

UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

**THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY AND AUDIT QUALITY
ON CORPORATE TAX AGGRESSIVENESS**



BY

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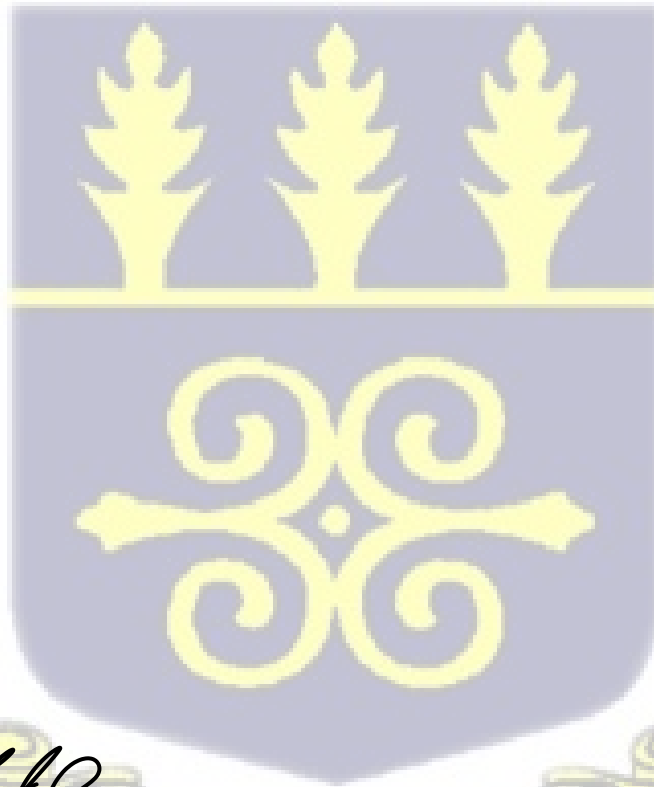
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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
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ACCOUNTING**

SEPTEMBER, 2023

DECLARATION

I, Oliver Nyamekye, hereby declare that this work is the result of my research and has not been presented by anyone for any academic award in this or any other university. All references used in this work have been fully acknowledged.



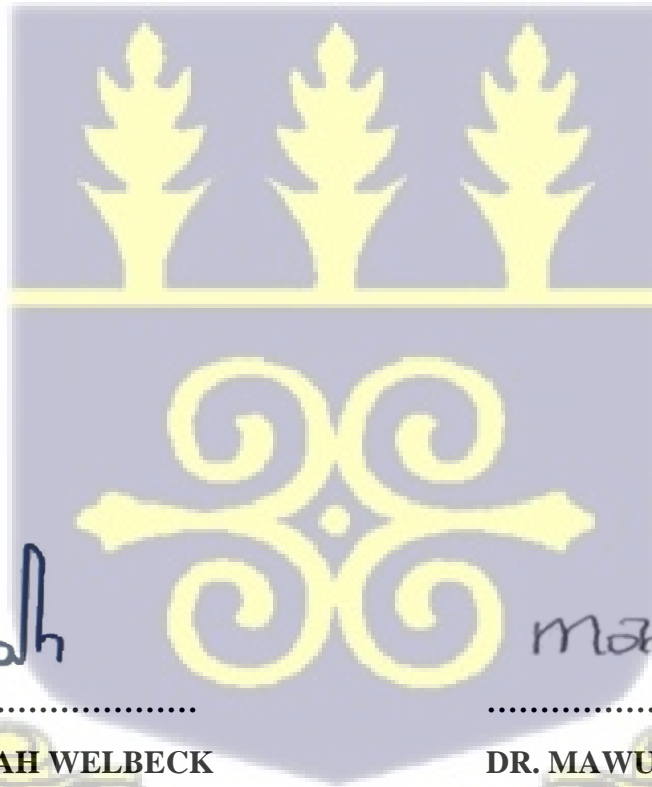
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CERTIFICATION

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DEDICATION

This thesis is dedicated to the Nyamekye family for the unflinching support throughout my education. God bless you.



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I am grateful to the Almighty God for the good health, wisdom, and strength He gave me to complete this thesis successfully. Unto Him alone be all the glory.

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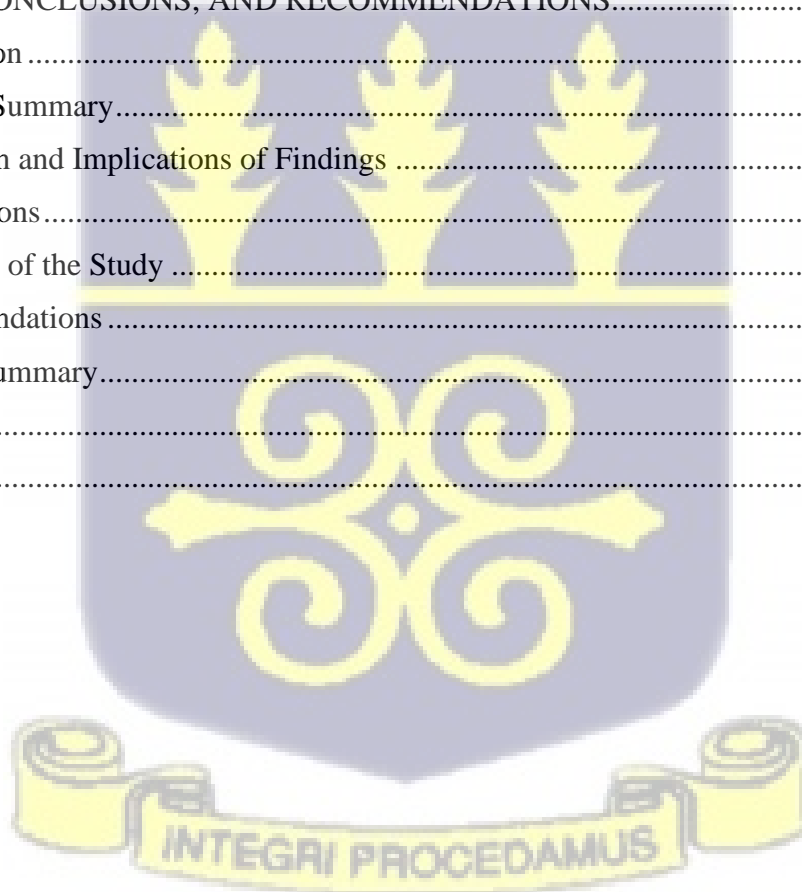


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LIST OF ABBREVIATIONS

CEO – Chief Executive Officer

CSR – Corporate Social Responsibility

CTA – Corporate Tax Aggressiveness

ETR – Effective Tax Rate

IMF – International Monetary Fund

KLD – Kullback-Leibler Divergence

KPMG – Klynveld Peat Marwick Goerdeler

MSCI – Morgan Stanley Capital International

OLS – Ordinary Least Square

PwC – PricewaterhouseCoopers

ISO – International Organization for Standardization

SBP – State Bank of Pakistan

STR – Statutory Tax Rate

STATA - Statistics and Data

WBCSD - World Business Council for Sustainable Development



ABSTRACT

This study investigates the effect of corporate social responsibility (CSR) and audit quality on corporate tax aggressiveness and ascertains how favourably audit quality may moderate the relationship between CSR and corporate tax aggressiveness using economic deterrence and legitimacy theories. The study employed 27 listed firms on the Ghana Stock Exchange from 2011 to 2020, and the hypothesised relationships of the study were tested using the fixed effect model. Results from the fixed effect model reveal that although entities engage in CSR activities to improve the welfare of the society, some of them have ulterior motives to use these CSR activities to engage in corporate tax aggressiveness thereby reducing the amount of tax payable to the state. This confirms that some of these entities trade off tax payments for CSR, proving that, on average, CSR and tax payment act as substitutes rather than as complements. The findings demonstrate that the extent to which entities use CSR to reduce the amount of tax payable to the tax authorities depends on management's perception of the quality of the audit carried out on the financial affairs of the corporate entities. The results of this study make important contributions to the corporate tax aggressiveness discourse. Academically, the study provides some new insights into the tax aggressiveness discourse by investigating the moderating role of audit quality on the relationship between CSR and corporate tax aggressiveness. The results of the study are beneficial to tax authorities since it creates awareness about the role of audit quality in reducing the effect of CSR activities on corporate tax aggressiveness. This suggests that the tax authorities must design quality tax audits to report on the over-claiming of donations and other contributions made to society by taxpayers. This will demotivate the management of these taxpayers from engaging in tax aggressiveness in the future. Lastly, to improve the nation's revenue, policymakers need to formulate and implement appropriate tax laws to curb the usage of CSR as a tax aggressiveness strategy to reduce the amount of tax payable to the state.



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, Corporate Social Responsibility (CSR) is considered one of the best strategies for entities to attain recognition in the societies in which they operate (Laguir, Staglianò, & Elbaz, 2015). Entities engage in CSR activities such as providing donations, contributing to scholarship schemes, supporting developmental projects, and the like to improve the wellbeing of the society and in return earn recognition.

CSR has been defined in literature to mean voluntary actions adopted by corporate entities to improve the welfare of the society (Mao, 2019). Hazen (2020) reveals that the implementation and disclosure of CSR activities among firms have increased in recent times. Laquir et al. (2015), speaking from Carroll's (1991) point of view, indicated that firms engage in CSR activities for either ethical, philanthropic, economic, or legal purposes or two or more of these. According to these authors, tax payment could be considered the legal aspect of CSR suggesting that tax payment is a medium through which entities pay their quota to the broader society.

According to Lanis and Richardson (2018), tax revenue is the life bread of the society, revealing that tax is the major source of revenue for every state. Governments use this tax revenue to provide social goods such as roads, hospitals, schools, etc. that are required for the welfare of the society. This means that corporate entities engage in indirect CSR through the government when these entities pay their fair amount of tax to the state for social and economic development by the government (Lanis & Richardson, 2013).

However, tax payment is considered a major cost to every entity (Davis, Guenther, Krull, & Williams, 2016). For instance, in Ghana, according to the Income Tax Act 2015 (Act 896), general corporate businesses are required to pay 25% of their chargeable income (i.e., profit) to the state, whereas mining and petroleum companies pay 35% of their chargeable income (i.e., profit) to the tax authority (PWC, 2021).

Indeed, every entity aims at increasing profit to maximise shareholders' wealth, and for this reason, the management of these entities may pursue various strategies to achieve this aim. One key strategy espoused in literature is corporate tax aggressiveness (Davis et al., 2016; Mao, 2019). This has been defined by Wahab, Ariff, Marzuki, and Sanusi (2017) to mean the downward management of taxable income through tax planning activities, which can be legal or illegitimate; or activities that fall into a grey area. Examples of tax-aggressive activities cited by Mao (2019) include over-claiming of donations, over-claiming of other expenses, underreporting of income, transfer pricing manipulations, etc.

Davis et al. (2016) posit that managers engage in corporate tax aggressiveness to cut down taxes payable to the tax authorities to achieve the sole aim of profit maximisation. Likewise, Lanis and Richardson (2013) argue that some entities do not want to use their profit to engage in CSR activities only, and for this reason they substitute or trade-off legal CSR activities (e.g., tax payment) for philanthropic activities (e.g., donation or provision of scholarships) to achieve their profit levels. That is, although entities perform CSR activities to improve the welfare of the society, some of these entities may have ulterior motives thereby using CSR activities to engage in corporate tax aggressiveness by over-claiming the donations made to the society to minimise their tax liabilities.

Wilson (2009) and Mao (2019) added that CSR can also be used to manage the risk associated with engaging in corporate tax aggressiveness, causing firms to increase their level of engagement in corporate tax aggressiveness. According to the authors, engagement in corporate tax aggressiveness leads to a serious negative impact on these corporate entities such as reputational damage, penalties and fines from tax administration, media pressure, and even boycotts from customers. To curtail these risks, Wilson (2009) and Mao (2019) reveal that some of these entities engage in philanthropic CSR activities to attain a good reputation and remain legitimate businesses in the eyes of the society. Furthermore, Minor and Morgan (2011) indicate that firms with a high reputation can avoid serious political, regulatory, and social sanctions buttressing the aforementioned suggestions by Wilson (2009) and Mao (2019). This, therefore, may motivate some of these entities to increasingly engage in tax-aggressive behaviours to reduce the amount of tax payable to the state without the fear of being sanctioned.

Corporate tax aggressiveness has become a global issue. For instance, in the United State of America, it was estimated by Internal Revenue Service that, on average, it losses \$350 billion annually to tax-aggressive behaviours (Austin, Bobek, & LaMothe, 2020). Dawn news presented in the Cambridge University Press (2018) shows that Pakistan's voluntary tax payment constitutes only 22% of the total direct taxes (a behavioural insight into voluntary tax compliance, 2018).”

According to International Monetary Fund (IMF) report, Ghana lost US\$ 39 million as a result of corporate tax aggressiveness (IMF Report, 2015). Although other factors may contribute to this rise of corporate tax aggressiveness, the Ghanaian tax environment seems to be characterized by loopholes in the tax laws (Ameyaw, Korang, Twum, & Asante, 2016). Moreover, CSR practice and reporting are voluntary (Welbeck, Owusu, Bekoe, & Kusi, 2017), therefore, there is a

possibility that entities engage in publicly visible CSR (philanthropic CSR) for legitimacy concerns, while secretly pursuing corporate tax aggressiveness.

Extant studies suggest that entities engage in tax aggressiveness because of lack of audit quality, suggesting that if the audit carried out on the financial affairs of the entities is of high quality, the level of corporate tax aggressiveness may be reduced (Knechel, 2014; Klassen, Lisowsky & Mescall, 2016; Gaaya, Lakhal, & Lakhal, 2017). Audit quality has been defined in literature to mean a corporate governance feature that controls the actions of managers and deters accounting manipulations and any other fraudulent activities (DeAngelo & Masulis, 1980).

Gaaya et al. (2017) reveal that quality audit reports on tax non-compliance behaviours such as underreporting of income, over-claiming of expense, non-filing of returns, and poor records keeping, among others; however, since the tax non-compliance behaviours will be exposed, management will be demotivated to engage in it. The authors indicate that the non-compliance activities identified by auditors are supposed to be communicated to management and those charged with governance for the necessary corrections to be made. The authors posit that even if management fails to comply with these directives, auditors are supposed to include the non-compliance issues in their audit report to be issued to users including tax authorities. Gaaya et al. (2017) suggest that when management makes the necessary corrections, then the right amount of taxes will be paid to the tax authorities, and even if management fails to make the corrections, attention will be drawn to the tax authorities for subsequent action to be taken for the entity to pay the right amount of tax, hence decrease the level of tax aggressiveness.

To support the above suggestion, Jihene and Moez (2019) add that high-quality audit acts as a deterrence factor by exposing tax fraudulent activities made by management to reduce the amount of tax payable to the tax authorities, and this will discourage firms from engaging in such tax-aggressive behaviours. Therefore, it may be possible that although some entities may have ulterior motives for engaging in CSR activities to reduce the amount of tax payable to tax authorities, conducting a high-quality audit on the financial affairs of these entities may expose these tax non-compliance behaviours, hence, reducing tax aggressiveness

1.2 Problem Statement

Issues of corporate tax aggressiveness continue to be of interest to many researchers in the global environment because of the increase in the reported cases of tax aggressiveness and its consequence on the society (Lanis & Richardson, 2018; Jin, Shen, Wang, & Yin, 2022). In literature, CSR has been espoused by some studies as one of the key strategies used by entities to engage in corporate tax aggressiveness (Laquir et al., 2015; Davis et al., 2016; Mao, 2019). Notwithstanding, existing studies on CSR and tax aggressiveness have produced conflicting evidence (Laquir et al., 2015; Mgbame, Chijoke-Mgbame, Yekini, & Yekini, 2017; Gaaya et al., 2017; Lanis & Richardson, 2013; 2015; 2018; Jihene & Moez, 2019; Mao, 2019; Abid & Dammak, 2021).

For instance, studies (e.g., Laquir et al., 2015; Mgbame et al., 2017; Lanis & Richardson, 2018) found a negative relationship between CSR and corporate tax aggressiveness suggesting that entities that engage in CSR do not engage in corporate tax aggressiveness. However, other studies (e.g., Lanis & Richardson, 2013; Hoi et al., 2013; Elbaz, 2015; Watson, 2015; Davis et al., 2016; Gulzar, 2018; Zeng, 2019; Mao, 2019) established a positive relationship between CSR and

corporate tax aggressiveness inferring that entities use CSR as a strategy to reduce the amount of tax payable to the tax authorities. Consequentially, some studies (e.g., Karagiorgos, 2010; Gras-Gil et al., 2016) found no relationship between CSR and corporate tax aggressiveness, perceiving both variables as independent strategies for maximising shareholders' wealth.

According to Mgbemena and Idem (2019), the mixed findings produced by previous authors could be attributed to the variations in the tax laws of the various countries. Although Ghana's tax laws are standardised and constitutional (Atuguba, 2021), Ameyaw, Korang, Twum, and Asante (2016) cite loopholes and complexities in tax laws of Ghana that create tax fraud opportunities for corporate entities (Ameyaw, Korang, Twum, & Asante, 2016). These loopholes and complexities in the Ghana's tax laws could probably be facilitating corporate tax aggressiveness of corporate entities. Furthermore, Welbeck, Owusu, Bekoe, and Kusi (2017) reveal that CSR reporting in Ghana is voluntary. The voluntary reporting nature of CSR, diversity of findings produced by previous studies, loopholes, and complexities in the tax laws of Ghana motivates the research question: "Do entities operating in Ghana have ulterior motives to reduce the amount of tax payable to tax authorities when they engage in CSR activities? That is, does tax aggressiveness in Ghana have a link with corporate entities' engagement in CSR activities?" To address this question, this study seeks to examine the relationship between CSR and corporate tax aggressiveness in the Ghanaian context.

