CSR and Taxes: Examining the Taxing Debate Over a Corporate's Social Responsibility

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Declaration

I, Kemilembe Buberwa, hereby declare that the work on which this thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university. I authorise the University to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

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Table of Contents

List of Figures

List of Tables

Abstract

Emerging research has sought to understand if there is a relationship between corporate taxes and corporate social responsibility (CSR); and more specifically, whether the payment of a company's taxes can become an additional consideration when distinguishing between responsible and irresponsible company behaviour. This study adds to this research as it provides an emerging market's perspective. The study analyses companies listed on the Johannesburg Stock Exchange (JSE) over a five-year period between 2015 and 2019. Effective tax rate was used as a proxy for corporate tax aggressiveness (CTA), CSR scores were used as a proxy for CSR, and various governance and financial variables were included to control for the effects of tax aggressiveness. The purpose of this study is to understand if there is a relationship between a company's CSR and CTA and, if so, to establish the significance and direction of such a relationship. In addition, the study considered the relationship between CTA and each individual category of CSR (namely community, environment, employee and governance) to uncover the extent to which each was likely to have an impact on CTA. Both research questions were assessed via the pooled ordinary least squares (OLS), random effects and fixed effects methods to select the most appropriate modelling technique.

The empirical findings could not find a significant relationship between CSR and CTA. The preliminary analysis found a significantly negative relationship between CTA and three of the control variables (size, leverage and return on assets). The additional analysis found a significantly negative relationship between CTA and the environment category of CSR, as well as a significantly positive relationship between CTA and the community category of CSR. This implies that environmental initiatives are more likely to reduce tax aggressive behaviour, and that community initiatives are more likely to increase tax aggressive behaviour. The additional analysis also found a significantly negative relationship between return on assets and CTA.

Emerging markets face significant development funding gaps. Emerging economies would benefit greatly from improved domestic revenue mobilisation as it would reduce the development funding deficit, reduce dependence on foreign aid, and strengthen relations between governments and their citizens. It is recommended that policy discussions should consider the coordination of CSR activities at a national level, the standardisation of integrated reporting requirements, as well as the inclusion of corporate tax planning activities in integrated reports and CSR disclosures.

List of Acronyms

Acronyms	Meaning
2SLS	Two Stage Least Squares
ATO	Australian Tax Office
ATX	Australian Stock Exchange
BEPS	Base Erosion and Profit Shifting
CEP	Corporate Environmental Performance
CGP	Corporate Governance Performance
CSP	Corporate Social Performance
CSR	Corporate Social Responsibility
CSR_CO	Community Related CSR Initiatives
CSR_EP	Employee Related CSR Initiatives
CSR_EN	Environment Related CSR Initiatives
CSR_GV	Governance Related CSR Initiatives
CSiR	Corporate Social Irresponsibility
CTA	Corporate Tax Aggressiveness
CTP	Corporate Tax Planning
DRM	Domestic Revenue Mobilisation
EOI	Exchange of Information
ESG	Environmental, Social and Governance
ETR	Effective Tax Rate
FE	Fixed Effects
G20	Group of 20
GDP	Gross Domestic Product
GRI	Global Reporting Initiative
ILT	Institutional Legitimacy Theory
IMF	International Monetary Fund
IoD	Institute of Directors
IR	Integrated Reports/Reporting
ITA	Israeli Tax Authority
JSE	Johannesburg Stock Exchange
LEV	Leverage
MKTBK	Market to Book Value
MNC	Multi-National Corporation
MSME	Micro, Small and Medium Sized Enterprises
NETR	Normalised Effective Tax Rate
NPOs	Non-Profit Organisations
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PRI	Principles for Responsible Investment
RE	Random Effects

ROA	Return on Assets
SARS	South African Revenue Service
SLT	Strategic Legitimacy Theory
STR	Statutory Tax Rate
TA	Tax Aggressive/Aggressiveness
TBL	Triple Bottom Line
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development

Chapter 1
Introduction

1.1 Background and Context of the Study

The concept of Corporate Social Responsibility (CSR) has become a major topic and has stimulated lengthy economic, business, social and political debate. Until now there has been no single agreed-upon definition of what constitutes CSR. However, Carroll (1979) designed a framework which has become popular and has been used by many scholars as a basis for analysing a company's social responsibility. According to that model, Carrol asserts that CSR "encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time" (Carroll, 1979, p. 500). That model would later go on to be referred to as Carroll's Pyramid, which still remains one of the most influential CSR models (Carroll, 1999, 2008, 2016; Carroll & Brown, 2018; Visser, 2006).

Carroll's model allows the construct of CSR to evolve as society's expectations of business changes. Today's society expects companies to consider the interests of legitimate stakeholders and to not only focus on shareholder needs (Bhatia & Makkar, 2020; Carroll & Brown, 2018; Donaldson & Preston, 1995; Dunham et al., 2006; Elkington, 2018; Jenkins & Newell, 2013; Lanis & Richardson, 2015). This is because business cannot exist without society (Idowu et al., 2013; Malesky & Taussig, 2019). A wider stakeholder strategy is seen as contributing positively towards an organisation's sustainability, and in that way it safeguards shareholder's interests (Bowen & Gond, 2013; Carroll & Brown, 2018; Jenkins & Newell, 2013; Lanis & Richardson, 2012, 2015). Instances of Corporate Social Irresponsibility (CSiR) can result in reputational damage and threaten an organisation's legitimacy (Carroll & Brown, 2018; Malesky & Taussig, 2019).

Carroll's fourth category of social responsibility (i.e. discretionary responsibilities) has been criticised, with some critics suggesting that the discretionary nature of charitable giving and money directed towards philanthropic activities enable companies to distract from other irresponsible behaviour, such as acts that harm the environment or commit labour abuses. Critics argue that discretionary responsibilities have been distorted to act as a form of social insurance which absolves a company from the consequences of irresponsible behaviour (Luo et al., 2018; Tamvada, 2020). Calls to legislate CSR are driven by attempts to increase the accuracy of reports, improve enforceability, and punish irresponsible behaviour (Luo et al.,

2018; Tamvada, 2020). However, these attempts are impeded by the multiple definitions and interpretations that exist (Dentchev et al., 2017; Malesky & Taussig, 2019).

Interpretations of CSR are heavily influenced by regional nuances which are informed by societal expectations, national values and institutional structures (Bhatia & Makkar, 2020; Cheruiyot & Onsando, 2016; LaGore et al., 2020; Matten & Moon, 2008; Ortas & Gallego-Álvarez, 2020; Visser, 2006). For example, Visser (2006) argues that, for Carroll's Pyramid to be relevant in an African context, discretionary responsibilities would need to be elevated and considered a societal expectation, and not just a desire. The types of CSR in Africa are influenced by unique characteristics, including a greater number of small-sized businesses, a weaker regulatory environment, and a strong sense of community that places greater expectations on corporations to assist in development (Cheruiyot & Onsando, 2016).

Emerging research examines whether corporate tax payments should be a CSR consideration (Aguirre & Piani, 2016; Davis et al., 2016; Lanis & Richardson, 2012, 2013, 2015; Muller & Kolk, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). Corporate tax planning allows companies to maximise profits by reducing taxes (Ortas & Gallego-Álvarez, 2020). While tax avoidance uses legal methods to reduce the amount of tax payable, excessive tax avoidance does raise ethical concerns (De Paepe, 2015; Dowling, 2014; Gavious et al., 2022; Jenkins & Newell, 2013). Tax abuses have been described as socially irresponsible; businesses should pay their fair share of taxes to compensate governments for their continued use of public resources, and to enable economic growth (Aguirre & Piani, 2016; Christensen & Murphy, 2004; Dowling, 2014). McGee (2010) argues that paying fewer taxes benefits society as it increases output, salaries, economic activity and shareholder wealth. Others (Jenkins & Newell, 2013; Sikka, 2010) believe that these gains are short-sighted since they ultimately erode shareholder wealth.

The effects of excessive tax aggressiveness are felt globally but can be devastating for the African continent. African governments do not have the necessary budgets to fund development efforts. Domestic revenue mobilisation (DRM) would help fund development, reduce the continent's dependency on foreign aid, reduce dependency on debt and help strengthen the 'social contract' between African governments and their citizens (De Paepe, 2015; Donkor et al., 2022; Garde & Manatta, 2020; Jenkins & Newell, 2013; OECD Centre for Tax Policy and Administration et al., 2020; *Tax Them and They Will Grow*, 2015).

The relationship between CSR and the payment of corporate taxes is a new and emerging theory. Previous studies have been heavily skewed towards developed nations. The exclusion of emerging markets has been largely due to lack of reliable and sufficient CSR data. This lack of diversity has negatively impacted the ability for prior findings to be generalised. In a small way, this study attempts to correct this anomaly by studying CSR data drawn from South African business activities. In so doing, it provides a perspective from an African context. South Africa has been chosen because it is the second largest economy in Africa, has the largest financial system in Africa and houses the continent's largest stock exchange, the Johannesburg Stock Exchange (JSE) (Donkor et al., 2022; Johannesburg Stock Exchange, 2019; Sampong et al., 2018). Companies listed on the JSE are subject to stringent disclosure requirements and corporate governance standards (Donkor et al., 2022; Kloppers, 2018; Thiart, 2019). As such, South Africa is uniquely positioned to provide insights into the relationship between CSR and corporate taxes on the African continent, more especially within Sub-Saharan Africa.

1.2 Research Problem Statement

Carroll's Pyramid (1979) identified four components of CSR that allow its definition to evolve as society's expectation of business has changed. Economic responsibility is the least contested responsibility that business has towards society. Supporters and detractors of CSR agree that a business needs to remain profitable to survive and that all stakeholders share this expectation (Carroll & Brown, 2018; Friedman, 1970). All stakeholders generally also agree on legal responsibility, but responsibility past that gives rise to conflicting stakeholder interests (Friedman, 1962, 1970).

The business case for CSR suggests that it can be used as a competitive advantage to improve economic performance (Bizcommunity, 2021; Famiyeh, 2017; Graafland & Mazereeuw-Van der Duijn Schouten, 2012). Rangan et al (2015) argue that business should adopt CSR practices as part of a moral obligation and not because the practices are seen as a profitable venture. According to Watson (2015), in times of distress business might abandon CSR activities in favour of increased financial returns. This ability to opt out of responsibility to pursue other objectives has contributed to calls for CSR to be regulated and for stricter measures to deal with non-compliance (Tamvada, 2020).

What constitutes responsible and irresponsible corporate behaviour differs between geographies (Bhatia & Makkar, 2020; Cheruiyot & Onsando, 2016; LaGore et al., 2020; Matten & Moon, 2008; Visser, 2006). Emerging market studies have highlighted the need to reorganise Carroll's Pyramid to prioritise discretionary responsibilities (Cheruiyot & Onsando, 2016; Visser, 2006). These calls can be problematic as discretionary responsibilities (i.e. philanthropic activities) have come under scrutiny, with some researchers (Luo et al., 2018; Tamvada, 2020) referring to them as a form of social insurance that companies buy to mitigate against the consequences of socially irresponsible behaviour.

In recent times, the focus has expanded to consider the relationship between CSR and corporate taxes. Some researchers have questioned whether the payment of taxes should be added to the list of considerations to determine whether a company is behaving in a socially responsible manner (Davis et al., 2016; Jenkins & Newell, 2013; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). Advocates in favour of tax considerations in CSR disclosures argue that increased tax payments result in increased revenues for governments to cater to society's needs (Jenkins & Newell, 2013). Detractors argue that the private sector is better equipped to effectively allocate resources (McCormick & Morgan, 2020; McGee, 2010) and that lower tax rates increase a corporation's ability to service society. There has been limited studies in this area in emerging markets (Agundu & Siyanbola, 2017; Donkor et al., 2022; Mgbame C.O et al., 2017; Mohanadas et al., 2020; Muller & Kolk, 2015).

The impact of tax aggressive practices can be detrimental in any society. Understanding its impacts is even more urgent in developing economies, as they face large development budget deficits. DRM, partly via corporate taxation, can contribute towards long-term sustainable growth (OECD Centre for Tax Policy and Administration et al., 2020). I seek to understand whether there is a relationship between tax aggressiveness and CSR for companies operating in South Africa. Therefore, this study focuses on the following questions:

i. Is there a relationship between CSR and corporate tax aggressiveness?
ii. Are there certain CSR categories that minimise corporate tax aggressiveness?

1.3 Research Objective and Hypotheses

The purpose of this study is to understand if there is a relationship between CSR and the payment of corporate taxes. If such a relationship exists, this study further aims to establish the significance and direction of such a relationship. The objective of the study is to:

i. Determine if there is a relationship between CSR and corporate tax aggressiveness (CTA):

H_0 = CSR and CTA are not correlated in South Africa

H_1 = CSR activities influence CTA in South Africa

ii. Determine if this relationship is stronger for certain CSR categories; i.e., are certain CSR categories better at reducing tax aggressive behaviour?

Category 1, Community:

H_0 = Community orientated CSR and CTA are not correlated in South Africa

H_1 = Community orientated CSR activities influence CTA in South Africa

Category 2, Employee:

H_0 = Employee orientated CSR and CTA are not correlated in South Africa

H_1 = Employee orientated CSR activities influence CTA in South Africa

Category 3, Environment:

H_0 = Environment orientated CSR and CTA are not correlated in South Africa

H_1 = Environment orientated CSR activities influence CTA in South Africa

Category 4, Governance:

H_0 = Governance orientated CSR and CTA are not correlated in South Africa

H_1 = Governance orientated CSR activities influence CTA in South Africa

1.4 Significance of the Research

CSR and CTA have traditionally been discussed and studied independently. Emerging research has been conducted to understand if there is a relationship between these two concepts (Aguirre & Piani, 2016; Davis et al., 2016; Lanis & Richardson, 2012, 2013, 2015; Ortas & Gallego-Álvarez, 2020). Previous studies have been concentrated in the developed world with limited focus on emerging markets (Mohanadas et al., 2020; Muller & Kolk, 2015), and more specifically the African continent (Agundu & Siyanbola, 2017; Mgbame C.O et al., 2017). The results of previous studies have yielded mixed results. Lanis (2012, 2015) found that companies

with high levels of CSR display less tax aggressive behaviour. Davis et al (2016) found that companies with high CSR activity participate in tax aggressive behaviours because they view tax and CSR as substitutes. This research provides additional insights into the emerging research area of CSR and tax aggressiveness. By focusing on South Africa, this research provides an African perspective on the emerging paradigm of tax aggressive practices and CSR.

Countries rely on taxes to fund public expenditure (De Paepe, 2015; Garde & Manatta, 2020; Jenkins & Newell, 2013). In developing nations where tax supply is unable to meet demand requirements, development funds are used to supplement insufficient tax revenues. There has been a noticeable decline in official development assistance (ODA) (OECD, 2014). Foreign borrowing can have a negative impact on interest rates, domestic currency valuations and the balance of payments (Kiptanui, 2017). The development funding gap (required funds versus available funds) is too wide to allow for the crowding-out of one source of funds in favour of another. Improved DRM can assist in closing this gap (OECD Centre for Tax Policy and Administration et al., 2020). In understanding whether such a relationship exists in South Africa, this study appeals to the revenue authorities by helping them better detect instances of corporate tax aggressiveness; the broader government, as the custodians of public funds who would need to understand whether tax deficits have an impact on national borrowing; shareholders, who have a vested interest in the sustainability of a company; and the private individual who is impacted when the tax burden is shifted from the corporate sector onto the private sector.

1.5 Organisation of the Research

This dissertation consists of five chapters. Chapter 2 provides a review of existing literature that refers to the relationship between CSR and corporate tax payments. Chapter 3 contains the research methodology; it describes the research approach and research design. Chapter 4 presents the research findings. Chapter 5 concludes by summarising the study, providing policy recommendations, and discussing avenues for future research.

Chapter 2
Literature Review

2.1 Introduction

The review of literature in this chapter starts by first defining key concepts and terms. Second, it presents an overview of CSR disclosure on the JSE. Third, it discusses the theoretical frameworks that can describe the relationship between CSR and corporate taxes. Lastly, it examines existing empirical literature on this emerging nexus.

2.2 Definition of Terms and Concepts

Emerging research investigates the relationship between CSR and corporate taxes (Davis et al., 2016; Lanis & Richardson, 2012, 2013, 2015; Ortas & Gallego-Álvarez, 2020). This nexus explores whether the payment of corporate taxes should form part of the considerations to determine whether a company is socially responsible (Aguirre & Piani, 2016; Jenkins & Newell, 2013). There are several aspects that need to be considered. The sections below define some key terms and concepts associated with CSR and corporate tax aggressiveness.

2.2.1 CSR and Associated Concepts

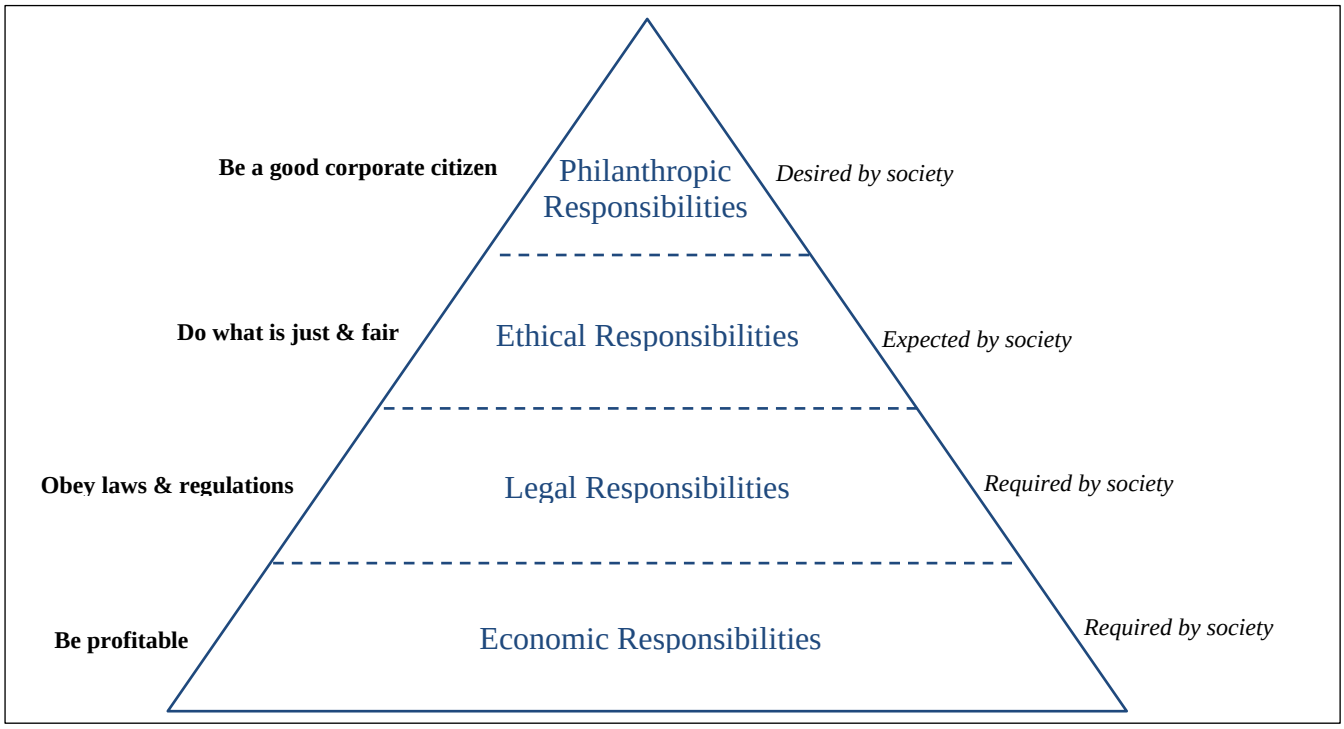
As a concept, CSR has been and continues to be debated. Howard Bowen is commonly considered a founding father of the modern era of CSR. In his landmark book titled *The Social Responsibilities of the (American) Businessman*, he examined the role of business in society. Bowen defined social responsibility as referring to “the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society" (Carroll, 2018, p. 43, citing Bowen).

Drawing on previous discussions, Carroll (1979) produced a unifying definition that embraced both a social and economic obligation, as opposed to choosing between the two. “The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time” (Carroll, 1979, p. 500). This model would later go on to be referred to as Carroll’s Pyramid, introduced in the previous chapter and discussed in more detail here. Carroll’s Pyramid remains one of the most important CSR models.

