Assurance on corporate social responsibility reports: Evidence from the UK listed firms

By:

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Abstract

Over recent decades, the number of corporate social responsibility (CSR) reports produced by various firms worldwide to cover the environmental, social and economic aspects has increased considerably. There is, however, some tension regarding the quality and credibility of the disclosed information due to the voluntary nature of CSR reporting. Thus, assurance provided by a third party was proposed as a potential solution in order to increase confidence in the CSR reports and safeguard potential stakeholders. Interestingly, however, obtaining external assurance is a voluntary and costly practice. Therefore, not all firms purchase external assurance for their CSR reports, even though it is assumed to add value to the reporting firm.

The reasons why some companies purchase external assurance for their CSR report while others do not have attracted attention in recent years. Some studies have quantitatively examined the potential role of a number of factors such as firm size, profitability, board size, industry and legal origin. However, mixed results have been reported. A common characteristic of studies in the above stream of literature is the little attention they have paid to relevant findings from a qualitative-based stream of literature which has developed in parallel. By integrating knowledge from both streams of literature, the current research aims to develop and empirically test a more comprehensive theoretical model than in prior research in order to explain the decision to purchase external assurance by some companies. More specifically, by identifying and including new variables which have not been investigated before, the model presents the decision to purchase external assurance from the rational cost-benefit analysis perspective and brings to light potential factors which may affect the outcome of such analysis, such as the demand of influential stakeholders.

After reviewing the prior literature, the rational choice theory and stakeholder theory have been used to develop this research's conceptual framework and hypotheses. The study adopts a positivist stance and uses a deductive logic approach to test hypotheses. This research utilises quantitative methodology, through a questionnaire instrument to gather empirical data from the UK context along with objective data generated from the Financial Analysis Made Easy (FAME) database, using the partial least squares structural equation modelling (PLS-SEM), to test the conceptual framework.

The empirical findings reveal that assurers' independence and competition positively impact the perceived benefit of external assurance. However, following the global reporting guidelines has a negative influence on the perceived benefit of external assurance. Further, the results support the rational perspective where the decision to purchase external assurance is subject to cost-benefit analysis; that is, the perceived benefit of purchasing external assurance has a positive effect on the purchase decision, while the cost has a negative one. Moreover, the findings indicate that the decision to purchase external assurance is subject to cost-benefit analysis when there is no pressure from influential stakeholders. Further analysis indicates that institutional investors' demand has the most powerful effect on obtaining assurance and renders the impact of the perceived benefit and cost irrelevant.

The current research contributes theoretically to the existing literature by developing a theoretical model that integrates the quantitative and qualitative streams of literature. Unlike prior studies, the model highlights the cost-benefit analysis impact on obtaining assurance based on the perspective of the rational choice theory in addition to the stakeholder theory. Furthermore, the current research offers a methodological contribution to the current literature by collecting primary and secondary data to avoid common criticisms associated with using either subjective or objective data alone. Besides, the analyses of this research were conducted using a sophisticated statistical technique (PLS-SEM) to offer more credible results. The findings provide policymakers and researchers with an understanding of the factors influencing purchasing assurance and the variation in companies’ decision to purchase external assurance.

Dedication

I am delighted to dedicate this thesis to my dear parents

Acknowledgement

Praise be to Allah who gave me the strength, patience, and capability to complete this thesis. Prayers and peace be upon His prophet Muhammad.

I would like to express my sincere gratitude to my supervisor, Dr Wael Hadid, whose excellent supervision and dedication to research have inspired my research project and whose patience, endless support and constructive feedback have encouraged and guided me to complete this thesis. I would also like to express my sincere appreciation and gratitude to Dr Lei Chen for her great supervision, support and valuable feedback during the PhD journey. My sincere appreciation is also extended to Professor Shuxing Yin and Professor Ataur Belal for their invaluable support and guidance. Huge thanks go to my friends, PhD colleagues, officemates, and the entire staff at the University of Sheffield Management School for their greatly appreciated support during this journey.

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Declaration

I, Ibrahim Alkhataybeh, confirm that the thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not previously been presented for an award at this, or any other, university.

Publications associated with the thesis

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List of abbreviations

AA1000 APS:	AccountAbility Principles Standards
AVE:	Average variance extracted
CB:	Covariance-based
CFA:	Confirmatory factor analysis
CSR:	Corporate social responsibility
DEFRA:	Department of Environment, Food, and Rural Affairs
EFA:	Exploratory factor analysis
EPREA:	European Public Real Estate Association
FAME:	Financial Analysis Made Easy
GHGP:	Greenhouse Gas Protocol Initiative
GRI:	Global Reporting Initiative
IIRC:	International Integrated Reporting Council
ISO:	International Organisation for Standardisation
LSE:	London Stock Exchange
OGIG:	Oil and Gas Industry Guidance on Voluntary Sustainability Reporting
PLS:	Partial Least Squares
ROA:	Return on total assets
SASB:	Sustainability Accounting Standards Board
SEM:	Structural Equation Modelling
TA:	Total assets
TCFD:	The Task Force on Climate-Related Financial Disclosures
VIF:	Variance inflation factor

Chapter one: Introduction

1.1 Introduction

A growing interest in firms' social and environmental impacts has been observed in recent years (Herremans *et al.*, 1993; Aguinis and Glavas, 2012; Christensen, 2016; Sun *et al.*, 2019; García-Sánchez, 2020; Haider and Nishitani, 2020; Venter and van Eck, 2020). Firms are facing an increasing demand from different stakeholders to publicly disclose information on such impacts (Arvidsson, 2010; Krasodomska *et al.*, 2021). In response, a rising number of firms have begun to report information on their social and environmental impacts (such as corporate social responsibility report [1], sustainability report, and integrated report) to the public on an annual basis even if they are not required to do so by law and regulations (O'Dwyer and Owen, 2005; Simnett *et al.*, 2009; Bansal *et al.*, 2018; Richard and Odendaal, 2020; Baboukardos *et al.*, 2021).

However, such voluntary reporting raises questions regarding the quality and integrity of the reported information, and hence it should not necessarily mean that businesses voluntarily reporting on their social and environmental impacts are good citizens in their society *(Sethi et al*., 2017). Lyon and Maxwell (2011) state that unethical firms may use voluntary reporting as a means to form a different reality in relation to their social and environmental impacts with the aim to improve how they are perceived by important stakeholders. Therefore, calls for providing assurance from external, independent and qualified parties on the quality and integrity of the social and environmental information voluntarily reported by businesses have been growing (O'Dwyer and Owen, 2005; GRI, 2013; De Beelde and Tuybens, 2015; Haider and Nishitani, 2020; Richard and Odendaal, 2020). However, according to the KPMG survey (2020) not all firms have their social and environmental disclosures externally assured. The reasons why some firms obtain external assurance for their CSR disclosures while other firms do not are still unclear in the literature.

[1] This research will adopt the term corporate social responsibility reports (CSR) because of its wide adoption by firms and will consider other terminologies used by many firms, such as sustainability reports, corporate reports, corporate environmental and social reports and integrated report (Erusalimsky *et al*., 2006), which have been used to describe firms' contributions and consequences in terms of the environmental, social and economic dimensions (Jenkins and Yakovleva, 2006).

Different theories, such as stakeholder theory, legitimacy theory and signalling theory, have been used to explain why firms produce CSR reports and have those reports assured (Kolk and Perego, 2010; Bollas-Araya *et al.*, 2019; Simoni *et al.*, 2020). It is argued that external assurance could demonstrate to stakeholders the commitment of the disclosing firms to transfer transparent, credible, reliable and high-quality reports, which stakeholders can trust and rely on to make more informed decisions about their relationship with the firm (Cho *et al*., 2014; Haider and Nishitani, 2020). However, given that not all firms disclosing CSR/sustainability information purchase external assurance (KPMG survey, 2020), there are concerns on the relevance of stakeholder theory, legitimacy theory and signalling theory in terms of whether they could fully explain the variation observed in practice regarding the decision to purchase external assurance.

Other researchers have adopted a contingency perspective to identify a set of contextual factors which may explain why some firms decide to sacrifice their scarce financial resources and hire an external assurer to verify their reported CSR information while others do not. Factors such as firm size, profitability, ownership structure, industry membership and country legal system have all been empirically examined to test their effect on the decision to purchase assurance (Simnett *et al*., 2009; Kuzey and Uyar, 2017; Martínez-Ferrero and García-Sánchez, 2017a; Sethi *et al*., 2017; Liao *et al.*, 2018; Miras-Rodríguez and Di Pietra, 2018; Seguí-Mas *et al*., 2018; Maroun and Prinsloo, 2020; Kılıç *et al*., 2021). However, mixed results have been reported which leave open for further research the question of why some firms purchase external assurance for their CSR/sustainability reports while others do not. This research, therefore, aims to understand the factors influencing the decision to obtain external assurance by developing a theoretical model that reveals the influential factors on the decision to purchase external assurance and empirically assess the proposed association in the theoretical model.

It is important to note that a common characteristic of the studies adopting a contingency perspective is their quantitative nature and the focus on a limited set of contextual variables while neglecting relevant knowledge developed in parallel through a qualitative-based stream of literature. Therefore, the study argues that a better understanding of the factors which may influence firms' decision to purchase external assurance can be obtained by integrating knowledge from both streams of literature (quantitative- and qualitative-based streams). The current research aims to do so and to develop and empirically test a more comprehensive theoretical model, based on rational choice theory and stakeholder theory, which better explains and improves our understanding of why some firms may purchase external assurance while others may not.

Rational choice theory assumes that managers make reasonable decisions by calculating the potential benefit and cost of any action to achieve their most preferred outcome (Quackenbush, 2004), while the stakeholder theory implies that managers would respond to influential stakeholders' demands to support their managerial decisions or distract stakeholders' disapproval about their managerial decisions (Bebbington *et al*., 2014). Drawing from the two theoretical perspectives, our theoretical model suggests that the decision to purchase external assurance is more complex than has been presented in the literature so far. More specifically, it is likely to be subject to a cost-benefit analysis by decision makers but to also potentially depend on the desire/demand of influential stakeholders. Hence, to the extent that the perceived benefits of purchasing external assurance in the eyes of decision makers outweigh the costs of hiring an external assurer, firms are more likely to supplement their CSR/sustainability reports with externally obtained assurance. In the case where the costs associated with purchasing external assurance exceed the perceived benefits, firms are less likely to hire an external assurer. However, a demand from an influential stakeholder (e.g. institutional investors) may render the outcome of the aforementioned cost-benefit analysis irrelevant. That is, firms are likely to purchase external assurance even if the perceived benefits of doing so are lower than the associated costs if an influential stakeholder demands the provision of external assurance.

The current research findings reveal that the decision to purchase external assurance is subject to cost-benefit analysis. The results confirm that the perceived benefit positively influences the decision to purchase external assurance, while the cost of assurance has a negative influence. Further analysis shows that the other stakeholders' demand has insignificant impacts on obtaining assurance. Interestingly, however, the findings show that institutional investors' demand greatly influences obtaining assurance and renders the effect of perceived benefit and cost irrelevant. In addition, the findings reveal that assurers' independence and competition positively influence the perceived benefit of external assurance, while following global CSR reporting guidelines has a negative influence.

The theoretical model and empirical findings offered in this study can be very useful for both researchers and policy makers. For researchers, the proposed model helps to better understand the complexity of the decision to purchase external assurance. In addition, given the importance of the perceived benefits of external assurance in the model, this research also identifies different factors (i.e. perceived independence of external assurers, global reporting guidelines, and competition) which are likely to determine the level of the perceived benefits that could be reaped from purchasing external assurance. Furthermore, the model can form a starting point to predict the decision to purchase external assurance. For policy makers, in view of the rising importance of understanding the social and environmental impacts of businesses, ensuring that the information they voluntarily report on such impacts is reliable and of high quality becomes crucial along with the factors which affect their decision to have such information verified by external assurers. The model explicates these factors and helps to understand the role of each factor in influencing decision makers to either purchase external assurance or not and the significant role of influential stakeholders such as institutional investors in this respect.

1.2 Research problem and motivation

A number of scholars in the literature on CSR assurance have pointed to the positive outcome that firms may gain from externally assuring their CSR reports (Sìmnett *et al.*, 2009; Edgley *et al.*, 2010; Velte and Stawinoga, 2017). Nonetheless, there are still some firms which do not purchase external assurance for their non-financial CSR publication. As mentioned earlier, prior quantitative research has suggested a list of factors which were expected to influence the decision to purchase external assurance, such as firm size, profitability, board size and country legal system. However, mixed results were reported and thus our understanding of the influential factors on firms' decision to purchase external assurance is compromised (Sìmnett et al., 2009; Kuzey and Uyar, 2017; Sethi *et al*., 2017; Liao *et al*., 2018; Miras-Rodríguez and Di Pietra, 2018; Clarkson *et al*., 2019). Interestingly, qualitative studies in the CSR assurance literature have proposed a different list of factors which could explain variations in firms' decision to purchase assurance, such as the potential cost and benefits (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al*., 2010; Atkins and Maroun, 2015). However, such variables have received very little attention in quantitative large-scale studies. In short, there is no conclusive evidence on why some firms obtain external assurance for their CSR reports while others do not and the influential factors which affect firms' purchase decision, which necessitates further empirical research in this critical area.

1.3 Research aim and objectives

This research attempts to investigate the emerging assurance market in the United Kingdom due to the high prevalence of CSR reporting and its accompanying assurance practices (Kolk and Perego, 2010; KPMG survey, 2020). The main aim of this research is to develop and empirically test a theoretical model which explains the variation in firms' decision to purchase external assurance for their CSR reports which is observed in practice. The research objectives are set out as follows:

1. To measure the extent to which UK listed firms purchase assurance.
2. To identify the influential factors on firms' decision to purchase external assurance for their CSR reports.
3. To develop a novel theoretical model to explain the mechanism through which each of the pre-determined influential factors impacts firms' decision to purchase external assurance.
4. To construct a questionnaire instrument to empirically measure each of the pre-identified influential factors.
5. To empirically examine the theoretical model and associated hypotheses in the UK context.

1.4 Research questions

In order to attain the research aim and address the research objectives as mentioned earlier, the current thesis seeks to answer the following questions:

1. To what extent do UK listed firms purchase external assurance for their CSR report?
2. Is firms' decision to purchase (or not purchase) external assurance driven by the outcome of a cost-benefit analysis?
3. What are the factors which influence managers' perception of the benefits of external assurance?

1.5 Research context

Selecting an appropriate research context where the researcher can access and obtain the required data is necessary to get an adequate sample and examine the proposed hypotheses (Anderson and Widener, 2006). In this research, a theoretical model will be developed and examined at the firm level to understand the factors influencing the decision to obtain external assurance based on the views of the firm's decision makers. According to Anderson and Widener (2006), a suitable sample with specific features of interest must be selected to help to examine the developed model. Based on the nature and purpose of this study to explore the CSR assurance practices, it was deemed better to conduct the research in a context with a high level of social and environmental reporting. Therefore, the UK was chosen due to its high national rates and experience of reporting social and environmental information (Helfaya and Moussa, 2017; KPMG survey, 2020). In addition, firms in the UK are increasingly producing CSR information through different channels such as stand-alone reports, website disclosures, annual and integrated reports. Thus, the content and quality of their CSR disclosures might vary among firms. This variation could further support the need to obtain external assurance to enhance the credibility and reliability of firms' CSR disclosures (Du *et al.*, 2010; Al-Shaer and Zaman, 2019). Further, purchasing external assurance, as in most countries, is not mandatory in the UK, and thus firms have the choice to voluntarily obtain assurance (Al-Shaer and Zaman, 2019). Besides, there is an absence of a unified benchmark to assess the accuracy of the disclosed social and environmental information in the UK and that might lead to a variation in assurance practice in the UK (Al-Shaer and Zaman, 2019). These reasons make the UK an ideal context to host the current research.

1.6 Research methodology

In order to attain the current research aim and objectives, this research reviewed the prior literature in order to define the concepts under investigation and develop a theoretical model with nine hypotheses on the association between the factors influencing the decision to purchase external assurance. A quantitative approach using the cross-sectional and survey strategies was adopted to examine the proposed associations among the proposed factors in the model to generate a generalisable finding. Furthermore, an online questionnaire using an online survey tool "Qualtrics software" was adopted to gather the data. The questionnaire targeted mainly CSR/sustainability managers and other decision makers from a sample of UK listed firms who produce CSR reports to the public. The data was explored using the Partial Least Squares Structural Equation Modelling (PLS-SEM) and Factor Analysis statistical techniques.

1.7 Research Significance

This research offers valuable insights into the literature on corporate social and environmental reporting assurance and proposes a novel theoretical model that explains the variation in the assurance practices among firms. The research makes a number of important contributions to the existing literature. First, investigating the impact of the factors influencing the perceived benefit of external assurance will significantly contribute to the current literature. Previous literature mainly focused on the direct affect of contextual factors on obtaining assurance and reported inconclusive results while neglecting the possible impact of various variables on the perceived benefit, which in turn will influence the final decision to opt for external assurance. Furthermore, prior studies implicitly highlighted that the decision to obtain external assurance is subject to cost-benefit analysis; however, none of the previous studies deliver empirical evidence by examining the effect of the perceived benefit and cost on obtaining assurance (Park and Brorson, 2005; Simnett *et al*., 2009; Jones and Solomon, 2010; Hassan *et al*., 2020). The current research provides an alternative view on the factors influencing the decision to purchase external assurance, relying on the rational choice theory where the decision to obtain external assurance is assumed to be subject to cost-benefit analysis. In addition, this study provides a significant contribution by considering other factors that might enforce purchasing assurance decisions regardless of the managerial perception. More precisely, simultaneously underpinning the stakeholder theory and the rational choice theory also offers insightful evidence and understanding of the factors influencing purchasing external assurance. Therefore, the finding of this research will enable researchers to better understand the variation in assurance practice and offer policy makers more insight into the role of each factor in explaining the decision to obtain external assurance.

Second, the current study presents further evidence by utilising a questionnaire survey developed based on the qualitative and quantitative stream of literature to identify the factors affecting the decision to obtain external assurance, relying on decision makers' views. The most common approach utilised by prior studies was the archival method (Venter and van Eck, 2020). However, the available archival data were considered too limited for the purposes of the current research. Consequently, this research is one of the rare studies to use a questionnaire survey method to investigate the factors that influence the decision to acquire external assurance by surveying a large number of listed firms (Darnall *et al*., 2009; Sawani *et al*., 2010; Darus *et al*., 2014). The finding of this research allows for a better understanding of the variation in assurance practices within listed firms. In addition, the result helps to determine whether obtaining assurance is perceived as an important practice by decision makers. Moreover, surveying various listed firms in the UK helps generate more generalisable results (Saunders *et al*., 2019). Third, the study contributes to the literature by developing a new measurement for the perceived benefit and institutional investor factors due to their essential impact on purchasing external assurance. In addition, a new measurement was developed for following a global CSR reporting guidelines factor since it is considered an influential factor that impacts the perceived benefit, based on prior qualitative findings.

1.8 Chapter summary and thesis structure

The present chapter presents an introduction to this study and the essential background of this study, highlighting the research motivation, the utilised theoretical lens and implications. In addition, the research aim, objectives, and questions are outlined. A brief overview of the research context, methodology, and the research's significance is also presented. Following the current chapter, the remainder of this thesis is arranged into eight chapters.

Chapter two explores the development of corporate governance in the UK in general, emphasising the recommendations concerning CSR disclosures and assurance.

Chapter three presents a detailed review of the relevant literature and highlights the limitations of the literature. In particular, the research provides an overview of assurance practices in general. In addition, the empirical literature on factors influencing the decision of purchasing assurance is introduced. Accordingly, the limitations of the literature are identified and discussed.

Chapter four illustrates the theoretical model, which captures the associated hypotheses to be examined to address the research questions. More precisely, the chapter discusses the theoretical basis of the research, and notions of the utilised rational choice theory and stakeholder theory. Moreover, the research hypotheses are developed to examine the association between constructs and the decision to purchase external assurance.

Chapter five sets out the research philosophy and methodology adopted in the present research. More precisely, explanations of the research paradigm, approach and strategy are provided. Besides, the chapter presents a discussion on the choice of survey methodology, the development of the questionnaire instrument and administration. Additionally, the research population is identified and a description of variables measurement is provided. Lastly, the chapter provides of description of the suitable statistical techniques for data analysis.

Chapter six provides discussion on findings of data screening, including missing data analysis and outliers. Further, the chapter testify the unidimensionality of constructs and discusses the validity and reliability of the data. Lastly, the initial descriptive analysis of all variables under investigation is reported.

Chapter seven provides the results obtained from the evaluation of the measurement (outer) model and the constructs' validity and reliability. In addition, the chapter presents the findings obtained from the evaluation of the structural (inner) model.

Chapter eight puts forward an in depth discussion of the findings reported in this research in light of the relevant extant literature in order to highlight similarities and differences among the current findings and previous research findings and deduce the research implications.

Chapter nine develops the main conclusions drawn from the findings generated from data analysis. Furthermore, the chapter highlights the research implications, contribution and limitations associated with the current study along with recommendations for future research.

Chapter Two: Development of UK Corporate Governance

2.1 Introduction

The term "Corporate Governance" has been used frequently in the business context, referring to how businesses are directed and controlled (Solomon, 2021). In particular, a number of financial scandals, company failures, or other comparable disasters have often prompted the formation of corporate governance codes (Demirag and Solomon, 2003; Mallin, 2019; Solomon, 2021). The introduction of corporate governance codes has been driven by the demand for more transparency and accountability and the desire to enhance investors' trust in the stock market (Mallin, 2019; Solomon, 2021). In addition, the reported cases of corporate social and environmental misconduct and the need for companies to be more accountable to a wide range of stakeholders has put the spotlight on governance mechanisms (Solomon *et al.*, 2004). Existing research on corporate social responsibility highlights the increasing sense of discord surrounding the business of observing good and ethical practices and enforcing the importance of corporate governance (Mason and Simmons, 2014). Furthermore, an increasing movement toward disclosing CSR has risen to the top of the political agenda (Solomon and Lewis, 2002). Therefore, in recent decades, an increasing movement towards introducing or revising corporate governance codes for improving business in several countries worldwide has been noticed (Demirag and Solomon, 2003; Mallin, 2019).

Corporate governance has traditionally been viewed as a shareholder-centric model for protecting shareholder assets from opportunistic management (Brennan and Solomon, 2008; Maroun, 2020; Naciti *et al.*, 2021). However, in recent years, researchers have considered a more extensive form of monitoring and expanded the definition of corporate governance, where a narrow definition presumes that companies are accountable to shareholders (Brennan and Solomon, 2008; Mallin, 2011; Solomon, 2021), while the broader assumption considers that companies are responsible to the entire society and environment (Brennan and Solomon, 2008; Mallin, 2011; Naciti *et al.*, 2021; Solomon, 2021). In general terms, Sir Adrian Cadbury highlighted that "*corporate governance is the system by which companies are directed and controlled*" (Cadbury, 1992, p.15). The definition was briefly and clearly expressed, emphasising the necessity of business controls. Arnold (2012) highlights the role of corporate governance in managing and controlling firms through the board of directors prioritising the shareholders' best interest. Further, Solomon (2020, p 6) defines corporate governance as "*the* *system of checks and balances, both internal and external to companies, which ensures that companies discharge their accountability to all their stakeholders and act in a socially responsible way in all areas of their business activity*". Solomon (2021) views corporate governance through a stakeholder lens while emphasising the relationships of companies and stakeholders. Aligned with the stakeholder lens, E-Vahdati *et al.* (2019) highlight the importance of aligning the stakeholders' perspective towards CSR in combination with corporate governance.

Due to the globalisation of financial markets, different corporate governance reforms have been developed in various countries around the world to enhance the country's competitiveness in attracting international capital and increase investor confidence in the stock market (Demirag and Solomon, 2003; Mallin, 2019). According to Solomon and Solomon (2004), good corporate governance might enhance corporate productivity, minimise wasted efforts, and achieve optimal social welfare, increasing society's confidence in the firm and leading to corporate success. Therefore, corporate governance is essential to well-run companies, to reduce the expropriation by individuals with excessive power within the company, and be sustainable in the long term and enable wealth creation (Mallin, 2011). In addition, Mohamed Adnan *et al.* (2018) point out that corporate governance influences transparency, and thereby firms might provide more CSR disclosures to communicate more transparent reporting.

Compliance with various governance codes around the world is often voluntary, whilst the UK Corporate Governance Code is on a comply or explain basis; where a firm has to either completely adhere to the code or explain why not to comply (i.e. voluntary adoption and mandatory disclosure) (Cuomo *et al.*, 2016; Mallin, 2019). The Comply or Explain approach might help in providing flexibility within different companies to choose the suitable corporate governance structure while ensuring better transparency and accountability to the market (Arcot *et al.*, 2010; Cuomo *et al.*, 2016). Most notably, the UK is often regarded as a global pioneer in corporate governance reforms ((Cuomo *et al.*, 2016; Solomon, 2021). The subsequent section presents the development of corporate governance in the UK.

2.2 The development of corporate governance in the UK

In the 1980s, shareholder ownership in the UK evolved to be more internationalised and institutionalised, while family and state ownership declined (Lútz *et al.*, 2011). Hence, a powerful interest group of foreign and national investors has been established in the market, which makes the regulatory environment more complex (Lútz *et al.*, 2011). Moreover, a series of corporate scandals and the failures of companies such as Maxwell, Coloroll and Polly Peck highlight the need to sufficiently protect the shareholders and other stakeholders from managerial failure and fraud (Lútz *et al.*, 2011). Besides, the introspection by boards and shareholders has also shed light on the corporate governance issues (Solomon, 2021). It is worth mentioning that the UK corporate governance has undergone many reforms, and corporate scandals have driven the development of corporate governance codes in the UK (Arcot *et al.*, 2010; Mallin, 2019). Prior studies on corporate governance have provided significant insight into discharging firms' accountability to interested stakeholders, which has led to policy document changes and has been reflected in the development of governance codes of practice (Brennan and Solomon, 2008). Notably, a primary effort of corporate governance reform is to increase the corporate level of transparency and accountability (Solomon, 2021).

2.2.1 The Cadbury report (1992)

In response to corporate failures, corporate abuse of power and public unease relating to executive pay have created incentive to reform corporate governance in the UK (Solomon and Solomon, 2004). Corporate governance codes are often produced by a collective body and are primarily relevant to publicly traded corporations (Lútz *et al.*, 2011). Thus, the Cadbury Report and its accompanying Cadbury Code (1992), produced by the Cadbury Committee, was the first attempt to set the foundation and formalise a best practice of corporate governance in the UK and subsequently in many countries around the world to re-establish market confidence and encourage investment (Solomon and Solomon, 2004; Lútz *et al.*, 2011; Mallin, 2011). Traditionally, accounting researchers in corporate governance often use the Cadbury Report as the starting point of their research (Brennan and Solomon, 2008).

The Cadbury Report addressed three general areas: the board, auditing, and shareholders (Cadbury Report, 1992). In terms of the board, the Cadbury Report emphasises the importance of having an effective board of directors to provide constant monitoring and assessment to the firms and recommends that companies should appoint a sufficient number (at least three) of independent Non-Executive Directors on the board (Cadbury Report, 1992; Mallin, 2019). Further, the Report recommends that the chairman role be separated from the chief executive role. In addition, the establishment of a nomination, rumination and audit committees is also recommended by the Cadbury Report (Cadbury Report, 1992; Mallin, 2019). Regarding the audit function, the Cadbury Report also highlights the importance of corporate transparency and communication to all who have a financial interest in the firm to ensure that firms are accountable for their actions (Cadbury Report, 1992; Solomon, 2021). The Report highlights the importance of establishing an internal audit function within the corporation to ensure the effectiveness of internal control (Cadbury Report, 1992). The Report also recommended that the audit committee members are confined to the non-executive directors, with the majority of those members being independent (Cadbury Report, 1992). Lastly, the Report highlights the board's accountability to shareholders, with an emphasis on the powerful role of institutional shareholders in making positive use of their voting rights (Cadbury Report, 1992; Solomon and Solomon, 2004, 2006; Solomon *et al.*, 2013). Remarkably, the Cadbury Report presumed that ensuring accountability to shareholders is the main objective of corporate governance (Short, 1999).

2.2.2 The Greenbury Report (1995)

In response to public and shareholder disquiet over excessive directors' remuneration packages in the UK, a second corporate governance committee was established, called the Greenbury Committee (Greenbury Report, 1995; Mallin, 2019; Solomon, 2021). The committee was chaired by Sir Richard Greenbury and consisted of leading investors and industrialists who agreed to produce a new code of best practice that corporations should comply with and report their compliance with it annually to shareholders in order to improve corporate remuneration practices and resolve apprehensions about increasing directors' remuneration (Greenbury Report, 1995).

Central to the Greenbury Report's comprehensive recommendations is enhancing directors' accountability and performance (Mallin, 2019). The report underlines the importance of having a sufficient remuneration package to attract, retain and motivate directors and managers of the quality required without imposing excessive, unnecessary packages (Greenbury Report, 1995; Solomon and Solomon, 2004). The Greenbury Report proposed that the board of directors be responsible to set up a remuneration committee of independent non-executive directors to act on their behalf and on behalf of shareholders and this should consist of individuals who have no potential conflict of interest within the business operations (Greenbury Report, 1995; Short, 1999). Furthermore, the Greenbury Report recommended that the remuneration committee should annually report to the shareholders about the company policy on executive directors' remuneration. In addition, the report should also include full details of all elements of the remuneration package, details and reasons for each individual director's contract (Greenbury

Report, 1995; Solomon and Solomon, 2004). The Report proposed that the remuneration committee be responsible for aligning shareholders' and directors' interests to allow directors to perform at the highest level (Greenbury Report, 1995). The Report further recommended that the chairman of the remuneration committee be responsible for answering shareholders' concerns about directors' remuneration in the annual general meeting (Greenbury Report, 1995). In particular, the Greenbury Report re-emphasised the vital importance of the role of non-executive directors in the governance process (Short, 1999).

2.2.3 The Hampel Report (1998) and the Combined Code

The Hampel Committee was established in 1995 to review the implementation of the Cadbury and Greenbury Reports (Hampel Report, 1998; Mallin, 2019; Solomon, 2021). Reporting in 1998, the Hampel Committee, chaired by Sir Ronald Hampel, sought to promote high standards of corporate governance, aiming to protect investors and enhance the standing of listed companies (Hampel Report, 1998). The Report responded to criticisms and brought together all matters arising from the Cadbury and Greenbury codes to ensure their original purpose was being achieved more flexibly and was incorporated into the Stock Exchange Listing Rules in 1998 (Hampel Report, 1998; Short, 1999; Arcot *et al.*, 2010; Solomon, 2021). Besides, the Report emphasised the shareholders' role, with a focus on institutional investors and auditors' role in corporate governance issues. Importantly, concerning corporate social responsibility, the Report highlighted that the board of directors are responsible for relations with stakeholders but accountable to shareholders (Hampel Report, 1998; Mallin, 2019; Solomon, 2021).

Then, in 1998, arising from the Hampel Report, the Combined Code was produced by the Hampel Committee to combine, embrace and readdress all the issues raised in the Hampel, Greenbury and Cadbury Codes (Short, 1999; Solomon, 2021). Under the Combined Code, a set of 18 principles and 48 codes provisions was introduced and UK listed companies were required to comply with the individual code provisions or provide explanations for any failure to adhere (Short, 1999; Kendrick, 2000; Arcot *et al.*, 2010). The Code was constituted in two sections. The first section dealt with companies and was split into four parts including the directors, directors' remuneration, relations with shareholders, and accountability and audit. The second section dealt with institutional investors and consisted of three parts including shareholders' voting, dialogue with companies, and evaluation with governance disclosures (Solomon, 2021). Clearly, the Combined Code underlines the importance of maintaining a sound system of internal control but contributes very little to the stakeholders, mainly emphasising the interests of shareholders (Arcot *et al.*, 2010; Mallin, 2011). In a study conducted by Short (1999), the author drew attention to the importance of developing an open system of governance by upholding a balance between accountability and flexibility in order to ensure that companies are adopting structures which are appropriate to their specific circumstances. In short, the Combined Code's aim was to consolidate previous corporate governance views (Solomon, 2021).

2.2.4 Turnbull Report (1999, 2005)

In 1999, the Turnbull Committee, chaired by Nigel Turnbull, was established by the Internal Control Working Party of the Institute of Chartered Accountants to review the internal control system and respond to the recommended provisions in the earlier Combined Code (Zaman, 2001; Mallin, 2019; Solomon, 2021). The Report provided a broad review of the internal control systems in use in UK firms and made specific recommendations for development (Solomon, 2021). The Report provides directors with guidance on developing and dealing with a sound system of internal control, internal audit and risk management (Kendrick, 2000). The Turnbull Report highlighted the vital role of internal control in managing risk appropriately instead of eliminating it, and the Report is intended to provide robust guidance on how to develop and maintain internal control systems that can tailor firms' individual circumstances (Keasey *et al.*, 2005; Solomon, 2021). Solomon (2021) states that companies might suffer significant financial losses as a consequence of unplanned disasters if they do not have an efficient internal control system in place. The Turnbull Report presumes that firms should adopt a continuing system of internal control that focuses on financial and non-financial risk (such as social and environmental risk) associated to the business (Keasey *et al.*, 2005; Solomon, 2021).

According to Solomon *et al.* (2000), the Turnbull Report represents an explicit conceptual framework that firms can rely on as a benchmark when developing their own internal control strategies. Internal control is presumed to ensure the reliability of both internal and external reporting, facilitate efficiency and effectiveness of firms' operation, and help firms comply with laws and regulations (Zaman, 2001). Maintaining a sound system of internal control safeguards the firm's assets and shareholders' investment (Zaman, 2001; Mallin, 2019). The board of directors are responsible for assessing the effectiveness of internal control and should report on this in the annual report (Zaman, 2001; Keasey *et al.*, 2005; Mallin, 2019). Further, Turnbull confirmed that in order to ensure the effectiveness of internal control the board of directors could delegate this task to its audit committee (Zaman, 2001). Essentially, the Report emphasises the importance of boards' self-evaluation in reporting about their own efficacy (Solomon, 2021).

According to Solomon (2021), the Turnbull report was revolutionary in terms of corporate governance reform. Following the recommendation of the Turnbull Report regarding the importance of an effective system of internal control, there has been a noticeable awareness of the significance of non-financial CSR issues to financial performance (Solomon *et al.*, 2004). The Turnbull Report highlights companies' need to disclose more information about their social, ethical and environmental liabilities (Kendrick, 2000; Solomon *et al.*, 2004). Kendrick (2000) points out that the need for directors to take responsibility for monitoring non-financial risk was one of the significant changes imposed by the Turnbull Report. Likewise, Solomon *et al.* (2002) draw attention to the internal control shift of focus from solely financial aspects toward the consideration of non-financial elements. Moreover, Zaman (2001) point out that the Turnbull guidance explicitly enhanced the role of internal audit committees in the UK and improved the visibility of the internal audit function within companies.

Furthermore, revised guidance with a few substantial changes to the Turnbull Report was published in 2005 (FRC, 2005; Mallin, 2019). The revised version re-emphasised the importance of running regular and systematic risk assessments and the value of embedding an internal control system within the firm process (FRC, 2005). The revised Turnbull Report recommends that the board of directors are encouraged to review their application of the guidance continuously, and they are responsible for notifying shareholders of any weaknesses in the effectiveness of the internal control system in the annual report (Mallin, 2019; Solomon, 2021). In addition, the guidance requires boards to reflect on their actions towards any failing or weakness identified in relation to the effectiveness of the internal control system (Solomon, 2021). Notably, the review strongly advocated for the original Turnbull Report's flexible, principles-based approach to be maintained (Solomon, 2021).

2.2.5 Higgs Review (2003)

The fall of Enron highlighted the significance of re-evaluating the role and effectiveness of non-executive directors (Keasey *et al.*, 2005; Mallin, 2019; Solomon, 2021). In 2002, Derek Higgs chaired a review to investigate the board of directors' operation and the contribution of non-executive directors and identify actions to improve non-executive directors' quality, independence, and effectiveness (Keasey *et al.*, 2005). According to Solomon (2020), the difficulty of retaining non-executive directors in their position prevents them from fulfilling their full potential. In January 2003, the Higgs Report was published, emphasising the role and effectiveness of non-executive directors and offering additional recommendations for the Combined Code (Higgs Report, 2003; Keasey *et al.*, 2005; Mallin, 2019; Solomon, 2021). Central to the significant suggestions provided by the Higgs Report is inclusion of a greater proportion of independent non-executive directors on the board (at least half of the board), and for them to meet at least once a year without the presence of executive directors (Keasey *et al.*, 2005; Mallin, 2019; Solomon, 2021). In addition, the Report pointed out the need for stronger links between principal shareholders and non-executive directors to effectively monitor the agency problem and recommended identifying a senior independent non-executive director in the annual report to represent shareholder's interest and embrace social responsibility. (Keasey *et al.*, 2005; Solomon, 2021). The Higgs Report also recommended the need to provide an induction programme for all new non-executive directors and that no one non-executive director should serve on three board committees (Keasey *et al.*, 2005).

2.2.6 The Tyson Report (2003)

After the publication of the Higgs Review on the role and effectiveness of non-executive directors, the Tyson Report on Recruitment and Development of Non-Executive Directors was published in June 2003. The Report was commissioned by the Department of Trade and Industry and Chaired by Laura D'Andrea Tyson (Tyson Report, 2003; Solomon, 2021). The Tyson Report highlights the importance of having diversity in the background, experience and skills of non-executive directors to bridge a wide range of perspectives and knowledge and thereby enhance board effectiveness (Tyson Report, 2003; Solomon, 2021). Further, the Report indicates that board diversity might transfer positive signals and enhance the relationship with corporate stakeholders, such as shareholders, employees and customers (Tyson Report, 2003). The Report highlights that having board diversity would positively impact the association between the firm and stakeholders, where a more diverse boardroom would better understand stakeholders' needs due to their variety of expertise and enhance the firm's reputation (Tyson Report, 2003; Solomon, 2021). The Tyson Report, in short, emphasises the need to include stakeholders in corporate decision making (Solomon, 2021).

2.2.7 The Smith Report (2003, 2008)

One of the main causes of Enron's collapse was the failure of the audit committee and internal audit function (Solomon and Solomon, 2004). In response to the Enron scandal, the Smith group, chaired by Sir Robert Smith, was appointed by the Financial Reporting Council (FRC) to review the UK auditing and accounting regime, with an emphasis on the role of the audit committee (Solomon and Solomon, 2004; Mallin, 2019). The Smith Review released its report simultaneously with the Higgs Review in January 2003. The Report dealt with the association between the external auditor and the firms they audit and set out the responsibilities of firms' audit committees (Solomon, 2021). One notable recommendation by the Smith Report is that the audit committee should consist of independent non-executive directors, with one of them having relevant financial experience (Dewing and Russell, 2003). In addition, the Smith Report recommended that the audit committee should act independently from the executive, in order to guarantee that shareholders' interest are properly protected in relation to internal control and financial reporting (Solomon and Solomon, 2004; Mallin, 2019). In 2008, the FRC published the Revised Guidance on Audit Committees as an updated version of the Smith Report (Solomon, 2021). One of the principal aims of the updated Smith guidance was to encourage companies to consider the risks associated with their external auditor leaving the market and also disclose additional information to stakeholders concerning the auditor's selection (Solomon, 2021).

2.2.8 The redrafted Combined Code (2003, 2006, 2008)

In July 2003, the FRC reacted to critiques made concerning the Higgs and Smith Reports and provided a new draft of the Combined Code (Dewing and Russell, 2003; Mallin, 2019; Solomon, 2021). The redrafted Code highlighted the importance of forcing firms to avoid excessive remuneration, which has showed little relationship to firm performance (Solomon, 2021). Notably, the revised Combined Code placed attention on shareholder activism to enhance corporate accountability and transparency (Solomon, 2021). The Combined Code was to be subject to periodic reviews by the FRC in order to reassure the Code's content and impact.

2.2.9 The Walker Review (2009)

After the financial crisis, the UK government appointed Sir David Walker to conduct an independent review of the governance of banks and other financial institutions due to the losses and failures of the banking system (Mallin, 2019; Solomon, 2021). Solomon (2021) states that the recommendations of the Walker Review seem to be appropriate to other types of corporations. One of the main aims of the Walker Review is to make recommendation in relation to the role of institutional shareholders in engaging effectively with investee corporations and monitoring of boards and also to recommend on how national and international best practice can be promulgated (Walker Review, 2009). Significantly, the Review recommended that institutional shareholders should be more active and exercise their voting rights to impact firms' management and also focus on long term value (Solomon, 2021). Further, the Review recommended that boards should devote more time to audit and risk management and should have a dedicated non-executive director exclusively focused on risk (Solomon, 2021).

2.2.10 The Stewardship Code (2010, 2020)

In 2010, the FRC published the Stewardship Code for institutional investors, aiming to enhance the latter's engagement quality within investee companies to help improve long term returns to shareholders and enhance corporate and investor accountability (Mallin, 2019; Solomon, 2021). The Code is applied on a comply or explain basis, and firms' fund managers are encouraged to disclose their compliance on their firm's website (Solomon, 2021). The Code recommends that institutional investors monitor their investee companies and establish clear guidelines on how they will protect and enhance value for shareholders (FRC, 2010). In 2020, the FRC published a new updated version of the UK Stewardship Code (FRC, 2020). The updated version sets high stewardship standards for assets owners and assets managers to create long term value for their clients and attain sustainable benefits for the economy, society and environment (FRC, 2020). Substantially, the updated Code highlights the importance for institutional investors of considering the environmental, social and governance factors when making decisions or undertaking stewardship (FRC, 2020).

2.2.11 The UK Corporate Governance Code (2012, 2016, 2018)

The FRC replaced the Combined Code with an updated Corporate Governance Code in 2012 to strengthen the existing governance framework (Mallin, 2019; Solomon, 2021). Revisions of the UK Corporate Governance Code require audit committees to communicate information to shareholders on how they have assessed the effectiveness of external auditors (Solomon, 2021). In addition, the updated Code requires companies to explain their policies on boardroom diversity and consider the balance of skills, experience and independence of the board (Mallin, 2019; Solomon, 2021). In June 2016, the FRC issued an updated UK corporate governance code which was amended to fit the European Union's new Audit Regulation and Directive (FRC, 2016). In particular, the updated code recommended that the audit committee check and review the efficacy of the firm's internal audit function as well as monitor the external auditor's independence and the effectiveness of the audit process (FRC, 2016).