Audit quality has been expounded upon in the literature as a corporate governance feature that controls managers' actions by reporting non-compliance behaviours and deterring accounting manipulation and fraudulent activities (Gaaya et al., 2017). However, the studies on corporate tax aggressiveness have focused mostly on the area of determinants of corporate tax aggressiveness

and CSR while areas such as audit quality have received less attention in the literature (Jihene & Moez, 2019). The few available studies (e.g., Klassen, Lisowsky, & Mescall, 2016; Gaaya et al., 2017; Jihene & Moez, 2019) suggest that entities engage in tax aggressiveness because of the lack of audit quality. Consequently, if the audit carried out on the financial affairs of the entities is of high quality, the level of corporate tax aggressiveness may be reduced. According to these authors high-quality audits expose management's tax non-compliance behaviours, which in effect demotivates them from engaging in it. For this reason, this study argues that the level of audit quality, being low or high, carried out by the tax auditors on the tax affairs of the entities may motivate or demotivate management to use CSR activities as a medium to reduce the entities' tax liability. Therefore, the study contends that the relationship between CSR and corporate tax aggressiveness could change when a quality audit is carried out on the financial affairs of the entities. This study fills the aforementioned gap by investigating the effect of audit quality on tax aggressiveness and further examines the moderating role of audit quality on the relationship between CSR and corporate tax aggressiveness.

Studies in the area of CSR and corporate tax aggressiveness have relied heavily on the shareholders, agency, and legitimacy theories. While these theories have been used to shape our understanding of corporate tax aggressiveness, the Economic Deterrence Theory as espoused by Allingham and Sandmo (1972) is believed to be wider in scope in the area of audit quality and corporate tax aggressiveness studies and hence could provide a useful extension to our understanding on corporate tax aggressiveness as a phenomenon (Acheke, 2015). Najib and Nura (2021) posit that to date, the applicability of economic deterrence theory remains open as it lacks empirical support in the area of corporate tax aggressiveness studies. Hence, in addition to the adoption of the legitimacy theory in explaining the relationship between CSR and corporate tax

aggressiveness, the study resorts to the economic deterrence theory to further explain how quality audit deters organisations from engaging in corporate tax aggressiveness.

This study is novel as it departs from previous studies by investigating the moderating role of audit quality on the relationship between CSR and corporate tax aggressiveness within the context of Ghana using both the legitimacy and economic deterrence theories concomitantly.

1.3 Research Objectives

- i. To investigate the association between CSR and corporate tax aggressiveness
- ii. To investigate the relationship between audit quality and corporate tax aggressiveness
- iii. To ascertain the moderating role of audit quality on the relationship between CSR and corporate tax aggressiveness.

1.4 Research Question

- i. Does CSR initiatives affect the quantum of tax paid by corporate entities?
- ii. What is the effect of audit quality on corporate tax payment?
- iii. Can the relationship between CSR and tax reduction strategies be moderated by audit quality?

1.5 Significant of the Study

To literature and academia, this study is timely and provides an important contribution to the literature on tax aggressiveness discourse by ascertaining the moderating role of audit quality on the association between CSR and corporate tax aggressiveness. Moreover, the study provides new

insights to support the literature on the application of economic deterrence theory to explain how audit quality is used to demotivate managers from using CSR activities to reduce tax payments.

In practice, the study creates awareness to the tax authorities about the effect of CSR activities and audit quality on corporate tax aggressiveness since the information about whether CSR is used as a strategy to pay less tax and the role audit quality plays in reducing corporate tax aggressiveness will be made known.

1.6 Organization of the Study

The study is grouped into five chapters. The first chapter discusses the introduction, which captures the study's background, problem statement, research questions, objectives, and significance of the study. The second chapter explains the concepts and theories underpinning the study. The third chapter discusses the methods used to achieve the objective of the study. The fourth chapter discusses the results, and the final chapter presents the summary of the study, conclusion, and recommendation.

1.7 Chapter Summary

This chapter introduced and discussed the overview of the study in its entirety. The first section of this chapter provided a highlight on the background that explains the motivation behind this study. It continued with the problem statement of which the gaps identified in the literature on corporate tax aggressiveness were explained and the need to conduct this study to fill those gaps enlightened. This is followed by the research objectives and the research questions, which specifically detailed how the objectives were to be achieved. The significance of the study followed suit and ends with how the whole thesis was organised

CHAPTER TWO

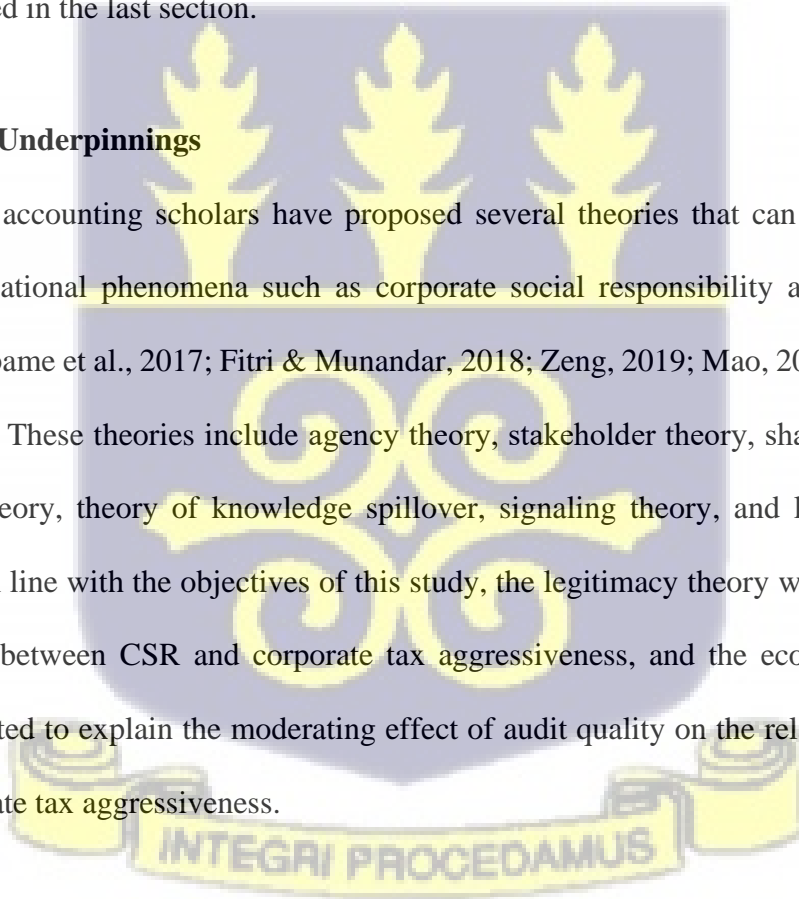
LITERATURE REVIEW

2.1 Introduction

This chapter explains the theories and concepts underpinning this study. It deliberates on the concepts of corporate social responsibility, corporate tax aggressiveness, and audit quality followed by a review of findings from previous studies and theories surrounding these concepts. Hence, this chapter is organised into three sections, the first section focuses on the theoretical underpinnings, the second section deals with the conceptual review, and finally, the empirical review is captured in the last section.

2.2 Theoretical Underpinnings

In recent times, accounting scholars have proposed several theories that can be used to better describe organizational phenomena such as corporate social responsibility and tax-aggressive behaviours (Mgbame et al., 2017; Fitri & Munandar, 2018; Zeng, 2019; Mao, 2019; Aronmwan & Igbino, 2021). These theories include agency theory, stakeholder theory, shareholder's wealth maximization theory, theory of knowledge spillover, signaling theory, and legitimacy theory, among others. In line with the objectives of this study, the legitimacy theory was used to explain the relationship between CSR and corporate tax aggressiveness, and the economic deterrence theory was adopted to explain the moderating effect of audit quality on the relationship between CSR and corporate tax aggressiveness.



2.2.1 Legitimacy's Theory

The legitimacy theory has been widely used in literature (Lanis & Richardson, 2012; Lanis & Richardson, 2013; Laguir et al., 2015; Mao, 2019; Aronmwan & Igbino, 2021; Kacem & Ali, 2021). The principles of legitimacy theory state that for corporate entities to continue to exist for a long time and achieve their corporate objective, they must act in correspondence with society's values and norms, and remain legitimate in the eyes of those whom the entity believes can interfere with their operations (Dowling & Pfeffer, 1975). This theory stresses that corporations are bound by social implicit contracts in which the entity agrees to perform some social activities and in return, they get the authority to meet their objectives without any interference.

Nurhayati et al. (2016, p.7), drawing from this theory, indicate that, "to enhance the reputation of a corporation, it must show to society that it is complying with and managing the environmental, social, and ethical aspects of its existence. When a corporation breaches the social implicit contract as a result of policymaking which does not meet societal expectations, it attracts community concern over its activities".

From the perspective of this theory, Lanis and Richardson (2013; 2018) pinpoint that entities may engage in CSR activities to remain legitimate businesses in the eyes of the public to avoid attracting the concern of the community to their operations, thereby performing CSR activities for duty's sake. Building on the study by Lanis and Richardson (2013; 2018), Aronmwan and Igbino (2021) assert that to make sure all the corporations' profits are not locked up in only CSR activities, a balance among the CSR components, namely ethical, economic, philanthropic and legal as documented by Carroll (2016), should be achieved. The study posits that entities may want to trade-off between the components of CSR in order to achieve the balance. For instance, entities

may want to trade off or substitute legal CSR (e.g., tax payments for philanthropic CSR such as donations, scholarships, and other social involvements) with the aim of achieving economic CSR (profit maximization). Davis et al. (2016) add that socially responsible firms may not want to pay the correct amount of tax because they see this payment of taxes as restricting the firm from further engaging in direct CSR activities (e.g., donations, scholarship, protecting the environment) thereby forcing these firms to substitute tax payment for philanthropic CSR activities.

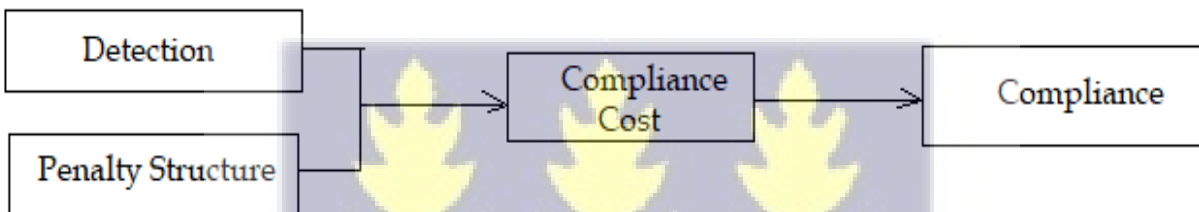
To buttress the above point from the previous studies, Mao (2019) indicates that corporate entities may engage in philanthropic CSR as a risk management strategy to cover up the negative effects associated with corporate tax aggressiveness engagement. That is, from Carroll's (2016) point of view, some corporations trade-off legal CSR responsibility (tax payment) for philanthropic CSR responsibilities to avoid the negative impacts of engaging in corporate tax aggressiveness.

2.2.2 Economic Deterrence Theory

The Economic Deterrence Theory by Allingham and Sandmo (1972) used tax rate, higher chance of discovery of non-compliance behaviour through an audit, and penalty structure as the mechanisms to reduce the level of tax-aggressive behaviours (Cuccia, 1994; Ya et al., 2020). According to the proponent, if punitive measures are extreme and discovery of tax non-compliance is possible through tax audits, a small proportion of a given tax-paying populace will engage in tax aggressiveness. Contrary to this position, if audit possibilities are modest and attributed penalties are low, the projected rate of corporate tax aggressiveness will be fairly high (Allingham & Sandmo, 1972; Ya et al., 2020).

According to Loughran et al. (2012), the proponents of the economic deterrence theory argued that factors that include tax rate, detection (tax audit), and penalty structure constitute the compliance cost that induces taxpayers to engage or not to engage in tax aggressiveness or induce taxpayers to comply with the tax laws and regulations of the tax jurisdiction. However, for the purpose of this study, two compliance costs, namely detection and penalty structured from Fischer Tax Compliance Model, are employed in explaining the economic deterrence theory. This can be represented diagrammatically below:

Figure 2.1: Fischer Tax Compliance Model



Source: Adapted from Fischer, Warti, and Mark (1992)

The fear of being detected of tax non-compliance by a quality tax audit may demotivate the management of corporate entities to engage in corporate tax aggressiveness. Recent literature indicates that high-quality tax audits act as a deterrence to demotivate management to engage in corporate tax aggressiveness including the use of CSR activities to reduce tax (Knechel, 2014; Gaaya et al., 2017; Jihene & Moez, 2019; Bimo et al., 2019). In other words, an effective tax audit carried out by tax auditors may improve the detection and enhance compliance rates, which would eventually reduce the level of tax aggressiveness.

Klassen et al. (2016) linked the Big 4 auditing firms to less tax aggressiveness when they are the tax preparers of the entities than when they are not, on the basis that these firms have enough resources, requisite skilled personnel, experienced staff, more skeptical audit team, and they are

highly protective of their independence and reputational damage. Lawrence et al. (2011) and Asthana et al. (2019) added that these auditing firms increase the level of non-compliance detection rate, which in effect enhances entities' tax compliance rate.

Additionally, the fear of penalty payment and reputational risk deter non-compliance behaviours. Gaaya et al. (2017) claims that aggressive tax firms can expose their auditors to higher reputational risk and penalty payment. They reveal that auditors that value their reputation do not entertain an act that will expose them to these risks. In Ghana, for instance, aiding and abetting clients (taxpayers) to engage in tax non-compliance attracts penalties under the Revenue Administrative Act 2016 Act 915 (Nyamekye, 2021, p. 101).

Moreover, the fear of being exposed by a quality audit and its subsequent tax implication such as the imposition of penalties and fines by the tax authorities deters management from engaging in corporate tax-aggressive behaviours (Gaaya et al., 2017). Auditors communicate detected non-compliance activities to management for immediate amendments. Consequently, failure on the part of management to make those amendments leaves the auditor with no choice but to report the non-compliance behaviour of their client, and this may call for the tax authority's audit and subsequent charging of penalties (Olaoye, Ogunleye, & Solanke, 2018).

Therefore, on the basis of this theory, the study argues that although corporations may want to engage in CSR activities such as providing donations, contributing to scholarship schemes, and supporting developmental projects as a strategy to reduce their tax liabilities, the fear of being detected by a quality audit and the imposition of a penalty for non-compliance behaviour may

deter these entities from using CSR activities to engage in corporate tax aggressiveness to reduce their tax liabilities

2.3 Conceptual Review

This section deliberates on the concepts of corporate social responsibility, taxation, corporate tax aggressiveness, and audit quality

2.3.1 Concept of Corporate Social Responsibility

CSR has received great attention from academic researchers and the corporate world in business ethics literature (Newman et al., 2015; Jamali & Karam, 2016; Ali, Frynas, & Mahmood, 2017; Wang, Hsieh, & Sarkis, 2018; Franco, Caroli, Cappa, & Del, 2020). Business analysts have indicated how CSR has changed over the previous 50 years from being a less studied and irrelevant research area to one of the most investigated concepts in the literature (Chen et al., 2017). The two main causes that have contributed to the increased focus on CSR over the past few decades are pressure on businesses to develop high ethical standards and rising concern among policymakers (Bernal-Conesa et al., 2017).

A study conducted by Sheehy (2015) argues that although corporate social responsibility has received attention globally, the key issue is the lack of an agreed normative basis that gives a foundation for the practice of CSR, leading to diverse definitions to explain this concept. Dahsrude (2008), in his study, examined 37 different definitions for CSR, a number Carroll (2016) believes is underestimated. This study discusses some of these definitions of corporate social responsibility provided by previous authors in their studies and finally narrows it down to one that will be the

adopted definition for this study. The definitions researchers have ascribed to CSR worldwide include;

Frederick (1960) defined CSR as activities performed by corporations to enhance socioeconomic welfare beyond the interest of the individual and corporations. A paper by McGuire (1963) added that CSR consists of the various obligations an organisation voluntarily takes to improve the welfare of the society. However, Friedman (1971) argued contrary to McGuire (1963) and Frederick (1960), asserting that firms' major preoccupation is shareholder's wealth maximisation and therefore business responsibility to society should be geared towards achieving goals for individuals and entities who invest in the running of the affairs of the business.

Another influential definition of CSR comes from Drucker (1984), who proposed that profitability and responsibility are two concepts that are well-matched. The author advanced and strengthened earlier arguments made by Friedman (1971). This study posits that firms all around the world should strive to turn their social responsibilities into business advantages

In addition to the definitions offered by scholars and academics, World Business Council for Sustainable Development defined CSR as “the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large” (Moir, 2001, p.1). The European Communities (2001, p.1) further add that, “CSR is a concept whereby companies integrate social and environmental concerns in their business operations and their interaction with their stakeholders voluntarily”.

Nevertheless, this study adopted the definition of CSR provided by Carroll (1979; 2016), where the author defines CSR as constituting legal, economic, philanthropic, and ethical dimensions that

the society expects from corporate entities. Carroll (2016) argued that for CSR to gain widespread acceptance among conscientious businesspeople, it must be properly structured in such a way that it encompasses the complete range of company obligations. Carroll developed four dimensions of CSR based on this argument.