Components of CSR

Carroll's Pyramid categorises a business's social responsibility into four components, illustrated in Figure 1 below (Carroll, 2016, p. 5). The model suggests that society requires business to fulfil their economic and legal responsibilities; that society expects business to behave ethically; and that society desires additional discretionary efforts (1979). The model can be viewed as a suitable stakeholder framework as it addresses different stakeholder expectations, reflects long term responsibilities and is flexible enough to cater for changing expectations (Carroll, 2016).

Figure 2.1: Carroll's CSR Pyramid



Source: Carroll, 2016, p. 5

a) Economic Responsibilities

The least controversial responsibility is business's economic responsibility. Shareholders continue to invest in a business so long as they receive suitable returns for their investments, the realisation of which incentivises them to continue to invest in the company. If a company is not profitable it will cease to exist. The business case for CSR suggests that CSR and profitability are not mutually exclusive concepts. This is an attractive incentive that merges economic and philanthropic activities.

Through this lens, CSR can add to a company's competitive advantage and contribute towards company profits. The Bizcommunity publication reported that "mining companies in South Africa with higher CSR considerations, as evidenced by their higher Environmental, Social and Governance (ESG) ratings, delivered superior returns to the general market over a three-year period delivering 34% average total shareholder return over the past three years - ten percentage points higher than the general market index" (Bizcommunity, 2021). However Rangan et al (2015) argue this detracts "from CSR's main goal which is to align a company's social and environmental activities with its business purpose and values". Any benefits from a successful strategy (i.e. increased revenues) should be welcomed but they should not be the primary motivation behind acting responsibly (Rangan 2015).

b) Legal Responsibilities

CSR is not legally enforceable. A company's legal responsibility refers to the requirement that business will abide by a country's laws and regulations. With respect to laws and regulations, "it should be acknowledged that most laws and regulations were created based upon some ethical reasoning that they were appropriate. Most laws grew out of ethical issues, e.g. a concern for consumer safety, employee safety, the natural environment, etc., and thus once formalized they represented "codified ethics" for that society" (Carroll, 2016, p. 5). Where a company operates in multiple geographies, the general expectation is that it will abide by the laws of both its parent and host countries.

Emerging research examines the need for regulating CSR (Dentchev et al., 2017; Malesky & Taussig, 2019) but the various interpretations and definitions of CSR has made this difficult. Tamvada argues that, in the absence of enforceable laws, current CSR standards and practices place no legal obligations on companies to act responsibly and in some instances can facilitate irresponsible behaviour (Tamvada, 2020).

c) Ethical Responsibilities

Ethical responsibilities are not legally prescribed but they do form part of a firm's contract with society, i.e. how society expects a firm to behave. Ethical considerations are embedded in all components of the model, such as philanthropic activities motivated by a sense of moral duty (Carroll 2018). Fulfilling this responsibility requires that companies evolve with society. It requires companies to act as good corporate citizens that obey the law and embrace practices

that might not (yet) be required by law. “Part of the ethical expectation is that businesses will be responsive to the spirit of the law, not just the letter of the law.” (Carroll, 2016, p. 3).

Over time, CSR has evolved to include medium and small enterprises and non-humans such as environmental concerns. Responsibility now not only refers to a company’s direct actions but also over its ability to control or influence outcomes (Carroll & Brown, 2018). This evolution is testament to society’s ever-evolving expectations of business. The term sustainability is sometimes used in place of CSR as it does not impose responsibility, has a long term view and is easily understood by business to mean “take care of the present to take care of the future” (Carroll & Brown, 2018, p. 51). The triple bottom line (TBL) framework focuses on simultaneously perusing financial profits while also considering business’s impact on the environment and social equity (Elkington, 2004). The framework was created in response to calls for greater accountability and to promote sustainability.

d) Discretionary Responsibilities

Discretionary responsibilities are voluntary activities that can be labelled as philanthropic contributions. When Rangan et al (2015) surveyed executives and asked them to categorise their CSR initiatives, 48% classified their initiatives as being philanthropic (Rangan et al., 2015). This category of CSR has received criticism for being a passive form of responsibility that excuses a corporate from assuming any other responsibility (Luo et al., 2018; Tamvada, 2020).

Criticisms of modern-day CSR are focused on the supposed voluntary nature of the discipline, the unenforceable standards and the lack of accountability for bad behaviour (Luo et al., 2018; Tamvada, 2020)—all factors contributing towards the failure of the TBL framework. Elkington (2018) called for a review of the framework, cautioning against its misuse to balance trade-offs instead of doing things differently. Tamvada (2020) blames the fourth category of Carroll’s Pyramid for contributing to this dilemma, as it allows for discretionary activities to form part of a company’s social responsibility. Tamvada argued that the notion of philanthropy is used by firms as a form of social insurance. Firms known for large philanthropic donations are assumed to be ‘good’ and are not held accountable for their detrimental business practices (Luo et al., 2018).

Motivations

CSR is voluntary in nature. Business motivations for pursuing CSR strategies have differed and can be broadly categorised as either intrinsic or extrinsic (Graafland & Mazereeuw-Van der Duijn Schouten, 2012).

Extrinsic motivations encourage CSR activities to improve a company's economic performance. This is possible when CSR is viewed as an advantage that promotes a company's reputation and competitiveness, results in higher revenues and increases market share (Famiyeh, 2017). A visible and impactful CSR strategy can affect company revenue through its ability to attract and retain skilled resources (Graafland & Mazereeuw-Van der Duijn Schouten, 2012), since some employees prefer to work for companies that are considered socially responsible. In this respect, senior management whose remuneration depends on company profits pursue CSR as a mean of enriching themselves (Ikram et al., 2020).

Intrinsic motivations encourage CSR activities for ethical and altruistic reasons. Here, CSR strategies are adopted out of a moral obligation that aims to benefit society (Graafland & Mazereeuw-Van der Duijn Schouten, 2012). Financial gain from such strategies is an additional benefit and not the intended outcome.

Attempts to implement CSR strategies can be hindered by resistant corporate culture, competing resources and an unwillingness to change (Caiado et al., 2018). Atmeh (2020) studied the influence on CSR of firm motives in emerging economies and found that intrinsic motivations had a significant effect in driving CSR engagement while extrinsic motivations did not.

Conflicting Interests

Milton Friedman is often cited as being one of the most outspoken critics of CSR. Friedman (1970) argues that CSR detracts from management's sole duty which is to make money for a company's owners. Friedman acknowledges that companies have an obligation to operate within the requirements of the law but famously describes any expectation past that as "a subversive doctrine" (Hakemy, 2017). "Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as possible." (Friedman, 1962, p. 113). He argues further that CSR gives rise to the principal-agent conflict as company

executives adopt CSR initiatives to maintain favour with the public, but their popularity is paid for with shareholder's money (Friedman, 1970).

Counter arguments reference Stakeholder Theory, which proposes that business has a responsibility to a wider group of stakeholders (Carroll, 2008; Carroll & Brown, 2018; Donaldson & Preston, 1995; Elkington, 2018). Modern Stakeholder Theory concedes that there are varying degrees of legitimacy between stakeholders, with varying degrees of influence and different periods of influence. Dunham et al (2006) identify a legitimate stakeholder as a group that can impact a company's ability to exist (i.e. governments, customers, suppliers, employees, financiers and communities). Stakeholder management asks business to consider the impact of its actions on a more holistic view of society. This suggests that considering various stakeholder interests promotes sustainability, which, in turn, protects shareholder interests (Carroll & Brown, 2018; Jenkins & Newell, 2013; Lanis & Richardson, 2015).

Today, businesses are expected to behave responsibly. As a result, few have matched Milton's outright objection towards CSR. The lack of objection cannot be interpreted as agreement. Reports of CSR activity and impact can be grossly exaggerated or falsified outright to avoid negative implications of corporate social irresponsibility (CSiR), and to retain public favour and increase profits (Jedrzej George Frynas, 2005; Luo et al., 2018; Sikka, 2010; Tamvada, 2020).

Regional Differences

While the focus of Bowen and Carroll's work was skewed towards American businesses, regional differences in CSR have also been researched and evidenced (Bhatia & Makkar, 2020; Cheruiyot & Onsando, 2016; LaGore et al., 2020; Matten & Moon, 2008; Ortas & Gallego-Álvarez, 2020; Visser, 2006).

Bhatia and Makkar (2020) found differences in the type and extent of CSR reporting between developed and developing economies. Visser (2006) questioned the eligibility of using Carroll's Pyramid in the African context and highlighted the need to increase the priority given to philanthropic responsibilities. Carroll's Pyramid classifies philanthropic responsibilities as desirable activities. Visser (2006) suggests that these responsibilities are not just desired but are in fact required by African communities. Characteristics that influence the types of CSR required in Africa include the greater prevalence of small businesses, a weaker regulatory

environment and a strong sense of community that places greater expectations on corporations (Cheruiyot & Onsando, 2016). Cheruiyot & Onsando (2016) cautions against grouping African countries as a homogenous entity, as the continent comprises many diverse markets. Their research refers to the minimal impact made by CSR to date but alludes to significant opportunities if done with good intentions (Cheruiyot & Onsando, 2016).

Developed economies can display regional differences in their approach towards CSR. Matten and Moon's Implicit-Explicit Framework suggests that a region's approach to CSR falls on an implicit-explicit continuum. The outcome is based on societal expectations, national values and institutional structures (Matten & Moon, 2008). Explicit expectations lead to deliberate and strategic CSR activities that respond to influence from direct stakeholders and typically involve adherence to regulations or rules (LaGore et al., 2020). American companies traditionally follow explicit methodologies (Moon 2008). Implicit expectations stem from a country's values and norms and result in obligations that a business would not typically assume (LaGore et al., 2020; Matten & Moon, 2008). These obligations respond to the needs of multiple stakeholders, are less self-aggrandising when compared with explicit CSR, and can be easily overlooked (LaGore et al., 2020). Traditionally, European companies were seen as being more implicit in their CSR approach. Moon (2008) noticed a recent shift in European markets, towards a more explicit model owing to changes in culture, legislation and company structures.

Regional influences can impact more than just the type and extent of CSR. Some governments have influenced the definition of CSR and have moved away from voluntary activities to impose a corporate's social responsibility. An extreme example is the Indian government, which from 2013 forced CSR by demanding that businesses direct 2% of their profits towards community development (Carroll & Brown, 2018).

Corporate Social Irresponsibility

While CSiR is not a new concept, it has been popularised by recent company scandals. No single definition exists. Some researchers suggest that it is simply the opposite of CSR (Tench et al., 2012). Riera and Iborra (2017) identify three common considerations of CSiR in current literature, namely stakeholder attentions, intentionality, and its relationship with CSR. Debate exists over whether a socially responsible firm can act irresponsibly, or whether the two concepts are mutually exclusive (Riera & Iborra, 2017)

Companies are considered socially responsible when they cater to multiple stakeholder interests. This commitment to society is partially evidenced by business's adherence to minimum wage standards, employment equity targets, fair trade agreements, reduced pollution, and environmental damage, etc. Interest in CSR among various stakeholder groups has increased. Public fallout in response to CSiR can result in company boycotts, as well as a loss of customers and investors (Bowen & Gond, 2013; Carroll & Brown, 2018). Scenarios in which short term company profits are earned at a disproportionate cost to the community can ultimately impact profits and continued sustainability.

2.2.2 Tax Aggressiveness

Corporate tax is an income tax imposed on a company. It is set by the country's revenue authorities and is charged through a statutory tax rate (STR). Corporate tax planning (CTP) is a process by which companies aim to maximise profits by reducing the amount of taxes payable to revenue authorities (Ortas & Gallego-Álvarez, 2020). There is a clear theoretical distinction between tax evasion and tax avoidance but in practice this distinction can be harder to differentiate.

Corporate Tax Planning

Tax evasion is illegal. It occurs when companies misrepresent their income to pay less taxes by, e.g. overstating deductions, reporting lower profits, or concealing money and associated interest in offshore accounts (Cornell Law School LII Online Legal Dictionary, n.d.). Tax avoidance uses legal methods to minimise the amount of taxes owed, while abiding by the letter of the law. Examples of tax avoidance include tax exemptions and tax deductions (Jane, 2015).

When done excessively, tax avoidance raises ethical questions. Excessive tax reductions, whether by legal or illegal methods, are sometimes referred to as tax aggressiveness (Ortas & Gallego-Álvarez, 2020). Examples of aggressive tax practices include transfer pricing, profit shifting, and the excessive use of tax havens (Jane, 2015). Claims of aggressive tax practices are hard to substantiate since tax disclosures are not mandatory and multinational organisations have complex operating structures (Lanis & Richardson, 2012).

Some believe that reducing tax payments is only logical as it makes business sense to increase profits. "Anyone may arrange his affairs so that his taxes shall be as low as possible. There is no patriotic duty to increase one's taxes and asking companies to intentionally pay a higher

rate is absurd" (Gregory v. Helvering as cited in Aguirre & Piani, 2016, p. 23). Jenkins & Newell (2013) criticise excessive tax avoidance and demand that business pays its "fair share of taxes" (Dowling, 2014; Jenkins & Newell, 2013). They argue that companies benefit society by producing their products and providing their services, paying salaries to employees and stimulating increased economic activity. In turn, a corporation benefits from society by sourcing skilled labour and a supply of customers, and making use of publicly provided infrastructure (e.g. buildings, national security, sanitation and health services). Corporations are expected to pax corporate taxes for their continued use of public resources and to help grow the economy.

Multinational companies face growing mistrust due to their use of tax havens and their ability to shift profits between geographies. The actual cost of tax abuses is difficult to calculate, but estimates suggest that the combined cost of evasion and avoidance abuses from individual and corporates is close to $100 billion per year. The cost of corporate tax reductions as a result of profit-shifting activities ranges from $10 to $90 billion per year (Jane, 2015).

Developing Markets Context

Emerging economies face a $2.5 trillion gap in resources needed to fund developmental efforts (Dhlamini, 2019). A contributing factor is insufficient domestic revenue mobilisation (DRM). These economies face a shortage in tax revenues for various reasons, including, for example, inefficiencies in collection, tax evasion, tax avoidance, corruption, and poor communities with large tax-exempt populations (De Paepe, 2015).

Aggressive tax practices in the pursuit of increased company profits can be short-sighted. They can negatively impact long term sustainability and ultimately erode shareholder wealth (Jenkins & Newell, 2013; Sikka, 2010). While the impact of these practices can be detrimental in any society, a reduction in aggressive tax practices would greatly benefit developing economies. Tax shortfalls in emerging market economies result in governments taking various actions, for e.g. an increased dependency on ODA, increased government borrowing and using extreme measures to attract foreign investments.

There has been a noticeable decline in ODA over the years. Contributing factors are donor fatigue, pressure to cut public spending, and accountability to local constituencies (OECD, 2014). Increased government borrowing can cause national harm as it merely delays the

financial responsibility of development initiatives for future generations to deal with. Borrowing is also subject to interest claims and at times exchange rate fluctuations. Developing nations continue to reduce corporate taxes as a way to attract foreign investments (United Nations UNCTAD, 2015). This practice is commonly referred to as 'the race to the bottom'. Research has shown that tax incentives in low-income countries did not attract investments. Rather, they were detrimental to developing nations as they reduced the tax base for no demonstrable reason (IMF et al., 2015). When deciding where to invest, multinational companies were shown to prioritise political stability and market access over tax reductions (McCormick & Morgan, 2020). McCormick and Morgan (2020) also found that multinational companies preferred a predictable tax rate over a lower tax rate.

Improved DRM would help to reduce government deficits and close the development funding gap present in emerging markets (De Paepe, 2015; Jenkins & Newell, 2013; *Tax Them and They Will Grow*, 2015). While issues of poorer and tax-exempt economies are a separate matter, curbing the flow of illicit tax practices has been cited as a possible way to close the development budget gap.

South Africa is the second-largest economy in Africa. It is home to the continent's largest stock exchange and has relatively advanced tax systems, (Gavious et al., 2022). Despite this, it is suspected that "CTA [Corporate tax aggressiveness] practices are still prevalent among multinationals and larger firms in South Africa, avoiding as much as 80% true income in taxes through strategies, [*sic*] such as tax havens, transfer pricing, [and] thin capitalisation hybrid instruments" (Gavious et al., 2022, p. 905). Corporates have been asked to pay their fair share and minimise aggressive tax practices (International Monetary Fund, 2015; KPMG, 2019; Rasmus Torpe Hansen, 2015; *Tax Them and They Will Grow*, 2015). A further benefit of improved DRM is the strengthening of domestic governments' ability to drive their developmental goals. Improved tax collection benefits a nation as it "is integral to strengthening the effective functioning of state and to the social contract between governments and citizens" (De Paepe, 2015, p. 2).

Tax Transparency

Tax aggressiveness and tax scandals continue to receive attention from the public. "Tax is not a cost to minimise but a systemic risk" (Aguirre & Piani, 2016, p. 4). The depressed rates of economic growth, growing levels of inequality, rising government debt, increase in social

programmes and the required investments in public infrastructure are factors that contribute to the growing scrutiny of business's impact on society. The discussions on tax payments as a form of social responsibility have led to increased calls for improved tax transparency and governance. Some measures include:

- In 2015 the Principles for Responsible Investment (PRI) network released a document that was created to enable investor conversations about corporate taxes with the companies that they invest in. The *Engagement Guidance on Corporate Tax Responsibility* discusses concepts of corporate tax responsibility, disclosures, tax transparency and governance (Karananou & Guha, 2015).
- In 2019 the Global Reporting Initiative (GRI) launched a global standard for the reporting of taxes and payments to governments. The *GRI 207: Tax 2019* came into effect on 1 January as part of the GRI's sustainability reporting standards. It focuses on a company's impact to the economy, environment and society (Global Sustainability Standards Board, 2019).

The *Framework on Base Erosion and Profit Shifting* (BEPS), devised by the Organisation for Economic Co-operation and Development (OECD) and the G20 is a collaboration that spans across 139 countries. Joint multinational government initiatives like the BEPS Framework are needed to stop tax avoidance practices that take advantage of differing tax environments and allow multinational companies to avoid paying their fair share of taxes. "BEPS practices cost countries 100-240 billion USD in lost revenue annually, which is the equivalent to 4-10% of the global corporate income tax revenue" (OECD, 2019). It is estimated that tax havens cost developing nations close to three times what they receive in foreign aid (*Tax Them and They Will Grow,* 2015). Aggressive tax practices are detrimental to sustainability, and good governance can strengthen risk management practices and help a company avoid legal and reputational risks (OECD, 2019). Through progress made on tax transparency and the exchange of information (EOI) initiatives, additional government revenues (tax, interest and penalties) in the amount of EUR 107bn have been realised, with EUR 29bn recovered in developing nations (Garde & Manatta, 2020).

In South Africa, the King Code on Corporate Governance has made calls for South African companies to implement responsible and transparent tax strategies (Institute of Directors

Southern Africa, 2016; Thiart, 2019). These discussions are still relatively new and the business community is still considering the impact of the proposal. Only 30% of companies listed on the JSE's Top 40 Index increased tax transparency in 2020 (Bizcommunity, 2021).

Summary

There is no single definition for CSR. Carroll's framework remains an influential CSR model that allows the definition to evolve as society's expectation of business changes. While Carroll's Pyramid is widely adopted and referenced, certain misconceptions exist. The categories were not meant to infer a sequential ordering or hierarchy. The intention was to articulate that "the CSR driven firm should strive to make a profit, obey the law, engage in ethical practices and be a good corporate citizen" (Carroll, 2016, p. 6). A firm should seek to be responsible when measured against all four categories and should not be allowed to choose based on their interpretation of the framework. Regional nuances influence societal expectation, which is a key driver in defining what constitutes responsible behaviour. Modern stakeholders expect business to be socially responsible and can punish irresponsible behaviour by negatively impacting company profits. Discretionary forms of CSR can mitigate against the negative impacts of CSiR, by appeasing society with charitable donations that distract from greater offences. Such instances have increased calls to standardise and regulate CSR. However, attempts to regulate CSR have been impeded by the range of definitions, and the competing interests of various stakeholders.

Corporate taxes are the income tax paid by corporates to governments in exchange for their use of public assets. Corporate tax planning reduces this tax liability. There are legal and illegal means to reduce a company's tax obligations. Some tax aggressive practices abide by the letter of the law but raise moral questions when done aggressively. DRM could help developing economies to reduce their development funding shortfalls. Corporate tax payments have become a topical governance consideration under Environmental, Social and Governance (ESG) frameworks. Aggressive tax strategies have been the main reason for calls for increased transparency and "corporate income tax responsibility" (KPMG, 2019). Some researchers have proposed that tax aggressive behaviour should be categorised as a form of CSiR, since the impacts of such practices are detrimental for society (Christensen & Murphy, 2004; Dowling, 2014).