The FRC published another updated version of the UK Corporate Governance Code in July 2018 which is applicable to all premium listed companies and shed light on the importance to success in the long term through building and maintaining a successful relationship between firms, shareholders and the wide range of stakeholders (FRC, 2018). The code states that the board are responsible to construct formal and transparent policies to assure both the internal and external audit functions' independence and effectiveness (FRC, 2018). In addition, the code states that the board should establish procedures to manage risk and establish an audit committee (FRC, 2018). The code calls for firms to establish a corporate culture that is aligned with the firm's purpose, values and strategy (FRC, 2018). One noticeable change in the code is the requirement for the board to describe in the annual report the sustainability of the firm's business model and understand the views of the firm's key stakeholders and encourage engagement with the workforce (FRC, 2018). Further, the code focuses on boardroom culture and subcommittees' diversity in terms of gender, social, and ethnic backgrounds with skills, experience, and knowledge (FRC, 2018; Solomon, 2021). The code states that the audit committee should ensure that firms' disclosures are fairly and understandably presented and should review the effectiveness of the internal audit functions as well as ensure the independence, effectiveness and the appointment of the external auditors (FRC, 2018).

2.2.12 The Review of Corporate Governance Code (2021)

The way companies are governed and managed is critical, especially with the uncertainty and change due to the Covid-19 pandemic, which impacted firms' governance (FRC, 2021). The latest review of the UK corporate governance code was published in November 2021 to provide support and enhance governance and reporting while considering the clarity and quality of reporting in relation to the latest UK Corporate Governance Code. The review encouraged the use of the "comply and explain" nature of the Code and highlighted the board's need to take account of both short and long term risks. In addition, the review encouraged enhancing the transparency of board decision making and accountability to investors and stakeholders, as well as ensuring the independence and effectiveness of both internal and external audit functions (FRC, 2021). Notably, the review substantially focuses on the firm's leadership to pursue policies on environmental and social issues to achieve long term success and benefit the economy and society as a whole (FRC, 2021). In addition, the review recognises the crucial role of stakeholders' engagement and underlines the need for different approaches to stakeholder engagement to ensure that the review process is insightful and effective (FRC, 2021). One notable aspect pointed out in the review is the substantial improvement in reporting on environmental and social issues achieved by UK firms (FRC, 2021). The review urged companies to ensure transparent, insightful and concise reporting on culture assessment and assurance (FRC, 2021).

2.3 Corporate governance concerning CSR reporting and assurance

Since the publication of the Cadbury Code, there has been a rapid increase in corporate governance codes and guidelines in the UK to encourage corporations to increase their accountability and transparency (Cuomo *et al.*, 2016). As a consequence, a number of principles and provisions have been introduced to be applied by companies to promote transparency and integrity and achieve long term sustainable success (FRC, 2018). Demirag and Solomon (2003) underline international development of corporate governance to improve control mechanisms and highlight the need to enhance internal control, transparency, accountability and investors’ confidence in corporations to reduce the risk of corporate collapses. In addition, the environmental implications of firms' activities have led firms' boards to embrace sustainable strategies and disclose more information about their firm's impact on the environment (Helfaya and Moussa, 2017). Solomon (2021) states that transparency is a vital component of an effective corporate governance system, and firms' financial and non-financial disclosures are the primary mechanism for becoming transparent. According to Brennan and Solomon (2008), corporate disclosure and transparency are impacted by the external governance mechanisms, such as the country's legal system, and internal governance mechanisms, such as the role of boards, subcommittees, and directors' independence, and ownership concentration and the quality of auditors. Further, Turley and Zaman (2007) and Solomon (2021) point out that audit committees, internal audits, and external audits, as corporate governance mechanisms, play a vital role in ensuring accountability and enhancing firms’ transparency and reducing information asymmetry. Solomon (2021) highlighted the crucial role of internal audit functions in effective corporate governance and accountability.

Within the area of transparency and accountability, the UK’s Turnbull Report (1999,2005) emphasised the importance of companies' internal control system as a governance mechanism to manage financial, environmental and social risks effectively, thereby enhancing transparency and reducing agency problems (Brennan and Solomon, 2008; Solomon, 2021). According to Jones (2008), internal control is an important corporate governance mechanism to deliver proper accountable disclosures and monitor firms' operations. Moreover, the Turnbull Report pointed to the board’s responsibility for reviewing and ensuring a proper risk management and internal control system are in place to safeguard shareholders, respond to business environmental changes, and ensure reliability of internal and external reporting (FRC, 2005). Further, the Stewardship Code (2020) and Solomon (2021) highlight the crucial role of institutional investors in emphasising and raising the profile of social and environmental issues. The audit of a firm’s financial and nonfinancial information is presumed to enhance confidence in the firm’s transparency (Solomon, 2021).

Helfaya and Moussa (2017) highlight the interrelation between corporate governance and CSR and state that the board of directors, as a corporate governance mechanism, plays an important role in enhancing firms CSR disclosures. The UK Corporate Governance Code states that the board should promote the firm’s long term success, sustainability model and contribute to the wider society as well as understand the views of the key stakeholders (FRC, 2018). In addition, it has been recommended that at least half of the board’s members should be independent nonexecutive directors, to bring wider experience and fresh ideas to the boardroom (Tyson Report, 2003). The board should include a combination of executive and independent non-executive directors to provide the management with advice and strategic guidance and avoid any possible domination of board decision-making (FRC, 2018). The board should also ensure the independence and effectiveness of the internal and external audit processes to enhance the integrity of disclosures and ensure that their disclosures are fair, balanced and understandable (FRC, 2018). Further, the board of directors should appoint an audit committee which is responsible to monitor and review external auditors’ independence, effectiveness and objectivity (FRC, 2018). Moreover, the Tyson Report highlights the important role of board diversity in background, skills and experience in providing a motivating signal to stakeholders which in turn impacts on the firm’s performance (Tyson Report, 2003; Brennan and Solomon, 2008).

Notably, the legislator underlines the crucial role of corporate governance mechanisms in ensuring the quality of firm's disclosures and the recent corporate governance reforms stress the importance of considering the CSR aspects to achieve long term sustainable success (FRC, 2018). However, the continuing voluntary nature of CSR disclosures and restoring confidence in companies remains a case of matter (Solomon, 2021). CSR disclosures-related research presumes that obtaining external assurance might be a mechanism implemented by firms to enhance the transparency and credibility of their CSR disclosures (García-Sánchez *et al.*, 2021). In the accounting field, the noticeable increase in attention from researchers towards the area of transparency and stakeholders' inclusivity reflects a clear movement towards a more stakeholder-oriented approach (Brennan and Solomon, 2008; Solomon *et al.*, 2013). For instance, there has been growing research into CSR reporting and assurance as mechanisms to improve firms' accountability to a wide range of stakeholders (Brennan and Solomon, 2008). In addition, prior research on CSR reporting demonstrates that various corporate governance mechanisms might play a crucial role in enhancing firms' non-financial disclosures and accountability (Cotter and Najah, 2012; Kend, 2015; Harun *et al.*, 2020; Gerwing *et al.*, 2021; Moussa *et al.*, 2021). Likewise, academic research on CSR assurance demonstrates that numerous different corporate governance mechanisms might significantly impact the CSR assurance practices (Kend, 2015; Peters and Romi, 2015; Martinez-Ferrero *et al.*, 2017; Al-Shaer and Zaman, 2018; Liao *et al.*, 2018).

2.4 Chapter Summary

This chapter has reviewed the development of codes of best practice for corporate governance in the UK since 1992. The chapter focuses on the work of the Cadbury Report, Greenbury Report, Hample Report, the Combined Codes, Higgs Report, and Smith Report, where the focus in those reports was on protecting shareholders' interests: a "shareholder centric approach". In addition, the chapter has considered the Walker Review and the Stewardship Code, which paid great attention to the vital role of institutional investors in monitoring the board of directors and ensuring long term success. Furthermore, the current chapter has discussed the Turnbull Report, Tyson Report and the UK corporate governance code, which revealed a more stakeholder-oriented approach toward corporate governance. Lastly, the chapter discussed the UK corporate governance reforms concerning non-financial disclosures. The next chapter conducts a detailed review of the relevant CSR and assurance literature, and the empirical literature on factors influencing the decision to purchase assurance is introduced.

Chapter Three: Literature review

3.1 Introduction

Over the last decades of the 20th century, there has been a significant increase in production of CSR reports by many firms around the world. Latterly, many firms have started to publish CSR reports publicly (O'Dwyer and Owen, 2005; Helfaya *et al*., 2019; Venter and van Eck, 2020). A CSR report can be defined as a report produced by an organisation or corporation reflecting the impact of its daily activities on the social, environmental and economic aspects *(Helfaya et al*., 2019; GRI and SASB, 2021). Also, it reflects the firm's governance model and values and explains the association between a firm's strategy and its commitment to contributing to a sustainable world economy (Hodge *et al*., 2009; GRI and SASB, 2021). As stated by Bebbington *et al*. (2014), producing CSR reports is a helpful tool which aims to communicate the social and environmental impact to the interested users. Also, it may help firms in measuring and understanding their social, environmental and economic performance, therefore in setting suitable goals and managing their performance effectively (GRI and SASB, 2021).

Responding to the increasing social expectations, firms have started to undertake voluntary social actions through publishing CSR reports (Bepari and Mollik, 2016). Providing CSR information is considered as a key platform for communicating firms' sustainability performance and impacts (Helfaya *et al*., 2019). According to a KPMG survey (2020), around 96% of the world's 250 largest firms (G250) issued a corporate responsibility report in 2020, compared with approximately 40% in 2000. Although disclosure of non-financial information such as "economic, environmental, labor, human rights, product responsibility, and society" information can be communicated through different media channels by firms and is still essentially a voluntary practice that is not required by law in most countries, a few countries, such as the UK, Germany, Norway and Finland, have imposed some regulations regarding such disclosures (Park and Brorson, 2005; Day and Woodward, 2009; Bonsón and Bednárová, 2015; Scaltrito, 2016; Khan *et al.*, 2020). This leads to discrepancies in the layout of the report, inclusion of several contextual components and absence of various measures relating to the quality and truthfulness of the disclosed information (Sethi *et al*., 2017). As a result, many global initiatives, such as GRI, ISO, ISAE 3000, AA 1000 and DEFRA, have been launched during the last two decades with the aim of setting suitable standards, criteria and frameworks for CSR reporting and thereby increasing the quality and usefulness of CSR reporting (Helfaya and Kotb, 2016).

However, these initiatives do not deliver measurement standards to verify the accuracy of the corporate disclosures (Sethi *et al*., 2017). Meanwhile, stakeholders are demanding that CSR reports should present firms' current and prospective achievements in a true and fair way (Park and Brorson, 2005). Hence, disclosing credible CSR information is considered as a major element in corporate accountability, governance, and responsibility (Park and Brorson, 2005; Sethi *et al*., 2017). To tackle the demand of stakeholders, the notion of third-party assurance of CSR reports was introduced by some organisations at the end of the 20th century (Park and Brorson, 2005). Many firms have subsequently adopted the assurance practices in order to increase the credibility of their voluntary disclosures, increase stakeholder confidence in their corporate disclosures, and measure the risk associated with their social and environmental impacts in an effective way (Simnett *et al*., 2009; Kolk and Perego, 2010; Sethi *et al*., 2017; Dutta, 2019; Baboukardos *et al*., 2021).

Experts have stated that provision of an assurance statement by a third party enhances the reliability of the CSR report, which has led firms to predict that third-party assurance might become a common practice in the near future (Park and Brorson, 2005; Velte and Stawinoga, 2017). The main purpose of the assurance statement is to enhance the corporate report's status through inclusion of an external third-party opinion aiming to increase stakeholder confidence in the reliability of the disclosed information (Bebbington *et al*., 2014; Clarkson *et al.*, 2019). Additionally, there are internal benefits which may come from adopting assurance practices, such as enhancing the performance of management in regard to the existing policies, helping to increase understanding of emerging issues, and enhancing the management of risk (Park and Brorson, 2005; Sawani *et al*., 2010; Bebbington *et al*., 2014).

Providing assurance is helpful for various users including management, the board of directors, investors, regulators, media and customers (Zadek *et al*., 2004). Yet, in comparison to the financial report which has to be audited by an external third party by law, the auditing for CSR reports is still voluntary in most countries (Velte and Stawinoga, 2017). This has motivated many scholars to investigate the factors which may influence the decision of some organisations to voluntarily purchase external assurance while others do not (Peters and Romi, 2015; Sethi *et al.*, 2017; Velte and Stawinoga, 2017; Liao *et al.*, 2018; Venter and van Eck, 2020). Prior studies predominantly employed the archival data method to examine the impact of firm, industry and country-level factors on the decision to obtain external assurance, and this chapter will review relevant literature in the area and highlight the factors influencing obtaining assurance decision as identified by prior studies.

The subsequent section (3.2) introduces the definition and overview of assurance practices. Section (3.3) highlights the relevant prior empirical findings on the factors influencing the decision to purchase external assurance. Section (3.4) presents the limitations of the literature, and finally section (3.5) presents the chapter summary.

3.2 Definition and overview

3.2.1 Definition of CSR reports assurance

Assurance is a broad term commonly used in the CSR literature to refer to the assurance services for CSR disclosures and can be used interchangeably with the terms audit, verification or attestation. (Gray *et al.*, 2014; Channuntapipat *et al.*, 2020). More precisely, assurance is defined by Zadek *et al*. (2004, p. 7) "*as an evaluation method that uses a specified set of principles and standards to assess the quality of an organization's subject matter and the underlying systems, processes and competencies that underpin its performance. Assurance includes the communication of the results of this evaluation to give the subject matter credibility for its users*". Further, Farooq and de Villiers (2017) define CSR assurance as an engagement in which an independent assurance provider evaluates and verifies an organisation's CSR reports.

To obtain assurance with some verification, auditing and validation tools have to be implemented (Zadek et al., 2004). The market for assurance is shared between various types of assurance providers such as the Big Four accounting firms, specialist consultancies and certification bodies (O'dwyer, 2011). Adoption of assurance practices by firms is considered as an important tool that helps to boost credibility of and trust in the disclosed information, enhance corporate reputations, facilitate the process of making decisions and improve management systems (Zadek *et al.*, 2004; Simnett *et al.*, 2009; Sawani *et al.*, 2010; Farooq and de Villiers, 2017).

3.2.2 CSR reporting guidelines, assurance standards and providers

There is growing incidence of non-financial reporting and its accompanying assurance worldwide (Christensen, 2016; Clarkson *et al*., 2019). In the past, disclosing non-financial information was not governed by any general criteria or standards, which made the disclosed information less credible and challenging to compare (Simnett, 2012; Clarkson *et al*., 2019). Standardisation may enhance the comparability of CSR reports and reduce users' confusion (Owen *et al*., 2000; Deegan *et al*., 2006). Abernathy *et al*.(2017) highlight the existence of several sets of CSR guidelines for potential adoption by reporting firms. Such initiatives include the United Nations Global Compact (UNGC), the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), International Organisation for Standardisation (ISO), and the International Integrated Reporting Council (IIRC) (Helfaya and Kotb, 2016; Abernathy *et al*., 2017; Baboukardos *et al*., 2021). However, the adoption of such reporting guidelines and standards is not mandatory in most countries and relies upon the discretion of the reporting firm, and to enhance corporate reporting quality, reporters should obey admitted reporting guidelines (Helfaya and Kotb, 2016). Helfaya and Kotb (2016) indicate that the available global CSR reporting initiatives are designed to assist reporting firms in enhancing the content of their CSR disclosures and improve the comparability and usefulness of the reported information in interested users' minds. The assurance standards, meanwhile, are aimed to direct the provision of assurance on the disclosed CSR information and to guide the verification process conducted by the assurance provider (Helfaya and Kotb, 2016).

Similar to the CSR reporting guidelines, the assurance practices have been subject to global initiatives and standard-setting in the last 20 years (Owen *et al*., 2000; Velte and Stawinoga, 2017; Velte, 2020). The International Audit Assurance Standards Board (IAASB) and the AccountAbility have set out the most widely used global assurance standards (Velte and Stawinoga, 2017). The International Standard on Assurance Engagements (ISAE 3000) and the AA1000 Assurance Standard (AA1000AS) are usually used to enhance the quality of assurance and to guide the assurance process (Simnett, 2012). The ISAE 3000 mainly emphasises the assurance process and characteristics, while the AA1000 standards mainly focus on the inclusiveness of the stakeholders (Martínez-Ferrero and García-Sánchez, 2016). According to Aras and Crowther (2008), the first initiative to offer an open-source assurance standard that covers the full range of firms' disclosures is the AccountAbility Principles Standards

(AA1000). Further, the Global Reporting Initiative (GRI) provides guidelines for all kinds of assurance providers to apply in verifying CSR reports. In addition, the Federation des Experts Comptables Europeens (FEE) provides guidelines for the assurance providers from the accounting field (Sierra *et al*., 2013; De Beelde and Tuybens, 2015). Implementation of such guidelines by an external third-party verifier could add further credibility to the disclosed CSR information (Jones and Solomon, 2010).

Regarding the types of assurance provider, these include professional accountants from the Big Four accountancy firms and other professional firms, consultancy firms such as environmental management firms, internal auditors and independent NGOs or academic groups/scholars (O'Dwyer and Owen, 2005; Sìmnett *et al*., 2009; Sethi *et al*., 2017). These providers have the role of offering their knowledge, experience, competencies, and legitimacy to the reporting firms for the purpose of enhancing the quality of the published CSR reports (De Beelde and Tuybens, 2015). Unlike in the case of the audit of financial reporting, professional accounting firms do not have a monopoly on assuring the CSR reports, as there is competition between audit firms and other assurance providers (Cohen and Simnett, 2015). The Big Four audit firms can guarantee high-quality assurance procedures in comparison with other providers because of their well-developed assurance standards, high reputation and specialism (Sìmnett *et al*., 2009; Velte and Stawinoga, 2017). The Big Four audit firms also have a higher ability to invest in new technologies. Moreover, it is suggested that it is implausible that the Big Four audit firms would act in an opportunistic way because of their reputation (Simnett *et al*., 2009).

Additionally, the associated cost of purchasing assurance from a high-quality assurance provider will be high (Simnett *et al*., 2009). In order to decrease the associated fees for purchasing assurance, firms are more willing to purchase the assurance from consultancy firms rather than from profession accounting firms (Simnett *et al*., 2009). However, while consultancy firms might have high experience in a specific subject area, they might not have the suitable assurance criteria, standards and independency (Velte and Stawinoga, 2017). Further, firms' internal auditors could play a major role in the process of assurance as the internal audit can enhance the reliability of the disclosed information (Soh and Martinov-Bennie, 2015). Nevertheless, the internal auditors' lack of independence may affect the quality of their engagement in the assurance process (Velte and Stawinoga, 2017).

3.2.3 Level of assurance

Firms are engaging in CSR reports assurance mainly to increase the credibility of their disclosed CSR information (Velte and Stawinoga, 2017; Hassan et al., 2020). The AA1000 standards defined Assurance engagement as "*an engagement in which an assurance provider evaluates and expresses a conclusion on a reporting organisation's disclosure about its performance and underlying processes, systems, and controls against suitable criteria in order to enhance the credibility and legitimacy of the information for the intended audience*" (AccountAbility, 2018, p. 36). Increasing the credibility of the disclosed CSR information is influenced by the level of assurance indicated by the assurers (Hasan et al., 2003). The level of assurance engagement helps in reducing the gap between the actual effectiveness of the assurance practices and the reader's perception (Martínez-Ferrero and García-Sánchez, 2016). The level of assurance reflects the depth and extent of the work undertaken by the assurance provider; hence, reflecting the level of confidence perceived through the assured report by users (Martínez-Ferrero and García-Sánchez, 2016). Hodge *et al.*(2009) highlight two levels of assurance to specify the extent of the work undertaken by the assurers, namely the limited (also referred to as moderate) level of assurance and the reasonable (also referred to as high) level of assurance.

The level of assurance is defined in the conclusion of the assurance statement and reflects the assurance provider's judgment, where a reasonable assurance is provided in a positive form and donates a greater level of assurance than limited assurance which is worded in a negative form (Hodge *et al.*, 2009; Martínez-Ferrero and García-Sánchez, 2016). For instance, in the case of a reasonable level of assurance the assurer may report that 'the information disclosed in the CSR report is approved in all material respects based on identified criteria', while in the case of a limited level of assurance, the assurer may report that 'nothing has come to our attention to lead us to conclude that the information discloused in the CSR report is not presented fairly based on the identified criteria' (Hodge *et al.*, 2009; Martínez-Ferrero and García-Sánchez, 2016). Further, a reasonable assurance level indicates that the assurer can decrease the assurance engagement risk to an acceptable level and communicate a greater level of verification, while the limited assurance level indicates that the assurer might decrease engagement risk to an acceptable level, but the risk is larger in comparison to reasonable assurance and communicates a low level of verification (Hasan et al., 2003; Martínez-Ferrero and García-Sánchez, 2016; Velte and Stawinoga, 2017).

3.2.4 Steps towards adopting external assurance practices

Before introducing an external assurance statement, there are four steps that have to be taken by the reporting firms, although it is not necessary for firms to follow these steps sequentially. Each step requires further resources from the firm (Park and Brorson, 2005). In detail: Step one involves collecting and analysing the CSR data, with firms having to introduce an internal reporting system. Step two entails using the collected data to provide a public report, which demands extra investments and resources. Step three consists of seeking external third-party assurance. Step four might be an additional step of engagement of stakeholders in the process of assurance in order to enhance the assurance's value. Fig.3.1 shows the steps which firms are required to take in order to receive an assurance statement.

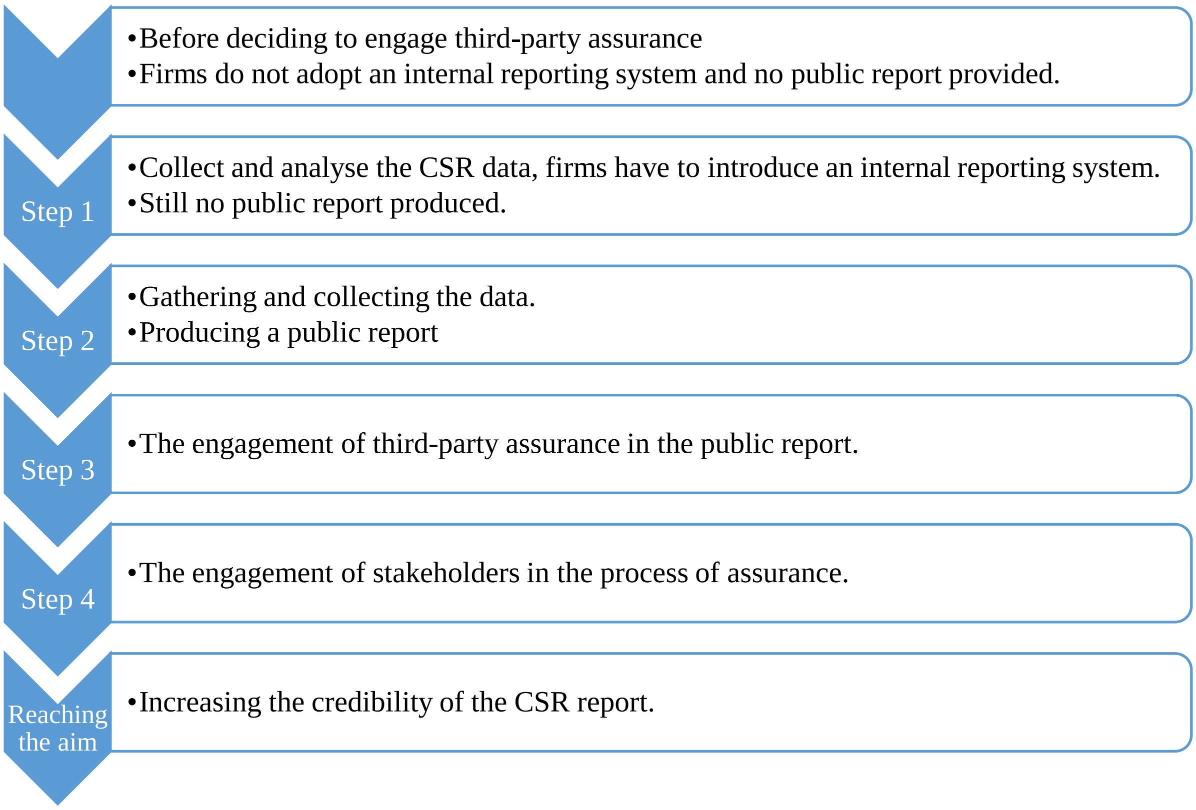

Figure 3. 1: Steps towards increasing the credibility of the CSR reports by purchasing assurance practices. Source: (Park and Brorson, 2005, p. 1097)

3.3 Factors affecting the decision of purchasing assurance.

The existing literature examined several factors that affect the decision to hire an external assurer, including firm-specific factors, country-specific factors, industry-specific factors and corporate governance factors (Velte and Stawinoga, 2017; Venter and van Eck, 2020). Table 3.1 provides a summary of the examined factors, the adopted theories and the concluded findings[2]. It is worth mentioning that almost half of the reviewed articles use an international sample, three articles use a European sample, and the remaining articles were conducted in a single context. The stakeholder and legitimacy are the most widely used underpinning theories in the literature to explain the decision to purchase assurance.

Table 3.1. Summary of the examined factors, the adopted theories and the concluded findings.

Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) ***Journal***	***Sample***	***Theory (ies)***	***The investigated variables*** ***Controls***	***The concluded Results***
Darnall et al. (2009) *Accounting, Organizations and Society*	International survey completed by 4186 facility managers from both large and small firms in manufacturing sectors during 2003.	Stakeholder theory	Perceived influence of societal stakeholders.	not significant
			Perceived influence of regulatory stakeholders	(+)
			Perceived influence of internal stakeholders	(+)
			Perceived influence of supply chain stakeholders	(+)
			Size	(+)
			Listing status	(+)
			foreign head office.	(+)
			Industry Membership	(+/-)

[2] Table 3.1 provides a summary of the factors examined by prior quantitative research. Under ***the investigated variables*** column, the variables presented in normal font refer to the main variables in empirical models while those in *Italic* font refer to variables included for control purposes only.

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) ***Journal***	***Sample***	***Theory (ies)***	***The investigated variables*** ***Controls***	***The concluded Results***
Simnett et al. (2009) *THE ACCOUNTING REVIEW*	867 listed firms across 31 countries with 2113 CSR reports, over the years (2002-2004).	Not explicitly mentioned	Quality of the legal environment	(+)
			Legal origin (code law/common law countries)	(+)
			Industry Membership	(+/-)
			Size	(+)
			Profitability	not significant
			Leverage	not significant
Kolk and Perego (2010) *Business Strategy and the Environment*	The first half of the fortunes Global 500 firms during the years (1999,2002,2005). 636 firm-year observation from 20 countries.	Stakeholder and legitimacy theory	Quality of the legal environment	(-)
			Legal origin (code law/common law countries)	(+)
			National Corporate Responsibility Index	(+)
			Size	not significant
			Capital intensity	not significant
			Industry Membership	(+/-)
Sierra et al. (2013) *Corporate Social Responsibility and Environmental Management*	210 observations from firms listed on IBEX-35 stock exchange in Spain over the period 2005-2010.	Not explicitly mentioned	Industry Membership	not significant
			Financial auditor Big4	not significant
			Size	(+)
			Profitability	(+) ROE (-) ROA
			Leverage	(-)
Zorio et al. (2013) *Business Strategy and the Environment*	690 observations from 130 firms listed in Bolsa de Madrid covering the period 2005-2010.	Not explicitly mentioned	The percentage of firms with CSR reports per year	not significant
			Inclusion in the IBEX-35	(+)
			Industry	(+/-)
			Size	(+)
			Profitability	not significant
			Leverage	(-)

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	***Sample***	***Theory (ies)***	***The investigated variables Controls***	***The concluded Results***
Ruhnke and Gabriel (2013) *Journal of Business Economics*	Sustainability report of the respective 150 largest companies listed on the Prime All Share (Germany), AEX All Share (the Netherlands) and FTSE All Share (Great Britain) in 2010.	Stakeholder-agency and Signalling theory	Size	(+)
			The dispersion of share ownership (Free float)	not significant
			Sustainability committee	(+)
			Follow the GRI guidelines	(+)
			First time publish sustainability report	not significant
			Country	not significant
			Industry	not significant
			Profitability	(+)
			Leverage	not significant
Branco et al. (2014) *Managerial Auditing Journal*	Unlisted and listed firms that produced CSR reports in the Portuguese market during 2008-2011.	Not explicitly mentioned	Size	(+)
			Profitability	(+)
			Leverage	(-)
			Listing status	(-)
			Type of ownership (state-owned/privately owned)	not significant
			Industry membership	(+/-)
Cho et al. (2014) *Sustainability Accounting, Management and Policy Journal*	Publicly listed U.S companies included in the Fortune 500 in 2010.	Voluntary disclosure and Signalling theory	*Size*	not significant
			Profitability	not significant
			Leverage	not significant
			Environmentally sensitive industry membership	(+)
			Finance industry membership	(+)
			Extensiveness of CSR disclosure	(+)
			Market value of equity	not significant

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	***Sample***	***Theory (ies)***	***The investigated variables Controls***	***The concluded Results***
Casey and Grenier (2015) *Auditing: A Journal of Practice & Theory*	230 assured reports from 2649 US CSR reports with sufficient Compustat data, during 1993-2010.	Meta-Theoretical Perspective (legitimacy, stakeholder, and shareholder theories)	Size	(+)
			Profitability	not significant
			Leverage	(-)
			Industry Membership	(+/-)
			CSR performance score (KLD Strengths)	(+)
			CSR performance score (KLD Concerns)	(+)
			Foreign income	(+)
			Growth	not significant
			Liquidity	not significant
			Cost-of- Capital	(+)
			High-litigation industries	not significant
			Competition	not significant
			Financing activities	not significant
			Disclosure Policy	not significant
			Advertising expense	(+)
De Beelde and Tuybens (2015) *Business Strategy and the Environment*	227 continental European listed companies	Stakeholder agent theory	National Corporate Responsibility Index	(-)
			Quality of the legal environment	(+)
			Industry	not significant
			(Size) Total assets	(+)
			(Size)Number of employees	not significant
			Profitability	not significant
			Leverage	not significant
			Media visibility	not significant
			Ownership Structure (% of largest shareholder)	not significant

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	***Sample***	***Theory (ies)***	***The investigated variables Controls***	***The concluded Results***
Gillet-Monjarret (2015) *Accounting in Europe*	Listed companies on the French SBF 120 over a period of four years (2007–2010).	Legitimacy theory	Media exposure	(+)
			Media legitimacy (type of articles)	(-)
			Firm size	(+)
			Profitability	not significant
			Debt ratio	not significant
			Firm industry	not significant
			Sustainability index	(+)
			Follow the GRI guidelines	(+)
Peters and Romi (2015) *Auditing: A Journal of Practice & Theory*	912 US sustainability reports, during 2002-2010.	Resource dependency theory, legitimacy theory and agency theory	Sustainability Committee	not significant
			Sustainability Officer within the management	(+)
			Expert Sustainability Officers	(+)
			Size of environmental committee	not significant
			Environmental committee expertise	(+)
			Environmental committee number of meeting	not significant
			Duality	not significant
			Board Size	(+)
			Board meetings	not significant
			Audit committee size	not significant
			Board Independence	not significant
			CSR performance score (KLD Concerns)	(+)
			Industry membership	not significant
			Follow the GRI guidelines	(+)
			Size	(-)
			Profitability	not significant
			Leverage	not significant
			Institutional investors	(+)
			Bid-ask spread	(+)
			Forecast dispersion	not significant
			Foreign income	not significant

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	***Sample***	***Theory (ies)***	***The investigated variables / Controls***	***The concluded Results***
Kend (2015) <u>*Sustainability Accounting, Management and Policy Journal*</u>	220 firms generated from the top 200 listed firms in the UK (FTSE) and Australia (ASX) in 2010.	Stakeholder theory	Audit committee meetings	(+)
			Audit committee size	not significant
			Board meetings	not significant
			Board Size	not significant
			Sustainability committee	not significant
			Governance committee	not significant
			<u>*Size*</u>	not significant
			<u>*Audit fees*</u>	not significant
			<u>*Other assurance fees*</u>	not significant
			<u>*Profitability*</u>	(+)
			<u>*Sales growth*</u>	(+)
Birkey et al. (2016) <u>*Accounting Forum*</u>	351 greenest companies in the US during 2009 and 2010.	Stakeholder theory	Environmental reputation score	(+)
Bollas-Araya et al. (2016) <u>*JOURNAL OF CO-OPERATIVE ACCOUNTING AND REPORTING*</u>	The top 300 cooperative and mutual firms listed in the World Cooperative Monitor over the period 2010,2011 and 2012.	Legitimacy theory	Legal origin (code law/common law countries)	(+)
			Sector sensitivity (less sensitive/more sensitive sector)	not significant
Sethi et al. (2017) <u>*Journal of Business Ethics*</u>	614 global firms listed in several global indices in 2012.	Not explicitly mentioned	CSR report quality	(+)
			Quality of the legal environment	not significant
			Legal origin (code law/common law countries)	not significant
			Industry Membership	not significant
			Size	not significant
			Profitability	(-)

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) ***Journal***	*Sample*	*Theory (ies)*	*The investigated variables* ***Controls***	*The concluded Results*
Martínez-Ferrero and García-Sánchez (2017a) *International Business Review*	International sample of 696 companies listed in the world largest 2000 companies provided by Forbes over the period of 2007-2014.	Agency, stakeholder, legitimacy, and neo-institutional theory	Legal origin (code law/common law countries)	(+)
			Culture	(+)
			Industry Pressure	not significant
			Size	(+)
			Leverage	(-)
			Growth	(+)
			Industry membership	not significant
Kuzey and Uyar (2017) *Journal of Cleaner Production*	300 firm-year observations for Turkish publicly traded firms at the Borsa Istanbul over the period 2011,2012 and 2013.	Legitimacy, agency, resource availability and signalling Theory	Firm size	not significant
			Environmentally sensitive industry membership	(+)
			Leverage	not significant
			Profitability	(-)
			Liquidity	(+)
			Free Cash Flow	not significant
			Growth	not significant
			The dispersion of share ownership (Free float)	not significant
Martinez-Ferrero et al. (2017) *Journal of Small Business and Enterprise Development*	536 international firms working in stakeholder-oriented countries over the period 2007-2014	Agency theory, institutional theory, socio-emotional wealth (SEW) theory	Board Size	(+)
			Board Independence	(+)
			Family Ownership	(+)
			BoardSize_FamilyOwner	(+)
			BoardIndep_FamilyOwner	not significant
			Size	(+)
			Leverage	not significant
			Growth	not significant
			Profitability	not significant
			Board meetings	(+)
			Family CEO	not significant

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

***Author(s)* _Journal_**	***Sample***	***Theory (ies)***	***The investigated variables* _Controls_**	***The concluded Results***
Liao et al. (2018) _Journal of Business Ethics_	2054 firm-year observations for businesses listed on the Chinese stock exchange over the period of 2008-2012.	Institutional theory, critical mass theory, resource dependence theory, and Agency theory	Board size	(+)
			Female directors	(+)
			Board Independence	not significant
			Supervisory directors	not significant
			Duality	(+)
			Board Meeting	not significant
			Foreign Directors	(-)
			CEO with Overseas Background	not significant
			Environmentally sensitive industry membership	(-)
			Size	not significant
			Profitability	(+)
			Leverage	not significant
			Financial auditor Big4	not significant
			state-owned enterprise	not significant
			CSR performance score	(+)
			Cross listing	not significant
			Market index	(-)
			Law index	(+)
			CSR index	not significant
Miras-Rodríguez and Di Pietra (2018) _Journal of Management and Governance_	176 CSR reports prepared and presented by worldwide energy listed companies at the financial year 2012/2013.	Legitimacy, Institutional and agency theory	Rule-Based or Relation-Based environments	(-)
			Percentage of executives on the board	(-)
			Ownership Structure (the presence of a Reference Shareholder)	(+)
			Board Size	not significant
			Size	(-)
			Profitability	not significant
			Number of pages	(-)
			CSR performance score	(-)
			Sustainability committee	not significant
			Voluntary CSR reporting	not significant

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	*Sample*	*Theory (ies)*	*The investigated variables Controls*	*The concluded Results*
Al-Shaer and Zaman (2018) *Business Strategy and the Environment*	Firms listed on the London Stock Exchange "FTSE350" in 2012.	Resource dependency theory	Audit committee size	not significant
			Independent audit committee members	(+)
			Audit committee members with financial expertise	(+)
			Audit committee meetings	(+)
			Sustainability committee	(-)
			Board size	(+)
			Board independence	not significant
			Board meeting	not significant
			Size	not significant
			Profitability	not significant
			Leverage	(+)
Fernandez-Feijoo et al. (2018) *Corporate Social Responsibility and Environmental Management*	2751 company-year observations from 18 countries generated from the Global Reporting Initiative (GRI) database during the years (2011-2013).	Legitimacy theory	Financial auditor Big4	(-)
			LegalSystem (English)	not significant
			LegalSystem (French)	not significant
			LegalSystem (Germany)	(+)
			LegalSystem (Scandinavian)	(+)
			EU companies	(+)
			Environmentally sensitive industry membership	not significant
			Consumer pressure	(+)
			Size	not significant
			Listing status	not significant
			Level of sustainability disclosure	(+)
Seguí-Mas et al. (2018) *Sustainability*	Worldwide firms that produced sustainability reports following the GRI guidelines between 2012 and 2015.	Institutional, legitimacy and stakeholder theory	Legal origin (code law/common law countries)	not significant
			Listing status	(+)
			Size	(+)
			Sector supplement	(+)

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	***Sample***	***Theory (ies)***	***The investigated variables Controls***	***The concluded Results***
Dutta (2019) *Social Responsibility Journal*	176 firm-year observations during 2008-2015 for listed Finnish firms that had produced sustainability reports.	Legitimacy theory	Environmental performance in terms of greenhouse gas emissions	(-)
			Environmental performance in terms of water consumption	(-)
			Environmental performance in terms of waste produced	not significant
			Size	(+)
			Profitability	not significant
			Leverage	(-)
			Asset age	(+)
			Environmentally sensitive industry membership	not significant
Clarkson et al. (2019) *Accounting, Auditing & Accountability Journal*	17,050 firm-year CSR reports drawn from 40 countries for the period of 2009–2015.	Signalling theory	CSR performance score	(+)
			level of CSR information available to shareholders	(+)
			Size	(+)
			Leverage	not significant
			Profitability	(-)
			Accruals	not significant
			Financial auditor Big4	(-)
			Number of analysts	(+)
			Cross listing	(+)
			Voluntary disclosure measure	(-)
			Corporate governance measure	(-)
			Institutional ownership (% of institutional ownership)	(-)
Bollas-Araya et al. (2019) *Australian Accounting Review*	The top 300 cooperative and mutual organisations worldwide over a four-year period (2010–13).	Institutional, Legitimacy and stakeholder theory	Size	not significant
			Legal origin (code law/common law countries)	(+)
			Sector sensitivity (less sensitive/more sensitive sector)	(+)

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	***Sample***	***Theory (ies)***	***The investigated variables Controls***	***The concluded Results***
Hassan et al. (2020) *Accounting Research Journal*	100 firms listed in the Dhaka Stock Exchange in 2015 and published sustainability information.	Signalling theory	Sustainable disclosure index	(+)
			Industry membership	(-)
			Reporting format	(+)
			Size	(+)
			Profitability	not significant
			Leverage	not significant
Maroun and Prinsloo (2020) *Business Strategy and the Environment*	Top 50 firms listed on the Johannesburg Stock Exchange from 2013-2018.	Legitimacy theory	Size	(-)
			Profitability	not significant
			Leverage	not significant
			Environmentally sensitive industry membership	not significant
			Financial services sector	(-)
			Disclosure’s extensiveness (number of pages in an IR)	not significant
			Board size	(+)
			Board experience	(-)
			Board independence	(+)
Simoni and Bellucci (2020) *Meditari Accountancy Research*	417 listed firms based in distinct European countries during (2012-2016).	Stakeholder, institutional, signalling and legitimacy theory	Social score (extracted from Thomson Reuters)	(+)
			National culture	(-)
			Environmental Score	(+)
			Business Ethics Score	(-)
			Corporate Governance Score	(+)
			Environmentally sensitive industry membership	not significant
			Follow the GRI guidelines	(+)
			Size	(+)
			Leverage	not significant
			Profitability	not significant

Table 3.1. (continued)
Empirical research related to the decision of purchasing assurance and the concluded findings

Author(s) Journal	***Sample***	***Theory (ies)***	***The investigated variables Controls***	***The concluded Results***
Baboukardos et al. (2021) *Business Strategy and the Environment*	19,076 firm-year observations generated from Thomson Reuters ASSET4 database during 2002- 2016, spanning 47 countries and over 10 industries.	Stakeholder theory	Integrated Thinking (IT)	(+)
			Legal origin (LEG) (code law/common law countries)	(+)
			IT and LEG interaction	(-)
			Size	(+)
			Leverage	(+)
			Profitability	(+)
			Growth	not significant
			Participation in an emission trading scheme	(+)
			Signatory to United Nations Global Compact	(+)
Kılıç et al. (2021) *Journal of International Accounting, Auditing and Taxation*	192 firms registered in the example database of the IIRC, and 1,152 firm-year observations during (2011-2016).	Institutional theory	Legal origin (code law/common law countries)	(+)
			Quality of the legal environment	(-)
			Sustainability performance (Sustainable Society Index)	(+)
			Size	not significant
			Leverage	not significant
			Profitability	not significant
			Environmentally sensitive industry membership	not significant
			Financial industry	not significant

As can be seen from Table 3.1, the potential explanatory role of a large number of variables has been investigated in order to explain why some companies purchase external assurance while others do not. Most of the prior studies employed archival research methods to examine the impact of several factors on the decision to purchase external assurance, with a focus on firm, industry, corporate governance and country related factors. Further details are presented in the following sections.