2.3.1.1 The Four Dimensions of Corporate Social Responsibility

Carroll (1979; 1991; 2016) identified legal, economic, philanthropic, and ethical as the four categories or dimensions of corporate social responsibility.

Figure 2.2: Carroll's Four Dimensions of CSR



Source Adapted from Carroll, (1979, 1991 & 2016)

Carroll (2016) posits that businesses have an economic obligation to the society that allowed them to operate. The economic responsibility of CSR is a multi-dimension field that aims at finding a balance between commercial, environmental, and charitable endeavours. Carroll furthermore asserts that businesses should seek solutions that would help them grow their businesses and make profits while also benefiting the community and society. The author makes the case that every

entity needs to make a profit since it serves as a reward for investors and, when wisely reinvested into the company, serves as a foundation for growth. Carroll (2016) believes that businesses must conform strictly to the baseline requirement of economic CSR.

Ethical responsibility of CSR programs ensure that all stakeholders in a firm, from employees to customers, are treated fairly. It is a self-enforced initiative by firms that society expects from them because that is what the corporation believes is morally right to do (Carroll, 2016). Carroll went on to say that being ethical implies adhering to the "spirit" of the law rather than just the "letter" of the law and making sure entity's operations conform to the "spirit" and not just the "letter" of the law.

Philanthropic CSR refers to donations and contributions made by entities to society with the sole aim of improving their welfare. Carroll suggests that the decision for corporate entities to engage in philanthropic CSR is voluntary. As reported by the author, this dimension of CSR is aided mostly by the business' desire to participate in social activities that are neither legislated nor required by law. Corporations willingly engage in a variety of philanthropic activities such as employee and management volunteerism, gifts, donations, community involvement, and other contributions to support the community's development. Even while there are times when a corporate entity's contributions to society are motivated by altruism, most companies participate in corporate philanthropy to demonstrate that they are good corporate citizens, which usually earns them recognition or a good reputation from society.

Legal CSR explains the entity's compliance with the laid down laws and regulations. There are other laws and regulations with which the state or society equally requires the business to comply

with. Carroll (2016) postulates that compliance with these established rules and regulations reflects society's concept of the fundamental idea of fair business practices. Carroll explains several important requirements expected of businesses in complying with rules and regulations including tax laws. Laquir et al. (2015) posit that tax payments could be considered the legal aspect of CSR suggesting that tax payment is a medium through which entities pay their quota towards the broader society. Aronmwan and Igbinoba (2021) postulate that paying the correct amount of tax to the state is a way corporations indirectly contribute to improve the welfare of their society at large.

2.3.2 Concept of Taxation

Yin et al. (2016) indicate that the state has been given the authority to impose mandatory contributions from the public to mobilise revenue for economic and social development. Taxation, according to Yin et al. (2016), is a compulsory levy imposed by the tax authorities on behalf of the government to generate revenue to finance developmental projects. Similarly, Ali Nakyea defined taxation to mean “the levying of compulsory contributions by the government of the tax jurisdiction, to defray the cost of their activities where no specific reward is gained by the taxpayer” (Ali-Nakyea, 2014, p. 4).

Payment of tax is a primary way for individual and corporate taxpayers to show their civic responsibilities to the larger community. According to Lanis and Richardson (2013), tax payments influence social and economic development because the revenue generated from taxes is the main source of funding for the establishment of infrastructure and acquisition of other social goods.

Aronmwan and Igbinoba (2021), in discussing taxation from the society point of view, suggest

that tax payment increases government revenue, which leads to an increase in social and economic developmental projects to benefit the society at large.

Globally, the majority of government revenues for social and economic development comes from tax revenue. For instance, UK budget revealed that 73% of UK total revenue outturn in respect of the 2020 fiscal year came from tax revenue (UK budget, 2021). In Ghana, averagely the revenue generated from tax constitutes 82% excluding oil revenue, and 18.8% of Gross Domestic Product (Yusof et al., 2014; Bedi, 2016; Carsamer & Abbam, 2020). It is, therefore, alarming when corporations engage in tax-aggressive activities to cut down tax liability. In determining the amount of tax to be paid by the taxpayers to the state, the tax authorities require the taxpayers to assess their tax affairs for that year of assessment. In Ghana, for instance, the Income Tax Act 896 and Revenue Administration Act 915 have put in place the procedures for assessing the amount of tax payable to the Ghana Revenue Authority (Nkuah, Frederick & Asamoah, 2015).

2.3.2.1 Assessment of Tax Liability in the Case of Ghana

Assessment is defined as “a determination of the amount of tax liability made under a tax law, whether by the Commissioner-General or by way of self-assessment” (Nyamekye, 2021, p. 62). Formerly, in Ghana, the Commissioner-General used to raise provisional assessments on all taxpayers except for large taxpayers’ category shortly after the beginning of the year under section 76 of the repealed Internal Revenue Act 592 (GRA, 2017).

The Internal Revenue Act 592 defined provisional assessment as an assessment that is raised by the Commissioner General or an authorized officer of Ghana Revenue Authority to determine the tax liability of the taxpayer based on the judgment of the Commissioner General or the authorized officer of GRA at the beginning of the year. Notification of provisional assessment on the

estimated chargeable income, the manner of objection, and estimated tax payable is sent to the taxpayers (Nkuah, Frederick & Asamoah, 2015).

The implementation of the provisional assessment resulted in so many issues, which triggered the change of this type of assessment to self-assessment. The rationale for the shift from provisional assessment to self-assessment includes the high frequency of objections under provisional assessment and the high cost of collection under provisional assessment, among others (Nyamekye, 2021, p. 62). These issues called for all categories of taxpayers to be allowed by the Commissioner General of Ghana Revenue Authority to be on self-assessment basis (GRA, 2017).

Self-assessment is defined as “an original assessment under tax law that is occasioned by a the person filing the tax returns rather than the Commissioner-General making an assessment. It is a mode of assessment where the onus (duty) of determining the tax liability and the payment of the tax thereby is on the taxpayer. The taxpayer is expected to furnish the Commissioner with an estimate of the chargeable income and the tax liability at the commencement of the basis period” (Ali-Nakyea, 2008, p. 47).

Under this system of assessment, all taxpayers are required, according to the Revenue Administrative Act 915, to assess their tax affairs, file returns, and pay the tax thereon. Unlike previously, where the Commissioner General or an authorized official from the tax authority was involved in the assessment process, the Revenue Administrative Act 915 has given the sole liberty of assessment to all taxpayers. For this reason, sections 38 and 39 of the Revenue Administrative Act 915 give the right to the Commissioner General to adjust the assessment made by the taxpayer using the information reasonably available and his best judgment. This happens when the Commissioner-General finds evidence of tax fraud, willful deceit, or omission on the side of the

taxpayer. In addition, the Commissioner General is required to carry out tax audits under section 36 of the Revenue Administration Act 915 to make sure that the taxpayers' assessments are accurate.

Previous studies (e.g., Palil & Mustapha, 2011; Nkuah et al., 2015; Adimassu & Jerene, 2016) indicate that self-assessment ensures voluntary compliance concerning the filing of returns and payment of tax thereon. However, these authors (James & Alley, 2002; Nyamekye, 2021, p. 378) believed that since the taxpayers assess themselves under a self-assessment regime, it ends up giving opportunities for some taxpayers to engage in tax aggressiveness.

2.3.3 Concept of Corporate Tax Aggressiveness

This study discusses some key definitions of corporate tax aggressiveness provided by the previous authors in their studies and narrows it down to one which will be the adopted definition for this study.

Lanis and Richardson (2013) are among the few authors who have conducted studies in the area of corporate social responsibility and corporate tax aggressiveness for some years now. Lanis and Richardson (2011; 2012; 2013; 2015; 2018), defined corporate tax aggressiveness as a tax reduction strategy that is not within the spirit of the law used by entities to avoid the amount of tax payable to the tax authorities. The definition given by Lanis and Richardson, therefore, implies that where corporate entities engage in planning or arrangements of their tax affairs that may fall within the letter of the law but not in the moral consensus of the tax law's interpretation, then these corporations are engaging in corporate tax aggressiveness. This definition of Lanis and Richardson

can therefore be said to be consistent with the definition of tax avoidance but falls outside the definition of tax evasion.

However, the definition provided by authors (Frank, Lynch, & Rego, 2009; Chen, Chen, Cheng, & Shevlin, 2010; Hanlon & Heitzman, 2010; Landry et al., 2013; Martinez & Ramalho, 2014; Wahab, 2017; Zirgulis, Huettinger, & Misiunas, 2021) for corporate tax aggressiveness covers both tax avoidance and evasion definitions. Frank et al. (2009, p. 468), for instance, defined corporate tax aggressiveness as “the management of tax affairs through tax-planning activities, including legal and illegal activities, and activities that may fall into a grey area with the sole purpose of reducing the tax liability payable to the tax authorities”. Chen et al. (2010) and Zemzem and Ftouhi (2013) adopted this definition for their studies. Similarly, Landry et al. (2013) defined corporate tax aggressiveness as strategies designed to cut down the tax liability of corporate entities, which covers tax evasion and avoidance.

Laguir et al. (2015, p. 4) in their study added that tax aggressiveness could simply be defined as “the reduction of explicit taxes, and it includes a broad range of tax strategies, from legal tax strategies to tax evasion”. Similarly, Wahab et al. (2017, p.23) defined corporate tax aggressiveness as “the downward management of taxable income through tax planning activities which can be legal or illegitimate; or activities that fall into a grey area”. To the best of the researcher’s knowledge, the definition of corporate tax aggressiveness provided by previous authors, except for a few authors for which Lanis and Richardson cannot be excluded, captured only tax avoidance: the rest of the definitions cover both tax avoidance and evasion. Therefore, this study adopts the definition of Wahab et al. (2017).

The issue of corporate tax aggressiveness has become a global issue and this has compelled many tax jurisdictions to include provisions in their tax laws and regulations to curb or minimise this issue. In the United State of America, for instance, it was estimated by the Internal Revenue Service that, on average, it losses \$ 350 billion annually (Austin et al., 2020). According to International Monetary Fund (IMF) report in 2015, Ghana lost USD 39 million as a result of corporate tax aggressiveness and other taxpayers' non-compliance activities that are engaged in by the taxpayers.

Previous authors (see Davis et al., 2016; Mao, 2019; Zeng, 2019) postulate that tax payment is beneficial to the society, however, its form a greater portion of entities' cost which managers tend to concentrate on and thus, are desirous to engage in corporate tax aggressive to reduce the tax liabilities of their corporations. In Ghana, for instance, the general corporate businesses pay one-fourth (thus 25%) of their profit as tax to the state, companies in mining and petroleum operations pay 35% of their profit before tax to the government (PWC, 2021; Nyamekye, 2020, p.429). Tax cost is a huge expenditure to corporations, and for that reason the management of these corporate entities engage in tax-aggressive activities to reduce the cost associated with tax (Chen, Chen, Cheng, & Shevlin, 2010). Examples of tax-aggressive activities cited by Mao (2019) include over-claiming of donations, over-claiming of other expenses, underreporting of income, and transfer pricing manipulations.

2.3.3.1 Tax Aggressiveness, Tax Avoidance, and Tax Evasion

In literature, tax aggressiveness, tax avoidance, and tax evasion have been considered tax reduction strategies used by entities to cut down their tax liabilities. These three concepts have been defined by previous studies to mean the difference between Statutory Tax Rate (STR) and Effective Tax

Rate (ETR). For instance, tax avoidance (Taylor & Richardson 2012; Yorke, Amidu, & Agyeman-Boateng, 2016), tax evasion (Blaufus, Möhlmann, & Schwäbe, 2019; Nafti, Kateb, & Masghouni, 2020), and corporate tax aggressiveness (Landry et al., 2013; Lanis & Richardson, 2018; Jaffar, Derashid, & Taha, 2021) all used the same definition. Since this same definition underpins this study, these three concepts (corporate tax aggressiveness, tax evasion, and tax avoidance) are used interchangeably for the study as purported by Davis et al. (2016) and Mao (2019).

Tax Avoidance

Aside from the definition given by Taylor and Richardson (2012) and Yorke et al. (2016), tax avoidance can broadly be defined as “the reduction of explicit taxes” (Hanlon & Heitzman, 2010, p. 137). Likewise, Nyamekye (2021, p. 380) defined tax avoidance as a legal way of arranging a person’s tax affairs by taking advantage of the mismatches, grey areas, and inconsistencies in the tax laws and regulations to reduce tax liability, which may not be within the spirit of the law.

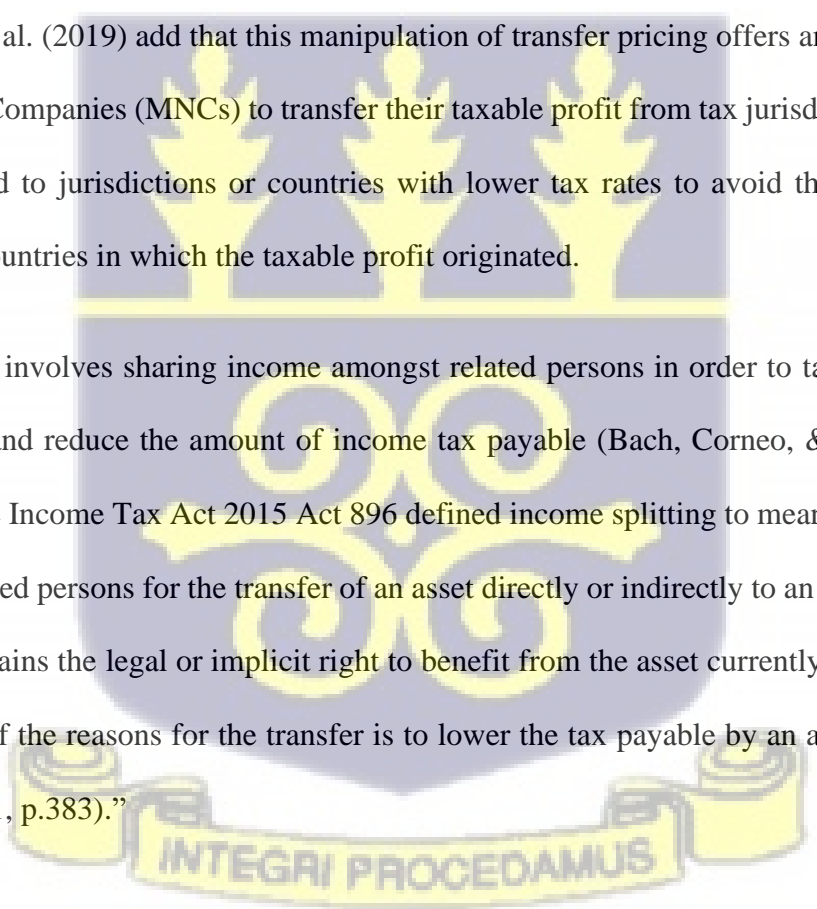
Examples of tax avoidance techniques identified and discussed in the literature include thin capitalization, transfer pricing manipulations, and income splitting (Henn, 2013; Brock & Pogge, 2014; Bandiyono & Murwaningsari, 2019).

Thin capitalization refers to a situation where an entity's debt in its capital structure is relatively high compared to equity (Taylor & Richardson, 2013; Bandiyono & Murwaningsari, 2019). In Ghana and many other countries like Kenya, UK, South Africa, The Netherlands, Germany, etc., the tax laws and regulations typically allow a deduction for interest paid or payable on debt in arriving at the taxable profit for the period (Nyamekye, 2021, p. 385). The higher the level of debt in a company, the higher the amount of interest it pays; this reduces the taxable profit to be reported and the tax liability paid to the tax authorities (Prastiwi & Ratnasari, 2019). For this reason, related

foreign companies channel huge amounts of debt to their associated company in the host countries. When this happens, a huge amount of profit is paid as interest to the related foreign company and this same amount of interest is deducted from the profit to reduce the amount of tax paid to the government of the host country (Prastiwi & Ratnasari, 2019).

Some entities also engage in transfer pricing manipulation to reduce the amount of tax payable to the tax authorities. Entities sell or buy from their associated party below or above the market price to reduce their tax payment and this happens when the related parties are situated in different tax jurisdictions (Clausing, 2003; Slemrod & Wilson, 2009; Brock & Pogge, 2014; Amidu et al., 2019). Amidu et al. (2019) add that this manipulation of transfer pricing offers an opportunity for Multi-National Companies (MNCs) to transfer their taxable profit from tax jurisdictions that these profits originated to jurisdictions or countries with lower tax rates to avoid the amount of tax payable to the countries in which the taxable profit originated.

Income splitting involves sharing income amongst related persons in order to take advantage of lower tax rates and reduce the amount of income tax payable (Bach, Corneo, & Steiner, 2012). Section 32 of the Income Tax Act 2015 Act 896 defined income splitting to mean an arrangement between associated persons for the transfer of an asset directly or indirectly to an associate; where the transferor retains the legal or implicit right to benefit from the asset currently or in the future; and where one of the reasons for the transfer is to lower the tax payable by an associated person (Nyamekye 2021, p.383).”



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Tax Evasion

Alm, Martinez-Vazquez, and McClellan (2016, p. 3) define tax evasion as “the illegal and intentional action taken by individuals and firms to reduce their legally due tax obligation by under-reporting incomes, sales or wealth, overstating deductions, exemption or credits or simply by failing to file the appropriate tax returns”. In the context of Ghana, tax avoidance does not attract penalty payments. Unlike tax avoidance, evasion of tax attracts interests, fines, and penalties (Nyamekye, 2021, p. 379).