2.3 Overview of CSR Disclosure on the JSE

The JSE is only stock exchange to mandate integrated reporting. In 2010 the JSE incorporated the King Code on Corporate Governance (King Code) as a listing requirement (Horn et al., 2018). The JSE strives to promote ESG transparency and sustainability, to minimise systemic risk. The exchange "has recognised that a purely reactive response to sustainability may render its own viability in jeopardy without businesses to list" (Johannesburg Stock Exchange, 2019).

In South Africa the King Code is a guiding document for good corporate governance. It is a non-legislative code that provides a set of best practices and principles aimed at providing guidance on corporate citizenship. It has gone through various editions, with the most recent being *The King IV Report on Corporate Governance*. South African companies are required to adopt the code via the JSE's listing requirements and via other laws such as The Companies Act of South Africa.

King I (1994) was mainly focused on the composition and responsibilities of the Board of Directors and offered reporting guidelines, while the subsequent revised reports discussed matters of sustainability and corporate citizenship. King II, III and IV are briefly discussed below.

King II

King II identified certain characteristics of good governance and social responsibility was listed as one of them (Kloppers, 2018). A socially responsible company was referred to as a good corporate citizen. Business was encouraged to adopt a wider stakeholder approach and to also report on non-financial measures, i.e. social and environmental matters. The requirement was for an annual report that would describe "the nature and extent of its policies and practices regarding stakeholder relations, social issues, transformation, health and safety, and environmental management" (Kloppers, 2018, p. 62). King II was applicable to listed companies, public sector entities and companies in the financial services sector. This excluded many companies in South Africa and its limited scope of application was seen as a shortcoming.

The need to revise King II was driven by the shortcomings identified, as well as a loss in stakeholder confidence owing to the global financial crisis and revisions to the Companies Act of South Africa (Kloppers, 2018). Corporate governance was not mentioned in previous

versions of the Companies Act, but it was included in the new Companies Act no. 71 of 2008 ('the Act') (Institute of Directors Southern Africa, 2009). Section 7(b)(iii) identified the Act's purpose of "encouraging transparency and high standards of corporate governance as appropriate, given the significant role of enterprises within the social and economic life of the nation." (Kloppers, 2018, p. 66).

King III

King III widened its scope to include all forms of business across South Africa (Institute of Directors Southern Africa, 2009), and was in effect when the JSE incorporated the King Code into its listing requirements. It combined financial and sustainability reporting into a single integrated report. King III consisted of nine chapters. Social responsibility considerations were mentioned in Chapters 1, 6, 8 and 9, which are briefly discussed below.

Chapter 1 focuses on ethical leadership and corporate citizenship (Institute of Directors Southern Africa, 2009). This chapter describes what responsible leadership entails. It outlines the responsibilities of the Board, the role of ethics, the need to translate ethical standards into a code of conduct and the necessary assessments and disclosures thereof. It goes on to describe a responsible leader, as someone who promotes long term sustainability by proactively considering and managing the impact that business has on society (Institute of Directors Southern Africa, 2009).

Chapter 6 focuses on compliance with laws, rules, codes and standards (Institute of Directors Southern Africa, 2009). This chapter cautions business to be aware of binding and non-binding rules. It refers to both legal and ethical considerations and deals with compliance with both the letter and spirit of the law. It encourages business to disclose the non-binding standards that it voluntary complies with. It cautions that these laws, rules, codes and standards do not exist in a vacuum, and that the interplay between them should be well understood. The chapter also highlights the need for internal frameworks and mechanisms to monitor compliance.

Chapter 8 focuses on stakeholder management. It highlights the need to balance the interests of various stakeholders. It warns that reputational damage can erode the economic value of a company, and it encourages the Board to consider the interests of multiple stakeholders in its decision-making process. It encourages frequent dialogue with the various stakeholder groups

and the creation of reports to satisfy their interests (Institute of Directors Southern Africa, 2009).

Chapter 9 focuses on integrated reporting and disclosures. It explains that the integrated report should be a comprehensive view of a company's performance that considers financial performance and sustainability. As such, "The integrated report should describe how the company has made its money; hence the need to contextualise financial results by reporting on the positive and negative impact the company's operations had on its stakeholders." (Institute of Directors Southern Africa, 2009, p. 109).

King IV

While listed companies generally complied with previous versions of the Code, it was noted that other entities struggled to adopt the code. King IV made further attempts towards inclusivity by including supplements that focused on specific sectors, i.e. not-for-profit organisations (NPOs), municipalities, medium and small-sized enterprises (MSMEs), retirement funds and state-owned enterprises (Institute of Directors Southern Africa, 2016). Another change was in naming conventions. What was previously referred to as 'the Board' was replaced with reference to a 'governing body' since not all organisations have Boards (Clamp, 2017). This new code aimed to simplify King III by reducing the number of chapters from 9 to 5, and by reducing the number of principles from 75 to 16 (Clamp, 2017).

In the revised code, Chapters 1, 4 and 5 pertain to social responsibility. They are discussed briefly below (Institute of Directors Southern Africa, 2016):

- Chapter 1 focuses on leadership, ethics, and corporate citizenship. It has no material deviations from Chapter 1 of King III.
- Chapter 4 focuses on governance functional areas and strongly aligns to Chapter 6 of King III. Principle 13 covers matters relating to laws, ethics and good corporate citizenship.
- Chapter 5 focuses on stakeholder relations. It combines aspects of King III's Chapters 8 and 9 and addresses stakeholder management and integrated reporting
- Chapter 5 includes a principle directed at institutional investors. Principle 17 gives guidance on promoting good governance in both the investor as well as in the companies that they invest in.

Previous versions of the King Code applied the "apply or explain principle" in which an entity could decide which principles to adopt. King IV moved to an "apply and explain" approach, in which a company is expected to adhere to the principles. Instances of non-adherence need to substantiated (Clamp, 2017). Also worth noting is that King IV mentions the need for a policy and strategy on taxes. It lists this as a responsibility of the governing body. "Tax has become a complex matter with various dimensions. The governing body should be responsible for a tax policy that is compliant with the applicable laws, but that is also congruent with responsible corporate citizenship, and that takes account of reputational repercussions. Hence, responsible, and transparent tax policy is put forward as a corporate citizenship consideration in King IV." (Institute of Directors Southern Africa, 2016, p. 32). This is the first time that the King Code has drawn a direct link between tax strategies and good corporate citizenship.

Summary

South Africa is the only country in the world that mandates integrating reporting as a listing requirement and the King Code is the governing document for good corporate governance. It has gone through various iterations. King I (1994) outlined the roles and responsibilities of the Board of Directors. The revised King II (2002) included guidance on sustainability and risk management. King III (2010) required companies to combine financial and non-financial information into a single integrated report. King III was in effect when the JSE incorporated the King Code into its listing requirements. King IV (2016) focuses on transparency and asks business to transition from "apply or explain" methodologies to "apply and explain". The most recent version, King IV, challenges business to consider tax strategies as a governance consideration (Thiart, 2019).

2.4 Theoretical Framework: Tax Aggressiveness and CSR

The relationship between CSR and corporate taxes is new and emerging. It is better explained by social-political theories, specifically the legitimacy theory, stakeholder theory and institutional theory. Traditionally, these theories have sought to explain business motivations for adopting CSR and the reasons for disclosing such activities. The theories share similar concepts and complement each other. Calls have been made for increased tax transparency and that these disclosures should be considered when deciding whether a company is behaving in a sociably responsible manner. The next section presents theoretical frameworks that can be used to describe this emerging relationship.

a) Legitimacy Theory

Legitimacy is defined as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions."(Suchman as cited in Idowu et al., 2013, p. 1579). Legitimacy theory states that a company needs to maintain its legitimacy to survive (Fernando & Lawrence, 2014). Legitimacy acts on two levels—macro and organisational (Idowu et al., 2013). At a macro level, institutional legitimacy theory (ILT) is created outside an organisation, i.e. society's legitimation of organisational structures or systems. At an organisational level, strategic legitimacy theory (SLT) is developed internally and is the legitimacy of a company. Strategic legitimacy can be viewed as a company resource (Idowu et al., 2013).

Legitimacy theory asserts that business and society have a mutually beneficial agreement (i.e. a social contract) in place, through which society places certain moral obligations on business (Fernando & Lawrence, 2014; Lanis & Richardson, 2013). Business's continued fulfillment of these obligations results in gained or maintained legitimacy. CSR disclosures provide an opportunity for business to demonstrate the fulfilment of its moral obligation to society (Lanis & Richardson, 2015). As such, companies choose to report on CSR activities to gain, increase or recover legitimacy. This can lead to selective reporting in which a company reports on information that would improve legitimacy, while not disclosing information that would reduce legitimacy. The pursuit of legitimacy can result in increased CSR disclosures that are directly related to areas of public concern, i.e. environmental issues resulting in increased CSR environmental disclosures (Lanis & Richardson, 2013).

Through various iterations, under the King Code business is required to report on more than just financial performance. Business is expected to act as a good corporate citizen. South African companies are required to provide stakeholders with integrated disclosures that balance financial performance and societal impact (Kloppers, 2018). A holistic view of a company's performance is necessary to ascertain whether a company is behaving in a socially responsible manner. The information disclosed in these reports influence stakeholder perceptions and has a direct impact on the legitimacy of a company.

Paying taxes can be considered as a contract between society and business (Aguirre & Piani, 2016; Christensen & Murphy, 2004; Dowling, 2014). Instances of excessive tax aggressiveness

might be interpreted as a breach of that contract and could threaten a company's legitimacy (Lanis & Richardson, 2013). Conversely, companies that pay their taxes would strengthen their legitimacy. Tax disclosures are not mandatory and public outrage over tax abuses is usually in response to reports from revenue authorities and media groups. Legitimacy concerns over tax abuses cannot be remedied through increased tax disclosures. However Lanis and Richardson (2013) have noted that companies increase general CSR disclosures to minimise the reputational damage caused by tax violations.

b) Stakeholder Theory

Stakeholder theory asserts that business has an obligation to multiple stakeholders, as opposed to a sole obligation implied by shareholder theory (Carroll & Brown, 2018; Watson, 2015). There are various classifications of stakeholder groups. Fernando & Lawrence (2014) distinguish between ethical and managerial branches of stakeholders. The managerial perspective suggests that business should only respond to the needs of powerful stakeholder groups as they have a direct impact on the company's future profits (Fernando & Lawrence, 2014). The ethical perspective suggests that business is accountable to all stakeholders, and that all stakeholders should be given the same rights and considerations. It can be difficult to cater equally to multiple stakeholder interests. Modern day stakeholder theory has conceded that there are varying degrees of influence and interest among the various stakeholder groups (Elkington, 2018).

CSR activities, and subsequent disclosures, are easily understood under the ethical considerations of stakeholder theory. Society comprises various stakeholder groups, each of whom are impacted by a company's existence. The information reported on in CSR disclosures is prepared according to these stakeholder's needs (Fernando & Lawrence, 2014). The reports also serve to reduce information asymmetries, ensuring that most stakeholders are informed of business's impact on society. Legitimacy theory and stakeholder theory are closely related, as various stakeholder groups can impact a company's legitimacy (Lanis & Richardson, 2013).

The various iterations of the King Code stress the importance of considering financial, governance, social and environmental matters. The continued emphasis in the Code on a wider stakeholder approach encourages an ethical approach towards stakeholder management. King III and King IV highlight the need for South African companies to manage stakeholders,

balance stakeholder interests and to ensure that disclosures adequately address stakeholder concerns (Clamp, 2017; Institute of Directors Southern Africa, 2009).

Corporate tax payments fund public goods and services which benefit society. The payment of corporate taxes can be categorised as part of a company's legal and ethical responsibilities (Jenkins & Newell, 2013; Ortas & Gallego-Álvarez, 2020). Dowling (2014) suggests that aggressive tax practices can be viewed as socially irresponsible behaviour. Tax aggressive behaviour is considered detrimental to multiple stakeholder groups as it shifts the burden of tax from the corporate sector onto other areas of society, e.g. to the individuals or the public sector via budget deficits, etc. Some argue that the threat to corporate legitimacy posed by aggressive tax practices threatens shareholder wealth (Jenkins & Newell, 2013; Sikka, 2010). This implies that paying taxes benefits multiple stakeholder groupings including shareholders.

While logical, the above argument is not wholly accepted. Detractors argue that corporate taxes are an illegitimate category of taxation, and a means for governments to further squeeze revenues from the private sector (McCormick & Morgan, 2020). They argue that corporate taxes are a form of double taxation since shareholders and employees pay taxes in their individual capacities. The burden of corporate income tax can be transferred to other stakeholder groups at managerial discretion, e.g. via increased customer pricing, reduced employee salaries and reduced shareholder returns. McGee (2010) argues that reduced taxes result in increased profits resulting in benefits including the production of more products and services, increased employee wages, increased economic activity and improved living standards.

c) Institutional Theory

An organisational field is defined as "those organisations that, in the aggregate, constitute a recognised area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organisations that produce similar services or products" (Fernando & Lawrence, 2014, p. 15). Once an organisational field is created, societal demands force the organisations to abide by the same codes and standards. Institutional theory helps to explain why organisations in the same field have similar characteristics.

Societal pressure can result in two outcomes, namely isomorphism or decoupling (Fernando & Lawrence, 2014). Institutional isomorphism refers to the homogeneity of organisations in the

same field. This can be because of pressure from influential stakeholders (coercive isomorphism), pressure to retain legitimacy by copying other companies (mimetic isomorphism) or the pressure to adopt certain standards in response to a shared set of values (normative isomorphism). Decoupling is the separation of a company's public image and internal reality.

Institutional theory helps to explain why business has adopted a voluntary practice such as CSR to the extent it has become a normative practice. Societal expectation has shaped the adoption and disclosure of CSR. Lanis and Richard (2013) noted a correlation between societal concern and the types of CSR activities business invested and reported on. Instances of decoupling and exaggerated or falsified claims of impact (i.e. impact washing) have also been reported. This can be intentional or unintentional and can lead to instances where the public believes that a company is socially responsible while it continues to behave in a socially irresponsible manner (Agarwal & Kadyan, 2014; Pope & Waeraas, 2016; Rangan et al., 2015).

The King Code is not legally binding, and King I and II were not requirements for listing on the JSE. Rather, the various codes outline best practices intended to guide business on principles relating to good corporate governance. The Code provides society with a benchmark by which to assess a business and to compare the business's performance across similar industries. Institutional theory helps to explain how coercive, mimetic and normative pressures helped to drive adoption of the non-legislative code in South Africa.

CSR and taxes are usually viewed as two separate constructs but recently researchers have sought to marry the two concepts. This new relationship is pushed forward by societal pressure, from multiple interest groups ranging from individuals to governments. While claims of tax abuses are difficult to prove, corporate tax payments have become a topical governance consideration under the ESG framework (Global Sustainability Standards Board, 2019; Institute of Directors Southern Africa, 2016; Karananou & Guha, 2015; KPMG, 2016; Thiart, 2019). Opportunistic companies can benefit from highly publicised yet unsubstantiated CSR activities while being guilty of aggressive tax practices (Rasmus Torpe Hansen, 2015). Increased tax transparency and the standardisation of CSR reporting are paramount in translating societal pressure into tangible outcomes.

Summary

Recent literature has investigated the nexus between CSR and corporate taxes. Some propose that the payment of corporate tax should form part of the criteria used to determine whether a company is socially responsible. When analysing the emerging relationship, this study considered three socio-political theories that are traditionally used to explain business motivations for CSR activities and disclosures. Legitimacy, stakeholder and institutional theories share similarities and complement each other. They suggest that CSR information is disclosed to maintain legitimacy, to communicate with various stakeholder groups and in response to societal pressure. If corporate taxes were to form part of CSR disclosures in future, the theoretical frameworks described above would apply.

2.5 Empirical Literature

CSR evolves with societal expectations. This evolution has led to recent discussions that ask whether the payment of corporate taxes should form part of a company's social responsibility. Researchers have sought to understand the nature and extent of this merging nexus (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022; Lanis & Richardson, 2012, 2013, 2015; Muller & Kolk, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). These studies have also sought to understand what circumstances might strengthen or weaken such a relationship. The section below provides an overview of some empirical literature on the relationship between CSR and the payment of corporate taxes.

Lanis and Richardson (2012) were among the first researchers to conduct an empirical study into the relationship between CSR and CTA, reviewing 408 publicly listed Australian companies over the 2008/2009 financial year period. The study used effective tax rate (ETR) as a proxy for CTA. The researchers derived their own CSR score by creating a broad-based CSR Index, comprising 54 questions that spanned across six CSR categories. The CSR scores allowed them to categorise companies as being socially responsible (as evidenced via a high score) versus less socially responsible (as evidenced by a lower score). The researchers found a significantly negative relationship between CSR and CTA. The study concluded that socially responsible firms were less tax aggressive, as they considered the payment of taxes to form part of their social responsibility (Lanis & Richardson, 2012). Lanis and Richardson also conducted an additional regression to understand whether certain CSR categories were more likely to reduce tax aggressive behaviour. The six categories of CSR were corporate and CSR strategy, staffing strategy, social investment, environment, customer and suppliers, and

community and political involvements (Lanis & Richardson, 2012). The results of the additional regression found a significantly negative relationship between social investment and CTA (Lanis & Richardson, 2012). The results failed to establish a significant relationship between CTA and any other category of CSR.

Legitimacy theory suggests that companies adopt and disclose CSR activities to gain, increase or recover legitimacy. In 2012 Lanis and Richardson established that Australian companies believed that paying taxes formed part of their social responsibilities. Expanding on this research, Lanis and Richardson (2013) conducted a study to investigate whether companies believed that CTA had an impact on legitimacy. They conducted a search to obtain a list of publicly traded Australian firms that were accused of tax abuses by the Australian Tax Office (ATO). The sample was restricted to companies accused of evading local taxes that were still actively trading on the Australian Stock Exchange (ATX). These parameters resulted in a sample of 20 tax aggressive companies which were then matched with 20 tax compliant companies on a one-to-one basis (i.e. a single tax aggressive company paired with a single non-tax aggressive company). A company was deemed to be non-tax aggressive if the ATO made adverse findings against them (Lanis & Richardson, 2013). The pairings were based on similar industry classifications, company size and listing periods. The dependent variable in this study was CSR disclosure, and more specifically, the amount of disclosure as measured via sentence length. CTA was the independent variable, measured with a dummy variable, where 1 indicates a tax aggressive firm and 0 being a non-tax aggressive firm. The choice-based sample size of 40 firms, was assessed over an observation period from 2001 to 2006. Lanis and Richardson (2013) found a significantly positive relationship between CTA and the length of CSR disclosures. This led the researchers to conclude that companies accused of tax aggressiveness will respond by increasing CSR disclosures in an effort to minimise reputational damage and retain legitimacy (Lanis & Richardson, 2013).

Lanis and Richardson's earlier research focused on Australian companies. In 2015 they studied American companies. Including other geographies would enable their findings to be applied more widely. They amended their variables and chose a more direct measure of CTA and used a third-party database for CSR information. The study analysed 434 American companies over the financial period 2003-2009 (Lanis & Richardson, 2015). Half of their sample comprised firms accused of avoiding taxes and the other half were tax compliant firms. The dependent variable was measured through a tax disputes variable. Tax avoidance was measured via a

dummy variable coded 1 if a company has been involved in a major tax dispute and 0 otherwise (Lanis & Richardson, 2015). The independent variable of interest was CSR performance, and this information was sourced from the KLD database. Named after its founders; Peter Kinder, Steve Lydenberg and Amy Domini, the KLD database creates integer scores based on company strengths and concerns (Lanis & Richardson, 2015). They found a strong relationship between low levels of tax avoidance and high CSR scores (Lanis & Richardson, 2015), leading them to conclude that socially responsible firms were less tax avoidant. An additional analysis investigated this relationship between tax avoidance and seven categories of CSR. The results showed a significantly negative relationship between tax avoidance, community relations and diversity.

Watson (2015) conducted a study to understand whether earnings performance moderated the relationship between CTA and CSR. Like Lanis and Richardson's 2015 study, Watson analysed American companies over the same time period. The study dramatically increased sample size: it incorporated 1 929 large American firms from the year 2003 to 2009, using ETR as a proxy for CTA. CSR information was sourced from the KLD database and was constructed similar to the scoring methodology described previously (Lanis & Richardson, 2015). Return on assets (ROA) was used as a measure of profitability. Watson created an interaction variable to distinguish between companies with high earnings performance (ROA greater than and equal to 10%) and those with low earnings performance (ROA less than 10%) (Watson, 2015). He found an association between low CSR and tax aggressiveness when a company experiences financial distress. However, this relationship changes when a company's economic outlook improves. These findings show that when a company is faced with limited resources, management will prioritise the interests of the shareholder over the interests of other stakeholder groups (e.g. the community) and they became more tax aggressive to maximise shareholder returns. (Watson, 2015).