3.3.1 Firm specific factors

Regarding firm's characteristics, several variables have been tested by previous research to investigate their association with the decision of purchasing assurance. The most used variables are firm size, profitability and leverage (Sìmnett *et al*., 2009; Zorio *et al*., 2013; Cho *et al*., 2014; Castelo Branco *et al*., 2014; Casey and Grenier, 2015; De Beelde and Tuybens, 2015; Martinez-Ferrero *et al*., 2017; Sethi *et al*., 2017; Liao *et* al., 2018;Dutta, 2019; Maroun and Prinsloo, 2020; Baboukardos *et al*., 2021).

In terms of firm size, the authors assumed that large firms have more comprehensive activities and are more willing to adopt assurance practices due to the high public pressure they face. Remarkably, however, the concluded findings vary among prior studies. In some cases, researchers found that firm size was positively associated with the decision to purchase assurance (Sìmnett *et al.*, 2009; Sierra *et al.*, 2013; Casey and Grenier, 2015; Martínez-Ferrero and García-Sánchez, 2017a; Dutta, 2019), whereas others found negative association (Peters and Romi, 2015; Miras-Rodríguez and Di Pietra, 2018; Maroun and Prinsloo, 2020). On the contrary, some researchers found that firm's size was not associated with purchasing assurance decision (Kolk and Perego, 2010; Sethi *et al.*, 2017; Liao *et al.*, 2018; Kılıç *et al.*, 2021). Venter and van Eck (2020) assumed that the variation in findings might be attributed to different legal systems in the examined samples' countries of origin.

Additionally, previous researchers suggested that profitable firms are more subject to public scrutiny, which may incentivise these firms to adopt assurance statements as a response to the public pressure. Interestingly, however, mixed results have been documented. For example, Ruhnke and Gabriel (2013), Branco *et al.* (2014), Kend (2015), Liao *et al*. (2018) and Baboukardos *et al*. (2021) found that profitability is positively associated with the decision to purchase external assurance, while other researchers documented a negative association (Kuzey and Uyar, 2017; Sethi *et al*., 2017; Clarkson *et al.*, 2019). In contrast, Simnett *et al*. (2009), Casey and Grenier (2015), Martinez-Ferrero *et al*. (2017), Al-Shaer and Zaman (2018), Dutta (2019) and Maroun and Prinsloo (2020) found that the decision to purchase external assurance is not associated with firms' profitability.

With regard to leverage, high leverage firms are more willing to increase the credibility and confidence of their corporate disclosures to increase the stakeholder trust. Researchers assumed that firm leverage influences the decision of purchasing assurance (Sìmnett *et al.*, 2009; Branco *et al.*, 2014; Casey and Grenier, 2015; Liao *et al.*, 2018; Clarkson *et al.*, 2019; Hassan *et al.*, 2020; Baboukardos *et al.*, 2021). Interestingly, however, mixed results have been reported. For instance, Al-Shaer and Zaman (2018) found that firms with higher levels of leverage are more likely to have their CSR report externally assured, while Zorio *et al.* (2013), Branco *et al.* (2014), Casey and Grenier (2015) and Dutta (2019) documented a negative one. However, Casey and Grenier (2015) assumed strict regulations and effective oversight might eliminate demand for assurance practices in highly regulated industries. Moreover, no significant association was found between leverage and the decision to obtain assurance (Sìmnett *et al.*, 2009; Cho *et al.*, 2014; De Beelde and Tuybens, 2015; Kuzey and Uyar, 2017; Liao *et al.*, 2018; Clarkson *et al.*, 2019; Maroun and Prinsloo, 2020).

With respect to the above firm characteristics, Cho *et al.* (2014) and Clarkson *et al.* (2019) examined the effect of CSR disclosure extensiveness on purchasing assurance, and document that firms with more extensive CSR disclosures are more willing to adopt assurance statements, while Maroun and Prinsloo (2020) document no association between disclosure extensive and assurance decision. In addition, Liao *et al.* (2018) and Clarkson *et al.* (2019) found CSR performance score to be positively associated with the decision to purchase assurance, highlighting that firms with better CSR performance scores are more likely to purchase assurance, whilst Miras-Rodríguez and Di Pietra (2018) document a negative association. Further, Sethi *et al.* (2017) reported that firms with high quality CSR reports are more willing to purchase external assurance. On the other hand, Casey and Grenier (2015) studied the effect of firms' global presence on obtaining assurance decision, assuming that firms need to enhance their credibility with foreign stakeholders. Their findings meet their expectation that firms with a global presence are more willing to purchase assurance (Casey and Grenier, 2015). However, Peters and Romi (2015) found that foreign income is not a significant determinant to purchase assurance. In addition, Liao *et al.* (2018) and Clarkson *et al.* (2019) examined the association between obtaining assurance and firms cross-listing in other countries. Clarkson *et al.* (2019) reported a positive association, while Liao *et al.* (2018) found no relationship between firms cross listing and assurance. Further, Branco *et al.* (2014) found a negative relationship between listing status and obtaining assurance in the Portuguese context, while Darnall *et al.* (2009) and Seguí-Mas *et al.* (2018) reported a positive association based on an international sample.

Ruhnke and Gabriel (2013) and Kuzey and Uyar (2017) considered the dispersion of share ownership as an influential factor affecting the decision to obtain assurance, assuming that firms with dispersed ownership would be more willing to obtain assurance as a monitoring mechanism to reduce agency costs; however, an insignificant association was reported. Besides, Miras-Rodríguez and Di Pietra (2018) assumed that reference shareholders' existence influences the decision to adopt assurance since they have an influential role in appointing directors to the board, and their result indicates a positive and significant relationship. In a similar vein, Peters and Romi (2015) reported a positive relationship between institutional investors ownership and obtaining assurance, whilst Clarkson *et al.* (2019) identified a negative association between institutional ownership and assurance decision. In contrast, De Beelde and Tuybens (2015) assumed that a lower percentage of reference shareholders reflects the need for credible CSR information and therefore influences the decision to obtain assurance; however, their finding shows an insignificant association.

To further examine the potential factors influencing the assurance decision, other firm variables were tested; for instance, firms' cost of capital, advertising expenses, and CSR strengths and concerns were found to positively influence obtaining assurance (Casey and Grenier, 2015). In addition, firms following GRI guidelines were found to be more willing to purchase assurance (Gillet-Monjarret, 2015; Peters and Romi, 2015; Simoni *et al.*, 2020). Furthermore, media pressure, customer awareness and consumer pressure were found to be positively related to assurance decision (Casey and Grenier, 2015; Gillet-Monjarret, 2015; Fernandez-Feijoo *et al.*, 2018). Besides, Darnall *et al.* (2009) found that obtaining assurance is associated with both internal and external stakeholders influences. Baboukardos *et al.* (2021) found the level of integrated thinking in a firm positively influences the assurance decision, assuming that firms worldwide are under pressure to disclose integrated financial and non-financial information. Further, firms' liquidity, free cash flow, growth opportunity, audit fees, other audit fees, market capitalisation, asset age, signing up to the UN global compact and number of analysts following the firm were other factors examined as assurance determinants by Cho *et al.* (2014), Casey and Grenier (2015), De Beelde and Tuybens (2015), Kuzey and Uyar (2017), Liao *et al.* (2018), Clarkson *et al.* (2019), Dutta (2019) and Baboukardos *et al.* (2021). However, only a few significant results were reported.

3.3.2 Industry specific characteristics

Concerning industry type and sector sensitivity, assuming that firms belonging to particular industries with more significant social and environmental impact are more willing to face social and environmental risks, these firms will manage these risks through purchasing assurance practices (Sìmnett *et al.*, 2009; Sierra *et al.*, 2013; Sethi *et al.*, 2017; Dutta, 2019; Hassan *et al.*, 2020). However, mixed results have been reported. For instance, Sìmnett *et al.* (2009), Sierra *et al.*(2013), Zorio *et al.* (2013), Branco *et al.* (2014), Cho *et al.* (2014) and Hassan *et al.* (2020) found that the demand for assurance is greater among firms participating in industrial activity with high environmental and social risks and firms with high social footprint. However, Casey and Grenier (2015) indicated that despite environmental and social risks, US finance and utility firms are less likely to obtain assurance because of higher regulation. This regulation might act as a substitute for adopting assurance. Similarly, Maroun and Prinsloo (2020) found that firms operating in the financial sector domiciled in South Africa are less likely to obtain assurance for their integrated report, assuming strict regulation in this sector, and firms in this sector are more interested in financial reporting. Further, Martínez-Ferrero and García-Sánchez (2017a) reported a significant relationship between industry membership and assurance decision; however, applying a two stage logit model showed that country specific factors exert the greatest explanatory power for obtaining assurance. In addition, in terms of sector sensitivity, Bollas-Araya *et al.* (2019) found that less sensitive sectors are more willing to assure their corporate reports than highly sensitive sectors. However, Sethi *et al.* (2017) and Dutta (2019) found that neither environmental nor social industries have an impact on obtaining assurance.

3.3.3 Corporate governance specific factors

In addition to the firm characteristics, some of the previous research focuses on the effect of corporate governance factors on purchasing assurance. The most adopted factor was the board size, representing the number of directors serving on the board (Peters and Romi, 2015; Martinez-Ferrero *et al.*, 2017; Al-Shaer and Zaman, 2018; Liao *et al.*, 2018; Maroun and Prinsloo, 2020). The researchers assumed that firms with larger board size would be more willing to adopt assurance, arguing that larger boards reflect high experience, and knowledge might be represented, thus enhancing the quality of a firm's disclosures. Their finding indicates that firms with larger board size are more willing to purchase an assurance statement (Peters and Romi, 2015; Martinez-Ferrero *et al.*, 2017; Al-Shaer and Zaman, 2018; Liao *et al.*, 2018; Maroun and Prinsloo, 2020). However, Kend (2015) and Miras-Rodríguez and Di Pietra (2018) document insignificant results.

Furthermore, number of board meetings was examined as a factor affecting the demand for assurance practices, assuming that firms with more frequent board meetings are more willing to purchase assurance (Kend, 2015; Peters and Romi, 2015; Martinez-Ferrero *et al.*, 2017; Al-Shaer and Zaman, 2018; Liao *et al.*, 2018). However, mixed results were documented; for example, Martinez-Ferrero *et al.* (2017) document a positive association based on an international sample, whereas other research results show an insignificant association between board meetings and obtaining assurance (Kend, 2015; Peters and Romi, 2015; Al-Shaer and Zaman, 2018; Liao *et al.*, 2018).

Additional factors to these mentioned above were investigated by Liao *et al.* (2018). For instance, they examined the effect of gender diversity of board members, board independence, CEO overseas background, and the board's duality in the Chinese context. Liao *et al*. (2018) found that firms with more gender diversity in their board and less duality are more likely to purchase assurance, while the other factors are not associated with adopting assurance. Martinez-Ferrero *et al.* (2017) and Maroun and Prinsloo (2020) reported a positive association between board independence and assurance. Additionally, Peters and Romi (2015) studied the effect of an existing environmental committee on the board of directors and chief sustainability officer presence within the management team. They found that the existence of a chief sustainability officer has a positive association with purchasing assurance. In contrast, an environmental committee's existence was not found to affect the decision of purchasing assurance (Kend, 2015; Peters and Romi, 2015; Miras-Rodríguez and Di Pietra, 2018). Interestingly, however, Al-Shaer and Zaman (2018) reported a negative association between sustainability committee existence and obtaining assurance, while Ruhnke and Gabriel (2013) document a positive association. In addition, Kend (2015) found high number of environmental committee meetings to be positively associated with purchasing assurance.

Furthermore, Martinez-Ferrero *et al.* (2017) investigated the effect of family ownership on board directors' strength regarding purchasing assurance. Their result indicates that family ownership influences the decision of purchasing assurance. Moreover, Kend (2015) investigated different corporate governance variables, such as audit committee meeting frequency, audit quality reflected as less likelihood of manipulating earnings, audit members, the existence of governance committee, the number of governance committee members. The results show that firms with a more active audit committee are more willing to purchase assurance (Kend, 2015; Al-Shaer and Zaman, 2018). In contrast, the other factors are not associated with purchasing assurance (Kend, 2015). In addition, Al-Shaer and Zaman (2018) examined the association between the proportion of audit committee independent members and financial expert members on obtaining assurance and document a positive association. Further, Simoni *et al.* (2020) tested the influence of overall quality of corporate governance on assurance decision among European based firms, and document a significant positive association.

3.3.4 Country specific factors

A number of transnational research studies examined the effect of country specific factors on purchasing assurance (Simnett *et al.*, 2009; Kolk and Perego, 2010; De Beelde and Tuybens, 2015; Martínez-Ferrero and García-Sánchez, 2017a; Sethi *et al.*, 2017; Seguí-Mas *et al.*, 2018; Bollas-Araya *et al.*, 2019; Kılıç *et al.*, 2021). These factors include the kind of law implemented in each country, whether it is a common or code law regime. Common law countries tend to be more shareholder-oriented countries, while code law countries tend to be more stakeholder-oriented (Simnett *et al.*, 2009; Kolk and Perego, 2010; Kılıç *et al.*, 2021). Simnett *et al.* (2009) and Kolk and Perego (2010) studied the legal environment in which a firm is domiciled, by exploring the distinction between the code and common law legal systems. Since common law countries are more shareholder-oriented, their primary interest is to maximise shareholder wealth (Kolk and Perego, 2010). Meanwhile, in code law countries, where the law system is more stakeholder-oriented, firms have more responsibilities in addition to maximising shareholders' wealth, including responsibility for social and environmental aspects (Kolk and Perego, 2010). Simnett *et al.* (2009); Kolk and Perego (2010); Bollas-Araya *et al.* (2019); Kılıç *et al.* (2021) and Baboukardos *et al.* (2021) found that country's legal system is associated with purchasing assurance, based on the assumption that firms domiciled in stakeholder-oriented countries are more willing to obtain assurance to meet stakeholders' demand.

Moreover, Simnett *et al.* (2009) and Kolk and Perego (2010) tested the legal system's strength on the decision of purchasing assurance. They predicted that the demand for assurance would be higher in firms operating in a weaker legal environment because of their interest in increasing their CSR disclosures' credibility. Interestingly, however, mixed results have been reported. For instance, Kolk and Perego (2010) found that firms operating in a weaker legal system are more likely to purchase assurance as the assurance practices might be considered a substitutional governance instrument. In a similar vein, Casey and Grenier (2015) stated that the intense regulation works as a substitute form of credibility improvement in the US market. However, Simnett *et al.* (2009); De Beelde and Tuybens (2015) and Martínez-Ferrero and

García-Sánchez (2017a) found that firms domiciled in countries with stronger legal systems are more likely to purchase assurance practices.

Besides, Martínez-Ferrero and García-Sánchez (2017a) examined the effect of national culture on obtaining assurance, assuming that firms in culturally developed societies with a greater orientation towards sustainability are more willing to obtain assurance than those in less developed cultures. They found that the national culture exerts the greatest influence on assurance demand (Martínez-Ferrero and García-Sánchez, 2017a). In this regard, Simoni *et al.* (2020) tested the effect of national culture on purchasing assurance and found that firms operating in countries with weaker sustainability policies are more willing to purchase assurance, based on the assumption that those firms are more willing to legitimise their operations in the eyes of stakeholders.

3.4 Limitations of the Literature

A large body of previous quantitative studies, underpinned by different theories such as stakeholder theory, legitimacy theory, signalling theory and institutional theory, examined various factors that may influence the decision to purchase external assurance. However, mixed results were reported for many of the variables they examined, such as firm size, industry, board size and country legal system (Sìmnett *et al*., 2009; Kuzey and Uyar, 2017; Sethi *et al.*, 2017; Liao *et al*., 2018; Miras-Rodríguez and Di Pietra, 2018; Clarkson *et al*., 2019). Therefore, concern has been raised regarding the relevance of the adopted theories and the variables identified in these quantitative studies to fully explain why some firms obtain external assurance while others do not. Meanwhile, qualitative research has suggested a completely different list of factors that might influence the decision of purchasing assurance, which the quantitative stream of literature has overlooked.

For instance, prior qualitative research documented that firms with external assurance are influenced by the perception of decision makers toward the potential benefits of external assurance, e.g. enhancing the credibility of the disclosed information and improving the internal reporting system (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010). On the other hand, the direct and indirect cost of assurance is assumed to be the main influential factor for hesitancy to purchase external assurance (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010; Darus *et al.*, 2014).

Further, qualitative studies also highlighted the lack of evidence regarding the benefits gained from external assurance, which in turn reduces firms' willingness to obtain assurance (Park and Brorson, 2005; Darus *et al*., 2014). Moreover, some CSR managers argued that obtaining assurance is not essential, assuming that other measures might be sufficient to enhance CSR disclosures' credibility, which therefore reduces the perceived benefit of obtaining assurance and the willingness to pay the fees associated with purchasing assurance (Park and Brorson, 2005; Jones and Solomon, 2010). For example, Jones and Solomon (2010) highlight that verification of the CSR reports by internal auditors might reduce the perceived benefit of external assurance and thus affect the decision to obtain external assurance. Similarly, following CSR reporting guidelines might also reduce the perceived benefit of external assurance (Park and Brorson, 2005; Sawani *et al.*, 2010). Meanwhile, assurers' potential independence is another determinant factor that is assumed to influence the perceived benefit of external assurance, where some individuals might question the independence of external assurers (Jones and Solomon, 2010). On the other hand, firms seeking to enhance their position vis a vis other companies might obtain external assurance based on their perception of its benefits in terms of attaining their goals. Furthermore, Sawani *et al.* (2010) assumed that responding to stakeholders' demand is another motive to obtain assurance. Likewise, Edgley *et al.* (2010) refer to the governance role of institutional shareholders in influencing the decision to obtain external assurance.

In short, prior quantitative studies predominantly used the available archival data to analyse the impact of the identified factors on obtaining assurance and did not integrate the different variables identified by qualitative studies, such as those highlighted above. While scholars in the quantitative stream of literature focused on firm-, givernance-,country- and industry-level factors, they paid little attention to the possibility that purchasing assurance is a decision that can be subject to cost-benefit analysis by decision makers, whereas anecdotal evidence from case-based studies points in this direction (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010). Hence, quantitative research has failed to provide a conclusive result on their list of relevant variables. That being the case, it is vital to construct an alternative list of variables drawn from both quantitative and qualitative studies, based on the assumption that this could provide a more conclusive picture of the factors influencing obtaining assurance and explain the mechanism through which these factors impact the decision to obtain external assurance.

3.5 Chapter summary

In chapter three, the literature on corporate social responsibility reporting and assurance has been reviewed. More specifically, the chapter has provided a brief introduction to the notions of CSR reporting and assurance and definitions of assurance engagement, standards and providers. Besides, the chapter has outlined the various levels of assurance and the procedures through which firms obtain assurance.

Furthermore, the chapter has presented an insightful review of the factors influencing the decision to purchase external assurance, as examined by prior research in the area, including firm-, industry- and country-specific factors in addition to corporate governance factors. However, regardless of the many factors identified by prior research as potentially influencing the decision to obtain external assurance, it is still unclear why some firms obtain assurance while others do not. Therefore, the last section of this chapter has highlighted the limitations of the previous literature and the need to integrate results from both quantitative and qualitative streams in order to achieve more conclusive findings.

Chapter Four: Theoretical Framework and Hypotheses Development

4.1 Introduction

The review of the prior literature in chapter three presents an overview of the current understanding of the factors influencing obtaining assurance. This research aims to examine the importance of external assurance and the factors influencing the decision to obtain external assurance in the United Kingdom. Hence, this chapter seeks to address the limitations of previous research by developing a theoretical model that highlights the importance of external assurance and clarifies the factors impacting the decision to purchase assurance.

Among the theories pertaining to external assurance, agency, legitimacy, stakeholder, and signalling are the dominant theories in the literature. The agency theory posits that CSR assurance is an effective monitoring tool for managers to enhance the credibility of their corporate disclosures and reduce the agency conflict (Martinez-Ferrero *et al.*, 2017). Legitimacy theory considers the association between the firm and society as a whole and presumes that for firms to survive, they should satisfy the social demand by producing CSR reports with accompanying assurance, while stakeholder theory considers certain groups within society (Bebbington *et al*., 2014; Casey and Grenier, 2015; Deegan, 2014). Drawing upon the signalling theory, firms obtain external assurance to signal their commitment to transferring trusted CSR disclosures (Cho *et al*., 2014; Kuzey and Uyar, 2017). However, prior studies failed to provide a conclusive list of variables and none of the previous studies explained the assurance practices from a cost-benefit analysis perspective, as shown in Table 3.1. The current study uses the rational perspective combined with the stakeholder perspective to better explain and provide new insight into the field.

The subsequent section (4.2) presents a brief introduction to the guiding theories of this research, namely the rational choice theory and stakeholder theory. Next, section (4.3) shows the proposed theoretical model and a set of research hypotheses connecting the factors of the proposed theoretical model. Finally, section (4.4) presents a synopsis of the information reported in current chapter.

4.2 The theoretical basis of the research

4.2.1 Rational choice theory

The rational choice theory offers a universal basis for constructing human behaviour explanations (Leeson, 2020). Rational behaviour, in general, has been taken to imply that human behaviour is shaped by the rewards and punishments received and can be used to explain human behaviour (Scott, 2000; Leeson, 2020). More precisely, individuals do things that lead to rewards instead of doing things that lead to punishments (Scott, 2000). The theory assumes that rational individuals calculate the potential benefit and cost of any action before taking a decision (Scott, 2000). In rational choice theories, individuals are seen to act based on their preferences and given constraints and must take the action that will be best for them (Scott, 2000). Consequently, the rational choice theory is often used to conceptualise investment decisions, and the perspective of cost-benefit analysis reflects the outcome of the rational choice theory (Cabantous and Gond, 2011; Turner, 2007). Quackenbush (2004) states that rational choice theory can be applied to a broad range of social contexts.

Takemura (2014) indicates that rationality is needed during the decision-making process. Based on the rational choice theory, the decision to obtain external assurance is subject to cost-benefit analysis whereby managers calculate the potential benefit and cost of external assurance to rationally decide whether to obtain external assurance or not. More precisely, prior research assumes that obtaining assurance will benefit the reporting firm, but the cost of assurance might render firms to obtain assurance. In reality, although there is a growing interest in purchasing assurance (KPMG survey, 2020; Park and Brorson, 2005), not all firms include assurance statements in their CSR disclosures (Sìmnett *et al.*, 2009; KPMG survey, 2020). The rational choice theory might explain the variation in obtaining assurance among decision makers, with rational managers being more willing to obtain assurance only if the perceived benefit of external assurance outweighs the cost of assurance to achieve the best possible outcome. However, there might be situations in which firms are likely to have their social and environmental reports assured even if the costs exceed the benefits of obtaining assurance. This can be explained by stakeholder theory.

4.2.2 Stakeholder theory

Stakeholder theory is one of the dominant theories pertaining to CSR disclosures and assurance (Kuzey and Uyar, 2017). Stakeholders can be defined as any individual or group who have a direct or indirect association with the firm's operations (Bebbington *et al.*, 2014). Prior research assumes that for firms to survive, they should operate in their stakeholders' interests and adjust their activities to meet stakeholders' expectations (Roberts, 1992; Cotter and Najah, 2012; Deegan, 2014). The theory considers certain groups within the whole society and has two branches: positive (managerial) and ethical (moral) branch (Deegan, 2014).

From a practical perspective, firms might not be able to meet the demands of all stakeholders equally, but rather, they must be more prepared to meet the demands of the powerful stakeholders (Deegan, 2014). Stakeholder theory explains the closest individuals' or groups' ability to affect firms' success and shape management strategies (Bebbington *et al*., 2014; Cotter and Najah, 2012). Stakeholder theory asks which of these individuals and groups of stakeholders deserve attention from management and towards whom corporate social responsibility disclosure will be directed (Mitchell *et al.*, 1997; Darnall *et al.*, 2009; Bebbington *et al.*, 2014). Accordingly, it is necessary for a firm's decision makers to meet the demand of influential stakeholders in order to achieve the firm's strategic goals and objectives (Freeman, 2015). Disclosing CSR information related to a firm's activities is considered a demanding issue among stakeholders (Deegan, 2014; Park and Brorson, 2005). Besides, producing CSR reports with accompanying assurance practices is considered a management tool to influence stakeholders and respond to demands from influential stakeholders to support the managerial decisions or distract stakeholders' disapproval about their managerial decisions (Bebbington *et al.*, 2014).

In addition, providing assurance statements with the disclosed CSR reports is considered an important element to reduce information asymmetry and reduce the conflict of interest between the firm's management and various groups of stakeholders (Velte and Stawinoga, 2017). Kend (2015) states that the assurance statement plays an essential role in verifying the CSR report, as it is considered part of the dialogue process with various groups of stakeholders. Reducing information asymmetries and the conflict of interest is influenced by active assurance procedures which are considered as mechanisms implemented to guide the managements activities regarding their CSR issues and thus will increase the credibility of the disclosed CSR information (Velte and Stawinoga, 2017). Simnett *et al.* (2009) state that providing an assurance statement has an important effect on the corporate report's credibility from the stakeholders' perspective.

From this perspective, the assurer plays a major role as an agent for both the management and stakeholders. Therefore, the decision to purchase an assurance statement and the efficient implementation of assurance procedures are considered as major requirements to reduce the conflict of interest between the firm's management and different groups of stakeholders and reduce information asymmetry in the disclosed CSR reports (Velte and Stawinoga, 2017). Cotter and Najah (2012) provide evidence supporting stakeholder theory to explain managers' decisions; they find that institutional investors, as influential stakeholders, influence firms' corporate reporting because of their desire for high-quality corporate disclosures to reduce financial risk from environmental impacts. Likewise, other influential stakeholders, such as investors, employees, and consumers, are seen as drivers to influence decision makers to produce more credible corporate disclosure (Sawani *et al.*, 2010). Besides, Darnall *et al.* (2009) find that differences in the influences of stakeholder groups lead to significant variation in environmental assurance practice. Therefore, stakeholder theory might also explain the decision to obtain external assurance, assuming that decision makers obtain external assurance as a response to the influential stakeholders' demand.

In short, this research tries to build a novel theoretical framework to investigate the factors influencing the decision to purchase external assurance by combining the rational choice theory and stakeholder theory, which has not been attempted by prior studies. This will allow the researcher to better explain the variation in assurance practice and observe which theory might dominate.

4.3 Hypothesis development

This section builds hypotheses related to obtaining assurance decisions based on variables identified from quantitative and qualitative literature. The theoretical model makes use of two well-known theories, namely the rational choice theory and stakeholder theory. More precisely, the research model draws on three stages, the first of which is to identify the factors influencing the decision to obtain external assurance based on the rational choice theory as shown in Figure 4.1. Based on this theory, it is expected that the decision to purchase external assurance might be influenced by cost-benefit analysis, whereby decision makers are assumed to calculate the cost and benefit of assurance. Therefore, the first stage includes the determinants variables influencing the perceived benefit of assurance, such as the internal audit, assurer's independence, following globally recognised CSR reporting guidelines, and competition. Besides, the model includes the perceived benefit construct and cost of assurance construct in addition to the control variables.

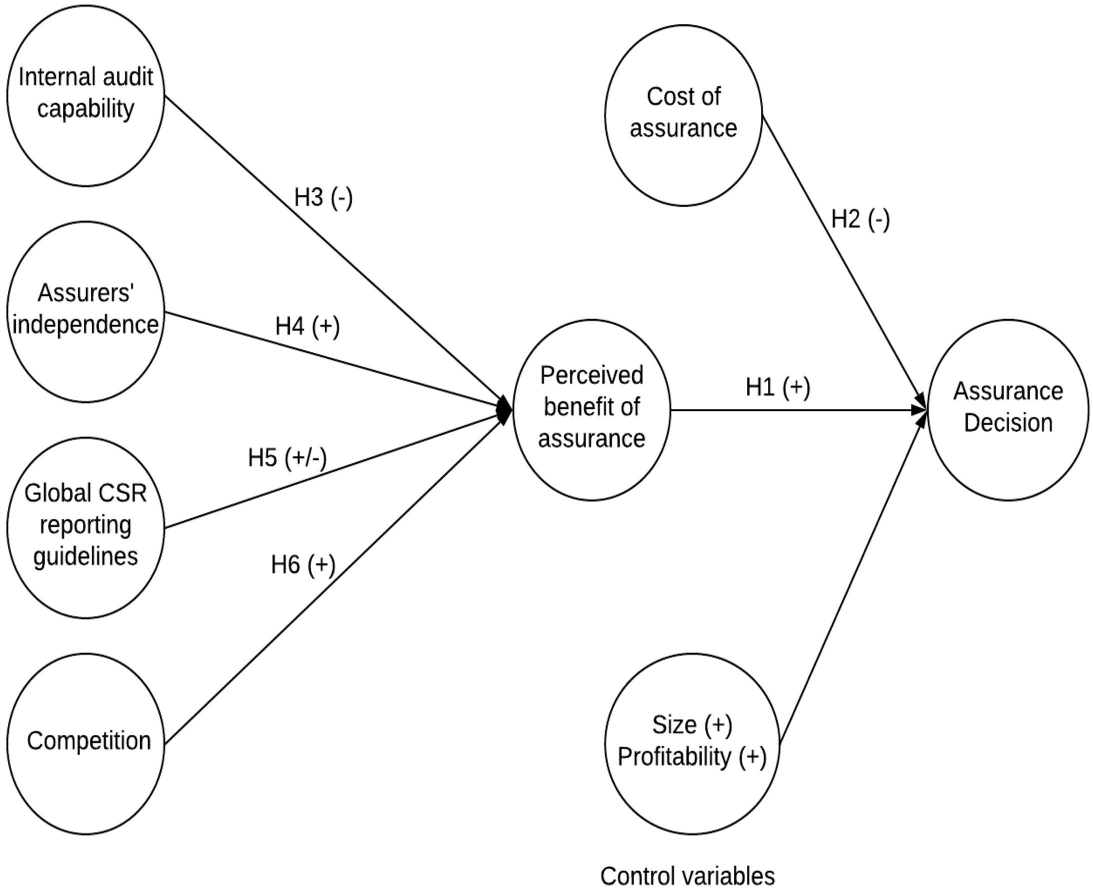

Figure 4.1. The model based on the rational choice theory "stage 1".

In the second stage, the model identifies the factors influencing the decision to obtain external assurance according to stakeholder theory. Based on this theory, it is assumed that the decision to obtain external assurance might be influenced by the demand of influential stakeholders, as can be seen in Figure 4.2. Lastly, in the final stage, the model identifies the factors impacting the decision to obtain external assurance based on the rational choice theory and stakeholder theory in combination, in order to provide insightful understanding about the role of both theories in explaining the decision to obtain external assurance and to observe which theory might dominate and explain the variation in external assurance practice, as shown in Figure 4.3.

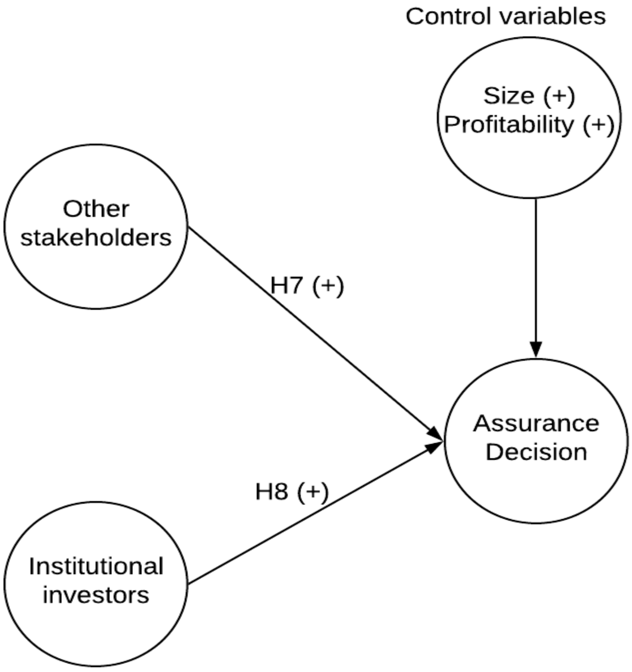

Figure 4. 2. The model based on the stakeholder theory “stage 2”.

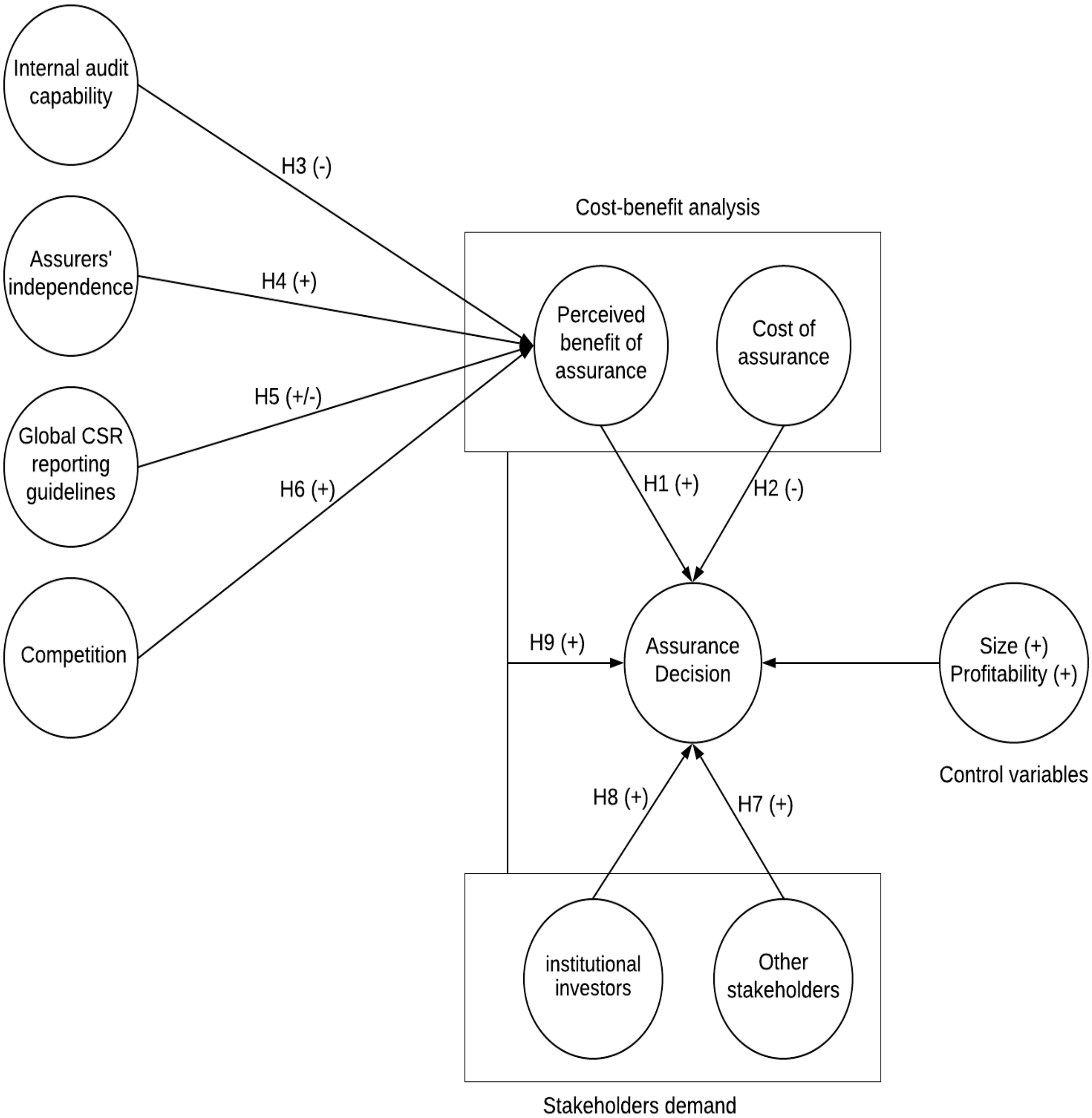

Figure 4. 3. The theoretical model based on the rational choice theory and stakeholder theory "stage 3"

4.3.1 Rational choice theory and CSR external assurance

As mentioned earlier in section (4.2.1), rational choice theory provides a universal foundation for explaining human behaviour (Leeson, 2020). The theory assumes that rational individuals are supposed to take the best possible action after considering the associated benefits and cost of any action (Scott, 2000; Leeson, 2020). Therefore, based on the underpinning with rational choice theory, this research presumes that the decision to purchase external assurance is subject to cost benefit analyses. Hence, in line with rational choice theory the following research hypotheses were developed.

4.3.1.1 The perceived benefit of external assurance

Purchasing external assurance arguably brings a number of benefits to the purchasing firms. Prior research has suggested that supplementing a CSR report with externally-obtained assurance statement is likely to enhance the credibility, transparency, reliability, and completeness of CSR-related disclosures (O'Dwyer and Owen, 2005; Simnett *et al.*, 2009; Bebbington *et al*, 2014; Cho *et al.*, 2014; Liao *et al.*, 2018; Haider and Nishitani, 2020). Sìmnett *et al.(*2009) argue that such assurance would confer greater confidence to interested users in terms of the accuracy and validity of the CSR disclosures. Moreover, firms purchase external assurance to gain internal improvements, such as enhancing their reporting system (Park and Brorson, 2005). Park and Brorson (2005) noted that most reporting firms confirm that the assurer follow-up meetings and feedback help improve firms' internal reporting system. Such improvements also included firms' adherence to various legal requirements during CSR documentation and improvement to the presentation of CSR reports (Park and Brorson, 2005).

Decision makers are more likely to engage in assurance practices based on their perception of the benefits potentially gained from external assurance (Farooq and de Villiers, 2017; Park and Brorson, 2005). The perceived benefit of external assurance from the decision makers' viewpoint is defined as the ability of an external assurer to enhance the credibility, transparency and reliability of the published CSR information as well as to provide suitable guidance to enhance firms' internal reporting system (Jones and Solomon, 2010; Park and Brorson, 2005).

Referring to CSR literature, Agudo-Valiente *et al.* (2017) argued that the perceived benefit of CSR disclosures relies on the personal values of individual managers. Agudo-Valiente *et al.* (2017) highlight that managers might support CSR disclosures as they consider their firms part of the surrounding society and should act in a more responsible way (Agudo-Valiente *et al.*, 2017). Besides, personal values could play a key role in disclosing high quality CSR information (Agudo-Valiente *et al.*, 2017). According to Hung (2011), corporate leaders who have a positive perception towards CSR tend to reflect more commitment to CSR practices in their firms.

In the same spirit, researchers argue that the perceived benefit of external assurance from decision makers' perspective is a key factor that affects the decision of purchasing assurance (Jones and Solomon, 2010; Park and Brorson, 2005). In their interview-based studies Jones and Solomon (2010) and Park and Brorson (2005) document that decision makers are more willing to engage in assurance practices if they have positive perception toward the benefit of assurance. This is in line with the rational choice theory which predicts that managers are less likely to purchase external assurance if they do not envisage the benefits which their firms could gain from such a decision. Therefore, the decision to purchase assurance is influenced by the perceived benefit of purchasing assurance. As such, this research expects a positive relationship between the perceived benefit of external assurance and the decision to purchase assurance. Accordingly, this research hypothesises that:

H1: The decision to purchase an assurance statement to verify the CSR reports is positively influenced by the perceived benefit of hiring an external assurer.

4.3.1.2 The cost of external assurance

As mentioned above, prior research assumed that obtaining assurance adds value to the reporting firms. However, obtaining external assurance obviously requires some costs to be incurred. These may include, in addition to the direct fees paid to external assurers, other costs in relation to employees/management time and other resources consumed as a result of the external auditing process (Park and Brorson, 2005; Simnett *et al.*, 2009; Jones and Solomon, 2010; Darus *et al.*, 2014; Kend, 2015; Briem and Wald, 2018; Venter and van Eck, 2020). Prior qualitative research argued that some companies did not include an assurance statement because of the very high cost of assurance (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010; Gillet, 2012; Briem and Wald, 2018; Maroun, 2019). For instance, a CSR representative in the UK construction sector stated that by adopting external assurance, the cost, scope and time of the audit would increase (Jones and Solomon, 2010). Furthermore, another CSR representative from an international firm argued that the cost of assurance would be horrendous because of the large number of business units they owned and the required time from the management to facilitate the process of assurance (Jones and Solomon, 2010). A similar argument was presented by a sustainability manager in the French context (Gillet, 2012). Interestingly, in one of the interviews undertaken by Park and Brorson (2005), an interviewee claimed that the fees for an external assurer could be ten times the entire CSR reporting budget. The above suggests that decision makers do take the cost associated with purchasing external assurance into account when making the decision whether to purchase or not.

Velte (2020) assumed that the decision to purchase external assurance is mainly influenced by financial determinants. It is also seen that the cost of assurance explains the will of firms to ignore external assurance practices (Gillet, 2012). Although the adoption of these costly assurance practices will bring external recognition to the reporting firms (Haider and Nishitani, 2020), Gillet (2012) suggested that it is very important for firms to balance the cost with the benefits of purchasing assurance. Based on the rational choice theory, rational managers (i.e. decision makers) are more likely to consider the associated cost of purchasing assurance when deciding whether to purchase. Thus, the cost of assurance is likely to affect managers' decision regarding hiring an external assurer. Therefore, this research believed that the cost of assurance would influence the decision to purchase external assurance. Accordingly, this research hypothesises that:

H2: The decision to purchase an assurance statement to verify the CSR reports is negatively influenced by the cost of assurance.

4.3.2 The determinants of the perceived benefits of external assurance

Given the importance of the perceived benefits of external assurance in the purchasing decision, as mentioned earlier, identifying the factors which may influence decision makers' perception of such benefits becomes necessary. Such factors help us better understand why some decision makers expect more (or less) benefits from external assurance than others. Based on an extensive literature review, four important factors were identified, namely, internal audit capability, external assurer independence, following global CSR reporting guidelines, and competition.