In literature, the following activities have been used by the previous authors as examples of tax evasion activities (Chipeta, 2002; Nafti et al., 2020). Nyamekye (2021, p. 379) also identified these activities as the techniques used by taxpayers to evade the amount of tax due them.

- Under-reporting income
- Inflating or overstating deductions or expenses
- Filing false payroll tax reports
- Underpayment of taxes
- Deliberately omitting income
- Failure to submit returns
- Misapplication of accounting policies
- Claiming false deductions

According to Kirchler and Wahl (2010), taxpayers who engage in tax avoidance or tax evasion activities are not complying with the tax laws, especially those who use illegal ways of minimising their tax liabilities. Tax avoidance is seen as a legal arrangement to reduce one’s tax liability, however, the tax authorities characterise any tax saved from avoidance activities when detected.

Now, many countries have included anti-avoidance rules in their tax laws to counter any avoidance strategies deployed by taxpayers to reduce their taxes (Cooper, 2001; Prebble & Prebble, 2010; Baumann, Böhm, Knoll, & Riedel, 2020).

In Ghana, for example, sections 31, 32, 33, and 34 of the Income Tax Act 896 spelled out the specific and general anti-avoidance techniques used by Ghana Revenue Authority to combat tax avoidance arrangements, and the tax authorities expect the taxpayers to comply with these provisions in their dealings (Addo, Salia, & Ali-Nakyea, 2017; Nyamekye, 2021, p. 385). Therefore, corporations that engage in tax aggressiveness are non-compliant with the tax laws and regulations of that state. Otiaku (1988) came up with typologies to explain why some corporations do not comply with the tax laws but rather engage in aggressive activities to avoid or evade tax (Kidder & McEwen, 2016).

2.3.3.2 Typologies of Tax Non-compliance Behaviour

Otiaku (1988) discovered six types of non-compliant taxpayers that are likely to engage in corporate tax aggressiveness activities with the sole purpose of reducing their tax liabilities as a result of their non-compliance behaviour. Kidder and McEwen (2016) adopted Otiaku's typology for their study.

One of the typologies of tax non-compliance behaviour, according to Otiaku (1988), is unknowing non-compliance. According to Otiaku (1988), unknowing non-compliance involves avoiding taxes through ignorance of complex, changing, and sometimes ambiguous tax laws. The author stresses that this group of taxpayers may under-declare income, over-claim expenses, and fail to file returns on the due date out of ignorance. This group of non-compliance taxpayers does not necessarily

plan their affairs to minimize the amount of tax payable to the tax authorities. However, this group is unaware of the rules and procedures for complying with the tax laws and regulations, and for that reason, they end up avoiding or evading tax out of ignorance (Kidder & McEwen, 2016).

Another group of tax non-compliance revealed by Otiaku (1988) is the symbolic non-compliance taxpayers. Otiaku (1988) reveals that symbolic non-compliance taxpayers fail to comply with the tax laws as compensation for perceived unfairness and inequities in tax laws. This group protested against tax compliance. Kidder and McEwen (2016) added that symbolic tax non-compliance would not have engaged in any form of corporate tax aggressiveness if not because of the unfair nature of the tax system. This group of taxpayers engages in corporate tax aggressiveness as a way to compensate for the inequality of the system.

The next group is procedural non-compliance taxpayers. Otiaku (1988) posits that this group of tax non-compliance may engage in evasion or avoidance because of the complex nature of the tax system. He postulates that where the system for paying taxes, filing returns, systems for tax withholding, and assessment processes are not simple, taxpayers tend to avoid tax.

Lazy non-compliance is an extension of procedural non-compliance. This group of non-compliance taxpayers is just too incompetent and lazy to maintain proper records, and keep track of all expenses and income; and for that reason, they end up paying taxes below what the law required of them. This issue of non-compliance gets serious when the procedures involved in complying with the tax laws are complex (Otiaku, 1988; Kidder & McEwen, 2016).

Another group revealed by Otiaku (1988) is asocial non-compliance taxpayers. This group is the classic kind of evasion assumed by the appellation of “tax cheater”. This group aggressively plans

its tax affairs with the sole purpose of reducing the amount of tax payable to the tax authorities through tax avoidance or tax evasion activities (Otioku 1988). He added that this group avoids tax intentionally.

The last group is the brokered non-compliance. According to Otioku (1988), brokered non-compliance takes up the advice of an expert such as a tax consultant, or tax adviser. This group engages in corporate tax aggressiveness only if they are advised by an expert in the field to engage in it. He added that this group is always aided or abetted by an expert to engage in corporate tax aggressiveness to reduce their tax liability.

2.3.4 Audit Quality

DeAngelo and Masulis (1980, p.459) defined audit quality as “a corporate governance feature that controls managers’ actions and deters accounting manipulation and any fraudulent activities”. Recent literature indicates that a high-quality audit acts as a deterrent to demotivate management to engage in corporate aggressiveness (Gaaya et al., 2017). The authors reveal that quality audit reports on tax non-compliance behaviours such as underreporting of income, over-claiming of expense, non-filing of returns, and poor records keeping; however, since the tax non-compliance behaviours will be exposed, management will be demotivated to engage in it.

Kyriakou and Dimitras (2018) posit that external auditors are hired to offer their opinion on the financial affairs of the clients. In the course of the audit, external auditors are required to investigate the tax planning position of the client whether the management of that client has engaged in corporate tax aggressiveness that could be detected by the tax authorities (Guenther et al., 2017). According to Kanagaretnam et al. (2016), external auditors who assist the taxpayer in preparing financial statements and filing tax returns are not expected to aid or abet their clients to

indulge in corporate tax aggressiveness but rather conduct a quality audit that will expose the tax non-compliance activities of the business.

In Ghana, for instance, section 76 of the Revenue Administration Act 915 stipulates that a person will pay a penalty of 100% of the underpayment tax when that person knowingly abets, or aids another person to commit an offence (Nyamekye, 2021, p. 101), which sometime can further lead to reputation damages and litigations. Donohoe and Knechel (2014) added that a firm that engages in tax-aggressive behaviour usually expose their auditors to reputational risks and high legal costs. For this reason, audit firms that are more concerned with maintaining a good reputation will not consent to any actions that could damage their reputation but instead aim for a quality audit. In Ghana, for example, the external auditor of Capital Bank, Pannell Kerr Forster (PKF) was sanctioned by the Institute of Chartered Accountants, Ghana for an amount of GHS 550,000, and the licence was revoked for not being able to obtain sufficient appropriate audit evidence and this happened after the collapse of Capital Bank by Bank of Ghana in 2017 (Nsiah, 2019).

The Big N audit firms have been associated with high-quality audits in the multi-country setting because they are more concerned about reputational damage and are linked to lower corporate tax aggressiveness of entities when they are the auditor than when they are not (Kanagaretnam et al. 2016). Lanis and Richardson (2012) proved that the audit from the Big 4 demotivate management's likelihood of engaging in corporate tax-aggressive behaviour. Kassen et al. (2016) also linked the Big 4 audit firms to less tax aggressiveness when they are the tax preparers of the entities than when they are not, on the basis that these Big 4 firms have enough resources, superior expertise, are well-experienced, and more protective of their independence and reputation. They claimed that the Big 4 demotivate management from engaging in tax aggressiveness because they are more

likely to detect fraud and other misstatements on the financial statement that could result in the reduction of tax liability.

In literature, the Big 4 auditing firms have been linked with audit quality (Lawrence et al., 2011; Kyriakou & Dimitras, 2018; Asthana et al., 2019). Therefore, this study defined audit quality as the audit carried out by the Big 4 auditing firms.

2.3.5 Conceptual Framework

This section explains how the test of relationships between the constructs to be investigated in this study is conceptualised into the framework below. The framework reveals that corporate tax aggressiveness, being the dependent variable, is influenced by CSR and audit quality as the independent variables. The framework also shows that audit quality is used as the moderating variable to moderate the relationship between CSR and corporate tax aggressiveness.”

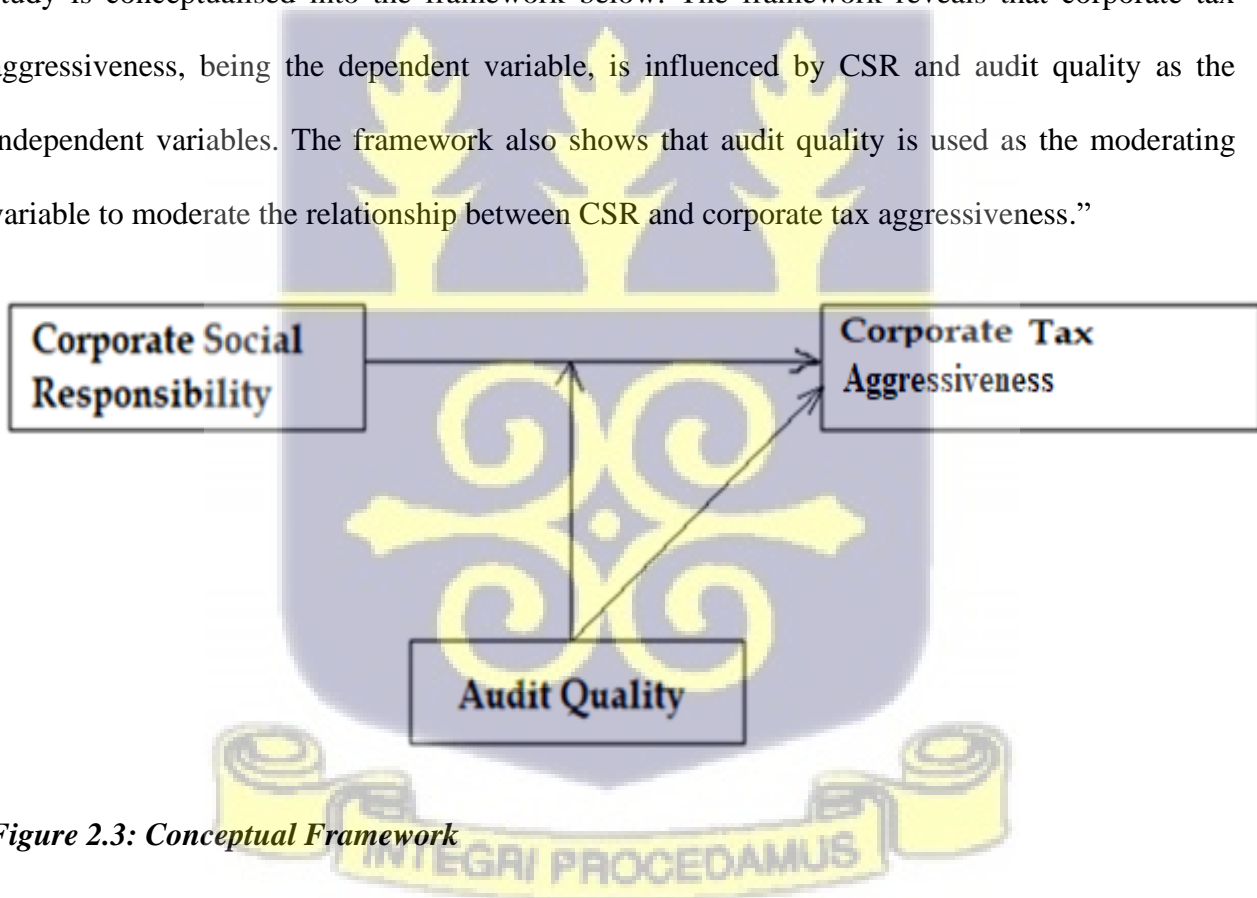


Figure 2.3: Conceptual Framework

2.4 Empirical Review – Hypothesis Development

This section discusses the analysis of the previous studies in consistent with the study's objectives to formulate the research hypothesis. Moreover, this section, in addition to the conceptual review, helps to ascertain the relationships of the constructs in the conceptual framework. This section is therefore organised into three: the first section focuses on the relationship between CSR and corporate tax aggressiveness, followed by the association between audit quality and corporate tax aggressiveness, and the last section deals with audit quality as a moderator.

2.4.1 Corporate Social Responsibility and Corporate Tax Aggressiveness

Empirically, the results on the association between CSR and corporate tax aggressiveness have been mixed.

Laquir et al. (2015) examined the association between CSR dimensions and corporate tax aggressiveness. The authors employed partial least square regression model to estimate the results. The results reveal a negative association between the social dimension of CSR and tax aggressiveness, suggesting that firms that are concerned for the well-being of the society and engage in more social activities to improve the welfare of the people, do not engage in corporate tax aggressiveness. That is, entities that engage in the social activities of CSR avoid tax less.

To buttress the earlier suggestions, Magbame et al. (2017) conducted a study to examine the role of CSR performance on tax aggressiveness among the firms listed on the Nigerian Stock Exchange. The study employed 350 samples from 2007 to 2013. The researchers measured CSR using the amount of donations made by the entities to support the society and measured tax aggressiveness using the Effective Tax Rate (ETR). Magbame et al. (2017) found a significant and negative

association between CSR performance and corporate tax aggressiveness revealing that entities that perform CSR activities do not engage in corporate tax aggressiveness.

Lanis and Richardson (2018) conducted another study to ascertain the effect of outside directors and CSR performance on corporate tax aggressiveness. This time, the authors added the outside director as the additional independent variable. They employed a fixed effect model estimator to generate the research results. The results of the fixed effect model found a negative relationship between CSR performance and tax aggressiveness denoting that entities that engage more in CSR activities do not employ tax reduction techniques to avoid tax.

Notwithstanding, some researchers have documented a positive association between CSR and corporate tax aggressiveness in the literature. For instance, Hoi et al. (2013) conducted a study to find out whether corporate entities perform CSR for legitimacy concerns while these entities secretly engage in corporate tax avoidance. Hoi et al. (2013) used the OLS regression model to estimate the results of their study. They measured corporate tax avoidance using cash ETR. The finding from the OLS regression model estimator indicated that socially irresponsible firms engage in tax avoidance more, suggesting a significant and positive relationship between CSR and corporate tax avoidance.

Lanis and Richardson (2013) examined whether entities perform CSR activities as a strategy to avoid tax using legitimacy theory. The findings of the study were consistent with the previous studies. Similarly, Lanis and Richardson found that CSR and corporate tax aggressiveness have a significant and positive association confirming the legitimacy theory. The results imply that

entities selected for the study perform CSR with the sole aim of winning legitimacy from the society while secretly engaging in corporate tax aggressiveness.

Watson (2015) conducted a study with the purpose of investigating whether earnings favourably moderate the relation between CSR and tax avoidance. Watson used OLS regression estimator to estimate the results. The finding of the study confirmed that there is a significant positive relationship between CSR and tax avoidance when earnings are low. This implies that the level at which entities used CSR to pay less tax is dependent on the level of the organization's performance (i.e., earnings).

Davis et al. (2016) conducted a study to examine whether CSR and tax payment act as substitutes or complements. The results revealed that there is a significant and negative association between CSR and tax payment, suggesting that entities substitute payment of the right amount of tax for CSR performance. That is, entities used CSR activities as a tax reduction strategy to pay less tax.

Likewise, Mao (2019) investigated the relationship between CSR and tax avoidance using firms listed on the Chinese Stock Exchange. The study used a matching approach. The results revealed that some entities use CSR to avoid payment of the right amount of taxes to the tax authorities. He also reported that CSR is used by some entities to manage the risks linked to tax avoidance such as bad publicity and penalties payment, causing firms to even engage more in tax avoidance activities. The results show a significant and positive relationship between CSR and tax avoidance. Zeng (2019) also investigated whether CSR can be used to avoid tax using a cross-country setting and 9945 firm-year observations from listed companies. Consistent with Mao (2019) results, Zeng found a positive relationship between these constructs.

Gulzar et al. (2018) studied the impact of CSR on tax aggressiveness using Chinese listed firms. The study employed a sample of 3481 firm-year observations from 2009 to 2015. The results of the study found a significant and positive connection between the variables, denoting that entities considered to be socially responsible are the entities that engage more in corporate tax aggressiveness. Hence, this study hypothesises that

H1: there will be a significant positive relationship between corporate social responsibility and corporate tax aggressiveness

2.4.2 Audit Quality and Corporate Tax Aggressiveness

Klassen et al. (2016) conducted a study to investigate whether auditors and non-auditors influence the level of entities' engagement in corporate tax aggressiveness. The authors used 1,533 firm-year observations from 2008 (804 firms) to 2009 (729 firms). The results confirmed a significant and negative association between the Big 4 auditing firms and corporate tax aggressiveness, suggesting that entities audited by the Big 4 firms do not engage in corporate tax aggressiveness. Klassen et al. (2016) associated the Big 4 auditing firm with less tax aggressiveness suggesting that the Big 4 auditing firms are more likely to deter tax non-compliance behaviours of management, which in effect demotivate these entities to engage in corporate tax aggressiveness.

Kanagaretnam also investigated the impact of audit quality on corporate tax aggressiveness using an international sample of firms from 31 countries. The results of the study confirmed that audit quality is negatively associated with corporate tax aggressiveness suggesting audit quality helps to combat corporate tax aggressiveness. Again, the results revealed that the negative association between these variables is more noticeable in a country where there is high litigation risk.