Multinational corporations have been accused of exploiting developing nations by shirking their tax responsibilities (J. G Frynas, 2008; Muller & Kolk, 2015; Rasmus Torpe Hansen, 2015; *Tax Them and They Will Grow*, 2015). Muller and Kolk (2015) conducted a study to understand whether multinational corporations (MNCs) were guilty of tax abuses. The study focused on India, to (i) assess whether there was a difference in ETRs between local and foreign businesses; and (ii) to assess whether there was a difference in ETRs between MNCs with high CSR activity when compared with those with lower CSR activity. The Indian market was

chosen because it is a developing country with a healthy mix of domestic firms and MNCs (Muller & Kolk, 2015). The two-year observation period covered the financial periods from 2000-2001/2, and consisted of 82 firms and 154 observations. Kolk and Muller (2015) found that both sets of companies (domestic and MNCs) reported ETRs that were below the country's statutory tax rate, but that MNCs paid higher ETRs than domestic firms (Muller & Kolk, 2015). When comparing MNCs, the researchers found that those with high levels of reported CSR paid higher ETRs than their counterparts (Muller & Kolk, 2015). This led the researchers to assume that firms with high disclosures of CSR were less tax aggressive, and that they considered the payment of corporate taxes to form part of their CSR. Previous literature has warned of how MNCs use their complex organisational structures to avoid paying their fair share of taxes. This research was important as it highlighted the need for developing nations to equally consider tax abuses perpetrated by domestic firms.

Davis et al. (2016) conducted a study to understand whether socially responsible firms paid more taxes than firms that were deemed less socially responsible. The study sampled 5 588 American listed companies, with an observation period from 2006 to 2011. CSR was calculated with information from the Morgan Stanley Capital International (MSCI) ESG research data set (formerly known as the KLD database). They used MSCI's CSR categories, intentionally removing corporate governance considerations, and created an index score similar to the one described above (Lanis & Richardson, 2015; Watson, 2015). Tax payments were considered using two variables: (i) a five-year average of a cash effective tax rate; and (ii) the amount of money spent on tax lobbying initiatives. They study found that companies with higher investments in CSR paid less in tax than their counterparts. They also concluded that socially responsible firms would prefer to pay fewer corporate taxes, as evidenced by their lobbying efforts. The findings led them to conclude that socially responsible firms view CSR and corporate taxes as substitutes (Davis et al., 2016).

Lanis and Richardson (2015), Watson (2015) and Davies (2016) all focused on the American market and reached different conclusions. Lanis and Richardson concluded that high CSR firms considered the payment of taxes to form part of the CSR, and so paid more taxes. However, Davies concluded that high CSR firms paid less taxes as they considered corporate taxes and CSR as substitutes for one another. Yet it is Watson's sub-categorisation that helped provide a possible reason. The study showed that the relationship between CSR and CTA was not constant and could change under certain circumstances (Watson, 2015).

Ortas and Gallego-Álvarez (2020) researched the relationship between CSR and CTA, and the impacts of national culture. They conducted a study of 2 696 companies across 30 countries, with data collected from 2002 to 2014. CSR was constructed using three categories namely corporate social performance (CSP), corporate environmental performance (CEP) and corporate governance performance (CGP) (Ortas & Gallego-Álvarez, 2020). They further analysed whether certain aspects of national culture had a moderating effect on the evidenced relationships. The study considered six national cultural characteristics, namely whether a country exhibited higher degrees of unequal distribution of power (i.e. power distance levels), uncertainty avoidance, individualism, masculinity, long term orientation, and indulgence (Ortas & Gallego-Álvarez, 2020).They found that CSR performance (as well as all three categories of CSR performance) was negatively associated with corporate tax aggressiveness. Furthermore, they found that the negative effects of CSR on tax aggressiveness were lessened by certain restricting cultures i.e. power distance levels, uncertainty avoidance and masculinity (Ortas & Gallego-Álvarez, 2020). The negative influence of CSR on tax aggressiveness was made greater by certain enhancing characteristics, namely individualism and long-term orientation (Ortas & Gallego-Álvarez, 2020).

Gavious et al. conducted a study through which they sought to understand how the enforcement of tax practices would affect firms (Gavious et al., 2022). “In 2007 the Israeli Tax Authority (ITA) increased its scrutiny of Israeli firms by adding an ‘anti-planning’ norm as part of Amendment 147 to the Income Tax Ordinance” (Gavious et al., 2022, p. 2),. This addition required business to disclose aggressive tax planning activities. The sample consisted of 4 251 companies operating in Israel. Firms in the sample were engaged in CSR activities and also did not engage in CSR activities, categorised as CSR and non-CSR firms respectively. The period of observation was from 2004 to 2013, providing for three years of observation before the changes and six years after the changes were introduced. Data was sourced from public disclosures from companies listed on the Tel Aviv Stock Exchange. The researchers found that CSR and non-CSR firms exhibited similar levels of tax avoidance before the changes in tax enforcement. Their research found that post-tax enforcement changes, non-CSR firms were less tax avoidant but CSR firms were more tax avoidant (Gavious et al., 2022). This research supports literature that suggests CSR acts as a form of social insurance, as CSR firms were better able to increase tax avoidance partly due to their established legitimacy and the social perceptions of those firms. Motivations for increased tax avoidance were not always malicious

and in some instances it was suggested that management reduced company taxes in order to fund CSR activities (Gavious et al., 2022). King IV highlights the need for transparent tax practices (Institute of Directors Southern Africa, 2016). While the King Code is not a legislative code, the above study does highlight the unintended consequences of tax enforcement.

Donkor et al. (2022) conducted a study to understand whether the quality of integrated reports was effective in reducing tax aggressiveness (2022). The study researched South African firms listed on the JSE and sampled 74 companies from the JSE's top 100 Index. The dependent variable of interest was CTA, as measured by ETR. The quality of integrated reporting was measured, assessing 30 characteristics each, scored from 0 to 3, allowing for a maximum score of 99 and a minimum score of 0 (Donkor et al., 2022). Donkor et al. (2022) found a significantly negative relationship between CTA and the quality of integrated reporting, but cautioned that this relationship was less evident as firm complexity increased in, for e.g. size and scope of operations. They also segmented companies into categories based on degrees of tax aggressiveness and found that the moderating effects of integrated reporting quality were not evidenced in highly tax aggressive firms (Donkor et al., 2022). This means that at certain levels, integrated reporting quality was not successful in reducing tax aggressiveness.

Summary

The section above has provided a brief overview of some empirical studies on the relationship between CSR and the payment of corporate taxes. This emerging nexus is the subject of much debate, as is evidenced by the breadth and degree of prior research. Previous studies have provided mixed results and are noticeably skewed towards developed nations. This study adds to existing research by providing an emerging market view.

2.6 Conclusion

Chapter 2 has provided a robust overview of existing literature pertaining to CSR, the payment of corporate taxes and the emerging nexus between these two constructs. Carroll's Pyramid still provides a generally accepted framework that describes business's responsibilities towards society. It is generally accepted that business has a financial and legal responsibility, but ethical and discretionary responsibilities continue to generate debate. CSR is a voluntary practice that is not standardised. CSR practices are shaped by regional nuances and national cultures. While not legally enforceable, social responsibility is partly influenced by societal expectation.

Business and society have a social contract in place and a key output is the continued right for businesses to exist. Socially irresponsible behaviour can impact a company's relationship with its stakeholders and threaten its legitimacy. Through this lens, CSiR is said to negatively affect all stakeholders including shareholders through the possible erosion of shareholder wealth.

CSR continues to evolve with societal expectations. Recent discussions focus on the relationship between CSR and corporate taxes and whether the payment of taxes should form part of a company's social responsibility. Corporate tax planning describes initiatives taken by business to reduce the amount of tax payable. Reduced tax liability can result from both illegal and legal activities. While they are legal, some CTP activities are considered unethical when done excessively as they result in businesses paying less than their fair share in taxes. Aggressive tax practices are detrimental in any society as they shift the burden of taxes from business to individuals and the public sector. Sources of development funding are heavily constrained in emerging countries that face development funding deficits. DRM would assist developing countries in their development initiatives, reduce dependencies on foreign aid and strengthen the social contracts between governments and their people.

This emerging nexus has resulted in interesting studies that have tried to understand the nature and extent of the relationship between corporate taxes and CSR. Empirical studies have yielded mixed results. Extensive earlier CSR literature focused on the American market and recently the scope has expanded to include non-American markets. Research, especially empirical studies, are still heavily skewed towards developed nations. Previous studies have excluded emerging markets owing to insufficient data. South Africa provides an opportunity to test earlier assumptions by replicating aspects of previous studies. This is because South Africa boasts a sophisticated financial system and the JSE requires businesses to incorporate integrated reporting as a listing requirement. This research aims to contribute towards empirical studies on the emerging nexus. A further contribution is the unique focus on emerging markets, more specifically sub-Saharan Africa. The next chapter provides an overview of the research methodology which builds on the empirical studies presented in this section.

Chapter 3
Methodology

3.1 Introduction

This chapter presents the research approach and research design used to conduct the study. It describes the population sample and the data gathering approach. It outlines the analytical framework, describes the variables used and explains how these variables were derived. The chapter then provides an overview of the estimation techniques and the processes used to establish reliability and validity. It concludes by discussing the study's limitations.

3.2 Research Approach

There is an emerging theory that suggests a relationship between CSR and CTA (Davis et al., 2016; Gavious et al., 2022; Jenkins & Newell, 2013; Lanis & Richardson, 2012, 2013, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). This study uses hypotheses to test whether such a relationship exists in emerging markets and, if so, it seeks to establish the significance and direction of such a relationship. It also seeks to understand whether there is a relationship between CTA and certain categories of CSR, i.e. whether certain CSR activities are more likely to reduce tax aggressiveness than others.

This study is quantitative in nature as it uses secondary data in its analysis, ensuring that the results can be replicated with ease (Creswell, 2014). Sargeant (2012) cautions that data quality issues can arise from the use of quantitative data, sometimes from a limited understanding of the data collection process, misuse of the data or by studying a non-representative sample. To minimise these concerns this study will include all companies with available data to help ensure a more representative sample. The use of information from publicly listed companies helps to minimise data quality concerns. This is because such companies:

- have publicly available and independently audited financial statements. The data from these disclosures is expected to be accurate and reliable;
- are expected to comply with rigorous disclosure standards that allow for peer comparisons;
- face greater public scrutiny and are accountable to multiple stakeholders; and
- are more likely to have comparable ESG/CSR ratings and to adopt global reporting standards on sustainability and corporate governance.

A benefit of this approach is that the data was easily accessible and the data gathering process was relatively inexpensive (Creswell, 2014). This supported the purpose of the study as it allowed the research to consider a sample over multiple years. The approach also reduced subjectivity, increased the applicability of the findings to the wider population, and reduced the risk that findings were heavily influenced by shocks within a specific year.

3.3 Research Design

3.3.1 Population and Sample

The target population for this study is companies that are listed on the JSE. This is a longitudinal study that observes five years' worth of data (from 2015 to 2019). It excludes companies that were listed after 1 January 2019. This will ensure a full year's worth of financial, governance and CSR information.

The 2019 financial year was selected as a cut off as it excludes potentially distorting impacts of the recent COVID-19 global pandemic, e.g. reduced taxes stemming from muted profits and increased social initiatives. All 288 companies that were actively trading as of 1 January 2019 were considered in this study and are summarised in Appendix A attached.

3.3.2 Data Sources and Data Gathering Approach

The hypothesis was tested by using publicly disclosed information. Statutory and financial information was sourced from the IRESS Research Domain database, formerly known as the McGregor BFA database, (IRESS Research Domain, 2014). CSR information was collected from the CSR HUB which uses 776 sources of data to create consensus ESG ratings (CSR HUB, 2022). Third party CSR reports help to provide a systematic and objective assessment of a company's CSR performance (Lanis & Richardson, 2015; Ortas & Gallego-Álvarez, 2020). CSR HUB's categories include multiple activities that are industry-agnostic, i.e. community, employees, environment and governance. These categories are broad enough to be similarly applicable to companies in different sectors, allowing for a cross sectoral analysis (*Consensus ESG Ratings*, 2021). This was useful as this study spans the entire JSE. The research instrument used to generate the regression results was STATA. STATA is an integrated statistical software package that enables the manipulation of data, generates statistical output and enables the reporting of results (STATA, 2022).

3.3.3 Regression Model

To examine the relationship between CSR and CTA, this study adopted a regression model. It builds on previous empirical studies (Davis et al., 2016; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020) and states that:

$$CTA_{it} = \alpha_0 + \beta_1 CSR_{it} + \beta_2 AGEPUB_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 MKTBK_{it} + \beta_6 ROA_{it} + \beta_7 BIG4AUDIT_{it} + \varepsilon_{it} \quad \ldots\ldots 1$$

Where:

- i = corporations 1 through x;
- t = the financial year;
- CTA = corporate tax aggressiveness;
- CSR = CSR score ranging from 0 to 1;
- AGEPUB = number of years listed on the JSE;
- SIZE = the natural logarithm of total assets;
- LEV = long term debt divided by total equity;
- MKTBK = market value of equity divided by the book value of equity;
- ROA = pre-tax income divided by total assets;
- BIG4AUDIT = a dummy variable that is coded 1 if the company uses a Big4 Auditing firm and 0 if not; and
- ε = the error term.

Following the basic estimation of model 1, this study also examines the effect of categories of CSR (community, employees, environment, and governance) on CTA. This additional regression also pulls on previous empirical research (Davis et al., 2016; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). The mode to examine the disaggregated effect of the categories of CSR is presented in model 2 as:

$$CTA_{it} = \alpha_0 + \beta_1 CSR\_CO_{it} + \beta_2 CSR\_EP_{it} + \beta_3 CSR\_EN_{it} + \beta_4 CSR\_GV_{it} + \beta_5 AGEPUB_{it} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 MKTBK_{it} + \beta_9 ROA_{it} + \beta_{10} BIG4AUDIT_{it} + \varepsilon_{it} \quad \ldots\ldots 2$$

Where:

- CSR_CO = community initiatives ranging from 0 to 1;
- CSR_EP = employee initiatives ranging from 0 to 1;
- CSR_EN = environmental initiatives ranging from 0 to 1; and
- CSR_GV = governance initiatives ranging from 0 to 1.

3.3.4 Description and Measurement of Variables

a) Dependent Variable: Corporate Tax Aggressiveness (CTA)

For this empirical study the dependent variable is CTA. This study used ETR as a proxy for CTA, in line with previous tax aggressiveness studies (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022; Lanis & Richardson, 2012; Ortas & Gallego-Álvarez, 2020). ETR is calculated as cash taxes paid, divided by profit before tax. ETR is a good proxy for tax aggressiveness as it shows instances in which a company has reduced its paid taxes while accounting income remains constant (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022).

Some studies have used an ETR differential to highlight tax aggressiveness. It is calculated as the difference between a country's statutory tax rate (STR) and a company's ETR (Davis et al., 2016; Gavious et al., 2022; Ortas & Gallego-Álvarez, 2020). There are two situations in which this is necessary:

- Where a study considers multiple countries with varying ETRs (Davis et al., 2016; Ortas & Gallego-Álvarez, 2020), the ETR differential highlights instances of tax aggressiveness that would not be so obvious, shown in Table 3.1 below
- Where a study focuses on a single country, but the country's ETR has changed significantly during the observation period (Gavious et al., 2022)

This qualification is not necessary in this study as the research focuses on a single country, i.e. South Africa, and during the observation period the country's company tax rate remained unchanged at 28% (SARS, 2022).

Table 3.1: An example of ETR Differentials Across Different Countries

	STR	**ETR**	**ETR Differential**	**Conclusion**
Company A	15%	15%	0%	Tax compliant
Company B	25%	15%	10%	Tax aggressive

A company's tax liability can be reduced, e.g. when a company has accumulated tax credits. Profit before tax can be negative, e.g. when a company has been operating at a loss. Such instances can make it difficult to interpret the resulting ETR, as shown below in Table 3.2 below.

Table 3.2: The Distorting Interpretation of ETR

Income Tax Payable	Profit Before Tax	ETR	Distortion
Negative	Negative	Positive	Wrongly implies taxes are payable
Positive	Negative	Negative	Wrongly implies that no tax is payable

To avoid modeling errors, previous studies (Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020) truncated their data to only include ETRs between 0 and 1. In an attempt to avoid losing data, this study opted to standardise ETR between 0 and 1 by using the standardisation model shown below (Keller, 2014):

$$NETR_{it} = (ETR_{it} - \min ETR_{it}) \; / \; (\max ETR_{it} \; - \; \min ETR_{it}) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3$$

Where:

- i = corporations 1 through x;
- t = the financial year;
- NETR = the normalized measure of ETR;
- ETR = the original ETR;
- min ETR = the single lowest observed value of ETR across time; and
- max ETR = the single highest observed value of ETR across time.

A low or decreasing NETR indicates higher tax aggressiveness, while a high or increasing tax rates is indicates lower tax aggressiveness. In keeping with previous research, NETR was further transformed into the CTA variable by multiplying it by -1 to obtain an increasing measures of tax aggressiveness for this study (Lanis & Richardson, 2012; Ortas & Gallego-Álvarez, 2020) . After this adjustment when interpreting the results, an increase in CTA is interpreted as an increase in corporate tax aggressiveness.

b) Independent variable: Corporate Social Responsibility (CSR)

The independent variable is CSR. CSR scores were used as a proxy for CSR. The need to compare companies based on their CSR/ESG ratings has resulted in the emergence of databases that synthesise information from multiple sources to provide comparable CSR scores (KPMG, 2019).

This study used CSR information from the CSR HUB (CSR HUB, 2022). CSR HUB uses over 5 000 data elements to calculate a CSR score. The data is mapped into 12 subcategories of

CSR. Their scores are then aggregated into four CSR categories which are used to derive a company's overall CSR score (*Consensus ESG Ratings*, 2021). The score is a rating from 0 to 1 (1 = a positive rating). The complete data schema is shown in Appendix B and briefly summarised below in Table 3.3.

Table 3.3: Summary of CSR HUB's Data Schema

CSR score	Categories	Sub-categories
CSR	Community	• Community development and philanthropy • Product • Human rights and supply chain
	Employee	• Compensation and benefits • Diversity and labour rights • Training, health and safety
	Environment	• Energy and climate change • Environment policy and reporting • Resource management
	Governance	• Board • Leadership ethics • Transparency and reporting

Source: from CSR HUB (CSR HUB, 2022)

A company's CSR score was calculated as the average of the four CSR categories. If a category was missing information, the CSR score was calculated as the simple average of the available categories.

c) Control Variables

Certain variables were selected to control for the effects of CTA, to avoid biased estimates (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). These control variables are briefly discussed below.

Governance and Fraud Controls

This study considered two governance and fraud variables; namely how long the company has been listed on the JSE and the quality of a company's external auditor.

Age Public (AGEPUB*)* controls for the differences in company's listing periods (Lanis & Richardson, 2012). Lanis and Richards' initial study expected that recently listed companies faced greater pressure to deliver superior returns and that these financial pressures might encourage them to adopt more tax aggressive practices. They also believed that companies

listed for longer would be less tax aggressive as they had more time and resources to comply with market requirements (Lanis & Richardson, 2012). Their 2012 results showed a positive relationship between AGEPUB and CTA. They later updated their assumptions to reflect that it was in fact longer-listed companies that faced pressures to continuously deliver superior returns (Lanis & Richardson, 2015).

Auditing (BIG4AUDIT) controls for the assurance provided by external auditors. It is measured by a dummy variable coded 1 if the company uses one of the 'Big Four' accounting firms as their external auditor, and 0 if they do not (Lanis & Richardson, 2015). This is based on the assumption that the quality and enhanced monitoring offered by such auditors would deter aggressive tax practices, partly owing to the increased possibility that those practices could be uncovered (Lanis & Richardson, 2015). The 'Big Four' accounting firms are Deloitte, Ernst & Young, KPMG and PricewaterhouseCoopers.

Financial Controls

The four financial controls used were: size of the company; leverage ratio; a company's market-to-book value; and return on assets.

SIZE controls for the effects of a company's size. Previous research suggests that larger companies would be more tax aggressive (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). The rationale is that larger companies are better resourced and able to exploit opportunities to reduce tax payments, and they possess political influence that shields them from the consequences of tax aggressiveness. SIZE is calculated as the natural logarithm of total assets (Donkor et al., 2022).