4.3.2.1 The role of internal audit capability

Internal audits, as an important element of the corporate governance system, can be implemented by firms' internal employees to enrich, among other things, CSR disclosures' reliability and credibility while also defining areas for improvement (Darnall *et al.*, 2009; Soh and Martinov-Bennie, 2015, 2018; DeSimone *et al.*, 2020). Prior qualitative studies have explicitly pointed out that managers tend to be reluctant to hire external assurers when they believe their internal audit function helps assure their firms' CSR disclosures, and thus the potential benefits of purchasing external assurance are diminished (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010).

In their interview-based study, Jones and Solomon (2010) document mixed feelings among their interviewees. More precisely, Jones and Solomon (2010) report that half of their interviewees preferred the internal audit over external audit for their CSR disclosures, suggesting that the internal audit is a sufficient measure to enhance corporate reports' credibility as compared to purchasing external assurance. Similar arguments are upheld by Park and Brorson (2005) and Sawani *et al.* (2010) who indicate that there is less value added from purchasing external assurance. Interestingly, a CSR representative stated that the internal audit for the CSR disclosure is sufficient because the firm's internal auditors will do the verification and transfer their report to the audit committee, the audit committee will review the report, and finally the shareholders will review the audit committee report, thereby ensuring corporate report quality and thus reducing the perceived benefits of purchasing external assurance (Jones and Solomon, 2010).

In contrast, another CSR representative stated that the internal audit is not enough in itself and cannot be considered a replacement for external assurance; instead, it should be considered part of the assurance process as a whole (Jones and Solomon, 2010). Also, as claimed by a CSR manager, internal auditors might play an essential role in the process of assurance. Still, they lack independence, which may affect their disclosures' quality (Darnall *et al.*, 2009; Jones and Solomon, 2010; Velte and Stawinoga, 2017). Likewise, Soh and Martinov-Bennie (2015) suggest that external assurance should be a supplement to internal auditing to verify CSR disclosure.

Based on the above, this research expected that decision makers' perspective toward internal auditors' adequateness to assure CSR reports would influence their perceived benefits of hiring external assurance. Accordingly, this research hypothesises that:

H3: The perception of the capability of internal auditors to assure CSR reports will influence the perceived benefits of external assurance (i.e. a positive perception of the capability of internal auditors will negatively influence the perceived benefits of external assurance).

4.3.2.2 The role of assurer independence

The financial scandals of recent years have led to an increase in concern regarding financial auditors' independence (Jones and Solomon, 2010; Solomon, 2021). Similarly, the assurers of CSR reports have also been subject to criticism regarding their independence (Deegan *et al.*, 2006; Jones and Solomon, 2010). Some CSR managers have shown an apparent hesitation towards hiring external assurers to verify CSR reporting due to their lack of independence. They argue that if assurers are not sufficiently independent, the potential benefits of hiring them will diminish (Park and Brorson, 2005; Jones and Solomon, 2010). Therefore, based on decision makers' perception, assurers' independence might be another contingent variable that influences the perceived benefits of external assurance and, consequently, the final decision to purchase one.

Park and Brorson (2005) state that the way financial auditors add credibility to the financial report is akin to the way in which external assurance is intended to add credibility to the CSR report. Accordingly, to provide credible and transparent CSR information, an independent verifier has to conclude the evaluation or measurement of a subject matter in order to increase stakeholders' confidence in the published CSR information (Park and Brorson, 2005; Boiral *et al.*, 2019; Pucheta-Martínez *et al.*, 2019; Boiral and Heras-Saizarbitoria, 2020). Thus, examination and evaluation of the CSR information by independent assurers enhances the potential benefits of external assurance (Park and Brorson, 2005; Darus *et al.*, 2014). Drawing on qualitative studies, a CSR manager indicated that hiring third-party independent assurers is needed to add credibility to their CSR disclosure. This argument that the CSR disclosure needs to be scrutinised by an independent verifier, thus reflects managers' positive perception towards assurers' independence and the potential benefits of external assurance (Jones and Solomon, 2010; Sawani *et al.*, 2010).

Decision makers are the ones who ultimately choose to purchase external assurance based on their evaluation of the potential benefits (Fernandez-Feijoo *et al.*, 2018). The arguments mentioned above highlight that decision makers' belief concerning the independence of assurers is considered an influential factor that would affect the perceived benefits of hiring an external assurer. Accordingly, this research hypothesises that:

H4: Decision makers' perception of the independence of external assurers will influence their perceived benefits of external assurance (i.e. a perception of external assurer's independence will positively influence the perceived benefits of external assurance).

4.3.2.3 The role of following CSR reporting guidelines

Over the past couple of decades, governmental and nongovernmental bodies have introduced several global initiatives to improve CSR reporting quality and usefulness (Helfaya and Kotb, 2016). The various global initiatives have been launched to produce suitable standards, criteria, and frameworks for CSR reporting. The most adopted framework is the Global Reporting Initiative (GRI). Following the GRI guidelines might improve firms' reputation and assure the quality and completeness of the disclosed CSR information (Park and Brorson, 2005; Boiral *et al.*, 2019; Yang *et al.*, 2019). Another interesting framework which is gaining momentum among companies is the Integrated Reporting Framework (Baboukardos *et al.*, 2021). Maroun (2018) indicates that adopting the integrated reporting framework enhances corporate reporting quality. Likewise, Graffin and Ward (2010) state that when firms adopt International Standards Organisation (ISO) guidelines, this might signal to interested users their commitment to confirming the trustworthiness of their CSR disclosure. So far, the adoption of such reporting guidelines and standards is not mandatory in most countries and relies upon the discretion of the reporting firms (Helfaya and Kotb, 2016). However, Helfaya and Kotb (2016) indicate that following global reporting guidelines enhances the trustworthiness and usefulness of the reported information in interested users' minds.

Given the potential positive influence of adopting GRI (and other international standards) on the credibility and quality of the CSR reported information, it is possible that some firms will also be encouraged to supplement this with external assurance since an external assurer is assumed to further enhance the CSR report's accuracy and transparency (Briem and Wald, 2018). In favour of this perspective, a few scholars have examined the direct impact of adopting GRI on the decision to obtain external assurance and found it to be positive (Ruhnke and Gabriel, 2013; Gillet-Monjarret, 2015; Peters and Romi, 2015; Simoni *et al.*, 2020). In contrast to the above perspective, anecdotal and case-based evidence suggests that in some companies, adopting GRI and/or other guidelines may negatively influence the perceived benefits of external assurance. For instance, Park and Brorson (2005) and Sawani *et al.* (2010) reported, through qualitative research, that some managers do not support the need for external assurance when their companies adopt GRI or other international guidelines. Such managers believe that the benefits of external assurance could alternatively be gained through the adoption of GRI or other reporting guidelines.

To summarise, some scholars expect a positive impact of adopting GRI or other international guidelines on the decision for external assurance, while others anticipate a negative one because of its negative effect on the perceived benefits of external assurance. Therefore, examining the role of adopting GRI or other international guidelines deserves further research and given the contradictory theoretical arguments, the current study proposes the following:

H5: Adopting a globally recognised reporting framework has an impact on the perceived benefits of external assurance.

4.3.2.4 The role of competition

Firms desire disclosure of CSR information as a way to gain competitive advantage through building strong relationships with stakeholders (Cao *et al.*, 2019). Cao *et al.* (2019) mentioned that peer effects are among the fundamental determinants of corporate behaviour, as firms interact every day within the same market and this affects firms' competitive actions. Competitive action is a mechanism used by firms to avoid falling behind their rivals (Smith *et al.*, 2001). These actions might include a price adjustment, introducing a new product or press statements (Zucchini *et al.*, 2019).

Likewise, firms imitate each other when introducing a new product and introducing an innovative communication tool (Redmond, 2004; Lieberman and Asaba, 2006). Imitation is a diffuse form of behaviour that occurs in several business domains (Lieberman and Asaba, 2006). Firms imitate each other to defend themselves against competitors (Lieberman and Asaba, 2006). Importantly, firms' imitation practice is the responsibility of decision makers and relies on their perception toward the benefit of taking competitive action (Lieberman and Asaba, 2006). The imitation of rivals' behaviour in adopting CSR assurance can be a technique used by managers to enhance corporate reports' credibility, which therefore enhances the perceived benefit of external assurance.

Cao et al. (2019) point out that publishing CSR information creates competitive CSR practices between rivals. In addition, Casey and Grenier (2015) suggest that firms are more willing to purchase external assurance to provide more credible information than their competitors in the same industry. Hence, this research expects that the competition between rivals might motivate managers to recognise the benefit of obtaining assurance to defend themselves against competitors. For instance, Sawani *et al.* (2010) found that decision makers were motivated to disclose CSR reports and external assurance as it became a trend, assuming that they would maintain or enhance their position vis a vis their competitors by adopting external assurance.

Further, CSR representatives believe that having this assurance will maintain their position as frontrunners in sustainability management (Park and Brorson, 2005). The above evidence reflects how competition between rivals influences decision makers' perception toward the benefits of external assurance, which in turn influences the decision to purchase external assurance. On that basis, the current study hypothesises the following:

H6: Firm competition has a positive influence on the perceived benefits of external assurance.

4.3.3 Stakeholder theory and CSR external assurance

While the decision to obtain external assurance is likely to be subject to a cost-benefit analysis and depends on the outcome of such analysis, as explained earlier, there might be situations in which firms are likely to have their social and environmental reports assured even if the costs exceed the benefits of obtaining assurance. This can be explained by stakeholder theory**.** Stakeholder theory posits that for companies to survive, they should function in their stakeholders' best interests and align their activities to suit stakeholders' expectations (Roberts, 1992; Cotter and Najah, 2012; Deegan, 2014). Simnett *et al.* (2009) indicate that supplementing a CSR report with an assurance statement has a valuable effect on the corporate report's credibility from the stakeholders' viewpoint. Zhang and Chen (2020) state that CSR performance has become an essential basis for institutional investors and other stakeholders to evaluate corporate values. Such other stakeholders include shareholders, investors, social/environmental groups, suppliers, customers, and employees which are the primary users and the target audience of CSR reports (Fernandez-Feijoo *et al*., 2018; Park and Brorson, 2005).

Companies are increasingly opting to get their CSR reports voluntarily assured in order to boost stakeholders' confidence (Hassan *et al.*, 2020). Notably, Bollas-Araya *et al.* (2019) point out that firms produce CSR information in alignment with their key stakeholders' expectations. For instance, empowered employees who can affect the firm's decision making might also influence the firm's operation regarding the environment (Daily and Huang, 2001). Likewise, empowered employees might influence the decision to obtain an environmental audit (Darnall *et al.*, 2009). Further, social and environmental groups are argued to have the ability to mobilise public opinion in support of or against the reporting firms. Therefore, managers should meet their expectations by producing credible CSR disclosure (Darnall *et al.*, 2009). Corporate customers are interested in reducing environmental liability related to product development and request their suppliers to obtain external assurance, thus ensuring their purchases are of adequate environmental quality (Darnall *et al.*, 2009).

The influence of key stakeholders has been empirically examined in prior research, though mostly in relation to CSR reporting (Prado-Lorenzo *et al.*, 2009; Gamerschlag *et al.*, 2011; Thorne *et al.*, 2014; Thijssens *et al.*, 2015; Fernandez-Feijoo *et al.*, 2018). For instance, Fernandez-Feijoo *et al*. (2018) document evidence that pressure from employees, investors, and environmental groups affects firms' CSR disclosure level. In our extensive literature review, a few studies emprically linked stakeholders' influence to CSR assurance. For instance, Fernandez-Feijoo *et al.* (2014) found that CSR reports' quality is positively associated with the pressure from different groups of stakeholders such as employees, consumers, and investors. In a later study, Fernandez-Feijoo *et al*. (2018) report a positive association between customers' pressure and CSR reports' credibility. Darnall *et al*. (2009) document evidence that the perceived influence of management, non-management employees and regulatory stakeholders is positively associated with external assurance. However, supply chain stakeholders and environmental and community groups were found to have insignificant association with external assurance (Darnall *et al.*, 2009).

Therefore, taking the existing evidence in totality, the current research expected that due to pressure from influential stakeholders, referred to as "other stakeholders", namely "shareholders, investors, social/environmental groups, suppliers, customers and employees", on firms to produce credible CSR disclosure, decision makers would be more likely to purchase external assurance of their CSR reports in order to meet their demand. Accordingly, this study hypothesised the following:

H7: The decision to purchase an external assurance statement to verify the CSR reports is positively influenced by the demand of other stakeholders.

While H7 predicts an impact of other stakeholders on the decision to obtain external assurance, such a finding would not indicate whether different stakeholder groups such as institutional investors due to their monitoring role and the high pressure they face to incorporate social performance in their investment decisions have a stronger/weaker impact than the others (Wong and Millington, 2014). Darnall *et al.* (2009) find that differences in the influence of stakeholder groups lead to significant variation in environmental assurance in practice. From a practical perspective, firms might not be able to meet the demands of all stakeholders equally, but rather, they must be more prepared to meet the demands of the powerful stakeholders (Deegan, 2014). Disclosing CSR information accompanied by external assurance is considered a management tool to influence and respond to demands from powerful stakeholders to support the managerial decisions or distract stakeholders' disapproval about their managerial decisions (Park and Brorson, 2005; Bebbington *et al.*, 2014; Deegan, 2014). Prior research, while limited in quantity, does suggest that one group (i.e. instituional investors) in particular may have a stronger impact on the decision to obtain assurance than the other groups (Atkins and Maroun, 2015).

Institutional investors represent a powerful and legitimate stakeholder group for firms in which they own a large percentage of equities; they play a major role in corporate governance, and they affect firms' behaviour and their public disclosures (Atkins and Maroun, 2015; Cotter and Najah, 2012; García-Meca and Pucheta-Martínez, 2018; García-Sánchez, 2020; Mallin, 2019). In addition, unlike other stakeholders, institutional investors face greater pressure for their investment decisions to encompass environmental and social performance (Ackers, 2009; Wong and Millington, 2014). Prior studies contended that institutional investors in particular significantly influence firms' decision-making process due to their incentive to exercise closer oversight and control over the management (Ingley and Van Der Walt, 2004). This implies that if institutional investors demand managers to supply external assurance, such managers are more likely to purchase one (Cotter and Najah, 2012; Peters and Romi, 2015).

The above argument is also in line with a branch of the stakeholder theory which suggests that firms seek to meet the demands and expectations of powerful stakeholders (e.g. institutional investors) (Cotter and Najah, 2012). Cotter and Najah (2012) find that institutional investors, as influential stakeholders, influence firms’ corporate reporting because of their desire for high-quality corporate disclosure to reduce financial risk from environmental impacts. García-Sánchez *et al.* (2020) argue that the apparent demand for CSR reporting can be attributed to institutional investors' interest, suggesting that firms produce CSR information to be considered a valid investment option by institutional investors. In addition, Atkins and Maroun (2015) indicate that institutional investors are the primary users of integrated reports and they require external assurance to enhance the quality of integrated reporting. Besides, Peters and Romi (2015) document that firms are more likely to obtain assurance as a response to the growing demand for credible CSR disclosure by institutional investors. Further, Miras-Rodríguez and Di Pietra (2018) report that firms owned by reference shareholders are more likely to supply CSR assurance due to the influential role of reference shareholders in appointing the board of directors and their long-term view of the firm.

Therefore, we expected that due to institutional investors' unique and legitimate power to influence and engage corporate management, the demand of institutional investors might have a stronger influence on decision makers' decision to purchase assurance. Accordingly, we proposed the following:

H8: The demand of institutional investors for external CSR assurance has a stronger positive impact (compared to other stakeholder groups) on the decision to purchase an assurance statement to verify the CSR reports.

4.3.4 Stakeholder theory, rational choice theory and CSR external assurance

The rational perspective suggests that the decision to obtain external assurance is based on the cost-benefit analysis outcome, while the stakeholder perspective suggests that the decision to purchase external assurance is influenced by the demand of influential stakeholders. However, while it is perhaps theoretically clear what decision decision makers would take if the cost-benefit analysis were to encourage them to obtain external assurance and influential stakeholders were also to demand it, it is unclear what would happen were the two theories to generate contradictory forces. That is, what will happen when decision makers believe that external assurance is not worth the effort and cost but an influential stakeholder requests one? Drawing on the qualitative stream of literature, some CSR representatives had a negative perception of the benefits of external assurance, but they still purchased one (Jones and Solomon, 2010). This contradiction between the perceived benefits and the final decision to purchase assurance might be attributed to the existence of a powerful group of stakeholders who require CSR assurance to enhance reports' credibility and transparency. Notably, prior studies suggested that powerful stakeholders, and in particular institutional investors, significantly influence firms' decision-making process (Daily snd Huang, 2001; Ingley and Van Der Walt, 2004). This implies that if powerful stakeholders demand that managers supplement a CSR report with external assurance, such managers are more likely to do so regardless of the outcome of their cost-benefit analysis ((Darnall *et al*., 2009; Cotter and Najah, 2012; Peters and Romi, 2015).

While some prior scholars expected institutional investors to affect the decision to obtain assurance, that does not necessarily mean all institutional investors in all companies demand external assurance. For instance, Clarkson *et al.* (2019) reported a negative association between the percentage of institutional investors and the decision to obtain assurance. However, when institutional investors demand external assurance, managers will respond to their demand regardless of their cost-benefit analysis outcome. Interestingly, Cotter and Najah (2012) reported empirical evidence supporting institutional investors' influential role in driving corporate action.

H9: The demand of influential stakeholders for external assurance is likely to negate the effect of the cost-benefit analysis outcome on the decision to obtain external assurance.

4.3.5 Control variables

4.3.5.1 Firm size

Firm size has been considered as an important contextual factor that influences the decision to purchase assurance. Prior quantitative studies have investigated the association between firm size and the decision of adopting assurance practices for several reasons (Sìmnett *et al.*, 2009; Kolk and Perego, 2010; Sierra *et al.*, 2013; Branco *et al.*, 2014; Cho *et al.*, 2014; Martinez-Ferrero *et al.*, 2017; Liao *et al.*, 2018; Clarkson *et al.*, 2019; Maroun and Prinsloo, 2020; Baboukardos *et al.*, 2021). As stated by Simnett *et al.*, (2009) and Casey and Grenier (2015), large firms have higher visibility, and are more likely to verify their CSR reports as a response to the high public pressure and criticism they might face. Besides, large firms undertake more activities that influence the surrounding society and environment, and therefore these firms are more accountable to interested stakeholders (Sierra *et al.*, 2013).

Moreover, Branco *et al.* (2014) and Kuzey and Uyar (2017) state that larger firms are subject to greater public scrutiny in comparison with smaller firms, and that encourages them to engage in CSR reporting to cover the risk associated with their negative CSR practices. As a consequence, large firms’ CSR disclosures are more likely to be verified by an external assurer to legitimise their operations. In addition, Wickert *et al.* (2016) assumed that information asymmetry occurs when information is transmitted across successive hierarchical levels, which is more prevalent in larger firms than smaller firms. Hence, larger firms are more likely to compensate for the asymmetric information through hiring external assurers. Meanwhile, Aragón-Correa *et al.* (2020) report that small firms are unwilling to adopt voluntary practices because of their limited resources.

Given the theoretical stance of the relationship of firm's size with the decision to purchase external assurance, empirical studies reported mixed results. Whilst Simnett *et al.* (2009), Sierra *et al.* (2013) and Casey and Grenier (2015) found a positive relationship between firm size and the decision of purchasing assurance, Sethi *et al.*, (2017) and Liao *et al.*, (2018) documented no relationship, and Kuzey and Uyar (2017) identified a negative relationship. Kolk and Perego (2010) also found no association between firm size and the decision of purchasing assurance, which might be related to the composition of the investigated sample (the largest firms in the world).

Therefore, the association between firm size and the decision to obtain external assurance is still arguable based on the reported mixed results. Hence, the current study will control for the potential effect of firm size.

4.3.5.2 Firm profitability

The association between a firm's profitability and the decision of adopting assurance practices has been studied by prior quantitative research (Baboukardos *et al*., 2021; Kuzey and Uyar, 2017; Liao *et al*., 2018; Sethi *et al.*, 2017; Simnett *et al*., 2009). Maroun and Prinsloo (2020) state that large and profitable firms with essential expertise might be capable of developing and maintaining a set of systems to direct and support the formal assurance of CSR and integrated reports. In addition, Kuzey and Uyar (2017) argue that to sustain their economic performance, firms are likely to respond to the public interest by disclosing verified CSR information.

Branco *et al.* (2014) and Casey and Grenier (2015) state that profitable firms are subject to high public scrutiny. This public scrutiny will encourage them to engage in more sustainable activities and disclose more verified information to legitimise their operations. In the same vein, based on stakeholder theory, more profitable firms have high pressure from stakeholders, which encourages them to engage in assurance practices to satisfy the powerful demands of the interested stakeholders (Kend, 2015). In a similar manner, studies of CSR disclosure show a positive relationship between firms' CSR reporting and profitability, arguing that management have the freedom and flexibility to disclose extensive CSR information to interested users to prove their contribution to society's wellbeing and therefore legitimise their existence (Haniffa and Cooke, 2005; Roberts, 1992).

According to Kend (2015), profitable firms are more willing to verify their CSR reports. Likewise, Al-Shaer and Zaman (2018) and Liao *et al.* (2018) find that profitable firms are more likely to assure their CSR disclosures. However, Sethi *et al.* (2017) find that profitable firms are less likely to assure their CSR reports. Meanwhile, Simnett *et al.* (2009) and Sierra *et al.* (2013) find no conclusive link between firms' profitability and the decision to purchase assurance. Therefore, based on the reported mixed results, this research will control for the potential effect of firms' profitability.

4.4 Chapter summary

In the previous chapter, the limitations of prior studies were highlighted. This chapter covers the proposed theories to explain the associations among the research constructs in order to overcome the identified limitations in the existing literature. The theoretical model was drawn from and guided by the rational choice theory and stakeholder theory which were overlooked by prior studies. Consequently, nine hypotheses have been developed. First, six factors were proposed to explain obtaining assurance based on the rational choice theory; these include two factors affecting the decision to obtain external assurance directly: the perceived benefit and cost factors. In addition, four factors were proposed as influencing the perceived benefit of external assurance, namely the internal audit, assurer's independence, following global reporting guidelines, and competition, which consequently will affect the assurance decision. Second, institutional shareholders and other primary stakeholders were put forward as factors to explain the decision to obtain external assurance based on stakeholder theory. Third, one hypothesis was formulated to explain the combined impact of rational choice theory and stakeholder theory and to observe which theory might dominate. Finally, the generated hypotheses summarised in Table 4.1 will serve as the basis for the empirical testing in chapter five.

Table 4.1: Summary of the research hypotheses

No.	Hypothesis	Expected results
H1:	The decision to purchase an assurance statement to verify the CSR reports is positively influenced by the perceived benefit of hiring an external assurer.	(+)
H2:	The decision to purchase an assurance statement to verify the CSR reports is negatively influenced by the cost of assurance.	(-)
H3:	The perception of the capability of internal auditors to assure CSR reports will influence the perceived benefits of external assurance (i.e. a positive perception of the capability of internal auditors will negatively influence the perceived benefits of external assurance).	(-)
H4:	Decision makers' perception of the independence of external assurers will influence their perceived benefits of external assurance (i.e. a perception of external assurer's independence will positively influence the perceived benefits of external assurance).	(+)
H5:	Adopting a globally recognized reporting framework has an impact on the perceived benefits of external assurance.	(+/-)
H6:	Firm competition has a positive influence on the perceived benefits of external assurance.	(+)
H7:	The decision to purchase an external assurance statement to verify the CSR reports is positively influenced by the demand of influential stakeholders.	(+)

H8:	The demand of institutional investors for external CSR assurance has a stronger positive impact (compared to other influential stakeholder groups) on the decision to purchase an assurance statement to verify the CSR reports.	(yes)
H9:	The demand of influential stakeholders for external assurance is likely to negate the effect of the cost-benefit analysis outcome on the decision to obtain external assurance.	(yes)

Chapter Five: Research Methodology

5.1 Introduction

The aim of this research is to investigate the importance of the emergent assurance market and the factors associated with the decision of purchasing assurance in the United Kingdom context. The previous chapter presented the conceptual framework and the grounds for developing the research hypothesis. The current chapter sets the basis for the empirical analysis and outlines the research's philosophical position and the employed method to interpret the research data. The underpinning philosophical research assumptions assist in identifying the suitable methods to employ in a given research (Moon and Blackman, 2014). Employing a suitable methodology helps to explore the research phenomena and generate robust evidence that provides convincing answers to the research inquiry (Bryman, 2015).

Saunders *et al.* (2019, p.4) define methodology as *"a theory of how research should be undertaken*". Research methodology helps in acquiring knowledge by identifying the procedures or the employed method according to a discipline (Frankfort-Nachmias *et al.*, 2015). Furthermore, Frankfort-Nachmias and Nachmias (1996) indicate that to conduct a research study, a logical, scientific and systematic approach must be implemented. Accordingly, this chapter contains 10 sections: Section 5.2 represents a review of the research design and paradigms. Sections 5.3 and 5.4 outline the research approaches and strategies. Sections 5.5 and 5.6 address the data collection methods used to gather the required data and the identified population from which to collect the research data necessary to examine the developed hypotheses. Moreover, section 5.7 explains the process of developing the questionnaire instrument along with the ethical considerations, pilot testing, and the administration process with descriptive statistics and non-response bias. The following section determines the variables measures and scales used in the study along with the common method bias. Next, section 5.9 discusses the adopted statistical technique in detail. Finally, the last section provides a summary of the chapter.

5.2 Research design

Saunders *et al.* (2019) refer to research design as "*the general plan of how you will go about answering your research question(s)"* and it is an essential component of every research study. It involves specifying the intended sources to collect data, methods and analysis, as well as discussing the ethical issues and constraints in conducting research (Saunders *et al.*, 2019). The adopted methods to collect and analyse research data are mainly determined by the employed methodological approach. In addition, the utilised methodology depends on the research paradigm of the study. Therefore, it is crucial for the researcher to decide on an appropriate research paradigm, taking into consideration the coherence of the methodology and methods of the chosen paradigm.

5.2.1 Research paradigms

The research paradigm is regarded as the framework that governs how research should be conducted according to the researcher's philosophical view and assumptions about the world and the nature of knowledge (Collis and Hussey, 2013). Researchers' belief about the world and the nature of knowledge relies on two different paradigms, namely positivism and interpretivism (Collis and Hussey, 2013; Bryman, 2015). The former rests on the assumption that social reality is objective while the latter rests on the assumption that social reality is subjective (Collis and Hussey, 2013). Selection of a positivist or interpretivist paradigm influences the researcher's choice of the appropriate research approach and methods to achieve the aim of the study (Collis and Hussey, 2013). Table 5.1 shows a summary of the assumptions of the positivist and interpretivist paradigms as presented in Collis and Hussey (2013, P.46), whereas Table 5.2 explains the features of these two paradigms as presented in Collis and Hussey (2013, P.50).

Table 5. 1: Summary of the assumptions of the two main paradigms

Philosophical Assumption	Positivism	Interpretivism
Ontological Assumption (The nature of reality)	Social reality is external to the researcher and objective. There is only one reality.	Social reality is socially constructed and subjective. There are multiple realities.
Epistemological Assumption (What constitutes valid knowledge)	Knowledge derived from objective evidence about measurable and observable phenomena. The researcher is separate from phenomena under study.	Knowledge derived from subjective evidence from research participants. The researcher interrelates with phenomena under study.
Axiological Assumption (The role of values)	The researcher is autonomous from phenomena under investigation. The results are value-free and unbiased.	The researcher acknowledges the subjectivity of the research. The findings are value-laden and biased.
Rhetorical Assumption (The language of research)	The researcher uses accepted quantitative words, passive voice and set definitions.	The researcher uses accepted qualitative terms, personal voice, and limited a priori definitions.
Methodological Assumption (The process of research)	The researcher follows a deductive approach. The researcher utilises a static design where categories are identified in advance, and studies cause and effect, Generalisations result in prediction, explanation and understanding. Results are reliable and accurate through reliability and validity.	The researcher follows an inductive approach. The researcher utilises an emerging design where categories are identified during the process and studies the topic within its context and Theories and/or Patterns are developed for understanding. Findings are reliable and accurate through verification.

Source: adapted from Collis and Hussey (2013, P. 46)

Table 5. 2: Features of the two main paradigms

Positivism tends to:	Interpretivism tends to:
• Select large samples • Have an artificial location • Focus on hypothesis testing • Produce objective, precise, quantitative data • Generate results with high reliability but low validity • Generalise results from the sample to the population	• Select small samples • Have a natural location • Focus on generating theories • Produce subjective, 'rich', qualitative data • Generate findings with low reliability but high validity • Generalise findings from one setting to another, similar setting

Source: Adapted from Collis and Hussey (2013, P. 50)

5.2.1.1 Positivism

Bryman (2015, P.25) defines "*positivism as an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond*". The Positivist paradigm assumes that reality is independent of us, and based on observations and experiments, researchers can achieve the goal of discovering theories (Collis and Hussey, 2013). Positivism may be taken to entail that knowledge is the facts that are collected to provide the basis for laws and confirmed by senses (Bryman, 2015). The purpose of theory is to produce a testable hypothesis that permits the explanations of laws to be reviewed (Bryman, 2015). Collis and Hussey (2013) indicate that knowledge derives from positive information since positive information can be scientifically proven. Under positivism, researchers focus on theories to provide the basis of explaining and predicting the occurrence of a social phenomenon and therefore allow them to control it (Collis and Hussey, 2013). Positivism involves elements of both deductive and inductive strategies (Bryman, 2015). However, under positivism, researchers rely on quantitative words and methods and take a deductive approach instead of the inductive approach (Collis and Hussey, 2013). The deductive approach is appropriate in a well-structured environment, where researchers aim to empirically test theoretical models (Smith, 2012). Smith (2012) states that the positivist paradigm is the most prominent in accounting literature.

5.2.1.2 Interpretivism

The term interpretivism is accorded to a contrasting epistemology to positivism, and it emerged in response to criticisms of positivism (Collis and Hussey, 2013; Bryman, 2015). Supporters of interpretivism admit the variation between natural and social sciences subjects where studying these sciences entails the reliance on distinct research logics to reflect these variances (Collis and Hussey, 2013; Bryman, 2015). Unlike positivism, interpretivism is based on the assumption that social reality is subjective in that it is shaped by our perception and exists within us and therefore an investigation of that social reality effect it (Collis and Hussey, 2013). The interpretivist paradigm concentrates on discovering the complexity of social phenomena, aiming to gain interpretive understanding (Collis and Hussey, 2013). Therefore, interpretivists adopt various methods to describe and translate natural phenomena in the social world (Collis and Hussey, 2013). The interpretive research findings derive from qualitative research data analysis instead of quantitative data (Collis and Hussey, 2013).

5.2.1.3 Rational for adopting the positivist paradigm

The current research proposes a theoretical model with a set of hypotheses developed by relying on prior literature. The proposed association between a set of variables presented in the current research study will be empirically examined to explain and predict the occurrence of social phenomena such as obtaining external assurance in the current research. Therefore, the positivist paradigm is considered to be more appropriate and to fit the assumptions made in the current study. First, the research assumes an ontological positivist assumption of reality, where a phenomenon like obtaining assurance exists independently and is not influenced by the researcher. Second, in accordance with the epistemological assumptions, the research is distant from the phenomena under investigation (Collis and Hussey, 2013), and the researcher does not influence the proposed associations in this study. Third, the researcher's ability to choose which research paradigm to utilise is limited by the necessity for the paradigm to fit the nature of his/her research objectives and problems (Saunders *et al.*, 2019). Accordingly, given the aim of the current study to empirically verify the proposed theoretical model and associated propositions, the positivist paradigm is deemed to be appropriate to achieve the aim of this study.

5.3 Research approach to theory development

The extent to which the research involves theory testing or theory building raises an essential question about the particular research project's design. The deductive and inductive approaches are two contrasting approaches researchers adopt based on their approach for theory testing or building (Saunders *et al.*, 2019).

5.3.1 The deductive approach

Collis and Hussey (2013, P.7) define deductive research as "*a study in which a conceptual and theoretical structure is developed and then tested by empirical observations; thus, particular instances are deduced from general inferences*". This development path explains why the deductive approach is described as going from the general to the specific (Collis and Hussey, 2013). In a similar vein, Bryman (2015) states that deductive reasoning emerges when the conclusion is attained from a theory and it is usually associated with quantitative research. The deductive approach involves six stages: first, identifying a clear theoretical position and hypothesis to explain how variables are associated, and then gathering data and the empirical testing to generate results. Next, based on the generated results, the researcher accepts or rejects the hypothesis, and the final stage involves revising the theory (Bryman, 2015). The process of the deductive approach is outlined below in Figure 5.1.

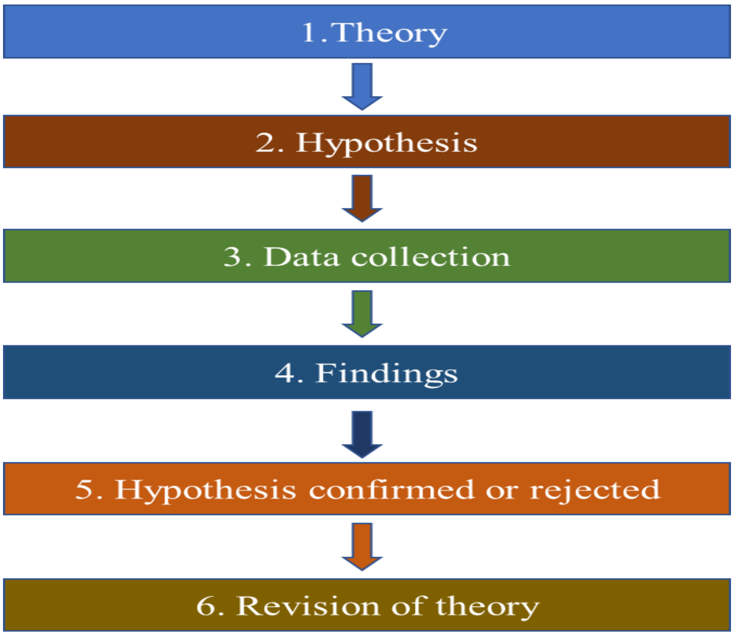

Figure 5. 1: Process of the deductive approach

Source: Bryman (2015, P.24)

5.3.2 The inductive approach

In contrast to the deductive research, Collis and Hussey (2013, P. 7) define the inductive research as "*a study in which theory is developed from the observation of empirical reality; thus, general inferences are induced from particular instances*". Therefore, the inductive approach is described as moving from the specific to the general (Collis and Hussey, 2013). More precisely, Bryman (2015) states that the inductive approach emerges when the generation of theory is attained from observations and findings and usually it is associated with qualitative research. The key differences between the deductive and inductive approaches pertaining to the association between theory and research are outlined below in figure 5.2.

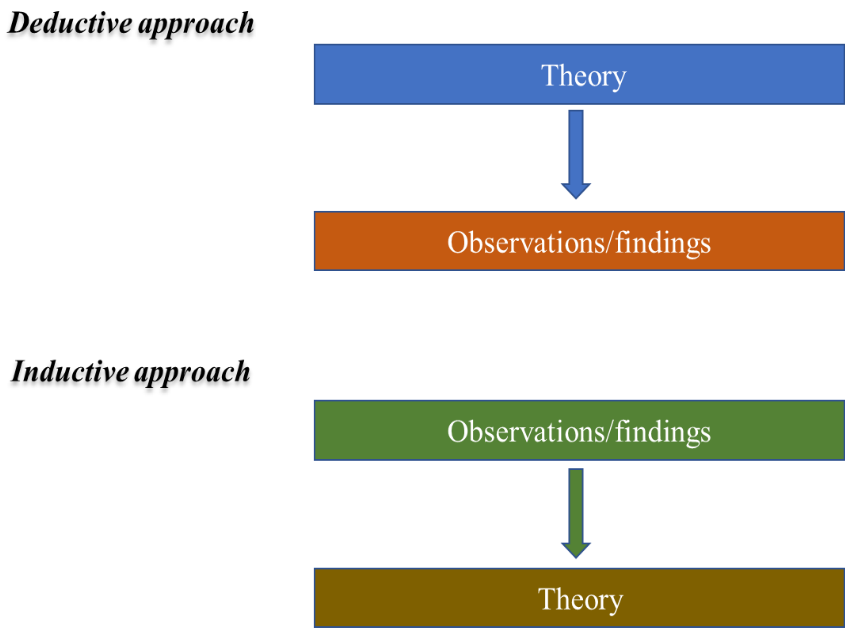

Figure 5. 2: Differences between the deductive and inductive approaches

Source: Bryman (2015, P.26)

5.3.3 Rational for adopting the deductive approach

Collis and Hussey (2013) underline the importance of using a research approach that aids in the fulfilment of the study aims and objectives. This study suggested a theoretical model with a set of propositions developed based on prior research and aimed to measure and offer empirical verification of the model's validity. Consequently, based on the aim and objectives of this study, the deductive approach is considered to be more relevant than the inductive approach, since the deductive approach emphasises testing the collected data on the specific variables that are determined by existing theory (Collis and Hussey, 2013; Bryman, 2015; Saunders *et al.*, 2019). Further, the deductive approach supports the use of a sufficient sample size to generalise the research findings. Thus, the deductive method is deemed to be more appropriate to adopt in the current research.

5.4 Research strategy

In general terms, a strategy can be defined as a plan of action for achieving particular objectives (Saunders *et al.*, 2019). In the same vein, a research strategy is defined as a plan of how a researcher is willing to answer his/her research questions (Saunders *et al.*, 2019). The research paradigm drives the way of investigating the research questions and consequently influences the research strategy (Collis and Hussey, 2013). Collis and Hussey (2013) specify four research strategies associated with the positivist paradigm, which is the adopted paradigm in this study, namely, surveys, cross-sectional studies, experimental studies and longitudinal studies.

Experimental studies are utilised to study the relationship between dependent and independent variables and can be conducted in a natural setting or a laboratory in a systematic way (Collis and Hussey, 2013; Saunders *et al.*, 2019). In this type of research strategy, the researcher has control over confounding and extraneous variables where he/she can eliminate or maintain certain variables constant to observe the association between variables (Collis and Hussey, 2013). However, experimental studies were not considered appropriate to achieve the aim of the current research since the researcher would not be able to manipulate or control the research variables of interest.

Longitudinal studies are concerned with investigating the exact variables or a group of subjects on more than one occasion and usually associated with a positivist paradigm; however, this strategy may also be used with an interpretivist paradigm (Collis and Hussey, 2013). Studying a phenomenon several times over the period allows researchers to track trends and detect any change and development over the variables of interest (Saunders *et al.*, 2019). However, longitudinal studies are assumed to be challenging to conduct over a long period, time-consuming, and expensive (Collis and Hussey, 2013; Dillman; *et al.*, 2014). In addition, obtaining data from busy individuals by asking the same questions over time is challenging, and participants' answers might be influenced by their previous survey participation (Dillman; *et al.*, 2014).

Cross-sectional experiments are concerned with examining the variables or a group of subjects at a particular time (Saunders *et al.*, 2019). Bryman (2015) indicates that cross-sectional studies are concerned with examining more than one case at a single point in time to generate quantitative or quantifiable data to detect the pattern of association between variables. Cross-sectional studies usually employ the survey strategy to collect primary or secondary data from a population or a sample to produce generalisable results in a very economical way (Collis and Hussey, 2013; Saunders *et al.*, 2019).

In the current study, adopting the cross-sectional and survey strategies together was considered to be sufficient to achieve the aim of this research for several reasons: First, the aim and the nature of the research and the use of survey strategy would allow the participation of a large number of firms. Second, the majority of prior studies relied on archival data and there is a lack of empirical evidence from survey studies in the literature (Venter and van Eck, 2020). Meanwhile, following the survey strategy would allow the researcher to collect numerical data regarding the attitudes and opinions of research participants (Creswell, 2014). Third, the response rate would be increased by asking respondents to complete the survey only one time. Fourth, generation of primary data would produce more generalisable results. Finally, the adoption of these strategies would save time and expense.

5.5 Data collection method

Based on the selection of survey research strategy, this research could utilise different methods to obtain the data needed for this study. Interviews and questionnaires are examples of such methods. Determining the sufficient method relies on the research aim and objectives and the pros and cons of each method. The current research aimed to examine a theoretical model highlighting the factors influencing the decision to obtain external assurance based on a large-scale empirical examination to produce generalisable results that would overcome prior research limitations. The data required to achieve the aim of this research would be mainly available in the minds of the targeted participants and not available from any other external sources. Therefore, interview and questionnaire would be two relevant methods to adopt in this research.

The research interview is a helpful conversation between two or more individuals where the interviewer asks pointed and detailed questions and carefully listens and records the interviewee responses to investigate points of interest, interpret and authenticate meanings (Saunders *et al.,* 2019). However, researchers have the option to utilise different forms of interview, including structured, semi-structured and unstructured interviews. The structured interview requires the interviewer to ask the interviewee pre-developed and closed questions with a fixed range of answers to ensure that the responses can be aggregated (Bryman, 2015). Researchers usually utilise structured interviews under the positivist paradigm to collect quantifiable data (Collis and Hussey, 2013; Saunders *et al.*, 2019). Therefore, the structured interview method could have been appropriate for collecting the required data for the current research. However, because this research intended to survey over a thousand companies, implementing the structured interview method would have required considerable time and financial resources. In addition, interviewing the decision makers targeted as participants might have been challenging on account of their busy schedules. In contrast to the structured interview, in semi-structured and unstructured interviews the interviewer generates the necessary data by asking open questions to participants. They are mainly used to investigate a phenomenon in depth and build theory and often employed in qualitative research (Collis and Hussey, 2013; Saunders *et al.*, 2019). Usually, researchers adopt semi-structured and unstructured interviews under the interpretivist paradigm which was not selected for this research (Collis and Hussey, 2013; Saunders *et al.*, 2019). In addition, the problem of interviewer bias can occur through the non-verbal behaviour or tone of the interviewer causing bias in the way that interviewees respond (Saunders *et al.*, 2019). Moreover, interviewing is a time-consuming process and expensive to conduct (Saunders *et al.,* 2019). Therefore, these methods would not have been convenient to adopt in the current research.