Salehi et al. (2020) assessed the relationship between auditor characteristics and tax avoidance among Iranian companies. The results showed a significant and negative association between audit opinions and tax avoidance. Similarly, Marzuki and Al-Amin (2021) conducted a study to ascertain the role of audit fees, and audit quality on tax aggressiveness evidence from Thailand. The results of this study revealed a negative relationship between audit quality and corporate tax aggressiveness, suggesting that audit quality demotivates the practice of tax aggressiveness among Thailand corporate entities. Accordingly, this study hypothesises that;

H2: there will be a significant and negative relationship between audit quality and corporate tax aggressiveness

2.4.3 Audit Quality as a Moderating Variable

In literature, studies (e.g., Knechel, 2014; Klassen et al., 2016; Gaaya et al., 2017) suggest that entities engage in tax aggressiveness because of lack of audit quality, suggesting that if the audit carried out on the financial affairs of the entities is of high quality, the level of corporate tax aggressiveness may be reduced. The authors reveal that quality audit reports on tax non-compliance behaviours such as under-reporting of income, over-claiming of expense, non-filing of returns, and poor records keeping, and since the tax non-compliance behaviours will be exposed, management will be demotivated to engage in it.

Gaaya et al. (2017) conducted a study to investigate whether audit quality discourages family firms from avoiding payment of tax. The study employed 55 listed companies from 2008 to 2013 and estimated the results using the OLS regression model estimator. The study found that audit quality demotivates family businesses from engaging in aggressive tax positions to reduce the amount of

tax payable to the tax authority, supporting that audit quality moderates favourably the association between family ownership and tax avoidance.

Subsequently, Jihene and Moez (2019) studied the relationship between CEO compensation and corporate tax avoidance in which audit quality was used as a moderating variable. The study employed a sample of Tunisia-listed firms from 2013 to 2016. The study found a significant positive relationship between CEO compensation and tax avoidance, suggesting that managers can go a long way to engage in risky activities to avoid payment of the right tax to the tax authorities provided that these managers will get additional compensation for doing that. However, the relationship between CEO compensation and tax avoidance changed to negative in well-audited firms supporting the moderating effect of quality audit on the association between CEO compensation and corporate tax avoidance.

Therefore the study argues that although some entities may have ulterior motives for engaging in CSR activities to reduce the amount of tax they pay to the tax authorities, conducting a high-quality audit on the financial affairs of these entities may expose these tax non-compliance behaviours; hence, reducing tax aggressiveness. Therefore this study hypothesises that

H3: Audit quality moderates favourably with corporate social responsibility and corporate tax aggressiveness

2.5 Chapter Summary

This chapter discussed all the relevant concepts and theories documented in the literature that are applicable to this study. First, it deliberated on the economic deterrence and legitimacy theories underpinning this study. Second, it provided an extensive review of the concepts of taxation,

corporate tax aggressiveness, corporate social responsibility, and audit quality. Finally, the empirical findings on how corporate social responsibility and audit quality influence corporate tax aggressiveness engagements were discussed.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the methods used to achieve the objectives of the study. The chapter explains the paradigm employed by deliberating on the philosophy behind this study. It also discusses the research design, unit of analysis, and data source of this study. It further explains the measurement of the variables, the analytical tool for data analysis, and finally concludes on how an appropriate model estimator was selected to estimate the results.

3.2 Research Paradigm

The kind of problems researchers study or address and the kind of explanations they deem appropriate are determined by a set of values, attitudes, beliefs, and methods that are held by members within the scientific society to which they belong. These values, attitudes, beliefs, and methods create several paradigms that provide the underlying philosophical presuppositions that define what constitutes genuine study and the suitable research methodologies (Myer & Avison, 2002)

Guba and Lincoln (1994, p.105) defined a paradigm as “the fundamental worldview or belief system that directs the investigator”. Several paradigms, such as positivism, interpretivism, realism, relativism, and critical realism, have evolved in the study of the social sciences (Sarantakos, 1998; Kim, 2003). However, positivism and interpretivism are the two most prevalent paradigms that reflect the main theoretical trajectories in business studies and business-related research (Mark, Philip, & Adrian, 2009).

Interpretivism holds that various realities can be perceived and experienced by different people. Interpretivism's ontology is that reality is socially formed. Contrary to positivism, interpretivism's epistemology holds that knowledge is formed in subjective, temporal, and context-dependent ways. By distinguishing the different constructions and interpretations of reality that exist and making an effort to find patterns, interpretivists develop knowledge. Therefore, these researchers study a phenomenon using inductive logic.

On the other hand, the positivist research paradigm embraces the belief that there is a single, tangible, objective reality and is frequently coupled with a quantitative research approach. According to their ontology, it is objective and free from the researcher's prejudices as well as social values and interests. Positivism holds that information formed is objective, independent of temporal influences, and has no relation to the context in terms of epistemology (the type of knowledge generated). According to Guba and Lincoln (1994), researchers who follow the positive paradigm see themselves as objective observers who do not sway the results of the study with their own personal prejudices and values.

Such researchers put themselves at a distance from the respondents to improve the impartiality of the data gathered and analysis done (Bryman & Bell, 2007). Once more, positivists believe that science is the sole legitimate method for generating knowledge. Positivist researchers develop their research topics and hypotheses and then empirically test them in well-controlled, scientific settings.

The nature of the objective of this study predisposes the researcher to be aligned with the philosophical presuppositions of positivists since the study seeks to generalize the research's findings.

3.3 Research Design

In literature, Broadhurst, Holt, and Doherty (2012) defined research design to mean strategy and technique used by researchers to integrate research components in achieving the purpose of the study. Research design is the overall plan of action used to coordinate all the components of research to accomplish the study's objective. Broadhurst et al. (2012) reveal that for researchers to explicitly address the research questions, research design demonstrates a logical framework of investigation that specifies how constructs will be measured, and how data will be collected and subsequently assessed.

Creswell (2013) argues that research designs are strategies and methods that encompass choices ranging from broad assumptions to a specific method of data collecting and analysis. The use of appropriate research design is based on the type of study, which might be quantitative, qualitative, or mixed. Denzin and Lincoln (2005) assert that qualitative researchers do research and offer interpretations depending on the context that individuals provide.

Boateng (2016) adds that this method of research design seeks to comprehend situations for what they are. When using qualitative research methodologies, many data-gathering strategies may be used such as unstructured or semi-structured questionnaires. Other typical techniques for gathering data include participation, focus group discussions, observation, and individual interviews.

On the other hand, quantitative research designs are often used to investigate an idea by finding the correlations between the variables under study (Creswell, 2009). The goal of quantitative research is to verify phenomena-related theories. It employs more rigid tools for assessing responses, and highly structured approaches are employed for data collection. Additionally, it quantifies the variables and forecasts their causal connection (Creswell, 2013). The study employs

the quantitative methodology due to the nature of the purpose and philosophical presumptions underpinning the study. It, therefore, uses a deductive approach since the hypotheses developed for this study will have to be tested to establish relationships among the variables under study.

3.4 Unit of Analysis

The unit of analysis refers to the entity being studied (Proisl, 2022). It is the main entity on whom the research study is focused. It is classified into three: individual, firm, and country levels. The unit of analysis should clearly be defined as it has implications on how the study's constructs should be measured and analysed. This study focuses on corporate entities or firms since the aim is to examine the effect of CSR and audit quality on corporate tax aggressiveness and investigate the impact of audit quality on the association between CSR and corporate tax aggressiveness. Therefore, firm-level analysis is employed to achieve the study objectives.

3.5 Data Sources

This study focuses on the use of firm-level data. The data for the study are drawn from the financial information of 27 firms listed on the Ghana Stock Exchange from 2011 to 2020. Listed firms were used because of the availability and reliability of data. The study considered the years from 2011 to 2020 because most of the firms listed on the Ghana Stock Exchange started reporting on corporate social activities in their financial statements in 2011, thus excluding newly listed companies that do not have up to 10-year data from 2011 to 2020, companies reporting in foreign currencies, and companies with non-disclosure information.

Additionally, the study excludes some firms that are located within the Ghana Freezones enclave because their 10-year concession period has not expired. This is because in Ghana Freezone

companies are exempted from payment of tax for the first 10 years of operation, and for that reason, the study cannot examine such companies' tax aggressiveness. However, loss-marking firms are included as earnings can be managed either downwards or upwards to avoid tax (Rohaya & Nor'Azam, 2008; Amidu et al., 2016).

3.6 Variable Measurements

The variables under investigation in this study include corporate tax aggressiveness, corporate tax aggressiveness, audit quality, and control variables such as firm performance, firm size, leverage, and board independence.

3.6.1 Corporate Tax Aggressiveness

Although tax aggressiveness, tax avoidance, and tax management may have different meanings, previous studies used them interchangeably (e.g., Lanis & Richardson, 2012; 2015; Davis et al., 2016). Prior studies (e.g., Lanis & Richardson, 2011; 2012; 2015; Landry et al., 2013; Taylor & Richardson, 2012; Yorke et al., 2016; Davis et al., 2016; Nafti, Kateb, & Masghouni, 2020)" employed the same proxies to measure the concepts of tax aggressiveness, tax avoidance, and tax management.

Recently, studies (e.g., Richardson, Taylor & Lanis, 2016; Duong & Pallasch, 2021) use a dummy to measure tax aggressiveness. It is measured by rating firms that have tax issues with the tax authorities 1 and 0 otherwise. However, this measurement does not apply to this study because of the confidentiality attached to tax information making the availability of such data difficult to reach.

Therefore, to measure tax aggressiveness, this study uses the Effective Tax Rate (ETR) approach. ETR was defined by Noor and Fadzillah (2010) to mean the total tax expense divided by the pre-tax profit. This definition indicates that tax aggressiveness only seeks to reduce the tax burden. However, Amidu et al. (2019) reveal that tax aggressiveness goes beyond just reducing the tax burden, it also involves the deferment of tax payments. To resolve this deferment objective of tax aggressiveness, it is appropriate to amend the numerator by deducting deferred tax expense from the total tax expense. This study, therefore, measures ETR as a total tax expense minus the deferred tax all divided by pre-tax profit. The ETR method has been used by previous researchers (e.g., Richardson & Lanis, 2012; 2015; Yorke et al., 2016; Amidu et al., 2019).

According to Yorke et al. (2016) and Amidu et al. (2019), this method of measuring tax aggressiveness compares the ETR of the entity to the Statutory Tax Rate (STR) applicable to that same entity. When the STR exceeds the ETR, the excess is considered a tax aggressiveness outcome or tax avoidance outcome. The tax savings from tax aggressiveness increase with the size of the difference between STR and ETR. This study, therefore, measures tax aggressiveness by using the difference between STR and ETR. The strength of this approach is the fact that the data regarding both STR and ETR required for the analysis can be accessed without directly contacting the tax authorities and taxpayers.

3.6.2 Corporate Social Responsibility

CSR is a predictor variable for this study. According to Lanis and Richardson (2012), measuring CSR activities using CSR information disclosed by entities has received inconsistent backing in the literature. For instance, studies (e.g., Patten & Trompeter, 2003; De Villier & Van Staden, 2011) suggest that CSR disclosure has nothing to do with CSR activity, indicating that CSR

disclosure and CSR activity are either not related or are negatively related. However, recent studies (e.g., De Vullier & Van Staden, 2015; Lanis & Richardson, 2018) provide empirical evidence that environmental performance is positively related to the level of discretionary disclosure in the environment and social reports.

Studies (e.g., Davis et al., 2012; Welbeck et al., 2017; Amidu et al., 2019) reveal that CSR captures a broader range of activities such as environmental protection, social and community development, promoting staff welfare and development, community involvement, political involvement, and maintaining a decent relationship with government bodies, suppliers and customers. These are activities that corporate entities engage in as part of their CSR projects.

Therefore, to create the CSR disclosure index, this study used the seven core subjects of social responsibility of the International Organisation for Standardisation (ISO 26000) as CSR activities engage by firms. These core subjects include environment protection, community involvement, human rights, organizational governance, fair operating practices, consumer issues, and labour practices. The purpose of ISO 26000 is to provide a guide on the management of social responsibility in the areas of these seven core subjects of ISO 26000 (International Organisation for Standardisation, 2010). ISO 26000 is considered an appropriate index to measure CSR because it agreed with several CSR definitions developed by 450 multi-stakeholders, which is considered in the literature as its main achievement (Moratis, 2018).

The CSR disclosure index for this study was calculated based on the seven core subjects of social responsibility of ISO 26000 present in the firm's annual financial statements. For every single core subject of ISO 26000 disclosed, a sampled firm scored 1 or 0 for non-disclosure of any core subject of ISO 26000. Afterward, the total score based on the number of core subjects disclosed by a

sampled firm was divided by 7 (that is, the 7 core subjects of ISO 26000). The outcome of this calculation is the CSR disclosure index for each sampled firm ranging from 0 to 1.

3.6.3 Audit Quality

Proxies to measure audit quality has been categorised into input-based proxies and output-based proxies by previous studies (Rajgopal, Srinivasan, & Zheng, 2021). The output-based proxies cover material restatements and going concern opinions. These measures have been criticized by previous authors. For instance, material restatement refers to the corrections of material misstatements in the client's previously issued financial statements (Alyousef & Almutairi, 2010). However, Defond (2010) and Tritscher (2013) reveal that material restatements are not always a good indicator of poor audit quality. According to these researchers, material restatements may be due to changes in accounting policies, therefore, they are not a result of audit failures (Tritscher, 2013). Moreover, the availability of such data is difficult to reach in the context of Ghana.”

Other studies measured audit quality by going-concern opinions. For example, Lennox (1999) and Francis (2011) measured audit quality using a dummy based on whether an auditor's opinion assures the going-concern of an entity, but the client's business ends up collapsing or not. However, it can be challenging to measure audit quality using going-concern opinions as a proxy because clients' business failures may be a result of unexpected future adverse circumstances and cannot be identified by a mere analysis of historical financial reporting data. Another limitation of this measurement is that it limits generalizability since it only applies to distressed businesses (Tritscher, 2013).

The input-based proxies, on the other hand, refer to audit-specific characteristics and audit fees. An audit fee proxy determines the level of effort the audit firm puts into examining the client's financial affairs, suggesting that a high audit fee will increase the quality of the audit and that a low audit fee reduces the audit quality. However, abnormal audit fees can also serve as a proxy for impaired independence, which will affect the quality of the audit (e.g., Badertscher, Jorgensen, Kart & Kinney, 2014).

IFAC code of ethics reveals that to safeguard against self-interest threats and ensure quality audits, audit fees charged by firms for a particular engagement should not exceed 15% of the firm's total fees. Moreover, the IFAC code further explains that charging a low audit fee will adversely affect the amount of effort audit firms invest in achieving quality audits. This means that charging either high or low audit fees has an adverse effect on audit quality. This, therefore, makes it inappropriate to use this approach as a proxy for audit quality for this study.

Another way of measuring audit quality is firm size (audit-specific characteristics). According to Rajgopal et al. (2018), existing studies have not specifically and clearly defined the appropriate method for measuring audit quality. Measuring audit quality can be difficult and complicated since an appropriate definition for measuring audit quality cannot be observed explicitly in the literature (Rajgopal et al., 2018). Due to the lack of a clear position on an appropriate method to directly measure audit quality, this study employed firm size to measure audit quality based on its high frequency of usage in literature and availability of data.

Previous studies (e.g., DeAngelo, 1981; Lawrence et al., 2011) have demonstrated that larger audit firms produce a better quality audit than smaller ones. Klassen et al. (2016) linked the Big 4

auditing firms to less tax aggressiveness when they are the tax preparers of the entities than when they are not, on the basis that these firms have enough resources, requisite skills, experience, more skeptical and they are highly protective of their independence and reputational damage. Lawrence et al. (2011) and Asthana et al. (2019) add that these auditing firms increase the level of non-compliance detection rate, which in effect enhances entities' tax compliance. The Big 4 audit firms are Deloitte, PricewaterhouseCoopers (PwC), Klynveld Peat Marwick, Goerdeler (KPMG), and Ernest and Young (EY). This study measured audit quality using a dummy where a value of 1 is given if the firm is audited by the Big 4 and 0 otherwise.

3.6.4 Measurements of Control Variables

Control variables are variables that may influence the model but are not the focus of the study. This study employed leverage, firm size, performance, and board independence as control variables.

Leverage

Leverage refers to the amount of debt component in the capital structure of entities. Amidu et al. (2019) posit that firms with a high debt ratio are more likely to engage in corporate tax-aggressive behaviours than firms with a low debt ratio. According to the authors, firms in different tax jurisdictions use debt financing to avoid payment of taxes and this is possible because interest on debt is tax-deductible from the business income. This study, therefore, measured leverage using the ratio of total long-term debts to equity. This measurement is in line with how Dam and Scholtens (2012) and Mao (2019) measured leverage in their studies.

Firm Performance

Previous studies (Minnick & Noga, 2010; Lanis & Richardson, 2012) suggest that firms engage in corporate tax aggressiveness to cut down the cost associated with tax to increase their profit. That is, high-profit earner firms engage more in corporate tax aggressiveness. According to Gaaya et al. (2017), profitable entities have more motivation to engage in corporate tax avoidance to reduce their tax burden than low-profit earner firms. This study employed the return on asset method as a proxy for firm performance.

Board Independence

Lanis and Richard (2011) assert that the more non-executive directors on the board, the less likely managers will engage in aggressive tax activities. The authors suggest that the board of directors monitor the activities of management and make sure rules and regulations are complied with. A board with more non-executive directors will strengthen the independence of that board and ensure that managers do not engage in non-compliance behaviours. To measure board independence, the study employed a ratio of non-executive directors to total board members (Lanis & Richardson, 2011; Aronmwan & Igbino, 2021).