Leverage (LEV) controls for the effects of a company's capital structure, i.e. debt financing. Earlier studies suggest that because interest payments are tax deductible, LEV would be positively associated with CTA (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). LEV is calculated as long-term debt divided by total equity (Lanis & Richardson, 2015).

Market-to-Book ratio (MKTBK) and the Return on Assets (ROA) both control for the effects of a firm's profitability (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). The profitability variable has

historically displayed mixed results. Ortas & Gallego-Álvarez (2020) suggest that this is due to the different calculations used as proxies for profitability, i.e. a market-based measure and an accounting-based measure. Therefore, this study includes both types:

- a market-based measure, the Market-to-Book ratio (MKTBK), calculated a firm's market value of equity divided by its book value of equity (Donkor et al., 2022); and
- an accounting-based measure, ROA, calculated as pre-tax income divided by total assets (Ortas & Gallego-Álvarez, 2020).

Table3.4: Summary of Measurement Variables and Sign Predictions

Symbol	Description	Expected Sign
	Dependent Variable	
CTA	Corporate tax aggressiveness	
	Independent Variable	
CSR	A company's total CSR score as a proxy for CSR activity	?
CSR_CO	CSR score for community initiatives	?
CSR_EP	CSR score for employee initiatives	?
CSR_EN	CSR score for environmental initiatives	?
CSG_GV	CSR score for governance initiatives	?
	Control Variables	
AGEPUB	Number of years a company has been listed on the JSE	- / +
SIZE	Size of the company	+
LEV	Leverage, the percentage of operations financed by debt	+
MKTBK	Market-to-book ratio	?
ROA	Return on assets	?
BIG4AUDIT	Indicates the use of a 'Big Four' accounting firm as an external auditor	-

3.3.5 Estimation Techniques

a) Regression Diagnostics

An outlier is an observation that is either unusually large or small, which can distort a model (Keller, 2014). Owing to the large data set, histograms were used to visually detect the existence of outliers. The presence of these extreme values was also assessed via the descriptive statistics provided in Chapter 4. This was done by analysing a variables range, the median-mean differential, and an assessment of the distance between percentiles (Kwak & Kim, 2017). Based on the results, the variable was transformed to reduce the distorting effects either by using its natural log or through winsorisation.

Winsorisation modifies the weights of outliers or replaces them with an expected value (Kwak & Kim, 2017). Winsorisation was used for all variables that could have negative values, as it allows for the correction of outliers without discarding data (Kwak & Kim, 2017). This allowed the variables distribution to maintain their original shape. When winsorisation was deemed appropriate, 5% of the distribution's tails (i.e. 2.5% on either side of the distribution) were replaced with expected values. Where a variable could not have negative values, the natural log was used. Variables that displayed no outliers were left untransformed.

A requirement of regression modelling is for the residuals to be independent and not correlated. Failure to meet this basic condition can result in less efficient estimators (Keller, 2017). The data was tested for multicollinearity, heteroskedasticity and autocorrelation where necessary and the data was corrected to improve the efficiency of the estimators (Drukker, 2003).

b) Panel Data Regression Models

This research uses cross-sectional longitudinal data i.e. panel data. A panel combines elements of cross-sectional and time series data (Hsiao, 2007; Hun, 2011). The benefits of panel data are that it controls for individual heterogeneity and allows for variability, which enhances the information extracted from data. It can also assist in obtaining more reliable parameter estimates (Hsiao, 2007). Model 4, shown below, provides a generic panel model (Hsiao, 2007):

$$y_{it} = \alpha + \beta X_{it} + u_{it} \quad \text{.....4}$$

Where:

- i = corporations 1 through x;
- t = the financial year;
- y = the dependent variable;

- α = the individual effects;
- β = the regression coefficients,
- X = the independent variable(s); and
- u = idiosyncratic error.

Furthermore, idiosyncratic error (u_{it}) can be calculated by model 5 (Hsiao, 2007), shown below as:

$u_{it} = u_i + v_{it}$ ……5

Where:

- u = the unobservable individual-specific event that is fixed over time (i.e. time invariant), and
- v = the time varying remainder disturbance.

A regression is impacted by the observed variables being studied as well as unobserved variables that impact the study, i.e. unobserved heterogeneity. Regression models can suffer from endogeneity bias. This is when the explanatory variable is correlated to the error term (Tan, 2018). Endogeneity bias can result from the incorrect measurement of independent variables, omitted variable bias and simultaneity bias (Namutebi, 2020). This study minimises the impact of simultaneity bias by avoiding the use of dynamic panel data. If the idiosyncratic error (u_{it}) is unobserved and correlated with an independent variable, this will result in omitted variable bias. Even if u_{it} is not correlated to any independent variables, the fact that α is constant and fixed over time might cause serial correlation (Drukker, 2003).

The distortions described above can result in inconsistent estimates of the regression parameters (Tan, 2018). To minimise these risks, the study employed three regression models to test the stated hypotheses. They are the pooled ordinary least squared (OLS), fixed effects and random effects regressions models (Hun, 2011). The three models were then compared to establish the most appropriate fit.

c) Pooled Ordinary Least Squared Model

The pooled OLS model is a multiple regression model applied to panel data (Chitiyo, 2017). A benefit of the OLS regression is its simplicity and ability to accurately approximate a sampled population (Chitiyo, 2017). A challenge of using OLS in panel studies it that is ignores the nature of panel data (i.e. panel effects) and can result in omitted variable bias (Torres-Reyna, 2007). The OLS pooled model is shown below (Keller, 2014):

$$Y_{it} = \beta_0 + \beta_1 X_1 + \cdots + \beta_2 X_2 + \mu_{it} \quad \text{.....6}$$

Where:

- i = corporations 1 through x;
- t = the financial year;
- Y = the dependent variable;
- X = the independent variable;
- β = the coefficient for the independent variables; and
- μ = the overall error term.

d) Fixed Effects Model

Omitted variables can occur when data is unavailable, or it is difficult to measure a variable. If the unobserved variable is time invariant, the fixed effects model can remove omitted variable bias (Torres-Reyna, 2007). It can do so even in instances where the unobserved variable remains unknown. It does so by looking within an entity to describe the observed changes. A version of the fixed effects model is shown below in models 7 to 9 (Baltagi, 2005):

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \cdots + \mu_{it} \quad \text{.....7}$$

Where the time invariant variables are combined into a single fixed (or individual) effect variable, shown in the below model:

$$\alpha_1 = \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} \quad \text{.....8}$$

Based on model 8, model 7 is reduced to:

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \alpha_1 + \cdots + \mu_{it} \quad \text{.....9}$$

Where:

- i = corporations 1 through x;
- t = the financial year;
- Y = the dependent variable;
- X = the independent variable;
- β = the coefficient for the independent variables;
- α = a single fixed or individual variable; and
- μ = the overall error term.

e) Random Effects Model

The random effects model was used to test whether differences across companies influence CTA. It assumes that each entity is unique, therefore the error terms and constants of the entities in a panel should not be related to each other (Torres-Reyna, 2007). If the error terms are correlated, then the random effects model should not be used. The random effects model is expressed in the model below (Torres-Reyna, 2007):

$$Y_{it} = \beta X_{it} + \alpha_1 + \mu_{it} + \varepsilon_{it} \quad \text{.....10}$$

Where:

- i = corporations 1 through x;
- t = the financial year;
- Y = the dependent variable;
- X = the independent variable;
- μ = between entity error; and
- ε = within entity error.

f) Tests for Endogeneity

Endogeneity can result in biased and inconsistent estimates, i.e. sample coefficients that are not a true reflection of the population coefficients (Tan, 2018). Instrumental variable (IV) estimation can correct this. An "instrument is a variable that does not belong to the explanatory equation, is correlated with the endogenous explanatory variable, and is not correlated to the error term" (Tan, 2018).

This study used the Two Stage Least Squares (2SLS) regression to check and correct for endogeneity bias (Namutebi, 2020; Tan, 2018). Three indicators were used to create an instrument. The sampled CSR indicators are summarised below in Table 3.5. The three indicators are the lagged variables of AGEPUB (natural log), SIZE and ROA (winsorised). The variables were lagged by one year. Previous research has found that CSR activity and reporting were positively influenced when a company was older in age, bigger in size and more profitable (D'Amato & Falivena, 2020; Syed & Butt, 2017; Waluyo, 2017). Lagged variables were deemed appropriate as the values of the indicators in the previous period would most likely impact the CSR strategy in the subsequent year.

Table 3.5: Indicators Used to Derive the Instrumented Variable

	Indicator 1	Indicator 2	Indicator 3
Measured as	AGEPUB (natural log) _L1	SIZE_L1	ROA (winsorised)_L1

Note: L1 is a lagged variable, lagged by one year.

The statistical software package STATA (STATA, 2022) was used to conduct the pooled OLS 2SLS regression. A series of tests was then conducted, outlined briefly below (Tan, 2018):

- A Pooled 2SLS regression was conducted. The Durbin Wu-Hausman test was used to examine the results for endogeneity. The test was conducted at a 5% level of significance
- The strength of the instrument was assessed via the estimated first stage regression. This was done to ensure that the instrument and endogenous variable were strongly correlated)
- Lastly, the validity of the instrument was assessed through the test for overidentifying restrictions. This test was done to ensure that the instrument was uncorrelated with the error term.

The pooled OLS 2SLS regressions was used to test for endogeneity. If detected, the appropriate 2SLS regression (i.e. pooled OLS 2SLS, random effects 2SLS, or fixed effects 2SLS regression) would be conducted and compared to the original regressions. The comparison would consider changes in coefficient estimates in terms of significance, direction and magnitude.

3.4 Reliability and Validity

In quantitative research it is important to test for the reliability and validity of results. Reliability refers to the accuracy of a chosen instrument, while validity refers to how well a concept is measured in a study (Creswell, 2014). Reliability and validity were tested throughout the study. This study builds on previous academic research (Davis et al., 2016; Gavious et al., 2022; Lanis & Richardson, 2012, 2013, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). The choice of variables, sampling methodology and measuring tools are derived from these studies. Additional validity tests were conducted on the models and are briefly described below.

The validity of the independent variables was assessed using a hypothesis that tested if at least one of the independent variables explains the variation in CTA. The F-statistic and Wald χ^2 were used to support or reject the null hypothesis at a 5% level of significance (Keller, 2017). The F/Wald χ^2 statistics help explain how much of the variation, in the dependent variable, is explained by the regression equation (Torres-Reyna, 2007). A high (low) value indicates that a big (small) part of the variation is explained by the regression equation.

The coefficient of determination (R^2) was used to test for what proportion of variation in the dependent variable is explained by the independent variables (Keller, 2017). Its results range from 0 to 1, with 1 reflecting a perfect model and 0 an invalid model.

The Breusch-Lagrange Multipliers (LM) test was conducted (Torres-Reyna, 2007) to determine whether to use the pooled OLS model or random effects models. It was used to assess whether panel effects were present. In deciding whether to use the random or fixed effects model, the Hausman test was conducted. It was used to assess whether the unique error is correlated with the regressors (Hsiao, 2007; Hun, 2011; Torres-Reyna, 2007). The test for endogeneity (outlined in section 3.3.5) was also conducted to ensure model validity.

3.5 Limitations

Tax aggressiveness is commonly defined as instances of tax evasion and excessive tax avoidance (Lanis & Richardson, 2012; Ortas & Gallego-Álvarez, 2020). Since tax disclosures are not mandatory, it is not possible to accurately calculate tax aggressiveness (Lanis 2012). A commonly acceptable proxy is derived by analysing a company's effective tax rate, as it highlights instances where a company reduces their taxable income while maintaining accounting profits (Davis et al., 2016; Donkor et al., 2022; Gavious et al., 2022; Lanis & Richardson, 2012; Muller & Kolk, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). This proxy has limitations as it does not account for instances in which accounting profits have been distorted to reduce payable taxes (Lanis & Richardson, 2012; Ortas & Gallego-Álvarez, 2020).

The purpose of the study is to examine the relationship between CSR and CTA. It does not explore other determinates of corporate taxes. Additional variables were included to control for the effects of CTA, to avoid biased estimates.

In line with previous research, this study uses CSR scores as a proxy for CSR activity (Davis et al., 2016; Lanis & Richardson, 2015; Muller & Kolk, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). It is understood that there can be instances in which CSR disclosures are an inaccurate reflection of performance (Jenkins & Newell, 2013; Luo et al., 2018; Tamvada, 2020). This distortion can be intentionally misleading or unintentionally inaccurate. This study does not seek to distinguish between legitimate and falsified incidences of CSR impact. To limit the distortion, this study uses third-party CSR reports as they provide a systematic and objective assessment of a company's CSR activities (Ortas & Gallego-Álvarez, 2020). This study also assumes that the CSR scores are calculated in a consistent and comparable manner.

Literature pertaining to CSR tends to focus on developed markets and there is a gap in analysis of emerging markets. In emerging studies, the lack of credible CSR information is cited as a limitation. CSR information is typically sourced from CSR aggregators that remove subjectivity and provide comparable CSR scores across industries and geographies. This study revealed that usable data points for South African companies is reduced in earlier periods. This study sourced data from CSR HUB, with the observational period restricted to the five year period from 2015 to 2019. This may limit the ability to generalise findings.

This study is limited to companies listed on the JSE and the findings might not be applicable to all companies operating in South Africa. To increase the generalisability of the findings, this study did not focus on a specific sector or company type.

Chapter 4
Discussion of Findings

4.1 Introduction

This chapter presents the results of the hypotheses that were outlined in Chapter 1. It details the descriptive statistics of the variables used and the corresponding correlation matrix. It presents the regression results and concludes with a discussion of the validity and reliability of the estimated regression models.

4.2 Descriptive Statistics

The descriptive statistics are outlined in Table 4.1. The overall population was unbalanced with a potential of 1 367 observations per variable over the five-year period. ETR was present in 96% of the observations. ETR exhibited a wide dispersion in values as evidenced by a wide range, standard deviation (1,29) and a noticeable difference between the median (0,2059) and mean (0,2233). The untransformed mean of 20,33% is lower than the country's STR tax rate of 28% which remained unchanged over the period of observation, (SARS, 2022). This implies a level of tax aggressiveness among South African firms. This variable was normalised to range between 0 and 1, as explained in Chapter 3. This method was preferred to truncation as the number of observations remained unchanged (1 308). The range still fluctuated widely between the minimum and maximum values of 0 and 1. NETR was then transformed using winsorisation to maintain its distribution and cater for outliers (Kwak & Kim, 2017). This transformation is evidenced in the NETR (winsorisation) variable in Table 4.1 and shows a significant reduction in range (0,0223) and a significantly reduced standard deviation (0,0057).

The total CSR score was calculated as the simple average of the four categories of CSR. This was the variable with the lowest number of observations in this study and was present in 60% of the observations. CSR information is not as readily available as financial information. This is partly due to the voluntary nature of disclosure and the lack of standard reporting (Luo et al., 2018). Lanis and Richard's (2012) landmark study had a wide disbursement of CSR values as evidenced by the minimum value (0,019), median (0,135) and maximum value (0,673). They attributed the low scores to the voluntary nature of CSR. This study also reveals a wide disbursement in CSR values, seen in the minimum value (0,2622), median (0,5558) and maximum value (0,7296). This study's higher CSR scores can partly be attributed to the JSE listing requirements for integrated reporting via the adoption of the King Code of Corporate Governance (Johannesburg Stock Exchange, 2019). The governance and environment

categories of CSR each have a 60% observation rate, while the community and employee categories were observed at 54% and 46% respectively. The governance category was expected to rank among the most complete categories, given the focus on governance in the King Code (Ackers & Eccles, 2015; Kloppers, 2018). A low rating for the employee category was surprising given South Africa's focus on employment equity, broad-based black economic empowerment (B-BBEE) and employee development. The difference in category rating shows that even though integrated reporting is required by the JSE and the Companies Act of South Africa, there is no standardisation of CSR disclosures (*Consensus ESG Ratings*, 2021). Companies still get to decide what constitutes their social responsibility, and how to report on it (Luo et al., 2018; Tamvada, 2020).

The governance and fraud controls were evidenced in 100% of the observations. AGEPUB exhibited a large range (59,0000), standard deviation (21,1956) and noticeable difference between the mean (22,1895) and median (13,0000). The wide range is not surprising since the JSE has been operational for many years, it is the oldest stock exchange on the African continent, and so the sample includes old and new listings(Johannesburg Stock Exchange, 2019). This variable was transformed using the natural log of AGEPUB which resulted in a slight reduction in the number of observations (1 312), a significant improvement in standard deviation (1,1761) and an acceptable variance between the mean (2,5931) and median (2,6391). BIG4AUDIT is a dummy variable which is present in 100% of the observations owing to its binary nature; 64% of companies had a 'Big Four' accounting firm as their external auditor while 36% did not.

The SIZE variable is already a transformed variable, as it was calculated as the natural log of total assets. It was present in 96% of the observations. It still exhibits a wide range (17,0031). This is to be expected, given the varying nature of companies listed on the JSE, the size of their operations and resultant balance sheets. The difference between the mean (15,0598) and median (15,3459) is acceptable. LEV, MKTBK and ROA are represented in 78-81% of observations. All three exhibit wide ranges in value as evidenced by their ranges, median, mean, and standard deviation values. The decision to winsorise all three was made to reduce the impact of lost negative values that would have been dropped off in other transformations, i.e. the natural log (Kwak & Kim, 2017). The shape of their distributions remains relatively unchanged, and their dispersions are improved as shown in Table 4.1.

Table 4.1: Summary of Descriptive Statistics

Variables	Observations	Minimum	Maximum	Mean	Median	Std Deviation
Raw Variables						
ETR	1 308	-27,1612	21,3611	0,2233	0,2059	1,2908
CSR	815	0,2622	0,7296	0,5389	0,5558	0,0836
CSR_CO	744	0,1700	0,8100	0,5231	0,5300	0,0954
CSR_EP	632	0,2600	0,8000	0,5804	0,5933	0,0984
CSR_EN	815	0,1900	0,8000	0,5514	0,5600	0,0981
CSR_GV	815	0,2350	0,8200	0,5317	0,5500	0,0916
AGEPUB	1 367	0,0000	59,0000	22,1895	13,0000	21,1956
SIZE	1 308	4,5326	21,5357	15,0598	15,3459	2,5433
LEV	1 096	-91,7700	15,1800	1,2377	0,7300	3,7132
MKTBK	1 071	-131,5400	18,9300	1,7184	1,2000	4,6731
ROA	1 112	-7,3184	0,9021	0,0622	0,0745	0,2716
Transformed Variables						
NETR (winsorised)	1 308	0,5547	0,5770	0,5643	0,5640	0,0057
AGEPUB (natural log)	1 312	0,0000	4,0775	2,5931	2,6391	1,1761
LEV (winsorised)	1 096	0,0800	5,1900	1,1795	0,7300	1,2696
MKTBK (winsorised)	1 071	0,3300	5,8000	1,7363	1,2000	1,4272
ROA (winsorised)	1 112	-0,1229	0,2714	0,0745	0,0745	0,0953
Dummy Variable		0 (%)	1 (%)			
Big4Audit	1 367	36%	64%			

Source: Results from research data

Note: ETR is effective tax rate; CSR is total CSR rating; CSR_CO is the community category; CSR_EP is the employee category; CSR_EN is the environmental category; CSR_GV is the governance category; AGEPUB is years listed on the JSE; SIZE is the size of the company; LEV is leverage; MKTBK is market-to-book ratio; ROA is return on assets; NETR is the normalised effective tax rate; BIG4AUDITis auditing firm.

4.3 Correlation Analysis

The dependent variable is a company's CTA and ETR is used as a proxy for CTA. ETRs were standardised to range between 0 and 1 (NETR). A high or increasing NETR is a proxied measure of low corporate tax aggressiveness. Similarly, a low or decreasing NETR is proxy for a high tax aggressive behaviour. For ease of interpretation, NETR was multiplied by -1 to provide an increasing measure of tax aggressiveness, as represented by the CTA variable. When interpreting further results, an increase in CTA indicates an increase in corporate tax aggressiveness and a decrease in CTA indicates a decrease in corporate tax aggressiveness.

The correlation matrix for the base regression is shown in Table 4.2. The results show a negative relationship between CTA and the independent variables, which suggests that tax

aggressiveness decreases as each of those variables increases in value. It is also worth noting that there is no excessive correlation between any of the control variables (barring CSR and the categories of CSR, which is to be expected). All are below the 0,7 suggested threshold suggested (Chitiyo, 2017). Correlations above this threshold would imply multicollinearity in that the independent variables were correlated to each other and this could result in large sampling errors (Keller, 2014). CTA exhibits the strongest correlation with ROA (-0,3022).