On the other hand, Collis and Hussey (2013, P. 205) define the questionnaire as a method for gathering primary data in which the researcher asks a series of precisely designed questions, chosen after extensive testing, to elicit reliable responses from a selected sample. Positivist studies usually rely on questionnaires for data collection (Bryman, 2015). There are several methods researchers can utilise to deliver and collect the questionnaire, such as telephone, face-to-face, postal and online self-completion questionnaires (Collis & Hussey, 2013; Bryman, 2015; Saunders et al., 2019).

Conducting face-to-face questionnaires requires the researcher to deliver the questionnaires at a convenient time and place for the participants (Collis and Hussey, 2013; Saunders *et al.*, 2019). Consequently, when the goal is to study a large sample size, like in the current study, this method becomes prohibitively expensive and time consuming in terms of travelling to particular locations to meet respondents (Collis and Hussey, 2013). Further, the data collection had to be conducted during the Covid-19 pandemic and lockdown, when the public were subject to a number of safety guidelines that were issued by regulatory bodies. For instance, the UK government encouraged people to work online from home to limit their person to person contact and reduce the spread of the virus. Thus, ways to distribute the questionnaire were restricted because it was not secure to meet in person. As a result, this research did not select the face-to-face questionnaires method.

The telephone method of distributing questionnaires is very useful to survey a large sample size with less cost in comparison to face to face questionnaires(Collis and Hussey, 2013). However, it introduces the issue of personal contact and therefore the generated results might be biased, in addition to the challenges researchers might face to achieve the desired number of responses (Collis and Hussey, 2013). Therefore, this method was not selected for the current research.

The postal method is the most frequently used method of distribution, since it is easy to administer, distribution requires less time and cost, and it allows the scholar to get to a large sample of participants at the same time (Collis and Hussey, 2013; Bryman, 2015). However, researchers should consider the time spent on printing, folding, inserting the contents, and preparing the envelopes to distribute the questionnaire as well as the cost of this process. In addition, the increase in numbers of people working at home during the COVID-19 pandemic, due to government restrictions on movement or at the behest of their companies, might have made such people more difficult to contact by post. Therefore, employing the postal questionnaire was not considered an appropriate method to achieve the aim of this study.

The online delivery method is widely used these days and it allows researchers to create a professional looking questionnaire and send it easily by email to the targeted participants. Hence, online questionnaires require less distribution time and cost and allow for surveying a large sample (Collis and Hussey, 2013). Although attaining sufficient responses might require some time and the results might be biased, the online method was considered the safest and the most accessible method to use during the pandemic as well as being the easiest and least expensive method to apply. Therefore, this research used the online method to distribute the questionnaires.

5.6 Population of the study

A population is the set of all entities about which the research intends to draw conclusions (Frankfort-Nachmias *et al.*, 2015). The population in this research would comprise all listed firms under the Main and Aim Market with coverage on the official website of the London Stock Exchange (LSE) website and the Financial Analysis Made Easy (FAME) database. More precisely, this research considers only UK listed firms that disclose corporate social responsibility/sustainability information to the public. According to the KPMG (2020) survey, the UK is considered a leading example in terms of high national rate of reporting corporate social responsibility/sustainability information to the public. Besides, obtaining external assurance for non-financial disclosures is not mandatory in the UK. Thus firms might voluntarily obtain external assurance to enhance the quality of their reports and increase report users' confidence in the published information (Al-Shaer and Zaman, 2019). Therefore, The UK Market was considered an ideal context in which to achieve the aim of the current research.

In order to generalise the concluded findings of this research, having a large-scale sample was essential to eliminate sample error. In addition, Saunders *et al.* (2019) indicate that it is possible to collect data from a manageable population to answer research questions. However, when it is impractical to survey the entire population or when there are budget or time constraints to collect the data from the whole population, the researcher would need to collect data from a representative sample (Saunders *et al.*, 2019). The current research population is not very large in size and manageable to survey; therefore, it was possible to use the whole population, and there was no need to decide on a representative sample.

The reason for limiting the population of the current research to listed firms was the high regulations imposed on listing firms. For instance, all listed firms in the UK are following the UK corporate governance system (Madhani, 2016). Moreover, it would negate any bias in the data relating to reporting variations between listed firms and private firms (Haddock-Fraser and Fraser, 2008). To some extent, listed firms have met specific standards before they are listed on the LSE (Madhani, 2016). In addition, small and medium-sized enterprises (SMEs) are less likely to have the resources or desire to publish non-financial disclosures. They therefore may not have been able to supply this research with relevant data (Cheffi *et al.*, 2021). The official websites of all target firms have been attained using the FAME database. As of the time of data collection, there were 1998 firms listed in the LSE, of which 1056 companies disclosed corporate social responsibility/sustainability information.

5.7 Questionnaire development

Generating reliable and valid information with a satisfactory response rate requires taking excellent care over designing the questionnaire instrument (Collis and Hussey, 2013). In most cases, the questionnaire offers one chance to collect the data, and usually it is not applicable to return to collect additional information from respondents. Thus, appropriate design of the questionnaire instrument is crucial (Saunders *et al.*, 2019). There are vital suggestions for creating a more ergonomic survey that allows for improving questionnaire response rate as well as valid and reliable data (Bryman, 2015). Key recommendations include writing a cover letter explaining the research’s aims and importance to targeted respondents, providing clear instructions for answering the questions with an attractive layout, and designing a shorter questionnaire (Bryman, 2015).

Consequently, in light of the above recommendations, special attention has been paid to the questionnaire design process in this study in order to produce a user-friendly questionnaire, while at the same time allowing for the collection of sufficient, reliable, and valid data for performing a robust empirical analysis. The questionnaire final version includes five parts and 18 questions spread across seven A4 pages. Thus, the length of the questionnaire in this research is within the acceptable length of 6-8 A4 pages as recommended by Saunders *et al.* (2019). Section A of the questionnaire contains eight questions focusing on firms’ specific characteristics. Sections B and C have 1 and 2 questions, respectively, focusing on the outcome of the external assurance decision and the external pressure faced by decision makers to obtain assurance practices. Section D focuses on the factors influencing the importance of external assurance. Finally, section F includes some demographic information. Appendix 1 presents the full and final version of the questionnaire.

5.7.1 Questions type and format

In self-administered questionnaires, questions might be either open-ended or closed-ended questions. However, researchers recommend using closed-ended questions in positivistic studies (Collis and Hussey, 2013; Bryman, 2015). Saunders *et al.(*2019) indicate that using closed questions allows respondents to choose an answer from alternative answers and requires minimal writing from respondents, making the instrument more straightforward and quicker to answer. Accordingly, most of the questions in the questionnaire were closed-ended questions to increase the response rate given the questionnaire's length. There are different types of closed questions, such as list questions, where respondents can choose any items from a list (Saunders *et al.*, 2019). In addition, there are category questions, where respondents can choose one response from a set of categories, and rating questions (i.e. Likert-style rating) where respondents' answers can range from strongly agree to disagree with a specific statement (Saunders *et al.*, 2019). In this study, the questionnaire instrument used the rating type of questions primarily, based on the most commonly used seven-point rating scale, in addition to some list and categorical kinds of questions. Besides, one open-ended question was included at the end of the questionnaire to allow respondents to provide additional comments if they so wished.

5.7.2 Constructing the questionnaire

Constructing the questionnaire requires careful consideration of the questionnaire layout and flow of questions to improve response rate and avoid response errors (Bryman, 2015; Saunders *et al.*, 2019). In order to produce a professional-looking questionnaire, this research uses the Qualtrics software, which contains beneficial features to enhance the layout of the questionnaire. Such features include a series of templates, colours, fonts, and page layout, as well as filter questions that allow respondents to skip inapplicable questions automatically without displaying them on the screen. In addition, using Qualtrics software enhances the questionnaire layout by employing the matrix style of rating questions to save spaces as recommended by Saunders *et al.* (2019). Furthermore, considering the importance of the questions' order and flow, the questionnaire began by asking the most interesting questions and following a logical sequence to attract respondents to fill out the questionnaire, as suggested by prior research (Bryman, 2015; Saunders *et al.*, 2019). Further, a trackable link was generated for each questionnaire to facilitate follow up reminders and to keep a clear record of the received responses and the accompanying secondary data extracted from the FAME database.

5.7.3 Covering letter

Accompanying the self-completed questionnaire with a cover letter is vital since it conveys useful information to respondents, such as the purpose of the research, and the importance of respondents' participation to achieve the research objectives (Saunders *et al.*, 2019). Researchers presume that the first part of the questionnaire that respondents should look at is an exciting cover letter (Frankfort-Nachmias *et al.*, 2015; Saunders *et al.*, 2019). Therefore, the current research devoted a substantial amount of attention to producing a cover letter that would succeed in convincing respondents to complete the questionnaire and thereby increase the response rate. The letter content included a clear title, name of the researcher and identified that the research is hosted by the Sheffield University Management School. In addition, sufficient information to explain the purpose of the research in addition to the respondent's contribution and impact of his/her participation was clearly presented along with some instructions for answering the questionnaire. The confidentiality of their participation was clearly assured, and the contact details of the researcher, the supervisory team and the ethics administrator were provided in case they required any further clarification. Furthermore, respondents were given a promise that they would be sent a summary of the main findings if they so wished, along with a thank you statement. Appendix 2 presents a copy of the cover letter.

5.7.4 Ethical Considerations

Ethical considerations are essential in conducting a research project, especially to avoid ethical concerns arising while dealing with human participants (Saunders *et al.*, 2019). To ensure that data collection is conducted in an ethical way, respondents of this research were made aware of the nature of this study and that participation was entirely voluntary, and their personal information as well as that of their organisations would be kept confidential and would only be used at an aggregate level, to ensure anonymity. In addition, there were no questions in any section of the questionnaire that requested respondents' personal information. The questionnaire allowed interested respondents to provide their email address (optional) if they wished to receive the research findings.

This research is hosted by the University of Sheffield, and to mitigate unethical research conduct, the University of Sheffield enforce researchers to submit an ethics form to the ethics committee appointed by the university, and researchers cannot collect the primary data before obtaining approval from the ethics committee reviewers. The form outlines the research summary, the potential participants, and the strategy for storing the data, as well as the information and consent sheets. Therefore, after careful consideration to ensure that this research adhered to the required ethical practices, this research project was approved by the University of Sheffield Management School Research Ethics Committee. Then, the research instrument was ready to be distributed.

5.7.5 The pilot questionnaire

Pre-testing a questionnaire instrument is always desirable to confirm that the questionnaire questions operate well along with the entire research instrument functions, especially since self-administered questionnaires are usually sent out in large numbers and collected only once from participants (Bryman, 2015; Saunders *et al.*, 2019). Pre-testing a questionnaire with an expert helps identify poorly worded instructions, highlights readability problems, and provides suggestions on modifying or improving the content and flow of questions (Bryman, 2015; Saunders *et al.*, 2019). The questionnaire of this study was sent out to 20 professional and academic experts in the area of corporate social responsibility/ sustainability assurance, and ten complete responses were returned. The participants in the pilot study were all requested to comment, suggest, and provide constructive feedback on the quality and suitability of the questionnaire instrument. Participants in this pilot research provided valuable comments and feedback. Participants' feedback included ideas to change the wording of some items to improve the clarity of items being measured and to move several items to improve the questionnaire's style and flow, making it easier to complete. In addition, the questionnaire was well-understood by the participants. After careful consideration of all comments and feedback, the questionnaire instrument was amended accordingly, resulting in the final form of questionnaire as displayed in Appendix 1.

5.7.6 Administration of the Questionnaire

After revising the questionnaire instrument relying on the valuable comments obtained from the experts during the pilot research, the questionnaire instrument was ready to be distributed to the selected population. Getting access to participants and identifying the appropriate way to manage and distribute the questionnaire is very important to increase the response rate (Saunders *et al.*, 2019). Remarkably, the questionnaire for this study was ready to distribute at time of the Covid-19 pandemic onset, when the UK government encouraged employees to work online from home. Therefore, as explained in section 5.5, online distribution was selected as the safest form of delivery. In addition, online surveys, according to Dillman *et al.(* 2014) and Frankfort-Nachmias *et al.* (2015), provide a better response rate, are easier and faster to manage and can be conducted at a low price.

For this purpose, a final version of the survey questionnaire was designed, and trackable web links were generated using Qualtrics survey software[3]. The contact details of respondents were generated from their company's official website (if applicable), otherwise an email was sent to the company as a general enquiry form to request the participation of a suitable person in their company. The participants were notified of the online questionnaire through the researcher's official university email address. The email contained a customised message for each company, including the company, name of respondent (if applicable), and a trackable hyperlink to make sure that the email was received and filled in by the targeted participants and to enhance the response rate by ensuring that the questionnaire was not sent randomly to them. Respondents had to click on the provided hyperlink, which automatically relocated them to the questionnaire. In addition, the customised message included information about the purpose of the research, confidentiality, and a clear promise to share a summary of the result if requested. The questionnaire was addressed personally to decision makers, including the CEO, managing director, corporate social responsibility, and sustainability manager when possible since those people would be more capable of offering valid answers to the questionnaire's questions. Otherwise, if respondents felt that sharing the questionnaire with other qualified people in their company would improve the quality and validity of the data, they were encouraged to share the questionnaire with them.

Initially, 1056 customised messages were prepared to target the identified 1056 companies that publicly disclose CSR/sustainability information. Data collection started on 24th April 2020 and the last reminder was sent on 8th December 2020. The long period of data collection was justified because of the effect of the COVID-19 pandemic. Some respondents refused to participate at the time of sending the questionnaire due to the unexpected impact on their workload during the pandemic. Therefore, 5 reminders were sent to increase the response rate. During the process of sending the questionnaires, 61 emails failed to be delivered to the targeted

[3] Qualtrics survey software is a tool used to design, send and analyse surveys online. It is the primary method of collecting feedback at scale, whether through a simple questionnaire or a detailed study of such as customer or employee feedback as part of a more structured experience management program. Accessed through http://www.qualtrics.com.

recipient and 237 responses were received from the 1056 targeted companies, giving a 22.4% response rate. More precisely, at the initial stage few responses were received (44 responses), but the first and second reminders attracted more responses, 53 and 52 respectively. The third reminder attracted 43 responses which was very similar to the first stage. The fourth and fifth reminders brought in 25 and 20 responses, respectively. Out of the 237 received responses, 132 returned responses were recorded, and 105 potential respondents declined to participate for the reasons presented in Table 5.3. The most frequent reason for not participating was: "unable to assist at this time (61 participants)". In addition, some participants declined to participate due to company policy (10 companies), inability to do so due to the pressures of COVID-19 (9 respondents), high demand for participation in research studies (8 respondents), not applicable (7 companies), certain constraints (7 companies), while three companies refused to participate because they were not listed anymore.

Of the 132 recorded questionnaires on Qualtrics, 17 were empty responses, and 10 were partially completed responses and not usable due to the high amount of missing values, leaving 105 valid and usable responses for the analysis. The low response rate might be attributed to the impact of the COVID-19 on firms' operations, and the targeted respondents being busy individuals, in addition to the length of the questionnaire. However, the response rate in this study is still comparable with other studies in the field. For example, the response rates for Darnall *et al.* (2009) and Darus *et al.* (2014) were 24.7% and 22.8% respectively. Respondents' average years of experience in their current post were 6 years, and in general, 18 years. This provided preliminary proof of the credibility of the data gathered in this research (Hadid, 2014).

Table 5. 3: Non-participation reasons

Reason	Total
Unable to assist at this time	61
Company policy	10
Unable due to the pressures of COVID-19	9
High demand for participation in research studies	8
Not applicable	7
Certain constraints	7
Not listed anymore	3
Total	105

5.7.7 Non-response bias

To generalise the findings of the questionnaire analysis, researchers need to keep in mind the problem of non-response bias since questionnaire respondents might not be representative of the target population. Therefore, non-response analysis helps researchers clarify and ensure extending the findings obtained from participants to the population (Werner *et al.*, 2007; Bryman, 2015; Walters, 2021). Non-response bias might emerge if some members of the targeted sample decline to participate, cannot be reached, or if individuals represented by the sample data are systemically different from those who complete the questionnaire (Collis and Hussey, 2013; Walters, 2021).

The literature of non-response bias proposed several methods for estimating non-response bias (Armstrong and Overton, 1977; Werner *et al.,* 2007). For instance, estimation of non-response bias can be attained by comparing the findings of the questionnaire responses with known values of the population, such as age and income, and the appearance of significant differences between the compared values reveals response bias (Armstrong and Overton, 1977). In addition, the wave method is another proposed method for testing non-response bias. The wave method assumes responses generated after a follow-up reminder to be similar to nonrespondents' (Armstrong and Overton, 1977; Werner *et al.*, 2007). Therefore, testing non-response bias entails evaluating the data provided by early respondents with the data supplied by late respondents, and any significant difference between the two groups of data would indicate non-response bias (Armstrong and Overton, 1977). The wave method is commonly employed in the literature of accounting and corporate social responsibility (Darus *et al.,* 2014; Helfaya *et al.,* 2019).

This research employed the wave method to test for non-response bias by comparing the early and late respondents for all relevant questions, using the independent t-test available in the SPSS software. The results showed no significant differences between the means of the early (n=22) and late (n=11) respondents in terms of any of the variables under investigation, where the two-tailed value of p was above the 0.05 threshold (Field, 2013). This result therefore indicates an acceptable level of confidence that the outcomes gathered from the questionnaire respondents can be extended to the targeted population as a whole.

5.8 Variables measurement

The current study aimed to investigate the importance of obtaining assurance statements and the potential factors influencing the decision to purchase external assurance for the CSR reports. However, the decisions on how to measure the research concepts and the questions to be answered by respondents are important decisions for researchers since they must consider precisely the direct impact of the reliability of the measures and validity of the concepts on the results obtained (Bryman, 2015; Saunders *et al.*, 2019). According to Bryman (2015), reviewing prior literature can assist in the identification of previously operationalised concepts and questionnaire items. In addition, the use of existing questions might allow the researcher to employ already piloted measures, the reliability and validity of which have already been established. Accordingly, the existing measures of the constructs included in this study have been identified and selected based on the prior literature and adopted, adapted, or developed in accordance with the research purpose. Further, all indicators used in this research are reflective indicators.

5.8.1 Variables influencing the perceived benefit and their associated measures

Park and Brorson (2005) and Jones and Solomon (2010) highlight the role of decision makers' perceived benefit of obtaining assurance and refer to the potential factors influencing their perception towards the benefit of obtaining assurance. In the current study, the factors influencing the perceived benefit are predictor variables and attention has been given to the "internal audit role, assurers independence, following global reporting guidelines and firm's competition" because these are the variables most widely assumed to influence the perceived benefit (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010; Darus *et al.*, 2014). All latent variables in the current research were measured using a 7-point Likert Scale to generate better reflection of a respondent's true evaluation. For the role of internal audit, the variable was assessed with three indicators to measure the extent to which decision makers believe that the internal audit function is adequate to assure CSR reports and therefore impact the perceived benefit. More precisely, two indicators were adapted from the prior studies of Sawani *et al.* (2010), Alzeban and Gwilliam (2014) and Darus *et al.* (2014) and one indicator was developed from "InternalAudit_3", relying on views of Jones and Solomon (2010) interviewees (see Table 5.4).

Table 5. 4: Internal audit: operationalisation, code, and sources

Variable	Indicator code	Operationalisation	Sources
Internal audit	InternalAudit_1	The internal auditing function in your organisation verifies the disclosed information in your CSR report.	Alzeban and Gwilliam (2014)
	InternalAudit_2	The internal auditing function in your organisation is effective in verifying your disclosed CSR information.	Sawani *et al.* (2010); Darus *et al.* (2014)
	InternalAudit_3	Obtaining an external assurance supplements the auditing work undertaken by your organisation's internal auditing function to verify the disclosed CSR information.	Jones and Solomon (2010).

For Assurer's independence, prior research assumed that the perception of decision makers towards the independence of assurers would influence the perceived benefit of hiring an external assurer (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010). Assurer's independence was operationalised using three items adapted from the Alzeban and Gwilliam (2014) research study and modified to fit the aim of the current study. Participants were asked to gauge the extent to which they believe that assurance providers are sufficiently independent, face interference by management, and whether conflicts of interest are present during their verification process. Full measurements and codes of the assurer's independence variable can be found in Table 5.5 below.

Table 5. 5: Assurer's independence: operationalisation, code, and sources

Variable	Indicator code	Operationalisation	Sources
Assurer's independence	Assurer'sIndependence_1	External assurance providers are sufficiently independent to perform their professional obligations and duties.	Alzeban and Gwilliam (2014)
	Assurer'sIndependence_2	External assurers rarely face interference by management while conducting their work.	Alzeban and Gwilliam (2014)
	Assurer'sIndependence_3	Conflict of interest are rarely present in the work of external assurers.	Alzeban and Gwilliam (2014)

The results from the interviews conducted in Park and Brorson (2005) and Sawani *et al.* (2010) suggest that following the global reporting guidelines might influence how decision makers perceive the benefit of employing external assurance. Following globally recognised guidelines is assessed with four indicators. Participants were asked to rate the extent to which following CSR reporting guidelines affects the potential assurance benefit. Four indicators were developed by the researcher as shown in Table 5.6 below.

Table 5. 6: Following global reporting guidelines: operationalisation, code, and sources

Variable	Indicator code	Operationalisation	Sources
Following global CSR reporting guidelines	GRG_1	Following the global reporting initiative (GRI) guidelines reduces the importance of external assurance in verifying your CSR disclosed information.	Sawani *et al.* (2010); Darus *et al.* (2014)
	GRG_2	Following the integrated reporting (IR) framework reduces the importance of external assurance in verifying your CSR disclosed information.	Park and Brorson (2005); Atkins and Maroun (2015)
	GRG_3	Obtaining International Organisation for Standardisation (ISO) certification reduces the importance of external assurance in verifying your CSR disclosed information.	Darus *et al.* (2014); Farooq and de Villiers (2017)
	GRG_4	Following other global reporting guidelines reduces the importance of external assurance in verifying your CSR disclosed information	Park and Brorson (2005)

Furthermore, firm's competition is assumed to influence the perceived benefit of external assurance where decision makers might obtain external assurance if they believe that purchasing assurance enhances their position vis a vis their competitors (Park and Brorson, 2005; Sawani *et al.*, 2010). This variable was measured using four indicators as presented in Table 5.7 below. More precisely, three indicators were adapted from Jaworski and Kohli (1993), Sawani *et al.* (2010), Darus *et al.* (2014) and Feng *et al.* (2019), and one indicator, "Competition_3", was adopted from the Darus *et al.* (2014) research study.

Table 5. 7: Firm's competition: operationalisation, code, and sources

Variable	Indicator code	Operationalisation	Sources
Firm's competition	Competition_1	Your organisation operates in an industry which is highly competitive.	Jaworski and Kohli (1993); Feng *et al.* (2019)
	Competition_2	Employing external assurance for your CSR reports offers your organisation a competitive advantage.	Sawani *et al.* (2010); Darus *et al.* (2014)
	Competition_3	External assurance report will be capitalised on by your major competitors in formulating their business strategies.	Darus *et al.* (2014)
	Competition_4	If your major competitors employ external assurance for their CSR report, your organisation will do likewise in response.	Jaworski and Kohli (1993)

5.8.2 Variables influencing the decision to obtain assurance and their associated measures

Prior research highlights the perceived benefit and cost of assurance as main factors that might influence the decision to obtain external assurance (Park and Brorson, 2005; Jones and Solomon, 2010; Darus *et al.*, 2014). In addition, firm's size and profitability are also assumed to influence the assurance decision (Simnett *et al.*, 2009; Cho *et al.*, 2014; Martinez-Ferrero *et al.*, 2017). Besides, other researchers refer to the role of powerful institutional shareholders and other stakeholders as factors influencing obtaining assurance (Darus *et al.*, 2014; Atkins and Maroun, 2015). Therefore, this research assumed that the perceived benefit, cost, firm size, profitability, institutional shareholders, and other stakeholders would serve as predictor variables and that assurance decision would be the dependent variable.

The assurance decision was measured as a dummy variable, scored as 1 if the company obtained external assurance and 0 otherwise (Liao *et al.*, 2018). Meanwhile, the perceived benefit construct has a dual relationship through operating as dependent and independent construct in a model. Participants were asked to rate the potential benefit of external assurance based on nine items, using a seven-point Likert scale, with a high score for items indicating a strong benefit from obtaining assurance and low score reflecting the reverse. As presented in

Table 5.8, eight items were developed by the researcher based on prior studies and one item, “Percived_8”, was adapted from Darus *et al.* (2014).

Table 5. 8: Perceived benefit: operationalisation, code, and sources

Variable	Indicator code	Operationalisation	Sources
Perceived benefit	Percived_1	Enhances the credibility of the disclosed CSR information for interested users.	Hodge *et al.* (2009); Darus *et al.* (2014)
	Percived_2	Indicates organisational transparency regarding the disclosed CSR information for interested users.	Ball *et al.* (2000)
	Percived_3	Enhances the reliability of the disclosed CSR information for interested users.	Hodge *et al.* (2009); Darus *et al.* (2014)
	Percived_4	Enhances the accuracy of the disclosed CSR information for interested users.	Darus *et al.* (2014)
	Percived_5	Helps, through the interaction with the external assurer, in improving the format of the disclosed CSR information in your organisation.	Park and Brorson (2005); Sawani *et al.* (2010)
	Percived_6	Demonstrates to the interested users your organisation’s commitment to becoming a good citizen.	Hodge *et al.* (2009)
	Percived_7	Facilitates, through the interaction with the external assurer, further learning about CSR reporting for future improvement.	Sawani *et al.* (2010)
	Percived_8	Enhances the reputation of your organisation.	Darus *et al.* (2014)
	Percived_9	Attracts institutional investors to your organisation.	Bushee and Noe (2000)

The cost construct was measured by three indicators, two of which were adapted from Darus *et al.* (2014), while the other, “Cost_3”, was developed by the researcher relying on prior qualitative findings (Jones and Solomon, 2010). Full details of measurement of the cost construct, code and resources are shown in Table 5.9 below.

Table 5. 9: Cost construct: operationalisation, code, and sources

Variable	Indicator code	Operationalisation	Sources
Cost	Cost_1	It is financially costly to hire an external assurer to verify the disclosed CSR information	Darus *et al.* (2014)
	Cost_2	The process of verifying your disclosed CSR information by an external assurance provider is time consuming.	Darus *et al.* (2014)
	Cost_3	External assurance increases the scope of the work conducted by the internal auditors in your organisation.	Jones and Solomon (2010)

Regarding the other stakeholders construct, using a seven-point Likert scale, respondents were asked to indicate the extent to which the following stakeholders request CSR external assurance in their organisations: shareholders, social/environmental groups, suppliers, customers, employees, and investors. These items were adapted from Darus *et al.* (2014); however, the "investors" item was added based on the feedback from the pilot study.

In addition, Atkins & Maroun (2015) highlight the ability of institutional investors in influencing the decision to obtain external assurance due to their powerful monitoring role. Participants were asked to rate the extent to which they strongly agreed or disagreed with three indicators developed by the researcher based on previous studies, as shown in Table 5.10.

Table 5. 10: Institutional shareholders: operationalisation, code, and sources

Variable	Indicator code	Operationalisation	Sources
Institutional Shareholders	InstitutionalSha_1	Institutional shareholders in your organisation require external assurance for the disclosed CSR information.	Pohl and Tolhurst (2010)
	InstitutionalSha_2	Institutional shareholders raise concerns if the disclosed CSR information is not externally assured.	Lewis and Mackenzie (2000)
	InstitutionalSha_3	Institutional shareholders consider your disclosed CSR information only if it is externally assured.	Atkins and Maroun (2015)

Furthermore, firm size and profitability were measured by means of secondary data obtained from the FAME database. More precisely, based on prior literature, the total assets were used to proxy for firm size and return on assets was used to proxy for firm's profitability (Martinez-Ferrero *et al.*, 2017; Sethi *et al.*, 2017). Secondary data were not been acquired directly by the researcher, since such data are usually published by organisations, governmental bodies, or archival data stored in databases like the FAME database (Bryman, 2015; Saunders *et al.*, 2019). Secondary data are assumed to be less expensive and require less time for the researcher to collect than primary data. On the other hand, collecting secondary data has some limitations, such as lack of control and familiarity over the data or the complexity of the data (Bryman, 2015). The current research used secondary data to increase the response rate by reducing the number of questions in the questionnaire.

5.8.3 Common method bias

In survey research, common method bias could arise as a problem when the estimates of associations among constructs are biased because measures are obtained using the same source (Podsakoff *et al.*, 2003; Jordan and Troth, 2020). Common method bias refers to variance associated with the measurement method instead of the construct that the measures represent, and it might significantly affect the research results (Podsakoff *et al.*, 2003). Common method bias might arise due to reasons such as obtaining data from the same person, social desirability tendencies, structure or wording of the questionnaire items and the context in which the measures are obtained (Podsakoff *et al.*, 2003; Jordan and Troth, 2020).

To control common method bias, Podsakoff *et al.* (2003) suggest using different resources as such key informants and archival data to obtain the measures of dependent and independent variables. This way makes it impossible for the respondents to bias the observed association between dependent and independent variables. In addition, Podsakoff *et al.* (2003) suggest the use of statistical techniques such as Harman's single-factors test to test for common method bias existence. Harman's single factors test is one of the techniques most adopted by researchers to address common method bias (Podsakoff *et al.*, 2003; Jordan and Troth, 2020). The procedure of applying Harman's single factors test involves loading all observed variables into an exploratory factor analysis and then examining the unrotated solution to determine the number of factors required to account for the variance in the data (Podsakoff *et al.*, 2003; Aguirre-Urreta and Hu, 2019). The logic behind this test is that if a substantial amount of common method bias is presented, one factor will emerge or account for more than half of the variance in the variables (Aguirre-Urreta and Hu, 2019).

Using this approach, all items being measured in this research were subject to exploratory factor analysis and the unrotated solution was tested. Multiple factors appeared using the exploratory factor analysis. Besides, the first factor only explained 33% of the total variance, which is less than 50% of the total variance in the variables. Therefore, in this study, common method bias is of little concern due to the low variance explained by the first factor and the absence of an emerging single factor.

5.9 Statistical technique: structural equation modelling

Analysing the collected data to examine the proposed theoretical model is a distinct stage in the overall process of conducting research (Bryman, 2015). However, researchers must adopt an analytical technique that appropriately matches the type of variables and the size and nature of the research sample to provide a rigorous examination of the proposed theoretical model (Bryman, 2015). One of the most cutting-edge and dominant statistical techniques for theory testing, which allows researchers to analyse multiple variables simultaneously, is Structural Equation Modelling (SEM) (Hair *et al.*, 2019a).

SEM is a second-generation statistical technique associated with multivariate data analysis used to address multiple equations with a single analysis (Hair *et al.*, 2019a). Specifically, SEM allows researchers to explain the association among three or more constructs and incorporate the indirectly measured latent constructs into the analysis, and therefore it incorporates the measurement and structural models (Hair *et al.*, 2019a). In addition, SEM is especially beneficial in models where an endogenous construct in one equation becomes an exogenous construct in a subsequent equation (Hair et al., 2019a). Hair *et al.* (2010) assumed that SEM could outperform other multivariate statistical techniques because it can combine interdependence and dependence multivariate techniques as well as accommodate the measurement error. Utilising SEM is argued to be appropriate when the research contains multiple constructs represented by several measured indicators, and these constructs are classified as to whether endogenous or exogenous constructs relying on a plausible underlying theory (Hair *et al.*, 2019a). Thus, this research utilises the SEM technique to analyse the collected data because the study identified multiple constructs, and several items measure the constructs; besides, these constructs are clearly distinguished as endogenous and exogenous constructs based on the rational choice and stakeholder theories. In addition, one construct, "perceived benefit", was identified as an endogenous and exogenous construct at the same time. However, SEM encompasses two types, namely covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM) (Hair et al., 2017). The subsequent section discusses the key characteristics of the two techniques and the most appropriate technique for the current study.

5.9.1 Key characteristics of CB-SEM and PLS-SEM

Many researchers recognise the term "SEM" as describing a method for carrying out CB-SEM analysis, exemplified by software such as AMOS, EQS, LISREL, MPLUS, SEPATH and RAMONA (Chinn, 1998; Hair *et al.*, 2011). However, another unique and useful technique which is being increasingly used by researchers interested in conducting SEM analysis is PLS-SEM (Chinn, 1998; Hair *et al.*, 2011). Remarkably, in business research, the use of PLS-SEM has risen significantly over the last decade (Hair *et al.*, 2019a).

PLS-SEM is a causal modelling technique that aims to maximise the explained variance of the dependent latent variable and uses total variance in calculating solutions (Hair *et al.*, 2011, 2019a). This is contrasted with CB-SEM, which seeks to reproduce the theoretical covariance matrix while ignoring explained variance (Hair *et al.*, 2011). CB-SEM uses only common variance and focuses on predicting a set of parameter estimates where the difference between the predicted covariance matrix and the theoretical covariance matrix is minimised (Hair *et al.*, 2011, 2019a). CB-SEM is a parametric statistical method that produces goodness of fit criteria and is usually employed by researchers to test, confirm or reject well developed theories; however, a number of assumptions are required to estimate a CB-SEM model, such as a sufficient sample size, multivariate normality of data, and large number of items representing a latent variable (Hair *et al.*, 2011, 2017, 2019a). However, when CB-SEM assumptions cannot be met, PLS-SEM estimates might be useful proxies of CB-SEM outcomes (Hair *et al.*, 2011).

PLS-SEM is a non parametric statistical method that is usually employed when the purpose of the study is theory development (Hair *et al.*, 2011). PLS-SEM is suitable for handling small sample sizes, not normally distributed data, single-item constructs, secondary data and complex models with many constructs and relationships (Hair *et al.*, 2017; Hair *et al.*, 2019a). Therefore, using PLS-SEM offers effective solutions for a wide range of research applications (Hair *et al.*, 2019a). Overall, when choosing the appropriate statistical approach, researchers should think about both CB-SEM and PLS-SEM, taking into consideration the research objectives, distributional assumptions and model complexity (Hair *et al.*, 2017). If the model's properties restrict the use of CB-SEM, PLS-SEM is a proper alternative technique to employ since CB-SEM produces more accurate parameter estimates (Hair *et al.*, 2011, 2017). It is worth mentioning that CB-SEM and PLS-SEM are complementary approaches rather than competitive statistical approaches (Hair *et al.*, 2011).

The current research adopts PLS-SEM since it does not make distributional assumptions in comparison to CB-SEM, and the data collected in this research are, to some extent, not normally distributed. In addition, the proposed model includes many constructs, indicators, single-item constructs and relationships between constructs which can be easily handled by PLS-SEM with no identification problems. Finally, the small sample size of the current research also encourages the use of PLS-SEM.

5.9.2 General view of PLS-SEM

A structural equation model with latent variables consists of two elements: the measurement and structural models. These are known as the inner and outer models, respectively, in PLS-SEM (Hair *et al.*, 2017). The measurement model describes the relationship between latent constructs and their related observed indicators, while the structural model describes the relationships between endogenous constructs and exogenous constructs (Hair *et al.*, 2011, 2017). The term endogenous is used to describe a latent construct explained by other constructs in the model, which is similar to a dependent (outcome) variable. In contrast, the term exogenous describes a latent construct that is not explained by other constructs in structural model associations, which is identical to the independent (predictor) variable (Hair *et al.*, 2011, 2017). In addition, constructs with a dual relationship that operate as endogenous and exogenous constructs in a model are also referred to as endogenous constructs. The exogenous construct is assumed to predict the endogenous construct (Hair *et al.*, 2017).

One of the advantages of using the PLS-SEM is that the technique allows researchers to measure a latent construct reflectively and formatively, while in CB-SEM researchers are generally allowed to examine reflective indicators. However, CB-DEM can accommodate formative indicators only if limiting specification rules are followed (Hair *et al.*, 2011, 2017; Hair *et al.*, 2019b). The reflective indicators for a latent construct are assumed to be influenced and caused by the same construct, where a change in the latent construct is reflected in the accompanying manifest (indicator) variables (Chinn, 1998; Hair *et al.*, 2011, 2017, 2020). In PLS-SEM, the associated coefficients for the association between the latent construct and the related indicators in reflective models are known as outer loadings (Hair *et al.*, 2011, 2017). In contrast, in formative measurement models, the indicators point to the related latent variable, and any change in the indicators causes a change in value of the latent variable (Chinn, 1998; Hair *et al.*, 2011, 2017, 2020). Further, the associated coefficients for the formative associations are referred to as outer weights (Hair *et al.*, 2011, 2017).

In the current research, all latent constructs were measured reflectively where the associated construct influences the indicators, and the relationship goes from the construct to its indicator variables. Therefore, this research uses the appropriate procedures for assessing a reflective measurement model. Following the basic PLS-SEM algorithm, a two-stage approach was implemented to estimate the model. The construct scores are estimated in the first stage and then, in the second stage, the estimates of the loading and weights, the structural model's path coefficients, and the R^2 values of the endogenous construct are obtained (Hair *et al.*, 2017).

5.10.3 Evaluation of the measurement and structural models under PLS-SEM

All PLS-SEM techniques involve two separate assessments to examine the measurement and structural models. As mentioned in the previous section, the measurement model is concerned with the association between latent constructs and their associated observed indicators (Hair *et al.*, 2017). Therefore, the first step in assessing a measurement model should be to ensure the quality of the observed indicators by examining the reliability and validity of the measures (Hair *et al.*, 2017, 2020). Ensuring the measures' reliability involves examining the internal consistency reliability using Cronbach's alpha and composite reliability, and indicator reliability using the indicator's outer loadings (Hair *et al.*, 2017; Hair *et al.*, 2019a). The measures' validity involves examining the convergent validity using the average variance extracted and discriminant validity using the Fornell-Larcker criterion and Heterotrait-monotrait ratio (Hair *et al.*, 2017; Hair *et al.*, 2019a). The subsequent chapter will present further details on evaluating the measures' reliability and validity.

After ensuring that the measurement model has been properly assessed and the measures' reliability and validity are confirmed, the next step involves assessing the structural model (Hair *et al.*, 2011, 2017; Hair *et al.*, 2019b). The structural model assessment allows researchers to examine the model's predictive capabilities and associations among constructs (Hair *et al.*, 2017). As previously mentioned, PLS-SEM seeks to maximise the explained endogenous constructs' variance. Therefore, the key assessment of the structural model involves evaluating the coefficient of determination R^2, path coefficient, effect size f^2 and predictive relevance Q^2 (Hair *et al.*, 2017).

The coefficient of determination R^2 is a measure of the model's predictive power, where the coefficient represents the endogenous variables variance that can be explained by all related exogenous variables (Hair *et al.*, 2017). In addition, the change of the R^2 value when deleting specific exogenous constructs allows the researcher to assess the importance of each exogenous construct on the endogenous constructs through measuring the f^2 effect size (Hair *et al.*, 2017). The path coefficient significance depends on the standard error acquired by bootstrapping (re-sampling) technique, which enables computing the p values and t values for all hypothesised relationships (Hair *et al.*, 2017). Another measure of the model's capability to predict is the Stone-Geisser Q^2 value, a sample reuse technique proposing that the model accurately predicts each endogenous latent variable's items (Hair *et al.*, 2011). The Q^2 value is based on the blindfolding procedure that removes part of the data in the endogenous construct's indicators and then attempts to estimate the parameters with the remaining data (Chinn, 1998; Hair *et al.*, 2011, 2017; Hair *et al.*, 2019a). More details on assessing the structural model will be attained in the next chapter.

5.10.4 SmartPLS Software

In order to run the PLS-SEM algorithm, researchers can use different software programs such as PLS-Graph, VisualPLS, SmartPLS, and WarpPLS (Wong, 2013; Hair *et al.*, 2017, 2019a). Although all these software programs support PLS-SEM, each has its own set of features and is limited in scope (Sarstedt and Cheah, 2019). In addition, some softwares have undergone significant development and updates, such as SmartPLS and WarpPLS, while others, such as PLS-Graph and VisualPLS, have not received substantial updates (Wong, 2013). SmartPLS is a prominent and comprehensive PLS-SEM software program with a graphical user interface (Wong, 2013; Sarstedt and Cheah, 2019). Since its inception in 2005, the SmartPLS 2 program has grown in popularity, not only because it is freely available to academics and researchers, but also because it has a user-friendly interface and advanced reporting features (Wong, 2013; Sarstedt and Cheah, 2019). During the last couple of decades, the latest version of SmartPlS 3 has received significant updates offering a wide range of modelling and algorithmic options compared to the initially released version (Sarstedt and Cheah, 2019). In addition, SmartPLS is the most commonly used PLS-SEM software by researchers across disciplines (Sarstedt and Cheah, 2019). The software allows researchers to run the PLS-SEM analysis easily and quickly, and the developers of the software continuously update the program. Besides, the software is well presented in books and literature, including clear guidelines on using the software. Therefore, this research used the latest version of SmartPLS 3 software for conducting PLS-SEM analysis since the software offers all essential options to evaluate the research proposed model.

5.10 Chapter summary

This chapter provides explanations of the adopted research methodology. The chapter begins with an introduction highlighting the research aim, overview, and research methodology definition. Then, the chapter discusses, identifies, and justifies the research paradigm, approach and strategy. More precisely, the positivism paradigm was adopted in the current study, in combination with a deductive approach and cross-sectional and survey strategies to investigate the developed association between variables as proposed in the theoretical model, in order to produce more generalisable findings. Furthermore, the research used an online questionnaire to gather the data. The chapter goes on to highlight the research population, ethical considerations, the development of the questionnaire instrument, the pilot test, administration process and non-response bias, and the measurements of the variables and common method bias. Finally, the chapter discusses the suitable analytical techniques and the rationale for using the partial least square structural equation modelling and the SamrtPLS software.

Chapter Six: Data preparation and description

6.1 Introduction

This chapter examines and prepares the collected data from the distributed questionnaires. First, this chapter outlines the adopted procedures for preliminary data screening. These procedures include an in-depth explanation of the treatment of missing data and the identification of parametric tests, including outliers and non-normal observations. Second, this chapter intended to verify the reliability and validity of the research's adopted variables using the explanatory factor analysis. Finally, descriptive statistics of the adopted variables are presented in this chapter.