Firm Size

Lanis and Richardson (2013) posit that larger firms are likely to use unacceptable tax reduction strategies to reduce tax as compared to smaller firms, explaining that larger firms have the skilled personnel, capability, and economic and social power to engage in non-compliance behaviours. This study used log of a firm's total assets as a proxy for firm size. Previous studies (e.g., Mao, 2019; Davis et al., 2016) also employed this method to measure the firm size in their studies.

3.7 Research Models and Data Analysis

3.7.1 Models Estimation Techniques

The study focuses on 27 firms across ten (10) years (panel data), hence a panel regression model is adopted. Panel data captures observations of multiple phenomena obtained over several periods concerning the same research population (Matyas & Sevestre, 2013). The strength of panel regression, which makes it suitable for the study, is the fact that it accounts for individual-specific heterogeneity. It also gives more data variation with a greater degree of freedom but less collinearity, and can easily measure effects that cannot be easily observed in either cross-section or time-series data (Matyas & Sevestre, 2013). To achieve the objective of this study, two-panel regression models were developed where the dependent variable remains unchanged in all cases. The first model captures audit quality and CSR as independent variables, and the second model uses the first model and includes the interaction term of audit quality and CSR (i.e., $AQ * CSR_{it}$). The models were adapted from Lanis and Richardson (2013) and Gaaya et al. (2017).

Model 1: Effect of CSR and Audit Quality on Corporate Tax Aggressiveness

$$CTA_{it} = \alpha_0 + \beta_1 CSR_{it} + \beta_2 AQ_{it} + \beta_3 BIND_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \varepsilon_{it} \quad (1)$$

Model 2: Moderating effect of Audit Quality on the relationship between CSR and Corporate Tax Aggressiveness

$$CTA_{it} = \alpha_0 + \beta_1 CSR_{it} + \beta_2 AQ_{it} + \beta_3 AQ * CSR_{it} + \beta_4 BIND_{it} + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \beta_7 ROA_{it} + \varepsilon_{it} \quad (2)$$



Table 1: Variable Definitions

Name	Definition
CTA	Corporate Tax aggressiveness: measured as $STR - ETR$; where $ETR = (\text{Tax charged} - \text{deferred tax}) / \text{Accounting Profit before tax}$
CSR	CSR disclosure index per ISO 26000: Number of CSR activities based on ISO 26000 7 core subjects of social responsibility present in the firm's annual financial statement divided by 7
AQ	Audit Quality: using a dummy where a value of 1 is given if the corporate entity is audited by Big 4 and 0 otherwise
LEV	Leverage: ratio of long term debts to equity
SIZE	Firm Size: log of total assets of the firm
ROA	Firm Performance: firm's pre-tax on total assets (ROA)
BIND	Board Independence: ratio of non-executive directors to total board members
β 's	Parameter vectors
α_0	Constant term
ε	Error term

3.7.2 Models Estimation

STATA is renowned for its versatility in handling a wide range of data types, including cross-sectional, time-series, and panel data. STATA offers the flexibility needed to manipulate and analyse complex datasets efficiently. In recent academic discourse, STATA has emerged as a preferred software choice for estimating results from panel data. For instance, studies (Mao, 2019; Zeng, 2019; Baldwin, 2019; Zhang et al., 2020) employed STATA to estimate research results

from penal data. According to Zhang et al. (2020), STATA is lauded for its user-friendliness and expansive array of statistical analyses, making it a favoured tool for researchers. The authors emphasize that STATA excels in presenting results clearly, allowing for the reproducibility and documentation of analyses, essential for publication and review. Baldwin (2019) underscores STATA's suitability for panel data analysis, particularly for estimating models with panel datasets. The regression model in this study was estimated using the STATA software version 15 since this study involves involves the analysis of penal data.

3.8 Research Model Diagnostics

Various tests were conducted to evaluate the appropriateness of the research model used for estimating. The Statistical tests include the model specification test, the Heteroskedasticity series test, and the serial correlation test.

3.8.1 Model Specification Test

Model specification is considered one of the processes of building a statistical model. It involves choosing an appropriate functional form to estimate the research model. The two main forms of model specification under panel regression are fixed effects and random effects specification approaches. In fixed effects, it is assumed that the individual-specific effects are correlated with the explanatory variables. The econometric application of fixed effects operates on the assumption that the group mean represents a non-random sample from the population, unlike the random effects model where the mean represents a random sample (Ramsey & Schafer, 2002). In the literature, the Hausman test is often employed in choosing between a random-effects model or a fixed-effects model. The test operates on the following hypotheses:

- *H₀ (null hypothesis): the preferred model is random effects;*
- *H_a (alternate hypothesis): the preferred model is the fixed effect model*

Therefore, this study utilizes the Hausman test in deciding whether the research model should be estimated using fixed-effects or random effects.

3.8.2 Diagnostics for Serial Correlation

Serial correlation occurs in time-series studies when errors associated with a specific period carry over into future periods. It is important to note that the presence of serial correlation can reduce the efficiency of estimates in a regression model. Additionally, serial correlation can introduce bias into the estimated variance of regression coefficients and may result in excessively high significance levels during hypothesis testing. This study assesses serial correlation using the Pesaran test. The Pesaran test operates based on the following hypotheses:

H₀ (null hypothesis): There is no serial correlation (rejected)

H_a (alternative hypothesis): There is serial correlation

3.8.3 Test for the Presence of Heteroskedasticity

One basic assumption underlying linear regression analysis is that the error term should be homogenous (Hair et al., 2014). When the basic underlying assumption is violated, it creates the presence of heteroscedasticity in the regression model. According to Hair et al. (2014), heteroskedasticity is caused by bias in the residuals, which always results in wrong levels of significance. In literature, the Modified Wald test has been hailed as one of the most robust for testing for the presence and absence of groupwise heteroskedasticity in the residuals of a fixed effect regression model (Greene, 2000). Therefore, the study uses the Modified Wald test to assess

the model for heteroskedasticity. The Modified Wald test operates based on the following hypotheses:

Ho (null hypothesis): There is homoskedasticity

Ha (alternative hypothesis): There is heteroskedasticity

3.9 Ethical Considerations

The data were used objectively without tampering with them or twisting interpretations. In addition, the information was only used for academic research and not for other reasons like intelligence gathering or market analysis, etc.

3.10 Chapter Summary

This chapter presented the methodology that underpins the conduct of this study. The first aspect of this chapter discussed the research paradigm by deliberating on the philosophy behind the study. The second section described the research design by highlighting the various research approaches and the reason for employing the quantitative research approach. Again, it explained the data source and how the constructs, namely corporate tax aggressiveness, CSR, audit quality, leverage, firm size, firm performance, and board independence, were measured. The last section discussed the panel data analytical tool and how the panel model estimator will be selected by conducting the Hausman specification test.



CHAPTER FOUR

ANALYSIS

4.1 Introduction

This chapter, consisting of three parts, presents and discusses the findings of the study. The first section looks at the background information of the sample. The next section discusses the diagnostics tests and model specification tests. The final section presents and discusses the results of the two estimated regression models. Considering that two research model specifications were developed for this study, a separate section was used to discuss the results of each of the two models.

4.2 Descriptive Statistics and Characteristics of Sample

4.2.1 Characteristics of Sample

The study intended to use all the firms listed on the Ghana stock exchange. However, some of the firms failed to meet the inclusion criteria. For instance, out of the 36 firms listed on the Ghana Stock Exchange, seven (7) of these firms were listed after the year 2011. Any firm listed after the 2011 year was excluded because of the unavailability of the complete financial statements from 2011 to 2020. Some financial statements were prepared using foreign currency and those firms were excluded because of exchange rate fluctuations from 2011 to 2020. This reduced the study sample to 27 firms listed on the Ghana Stock Exchange from 2011 to 2020. The data were categorised into manufacturing industries, distribution industry, financial industry, food and beverage, information communication technology, and agriculture.

4.2.2 Descriptive Statistics

Table 2: Descriptive Statistics

Table 2 presents the descriptive statistics for Corporate Tax Aggressiveness, Corporate Social Responsibility, and Audit Quality. It also captured the control variables used for this study which include Leverage, Firm Performance, Firm Size, and Board Independence. CTA represents Corporate Tax Aggressiveness measured by the difference between the Statutory Tax Rate and the Effective Tax Rate. CSR represents Corporate Social Responsibility measured by the CSR disclosure index as per ISO 26000: Number of CSR activities based on ISO 26000 7 core subjects of social responsibility present in the firm annual financial statement divided by 7. AQ represents Audit Quality measured by a dummy that takes 1 where the firm is audited by the Big 4 Audit firm and 0 otherwise. LEV represents Leverage defined as the ratio of long-term debt to equity. SIZE is Firm Size measured as a log of total assets. ROA represents Firm Performance (Return of Assets) measured as the firm's pre-tax on total assets and BIND represents Board Independence measured as the ratio of the number of non-executive members presents on the board.

Variable		Mean	Std. Dev.	Min	Max	Observations
CTA	overall	0.071	0.110	-0.170	0.380	N = 270
	between		0.098	-0.037	0.281	n = 27
	within		0.052	-1.000	0.192	T = 10
CSR	overall	0.242	0.126	0.000	0.600	N = 270
	between		0.105	0.108	0.445	n = 27
	within		0.073	-0.019	0.503	T = 10
AQ	overall	0.733	0.443	0.000	1.000	N = 270
	between		0.430	0.000	1.000	n = 27
	within		0.134	0.333	1.333	T = 10
LEV	overall	0.289	0.342	0.000	3.200	N = 270
	between		0.266	0.000	1.259	n = 27
	within		0.134	-0.450	2.295	T = 10
SIZE	overall	5.197	1.408	1.300	7.200	N = 270
	between		1.301	1.870	6.834	n = 27
	within		0.588	3.977	7.677	T = 10
ROA	overall	0.099	0.102	-0.139	0.520	N = 270
	between		0.081	0.011	0.279	n = 27
	within		0.064	-0.132	0.527	T = 10
BIND	overall	0.771	0.117	0.567	0.929	N = 270

between	0.098	0.579	0.909	n = 27
within	0.068	0.591	0.934	T = 10

The descriptive statistics show that corporate tax aggressiveness (CTA) has an overall minimum value of -0.170 and a maximum value of 0.380.; and the standard deviation and overall mean of CTA are 0.110 and 0.071, respectively. This implies that not every entity engages in tax-aggressive behaviour as evidenced by the overall minimum value of -0.170; however, the mean value of 0.071 and maximum value of 0.380 explain that some of the selected firms listed on the Ghana Stock Exchange engage in tax-aggressive behaviours. It was observed during the data collection stage that some loss-making firms were recognising tax liability. CTA has between variation of 0.098 and within variation of 0.052, denoting that changes in tax-aggressive practices within a particular firm does not differ too much across the selected sampled firms.

Corporate social responsibility (CSR), on the other hand, has an overall minimum value of 0.000 and a maximum value of 0.600. The standard deviation and overall mean values of CSR are 0.126 and 0.242, respectively. This shows that there is presence or existence of CSR activities among the sampled firms for this study as evidenced by a maximum value of 0.600 and the mean value of 0.242. However, not all the firms perform CSR activities every year as shown by the overall minimum value of 0.000. It was observed during the data collection stage that although all the firms selected for the study reported their CSR activities, there were instances where some firms did not engage in CSR activities in at least a particular year.

The overall mean of 0.242 with a maximum value of 0.600 denotes that not all the firms aggressively engage in CSR activities. Also, the between and within variations are 0.105 and 0.073, respectively indicating that changes in CSR within a particular firm are almost similar and do not vary too much from the changes in CSR practices across all firms selected for the study.”

The summary statistic indicates that audit quality (AQ) has a standard deviation and an overall mean of 0.443 and 0.733, respectively; and it has a minimum value of 0.000 and a maximum value of 1.000. The results denote that most of the sampled firm listed on the Ghana Stock Exchange are audited by the Big 4 auditing firms as evidenced by the mean value of 0.7333, whereas the minimum value of 0.000 depicts that not every firm sampled for the study are audited by the Big 4 firms.

In the case of the control variables, leverage (LEV) has a standard deviation of 0.342 and an overall mean of 0.289 with a minimum value of 0.000 and a maximum value of 3.200. This indicates that although the sampled firms do finance the business with debt as evidenced by the mean value of 0.289 and a maximum of 3.200, not all the firms have debt in their capital structure as shown by the minimum value of 0.000. The maximum value of 3.200 implies that some of the sampled firms are highly geared whereas the minimum value of 0.000 suggests that some firms do not finance their business with debt at all. Firm size (SIZE), on the other hand, recorded a standard deviation of 1.408 and an overall mean value of 5.197 with a minimum value of 1.300 and a maximum value of 7.200. This explains that most of the sampled firms for this study are large firms, and only a few firms are small in size.

Firm performance (ROA) has standard deviation and mean values of 0.102 and 0.099, respectively, with a minimum value of -0.139 and a maximum value of 0.520. This shows that most of the sampled firms make small returns from the asset they have invested in their business as revealed by the mean value of 0.098. The maximum value of 0.520 denotes that there are firms that make huge returns on their investment, and others do not make any returns at all as shown by the

minimum value of - 0.139. The summary statistics indicate that board independence (BIND) has an overall mean of 0.771 and a standard deviation of 0.117. The minimum and maximum values are 0.567 and 0.929, respectively. This implies that the majority of the board members of the sampled firms are non-executive members.

4.2.3 Correlations Matrix

Table 3: Correlations Matrix with P-values

Table 3 presents a Pairwise correlation that establishes the relationship between the variables under study. CTA represents Corporate Tax Aggressiveness measured by the difference between the Statutory Tax Rate and the Effective Tax Rate. CSR represents Corporate Social Responsibility measured by the CSR disclosure index per ISO 26000: Number of CSR activities based on ISO 26000 7 core subjects of social responsibility present in the firm annual financial statement divided by 7. AQ represents Audit Quality measured by a dummy that takes 1 where the firm is audited by the Big 4 Audit firm and 0 otherwise. LEV represents Leverage defined as the ratio of long-term debt to equity. SIZE represents Firm Size measured as a log of total assets. ROA represents Firm Performance (Return of Assets) measured as the firm’s pre-tax on total assets and BIND represents Board Independence measured as the ratio of the number of non-executive members presents on the board.

Variables	CTA	CSR	AQ	LEV	SIZE	ROA	BIND
CTA	1.000						
CSR	0.543 (0.000)	1.000					
AQ	-0.808 (0.000)	-0.556 (0.233)	1.000				
LEV	0.528 (0.000)	0.199 (0.051)	-0.397 (0.000)	1.000			
SIZE	0.632 (0.000)	0.378 (0.001)	0.628 (0.000)	-0.211 (0.267)	1.000		
ROA	0.616 (0.000)	0.446 (0.000)	-0.485 (0.061)	-0.309 (0.000)	-0.611 (0.000)	1.000	
BIND	-0.270 (0.000)	-0.247 (0.431)	0.182 (0.123)	-0.179 (0.003)	0.217 (0.000)	-0.278 (0.000)	1.000

From Table 3, it can be seen that corporate social responsibility (CSR) correlates positively with corporate tax aggressiveness (CTA) suggesting that socially responsible firms engage in tax

aggressiveness to reduce the amount of tax they pay to the state. That is, corporate entities may engage in CSR as a strategy to engage in corporate tax aggressiveness. However, audit quality (AQ) correlates negatively with corporate tax aggressiveness. This suggests that audit quality demotivates management from engaging in tax aggressive activities. That is, entities will avoid tax less if the audit is carried out by the Big 4 auditing firms.

Leverage (LEV) correlates positively with corporate tax aggressiveness, indicating that entities that finance their business with huge debt are likely to engage in tax aggressiveness. Also, firm size (SIZE) has a positive correlation with corporate tax aggressiveness depicting that large firms are likely to avoid tax compared to smaller firms. Again, the pairwise correlation results show that firm performance (ROA) correlates positively with corporate tax aggressiveness. This implies that high-profit-earner firms engage in tax-aggressive behaviour more than low-profit earners. However, board independence (BIND) has a negative correlation with corporate tax aggressiveness. This indicates that the more non-executive directors on the board (board independence), the less likely management engages in corporate tax aggressiveness

4.2 Research Models Diagnosis Checks

This section discusses the diagnosis checks of the research models. Performing diagnosis checks help to assess the reliability and validity of the models. According to Hair et al. (2010), researchers should not proceed to interpret results when diagnostic checks have not been carried out. Interpreting output without diagnosing the model and its underlying data may culminate in biased and unreliable estimates. The test for diagnosing models include the Hausman Specification test for selecting the best model for estimation, the Modified Wald test for Groupwise Heteroscedasticity, the Variance Inflation Factor (VIF) to test for Multicollinearity and the

Wooldridge test was used to test for Autocorrelation in panel data. These tests have been presented below.

4.2.1 Test for the Presence of Heteroskedasticity

One basic assumption underlying linear regression analysis is that the error term should be homogenous (Hair et al., 2014). When the basic underlying assumption is violated, it creates the presence of heteroscedasticity in the regression model. According to Hair et al. (2014), heteroskedasticity is caused by bias in the residuals, which always results in wrong levels of significance. In literature, the Modified Wald test has been hailed as one of the most robust for testing for the presence and absence of groupwise heteroskedasticity in the residuals of a fixed effect regression model (Greene, 2000). Therefore, the study uses the Modified Wald test to assess the model for heteroskedasticity. The results of the test are presented in Table 4.