CSR is calculated as the average of the four categories of CSR. it is therefore not surprising that it would show a high positive correlation with each of these categories. The highest correlation evidenced with CSR_CO (0,8585) and the lowest with CSR_GV (0,7241). It should be noted that there are strong correlations between the CSR categories themselves. This is to be expected as companies that are actively involved in CSR might be active across multiple categories. There is also the chance that the impact of certain initiatives might be wide enough to be classified across multiple categories (*Consensus ESG Ratings*, 2021). When considering the control variables, CSR had the highest correlation with SIZE (0,2771) and AGEPUB (0,2013). This implies that larger companies, and companies that have been publicly traded for longer periods of time, are more likely to engage in CSR activities (as evidenced by higher CSR scores).

Between control variables, SIZE and LEV have a strong positive correlation of (0,3971), suggesting that larger companies tend to finance their operations with higher proportions of debt. ROA is negatively correlated to SIZE (-0,3321) implying that a company's ability to generate a return on its assets decreases as its asset base increases. ROA is negatively correlated to LEV (-0,3071), and positively correlated to MKTBK (0,4390). The latter is not surprising as ROA and MKTBK are different measures of profitability.

Table 4.2: Correlation Matrix

	CTA	CSR	CSR_CO	CSR_EP	CSR_EN	CSR_GV	AGEPUB (natural log)	SIZE	LEV (winsorised)	MKTBK (winsorised)	ROA (winsorised)	Big4Audit
CTA	1,0000											
CSR	-0,1249	1,0000										
CSR_CO	-0,0928	0,8585	1,0000									
CSR_EP	-0,1360	0,8529	0,6898	1,0000								
CSR_EN	-0,0496	0,8134	0,6481	0,4843	1,0000							
CSR_GV	-0,1344	0,7214	0,4401	0,5278	0,5011	1,0000						
AGEPUB (natural log)	-0,0928	0,2013	0,0973	0,1478	0,2011	0,2218	1,0000					
SIZE	-0,0562	0,2771	0,2009	0,2338	0,2830	0,1668	0,1279	1,0000				
LEV (winsorised)	-0,1229	0,1573	0,1736	0,1404	0,1189	0,0695	0,1766	0,3971	1,0000			
MKTBK (winsorised)	-0,2068	0,1315	0,1519	0,2279	-0,0162	0,0374	-0,0085	-0,0072	0,1451	1,0000		
ROA (winsorised)	-0,3022	0,0235	0,0225	0,0460	-0,0387	0,0549	0,0257	-0,3321	-0,3071	0,4390	1,0000	
Big4Audit	-0,0534	0,1645	0,1191	0,1662	0,0935	0,1613	0,0082	0,1939	-0,0348	0,2128	0,0505	1,0000

Source: Results from research data

Note: CTA is corporate tax aggressiveness and is calculated by multiplying NETR (winsorised) by -1; CSR is total CSR rating; CSR_CO is the community category; CSR_EP is the employee category; CSR_EN is the environmental category; CSR_GV is the governance category. AGEPUB is years listed on the JSE; SIZE is the size of the company; LEV is leverage; MKTBK is market-to-book ratio; ROA is return on assets; BIG4AUDIT is auditing firm.

4.4 Regression Results

The two hypotheses introduced in Chapter 1 were tested using three models. The results of the pooled OLS, random effects and fixed effects models are shown below. The Breusch-Pagan Lagrange Multiplier (LM) and Hausman tests were used to select the most appropriate model.

4.4.1 Basic Regression: CSR and CTA

The results of the pooled OLS, random effects and fixed effects models are shown below in Table 4.4. All three models proved to be valid as per the resultant F and Wald Chi values (Keller, 2014). The pooled OLS model was compared with the random effects model. The Breusch-Pagan Lagrange Multipliers (LM) test used to assess whether there were unique entity or time effects, i.e. panel effects. The null hypothesis was rejected in favour of the alternative hypothesis, concluding that panel effects were present and therefore the random effects model was superior (Torres-Reyna, 2007). The random effects model was then compared to the fixed effects model. The Hausman test was used to assess whether the individual specific effects in the error term were correlated with the error term and whether they were fixed or random. The study failed to reject the null. This concludes that the random effects model was superior as the difference in coefficients was not systematic (Torres-Reyna, 2007). The results are shown below in Table 4.3.

Table 4.3: Base Regression Model Selection Criteria and Results

TEST	HYPOTHESES	RESULTS	DECISION
LM	H_0: No panel effects (OLS) H_1: There are panel effects (RE)	$\mathcal{X}^2$= 128,92 Prob > $\mathcal{X}^2$= 0,000	Reject H_0
Hausman	H_0: Difference in coefficients is not systematic (RE) H_1: Difference in coefficients is systematic (FE)	$\mathcal{X}^2$ = 14,99 Prob > $\mathcal{X}^2$ = 0,1324	Fail to reject H_0

Source: Results from research data

Under the random effects model there were 730 observations from 161 groups. The model's R-squared value (0,1533) indicated that 15,33% of the variation in CTA is explained by the regression (Keller, 2017). The model exhibits internal validity as the F test was statistically significant (Prob > χ^2 = 0,0000), implying that at least one of the independent variables is able to explain the variation in CTA (Keller, 2014).

The outcomes of this study suggest a negative, although statistically insignificant, relationship between CSR and CTA. These results cannot support claims that CSR positively or negatively effects CTA. Previous studies have yielded mixed results. Lanis & Richardson (2012, 2015)

found a negative relationship and concluded that socially responsible firms were less tax aggressive and they considered taxes to form part of their social responsibility. Davis et al. (2016) found a positive relationship, concluding that socially responsible companies did not pay more taxes as they considered tax and CSR to be substitutes for each other. Ortas & Gallego-Álvarez (2020) established that national cultures influenced the relationship between CSR and CTA. Donkor et al. (2022) proposed that the quality of integrated reporting had a mitigating effect on certain levels of tax aggressiveness. Gavious et al. (2022) found that companies with high and low CSR involvement had similar levels of tax aggressiveness, but after the enforcement of standards and regulations, 'high CSR' firms were more likely to engage in tax aggressive behaviour.

The debate over whether tax payments should constitute responsible or irresponsible corporate behaviour is relatively recent (Davis et al., 2016; Gavious et al., 2022; Jenkins & Newell, 2013; Lanis & Richardson, 2012, 2013, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). The most recent version of the King Code (Institute of Directors Southern Africa, 2016) highlighted the need for South African businesses to adopt transparent and responsible tax policies. However, this study's findings suggest that this has yet to result in a demonstrable relationship in the South African context.

There was evidence of a significant relationship between CTA and some of the control variables. For instance, the relationship between CTA and SIZE is observed to be a significant ($p < 0,10$) and negative relationship. This implies that larger companies are less tax aggressive as they pay more taxes. This is counter to studies by Lanis & Richardson (2015) and Ortas & Gallego-Álvarez (2020), but supports Lanis & Richardson's (2012) assumption that larger companies would be less tax aggressive as they are better resourced (e.g. with finances, staff, etc) which enables them to comply with laws, regulations and standards.

The relationship between CTA and LEV is significant and negative ($p < 0,10$). This implies that highly leveraged companies are less likely to engage in tax aggressive behaviour. This is at odds with literature and previous studies which suggest that tax deductible interest payments would be used to reduce tax liability (Donkor et al., 2022; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). This study employs the same measure of leverage as Lanis & Richardson (2012, 2015). Their Australian study (Lanis & Richardson, 2012) failed to establish a significant relationship between CTA and LEV. In their study of American markets (Lanis &

Richardson, 2015) Lanis & Richardson found a significantly positive relationship between CTA and LEV. While other studies also showed a statistically positive relationship between CTA and LEV, they used alternative calculations for the variable, e.g. lagged total assets (Donkor et al., 2022), or common equity in place of assets (Ortas & Gallego-Álvarez, 2020).

No sign predictions were made regarding the relationship between CTA and measures of profitability, as previous studies have yielded conflicting results (Lanis & Richardson, 2012; Ortas & Gallego-Álvarez, 2020). In this study CTA and ROA display a significantly negative relationship ($p < 0,01$). This implies that more profitable companies, according to accounting measures of profitability, are less likely to be tax aggressive as they pay their fair share in taxes. Of the referenced studies, only two (Donkor et al., 2022; Ortas & Gallego-Álvarez, 2020) were able to find a statistically significant relationship which was positive in both instances. The model found no significant relationship with AGEPUB, MKTBK and Big4Audit.

Table 4.4: Base Regression Results

Variable	Predicted sign	OLS	RE	FE
Intercept	?	-0,5548 (-248,54) ***	-0,5544 (-188,56) ***	-0,5548 (-49,24) ***
CSR		-0,0047 (-1,75) *	-0,0029 (-0,95)	0,0001 (0,04)
AGEPUB (natural log)	+/-	-0,0003 (-1,15)	-0,0003 (-0,73)	0,0026 (1,84) *
SIZE	+	-0,0002 (-1,58)	-0,0004 (-1,67) *	-0,0011 (-1,69) *
LEV (winsorised)	+	-0,0007 (-3,90) ***	-0,0005 (-1,89) *	-0,0001 (-0,16)
MKTBK (winsorised)	?	-0,0002 (-1,10)	0,0000 (0,01)	0,0004 (1,13)
ROA (winsorised)	?	-0,0219 (-9,50) ***	-0,0219 (-7,12) ***	-0,0209 (-5,15) ***
Big4Audit	-	0,0004 (0,07)	0,0003 (0,38)	Omitted
F/Wald χ^2		19,27	102,00	4,44
Prob > F /		0,0000		0,0000
Prob > χ^2			0,0000	
R squared		0,1583	0,1533	0,0192
Number of observations		730	730	730
Number of groups			161	161

Source: Results from research data

Note: CSR is total CSR score; AGEPUB is years listed on the JSE; SIZE is the size of the company; LEV is leverage; MKTBK is market-to-book ratio; ROA is return on assets; BIG4AUDIT is auditing firm.

1. Coefficients estimates with the t-statistic in parentheses for pooled OLS and fixed effects models
2. Coefficients estimates with the z-statistic in parentheses for the random effects models
3. ***, **, and * denote significance at 1%, 5% and 10% respectively

4.4.2 Basic Estimations: CSR Categories and CTA

The results of the regression estimate on the effect of the four categories of CSR on CTA using the pooled OLS, random effects, and fixed effects techniques are shown in Table 4.6. Similar to the process outlined for the base regression (section 4.4.1), the models were compared to find the most appropriate model. The Breusch-Pagan Lagrange Multipliers (LM) test found that panel effects were evident and that the random effects model was superior to the pooled OLS (Torres-Reyna, 2007). The Hausman test found that the fixed effects model was superior to the random effects model (Torres-Reyna, 2007). The results are shown below in Table 4.5.

Table 4.5: Additional Regression Model Selection Criteria and Results

TEST	HYPOTHESES	RESULTS	DECISION
LM	H_0: No panel effects (OLS) H_1: There are panel effects (RE)	$\mathcal{X}^2$= 94,36 Prob > $\mathcal{X}^2$= 0,000	Reject H_0
Hausman	H_0: Difference in coefficients is not systematic (RE) H_1: Difference in coefficients is systematic (FE)	$\mathcal{X}^2 = 23{,}37$ Prob > $\mathcal{X}^2$ = 0,0374	Reject H_0

Source: Results from research data

Under the fixed effects model there were 592 observations from 132 groups. The model's R-squared value (0,0321) indicated that only 3,21% of the variation in CTA is explained by the regression (Keller, 2014). The model exhibits internal validity since the F test was statistically significant (Prob > F = 0,0001), implying that at least one of the independent variables is able to explain the variation in CTA (Keller, 2014).

The results found a statistically significant ($p < 0{,}05$) and positive relationship between CTA and CSR_CO. This implies that certain community-based initiatives increase a company's tax aggressiveness. The community-based category is broad and encompasses certain subcategories of CSR, summarised in Table 3.2 and defined in Appendix B. Previous research has tested the effects of aggregated or disaggregated initiatives within this category, labelled as social investment (Lanis & Richardson, 2012), community relations (Lanis & Richardson, 2015), human rights (Lanis & Richardson, 2015), product (Lanis & Richardson, 2015), community (Davis et al., 2016), and corporate social performance (Ortas & Gallego-Álvarez, 2020). This category might have the greatest link to tax as it is deals with the provision of public goods which is a typical use of corporate taxes (Lanis & Richardson, 2012). Previous studies (Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020) found a statistically significant and negative relationship between CSR_CO and CTA, concluding that certain community-based initiatives had a negative impact on tax aggressive behaviours. This study's

findings differ from previous empirical research findings. These findings might substantiate claims that CSR:

(i) could act as a form of social insurance that shields business from the fallout from irresponsible behaviours, i.e. not paying their fair share in taxes (Luo et al., 2018; Tamvada, 2020); and

(ii) that some companies view CSR and corporate taxes as substitutes and, as they invest more into CSR initiatives, they ultimately pay less in corporate taxes (Davis et al., 2016).

The study found a statistically significant ($p < 0,05$) and negative relationship between CTA and CSR_EN. This implies that certain environment-based initiatives decrease a company's tax aggressiveness. This category and its linkage to CTA has been researched previously (Davis et al., 2016; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). Only Ortas & Gallego-Álvarez (2020) were able to find a statistically significant (negative) relationship between CSR_EN and CTA. These results are in line with their finding. Ortas & Gallego-Álvarez (2020) concluded that "organisations promoting the preservation of living and non-living natural systems, thus minimising environmental risks, are less likely to engage in tax aggressive practices" (Ortas & Gallego-Álvarez, 2020, p. 841).

Similar to the base regression, the additional regression found a statistically significant ($p < 0,01$) and negative relationship with ROA. This implies that profitable companies are less likely to be tax aggressive. Previous studies found a significantly positive relationship (Donkor et al., 2022; Lanis & Richardson, 2012; Ortas & Gallego-Álvarez, 2020), which differs from this study's outcome. The model found no significant relationship with CSR_EP, CSR_GV, AGEPUB, SIZE, LEV, or MKTBK. The BIG4AUDIT variable was omitted from the model as multicollinearity was detected.

Table 4.6: Additional Regression Results

Variable	Predicted sign	OLS	RE	FE
Intercept	?	-0,5516 (-146,94) ***	-0,5532 (-122,99) ***	-0,5565 (-40,89) ***
CSR_CO		-0,0001 (-0,02)	0,0078 (1,40)	0,0142 (2,24) **
CSR_EP		-0,004 (-1,11)	-0,0037 (-0,81)	-0,0017 (-0,33)
CSR_EN		0,0036 (0,99)	-0,0051 (-1,16)	-0,011 (-2,22) **
CSR_GV		-0,006 (-1,24)	-0,0020 (-0,33)	0,0056 (0,69)
AGEPUB (natural log)	+/-	-0,0002 (-0,56)	-0,0001 (-0,20)	0,0016 (0,75)
SIZE	+	-0,0003 (-1,82) *	-0,0004 (-1,59)	-0,001 (-1,31)
LEV (winsorised)	+	-0,0008 (-4,10) ***	-0,0006 (-2,02) **	0,0000 (0,02)
MKTBK (winsorised)	?	0,0000 (0,20)	0,0001 (0,53)	0,0003 (0,80)
ROA (winsorised)	?	-0,0246 (-8,92) ***	-0,0245 (-6,67) ***	-0,0225 (-4,74) ***
Big4Audit	-	-0,0002 (-0,27)	-0,001 (-0,9)	Omitted
F / Wald χ^2		12,41	72,18	3,55
Prob > F		0,0000	n/a	0,0001
Prob > χ^2		n/a	0,0000	n/a
R squared		0,1699	0,1535	0,0321
Number of observations		592	592	592
Number of groups		n/a	132	132

Source: Results from research data

Note: CSR_CO is the community category; CSR_EP is the employee category; CSR_EN is the environmental category; CSR_GV is the governance category; AGEPUB is years listed on the JSE; SIZE is the size of the company; LEV is leverage; MKTBK is market-to-book ratio; ROA is return on assets; BIG4AUDIT is auditing firm.

1. Coefficients estimates with the t-statistic in parentheses for pooled OLS and fixed effects models
2. Coefficients estimates with the z-statistic in parentheses for the random effects models
3. ***, **, and * denote significance at 1%, 5% and 10% respectively

4.5 Robustness: Two Stage Least Squares (2SLS) Regression

2SLS regressions were conducted to address endogeneity concerns. The same instrumented variable was created for CSR and each category of CSR, as described in Chapter 3 (section 3.3.5). The instruments used were the lagged variables for AGEPUB (natural log), SIZE and ROA (winzorised). The endogeneity tests were conducted using a 2SLS Pooled OLS regression in all five instances (i.e. CSR, CSR_CO, CSR, EP, CSR_EN and CSR_GV). The results are shown below in Table 4.8. All five models proved to be valid as per the resultant Wald Chi values (Keller, 2014). The Durbin-Wu-Hausman test was used to test for endogeneity, using the hypothesis below, at a 5% level of significance (STATA, 2022).

- H_0: variables are exogenous
- H_1: variables are endogenous

The results, shown in Table 4.7, failed to reject the null in all instances, as there was no evidence of endogeneity. It was concluded that CSR and its categories (namely CSR_CO, CSR_EP, CSR_EN and CSR_GV) were all exogenous variables.

Table 4.7: 2SLS Regression Test for Endogeneity

TEST	**CSR**	**CSR_CO**	**CSR_EP**
Durbin (score) chi2	0,3601 (p = 0,5485)	0,2082 (p = 0,6482)	0,1642 (p = 0,6853)
Wu-Hausman F	0,3535 (p = 0,5523)	0,2041 (p = 0,6516)	0,1605 (p = 0,6888)
Robust score chi2	0,3606 (p = 0,5482)	0,2201 (p = 0,6389)	0,2227 (p = 0,6370)
Robust regression F	0,3596 (p = 0,5489)	0,2205 (p = 0,6388)	0,2129 (p = 0,6447)
Decision	Fail to Reject Ho	Fail to Reject Ho	Fail to Reject Ho
TEST	**CSR_EN**	**CSR_GV**	
Durbin (score) chi2	0,0129 (p = 0,9096)	0,1172 (p = 0,7321)	
Wu-Hausman F	0,0126 (p = 0,9105)	0,1150 (p = 0,7346)	
Robust score chi2	0,0126 (p = 0,9105)	0,1112 (p = 0,7388)	
Robust regression F	0,0124 (p = 0,9113)	0,1104 (p = 0,7398)	
Decision	Fail to Reject Ho	Fail to Reject Ho	

Source: Results from research data

Notwithstanding the results in Table 4.7, showing there was no evidence to support endogeneity, Table 4.8 reports the regression results using the 2SLS estimation. Appendix C has the detailed results of the 2SLS regressions (i.e. the report on the first stage regression and the test for overidentifying restrictions). The results in table 4.8 are purely for completeness and have no further bearing on the results of the robust estimations in Table 4.4 and 4.6.

Table 4.8: 2SLS Pooled OLS Regression Results

CTA	CSR	CSR_CO	CSR_EP	CSR_EN	CSR_GV
Intercept	-0,5478 (-39,66) ***	-0,5511 (-43,18) ***	-0,5503 (-70,16) ***	-0,5582 (-33,92) ***	-0,5502 (-35,73) ***
CSR	-0,0326 (-0,63)				
CSR_CO		-0,017 (-0,48)			
CSR_EP			-0,0153 (-0,66)		
CSR_EN				0,0065 (0,1)	
CSR_GV					-0,0256 (-0,4)
AGEPUB (natural log)	-0,0002 (-0,31)	-0,0004 (-0,99)	-0,0001 (-0,19)	-0,0006 (-0,78)	-0,0003 (-0,43)
SIZE	0,0002 (0,27)	-0,0001 (-0,25)	-0,0001 (-0,41)	-0,0003 (-0,34)	0,0001 (0,11)
LEV (winsorised)	-0,0007 (-3,16) ***	-0,0007 (-1,71) **	-0,0009 (-4,11) ***	-0,0008 (-3,91) ***	-0,0008 (-3,98) ***
MKTBK (winsorised)	-0,0001 (-0,5)	-0,0001 (-0,57)	0,0002 (0,6)	-0,0001 (-0,48)	-0,0002 (-0,92)
ROA (winsorised)	-0,0199 (-3,94) ***	-0,02 (-3,66) ***	-0,0246 (-8,61) ***	-0,0228 (-5,56) ***	-0,0198 (-2,71) ***
BIG4AUDIT	0,0011 (0,6)	0,0004 (0,33)	-0,0002 (-0,16)	-0,0001 (-0,07)	0,0012 (0,4)
Wald χ^2 (11)	150,22	153,12	143,86	196,25	168,11
Prob > χ^2	0,0000	0,0000	0,0000	0,0000	0,0000
R squared	0,0412	0,0950	0,1382	0,1448	0,1016
Number of observations	695	655	565	695	695

Source: Results from research data

Note: CSR_CO is the community category; CSR_EP is the employee category; CSR_EN is the environmental category; CSR_GV is the governance category; AGEPUB is years listed on the JSE; SIZE is the size of the company; LEV is leverage; MKTBK is market-to-book ratio; ROA is return on assets; BIG4AUDIT is auditing firm.