6.2 Preliminary data screening

6.2.1 Missing data analysis

Missing data often refers to item nonresponse in survey research (Graham, 2012). Missing data occurs when a respondent completes only some of the survey questions or fails to provide an answer to some parts of the survey questions (Graham, 2012). Missing data might occur because of various reasons, such as skipping upsetting questions or skipping the questions near the end of the survey due to slow reading by respondents. In addition, a respondent might have intended to complete the skipped questions but forgot to do so. Also, respondents might skip some questions due to the lack of knowledge on how to respond to the questions. Besides, loss of data might occur during the storage process (Graham, 2012).

As a consequence of item nonresponse to survey questions, valid values for the missing items will be missing from the research analysis. Thus, the effect of those values on the research statistical estimation will be vague and the generalisability of results will be impacted (Hair *et al.*, 2019a). Therefore, it is important to probe the reasons behind the missing data through evaluating the patterns and mechanisms of the data set (Hair *et al.*, 2010).

Determining the type of missing data helps in identifying the optimal method to deal with the problem (Hair *et al.*, 2019a). There are two proposed types of missing data: ignorable and non-ignorable missing data (Hair *et al.*, 2019a; Tabachnick and Fidell, 2019). Ignorable missing data occurs randomly due to the research design, the design of the data collection process or when the data are censored (Hair *et al.*, 2019a). Hair *et al.* (2019a) mentioned that a missing data level of under 10% for an individual observation can be generally ignored when missing data occurred at random. Specific remedies for missing data are not needed under the ignorable type of missing data (Hair *et al.*, 2019a). In contrast, non-ignorable missing data occur non-randomly due to known and unknown reasons. The known missing data can be identified based on procedural factors such as respondents' failure to complete the entire survey (Hair *et al.*, 2019a). Meanwhile, the unknown missing data can barely be identified since this issue is mostly pertinent to the respondents. The non-ignorable type of missing data requires finding special remedies (Hair *et al.*, 2019a). Hair *et al.* (2019a) offer recommendations to identify the type of missing data through examining the extent and patterns of a data set.

The Statistical Package of Social Science (SPSS) has been used to examine the extent of missing data in the current research study. The result revealed that the percentages of missing values for each individual observation were (<5%) which is within the 10% ignorable level of missing data mentioned above. Furthermore, adopting Little's MCAR test is an essential step to uncover the pattern of missing data. Using Little's MCAR test is recommended to determine whether the missing values were missed completely at random or not (Hair et al., 2014). The results of Little's MCAR test achieved in this research revealed that Chi-square = 345.170, DF = 322, sig = 0.179. This result indicates that the data were more likely to be missing completely at random.

When the missing data is ignorable, and the pattern of occurrence is random, various remedial imputation methods can be used, such as the casewise deletion method, pairwise deletion method and mean replacement method (Hair *et al.*, 2017). The casewise deletion method handles missing data by deleting all observations with missing values, but this might reduce the number of observations. In addition, the casewise deletion method requires careful consideration to avoid systematically deleting a specific group of respondents since this could bias the results (Hair *et al.*, 2017). Instead of deleting all observations with missing data, the pairwise deletion method uses all valid values and ignores the missing values to estimate the model parameters; however, using this method, running the analysis based on different sample sizes would generate a biased result (Hair *et al.*, 2017). The mean replacement method is assumed to be the more appropriate and easiest to implement, especially when very few observations have missing values (Hair *et al.*, 2017). This research adopts the mean value replacement method for missing values, where the missing value of an individual observation is replaced with the mean value of that indicator (Hair *et al.*, 2017). The motivation for using the mean value replacement is that the mean is considered as the best single replacement value (Hair *et al.*, 2019a). Furthermore, Hair *et al.* (2017) recommend adopting the mean value replacement when the missing values are less than 5% per indicator.

6.2.2 Outliers

Outliers are values which are well outside and differ from the remaining responses to a particular question, or to all questions (Hair *et al.*, 2017). Kline (2015) mentioned that there is no single definition of “well outside” the remaining responses; however, one heuristic is that scores ±3 standard deviation beyond the mean are deemed as outliers. The presence of an outlier can have a marked effect on survey results (Hair *et al.*, 2019a). Deciding whether to retain or eliminate the value of an outlier is related to the effect of an outlier on the results (Hair *et al.*, 2019a). However, in some circumstances the researcher might utilise the accommodation strategy by winsorising the data to deal with outliers, especially when he/she has reservations about retaining or eliminating outliers (Sheskin, 2003). Outliers are easy to detect by assessing frequency distributions of z-score, and any value beyond ±3 indicates an outlier (Kline, 2015). Therefore, to avoid reducing the research sample size, any observation with z-score beyond ±3 was winsorised. Sheskin (2003) highlights that winsorisation involves replacing the values being tested for outliers with the closest score in the tail of the distribution in which they occur. Observations pertaining to the value of total assets and the return on total assets ratio produced some outlier cases and thus these were winsorised to gain more stable results.

Normality refers to the degree to which the distribution of the sample data is well modelled by a normal distribution (Hair *et al.*, 2019a). Kline (2015) highlighted that non-normality might occur due to the existence of outliers. According to Hair *et al.* (2019a) the shape of the distribution can be described by comparing the normal distribution with the kurtosis “peakedness” and skewness “flatness” of the distribution. Therefore, this research relied on skewness and kurtosis values to test for normality (Hair *et al.*, 2019a). According to Kline (2015), variables with an absolute skewed index >3 were considered as severely skewed by prior research. In addition, absolute kurtosis values from about 8 and above demonstrate a severe kurtosis. The descriptive analysis showed a deviation from normality in the variables pertaining to the value of total assets and the return on total assets ratio. However, the research used the PLS-SEM to handle non-normally distributed data.

6.3 Unidimensionality, reliability and validity of constructs

An important task in a quantitative analysis is to check the unidimensionality, reliability, and validity of the measures used (Kline, 2015; Hair *et al.*, 2019a). Checking these aspects has a substantial impact on how confident a researcher can be in regard to using his/her results generated from using statistical tests to examine the developed hypotheses (Kline, 2015; Hair *et al.*, 2019a). More precisely, researchers should always ensure high validity and reliability of measures and reduce the level of measurement error present in a data set in order to ensure that the variables of interest are depicted more accurately and therefore enhance the credibility of the research findings (Hair *et al.*, 2019a).

6.3.1 Unidimensionality of constructs

The unidimensionality of a construct intimates that in order to create a summated scale, all items of that construct must be strongly correlated with one another and only represent that particular construct (Hair *et al.*, 2019a). The summated scale should pass the unidimensionality test, where each scale should consist of items that load highly on a single construct (Hair *et al.*, 2019a). The importance of ensuring that all constructs in a model are unidimensional stems from the potential uncertainty that may arise when some items represent multiple constructs. Factor analyses such as exploratory factor analysis (EFA) or confirmatory factor analysis (CFA) are usually employed to assess the unidimensionality of constructs (Hair *et al.*, 2019a). Given that some of the measures were developed for the first time based on prior qualitative research and have not been examined in empirical research, it was appropriate for this research to use EFA to examine the dimensionality of pre-determined items selected to measure certain constructs and then to confirm the results using CFA (Worthington and Whittaker, 2006; Hadid *et al.*, 2016). Therefore, using the SPSS software, this research employed exploratory factor analysis to determine the dimensionality of constructs used in the model empirically.

The current analysis applied the principal component method with varimax rotation and an eigenvalue higher than one as a criterion to decide how many factors to keep in "factor extraction" (Field, 2013). The research selected the principal component approach since it considers the total variance, including unique variance and, in certain instances, error variances (Hair *et al.*, 2019a). Furthermore, the research utilised the varimax orthogonal rotation method, as in most cases, the un-rotated solutions are insufficient. Besides, orthogonal rotation methods have been used more often than oblique rotation methods because analytical procedures for performing oblique rotations are still not developed adequately and are subject to controversy (Hair *et al.*, 2019a).

Given the current study sample, the Kaiser–Meyer–Olkin measure of sampling adequacy (KMO) was adopted at individual and multiple variable level, with a value greater than 50% being acceptable (Field, 2013). In addition, Bartlett's test of sphericity should be significant (<0.05). All variables should have communalities of 50% and above. Besides, factor loading of 55% and above is required for significance given a sample size of around 100 respondents (Hair *et al.*, 2019a). Therefore, any indicator that did not fulfil the above requirements was removed from the analysis until all items had met the satisfactory requirements for reliable factor analysis.

6.3.2 Reliability of constructs

Reliability is an assessment of the level of consistency among multiple measurements of a construct (Hair *et al.*, 2019a). The reliability of a measure contributes to its consistency, and the measure is reliable if an individual researcher or another researcher repeats the same research and obtains the same results (Collis and Hussey, 2013). There are two forms of reliability; one form is stability, also called test-retest, while the other and most common form is internal consistency (Hair *et al.*, 2019a).

6.3.2.1 The stability method

The stability method involves administering the exact measure to the same sample at two different points of time and concerns the consistency of obtaining similar results (Bryman, 2015). This method aims to confirm that responses do not vary too much over time periods, with the intention that a measurement taken is reliable at any point in time (Hair *et al.*, 2019a). In order to ensure measurement reliability, the results revealed from the two observations should be highly correlated (Bryman, 2015). However, there are some problems associated with this approach. For instance, a respondent's responses at time 1 can have an impact on his or her responses at time 2, revealing greater consistency between observations than is actually the case (Bryman, 2015). Besides, events might intervene between two different points of time and therefore affect the degree of consistency (Bryman, 2015). Considering the above limitations of the stability method and practical difficulties involved in persuading respondents to complete the same questionnaire twice, given the nature of respondents and the project duration, this approach appeared not to be appropriate for the current research.

6.3.2.2 The internal consistency reliability method

Internal consistency is the most adopted measure of reliability and applies to the consistency between multiple indicators in a construct (Hair *et al.*, 2019a). This method ensures that all items measuring a construct are related to each other, and there is no lack of coherence among items measuring the same construct since all items will be aggregated to form a score for the examined construct (Bryman, 2015; Hair *et al.*, 2019a). Cronbach's alpha is one of the most commonly used techniques for evaluating the internal consistency among items of a measure (Kline, 2015; Hair *et al.*, 2019a). A computed Cronbach’s alpha coefficient varies among 0 and 1, where 1 supports perfect internal reliability while 0 donates no internal reliability (Bryman, 2015). In general, the lowest acceptable limit of Cronbach’s alpha coefficient is 0.70, which offers an acceptable level of internal reliability (Hair *et al.*, 2019a). However, the coefficient of Cronbach's alpha is sensitive and positively associated with the number of items in a construct (i.e. increasing the number of items increases the Cronbach's alpha value even if the degree of inter-correlation remains the same). Besides, a Cronbach's alpha value of 0.60 is acceptable in exploratory research or for constructs with a few items (Hair *et al.*, 2019a).

Given the sensitivity of Cronbach's alpha, it is technically more appropriate to apply the second measure of internal consistency reliability, which is called composite reliability (Hair *et al.*, 2017). Composite reliability, in contrast to Cronbach's alpha, considers the different loadings of the indicators (Hair *et al.*, 2019a). Composite reliability is commonly interpreted as Cronbach's alpha and is regarded as satisfactory for advanced research when the value ranges between 0.7 and 0.9, while a value range between 0.6 and 0.7 is acceptable for exploratory research (Hair *et al.*, 2017). Values above 0.9 are unlikely to be a valid measure of the construct (Hair *et al.*, 2017). Finally, values less than 0.6 signify a lack of internal consistency reliability (Hair *et al.*, 2017).

This research selected both Cronbach’s alpha and composite reliability measures to guarantee that the adopted measures would be satisfactorily reliable (see section 7.2.2).

6.3.3 Validity of constructs

After ensuring a construct’s unidimensionality and reliability the next step involves ensuring the construct’s validity (Hair et al., 2019a). Validity refers to whether a construct’s indicators jointly measure what it was designed to measure and represent the concept of interest (Field, 2013; Hair et al., 2019a). There are three forms of validity, firstly, content validity which can be ensured by relying on experts’ feedback and judgment about the content of the constructs, while the two other forms are convergent validity and discriminant validity which can be evaluated and empirically tested (Hair *et al.*, 2019a).

6.3.3.1 Content validity

Content validity, also known as face validity, refers to how appropriately individual items represent the construct of interest, reflect the construct’s concept, and encompass the entire construct (Field, 2013; Hair *et al.*, 2019a). Content validity should be established at the very minimum when developing a new measure (Bryman, 2015). This type of validity is usually established by pre-testing with a subpopulation or seeking expert opinion on the correspondence between items and the construct without statistical analysis (Kline, 2015; Hair *et al.*, 2019a). This research ensured the content validity of constructs by conducting a pilot study with a small sample of ten expert individuals that sought to judge and provide valuable feedback about the concepts measured in this study. According to the valuable feedback received from the pilot research, the wording of some items was changed to improve the clarity of items being measured and some items were moved to improve the flow of questions, hence ensuring the content validity of constructs and that the questionnaire was well designed and could be understood by the participants (see subsection 5.7.5).

6.3.3.2 Convergent Validity

Convergent validity evaluates the extent to which a construct's indicators converge or share a large proportion of variance in common (Hair et al., 2019). Convergent validity can be empirically estimated in several ways, including the significance and size of factor loading or the average variance extracted (AVE) (Hair *et al.*, 2019). When assessing the construct convergent validity using the factor loadings method, it is essential to examine the standardised loading estimates of each indicator measuring that construct. A standardised loading estimate of 0.5 or more, ideally 0.7 or higher, indicates a converged validity (Hair *et al.*, 2019). Another way to estimate convergent validity is by measuring the AVE, which is calculated as the sum of the squared standardised loadings divided by the number of indicators (Hair *et al.*, 2019). An AVE of 0.50 or more suggests adequate validity convergence because this value implies that the construct explains over half of the variance of its items. In contrast, an AVE less than 0.50 indicates that, on average, more exceeding variance remains in the error of the indicators than in the variance revealed by the construct (Hair *et al.*, 2017, 2019). The AVE method is the most used method to test convergent validity and is utilised by the current research in addition to the factor loading method.

6.3.3.3 Discriminant validity

Discriminant validity evaluates the extent to which constructs are genuinely distinct from each other (Hair *et al.*, 2017, 2019a). Thus, high discriminant validity confirms that a construct is unique and catches some phenomena that other measures in the model miss (Hair *et al.*, 2019a). Two measures can be relied on to examine discriminant validity empirically (Hair *et al.*, 2019a). The first measure, called the cross-loadings approach, is often used as a first step in determining the discriminant validity of indicators (Hair *et al.*, 2017). Specifically, to support discriminant validity, an indicator's loading on the designated construct should be higher than its cross-loadings on other constructs (Hair *et al.*, 2017). The second and more rigorous measure is the AVE approach, which requires that the AVE values of any two constructs exceed the squared correlation estimate among these two constructs (Hair *et al.*, 2019a). This research selected both measures to test discriminant validity.

6.3.4 Exploratory Factor and reliability analysis of constructs.

The 21 indicators representing the constructs influencing the decision to obtain external assurance were factor analysed, resulting in the extraction of four factors explaining 69% of the data variance. In addition, the whole model yielded a meritorious Kaiser–Meyer–Olkin measure of sampling adequacy (KMO = 0.843) and a significant Bartlett's test of sphericity revealed that the EFA was appropriate and within acceptable levels. Two indicators, namely attracts institutional investors “perceived_9” and increase the scope of internal audit work "cost_3", were removed from the factor analysis because they had insignificant loading (<55) on any factor and due to low communality value (<50). The outstanding indicators were loaded onto their respective factors, and the unidimensionality of each factor extracted was confirmed as shown in Table 6.1. All indicators associated to a particular factor were loading significantly (>55%) onto that factor. Cronbach's alpha was used to measure the reliability of each factor and all factors possessed a satisfactory reliability value of over 0.70. In addition, as shown in Table 6.1, no high cross-loadings existed among indicators, confirming the convergent and discriminant validity of the extracted factors. The four factors represent the perceived benefit construct, other stakeholders construct, institutional shareholders construct, and cost construct.

Table 6. 1: Factor and reliability analysis of obtaining assurance items

	Factor loadings				Communality
	1	**2**	**3**	**4**	
Enhances the credibility	**0.886**	0.131	0.105	0.001	0.814
Indicates organisational transparency	**0.846**	0.182	0.10	0.036	0.761
Enhances the reliability	**0.843**	0.153	0.176	0.031	0.766
Enhances the accuracy	**0.831**	0.225	0.11	0.111	0.766
Commitment to becoming a good citizen	**0.759**	0.131	0.193	-0.092	0.638
Enhances the reputation	**0.758**	0.164	0.321	-0.107	0.716
Improves the format of CSR information	**0.700**	0.232	0.202	0.019	0.585
Facilitates future improvement	**0.670**	0.252	0.234	0.016	0.567
Suppliers	0.125	**0.862**	0.102	-0.043	0.770
Customers	0.206	**0.819**	0.069	0.042	0.720
Employees	0.212	**0.742**	0.122	-0.097	0.619
Investors	0.237	**0.677**	0.512	0.006	0.777
Shareholders	0.235	**0.635**	0.470	-0.063	0.683
Social/environmental groups	0.257	**0.624**	0.352	-0.088	0.587
Institutional shareholders raise concerns	0.297	0.31	**0.797**	-0.100	0.830
Institutional shareholders consider assurance	0.297	0.186	**0.795**	-0.004	0.755
Institutional shareholders require assurance	0.327	0.495	**0.651**	0.092	0.784
The process is time consuming	-0.043	-0.158	-0.047	**0.857**	0.763
It is financially costly to hire an assurer	-0.031	-0.098	-0.402	**0.766**	0.758
KMO Measure of sampling adequacy	0.843				
Bartlett's test of sphericity	($\chi2$ = 1577.091, df = 210, p = 0.000)				
Variance extracted by the model	69.06%				
Cronbach's alpha	0.936	0.889	0.889	0.73	

6.3.5 Exploratory Factor and reliability analysis of constructs influencing the perceived benefit of external assurance.

The 14 indicators representing the constructs influencing decision makers' perception toward the benefit of external assurance were factor analysed, resulting in the extraction of four factors, which, in combination, explained almost 75% of the data variance. However, one indicator representing competition "highly competitive industry, coded as competition_1", dropped out due to low communality (<50) and insignificant loading (<55) on any factor. Further, a significant Bartlett's test of sphericity ($p < .001$) and a meritorious Kaiser–Meyer–Olkin measure of sampling adequacy (KMO = 0.843) showed that EFA was appropriate and within acceptable levels. The outstanding indicators were loaded onto their respective factors, and unidimensionality of factors was confirmed as seen in Table 6.2 below. All indicators related to a certain factor were significantly loading (>55%) onto that factor. Reliability was evaluated using Cronbach's alpha of each factor and all factors achieved a satisfactory reliability coefficient value of over 0.70. Moreover, as revealed in Table 6.2, there are no high cross-loadings between indicators, certifying the convergent and discriminant validity of the extracted four factors. The four factors represent the followed reporting guidelines construct, competition construct, the role of internal audit construct, and assurer's independence construct.

Table 6. 2: Factor and reliability analysis of decision makers' perception items

	Factor loadings				Communality
	1	2	3	4	
Following other reporting guidelines	**0.896**	-0.014	0.097	-0.113	0.825
Following the IR framework	**0.886**	-0.045	0.039	-0.137	0.808
Following the GRI guidelines	**0.884**	-0.001	0.074	-0.099	0.797
Obtaining ISO certification	**0.858**	0.081	0.120	0.036	0.758
Competitors capitalise assured report	0.177	**0.833**	0.167	-0.035	0.755
Response to competitors	-0.083	**0.814**	0.161	0.112	0.708
Offers a competitive advantage	-0.175	**0.811**	0.178	0.281	0.799
The internal audit verifies CSR report	0.148	0.071	**0.930**	0.133	0.910
The internal audit is effective	0.169	0.063	**0.908**	0.044	0.859
Supplements internal audit work	-0.005	0.396	**0.730**	0.165	0.717
Rarely face interference from management	-0.075	0.103	0.171	**0.842**	0.747
Conflicts of interest are rarely present	-0.035	0.092	0.062	**0.815**	0.677
Assurers are sufficiently independent	-0.25	0.174	0.119	**0.800**	0.747
KMO Measure of sampling adequacy	0.752				
Bartlett's test of sphericity	($\chi2$ = 843.506, df = 91, p = 0.000)				
Variance extracted by the model	74.51%				
Cronbach's alpha	0.913	0.823	0.874	0.811	

6.4 Descriptive statistics

6.4.1 Firm characteristics and demographics

The first section of the questionnaire was designed to gather data related to the characteristics of the participating firms. Question 1 asked the respondent to indicate the way adopted by his/her organisation to publish its corporate social responsibility (CSR) reports to the public. The respondents were allowed to choose multiple answers because some organisations might adopt different ways of publishing their CSR reports. As reported in Table 6.3, among the 105 respondents, the majority (79) incorporated their CSR disclosures within the annual report. Meanwhile, 41 of the surveyed firms published a web-based CSR report, and 38 published a stand-alone CSR report. Finally, just 12 firms used integrated reporting. These results suggest that UK companies are more willing to include their CSR disclosures in the annual report, which is similar to the KPMG (2020) survey finding that the UK has among the world's highest rates of disclosure of CSR information within the annual financial reports. In addition, the result suggests that the number of UK companies that specifically label their reports as an integrated report is still expanding slowly in comparison to 22% of the G250 that label their reports as integrated reports based on the KPMG (2020) survey.

Table 6. 3: Descriptive statistics for the reporting types

	Stand-alone report	Web-based report	Within the annual report	Integrated report
Frequency	38	41	79	12

Regarding the following of reporting guidelines by the surveyed firms, Question 2 asked respondents to specify the reporting guidelines adopted while reporting their CSR information. Given that a reporting firm might utilise different reporting guidelines, respondents were given the option of selecting multiple options. Table 6.4 shows the reporting guidelines followed by 105 respondents. The most widely adopted reporting guidelines were the Global Reporting Initiative (GRI) and the Greenhouse Gas Protocol Initiative (GHGP), both scoring 46, followed by the International Organisation for Standardisation (ISO) with 35. Further, 14 followed the AccountAbility Principles Standards (AA1000 APS), 18 the Department of Environment, Food, and Rural Affairs (DEFRA) and 15 followed the International Integrated Reporting

Council (IIRC), while only 6 followed the Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (OGIG). There were also 30 firms which followed other reporting guidelines such as the Sustainability Accounting Standards Board (SASB) framework, the Task Force on Climate-Related Financial Disclosures (TCFD), European Public Real Estate Association (EPREA) and the United Nations Global Compact principles, which are the most commonly used guidelines for corporate social/sustainability reporting. According to the most recent KPMG survey (2020), the GRI framework is the most widely used in G250 reports, which is similar to the shown findings of this research.

Table 6. 4: Descriptive statistics for the followed reporting guidelines

	GRI	AA1000 APS	ISO	DEFRA	GHGP	OGIG	IIRC	Other
Frequency	46	14	35	18	46	6	15	30

With regard to the firms' history of CSR reporting and obtaining assurance, the respondents were asked to specify the first year of publishing CSR information to the public and the first year of impending assurance statement. The first time that any of the participating firms published CSR information was in 1990, while the average number of years of disclosing CSR information by respondents was approximately nine years, "started in 2012". The first instance of a participant firm hiring external assurance for their disclosed CSR information was in 1995; however, the average number of years of obtaining assurance was eight years, as shown in Table 6.5 below.

Table 6. 5: Descriptive statistics of the years of publishing CSR and hiring assurance.

	Mean	Minimum	Maximum
Year of first publishing CSR report	2012	1990	2020
Year of first hiring external assurance	2013	2000	2020

In addition, respondents were asked to enter two answer choices (Yes, No) if they had ever hired an independent assurer, whether an internal auditing function existed in their organisation, and if not, whether they outsourced the internal audit function. Figure 6.1 below shows that 42 out of 105 companies, representing 40 per cent of the surveyed firms, had hired an independent assurer and 60 per cent had not. Besides, 73.3 per cent of the surveyed companies had an internal auditing function in their organisation, while only 7.6% of the surveyed companies outsourced their internal audit function.

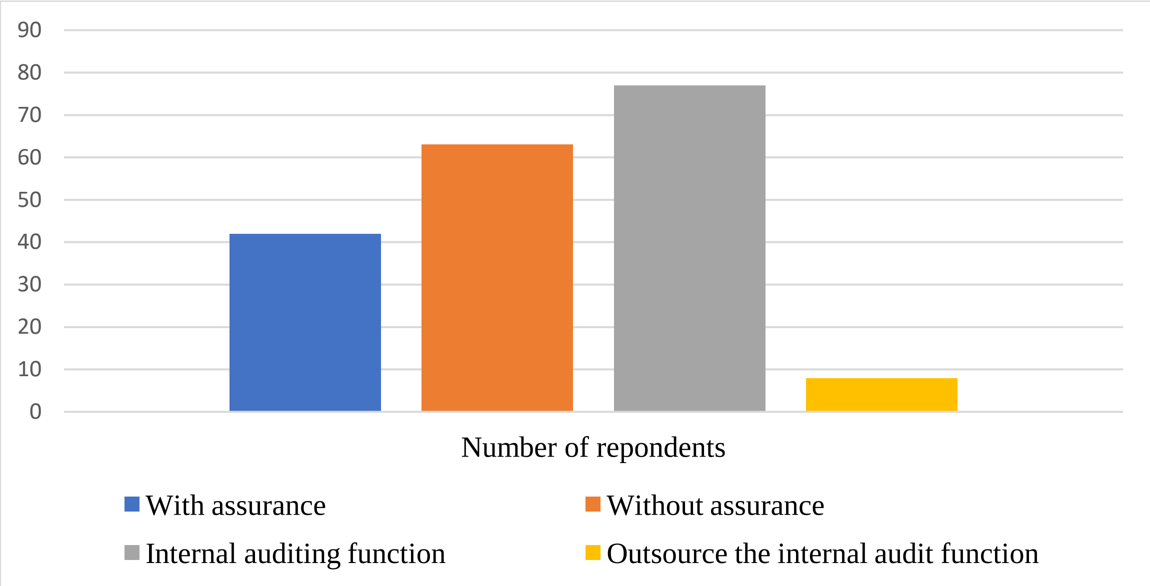

Figure 6. 1: Summary frequencies regarding adopting external assurance and internal audit function

The descriptive statistics in Table 6.6 below show that firms who purchased external assurance operate in the 'Consumer Discretionary' and 'Real Estate' industries, with 38% (8 firms) in each, followed by 'Basic Materials' and 'Industrials' with 28% (6 firms) in each. Among the outstanding firms, 5 operate in the 'Financials' industry, 3 firms in 'Utilities' and 2 firms respectively in 'Consumer Staples' and 'Energy'.

Table 6. 6: Industry classification of purchasing assurance

	Industry Name	Firms obtained assurance	(%)	Participating Firms	(%)
ICB Industry	Basic Materials	6	14.2	11	10.5
	Consumer Discretionary	8	19.0	14	13.3
	Consumer Staples	2	4.7	3	2.9
	Energy	2	4.7	6	5.7
	Financials	5	11.9	16	15.2
	Health Care	2	4.7	7	6.7
	Industrials	6	14.2	24	22.9
	Real Estate	8	19.0	14	13.3
	Technology	0	0	5	4.8
	Telecommunications	0	0	1	1.0
	Utilities	3	7.1	4	3.8
Total		42	100.0	105	100.0

Having considered firms' characteristics, it was also important to look at the demographic characteristics of the respondents. The last section of the questionnaire asked respondents to provide general information about their gender, age, education level, job title, years of experience and the industry of operation. First, Figure 6.2 provides a summary of respondents' gender and shows that nearly 52% of respondents were male and 41% were female, while the other 7% preferred not to say.

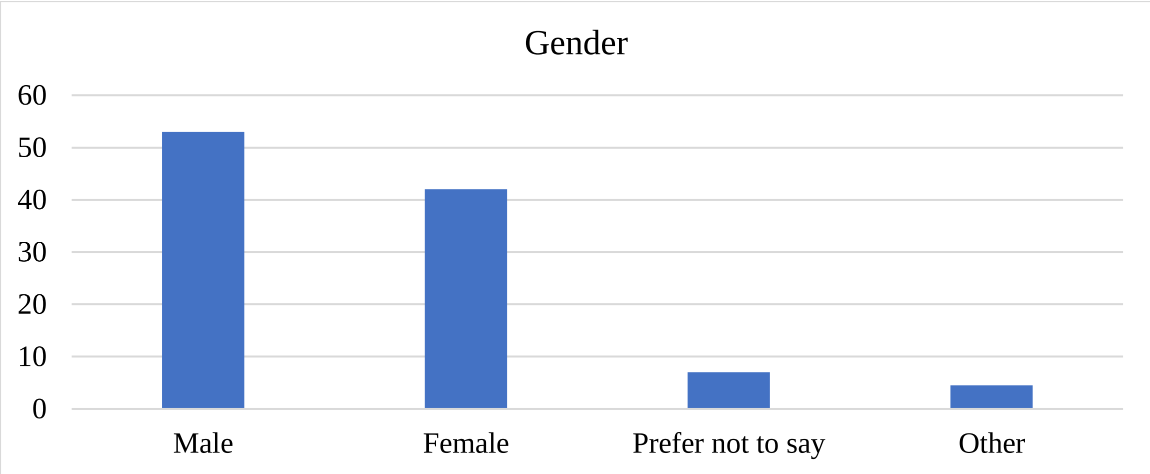

Figure 6. 2: Summary frequencies of respondents' gender

Next, Figure 6.3 shows that most of the research participants were in the age ranges 36-45 and 46-55 years old, representing approximately 62% of the entire sample. Meanwhile, 17% were aged 56-65 and 17% aged 25-35 years old. Only 2% of the respondents were aged either under 25 or over 65.

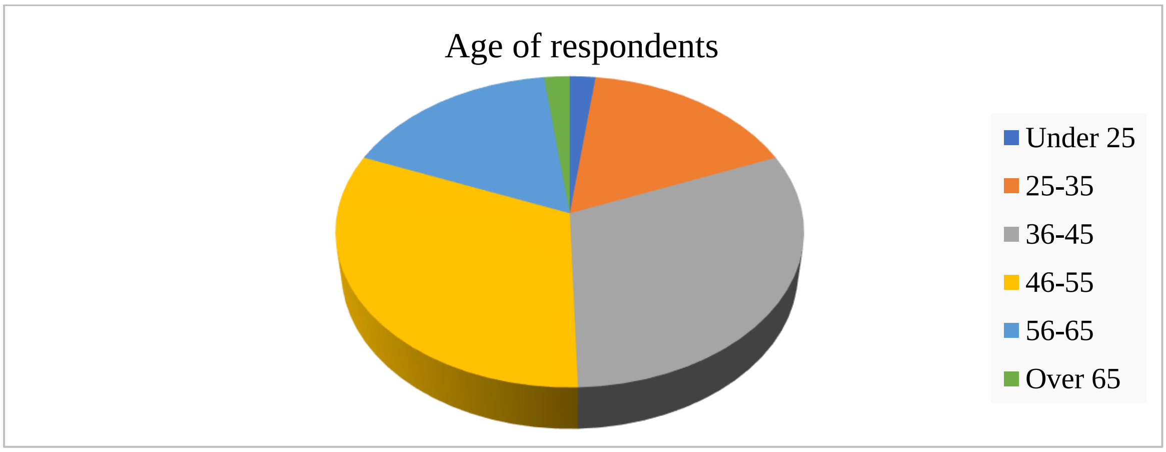

Figure 6. 3: Summary frequencies of respondents' age

With respect to the educational level, Figure 6.4 shows that around 72% of the respondents had a bachelor's degree, followed by 48% with a professional qualification, 40% with a master's degree, 18% with a college qualification and only 3.8% with a PhD.

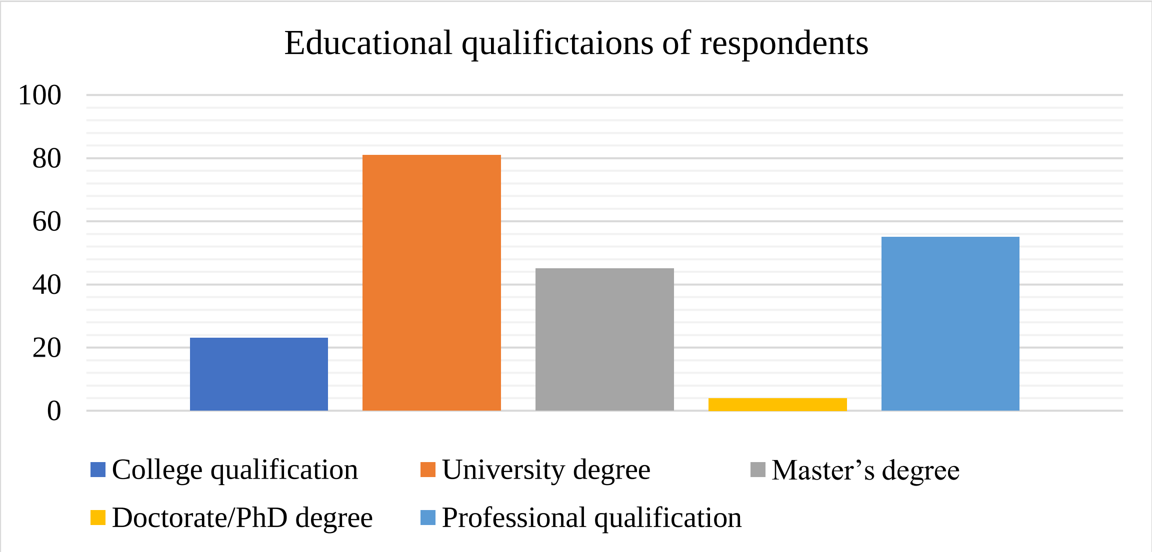

Figure 6. 4: Summary frequencies of respondents' educational qualifications

Further, the majority (52.4%) of respondents were CSR/Sustainability reporting representatives, followed by 10% each of CEOs and directors. Among the remainder, vice president, chairman, CFO, head of investor relations and company secretary were the job titles most frequently recorded by respondents. In addition, on average, respondents had 18 years of experience in total, with approximately 6 years of experience in their current post.

With regard to the industry of operation, as indicated in Table 6.6 above, the most highly represented industry in our sample was 'Industrials', with 24 (23%) companies, followed by 'Financials' with 16 (15.2%) companies. Next came 'Consumer Discretionary' and 'Real Estate', each representing (26.6 %) and 14 companies, and 'Basic Materials' with 11 (10.5%) companies. The remaining 24.7% included companies in 'Health Care' (7), 'Energy' (6), 'Technology' (5), 'Utilities' (4), 'Consumer Staples' (3) and 'Telecommunications' (1).

6.4.2 Descriptive statistics of the factors.

This section summarises data generated from the distributed questionnaire and objectively collected from the FAME database to give a clear, concise, and accurate picture of the collected data. The descriptive statistics of all factors used in the main statistical analysis are reported below in Tables 6.7 to 6.15, including the mean, standard deviation, minimum, maximum, skewness and kurtosis values. The factors include the perceived benefit of external assurance, the cost of assurance, the role of institutional shareholders, other stakeholders, internal audit, assurance independence, following globally recognised CSR reporting guidelines, competition, firm size and firm profitability.

Question 9 was used to capture the perception of respondents towards the potential benefits of obtaining external assurance. Respondents were asked to indicate the extent to which they agreed or disagreed about the potential benefits gained from obtaining external assurance by responding "strongly disagree", "disagree", "somewhat disagree", "neither agree nor disagree", "somewhat agree", "agree" or "strongly agree". Table 6.7 below shows the descriptive statistics of the perceived benefit factor. The results show that the respondents seemed optimistic about the benefits of external assurance. The mean score for the perceived benefit of obtaining external assurance is (5.404 out of 7) higher than the average score of the measurement scale (i.e. 4). In addition, as shown in Table 6.7 below, respondents agreed that obtaining external assurance would add value to the reporting organisation.

Interestingly, all individual items measuring the perceived benefit achieved a higher mean value than (5 out of 7). Among the eight indicators, enhancing the credibility, reliability and organisational transparency indicators achieved, on average, the highest scores of 5.77, 5.56 and 5.71, respectively. It appears from this table that in the UK, decision makers agree about the benefit of external assurance. Furthermore, checking for the skewness and kurtosis of the perceived benefit factor and the related items revealed no serious violation of normality.

Table 6. 7: Descriptive statistics of the perceived benefit measures.

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Perceived benefit	**105**	**1**	**7**	**5.404**	**1.149**	**-1.185**	**1.889**
1.Enhances the credibility	105	1	7	5.77	1.375	-1.570	2.320
2.Indicates transparency	105	1	7	5.71	1.433	-1.562	1.936
3.Enhances the reliability	105	1	7	5.56	1.414	-1.200	1.111
4.Enhances the accuracy	105	1	7	5.26	1.526	-.827	.147
5.Improves the format	105	1	7	5.17	1.355	-1.098	.912
6.Becoming a good citizen	105	1	7	5.15	1.399	-.879	.653
7.Future improvement	105	1	7	5.22	1.286	-.918	.808
8.Enhances the reputation	105	1	7	5.39	1.252	-.900	1.577

Question 10 captures the extent to which other influential stakeholders such as shareholders, investors, social/environmental groups, suppliers, customers and employees requested assured CSR reports. Respondents were asked to indicate whether these stakeholders did so "to an extremely small extent", "to a very small extent", "to a small extent", "to a moderate extent", "to a large extent", "to a very large extent" or "to an extremely large extent". As shown in Table 6.8 below, the mean value of the other stakeholders factor is less than the average score of the scale (i.e. 4 out of 7). Besides, all indicators recorded mean values of less than four, while a few indicators recorded average scores below the construct mean value (2.568), including suppliers (1.97 out of 7), Customers (2.26 out of 7) and employees (2.30 out of 7). Table 5.8 indicates that in the UK, decision makers reflect that other stakeholders are less likely to request external assurance. In addition, in terms of skewness and kurtosis, no severe violation of normality was observed for the other stakeholders factor or the individual indicators.

Table 6. 8: Descriptive statistics of the other stakeholders' measure.

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Other Stakeholders	**105**	**1.00**	**6.00**	**2.568**	**1.267**	**.392**	**-.676**
1. Shareholders	105	1	7	2.81	1.733	.470	-1.007
2. Investors	105	1	7	3.06	1.802	.386	-.929
3. Social/environmental groups	105	1	7	3.02	1.754	.395	-.890
4. Suppliers	105	1	5	1.97	1.197	.914	-.413
5. Customers	105	1	6	2.26	1.421	.865	-.260
6. Employees	105	1	6	2.30	1.500	.858	-.382

Question 11 asked respondents to indicate the extent to which they believe institutional shareholders require external assurance. Possible answers were "strongly disagree", "disagree", "somewhat disagree", "neither agree nor disagree", "somewhat agree", "agree", or "strongly agree". The analysis in Table 6.9 shows that the mean score for the institutional shareholders and the associated indicators is less than the average score of the measurement scale (i.e. 4). An item which asked respondents whether institutional shareholders would require external assurance for the disclosed CSR information achieved a score higher than the mean score of the construct (3.39>3.028). Furthermore, the institutional shareholders factor and indicators showed no significant deviation from normality.

Table 6. 9: Descriptive statistics of the institutional shareholders measure

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Institutional shareholders	**105**	**1.00**	**7.00**	**3.028**	**1.471**	**.496**	**-.567**
1.Require assurance	105	1	7	3.39	1.757	.468	-.911
2.Raise concerns	105	1	7	3.05	1.672	.490	-.724
3.Only consider assured CSR	105	1	7	2.65	1.414	.733	-.086

The second section of question 11 assessed respondents' perception toward the impact of firms' competition in obtaining external assurance. As shown in Table 6.10, the mean score for the competition factor and the associated indicators is slightly less than the average score of the measurement scale (i.e. 4). Employing external assurance offers the reporting firm a competitive advantage achieved a mean value of (3.86, out of 7), and reporting firms might obtain external assurance in response to competitors recorded a mean value of (3.82 out of 7). In addition, the mean score for the item referring to respondents' belief that competitors capitalise the assured report in formulating their business strategies achieved a mean score of (3.33 out of 7). Furthermore, analysing the skewness and kurtosis showed no serious normality violation for the factor and the associated indicators.

Table 6. 10: Descriptive statistics of the competition measure

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Competition	**105**	**1.00**	**7.00**	**3.669**	**1.302**	**-.030**	**-.054**
1. Offers a competitive advantage	105	1	7	3.86	1.528	-.249	-.452
2. Competitors capitalise assured report	105	1	7	3.33	1.491	.135	-.539
3. Response to competitors	105	1	7	3.82	1.524	-.087	-.538

Question 12 requested respondents' views on the extent to which they agreed or disagreed with the dimensions used to evaluate the cost of assurance. Using a seven-point Likert scale, where 1 indicated "strongly disagree" and 7 indicated "strongly agree", respondents were requested to state their perception of two statements extracted from prior qualitative studies. The results in Table 6.11 below show that respondents agreed that obtaining external assurance is a costly decision. The mean score for the cost of obtaining external assurance was (5.338 out of 7) higher than the average score of the measurement scale (i.e. 4). Respondents viewed the decision to obtain external assurance as a financially costly decision, with a mean value of (5.43 out of 7). Besides, the process of obtaining external assurance is time-consuming achieved a mean score of (5.25 out of 7), which reflects that decision makers acknowledge the high cost of external assurance in the UK. In addition, the cost factor and associated indicators demonstrated no serious deviation from normality.