Table 4: Presence of Heteroskedasticity

Modified Wald test for groupwise heteroscedasticity in fixed effect regression model	
H₀: $\sigma(i)^2 = \sigma^2$ for all I	
chi2 (27) =	1560.24
Prob>chi2 =	0.0712

The Modified Wald test for groupwise heteroscedasticity works on the null hypothesis that error term is homoscedastic when the p-value is more than 5%, whereas the alternative hypothesis indicates that the error terms are heteroskedastic. From Table 4, the results of the Modified Wald test show a p-value of 0.0712 (7%), which is more than 5% significant. This denotes that we fail to reject the null hypothesis and accept that the regression model does not suffer heteroscedasticity.

4.2.2 Testing for Multicollinearity

A multicollinearity test was performed prior to testing the hypotheses by estimating the variance inflation factor (VIF) for each of the variables or constructs. In literature, there is an ongoing argument about the acceptability of the VIF threshold value in determining the multicollinearity nature of the model (Henseler & Ringle, 2009). According to Hair et al. (1995), multicollinearity problem is absent when the mean of VIF is less than 10 whereas other studies (e.g., Diamantopoulos & Sigauw, 2006; Hair et al., 2011) argued that the mean of VIF should be less than 5 to confirm the absence of a multicollinearity problem. Table 5 presents the VIF results.

Table 5: Variance Inflation Factor

	VIF	1/VIF
AQ	2.305	0.434
SIZE	2.134	0.469
ROA	1.852	0.54
CSR	1.588	0.63
LEV	1.257	0.796
BIND	1.122	0.891
Mean VIF	1.71	

The results showed a mean VIF of 1.71, which denotes that there is an absence of a multicollinearity problem in the model: this is consistent with the advantage of using panel data. According to Hair et al. (2011), one advantage of using panel data is that there is a less multicollinearity problem.

4.2.3 Model Specification Test

A model specification test is conducted to select the appropriate function form to estimate the research model. In panel regression, there are basically two main forms of model specification that considers the heterogenous nature of the data set. These are the fixed effect and the random effect.

The econometric application of fixed effect operates in the assumption that the individual-specific effects correlate with the independent variables. The fixed effect model estimator is more appropriate when the data for the study is not randomly selected as opposed to the random effect model estimator. The study employed inclusion and exclusion criteria for selecting the data for the study. The data was not randomly selected, which makes the application of the fixed effect estimator appropriate.

The researcher actually confirmed the fixed effect estimator as the appropriate estimator for the study by carrying out Hausman's (1978) specification test. The Hausman (1978) specification test proved that a fixed effect model is preferred over the random effect model estimator for this study. In literature, the Hausman test is frequently used in choosing between a fixed effect model or a random effect model. The test operates on the following hypothesis

- *H₀ (null hypothesis): the preferred model is random effects;*
- *H_a (alternate hypothesis): the preferred model is the fixed effect model*

Table 6: The Results of the Hausman Test

	Coef.
Chi-square test value	30.429
P-value	0

From Table 6, it can be seen that the P – value is less than 5%. The results of the Hausman test show that the fixed effects estimator is appropriate and preferred over the random effect estimator. This means that the null hypothesis is rejected.

4.2.3.1 Initial Estimation of Model

The R squared of the estimated model 1 is 80%, revealing that the independent variables explain about 80% of the variation in corporate tax aggressiveness. The results of model 2 reveal that the independent variables explain 83% of the variation in corporate tax aggressiveness.

Table 7: Initial Results

Table “7 presents the results of the two models. Model 1 presents the results of the effect of CSR and Audit Quality on Corporate Tax Aggressiveness. Model 2 estimates the results of the moderating effect of Audit Quality on the relationship between CSR and Corporate Tax Aggressiveness. CTA represents Corporate Tax Aggressiveness measured by the difference between the Statutory Tax Rate and the Effective Tax Rate. CSR represents the Corporate Social Responsibility measured by the CSR disclosure index per ISO 26000: Number of CSR activities based on ISO 26000 7 core subjects of social responsibility present in the firm annual financial statement divided by 7. AQ represents Audit Quality measured by a dummy that takes 1 where the firm is audited by the Big 4 audit firms and 0 otherwise. LEV represents Leverage defined as the ratio of long-term debt to equity. SIZE represents Firm Size measured as a log of total assets. ROA represents Firm Performance (Return of Assets) measured as the firm’s pre-tax on total assets and BIND represents Board Independence measured as the ratio of the number of non-executive members presents on the board. The stars ***, ** and * indicate significant at 1%, 5% and 10% significant level, respectively.”

Variables	Model 1	Model 2
	CTA	CTA
	Coef (t-stats)	Coef (t-stats)
Intercept	18.964*** (4.81)	3.738* (1.73)
CSR	0.101*** (2.92)	0.608*** (7.66)
AQ	-14.129*** (-9.76)	3.794 (1.31)
LEV	0.073*** (3.69)	0.063** (3.48)

SIZE	0.391 (0.98)	0.261 (0.69)
ROA	0.174*** (3.90)	0.118*** (2.82)
BIND	-0.04 (-1.24)	-0.032 (-1.08)
CSR * AQ		-0.618*** (-6.96)
R-squared	0.800	0.833
Observation	270	270
Time Effect	Yes	Yes
Industry Effect	Yes	Yes

These models may be biased and rendered less efficient if serial correlations are present; hence, the model is diagnosed for serial correlation using the Wooldridge (2002) test for serial correlation.

4.2.3.2 Serial Correlation

Serial correlation is the relationship between a given variable and a lagged version of itself over various time intervals. That is, there is serial correlation when the current value of the dependent variable depends on its previous value. The Wooldridge test is used to test for serial correlation in panel data.

Table 8: Wooldridge Test for Serial Correlation

“H0: no first-order autocorrelation”

F (1, 26) = 19.059

Prob > F = 0.002

The Wooldridge test for serial correlation (refer to Table 8) formulates a null hypothesis that there is no serial correlation in the model. However, a P-value of 0.002 at a 5% significance level suggests that we should reject the null hypothesis and treat the model to eliminate serial correlation. One of the ways to correct the serial correction problem is by taking the lagged of a dependent variable (Godfrey,1978; Wasswa, 2021; Piper, 2022). This study thus corrects serial correlation by taking a lag of the dependent variable (L.CTA). Since there is a relationship between the current value of the CTA and the previous value, the previous value (Lagged CTA) of that variable shall be added to the explanatory variables.

4.3 Discussion of Results

This section presents the empirical results of the study based on the research objectives. The first section discusses the effect of CSR on corporate tax aggressiveness, followed by the relationship between audit quality and corporate tax aggressiveness and the final part discusses the impact of audit quality on the relationship between CSR and corporate tax aggressiveness. The results are presented in Table 9.

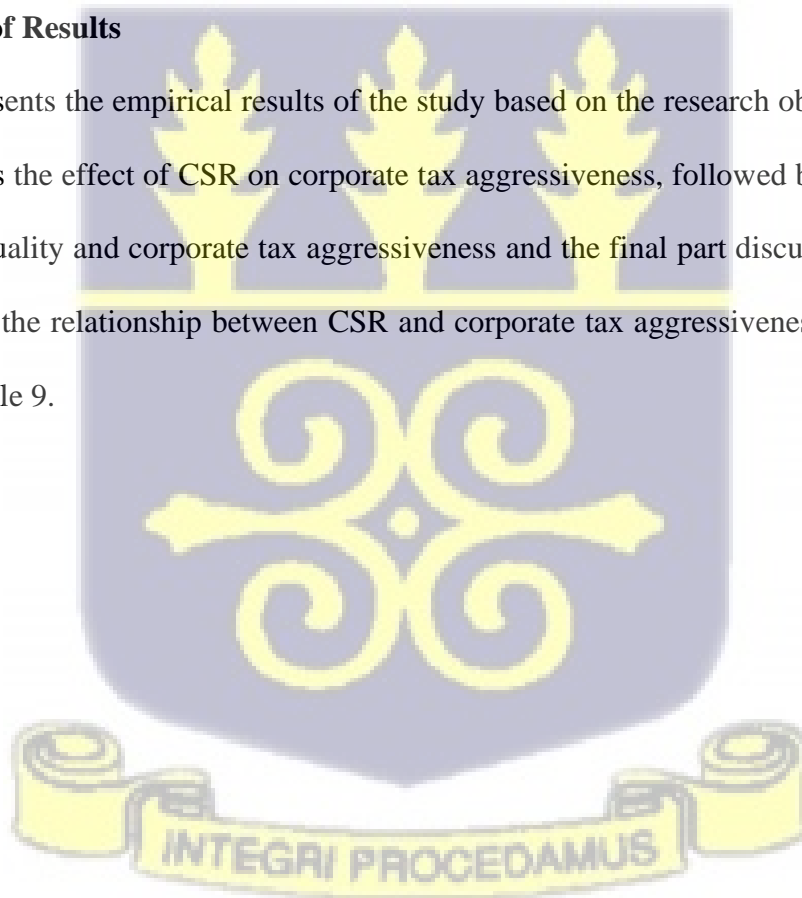


Table 9: Final Regression Results

Table 9 presents the results of the two estimated models after the serial correlation in the models is corrected. Model 1 presents the results of the effect of CSR and Audit Quality on Corporate Tax Aggressiveness. Model 2 estimates the results of the moderate effect of Audit Quality on the relationship between CSR and Corporate Tax Aggressiveness. CTA represents Corporate Tax Aggressiveness measured by the difference between the Statutory Tax Rate and the Effective Tax Rate. CSR represents Corporate Social Responsibility measured by the CSR disclosure index per ISO 26000: Number of CSR activities based on ISO 26000 7 core subjects of social responsibility present in the firm annual financial statement divided by 7. AQ represents Audit Quality measured by a dummy that takes 1 where the firm is audited by the Big 4 audit firms and 0 otherwise. LEV represents Leverage defined as the ratio of long-term debt to equity. SIZE represents Firm Size measured as a log of total assets. ROA represents Firm Performance (Return of Assets) measured as the firm's pre-tax on total assets and BIND represents Board Independence measured as the ratio of the number of non-executive members presents on the board. The stars ***, ** and * indicate significant at 1%, 5% and 10% significant level, respectively.

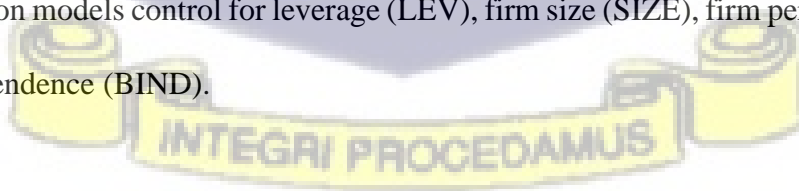
Variables	Model 1	Model 2
	CTA	CTA
	Coef (t-stats)	Coef (t-stats)
Intercept	21.489 (5.31)	7.469** (2.54)
CSR	0.113*** (3.27)	0.559*** (6.94)
AQ	-13.226 (-9.03)	5.938** (2.03)
LEV	0.074*** (3.80)	0.042** (2.36)
SIZE	0.523 (1.28)	0.524 (1.39)
ROA	0.16*** (3.56)	0.095** (2.26)
BIND	-0.054 (-0.63)	-0.008 (-0.25)

LagCTA	-0.104*** (-3.04)	0.256*** (4.76)
CSR * AQ		-0.579*** (-6.46)
R-squared	0.812	0.857
P-value of F-statistics	0.000	0.000
Observation	243	243
Time Effect	Yes	Yes
Industry Effect	Yes	Yes

From Table 9, model 1 is corrected for serial correlation, which increased the R squared from 80% to 81%. This indicates that 81% of the variation in corporate tax aggressiveness is explained by the predictor variables. The F – statistics of model 1 has a p-value of 0.000, which is less than 0.05. This suggests that model 1 has a great predictive power, which makes it important for policy making.

Furthermore, the estimated model 2 is corrected for serial correlation, which has increased the R squared from 83% to approximately 86%. This indicates that 86% of the variation in corporate tax aggressiveness is explained by the predictor variables. The F – statistics of model 2 has a p-value of 0.000, which is less than 0.05. This indicates that model 2 has a great predictive power, which makes it relevant for policy making.

The two regression models control for leverage (LEV), firm size (SIZE), firm performance (ROA), and board independence (BIND).



4.3.1 Corporate Social Responsibility and Corporate Tax Aggressiveness

Model 1 explains the association between corporate social responsibility (CSR) and corporate tax aggressiveness (CTA). The results of model 1 indicate that CSR has a positive relationship with CTA. The relationship between CSR and CTA is considered statistically significant at a 1% significant level. The results of the study validates H1. The coefficient of the relationship between CSR and CTA is 0.113 implying that one unit increase in CSR activities is associated with 11.3% increase in CTA. The results imply that, with a unit increase in CSR activities, listed firms on the Ghana stock exchange have an 11.3% likely chance of engaging in CTA.

The results confirm the intuition that entities that perform CSR activities engage in CTA as evidenced by the positive coefficient of 0.113. It is possible that some corporate entities engage in CSR because they have the intention to use it as a strategy to minimize the tax payable to tax authorities. That is, entities engage in CSR activities such as donations and providing scholarships that improve the welfare of the society, but some of these entities may have secret intention of over-claiming these donations made to society to reduce the amount of tax payable to the tax authorities. This affirms the proposition that some of these entities trade-off payment of the right amount of taxes for the performance of CSR activities, providing evidence that CSR and tax payment are seen as substitutes rather than complements among some of the listed firms in Ghana.

The results show from a practical perspective that not all the listed firms on the Ghana Stock Exchange engage in CSR activities purposely to improve the well-being of the societies: some of these firms have an ulterior motive of using these CSR activities to create an opportunity to commit tax fraud. This, therefore, can be considered as one of the risk factors that has increased the level

of tax aggressiveness. Therefore, the results of the study create awareness to tax authorities and tax policymakers about the effect of CSR activities on corporate tax aggressiveness.

From a theoretical perspective, the positive relationship between CSR and CTA confirms the legitimacy theory. Legitimacy theory stipulated that for entities to operate for a longer time, some of these entities engage in CSR activities to attain a good reputation and remain legitimate businesses in the eyes of the society. This is because the engagement in corporate tax aggressiveness leads to a serious negative impact on these corporate entities such as reputational damage, penalties and fines from tax administration, media pressure, and even boycotts from customers. To curtail these risks occurring in the future, corporate entities engage in CSR activities to legitimise their behaviours and remain legitimate businesses in the eyes of the society while still engaging in tax-aggressive behaviours. This, therefore, may have motivated some of these Ghanaian firms to increasingly engage in tax-aggressive behaviours to reduce the amount of tax payable to the state without the fear of being sanctioned.

The regression results of model 1 also confirm the positive association between CSR and CTA as revealed by previous studies (e.g., Lanis & Richardson, 2013; Davis et al., 2016; Gulzar et al., 2018; Mao, 2019; Zeng, 2019). Nevertheless, the result is inconsistent with Amidu et al. (2019). According to Amidu et al. (2019), entities that engage in CSR avoid tax less. The inconsistency may be a result of the fact that Amidu et al. (2016) used data covering the 2010 year to 2013 year. During this period, some Ghanaian firms were engaging in CSR but they were not disclosing their CSR activities as revealed by Gatsi, Anipa, Gadzo, and Ameyibor (2016). It may be possible that some of these firms were engaging in CSR as a strategy to reduce their tax but were not disclosing their CSR activities for the researcher to have access to the data. However, this study employed

data covering 2011 year up to 2020 year where the disclosure of CSR activities among firms has increased (Hazen, 2020). Moreover, Amidu et al. (2016) focused on data on non-financial institutions whereas this study included financial institution firms.

4.3.2 Audit Quality and Corporate Tax Aggressiveness

Model 1 also presents the results of the relationship between Audit Quality (AQ) and Corporate Tax Aggressiveness (CTA). The results of the study reveal that AQ has a significant negative relationship with CTA at a 1% significant level, validating H2. The results reveal that a unit improvement in the AQ carried out on the financial affairs of the corporate entities will culminate in about 13.22 units reduction in the level of CTA. The results revealed that AQ deters management from engaging in CTA. That is, in well-audited entities, the opportunistic behaviour of managers may reduce thus demotivating these managers from engaging in tax aggressiveness.

A related study by Gaaya et al. (2017) contended that AQ demotivates businesses to engage in aggressive tax positions to reduce the amount of tax payable to the tax authority, supporting the negative relationship between AQ and CTA. Likewise, the results confirm the intuition that hiring the Big 4 auditors for an audit reduces the level of engagement in tax aggressiveness among firms than hiring non-Big 4 auditors as revealed by previous authors (Eshleman & Guo, 2014; Kyriakou & Dimitras, 2018; Asthana et al., 2019).

Since non-Big4 auditing firms are more likely to engage in tax aggressiveness behaviours than the firms audited by the Big 4, the tax authorities should focus more on those entities that are audited by the non-Big 4 auditing firms by designing and implementing quality procedures for tax audits on the affairs of these entities by the audit unit of the tax authorities.

The results affirm the economic deterrence theory, which stipulated that the fear of being detected for tax non-compliance by a quality tax audit may demotivate management from engaging in tax-aggressive behaviour.

4.3.3 Corporate Social Responsibility, Audit Quality, and Corporate Tax Aggressiveness

Model 2 presents the moderating effect of audit quality (AQ) on the relationship between corporate social responsibility (CSR) and corporate tax aggressiveness (CTA). The results show that the interaction term of CSR and AQ has a significant negative relationship with CTA. The result shows that some of the entities who engage in CSR have ulterior motives to use CSR activities to engage in tax aggressiveness. However, the relationship changes with the introduction of the interaction term of CSR and AQ. That is, the presence of audit quality alters the positive relationship between CSR and CTA to a significant negative relationship.