1. Coefficients estimates with the t-statistic in parentheses for pooled OLS
2. ***, **, and * denote significance at 1%, 5% and 10% respectively

Chapter 5
Conclusions and Recommendations

5.1 Introduction

This chapter concludes the study. It summarises the findings presented in chapter 4, as they relate to the research objectives, questions and hypotheses. The chapter then provides policy recommendations regarding the nexus between CSR and corporate taxes. The chapter concludes by presenting possible avenues for future research.

5.2 Summary and Conclusions

The objective of this study was to understand whether there is a relationship between CSR and the payment of corporate taxes. This study is intended to contribute towards existing literature by providing an emerging market perspective on the nexus between CSR and CTA. It does so by focusing on publicly listed companies operating in South Africa. The data constraints that usually hinder CSR studies in emerging markets are not found in the South African example. This is partly because the JSE requires corporate governance disclosures as a listing requirement (Ackers & Eccles, 2015; Kloppers, 2018), and listed companies publish audited financial statements.

CSR scores were sourced from the CSR HUB and were used as a proxy for CSR. ETR was used as a proxy for CTA. ETR is an appropriate proxy at it captures instances where a company's tax payable reduces while accounting profits increase (Davis et al., 2016; Donkor et al., 2022; Lanis & Richardson, 2012; Muller & Kolk, 2015; Ortas & Gallego-Álvarez, 2020; Watson, 2015). Various governance and financial variables were included to control for the effects of tax aggressiveness. The base regression explored the relationship between an aggregated CSR score and CTA. The hypothesis was tested using the pooled OLS, random effects and fixed effects models (Hsiao, 2007; Hun, 2011). The models were then compared using the Breusch-Lagrange Multipliers (LM) and Hausman tests (Torres-Reyna, 2007) to select the most appropriate model. In the base regression, panel effects were detected. In addition, the unique error was not correlated with the regressors and the difference in coefficients was not systematic. This meant that the random effects model was the appropriate estimation technique.

Literature on this emerging nexus is new and has yet to result in definitive conclusions. Most of the empirical research conducted has found a statistically significant relationship between

CSR and CTA. Those that found a significantly negative relationship concluded that socially responsible companies (as evidenced by high CSR scores) do consider the payment of taxes to form part of their social responsibility (Lanis & Richardson, 2012; Ortas & Gallego-Álvarez, 2020). In their findings, companies with higher CSR scores exhibited lower levels of tax aggressiveness. Davis et al (2016) found a statistically significant and positive relationship between CSR and CTA, concluding that companies with high CSR scores were more tax aggressive as they did not consider taxes to form part of their social responsibility. Watson (2015) found that the relationship between CSR and CTA was more pronounced during tough economic conditions, e.g. an economic recession, during which the relationship between CSR and CTA became significantly positive. Gavious et al. (2022) found that prior to the enforcement of tax standards, CSR and non-CSR firms displayed similar levels of tax aggressiveness.

This study sought to investigate the relationship between CSR and CTA in emerging markets. No significant relationship was found. The base regression failed to find a difference in CTA between high CSR and low CSR firms. This study's findings imply that tax aggressiveness is not influenced (either positively or negatively) by CSR. Possible reasons linked to existing literature are briefly provided below:

- Visser (2006) explained that African markets tend to place greater importance on a company's discretionary responsibilities. Critics of this category of CSR have suggested that it is a form of social insurance paid to distract from a business's social irresponsibility (Luo et al., 2018; Tamvada, 2020). This implies that the other CSR categories might suffer as a result of this focus on discretionary activities and the financial, legal and ethical implications of CTA would not be as apparent. In such a situation, South African communities might be distracted by seemingly large philanthropic contributions while failing to understand the less obvious consequences of other harmful activities, i.e. CTA behaviour.
- Donkor (2022) showed that at high levels of CTA, the moderating effects of high-quality integrated reporting is diminished. In such instances there is no relationship between CSR and CTA. Like Donkor's, this study focused on companies listed on the JSE. It considered a larger sample size and showed that the untransformed mean (22,33%) and median (20,59%) of ETR are well below the South African STR of 28%. This implies that South African firms pay less corporate tax than required and can be

considered tax aggressive. The lack of a significant relationship between CTA and CSR might be due to high levels of tax aggressiveness.

- The CSR-CTA nexus is a new and emerging theory. King IV only recently introduced the direct link between CSR and corporate tax payments (Institute of Directors Southern Africa, 2016; Thiart, 2019). King IV only took effect from 1 April 2017, incorporating a call for greater tax transparency and responsibility. This study only captures two years post King IV implementation and so the full effects of this governance requirement might only become apparent in future years. This might also be a factor in this study's inability to find a significant relationship between CSR and CTA. However, it warrants mentioning that the previously referenced empirical studies were conducted in regions that did not enforce integrated reporting, yet in the absence of such requirements they mostly found evidence of a significant relationship between CSR and CTA.
- Watson (2015) suggested that tough economic conditions impact the relationship between CSR and CTA. The study used an ROA of less than 10% to indicate low earnings performance. A significantly positive relationship between CSR and CTA was shown to deteriorate at an ROA of less than 10% (Watson, 2015). In this study the transformed ROA variable displayed a mean and median below this 10% threshold (7,45% for both). Economic conditions might have a moderating effect on the relationship and could contribute to the lack of significance.

The base regression found a significant relationship between CTA and three control variables, namely SIZE, LEV, and ROA. The study found a statistically significant ($p < 0.10$) and negative relationship between CTA and SIZE. This differs from previous empirical findings (Lanis & Richardson, 2015; Ortas & Gallego-Álvarez, 2020) which found a significantly positive relationship. This study's findings suggest that larger companies are less tax aggressive. This might be because larger companies are better resourced to comply with tax requirements (Lanis & Richardson, 2012). An additional consideration is that larger companies face greater public scrutiny and can go to greater lengths to protect their reputations and retain their legitimacy (Lanis & Richardson, 2013).

Previous research assumes a positive relationship between CTA and LEV, owing to the tax-deductible nature of interest payments (Donkor et al., 2022; Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). Contrary to this view, this study found a statistically

significant ($p < 0.10$) and negative relationship between CTA and LEV. This implies that highly leveraged companies pay more taxes than those with less debt in their capital structures. This finding is not only at odds with previous empirical studies but differs from theoretical assumptions as well, and warrants further analysis that is outside of the scope of this study.

This study found a statistically significant ($p < 0.01$) and negative relationship between CTA and ROA. From the referenced empirical studies, only two were able to establish significance between CTA and ROA (Donkor et al., 2022; Ortas & Gallego-Álvarez, 2020), but their findings differed as they found a significantly positive relationship. This study's findings support claims that in times of improved economic circumstances, during periods of greater profitability, companies exhibited less tax aggressive behaviour because they can afford to pay taxes (Lanis & Richardson, 2012; Watson, 2015). The base regression failed to find a significant relationship with AGEPUB, MKTBK and BIG4AUDIT.

The additional regression explored the relationship between four CSR categories and CTA. This was done to understand if certain categories of CSR were more successful in moderating tax aggressiveness. The four categories of CSR are: community, employee, environmental, and governance initiatives. This information was also sourced from CSR HUB. Similar to the base regression, the additional regression was tested using the pooled OLS, random effects and fixed effects models (Hsiao, 2007; Hun, 2011). The results were also assessed using the Breusch-Lagrange Multipliers (LM) and Hausman tests (Torres-Reyna, 2007) For the additional regression, panel effects were detected. In addition, the unique error is correlated with the regressors and the difference in coefficients was found to be systematic. Based on these results, the fixed effects model was deemed the most appropriate estimation technique (Goldberg, 2005; Torres-Reyna, 2007).

This study found a statistically significant ($p < 0.05$) and positive relationship between CTA and CSR_CO. This finding differs from previous empirical research that found a significantly negative relationship (Lanis & Richardson, 2012, 2015; Ortas & Gallego-Álvarez, 2020). The CSR_CO category shares similarities with corporate taxes, because both are concerned with the provision of goods and services for the public. The fact that the study found that higher CSR_CO results in lower tax payments might bolster claims that CSR and corporate taxes act as substitutes (Davis et al., 2016). This finding also gives merit to accusations that high CSR investments serve as 'social insurance' that shield business from the negative consequences of

irresponsible behaviour, i.e. tax aggressiveness (Tamvada, 2020). Communities could be forgiving, or even unaware of tax transgressions when they perceive business to be socially responsible because of the company's more visible CSR_CO initiatives.

The study found a significantly negative ($p < 0.05$) relationship between CSR_EN and CTA, implying that companies invested in environmental initiatives are less likely to be tax aggressive. These findings are in line with Ortas et al.'s (2020) findings. The definition of CSR has evolved over time to not only refer to actions affecting living creatures but has expanded in scope to include the environment as a stakeholder (Carroll & Brown, 2018). This study's findings suggest that companies that have already awakened to this reality, evidenced by their commitment towards environmental initiatives, would be among the first to recognise the emerging nexus and already consider taxes to form part of their social responsibility.

The additional analysis also found a significantly negative ($p < 0.01$) relationship between CTA and ROA. The model found no significant relationship with CSR_EP, CSR_GV, AGEPUB, SIZE, LEV, or MKTBK. The BIG4AUDIT variable was omitted from the model as multicollinearity was detected.

A 2SLS regression was conducted on both the base and additional regressions. This was done to address endogeneity concerns. No evidence of endogeneity was found, and as such, CSR and the four categories of CSR (CSR_CO, CSR_EP, CSR_EN and CSR_GV) were found to be exogenous variables.

The findings above have resulted in some policy recommendations, as well as possible avenues for future studies, all of which are presented in the subsequent sections.

5.3 Policy Recommendations

Efforts to ensure corporates behave in a socially responsible manner still fall short based on the lack of consensus regarding the definition of CSR (Carroll, 2008; Carroll & Brown, 2018), as well as the lack of reporting standards (Luo et al., 2018). This was evident in the study's sample as CSR was the variable with the lowest observation rate (60%). The number of complete entries varied across CSR categories (46% - 60%). CSR activity does not aways result in tangible impact. This can be caused by companies exaggerating or falsifying reports to gain

or retain legitimacy (Fernando & Lawrence, 2014; Jedrzej George Frynas & Wood, 2001; Luo et al., 2018; Malesky & Taussig, 2019; Sikka, 2010; Tamvada, 2020).

It is tempting to assume that low levels of CSR impact are always because of impact washing. In some instances, impact falls short of expectations because business does not have the necessary skills to execute on social welfare initiatives (Friedman, 1970; J. G Frynas, 2008). This has raised questions over whether a corporate should have any additional responsibility beyond the responsibility it has to its shareholders (Friedman, 1970; Jenkins, 2005; Jenkins & Newell, 2013; McGee, 2010; Sikka, 2010). When CSR is deconstructed into the four components defined in Carroll's pyramid, it becomes apparent that the question is not laid equally against all four components. A company's financial and legal responsibilities are generally accepted as valid by both proponents and opponents of CSR (Carroll, 1979, 2016; Friedman, 1970). Ethical and discretionary responsibilities are still debated. In certain instances, excessive tax aggressiveness violates Carroll's Pyramid as it can include (i) tax evasion which is illegal; and (ii) certain tax avoidance practices which can be considered unethical.

Davis et al. (2016) found that companies view CSR as a substitute for taxes. This framing is quite dangerous since CSR is voluntary, non-standardised and can be moderated by economic performance (Watson, 2015). Taxes are paid, in part, to compensate governments for the use of public infrastructure and to help grow the economy (Christensen & Murphy, 2004; Jenkins & Newell, 2013; Muller & Kolk, 2015). Taxes are well defined and not subject to interpretation.

Emerging markets face substantial development funding gaps estimated at ZAR 2.5trn (Dhlamini, 2019). DRM benefits emerging economies as it reduces the development funding deficit, reduces dependence on ODA and strengthens the 'social contract' between governments and their citizens (De Paepe, 2015).

South Africa was the first country in the world to incorporate CSR considerations as an exchange listing requirement (Institute of Directors Southern Africa, 2009; Johannesburg Stock Exchange, 2019). It did this when it required all companies to adhere to the King Code of Corporate Governance and insisted on the adoption of integrated reporting that had financial and social considerations (Ackers & Eccles, 2015; Institute of Directors Southern Africa, 2009;

Kloppers, 2018; Thiart, 2019). The latest King Code, King IV, asked business to create a responsible and transparent tax policy (Institute of Directors Southern Africa, 2016; Kloppers, 2018; Thiart, 2019). The previously listed challenges (i.e. inconsistent definitions, lack of enforceability and non-standardisation) might impede these efforts.

This study recommends the coordination of CSR activities at a national level. This co-ordination will help create a regional definition of CSR that can help support business in identifying appropriate CSR strategies that are responsible towards and reflective of the communities they serve. The coordination of CSR activities across companies might increase the impact of such activities and result in a more efficient allocation of limited resources.

This study also recommends that integrated reports should be standardised. Standardised reporting will better highlight instances of responsible and irresponsible behaviour. This study further recommends that the disclosure of corporate tax planning activities should form part of a company's integrated reporting, as well as a sub-category of CSR disclosures. This is similar to the ITA's initiative in Israel (Gavious et al., 2022). This does not imply companies cannot take advantage of tax reducing opportunities, but the guidance would be that they to do so in a transparent and socially responsible manner that does not sacrifice the long-term sustainability of a country in the pursuit of short-term company profits.

5.4 Avenues for Future Research

This study failed to find a significant relationship between total CSR and CTA, but a significant relationship was evidenced between CTA and two categories of CSR, namely community and environmental initiatives. This warrants further investigation into certain situations that might impact this relationship, such as a cross-industry analysis, as well as an investigation into the moderating effects of economic cycles. An industry analysis could show which South African industries, if any, are more likely to be tax aggressive. This could assist stakeholders such as SARS in identifying possible areas of concern, and to identify current initiatives that successfully minimise CTA.

Another possible study could focus on using primary data sourced from interviews with appointed business representatives. This would provide additional CSR information not provided in public disclosures. A standardised data capturing process could allow for the

inclusion of non-listed companies and could extend the observational period. This would strengthen the generalisability of research outcomes.

King IV only took effect from 1 April 2017. In this study, not enough time had elapsed to understand whether the calls for greater tax transparency have impacted the relationship between CTA and CSR. Future studies could investigate the relationship between CSR and CTA before and after the implementation of King IV.

A further reason for this study's findings could be the muting effects of a multi-year observation period. By investigating the moderating effect of economic performance across time, research like Watson's (2015) study could be conducted to understand whether certain economic conditions impact the relationship between CSR and CTA. An additional study could investigate stakeholder sentiment towards CSR and CTA. This study could provide a view of which stakeholder(s) consider the payment of taxes as a company's CSR. The study should include an analysis of the various trade-offs involved to ensure that the respondents are informed of the benefits and costs associated with higher ETRs (e.g. increased taxes could result in lower salaries, lower shareholder returns, and increased product pricing, etc).

Lastly, since developing markets face daunting developmental budget deficits and tax aggressive practices have been listed as a contributing factor to these deficits; a possible future study could investigate the relationship between levels of CTA and development budgets to ascertain the authenticity and prevalence of this claim.

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Appendix A: The List of Companies Used in the Study

#	Company Name	#	Company Name	#	Company Name
1	4SIGHT HOLDINGS LTD	26	ANGLOGOLD ASHANTI LTD	51	BUFFALO COAL CORPORATION
2	ABSA GROUP LTD	27	ANHEUSER-BUSCH INBEV SA/NV	52	CAFCA LTD
3	ACCELERATE PROPERTY FUND LTD	28	ARCELORMITTAL SA LTD	53	CALGRO M3 HOLDINGS LTD
4	ACSION LTD	29	ARGENT INDUSTRIAL LTD	54	CAPITAL & COUNTIES PROPERTIES PLC
5	ADCOCK INGRAM HOLDINGS LTD	30	ASCENDIS HEALTH LTD	55	CAPITAL & REGIONAL PLC
6	ADCORP HOLDINGS LTD	31	ASPEN PHARMACARE HOLDINGS LTD	56	CAPITAL APPRECIATION LTD
7	ADVANCED HEALTH LTD	32	ASTORIA INVESTMENTS LTD	57	CAPITEC BANK HOLDINGS LTD
8	ADVTECH LTD	33	ASTRAL FOODS LTD	58	CASHBUILD LTD
9	AECI LTD	34	ATTACQ LTD	59	CASTLEVIEW PROPERTY FUND LTD
10	AFRICAN AND OVERSEAS ENTERPRISES LTD	35	AVENG LTD	60	CAXTON CTP PUBLISHERS AND PRINTERS
11	AFRICAN DAWN CAPITAL LIMITED	36	AVI LTD	61	CHOPPIES ENTERPRISES LTD
12	AFRICAN EQUITY EMPOWERMENT INVESTMENTS LTD	37	AYO TECHNOLOGY SOLUTIONS LTD	62	CHROMETCO LTD
13	AFRICAN MEDIA ENTERTAINMENT LTD	38	BALWIN PROPERTIES LTD	63	CITY LODGE HOTELS LTD
14	AFRICAN RAINBOW CAPITAL INVESTMENTS LTD	39	BARLOWORLD LTD	64	CLICKS GROUP LTD
15	AFRICAN RAINBOW MINERALS LTD	40	BASIL READ HOLDINGS LTD	65	CLIENTELE LTD
16	AFRIMAT LTD	41	BAUBA RESOURCES LIMITED	66	COGNITION HOLDINGS LTD
17	AFRISTRAT INV HLDGS LTD	42	BELL EQUIPMENT LTD	67	COMBINED MOTOR HOLDINGS LTD
18	AFROCENTRIC INVESTMENT CORPORATION LIMITED	43	BID CORPORATION LTD	68	COMPAGNIE FINANCIERE RICHEMONT SA
19	AH-VEST LTD	44	BK ONE LTD	69	CONDUIT CAPITAL LTD
20	ALEXANDER FORBES GROUP HOLDINGS LTD	45	BLUE LABEL TELECOMS LTD	70	CORONATION FUND MANAGERS LTD
21	ALPHAMIN RESOURCES CORPORATION	46	BOWLER METCALF LTD	71	CROOKES BROTHERS LTD
22	ALTRON LIMITED A	47	BRAIT PLC	72	CURRO HOLDINGS LTD
23	ALVIVA HOLDINGS LTD	48	BRIKOR LTD	73	DATATEC LTD
24	ANGLO AMERICAN PLATINUM LTD	49	BRIMSTONE INVESTMENT CORPORATION LTD	74	DELTA PROPERTY FUND LTD
25	ANGLO AMERICAN PLC	50	BRITISH AMERICAN TOBACCO PLC	75	DENEB INVESTMENTS LTD