Table 6. 11: Descriptive statistics of the cost measure

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Cost	**105**	**1.00**	**7.00**	**5.338**	**1.191**	**-.688**	**.521**
1.Financially costly	105	1	7	5.43	1.329	-.933	.894
2. Time consuming	105	1	7	5.25	1.357	-.650	.092

The next section of question 12 asked respondents to indicate the extent to which they agreed or disagreed with three statements used as items to evaluate the role of internal audit in verifying the disclosed CSR information. A seven-point Likert scale was used, with 1 denoting "strongly disagree" and 7 denoting "strongly agree". As can be seen from Table 6.12 below, the mean score for the internal audit factor was (4.101 out of 7) which is slightly higher than the average score of the measurement scale (i.e. 4). This indicates that respondents' views on the role of internal auditors in verifying the disclosed CSR information were neutral. The higher mean value was recorded for the item indicating that the internal audit function is effective to verify the disclosed CSR information, with a mean value of (4.15 out of 7). Besides, mean values of (4.11 out of 7) were recorded, indicating that respondents neither agreed nor disagreed that obtaining assurance supplements the auditing work undertaken by internal auditors. The results therefore reveal that in the UK decision makers are neutral towards the role of internal audit in verifying the disclosed CSR information. In addition, the internal audit factor and associated indicators demonstrated no serious departure from normality.

Table 6. 12: Descriptive statistics of the internal audit measure

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Internal audit	**105**	**1.00**	**7.00**	**4.101**	**1.693**	**-.196**	**-.970**
1. The internal audit verifies CSR report	105	1	7	4.04	1.975	-.031	-1.300
2. The internal audit is effective	105	1	7	4.15	1.854	-.190	-1.019
3. Supplements internal audit work	105	1	7	4.11	1.852	-.235	-1.110

Respondents were asked to indicate the extent to which they agreed or disagreed with three statements used as items to assess the assurer's independence to verify the disclosed CSR information, using a seven-point Likert scale, with 1 expressing "strongly disagree" and 7 expressing "strongly agree". As shown in Table 6.13 below, the mean score for the assurer's independence factor is (5.161 out of 7) which is higher than the average score of the measurement scale (i.e. 4). Respondents believed that external assurers' providers are sufficiently independent to verify the disclosed CSR information, with a mean value (5.37 out of 7). In addition, respondents believed that external assurers rarely face management interference when verifying the disclosed CSR information, with a mean score (5.20 out of 7). Besides, presence of conflict of interest in the work of external assurance achieved a mean value of (4.91 out of 7). Table 6.13 reflects that decision makers in the surveyed firms acknowledge that external assurers are independent enough to perform the work of verifying the disclosed CSR information. In addition, examining the skewness and kurtosis revealed no severe normality violation for the factor and the three associated indicators.

Table 6. 13: Descriptive statistics of the assurer's independence measure

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Assurers Independence	**105**	**1.00**	**7.00**	**5.161**	**1.234**	**-.830**	**.953**
1. Assurers are sufficiently independent	105	1	7	5.37	1.402	-.925	.806
2. Rarely face interference from management	105	1	7	5.20	1.383	-.790	.663
3. Conflicts of interest are rarely present	105	1	7	4.91	1.557	-.633	-.196

The effect of following globally recognised CSR reporting guidelines was measured using four indicators. Respondents were asked to indicate the extent to which they believed that following globally recognised reporting guidelines reduces the importance of external assurance, using a seven-point Likert scale, with 1 indicating "strongly disagree" and 7 indicating "strongly agree". As presented in Table 6.14 below, the mean score for the following global reporting guidelines factor is (3.781 out of 7) which is less than the average score of the measurement scale (i.e. 4).

According to Table 6.14, following the GRI guidelines, IR framework, ISO, or other reporting guidelines achieved mean values of (3.8, out of 7), (3.65 out of 7), (3.78 out of 7) and (3.81 out of 7) respectively. It seems from Table 6.14 that decision makers in the surveyed firms acknowledge that adhering to various reporting guidelines is less likely to negate the importance of obtaining external assurance. Furthermore, analysis of the skewness and kurtosis of the factor and the four related indicators showed no serious normality violation.

Table 6. 14: Descriptive statistics of following a recognised CSR reporting guidelines measure

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Reporting Guidelines	**105**	**1.00**	**6.25**	**3.781**	**1.308**	**-.433**	**-.374**
1. Following the GRI guidelines	105	1	7	3.80	1.490	-.041	-.556
2. Following the IR framework	105	1	7	3.65	1.359	-.131	-.107
3. Obtaining ISO certification	105	1	7	3.87	1.475	-.206	-.658
4. Following other reporting guidelines	105	1	7	3.81	1.545	-.073	-.561

Table 6.15 below outlines the descriptive statistics of firm size measured by total assets (TA) and profitability measured by the return on total assets (ROA) variables extracted from the FAME database for use in the current research. As shown in Table 6.15, there is wide variation in the two financial measures in terms of the minimum, maximum, and mean values; in addition, potential outliers can be distinguished, which indicates that the data are not normally distributed within these two variables. It is noteworthy to highlight that this research selected the PLS-SEM because it does not presume data normality.

Table 6. 15: Descriptive statistics of firm size and profitability measures

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
1. Total Assets (in million GBP)	105	1.051	2941	57	303	8.594	80.504
2. Return on total assets	105	-237.4	53.66	-1.148	33.928	-5.023	29.806

6.5 Chapter Six summary

Chapter five outlined the processes whereby the empirical data collected from respondents and the FAME database were screened, cleaned, and assessed against outliers and normality. In addition, unidimensionality, validity and reliability of measures were assessed using the EFA. Finally, details of the descriptive statistical analysis were provided for each variable included in the current study.

Chapter Seven: Statistical analysis and results using PLS-SEM

7.1 Introduction

The previous chapter examined and prepared the data collected from the distributed questionnaires and the FAME database. The purpose of the present chapter is to examine the developed theoretical model and the research associated hypotheses presented in chapter 4 by means of PLS-SEM. PLSE-SEM is a second-generation statistical technique that simultaneously analyses multiple variables (Hair et al., 2017). The PLS path model involves two elements: the measurement model or "outer model" and the structural model or "inner model". The measurement model displays the relationships between the constructs and the associated items, while the structural model displays the relationships between the constructs (Hair *et al.*, 2011, 2017). Therefore, PLS-SEM assessment involves two separate assessments; first, the measures' reliability and validity should be evaluated and then the structural model's estimates should be assessed (Hair et al., 2011). The second section of the current chapter will evaluate the measurement model as the first step of assessing PLS-SEM. The third section will formally test the structural model and the related research hypothesis developed in chapter four.

7.2 Measurement model

The measurement model is intended to confirm that all latent variables and their associated indicators are reliable and valid to represent the constructs of interest, since it is pointless to examine the structural relationships with unreliable and/or invalid measurements (Hair *et al.*, 2011). The preliminary step to construct the measurement model is to identify all latent variables along with associated items that have to be embedded in the measurement model. All latent factors embedded in the measurement model will be reported in the following section.

7.2.1 Variables of the measurement model

Information on the latent factors of the measurement model will be attained from the analysis performed in the preceding chapter. As shown in Table 6.1, the measurement model will contain the four latent factors representing the decision to obtain external assurance, namely the perceived benefit, other stakeholders, institutional shareholders, and cost, and their associated items. Besides, as presented in Table 6.2, the model will embed the four factors representing decision makers perception, namely role of internal audit, assurers independence, following CSR reporting guidelines, and competition, with their associated items. In addition, the model will include the variables representing firm size and profitability as reported in Table 6.15. Finally, the variable representing assurance decision is a dummy variable coded 1 if the firm obtain external assurance and 0 otherwise. Figure 7.1 below shows the latent factors with associated items along with the single variables.

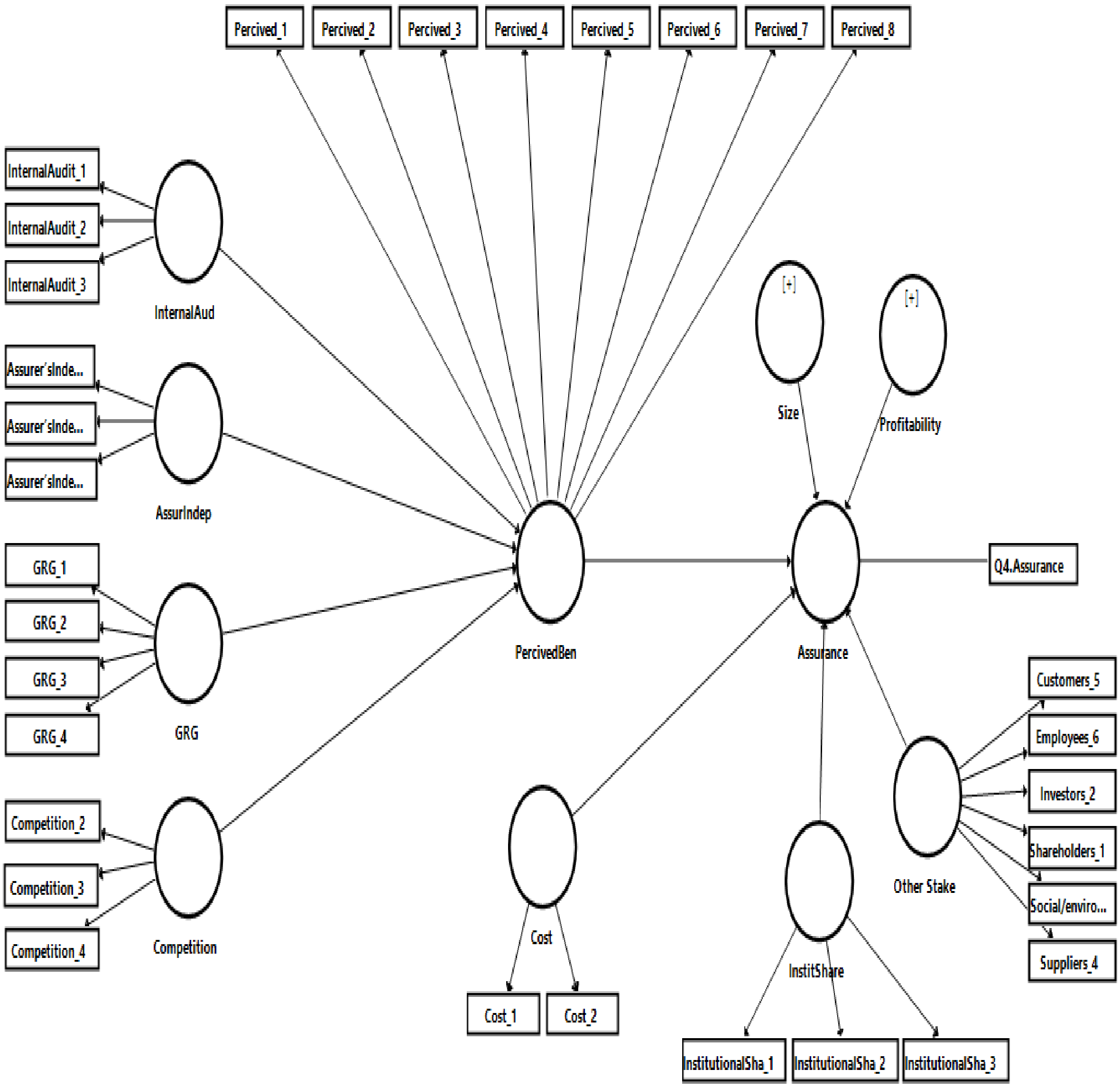

Figure 7.1: The inner and outer model

7.2.2 Evaluation of measurement model

7.2.2.1 Construct's reliability assessment

To assess a reflective measurement model, the internal consistency reliability is the first criterion to be evaluated (Hair *et al.*, 2017). As mentioned in the previous chapter (section 6.2.4), Cronbach's alpha is a traditional technique used for internal consistency. Cronbach's alpha estimation of reliability is based on the intercorrelation of multiple indicators on the construct. Cronbach's alpha assumes that all indicators are equally related to a construct. In general, Cronbach's alpha values should be higher than 70%. However, Cronbach's alpha is sensitive to the number of items in the construct and usually tends to underestimate the internal consistency (Hair *et al.*, 2017). Therefore, due to Cronbach's alpha limitations, prior research suggests the reliance on composite reliability to estimate constructs' internal consistency reliability (Hair *et al.*, 2011, 2017).

Table 7.1: Internal consistency reliability measure of constructs

Construct	Cronbach's Alpha	Composite Reliability	AVE
Assurance	1	1	1
Perceived benefit	0.936	0.947	0.693
Cost	0.730	0.810	0.692
Other Stakeholders	0.892	0.916	0.647
Institutional Shareholders	0.897	0.936	0.829
Internal audit	0.873	0.889	0.729
Assurer's independence	0.813	0.888	0.726
Competition	0.823	0.893	0.736
Global reporting guidelines	0.914	0.938	0.792
Profitability	1	1	1
Size	1	1	1

The composite reliability is the new criterion for evaluating constructs' internal consistency. Composite reliability covers the limitation of Cronbach's alpha by considering the different outer loadings of the indicators without assuming that all indicators are equally reliable (Hair *et al.*, 2017). Composite reliability is regarded as satisfactory for advanced research when the values range between 0.7 and 0.9, while values ranging between 0.6 and 0.7 are acceptable for exploratory research. Values above 0.95 are unlikely to be a valid measure of the construct (Hair *et al.*, 2017). Finally, values less than 0.6 signify a lack of internal consistency reliability.

Using SmartPLS software calculations, this research relies on both Cronbach's alpha and composite reliability measures to guarantee that the adopted measures are satisfactorily reliable. Hair *et al. (*2017) state that the true reliability usually lies among Cronbach's alpha and composite reliability. As shown in Table 7.1, the Cronbach's alpha and composite reliability values for all constructs are above the 0.70 threshold, which suggests sufficient reliability of the constructs.

7.2.2.2 Constructs convergent and discriminant validity assessment

Convergent validity evaluates the extent to which an indicator correlates positively with another indicator in the same construct (Hair *et al.*, 2017). The most common method to establish convergent validity is AVE. The AVE is defined as the mean value of the squared loading of the associated indicators to a construct (Hair *et al.*, 2017). An AVE value of ≥ 0.5 indicates that the construct explicates over half of the variance of its indicators, which is considered as an acceptable level of convergent validity. Conversely, when the value of AVE is less than 0.5, the implication is that more error remains without explanation in the items compared to the variance explained by the latent factor (Hair *et al.*, 2017). As can be seen from Table 7-1, all constructs achieved an AVE above the 0.5 threshold and therefore convergent validity was supported.

Furthermore, discriminant validity assesses the extent to which a latent factor is truly distinct from other latent factors by empirical standards, implying that a latent factor is unique from other latent factors in the model. (Hair *et al.*, 2017). There are two proposed methods to examine discriminant validity: first, examining the cross loading of the indicators; second, using the Fornell-Larcker criterion to compare the square root of the AVE values with the construct correlations (Hair *et al.*, 2017). By adopting the cross loading method, a discriminant validity problem occurs when the presence of cross loading is higher than the indicators' outer loading. However, the Fornell-Larcker criterion specifies that the square root of each construct's AVE should exceed its highest correlation with any other construct (Hair *et al.*, 2017).

Based on the cross-loading method, Table 7.2 shows the loading and cross-loading for every indicator. The result exhibits that all indicators have the highest loading with their corresponding construct and lower cross-loading with other constructs in the model. Next, the results of the Fornell-Larcker criterion assessment are presented in Table 7.3. The results show that the square roots of the AVEs for the reflective constructs in the current research exceed their correlation with other constructs in the model, thus indicating all latent variables in the model are truly unique from each other. Overall, cross-loadings and the Fornell-Larcker criterion offer support for the discriminant validity of constructs.

Table 7.2: Correlation matrix of latent variables and items

Indicators	1	2	3	4	5	6	7	8
Assurer'sIndependence_1	**0.90**	0.34	-0.22	-0.30	0.50	0.27	0.30	0.53
Assurer'sIndependence_2	**0.84**	0.28	-0.15	-0.15	0.40	0.28	0.17	0.38
Assurer'sIndependence_3	**0.82**	0.28	-0.18	-0.11	0.31	0.20	0.11	0.38
Competition_1	0.45	**0.92**	-0.20	-0.17	0.63	0.41	0.49	0.65
Competition_2	0.11	**0.80**	0.03	0.17	0.43	0.36	0.41	0.39
Competition_3	0.28	**0.86**	-0.05	-0.05	0.42	0.41	0.35	0.53
Cost_1	-0.23	-0.11	**0.99**	0.13	-0.34	0.01	-0.25	-0.16
Cost_2	-0.07	-0.03	**0.62**	0.14	-0.06	0.04	-0.18	-0.07
GRG_1	-0.21	-0.05	0.13	**0.92**	-0.25	0.11	-0.27	-0.34
GRG_2	-0.26	-0.10	0.11	**0.90**	-0.28	0.05	-0.25	-0.27
GRG_3	-0.09	0.04	0.13	**0.82**	-0.23	0.19	-0.23	-0.17
GRG_4	-0.22	-0.06	0.10	**0.92**	-0.28	0.11	-0.25	-0.30
InstitutionalSha_1	0.36	0.55	-0.22	-0.26	**0.91**	0.38	0.72	0.55
InstitutionalSha_2	0.50	0.54	-0.35	-0.30	**0.93**	0.32	0.63	0.51
InstitutionalSha_3	0.46	0.52	-0.34	-0.24	**0.89**	0.26	0.51	0.49
InternalAudit_1	0.23	0.26	0.02	0.20	0.19	**0.82**	0.14	0.11
InternalAudit_2	0.13	0.22	0.12	0.22	0.14	**0.77**	0.17	0.11
InternalAudit_3	0.31	0.50	-0.02	0.05	0.39	**0.96**	0.34	0.43
Shareholders_1	0.23	0.41	-0.24	-0.27	0.61	0.15	**0.87**	0.48
Investors_2	0.24	0.46	-0.22	-0.33	0.68	0.22	**0.92**	0.50
Social/environmental groups_3	0.27	0.40	-0.26	-0.32	0.55	0.36	**0.79**	0.45
Suppliers_4	0.12	0.33	-0.11	-0.19	0.46	0.25	**0.80**	0.34
Customers_5	0.13	0.35	-0.16	-0.08	0.47	0.26	**0.75**	0.38
Employees_6	0.09	0.41	-0.26	-0.02	0.45	0.31	**0.68**	0.39
Percived_1	0.56	0.51	-0.10	-0.38	0.45	0.31	0.41	**0.90**
Percived_2	0.49	0.60	-0.08	-0.24	0.44	0.35	0.44	**0.87**
Percived_3	0.47	0.56	-0.11	-0.34	0.49	0.34	0.45	**0.88**
Percived_4	0.41	0.49	-0.03	-0.31	0.47	0.33	0.46	**0.87**
Percived_5	0.36	0.47	-0.17	-0.20	0.47	0.35	0.45	**0.77**
Percived_6	0.28	0.50	-0.20	-0.25	0.46	0.17	0.40	**0.79**
Percived_7	0.33	0.53	-0.17	-0.08	0.51	0.29	0.45	**0.75**
Percived_8	0.47	0.52	-0.20	-0.26	0.51	0.26	0.50	**0.83**

(1) Assurer's Independence factor, (2) Competition factor, (3) Cost factor, (4) Global reporting guidelines factor, (5) Institutional Shareholders factor, (6) Internal audit factor, (7) Other Stakeholders factor, (8) Perceived benefit factor

Table 7. 3: Discriminant validity using Fornell-Larcker criterion

Construct	1	2	3	4	5	6	7	8	9	10	11
1 Assurer's independence	**0.85**										
2 Assurance	0.39	**1.00**									
3 Competition	0.36	0.32	**0.86**								
4 Cost	-0.22	-0.25	-0.11	**0.83**							
5 Global reporting guidelines	-0.23	-0.27	-0.06	0.13	**0.89**						
6 Institutional Shareholders	0.48	0.67	0.59	-0.33	-0.29	**0.91**					
7 Internal audit	0.30	0.18	0.46	0.01	0.12	0.35	**0.85**				
8 Other Stakeholders	0.24	0.56	0.48	-0.26	-0.28	0.68	0.31	**0.80**			
9 Perceived benefit	0.51	0.49	0.63	-0.15	-0.32	0.57	0.36	0.53	**0.83**		
10 Profitability	-0.06	0.07	0.14	0.06	-0.23	0.19	0.00	0.18	0.13	**1.00**	
11 Size	0.26	0.41	0.14	0.06	-0.35	0.24	0.16	0.29	0.27	0.24	**1.00**

The results of the reflective measurement model presented above indicate that all assessment criteria for the measurement model were met. The model measures passed reliability and validity tests, which allowed this research to examine the structural model and the developed hypothesis.

7.3 Structural model

After confirming that the constructs included in the model are reliable and valid, the next stage involves the structural model ("inner model") evaluation. This section proceeds to test the proposed hypothesis developed in the model presented in chapter 4. The assessment of the PLS-SEM includes the assessment of the statistical significance and relevance of the path coefficients, the coefficient of determination R^2 to measure the variance explained in each of the endogenous variables, the f^2 effect size to examine the constructs' relevance in describing certain endogenous constructs, the predictive relevance Q^2 of the path model (Hair *et al.*, 2017). However, a collinearity test among each set of predictor variables should be performed before evaluating the structural model (Hair *et al.*, 2017).

7.3.1 Collinearity test

Before assessing the structural relationships, a collinearity test is conducted between the predictor constructs in the model in order to ensure that the regression results are not biased (Hair et al., 2019). The collinearity test is necessary because the estimation of path coefficients is built on OLS regressions of each endogenous construct on its predictor construct. Thus, any critical level of collinearity between predictor constructs might yield meaningless results (Hair et al., 2017). Multicollinearity occurs when two or more predictor constructs are highly inter correlated. In this research, testing the structural model for collinearity issues is achieved through the variance inflation factor “VIF” values of all sets of exogenous latent variables in the structural model. All VIF values should be less than the threshold of 5 to ensure there are no critical collinearity issues among the predictor constructs (Hair et al., 2017). Specifically, the following variables were tested for collinearity: (1) Cost, Institutional Shareholders, Other Stakeholders, Perceived benefit, Profitability and Size as predictors of Assurance; (2) Assurer’s independence, Competition, Global CSR reporting guidelines, and Internal audit as predictors of Perceived benefit. As shown in Table 7.4, none of the predictor constructs have a VIF value higher than the critical value of 5 and, more precisely, none have a VIF of more than 3.00, which is similar to the ideal VIF values suggested by Hair et al. (2019). Therefore, since no critical collinearity issues were identified between the predictor constructs in the model, analysis of the structural model can proceed.

Table 7. 4: Inner VIF Values in the Structural Model

Assurance	VIF	Perceived benefit	VIF
Cost	1.168	Assurer’s independence	1.257
Institutional Shareholders	2.243	Competition	1.362
Other Stakeholders	2.032	Global reporting guidelines	1.102
Perceived benefit	1.600	Internal audit	1.356
Profitability	1.096		
Size	1.180		

7.3.2 Path Coefficients

The path coefficient is an estimation of the hypothesised relationships between the constructs in the structural model (Hair et al., 2017). The path coefficients have standardised values that range from –1 to +1; any estimated path coefficient very close to +1 reveals a strong positive association among the constructs, while a coefficient value closer to -1 indicates strong negative relationships. However, a path coefficient close to zero indicates weaker or insignificant association between constructs (Hair et al., 2017).

PLS-SEM presumes that the data are not normally distributed; therefore, the bootstrapping technique, a non-parametric test, is applied to assess the estimated path coefficient level of significance. The standard error acquired by bootstrapping determines whether a coefficient is significant or not. The bootstrap standard error allows for the computation of empirical t values and p values. In order to state that a coefficient is statistically significant, the t value should be higher than the critical value at a particular significance level (i.e., 1.96 is the critical value at a 5% significance level). In addition, the majority of researchers utilise p values to determine the degree of significance. To conclude that the coefficient is statistically significant, the p-value should be less than the assumed significance level (i.e. 5% significance level).

Furthermore, the bootstrap confidence interval may also be utilised to examine if a path coefficient differs considerably from zero. To conclude that a path coefficient has a significant effect using the bootstrap confidence intervals, the confidence intervals of the path should not include zero, thus rejecting the hypothesis that assumes the path coefficient equals zero. Hair et al. (2017) suggest using a 5000 bootstrap sample to guarantee the stability of the results obtained. Therefore, this research relies on a 5000 bootstrap sample instead of the default number of 500 samples in SmartPLS 3 (Ringle *et al.*, 2015).

Analysis of the structural model of this research was conducted using SmartPls 3 software and adopting the path weighting scheme in the basic setting options, where maximum iterations are “300” and the stop criterion is 7. In addition, by applying the bootstrapping procedure, a 5000 subsamples option was adopted, and the complete bootstrapping option was selected. In the advanced settings, the confidence intervals options “Bias-Corrected and Accelerated (BCa) Bootstrap” option were followed, with “two-tailed” test type and a significance level of 0.05.

7.3.3 Hypotheses testing

This research utilises three stages to test the developed hypotheses to gain more insight into the proposed relationships in the model. In the first stage, as shown in Figure 7.2 below, the model included the following variables: “internal audit, assurers independence, following global CSR reporting guidelines and competition”, as well as “the perceived benefit and cost” with the control variables “size and profitability”, in order to test the argument of the rational choice theory that individuals behave rationally based on their preferences and constraints before taking a decision (see section 4.2.1). In the second stage, the model includes the variables associated with stakeholder theory, namely the theory’s assumption that firms’ actions are associated to the demand of influential stakeholders (see section 4.2.2). The included variables are “the other stakeholders and the institutional shareholders” with the control variables “size and profitability” as shown in Figure 7.3. Finally, the structural model is tested with all the variables included, to test the effect of combining the effects of the variables associated to both the rational choice theory and stakeholder theory, as indicated in Figure 7.4 below.

7.3.3.1 Stage one: the main effect of factors associated to the rational choice theory

Stage one aims to examine the association between the variables in relation to the rational choice theory as shown in Figure 7.2, with the figure indicating the path coefficients and p-value of the inner model. The first hypothesis of this research, H1, predicts a direct positive relationship between decision makers’ perceived benefit of obtaining assurance and the final decision to purchase external assurance. The results reveal the perceived benefit factor to have a strong positive relationship with the assurance factor ($\beta = 0.455$, $p < 0.01$). This apparently supports H1.

The second hypothesis, H2, indicates that the cost of assurance negatively influences the decision to obtain external assurance, and the results reveal that the cost of assurance ($\beta = -0.212$, $p < 0.10$) is negatively and statistically significant (at 0.10 level). This provides partial support for H2. Meanwhile, firm size shows a strong positive association with the decision to obtain external assurance ($\beta = 0.209$, $p < 0.01$). However, firm’s profitability was found to have a negative but insignificant relationship with purchasing assurance decision ($\beta = -0.113$, $p = 0.151$), as can be seen in Table 7.5.

In addition, four determinant factors were predicted to have a direct impact on decision makers' perceived benefit of obtaining assurance, namely internal audit, assurer's independence, following global CSR reporting guidelines, and competition. As indicated by Hypothesis 3, the perception of the capability of internal auditors to assure CSR reports will negatively influence the perceived benefit of external assurance; however, the results reported in Table 7.5 ($\beta = 0.090$, $p = 0.285$) do not support the proposed hypothesis. Further, decision makers' perception of the independence of external assurers is assumed to positively influence their perceived benefit of external assurance as proposed in Hypothesis 4. Inspection of the results reported in Table 7.5 reveals a strong positive impact of decision makers' perception of the assurer's independence on the perceived benefit ($\beta = 0.261$, $p < 0.01$). Therefore, this result supports H4.

Hypothesis 5 predicts a direct impact of adopting a globally recognised CSR reporting framework on the perceived benefit. This hypothesis is strongly supported ($\beta = -0.241$, $p < 0.01$) as can be seen from Table 7.5. The last hypothesis associated to the rational choice theory perspective, H6, predicts that firm's competition has a positive influence on the perceived benefits of external assurance. The empirical results in Table 7.5 show that firm's competition has a strong positive effect on the perceived benefit as proposed in the literature ($\beta = 0.480$, $p < 0.01$). Therefore, H6 is strongly supported.

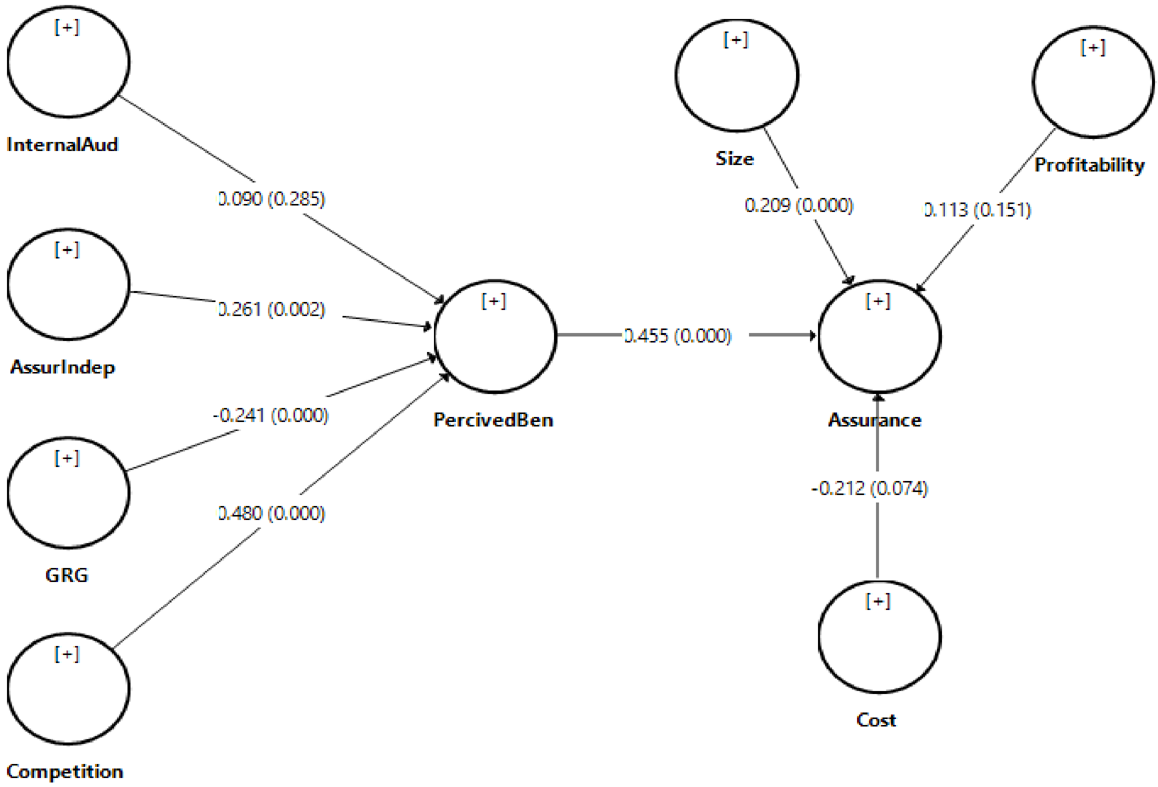

Figure 7. 2: Bootstrapping results of the structural model "stage one"

Table 7. 5: Model path coefficients "stage one"

Relationships	**Path Coefficients**	**Standard Deviation**	***t* Values**	***p* Values**	**95% Confidence Intervals**	**Sig**
InternalAud -> PerceivedBen	0.090	0.081	1.108	0.285	[-0.074, 0.237]	i/s
AssurIndep -> PerceivedBen	0.261	0.084	3.084	0.002	[0.094, 0.420]	***
GRG -> PerceivedBen	-0.241	0.066	3.642	0.000	[-0.364, -0.100]	***
Competition -> PerceivedBen	0.480	0.072	6.671	0.000	[0.335, 0.618]	***
PerceivedBen -> Assurance	0.455	0.075	4.931	0.000	[0.207, 0.502]	***
Cost -> Assurance	-0.212	0.125	1.710	0.074	[-0.338, 0.334]	*
Profitability -> Assurance	-0.113	0.078	0.621	0.151	[-0.201, 0.101]	i/s
Size -> Assurance	0.209	0.076	4.437	0.000	[0.182, 0.475]	***
	R^2	**Q^2**				
Assurance	0.370	0.322				
Perceived Benefit	0.543	0.359				

t values and *p* values significance level for two-tailed test t >1.65 (* $p \leq 0.10$), T> 196 (** $p \leq 0.05$), T>2.75 (*** $p \leq 0.01$)

7.3.3.2 Stage two: the main effect of factors related to the stakeholder's theory

Stage two aims to examine the relationships between constructs in relation to stakeholder theory. Two latent factors and two control variables were predicted to have a direct impact on obtaining assurance, namely other stakeholders and institutional shareholders, as well as size and profitability, as shown in Figure 7.3 below. As indicated by hypothesis 7 of this research, the decision to purchase external assurance statement is positively influenced by the demand of other stakeholders; however, the results reported in Table 7.6 do not support the proposed hypothesis ($\beta = 0.134$, $p = 0.205$). Further, the decision to obtain assurance is assumed to be positively influenced by demand of institutional shareholders as proposed in Hypothesis 8. Inspection of the results reported in Table 7.6 reveals a strong positive impact of institutional shareholders on the decision to purchase external assurance ($\beta = 0.542$, $p < 0.01$). Therefore, H8 is supported by this result. Firm size demonstrates a strong positive association with obtaining external assurance ($\beta = 0.276$, $p < 0.01$), while firm's profitability shows a negative significant (at 0.10 level) association with obtaining assurance ($\beta = -0.124$, $P = 0.086$), as can be seen in Table 7.6 and Figure 7.3.

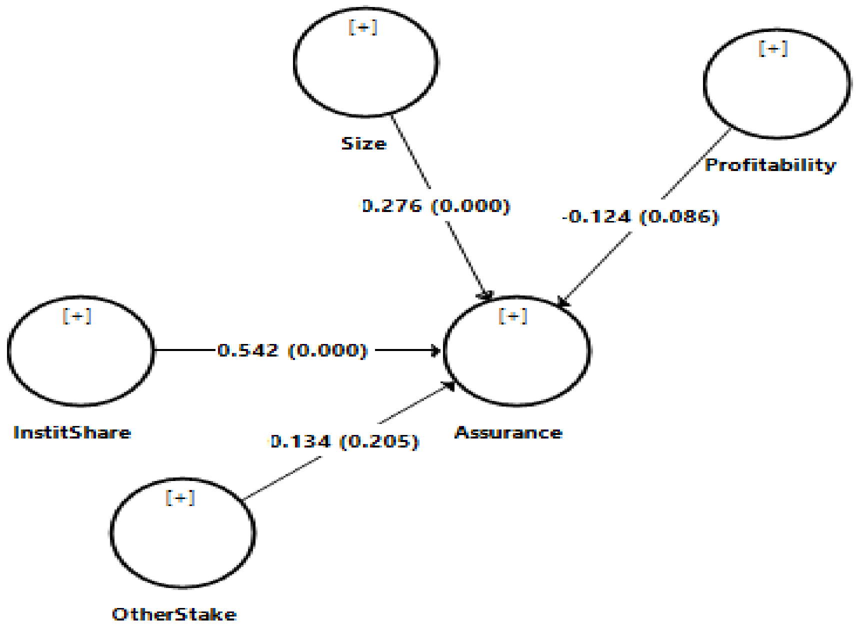

Figure 7.3: Bootstrapping results of the structural model "stage two"

Table 7.6: Model path coefficients "stage two"

Relationships	Path Coefficients	Standard Deviation	*t* Values	*p* Values	95% Confidence Intervals	Sig
InstitShare -> Assurance	0.542	0.103	5.259	0.000	[0.334, 0.737]	***
OtherStake -> Assurance	0.134	0.105	1.269	0.205	[-0.062, 0.351]	i/s
Profitability -> Assurance	-0.124	0.072	1.715	0.086	[-0.270, 0.012]	*
Size -> Assurance	0.276	0.076	3.615	0.000	[0.115, 0.417]	***
	R^2	**Q^2**				
Assurance	0.546	0.491				

t values and *p* values significance level for two-tailed test t >1.65 (* p ≤ 0.10), T> 196 (** p ≤ 0.05), T>2.75 (*** p ≤ 0.01)

7.3.3.3 Stage three: the combined effect of factors associated to the rational choice theory and stakeholder's theory

The final stage of the model aims to examine the association between all constructs included to test both the rational choice theory and stakeholders, as shown in Figure 7.4. It is worth mentioning that including all the variables in the model might provide greater insight towards understanding the nominated variables to influence the decision to obtain external assurance.

Running the model with inclusion of all the variables is shown in Figure 7.4 and Table 7.7 below. The results revealed that the factors influencing the perceived benefit, namely the role of internal audit, assurers' independence, following global CSR reporting guidelines, and firms' competition, remained constant and no significant variations were noticed, as shown in Table 7.5 and 7.7. Interestingly, however, including all constructs in the model created a massive change in the generated results related to factors influencing the decision to obtain external assurance. For instance, while in the first stage the perceived benefit was found to have a strong positive association with obtaining assurance (β = 0.455, p < 0.01) and the cost was found to have a negative one (β = -0.212, p < 0.10), as reported in Table 7.5, combining all constructs produced different results in terms of these two variables, with perceived benefit revealed to have no influence on obtaining assurance (β = 0.080, p = 0.303) and similarly the cost constructs were revealed to have no impact on obtaining assurance (β = -0.060, p = 0.467).

Further, the results show that the other stakeholder construct remains constant with no impact on obtaining assurance and the institutional shareholders construct remains constant with a strong positive impact on obtaining assurance ($\beta = 0.492$, $p < 0.01$). Remarkably, Hypothesis 9 of this research predicts that the demand of influential stakeholders is likely to negate the impact of cost-benefit analysis on purchasing assurance. The results reveal that the demand of influential stakeholders, in particular the institutional shareholders, negates the impact of the cost benefit analysis. Therefore, H9 is supported by this result. In addition, after including all constructs the influence of the control variables[4] for firm size remained constant, while firms' profitability became negatively significant ($\beta = -0.117$ at 0.10 level).

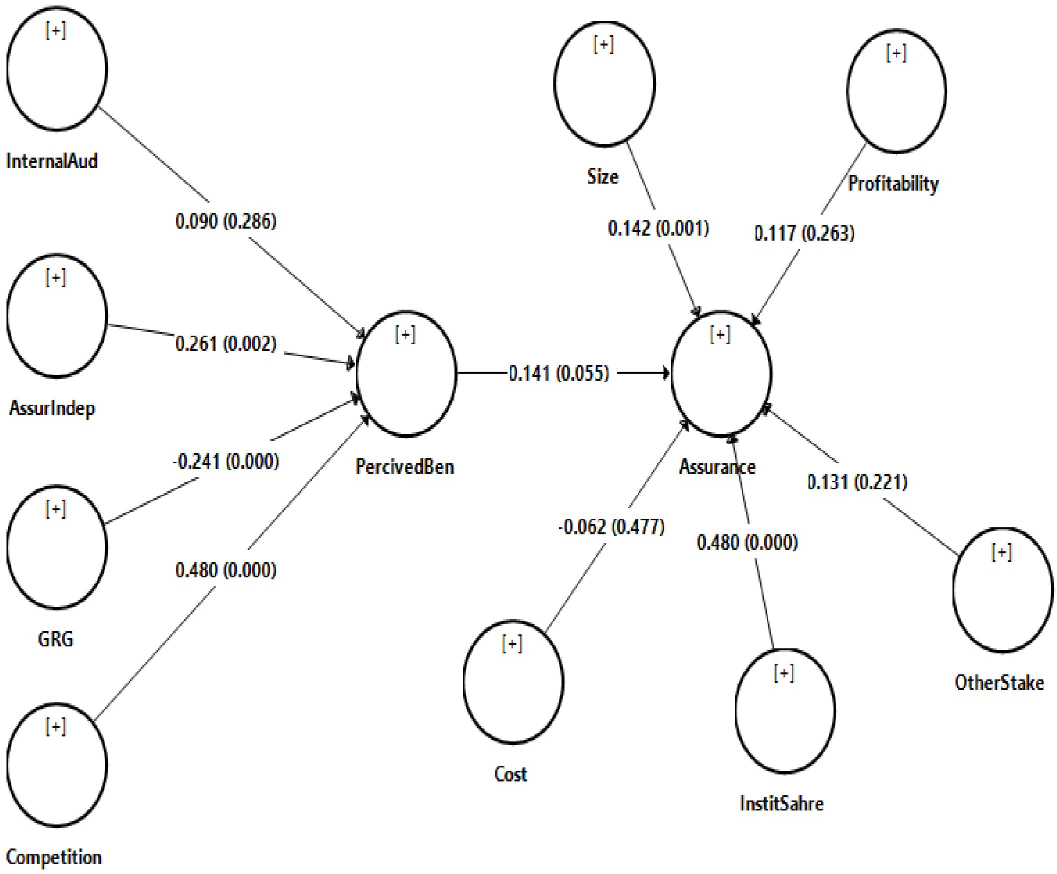

Figure 7. 4: Bootstrapping results of the structural model "stage three"

[4] Given that the research sample is composed of 82 firms listed in the main market and 23 firms listed in the Aim market, a dummy variable which combined the Main firms and Aim firms was added to control the perceived benefit construct and the assurance construct; however, the significance of the results did not change (see Appendix 3).