Therefore, the findings reveal that audit quality curbs managers' motivations to use CSR activities to engage in CTA to reduce the amount of tax payable to the tax authorities. The results of the study validated H3, supporting the moderating effect of AQ on the relationship between CSR and CTA. That is, AQ moderates favourably the relationship between CSR and CTA.

Practically, the interaction between CSR and audit quality on tax aggressiveness demonstrates the potential of quality audits to mitigate corporate tax aggressiveness associated with CSR activities among the listed firms in Ghana. This underscores the substantial impact of quality audits, particularly those conducted by the Big 4 auditing firms, on the use of CSR activities to reduce tax aggressiveness. The results of the study, therefore, emphasise the crucial role of audit practices in maintaining transparency and fairness in corporate tax behaviour.

4.3.4 Leverage, Firm Size, Firm Performance, Board Independent, and Corporate Tax Aggressiveness

The results of the study reveal that leverage (LEV) has a significant positive relationship with corporate tax aggressiveness (CTA), suggesting that entities that finance their business with huge debt are likely to engage in CTA. This result is consistent with Prastiwi and Ratnasari (2019) who stipulated that the higher the debt in corporate entities, the higher the amount of interest they pay, which then reduces the taxable profit to be reported and the tax liability payable to the tax authorities.

In addition, the results show that firm size (SIZE) has a positive but insignificant association with CTA revealing that larger firms are more likely to engage in CTA compared to smaller firms. Larger firms have greater resources and expertise to plan their tax affairs to reduce the tax payable to the state compared to smaller firms. This result is in line with the those of Mao (2019) and Davis et al. (2016), which suggest that geared companies are associated with tax avoidance.

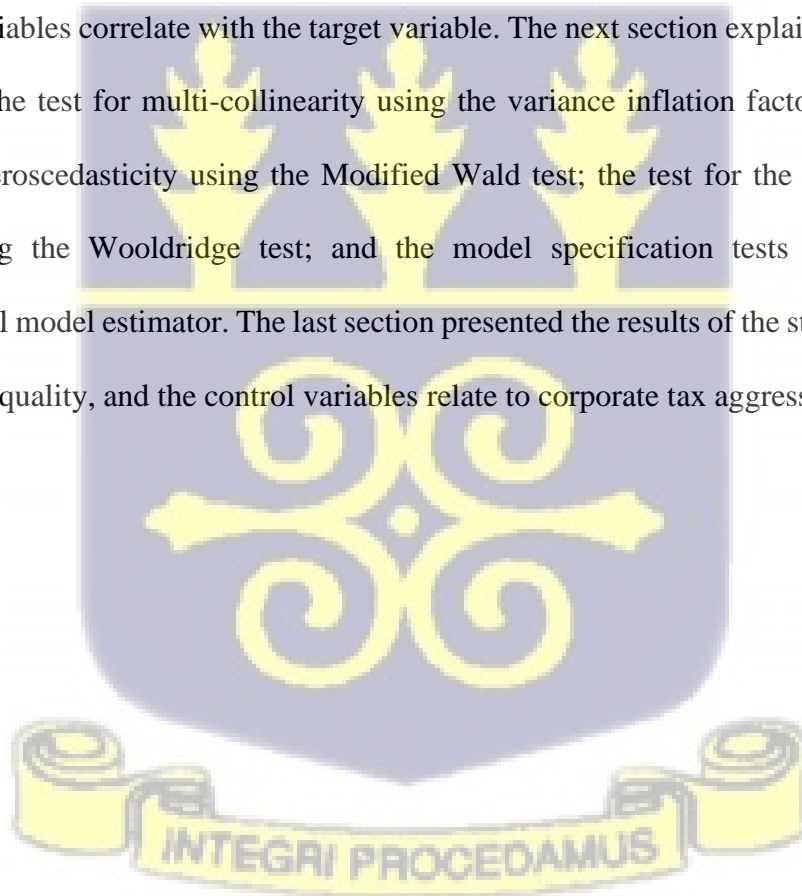
The study also found a positive and significant association between firm performance (ROA) and CTA implying that high-profit earning firms engage in tax-aggressive behaviours more than low-profit earning firms. Profitable firms have more incentives to engage in CTA to reduce the amount of tax payable to the tax authorities. This result is consistent with the results of Gaaya et al. (2017), positing that high-profit earners engage in tax avoidance strategies to reduce the tax payable to the tax authorities more than low-profit earners.

However, the results show that board independence (BIND) has an insignificant negative association with CTA. The results explain that the more non-executive directors on the board, the less the likelihood for management to engage in CTA. The board of directors monitor the activities

of management and make sure rules and regulations are complied with. Having more non-executive directors will strengthen the independence of the board to prevent managers from engaging in tax-aggressive behaviours. The results confirm the negative relationship between board independence and corporate tax aggressiveness as revealed by Lanis and Richardson (2011) and Pucheta-Martínez and Gallego-Álvarez (2019).

4.4 Chapter Summary

This chapter discussed the findings of the study, which were grouped into three sections. The first section presented the characteristics of the sample and the descriptive statistics and discussed how the predictor variables correlate with the target variable. The next section explained the diagnostic tests including the test for multi-collinearity using the variance inflation factor; the test for the presence of heteroscedasticity using the Modified Wald test; the test for the presence of serial correlation using the Wooldridge test; and the model specification tests for choosing the appropriate panel model estimator. The last section presented the results of the study by discussing how CSR, audit quality, and the control variables relate to corporate tax aggressiveness.



CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusions, and recommendations. This chapter is grouped into five parts. The first section discusses the research summary, followed by the conclusions and implication of the findings, then the research contributions, the limitation of the study, and finally, the recommendations.

5.2 Research Summary

The increase in the reported cases of corporate tax aggressiveness in the global environment heightened the interest of the researcher to investigate tax aggressiveness-related issues. CSR has been espoused by some studies as one of the key strategies used by entities to engage in corporate tax aggressiveness. However, the existing studies on CSR and tax aggressiveness produced conflicting evidence and some authors attributed the mixed findings to the variations in the tax laws of the various countries. Extant studies revealed that Ghanaian tax laws are characterized by loopholes and complexities, which create tax fraud opportunities for corporate entities. This motivated the researcher to investigate whether entities operating in Ghana have ulterior motives to use their engagement in CSR activities to reduce the amount of tax payable to the tax authority by taking advantage of the loopholes in the tax laws, and to ascertain whether audit quality curbs the incentive for corporate entities to use CSR as a strategy to engage in tax aggressiveness.

Corporate tax aggressiveness was measured by the difference between the statutory tax rate and the effective tax rate. Corporate social responsibility was measured by the CSR disclosure index

per ISO 26000: Number of CSR activities based on ISO 26000 7 core subjects of social responsibility present in the firm's annual financial statement divided by 7. Audit quality was measured by a dummy that takes 1 where the firm is audited by the Big 4 audit firm and 0 otherwise. Leverage was defined as the ratio of long-term debt to equity. Firm size was measured as a log of total assets. Firm performance (Return on Assets) was measured by the firm's pre-tax on total assets and board independence was measured as the ratio of the number of non-executive members present on the board.

Only listed firms on the Ghana Stock Exchange were considered for this study. The purpose of using only firms listed on the Ghana Stock Exchange was because of the availability and reliability of data. The study used 27 corporate entities for ten years covering 2011-2020, making 270 firm-year observations. Content analysis was performed on the financial statements of the firms under consideration for the data gathering. The resulting data were processed further using the Stata software to conduct a panel regression analysis.

Within the study, two regression models were developed. The first model investigated the effect of corporate social responsibility and audit quality on corporate tax aggressiveness. The second model investigated the impact of audit quality on the relationship between corporate social responsibility and corporate tax aggressiveness. In this regard, three main hypotheses were formulated.

The results of the study were mostly consistent with the existing literature, except for a few instances. The study found that there is a positive and significant relationship between corporate social responsibility and corporate tax aggressiveness. Thus, the study provides evidence that

entities perform CSR activities as strategies to engage in corporate tax aggressiveness to pay less tax supporting the argument that CSR and tax payment act as substitutes rather than complements.

Secondly, audit quality was found to be positive and significant to corporate tax aggressiveness. Thus the finding indicates that managers do not engage in corporate tax aggressiveness if a quality audit is carried out on the financial affairs of the taxpayers or entities. Quality audit detects non-compliance behaviour of management such as over-claiming of donations, under-reporting of income, etc., which in turn demotivates management from engaging in these corporate tax aggressiveness.

Again, the moderating effect of audit quality was evident in the relationships between corporate social responsibility and corporate tax aggressiveness. The results show that in the presence of audit quality, entities cannot use CSR activities to engage in corporate tax aggressiveness.

Finally, the results of the study confirm the economic deterrence theory suggesting that the fear of being detected for tax non-compliance behaviour demotivates the taxpayers' management from engaging in tax aggressive behaviour. The finding was in line with the legitimacy theory signifying that for entities to operate for a longer time, they engage in CSR activities as a strategy to remain a legitimate business in the eyes of the society while still engaging in tax aggressiveness.

5.3 Conclusion and Implications of Findings

This study has delved into the intricate relationship between corporate social responsibility (CSR), audit quality (AQ), and corporate tax aggressiveness (CTA) within the context of Ghana's stock market. The findings reveal not only the connections but also unexpected outcomes and practical implications that contribute to a better understanding of this complex problem.

One unexpected outcome is the dual nature of CSR. While CSR is often seen as a positive force for societal well-being, this study uncovers its potential misuse by some companies to lower their tax burdens. This can be considered one of the risk factors that may increase the level of tax aggressiveness by firms. This duality underscores the need for vigilant tax policies to prevent misuse while promoting genuine CSR activities.

Another unexpected finding is the significant impact of audit quality on reducing tax aggressiveness. Quality audits, especially by prominent firms, serve as a strong deterrent against tax avoidance strategies. This emphasizes the crucial role of audit practices in maintaining transparency and fairness in corporate tax behaviour. The results further indicate that entities that are audited by the Big 4 do not engage in tax aggressiveness as compared to entities audited by non-Big 4 auditing firms. Therefore, the tax authority should focus more on those entities that are audited by the non-Big 4 auditing firms by designing and implementing quality procedures for tax audits on the affairs of these entities.

Moreover, the interaction between CSR and AQ yields valuable insights. It demonstrates that AQ can mitigate the potential tax aggressiveness associated with CSR activities such as over-claiming of donations and other contributions made to society by the taxpayers. These findings suggest that tax authorities should consider designing more rigorous audit procedures to discourage misuse of CSR for tax reduction. This study not only reaffirms the significance of auditing practices and the importance of strong tax policies but also uncovers the details of CSR engagements and its impact on corporate tax behaviour. It provides new perspectives on how CSR can be both a positive societal contribution and a potential avenue for tax fraud.

To sum it up, this study offers valuable insights that can guide policymakers, tax authorities, and businesses towards more transparent, ethical, and responsible tax behaviours.

5.4 Contributions

The study makes a relevant contribution to extant studies within the tax aggressiveness discourse. This study is timely and provides new insights and important input to the growing literature on corporate tax aggressiveness by examining the moderating role of audit quality on the association between CSR and corporate tax aggressiveness.

Moreover, the study provides empirical support for the application of economic deterrence theory in explaining the moderating role of audit quality on the relationship between CSR and corporate tax aggressiveness. The findings of this study extend the literature on audit quality as a deterrence factor to curb the incentive for management to engage in corporate tax aggressiveness.

5.5 Limitation of the Study

Although the findings of the study make some relevant contributions, they are also bound with some limitations. First, the results of the study cannot be generalized to more developed countries considering the institutional setting of Ghana, being the focus of this study.

In determining the CSR disclosure index for this study, publically available CSR reports and annual reports of listed entities on the Ghana Stock exchange were consulted. However, some existing studies reported this approach to be a poor proxy for CSR activity; and there are some weaknesses inherent in ISO 26000 sustainability reporting framework developed in June 2012 by European Commission. This study may be limited by these weaknesses.

The findings of this study have to be interpreted with care even though the results produced by this study are not in any way affected by the above limitations. The study, therefore, makes some important recommendations for future studies in the next section based on the above key limitations identified.

5.6 Recommendations

This study makes some important recommendations to policymakers and practitioners. Considering the study's findings that some corporate entities may exploit CSR activities for tax aggressiveness, tax authorities and policymakers should review and update tax policies to close potential loopholes. The tax authorities and policymakers should design a tax policy to prevent over-claiming of donations made to society for tax reduction purposes. These reforms can help safeguard tax revenue and ensure a fair contribution from all corporate entities.

Tax authorities should prioritize the design and implementation of high-quality tax audit procedures, especially for entities audited by the non-Big 4 auditing firms. These audits should focus on detecting non-compliance behaviours, such as over-claiming of CSR-related expenses, and act as a strong deterrent against tax aggressiveness. The findings suggest that firms audited by the Big 4 auditing firms are less likely to engage in tax aggressiveness. Therefore, policymakers and stakeholders should encourage more entities to seek audit services from the Big 4 firms to enhance transparency and discourage tax avoidance.

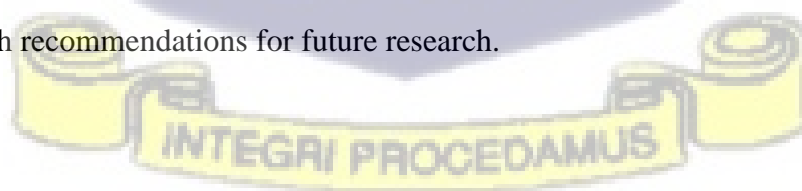
Corporate entities engaging in CSR activities should be closely monitored to ensure that these activities are genuinely aimed at improving societal well-being rather than as a means to commit

tax fraud. Tax authorities should collaborate with regulatory bodies to scrutinize CSR-related expenses for accuracy and legitimacy.

Also, this study makes a great recommendation for future research as it has shed light on complex relationships between CSR, audit quality, and tax aggressiveness using quantitative approach. Accordingly, future research in this area should explore case studies and conduct qualitative study to gain a deeper understanding of the motivations and mechanisms behind the relationships between CSR, audit quality, and tax aggressiveness. This will contribute to a more comprehensive body of knowledge in the field of corporate tax behaviour. Since this study may be limited by weaknesses inherent in the sustainability reporting framework provided by ISO 26000, future research should consider adopting alternative reporting frameworks as a benchmark for scoring CSR indicators.

5.7 Chapter Summary

This chapter presented the summary, conclusions, and recommendations of the study. The chapter is grouped into five parts. The first section discussed the summary and conclusion of the study in its entirety by highlighting the motivation of the study, the measurement of variables, the data source, and the study findings. This was followed by a discussion of the implication of the findings and continued with the research contributions. The limitation of the study followed suit and the chapter ends with recommendations for future research.



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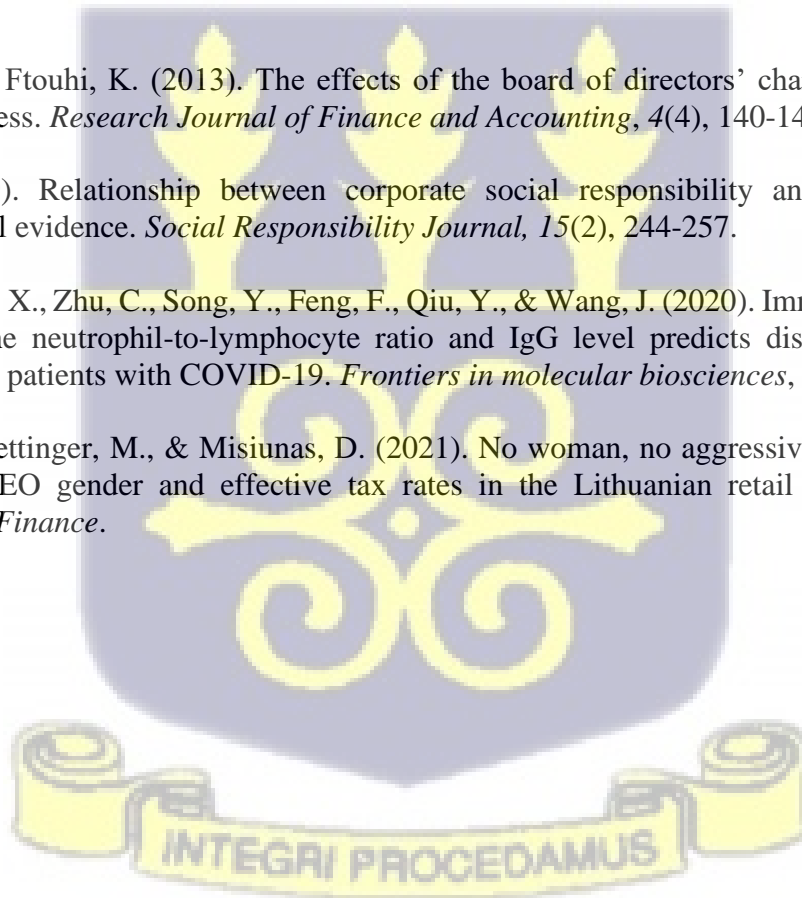
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APPENDIX

ISO 26000 Core Subjects of Social Responsibility

- 1 Organisational Governance
 - 2 Human Right
 - 3 Labour Practice
 - 4 The Environment
 - 5 Fair Operating Practice
 - 6 Customer Issue
 - 7 Community Involvement and Development
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