#	Company Name	#	Company Name	#	Company Name
76	DIS-CHEM PHARMACIES LTD	101	FRONTIER TRANSPORT HLDG LD	126	INVESTEC LTD
77	DISCOVERY LTD	102	GEMFIELDS GROUP LIMITED	127	INVESTEC PLC
78	DISTELL GROUP HOLDINGS LTD	103	GLENCORE PLC	128	INVESTEC PROPERTY FUND LTD
79	DRA GLOBAL LTD	104	GLOBE TRADE CENTRE SOUTH AFRICA	129	INVICTA HOLDINGS LTD
80	DRDGOLD LTD	105	GO LIFE INTERNATIONAL LTD	130	IRONGATE GROUP
81	E MEDIA HOLDINGS LTD	106	GOLD FIELDS LTD	131	ISA HOLDINGS LTD
82	EASTERN PLATINUM LTD	107	GRAND PARADE INVESTMENTS LTD	132	ITALTILE LTD
83	EFORA ENERGY LIMITED	108	GRINDROD LTD	133	JASCO ELECTRONICS HOLDINGS LTD
84	ELLIES HOLDINGS LTD	109	GRINDROD SHIPPING HOLDINGS LTD	134	JSE LTD
85	EMIRA PROPERTY FUND LTD	110	GROWTHPOINT PROPERTIES LTD	135	JUBILEE METALS GROUP PLC
86	ENX GROUP LTD	111	HAMMERSON PLC	136	KAAP AGRI LTD
87	EOH HOLDINGS LTD	112	HARMONY GOLD MINING COMPANY LTD	137	KAP INDUSTRIAL HOLDINGS LTD
88	EPE CAPITAL PARTNERS LIMITED	113	HERIOT REIT LTD	138	KIBO ENERGY PLC
89	EQUITES PROPERTY FUND LTD	114	HOMECHOICE INTERNATIONAL PLC	139	KORE POTASH PLC
90	ERIN ENERGY CORPORATION	115	HOSKEN CONSOLIDATED INVESTMENTS LTD	140	KUMBA IRON ORE LTD
91	ETION LTD	116	HUDACO INDUSTRIES LTD	141	LABAT AFRICA LTD
92	EUROPA METALS LIMITED	117	HUGE GROUP LTD	142	LESAKA TECHNOLOGIES INC
93	EXEMPLAR RETAIL LTD	118	HULAMIN LTD	143	LEWIS GROUP LTD
94	EXXARO RESOURCES LTD	119	HWANGE COLLIERY COMPANY LTD	144	LIBERTY TWO DEGREES LIMITED
95	FAIRVEST LIMITED A	120	HYPROP INVESTMENTS LTD	145	LIBSTAR HOLDINGS LTD
96	FAMOUS BRANDS LTD	121	IMBALIE BEAUTY LTD	146	LIFE HEALTHCARE GROUP HOLDINGS LTD
97	FINBOND GROUP LTD	122	IMPALA PLATINUM HOLDINGS LTD	147	LIGHTHOUSE PROPERTIES PLC
98	FIRESTONE ENERGY LTD	123	INDLUPLACE PROPERTIES LTD	148	LONDON FINANCE & INVESTMENT GROUP PLC
99	FIRSTRAND LTD	124	INDUSTRIALS REIT LIMITED	149	LUXE HOLDINGS LTD
100	FORTRESS REIT LTD A	125	INSIMBI INDUSTRIAL HOLDINGS LTD	150	MAHUBE INFRASTRUCTURE LTD

#	Company Name	#	Company Name	#	Company Name
151	MANTENGU MINING LIMITED	176	NEW FRONTIER PROPERTIES LTD	201	PURPLE GROUP LTD
152	MARSHALL MONTEAGLE PLC	177	NEWPARK REIT LTD	202	PUTPROP LTD
153	MAS P.L.C	178	NICTUS LTD	203	QUANTUM FOODS HOLDINGS LTD
154	MASSMART HOLDINGS LTD	179	NOVUS HOLDINGS LTD	204	QUILTER PLC
155	MASTER DRILLING GROUP LTD	180	NUTRITIONAL HOLDINGS LTD	205	RAND MERCHANT INV HLDGS LTD
156	MC MINING LIMITED	181	NU-WORLD HOLDINGS LTD	206	RANDGOLD & EXPLORATION COMPANY LTD
157	MEDICLINIC INTERNATIONAL PLC	182	OANDO PLC	207	RAUBEX GROUP LTD
158	MERAFE RESOURCES LTD	183	OASIS CRESCENT PROPERTY FUND	208	RAVEN PROPERTY GROUP LTD
159	METAIR INVESTMENTS LTD	184	OCEANA GROUP LTD	209	RCL FOODS LTD
160	METROFILE HOLDINGS LTD	185	OCTODEC INVESTMENTS LTD	210	REBOSIS PROPERTY FUND LTD
161	MIX TELEMATICS LTD	186	OLD MUTUAL LTD	211	RECM AND CALIBRE LTD
162	MOMENTUM METROPOLITAN HOLDINGS LTD	187	OMNIA HOLDINGS LTD	212	REDEFINE PROPERTIES LTD
163	MONDI PLC	188	ONELOGIX GROUP LTD	213	REINET INVESTMENTS S.C.A
164	MOTUS HOLDINGS LTD	189	ORION MINERALS LIMITED	214	REMGRO LTD
165	MPACT LTD	190	PAN AFRICAN RESOURCES PLC	215	RENERGEN LTD
166	MR PRICE GROUP LTD	191	PBT GROUP LIMITED	216	RESILIENT REIT LTD
167	MTN GROUP LTD	192	PEMBURY LIFESTYLE GROUP LTD	217	RESOURCE GENERATION LTD
168	MULTICHOICE GROUP LTD	193	PEPKOR HOLDINGS LTD	218	REUNERT LTD
169	MURRAY AND ROBERTS HOLDINGS LTD	194	PICK N PAY STORES LTD	219	REX TRUEFORM GROUP LTD
170	MUSTEK LTD	195	PPC LTD	220	RFG HOLDINGS LIMITED
171	NAMPAK LTD	196	PREMIER FISHING AND BRANDS LTD	221	RH BOPHELO LTD
172	NASPERS LTD	197	PRIMESERV GROUP LTD	222	RMB HOLDINGS LIMITED
173	NEDBANK GROUP LTD	198	PSG GROUP LTD	223	ROYAL BAFOKENG PLATINUM LTD
174	NEPI ROCKCASTLE S.A.	199	PSG KONSULT LTD	224	SA CORPORATE REAL ESTATE FUND
175	NETCARE LTD	200	PSV HOLDINGS LTD	225	SABLE EXPLORATION AND MINING LTD

#	Company Name	#	Company Name	#	Company Name
226	SAFARI INVESTMENTS (RSA) LTD	251	SUPER GROUP LTD	276	VISUAL INTERNATIONAL HOLDINGS LTD
227	SALUNGANO GROUP LIMITED	252	SYGNIA LIMITED	277	VIVO ENERGY PLC
228	SANLAM LTD	253	TELEMASTERS HOLDINGS LTD	278	VODACOM GROUP LTD
229	SANTAM LTD	254	TELKOM SA SOC LTD	279	VUKILE PROPERTY FUND LTD
230	SANTOVA LTD	255	TEXTAINER GROUP HOLDINGS LTD	280	VUNANI LTD
231	SAPPI LTD	256	TEXTON PROPERTY FUND LTD	281	W G WEARNE LTD
232	SASFIN HOLDINGS LTD	257	THARISA PLC	282	WESIZWE PLATINUM LTD
233	SASOL LTD	258	THE BIDVEST GROUP LTD	283	WILSON BAYLY HOLMES-OVCON LTD
234	SCHRODER EUROPEAN REAL ESTATE INVESTMENT TRUST PLC	259	THE FOSCHINI GROUP LTD	284	WOOLWORTHS HOLDINGS LTD
235	SEA HARVEST GROUP LTD	260	THE SPAR GROUP LTD	285	WORKFORCE HOLDINGS LTD
236	SEBATA HOLDINGS LTD	261	TIGER BRANDS LTD	286	YEBOYETHU (RF) LIMITED
237	SEPHAKU HOLDINGS LTD	262	TONGAAT HULETT LTD	287	YORK TIMBER HOLDINGS LTD
238	SHOPRITE HOLDINGS LTD	263	TRADEHOLD LTD	288	ZEDER INVESTMENTS LTD
239	SILVERBRIDGE HOLDINGS LTD	264	TRANSACTION CAPITAL LTD		
240	SIRIUS REAL ESTATE LTD	265	TRANSCEND RESIDENTIAL PROP FD LTD		
241	SOUTH OCEAN HOLDINGS LTD	266	TRANSPACO LTD		
242	SOUTH32 LTD	267	TRELLIDOR HOLDINGS LTD		
243	SPEAR REIT LTD	268	TREMATON CAPITAL INVESTMENTS LTD		
244	SPUR CORPORATION LTD	269	TRENCOR LTD		
245	STADIO HOLDINGS LTD	270	TRUSTCO GROUP HOLDINGS LTD		
246	STANDARD BANK GROUP LTD	271	TRUWORTHS INTERNATIONAL LTD		
247	STEFANUTTI STOCKS HOLDINGS LTD	272	TSOGO SUN GAMING LTD		
248	STEINHOFF INTERNATIONAL HOLDINGS N.V.	273	UBUBELE HOLDINGS LTD		
249	STOR-AGE PROPERTY REIT LTD	274	UNION ATLANTIC MINERALS LTD		
250	SUN INTERNATIONAL LTD	275	UNIVERSAL PARTNERS LTD		

Appendix B: CSR HUB Data Schema

Category	Subcategory
1. Community	**1.1 Community Development & Philanthropy**
The Community category covers the company's commitment and effectiveness within the local, national, and global community in which it does business. It reflects a company's citizenship, charitable giving, and volunteerism. This category covers the company's human rights record and treatment of its supply chain. It also covers the environmental and social impacts of the company's products and services, and the development of sustainable products, processes, and technologies.	The Community Development and Philanthropy subcategory covers the relationship between a company and the communities within which it is embedded. It reflects a company's community citizenship through charitable giving, donations of goods, and volunteerism of staff time. It also includes protecting public health (e.g. avoidance of industrial accidents) and managing the social impacts of its operations on local communities. The subcategory also includes a company's land use and building design impact on the local economy and ecosystem.
	1.2 Product
	The Product subcategory covers the responsibility of a company for the development, design, and management of its products and services and their impacts on customers and society at large. This subcategory reflects a company's capacity to reduce environmental costs, create new market opportunities through new sustainable technologies or processes, and produce or market goods and services that enhance the health and quality of life for consumers. This subcategory rating covers the integrity of a company's products and sales practices, including their labelling and marketing, social impacts, and end-of-life disposition. It also relates to product safety and quality and the company's response to problems with safety and quality.
	1.3 Human Rights & Supply Chain
	The Human Rights and Supply Chain subcategory measures a company's commitment to respecting fundamental human rights conventions, its ability to maintain its license to operate by supporting freedom of association and excluding child, forced or compulsory labour. This subcategory covers a company's transparency in overseas sourcing disclosure and monitoring and a company's relationship with and respect for the human rights of indigenous peoples near its proposed or current operations.
Category	**Subcategory**
2. Employees	**2.1 Compensation & Benefits**
The Employees category includes disclosure of policies, programs, and performance in diversity, labour relations and labour rights, compensation, benefits, and employee training, health, and safety. The evaluation focuses on the quality of policies and programs, compliance with national laws and regulations, and proactive management initiatives. The category includes evaluation of inclusive diversity policies, fair treatment of all employees, robust diversity programs and training, disclosure of workforce diversity data, strong labour codes (addressing the core International Labour Organization (ILO) standards), comprehensive benefits, demonstrated training and development opportunities, employee health and safety policies,	The Compensation and Benefits subcategory covers a company's capacity to increase its workforce loyalty and productivity through rewarding, fair and equal compensation, and financial benefits. It includes benefits that engage employees and improve worker development. This subcategory also focuses on long-term employment growth and stability through promotion practices, lay-off practices, and relations with retired employees.
	2.2 Diversity & Labour Rights
	The Diversity and Labour Rights subcategory covers workplace policies and practices covering fair and non-discriminatory treatment of employees, and its diversity policies. It covers a company's labour-management relations and participation by employees, National Labour Relations Board (NLRB) violations or patterns of anti-union practice, conformance to internationally recognised worker rights, as defined in the basic conventions of the ILO. Fundamental labour rights include freedom of association and protection of the right

basic and industry-specific safety training, demonstrated safety management systems, and a positive safety performance record.	to organise; right to bargain collectively; a minimum age for the employment of children; a prohibition against forced labour; lack of employment and occupational discrimination; and equal compensation. This subcategory measures a company's ability to maintain diversity, provide equal opportunities regardless of gender, age, ethnicity, religion, or sexual orientation, and promote work-life balance.
	2.3 Training, Health & Safety
	The Training, Safety and Health subcategory measures a company's effectiveness in providing a healthy and safe workplace. This subcategory includes accident and safety performance, as well as job training, safety standards and training, and employee-management safety teams. It includes programmes to support the health, well-being, and productivity of all employees. This subcategory includes workplace policies and programmes that boost employee morale, workplace productivity, company policies and practices to engage employees, and worker development.
Category	**Subcategory**
3. Environment	**3.1 Energy & Climate Change**
The Environment category data covers a company's interactions with the environment at large, including use of natural resources, and a company's impact on the Earth's ecosystems. The category evaluates corporate environmental performance, compliance with environmental regulations, mitigation of environmental footprint, leadership in addressing climate change through appropriate policies and strategies, energy-efficient operations, and the development of renewable energy and other alternative environmental technologies, disclosure of sources of environmental risk and liability and actions to minimise exposure to future risk, implementation of natural resource conservation and efficiency programs, pollution prevention programs, demonstration of a strategy toward sustainable development, integration of environmental sustainability and responsiveness with management and the Board, and programmes to measure and engage stakeholders for environmental improvement.	The Energy and Climate Change subcategory measures a company's effectiveness in addressing climate change through appropriate policies and strategies, energy-efficient operations, and the development of renewable energy and other alternative environmental technologies. The subcategory includes energy use, emissions to air of CO2 and other Greenhouse Gas Emissions (GHG).
	3.2 Environment Policy & Reporting
	The Environmental Policy and Reporting subcategory includes a company's policies and intention to reduce the environmental impact of a company and its value stream to levels that are healthy for the company and for the environment, now and in the future. The data includes the company's environmental reporting performance, adherence to environmental reporting standards such as the Global Reporting Initiative, and compliance with investor, regulatory and stakeholders' requests for transparency. Compliance data consists of breaches of regulatory limits and accidental releases.
	3.3 Resource Management
	The Resource Management subcategory covers how efficiently resources are used in manufacturing and delivering products and services, including those of a company's suppliers. It includes a company's capacity to reduce the use of materials, energy or water, and to find more efficient solutions by improving its supply chain management. This subcategory includes environmental performance relative to production size and is monitored by the production-related Eco Intensity Ratios (EIRs) for water and energy defined as resource consumption per produced or released unit. Resource materials include raw materials and packaging materials for production and related processes and packaging of products. Resource Management data also includes waste and recycling performance. Recycling data is related to the proportion of waste recycled of the total waste. Data includes how the company manages operations to benefit the local airshed and watershed, and how the company impacts land use and local ecological stability. The water resource data includes consumption of drinking water, industrial water, and steam.
Category	**Subcategory**

4. Governance	**4.1 Board**
The Governance category covers disclosure of policies and procedures, board independence and diversity, executive compensation, attention to stakeholder concerns, and evaluation of a company's culture of ethical leadership and compliance. Corporate governance refers to leadership structure and the values that determine corporate direction, ethics and performance. This category rates factors such as: are corporate policies and practices aligned with sustainability goals?; is the management of the corporation transparent to stakeholders?; are employees appropriately engaged in the management of the company?; and are sustainability principles integrated from the top down into the day-to-day operations of the company?. Governance focuses on how management is committed to sustainability and corporate responsibility at all levels.	The Board subcategory covers a company's effectiveness in following best practices in corporate governance principles related to Board membership, independent decision-making through experienced, diverse and independent board members, effectiveness toward following best practices related to Board activities and functions, and Board committee structure and composition. It includes how the company provides competitive and proportionate management compensation and its ability to incentivise executives and board members to achieve both financial and extra-financial targets.
	4.2 Leadership Ethics
	The Leadership Ethics subcategory measures how a company manages its relationships with its various stakeholders, including investors, customers, communities, and regulators. This subcategory measures a company's effectiveness in treating its shareholders equitably. Leadership ethics includes the company's culture of ethical decision making. It measures a company's commitment and effectiveness toward the vision of integrating social and environmental aspects into the overall core strategy and whether sustainability principles are integrated from the top down into the day-to-day operations of the company.
	4.3 Transparency & Reporting
	The Transparency and Reporting subcategory rates factors including whether corporate policies and practices are aligned with sustainability goals, if the management of the corporation is transparent to stakeholders, whether employees are appropriately engaged in the management of the company; and if sustainability reports comply with standards such as the Global Reporting Initiative, Accountability (AA1000) and other standards, and whether these reports are made publicly available. This subcategory includes whether the company provides a list of its major stakeholders and how it engages with them. It also covers whether the company is a signatory of Global Compact and other leading global entities. It evaluates the assurance (3rd party audit) of the accuracy, completeness, and reliability of its sustainability or Corporate Social Responsibility reports.

Appendix C: Additional 2SLS Pooled OLS Regression Results

CSR Results

a) First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	Robust F(3,681)	Prob > F
CSR	0,2281	0,2133	0,0037	0,857627	0,4628

Minimum eigenvalue statistic = 0,831881

Critical Values # of endogenous regressors: 1

H0: Instruments are weak # of excluded instruments: 3

	5%	10%	20%	30%
2SLS relative bias	13,91	9,08	6,46	5,39
	10%	15%	20%	25%
2SLS size of nominal %5 Wald Test	22,30	12,83	9,54	7,80
LIML size of nominal %5 Wald Test	6,46	4,36	3,69	3,32

b) Tests of overidentifying restrictions:

Sargan chi2(2)	=	0,279325	(p = 0,8697)
Basmann chi2(2)	=	0,273808	(p = 0,8721)
Score chi2(2)	=	0,382171	(p = 0,8261)

CSR_CO Results

a) First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	Robust F(3,641)	Prob > F
CSR_CO	0,1422	0,1248	0,0049	1,45817	0,2248

Minimum eigenvalue statistic = 1,04663

Critical Values # of endogenous regressors: 1

H0: Instruments are weak # of excluded instruments: 3

	5%	10%	20%	30%
2SLS relative bias	13,91	9,08	6,46	5,39
	10%	15%	20%	25%
2SLS size of nominal %5 Wald Test	22,30	12,83	9,54	7,80
LIML size of nominal %5 Wald Test	6,46	4,36	3,69	3,32

b) Tests of overidentifying restrictions:

Sargan chi2(2)	=	0,56707	(p = 0,7531)
Basmann chi2(2)	=	0,55543	(p = 0,7575)
Score chi2(2)	=	0,486389	(p = 0,7841)

CSR_EP Results

a) First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	Robust F(3,551)	Prob > F
CSR_EP	0,2076	0,1889	0,0089	1,51729	0,2090

Minimum eigenvalue statistic = 1,65317

Critical Values	# of endogenous regressors: 1			
H0: Instruments are weak	# of excluded instruments: 3			
	5%	10%	20%	30%
2SLS relative bias	13,91	9,08	6,46	5,39
	10%	15%	20%	25%
2SLS size of nominal %5 Wald Test	22,30	12,83	9,54	7,80
LIML size of nominal %5 Wald Test	6,46	4,36	3,69	3,32

b) Tests of overidentifying restrictions:

Sargan chi2(2)	=	0,723398	(p = 0,6965)
Basmann chi2(2)	=	0,706378	(p = 0,7024)
Score chi2(2)	=	0,78858	(p = 0,6742)

CSR_EN Results

a) First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	Robust F(3,681)	Prob > F
CSR_EN	0,1552	0,1391	0,0013	0,401154	0,7522

Minimum eigenvalue statistic = 0,296029

Critical Values	# of endogenous regressors: 1			
H0: Instruments are weak	# of excluded instruments: 3			
	5%	10%	20%	30%
2SLS relative bias	13,91	9,08	6,46	5,39
	10%	15%	20%	25%
2SLS size of nominal %5 Wald Test	22,30	12,83	9,54	7,80
LIML size of nominal %5 Wald Test	6,46	4,36	3,69	3,32

b) Tests of overidentifying restrictions:

Sargan chi2(2)	=	0,782158	(p = 0,6763)
Basmann chi2(2)	=	0,767266	(p = 0,6814)
Score chi2(2)	=	0,814221	(p = 0,6656)

CSR_GV Results

a) First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	Robust F(3,681)	Prob > F
CSR_GV	0,2395	0,2250	0,0023	0,423091	0,7365

Minimum eigenvalue statistic = 0,516959

Critical Values	# of endogenous regressors: 1			
H0: Instruments are weak	# of excluded instruments: 3			
	5%	10%	20%	30%
2SLS relative bias	13,91	9,08	6,46	5,39
	10%	15%	20%	25%
2SLS size of nominal %5 Wald Test	22,30	12,83	9,54	7,80
LIML size of nominal %5 Wald Test	6,46	4,36	3,69	3,32

b) Tests of overidentifying restrictions:

Sargan chi2(2)	=	0,561179	(p = 0,7553)
Basmann chi2(2)	=	0,550319	(p = 0,7595)
Score chi2(2)	=	0,64687	(p = 0,7237)