Table 7. 7: Model path coefficients “stage three”

Relationships	Path Coefficients	Standard Deviation	*t* Values	*p* Values	95% Confidence Intervals	Sig
InternalAud -> PerceivedBen	0.090	0.082	1.088	0.277	[-0.08, 0.246]	i/s
AssurIndep -> PerceivedBen	0.261	0.084	3.085	0.002	[0.095, 0.427]	***
GRG -> PerceivedBen	-0.241	0.067	3.588	0.000	[-0.36, -0.093]	***
Competition -> PerceivedBen	0.480	0.072	6.630	0.000	[0.329, 0.617]	***
PerceivedBen -> Assurance	0.080	0.078	1.031	0.303	[-0.068, 0.236]	i/s
Cost -> Assurance	-0.060	0.083	0.728	0.467	[-0.181, 0.195]	i/s
InstitShare -> Assurance	0.492	0.110	4.467	0.000	[0.277, 0.705]	***
OtherStake -> Assurance	0.109	0.106	1.023	0.306	[-0.104, 0.310]	i/s
Profitability -> Assurance	-0.117	0.069	1.703	0.089	[-0.263, 0.008]	*
Size -> Assurance	0.275	0.081	3.407	0.001	[0.122, 0.433]	***
	R^2	**Q^2**				
Assurance	0.552	0.470				
Perceived Benefit	0.543	0.359				

t values and *p* values significance level for two-tailed test T >1.65 (* $p \leq 0.10$), T> 196 (** $p \leq 0.05$), T>2.75 (*** $p \leq 0.01$)

Table 7. 8: Summary table of hypotheses testing

No.	Hypothesis	Expected results	Empirical results
H1:	The decision to purchase an assurance statement to verify the CSR reports is positively influenced by the perceived benefit of hiring an external assurer.	(+)	Supported
H2:	The decision to purchase an assurance statement to verify the CSR reports is negatively influenced by the cost of assurance.	(-)	Partial Support
H3:	The perception of the capability of internal auditors to assure CSR reports will influence the perceived benefits of external assurance (i.e. a positive perception of the capability of internal auditors will negatively influence the perceived benefits of external assurance).	(-)	Rejected

H4:	Decision makers' perception of the independence of external assurers will influence their perceived benefits of external assurance (i.e. a perception of external assurer's independence will positively influence the perceived benefits of external assurance).	(+)	Supported
H5:	Adopting a globally recognised CSR reporting framework has a direct impact on the perceived benefits of external assurance.	(+/-)	Supported (-)
H6:	Firm competition has a positive influence on the perceived benefits of external assurance.	(+)	Supported
H7:	The decision to purchase an external assurance statement to verify the CSR reports is positively influenced by the demand of other stakeholders.	(+)	Rejected
H8:	The demand of institutional investors for external CSR assurance has a stronger positive impact (compared to other influential stakeholder groups) on the decision to purchase an assurance statement to verify the CSR reports.	(yes)	Supported
H9	The demand of influential stakeholders for external assurance is likely to negate the effect of the cost-benefit analysis outcome on the decision to obtain external assurance.	(yes)	Supported

7.3.4 Coefficient of Determination (R^2)

The coefficient of determination (R^2 value) is the most often used measure for evaluating structural models (Hair *et al.*, 2017). The R^2 measures the model's predictive power and represents the amount of variance in the endogenous latent variables explained by the related exogenous latent variables. The R^2 values represent a measure of in-sample predictive power and range from 0 to 1, and the higher the level of R^2, the greater the signified level of predictive accuracy (Hair *et al.*, 2017, 2019b). It is worth noting that there is no threshold for an acceptable R^2 value, as it highly relies on the research discipline and model complexity (Hair et al., 2017). However, Hair et al. (2019b) suggest that R^2 values of 0.75 for endogenous constructs should be considered substantial, 0.50 moderate, and 0.25 weak. Therefore, following the Hair et al. (2019b) suggestion, the R^2 values of the perceived benefit and assurance reported in stage one were 0.543 and 0.370, respectively, as can be seen in Table 7.5. This means that the exogenous latent variables "internal audit, assurer's independence, following CSR reporting guidelines and competition" were able to account for 0.543 of the variance of the perceived benefit. Moreover, the independent variables "cost and benefit" explained 37 per cent of the total variance of the endogenous construct "assurance decision". In stage two of the analysis, the reported R^2 value of the assurance decision was 0.546, which implies that other stakeholders and institutional shareholders were able to account for over 50% of variance of the dependent variable "assurance decision".

The R^2 values of the two endogenous constructs in stage three of this research, namely the Perceived benefit construct and Assurance construct, can be considered moderate since the documented R^2 values were 0.543 and 0.552, respectively, as shown in Table 7.7. The R^2 value indicates that exogenous variables were able to account for over 50% of variance in the endogenous variables, which is almost similar to the finding by Liao *et al*. (2018) that the R^2 of assurance was 0.0548 and close to the finding by Clarkson *et al*. (2019) of an R^2 value of 0.486. Therefore, the exogenous constructs in this research can be considered good predictors of the endogenous constructs.

7.3.5 Effect Size (f^2)

To assess further the coefficient of determination (R^2) values of all the endogenous latent variables in the model, the change in the R^2 values when a particularised exogenous variable is excluded from the model can be used to examine whether the excluded exogenous variable has a magnitude impact on the endogenous variable (Hair *et al.*, 2017). This measure refers to the effect size f^2. Therefore, the effect size f^2 allows evaluating the contribution of an exogenous construct on an endogenous construct's R^2 values (Hair *et al.*, 2017). Guidance for assessing f^2 is that values less than 0.02 of the exogenous constructs indicate no effect on the endogenous constructs. In contrast, f^2 values of 0.02 represent small, 0.15 represent medium, and 0.35 represent large effects on the endogenous constructs (Hair *et al.*, 2019b).

Table 7.9 shows the f^2 values for all combinations of endogenous constructs and associated exogenous constructs. The results of the effect size in the first stage revealed that competition has a large effect size of 0.369 on perceived benefit. In addition, assurer's independence and following global reporting guidelines has a medium effect size of 0.118 and 0.116, respectively, on the perceived benefit construct. In contrast, the internal audit has no effect on perceived benefit (0.013). Further, the results show that the perceived benefit has a medium effect size of 0.192 on assurance. The cost construct has a small effect size of 0.07 on the assurance construct.

Furthermore, the results of the effect size in the second stage show that the other stakeholders construct has a small effect size of 0.02, while the institutional shareholders construct has a relatively large effect size of 0.343 on the assurance decision. The third stage includes examining the effect size of all constructs in the model and the results reveal that the institutional shareholders construct has a medium effect size of 0.241 on assurance and remarkably reduces the effect size of perceived benefit, cost, and other stakeholders on the assurance construct.

Table 7. 9: Results of Effect Size f^2

Endogenous construct	**Predictor constructs**	**Effect size (f^2) Stage 1**	**Effect size (f^2) Stage 2**	**Effect size (f^2) Stage 3**
Perceived benefit	Internal audit	0.013		0.013
	Assurer's independence	0.118		0.118
	Global reporting guidelines	0.116		0.116
	Competition	0.369		0.369
Assurance	Perceived benefit	0.192		0.009
	Cost	0.07		0.007
	Other Stakeholders		0.020	0.013
	Institutional Shareholders		0.343	0.241
	Profitability	0.003	0.031	0.028
	Size	0.158	0.147	0.144

7.3.6 Blindfolding and Predictive Relevance (Q^2)

In addition to evaluating the coefficient of determination R^2 values for the model's in-sample predictive accuracy, examining Stone-Geisser's Q^2 value is also necessary to assess the model's out of sample predictive power (Hair *et al.*, 2019b). Stone-Geisser's Q^2 assumes that the model must sufficiently predict each endogenous latent variable's indicators (Hair et al., 2011). The Q^2 value is calculated using the blindfolding procedure, a sample reuse technique that removes part of the data in the endogenous construct's indicators and uses the remaining data points systematically to estimate parameters (Avkiran and Ringle, 2018). The blindfolding procedure is applied only to dependent latent variables with reflective indicators and dependent single item constructs (Hair et al., 2017). Therefore, the blindfolding technique is appropriate to be applied by this research as this research uses dependent reflective latent variables and endogenous single item constructs.

It is worth noting that Q^2 values larger than zero indicate that the model has predictive relevance for the dependent construct and the associated reflective indicators. In contrast, Q^2 values of zero and below imply a lack of predictive relevance. Hair et al. (2017) suggest using a higher omission distance between 5 and 10, where the number of valid observations divided by the chosen omission distance is not an integer. An omission distance of 8 is used in this research to test the path model's predictive relevance. As shown in Tables 7.5, 7.6 and 7.7, the results from the blindfolding procedure and relying on the cross-validated redundancy measure recommended by Hair et al. (2011) show that the Q^2 values for the perceived benefit construct and assurance construct are considerably above zero, which supports the model's predictive relevance in terms of the dependent variables.

7.4 Chapter seven summary

This chapter introduces the research findings produced from the conducted analysis. First, the chapter presents the measurement model analysis and assessment regarding the reliability and validity of the research constructs. Beyond the measurement model assessment, this chapter introduces the results of the structural model analysis, including path coefficients, the coefficient of determination (R^2), effect size (f^2) and predictive relevance (Q^2) of the model.

Chapter eight: Discussion

8.1 Introduction

The findings obtained from the measurement and structural model were reported in the previous chapter. In this chapter, the reported findings of the proposed hypotheses will be discussed in greater depth to allow the researcher to answer the research questions and meet the study's aim and objectives. The hypotheses were developed and tested in order to identify the associations between the factors influencing the perceived benefit of assurance and the factors influencing the decision to obtain external assurance. A summary of the results generated from hypotheses testing is presented in Table 7.8 (see subsection 7.3.3.3). Section 8.2 will focus on examining the extent of adopting external assurance in the UK listed firms. Section 8.3 highlights the factors influencing the decision to obtain external assurance. Finally, section 8.4 presents a summary of the chapter.

8.2 The extent to which UK listed firms purchase assurance.

This section addresses the first research question: To what extent do UK listed firms purchase external assurance for their CSR report? It is argued that firms are increasingly seeking assurance statements of their CSR reports worldwide (Clarkson *et al*., 2019; Farooq and de Villiers, 2017). This research reveals that out of 105 UK listed firms, only 42 (40%) firms have obtained external assurance, as shown in Figure 6.1 (see subsection 6.4.1). Interestingly, in the same context, Al-Shaer and Zaman(2018) found that only (18%) of companies listed in 2012 in the UK FTSE350 have obtained external assurance for their CSR reports, which would imply that there is a noticeable movement toward obtaining assurance among listed firms in the UK context. The UK Corporate Governance Code states that companies should describe and communicate the sustainability model to users and maintain a successful relationship based on trust, transparency and integrity with stakeholders to succeed in the long term (FRC, 2018). This may indicate that UK companies are complying more with the latest UK Corporate Governance Code (2018). In comparison to other contexts, the current findings are higher than a finding reported in the Chinese context, where Liao *et al.* (2018) found that only (5.45%) of Chinese listed firms obtained external assurance in 2012. In addition, Peters and Romi (2015) document that only (13%) of all U.S. sustainability reports issued in 2010 obtained external assurance. However, the current findings are lower than in the case of Finnish listed firms. Dutta (2019), over an 8-year period, found that (57%) of Finnish listed firms obtained external assurance for their CSR disclosures. Further, Hassan *et al.*(2020) report that (61%) of Bangladeshi firms listed in the Dhaka Stock Exchange in 2015 obtained external assurance for their CSR disclosures. Overall, the findings imply that obtaining external assurance is still limited among UK listed firms and further investigation is required to understand why some firms obtain external assurance while others do not.

8.3 Factors influencing the decision to purchase external assurance

This section provides a detailed discussion of the findings obtained in the preceding chapter in relation to the hypotheses associated with the factors influencing the decision to obtain external assurance. More precisely, this section will answer the second and third research questions formulated in chapter one which investigate the factors influencing the decision to purchase external assurance and the factors influencing the perceived benefit of external assurance. The discussion will proceed in three stages. First, the set of hypotheses associated to purchasing assurance based on the cost benefit analysis will be further explored in addition to the hypotheses associated to the perceived benefit of external assurance, through the lens of rational choice theory. Second, the set of hypotheses associated with obtaining assurance will be discussed based on stakeholder theory. Third, in the final stage, the complete set of hypotheses, H1-H9, as presented in Table 4.1 (see section 4.4), will be examined through the impact of decision makers' rationality and the associated cost-benefit analysis in combination with the effect of influential stakeholders to further investigate the factors influencing the decision to obtain external assurance.

8.4.1 The rationality of obtaining assurance

As mentioned earlier in section (4.2.1), the fundamental premise of rational choice theory is that managers do not randomly take action. Instead, they rationally use a logical decision-making process by considering the benefit and cost of any act and then choosing the option that will provide the greatest benefit (Zey, 2014). Prior research implicitly suggests that the decision to purchase external assurance is subject to cost benefit analysis (Hassan *et al*., 2020; Jones and Solomon, 2010; Park and Brorson, 2005; Simnett *et al*., 2009). Therefore, relying on the rational choice theory, this research presumes that the decision to obtain assurance is subject to cost-benefit analysis whereby rational decision makers consider the potential benefit of assurance and the associated cost. Consequently, decision makers' decision whether or not to purchase external assurance is likely to be influenced by their calculation of the benefit and cost. This section offers a detailed discussion of the findings attained in chapter seven in relation to the hypotheses related to the role of the perceived benefit and cost of assurance in impacting the decision to obtain external assurance. In addition, taking into consideration the importance of the perceived benefit of external assurance in the purchase decision, this section will also discuss the generated results regarding four determinants factors, namely the internal audit, assurers independence, following CSR reporting guidelines, and competition, which were presumed to impact the perceived benefit in order to better understand their impact on the perceived benefit of external assurance and to elucidate the process through which these determinants have an impact on assurance decisions (i.e. through perceived benefits). This implies that this section will focus on hypotheses H1-H6 as shown in Table 4.1 (see section 4.4).

8.4.1.1 The perceived benefit and cost of assurance

Prior literature indicates that purchasing external assurance provides a number of benefits to the reporting firms, such as enhancing the disclosed information's credibility and improving the internal reporting system (O'Dwyer and Owen, 2005; Simnett *et al.*, 2009; Bebbington *et al*, 2014; Cho *et al.*, 2014; Liao *et al.*, 2018; Haider and Nishitani, 2020). However, simultaneously, purchasing assurance requires additional costs to be incurred by the purchasing firms (Hassan *et al*., 2020; Park and Brorson, 2005; Simnett *et al*., 2009). This research proposed that since purchasing external assurance is a voluntary practice that is supposed to bring a number of benefits to the reporting firm and is moreover a costly practice, rational managers are more likely to obtain assurance after evaluating the associated costs and benefits.

In line with the theoretical argument leading to H1 and H2, the descriptive statistics presented in Table 6.7 (see subsection 6.4.2) showed that respondents agreed strongly with several possible incentives for obtaining assurance, with a mean value of 5 out of 7 for all items. Thus, participants' attitudes emphasise the importance of obtaining external assurance from an accountability and marketing perspective. In addition, the statistical results of the questionnaire analysis support a direct positive relationship between the perceived benefit and the decision to obtain external assurance; thus, H1 has been accepted. The result shows a strong link between the perceived benefit of external assurance and the decision to obtain external assurance from decision makers' point of view. This finding reveals that the respondents believe obtaining assurance is the key indicator for enhancing a firm's image and accountability. The findings may also indicate that if decision makers are more aware about the accountability issues, they will obtain external assurance. Furthermore, the results confirm the findings of Jones and Solomon (2010) and Park and Brorson (2005), who interviewed some CSR managers/representatives and found that decision makers are more willing to obtain external assurance if they positively envisage the potential benefit of external assurance. The results imply that the perceived benefit of external assurance is an important factor that positively influences the decision to purchase external assurance. This finding goes along with *Hodge et al*. (2009) who document that purchasing assurance improves users' perception of the sustainability report, based on a survey of 145 students enrolled in an MBA programme in Australia. In a similar vein, using data from 72 manufacturing firms listed on Bursa Malaysia, Darus *et al.* (2014) document that CSR representatives clearly perceive the benefits of external assurance. Thus, the crucial role of the perception of decision makers should be prioritised in the agenda of corporate governance reform.

On the other hand, the presumption that obtaining external assurance is costly might have a negative influence on the decision to purchase assurance, as proposed in H2. Most of the prior quantitative research implicitly refers to the fees of purchasing assurance as an important factor that might discourage firms from obtaining assurance; however, no empirical findings were reported regarding the impact of the cost on obtaining assurance (Cho *et al*., 2014; Hassan *et al*., 2020; Kend, 2015; Kılıç *et al*., 2021; Kolk and Perego, 2010; Simnett *et al*., 2009). In addition, the qualitative based studies clearly found that cost of assurance is one of the main impediments to obtain assurance (Briem and Wald, 2018; Jones and Solomon, 2010; Park and Brorson, 2005; Sawani *et al*., 2010). The statistical findings of this research partially support the proposed direct negative impact of the cost of assurance on the decision to purchase external assurance; therefore, H2 has been accepted. This finding corroborates prior qualitative findings that the cost of assurance is one of the most determinant factors for obtaining external assurance. This implies that decision makers take into account the cost of assurance when deciding whether to obtain external assurance for their CSR disclosures; in addition, it seems that the direct assurance fees and other costs associated with the management time required to facilitate the process of obtaining assurance can negatively impact the decision to purchase external assurance.

In short, the above findings are consistent with the rationality perspective that rational managers calculate the potential benefit and cost of action and then choose the best possible action. Though obtaining assurance might bring potential benefits to the reporting firms from decision makers' perception, it is necessary to take into account the cost of assurance. These results confirm the findings of previous qualitative studies that highlight the role of managers' perception towards the benefit of assurance and the associated cost in the decision to purchase external assurance (Briem and Wald, 2018; Jones and Solomon, 2010; Park and Brorson, 2005). Further, these findings validate the argument that obtaining assurance is subject to cost-benefit analysis by rational managers and offer insights to understand the influence of the perceived benefit and cost of assurance and further explain why some firms obtain external assurance while others do not. In addition, the finding supports the recommendation by the Turnbull report (2005) for the board of directors to consider the cost and benefit relative to constituting a sound system of relevant controls (Zaman, 2001; FRC, 2005).

8.4.2 The determinants of the perceived benefits of external assurance

As well as highlighting the positive impact of the perceived benefit of external assurance, prior research suggests some factors that might influence decision makers' perception of the benefit of obtaining assurance (Jones and Solomon, 2010; Park and Brorson, 2005; Sawani *et al*., 2010). Such factors include the role of internal audit, assurers' independence, following CSR reporting guidelines, and firms competition. Thus, examining the factors influencing the perceived benefit is a necessary task in this research, to gain more insight into the determinants of the perceived benefit of external assurance and help in clarifying the mechanism through which these determinants impact the perceived benefit which in turn impacts the decision to obtain assurance.

8.4.2.1 The role of internal audit and the perceived benefit of external assurance

Decision makers' perception towards the capability of their firm's internal audit to assure their CSR disclosures is assumed to impact the perceived benefit of external assurance negatively (Jones and Solomon, 2010). More precisely, if a manager has a positive perception of the capability of internal auditors to assure the disclosed CSR reports, this will negatively influence the perceived benefits of external assurance. However, the empirical result of this research does not support the impact of the internal audit role on the perceived benefit of assurance as proposed in H3. This result indicates that the role of internal audit does not influence the perceived benefit of external assurance in the UK. This finding conflicts with interview evidence reported in prior literature that assumed the internal audit function is sufficient to verify the disclosed CSR information and might reduce the importance of external assurance (Park and Brorson, 2005; Jones and Solomon, 2010; Sawani *et al.*, 2010). However, this contradiction is believed to be attributed to two reasons; first, this research adopted a quantitative method using a survey of 105 UK firms to attain more generalisable data. Second, to some extent, the interviewees may have greater engagement with the internal audit functions in their firms. At the same time, not all companies have to have an internal audit function (FRC, 2018; Solomon, 2021). In addition, this contradiction might also be attributed to the shortcomings associated with the self-reporting questionnaire and the statistical test adopted in the current research. As a result, the responses collected from the research participants may not represent reality but are somewhat misleading answers.

A potential explanation for this insignificant association might be in alignment with a finding by Soh and Martinov-Bennie (2015). Soh and Martinov-Bennie (2015) surveyed 100 chief audit executives and internal audit providers and found the involvement of internal auditors in assuring environmental issues not to be of high importance, at least under the present conditions whereby internal auditors are required to be equipped with additional skills and expertise in relation to CSR assurance. Another potential explanation for the insignificant association is that decision makers might not perceive how independent their internal auditors are in terms of effectively verifying the disclosed CSR reports. Alzeban and Gwilliam (2014) conducted a survey study using data from 203 managers in the Saudi public sector. Their findings confirm that internal audit independence positively impacts internal management’s perception of internal audit effectiveness in the Saudi public sector. Further, the insignificant role of the audit function might be attributed to the UK corporate governance code, which recommends that the audit committee is responsible for reviewing and monitoring the effectiveness of the internal audit function (FRC, 2018). Therefore, the audit committee's role, in turn, might diminish the importance of the internal audit function in influencing the perceived benefit of assurance.

The finding implies that the capability of internal auditors to assure CSR reports does not influence managers’ perception towards the benefit of external assurance and hence the work of internal auditors might be considered as fundamental to facilitating the external assurers' work. Importantly, although the Turnbull guidance and the UK Corporate Governance Code increase the visibility of the internal audit function within companies, still internal audit has not played a big part in the debate on corporate governance and accountability (Zaman, 2001; FRC, 2005, 2018). Solomon (2021) states that an internal audit function is crucial to effective corporate governance and accountability. Thus, policy makers should further empower the corporate audit function as a means of monitoring and control within the firms in the agenda of corporate governance reform.

8.4.2.2 The role of assurers' independence and the perceived benefit of external assurance

Prior research highlights the importance of assurers' independence in enhancing the credibility of firms' disclosures (Jones and Solomon, 2010; Sawani *et al.*, 2010; Pucheta-Martínez *et al.*, 2019; Boiral and Heras-Saizarbitoria, 2020; Solomon, 2021). Over the years, issues concerning auditor independence have been expressed by policy makers, who have taken steps to address such concerns in corporate governance reforms (Tepalagul and Lin, 2015). The recent UK Corporate Governance reforms highlight the importance of ensuring auditors' independence. For example, the Report recommended that the board should establish an audit committee to assess and review the effectiveness of external audit independence and objectivity, considering relevant UK professional and regulatory requirements (Solomon *et al.*, 2000; FRC, 2018; Solomon, 2021). However, some CSR managers question the independence of CSR assurers, assuming that external assurers are not sufficiently independent; hence, the perceived benefit of obtaining assurance is reduced (Jones and Solomon, 2010). Unlike financial reporting audits, professional accounting companies do not have a monopoly on verifying CSR reports since there are different types of assurance providers, such as accountants and consultants firms which might have different degrees of independence based on the perspective of decision-makers (Ball *et al.*, 2000; O'Dwyer and Owen, 2005; Cohen and Simnett, 2015). H4 of this research hypothesised that decision makers' perception towards the independence of external assurers will impact the perceived benefit of assurance, with higher perception of assurers' independence positively influencing the perceived benefit. The results of the questionnaire analysis reveal that decision makers' optimistic attitude towards assurers' independence has a robust positive effect on the perceived benefit, thereby validating the argument that positive belief in the assurer's independence positively influences the perceived benefit of external assurance. This finding supports the result drawn from qualitative studies that assurers' independence affects the perceived benefit of assurance (Jones and Solomon, 2010; Sawani *et al.*, 2010). The independence of auditors is critical because it affects audit quality and improve transparency (Tepalagul and Lin, 2015). This finding emphasises the relevance of the recent corporate governance reform regarding establishing an audit committee to ensure the assurer's independence and objectivity. Importantly, the finding implies that assurers' independence is a determinant factor that influences the perceived benefit of external assurance which in turn impacts the decision to purchase external assurance. Therefore, the significant impact of assurers' independence helps in explaining the mechanism whereby it influences the decision to obtain assurance through its impact on the perceived benefit.

8.4.2.3 The role of following CSR reporting guidelines and the perceived benefit of external assurance

The global reporting guidelines aim to enhance CSR reports' quality, and an increasing number of firms now follow such guidelines (Helfaya and Kotb, 2016; Briem and Wald, 2018). However, given the potential benefit of adopting CSR reporting guidelines, some firms have also supplemented their CSR disclosures with an external assurance to further ensure the credibility of their CSR reports. In short, some prior research expected a positive impact of following CSR reporting guidelines on obtaining assurance to signal further credibility of their CSR publications (Ruhnke and Gabriel, 2013), while qualitative based findings document that following CSR reporting guidelines diminishes the perceived potential benefit of external assurance (Park and Brorson, 2005; Sawani *et al.*, 2010). Therefore, given the contradictory theoretical arguments and contrary to prior qualitative studies that examined the direct impact of following CSR reporting guidelines on obtaining assurance and reported it to be positive, this study empirically tested the direct impact of adopting CSR reporting guidelines on the perceived benefits of external assurance to further understand the mechanism through which following CSR reporting guidelines might impact the decision to purchase assurance. H5 proposes that adopting a globally recognised CSR reporting framework has an impact on the perceived benefits of external assurance and the result revealed that following globally recognised CSR reporting guidelines significantly and negatively affects the perceived benefit of assurance. These findings are in line with prior qualitative research that following global CSR reporting guidelines might diminish perception of the potential benefit of external assurance (Park and Brorson, 2005; Sawani *et al.*, 2010).

This finding implies that decision makers might not obtain external assurance when their firms adopt CSR reporting guidelines because of their belief that the potential benefit of external assurance is attained by following such guidelines and there is no added value from purchasing assurance. This contrasts with prior quantitative research which argued that following CSR reporting guidelines positively influences the decision to obtain external assurance in order to signal further credibility to the interested users (Gillet-Monjarret, 2015; Peters and Romi, 2015; Ruhnke and Gabriel, 2013; Simoni *et al*., 2020). This research considers the alternative perception extracted from qualitative research that following CSR reporting guidelines reduces managers' perception of the benefit of external assurance which in turn impacts the decision to obtain external assurance. The findings provide further insight into the mechanism through which following CSR reporting guidelines influences the perceived benefit and thereby impacts the decision to purchase external assurance. In addition, the results might explain the growing demand to follow CSR reporting guidelines in comparison to obtaining assurance. According to the KPMG survey (2020), the majority (77%) of the top national 100 firms (N100) in around 52 countries used global reporting guidelines in their CSR reporting to support their sustainability reports, while almost (50%) obtained external assurance. Further, it seems that decision makers might decide that following a globally recognised CSR reporting guideline is a sufficient tool to enhance the credibility of the disclosed CSR information.

8.4.2.4 The role of competition and the perceived benefit of external assurance

Publishing CSR information creates competitive CSR practices between rivals, and the peer effect is considered as an important driver of business behaviour (Cao *et al.*, 2019). This research assumes that the competition between firms might motivate decision makers to consider the potential benefit of assurance. Therefore, this research hypothesises that firms competition positively influences the perceived benefits of external assurance. The statistical results of the questionnaire analysis showed that firms competition has a strong positive effect on the perceived benefit. The results validate the argument proposed by prior qualitative investigation (Park and Brorson, 2005; Sawani *et al.*, 2010) that in order to retain or enhance their position vis a vis their competitors, firms operating in a competitive industry are more willing to acknowledge the perceived benefit of assurance than firms operating in a less competitive industry. Peters and Romi (2015) examined all the U.S. sustainability reports from 2002-2010 and produced evidence supporting that firms competition is positively associated with the decision to purchase external assurance. In contrast, insignificant findings were reported by Casey and Grenier (2015) who examined the impact of the competition within industry on obtaining assurance using 2649 U.S. CSR reports. Remarkably, however, research by Casey and Grenier (2015) and Peters and Romi (2015) into the direct impact of competition on obtaining assurance reported mixed results. Meanwhile, the current research examined how competition impacted directly on the perception of decision makers towards the potential benefit of assurance to better explain the mechanism through which competition might influence the decision to purchase external assurance (i.e. through the perceived benefit). Therefore, the findings attained in this research offer further explanation for the findings of Casey and Grenier (2015) and Peters and Romi (2015), by explaining the process through which firms competition influences the assurance decision and suggesting that firms competition positively influences the perceived benefit of external assurance which in turn might influence the decision to purchase external assurance.

8.4.1.2 Firm size and the decision to purchase external assurance

Prior research that examined the impact of firm size on the decision to purchase external assurance assumed that large firms undertake more activities, are subject to high public pressure and need to respond to stakeholders' demand, all of which may encourage them to obtain external assurance (Sierra *et al.*, 2013; Kuzey and Uyar, 2017; Liao *et al.*, 2018; Clarkson *et al.*, 2019). The results shown in Table 7.5 revealed that firm size, measured by total assets, is proven to have a positive association with the decision to purchase external assurance. This finding complies with the reporting by Simnett *et al.* (2009), Sierra *et al.* (2013) and Casey and Grenier (2015) of a positive relationship between firm size and the decision of purchasing assurance. This implies that rational mangers in larger firms are more willing to purchase assurance to respond to the high public pressure they might face.

8.4.1.3 Firm profitability and the decision to purchase external assurance

It is assumed that profitable firms have sufficient financial resources, are subject to public scrutiny and should not ignore the public interest regarding social and environmental issues to sustain their economic performance, which should encourage them to purchase external assurance (Branco *et al.*, 2014; Kuzey and Uyar, 2017). This research examined the impact of firm profitability on obtaining assurance using the return on total assets as a measure of firm profitability. The results presented in Table 7.5 show that firm profitability has no association with the decision to purchase external assurance. These results are in line with those of Simnett *et al.* (2009) and Sierra *et al.* (2013) who reported no conclusive link between firm profitability and the decision to purchase assurance.

8.4.3 Stakeholders' demand and the decision to purchase assurance

The above argument indicates that the decision to obtain external assurance is subject to cost benefit analysis in line with the rational choice theory. On the other hand, stakeholder theory would assume that the demand of key stakeholders might also influence the decision to obtain external assurance and could render the outcome of the rational decision makers irrelevant, because of the pressure on managers to respond to key stakeholders' demands (Darnall *et al.*, 2009; Cotter and Najah, 2012). Thus, the decision to purchase external assurance might be influenced by the demand of influential stakeholders. H7 specifies that demand from the other stakeholders group, namely "shareholders, investors, social/environmental groups, suppliers, customers and employees", is more likely to influence firms to obtain external assurance, and predicts a positive relationship between other stakeholders and the decision to purchase assurance. The statistical results in Table 7.6 show an insignificant association between other stakeholders and the decision to obtain external assurance. The current findings could be explained by the conclusion drawn by Darnall *et al.* (2009) that significant variation in the use of assurance practices is associated with differences in stakeholders' influence. More precisely, Darnall *et al.* (2009), in an international survey study, reported a positive association between management, non-management employees and regulatory stakeholders and the use of external assurance, while finding an insignificant association between supply chain stakeholders and the environmental and community groups and the use of external assurance. Therefore, this insignificant association between other stakeholders and the decision to obtain external assurance might be attributed to variation of stakeholders' influence as reported by Darnall *et al.* (2009). Another potential explanation is that the other stakeholders might not consider the assurance a trustworthy tool to enhance the quality and transparency of firms' CSR disclosures (O'Dwyer and Owen, 2005), therefore implying that the other stakeholders might not demand external assurance.

In contrast to the influence of other stakeholders, H8 anticipated a stronger positive association between institutional investors and the decision to purchase assurance. The research proposed a stronger impact of institutional investors than other stakeholders because institutional investors play a greater role in monitoring firms' operations and are subject to high pressure to consider social and environmental performance in their investment decisions (Wong and Millington, 2014). Institutional investors in the UK own almost 70% of shares in the stock market. Therefore, their significant role in monitoring firms' operations has received great attention on the agenda for corporate governance reform (Cadbury Report, 1992; Hampel Report, 1998; Solomon *et al.,* 2000; FRC, 2018). Solomon and Solomon (1999) found that institutional investors are active shareholders who support and encourage long-term returns in the UK capital market.

The statistical results in Table 7.6 reveal that institutional investors have a strong positive effect on obtaining assurance, while the other stakeholders are demonstrated to have no association with obtaining assurance. These results empirically confirm that the decision to obtain external assurance is influenced by the request of institutional investors due to their powerful and legitimate influence on decision makers (Miras-Rodríguez and Di Pietra, 2018). Similar findings have been documented by prior research. For instance, Peters and Romi (2015), based on examination of all the U.S. sustainability reports from 2002-2010, found a positive association between institutional owners and the decision to purchase external assurance. In a similar vein, Miras-Rodríguez and Di Pietra (2018) studied data from 176 energy companies worldwide and reported that reference shareholders have a positive influence on assuring CSR reports due to their monitoring power. Further arguments supporting the influential effect of institutional investors on obtaining assurance have been presented by qualitative studies (Atkins and Maroun, 2015; Briem and Wald, 2018). In contrast, Clarkson *et al.* (2019), based on 17,050 firm-year observations worldwide, reported empirical evidence showing a negative association between the percentage of institutional ownership and obtaining assurance. However, Clarkson *et al.* (2019) examined the impact of the percentage of institutional ownership on obtaining assurance, while the current research directly measured whether or not institutional investors in the surveyed firms demand external assurance. Therefore, the results further clarify the Clarkson *et al*. (2019) findings by revealing that managers are not influenced by the percentage of institutional shareholders but by whether institutional investors pay attention to external assurance and demand it. Solomon *et al.* (2000) examined the attitude of different types of institutional investors and documented different attitudes in terms of shareholder activism and voting policy. They have reported that pension funds appear more proactive in their approach than other types of institutional investors, such as unit trusts and investment trusts. Therefore, this might provide an explanation of why not all institutional investors demand external assurance. Besides, discrimination between small and large shareholders might also impact the decision to obtain external assurance. Overall, the findings imply that institutional investors as a homogeneous group are more willing to request external assurance than other stakeholders and therefore strongly influence the decision to opt for external assurance.

Controlling for firm size and profitability revealed a strong positive association between firm size and obtaining external assurance. In contrast, firm profitability was found to have a negative but significant (at 0.10 level) association with obtaining assurance (β = -0.124, P = 0.086), as can be seen in Table 6.6.

8.4.4 The combined effect of rational choice theory and stakeholder theory on obtaining assurance

The rational perspective implies that rational managers take into consideration the potential benefit and cost of external assurance and the findings of the current research imply that rational managers are supposed to decide whether to purchase assurance or not based on the cost benefit analysis outcome. On the other hand, the stakeholder perspective assumes that managers should respond to the demand of influential stakeholders, and the statistical findings demonstrate a positive impact of the demand of institutional investors on the decision to purchase external assurance. In addition to the above findings, it is still not clear which of these two perspectives will influence the decision to purchase external assurance if there are contradicting forces from the two theories. More specifically, it is not clear which factors will dominate if rational managers, based on the cost benefit analysis, decide not obtain assurance, but the institutional investors demand assurance. Drawing on the Jones and Solomon (2010) interview based study, some managers had a negative perception toward the benefit of obtaining assurance but still purchased it. Therefore, testing the two theories simultaneously helps to understand the combined role of the rational choice theory and stakeholder theory. Hypothesis 9 in the current thesis proposed that the demand of influential stakeholders for external assurance is likely to negate the effect of the cost-benefit analysis outcome on the decision to obtain external assurance. In this regard, the statistical findings presented in Table 7.7 indicate that the demand of institutional investors negates the impact of the perceived benefit and cost of assurance.

Testing all the hypotheses associated to the rational choice theory and stakeholder theory offers further insight into the factors influencing the decision to purchase assurance. The results of this research indicate that the factors influencing the perceived benefit remain constant. For instance, as shown in Table 7.7, the internal audit factor shows an insignificant association with the perceived benefit. In addition, assurer's independence and competition show a strong positive association with the perceived benefit and following global reporting guidelines shows a strong negative association with the perceived benefit. Furthermore, the results from controlling for firm size show that firm size has a strong positive association with purchasing assurance, while firm profitability has a partial negative effect on obtaining assurance.

Interestingly, however, the results also signify a strong influence of institutional investors on obtaining assurance. As shown in Table 7.7, the institutional investors suppress the proposed relationship between the perceived benefit and cost in the decision to purchase external assurance. More precisely, H1, which assumed that the decision to obtain external assurance is positively associated with the perceived benefit and was supported by the findings in the first stage, became insignificant. In addition, H2, which proposed a negative association between the cost of assurance and the decision to obtain assurance and was likewise supported by the results in the first stage, also became insignificant. Further, H7, which is associated with the impact of other stakeholders, remained insignificant, while H8, associated with the influence of institutional investors, remained positively significant. The results suggest that managers take into account the cost and benefit of external assurance when considering the purchase of external assurance. However, the findings also indicate that when powerful stakeholders (i.e. institutional investors) show interest in or demand the provision of external assurance, this renders managers' evaluation of the cost and benefit of external assurance irrelevant. In other words, when powerful stakeholders request external assurance, decision makers in organisations are more likely to purchase it even if they have concerns regarding its benefit and associated cost.

The conclusions attained from these findings explain why some firms obtain external assurance while others do not. Unlike prior studies which overlooked the rational perspective, the findings suggest that in some situations the decision to purchase external assurance is in line with the theoretical consideration of the rational choice theory. Meanwhile, in other situations, when firms are subject to strong demand from institutional investors, the stakeholder theory could better explain the decision to purchase external assurance.

8.5 Chapter eight summary

This chapter has presented discussion of the research findings obtained from the questionnaire and reported in chapter 7. During the discussion of the research findings, an attempt was made to compare the obtained results with the relevant literature to highlight distinctions and similarities between this research and prior research findings and draw conclusions from these findings.

First, the findings on the factors influencing the decision to purchase external assurance based on the rational choice theory were discussed. The results reveal that rational managers take into consideration the potential benefit and cost of assurance when deciding whether to obtain external assurance or not, with the perceived benefit showing a positive impact on obtaining assurance, while the cost of assurance shows a negative one. In addition, assurers' independence and competition were found to positively influence the perceived benefit of external assurance. Further, following global reporting guidelines has a negative influence on the perceived benefit. At the same time, this research did not find a significant association between internal audit and perceived benefit.

Second, the findings regarding the factors affecting the decision to obtain external assurance based on the stakeholder theory were discussed. The results indicated that the institutional investors have a strong positive association with purchasing external assurance, while the other stakeholders were found to have no impact on obtaining assurance. These findings highlight the variation in the use of assurance among different stakeholders. Finally, the findings from incorporating the rational perspective and the stakeholder perspective were discussed. The results show that the institutional shareholders' request negates the positive impact of the perceived benefit and the negative impact of the cost. These findings are significant as they draw attention to the important impact of the rational perspective and dominant role of institutional investors in impacting the decision to purchase external assurance. Having discussed the research findings, the conclusion of this thesis will be presented in the next chapter.

Chapter nine: Conclusion

9.1 Introduction

A growing demand for assurance in CSR reporting has been noticed in recent years, even though it is a costly and voluntary practice (Haider and Nishitani, 2020). Thus, the reasons why some firms acquire external assurance for their CSR report while others do not have attracted great attention (Kuzey and Uyar, 2017; García-Sánchez, 2020; Velte, 2020). Prior quantitative literature has examined the factors influencing the decision to obtain external assurance, such as size, listing status, board size, legal origin; however, inconclusive results were reported (Sìmnett *et al.*, 2009; Peters and Romi, 2015; Liao *et al.*, 2018; Clarkson *et al.*, 2019; Velte, 2020). Moreover, qualitative research suggested an utterly different list of factors that have been overlooked by quantitative literature (Park and Brorson, 2005; Jones and Solomon, 2010; Darus *et al.*, 2014; Atkins and Maroun, 2015; Briem and Wald, 2018). This research, thus, aims to investigate the importance of external assurance and the factors influencing the decision to obtain external assurance in the UK context. Consequently, relying on both streams of literature, this aim has been addressed through developing a theoretical model and associated set of hypotheses by utilising the rational choice theory and stakeholder theory. The model presumes that the decision to purchase external assurance is subject to cost-benefit analysis by rational managers and considers the determinant factors influencing assurance's perceived benefit. In addition, the model highlights the possible impact of various groups of stakeholders on the decision to obtain external assurance. Noteworthily, the model assumes that the decision to obtain external assurance is subject to cost-benefit analysis unless there is a high demand from influential stakeholders.

Furthermore, adopting the rational choice theory lays the groundwork for revealing the possible effect of assurers' independence, internal audit, following global CSR reporting guidelines and competition on the perceived benefit of external assurance and then the possible impact of the cost of assurance and the perceived benefit of assurance on the decision to purchase assurance, prior empirical research having overlooked the possible impact of the factors influencing the perceived benefit and the cost-benefit analysis on obtaining external assurance. In addition, the study expands the assurance literature by testing simultaneously the predictive capability of the rational choice theory, which has received little attention in the respective literature, and stakeholder theory. Thus, the stakeholder theory is also fundamental to the model developed in this research through drawing attention to the potential impact of other stakeholders and the institutional investors on the decision to purchase external assurance. The current research thus provides insightful understanding of factors influencing the decision to obtain external assurance by incorporating two theoretical perspectives, rational choice theory and stakeholder theory, which have been overlooked by prior studies.

To examine the theoretical model developed in this study, a positivist paradigm and a deductive approach were adopted. To collect the research data, a cross-sectional survey questionnaire and the archive database were employed. In addition, three new measurement constructs were developed to measure the impact of the perceived benefit, institutional investors and following CSR reporting guidelines. The questionnaire was distributed to 1056 UK listed firms that disclose CSR information to the public. The analysis was conducted by applying the PLS-SEM to gain more robust results using 105 valid and usable responses. The reason for choosing the UK context was that although obtaining assurance is a voluntary practice, the UK has a high national rate of reporting CSR information and therefore considerable experience of this practice.

The next section presents a summary of the main findings. Section 9.3 highlights the research implication and contribution. The last section outlines the research's limitations and makes recommendations for future research.

9.2 Summary of main findings

This research study sought to answer three questions that were presented in chapter one. These three questions are presented below:

1. To what extent do UK listed firms purchase external assurance for their CSR report?
2. Is firms' decision to purchase (or not purchase) external assurance driven by the outcome of a cost-benefit analysis?
3. What are the factors which influence managers' perception of the benefits of external assurance?

The current research makes use of a questionnaire instrument and secondary data to collect the research data. The first question was intended to provide a general view about the extent of obtaining assurance among the UK listed firms. The current thesis found evidence of CSR assurance engagement among the UK listed firms is still limited, with only 40% of listed firms obtaining voluntary external assurance for their CSR reports. Meanwhile, variation was identified among the UK listed firms in terms of their assurance practices. These findings encouraged further examination of the factors influencing the obtaining assurance decision. Therefore, questions two and three were formulated and presented to investigate the factors influencing the decision to purchase external assurance in order to further understand the variation in assurance practice in the UK.

The second and third research questions were formulated to identify the factors influencing the decision to purchase external assurance based on the perspectives of both the rational choice theory and stakeholder theory. First, relying on the rational choice perspective, six hypotheses were proposed and tested while controlling for the effect of firm size and profitability to identify their impact on obtaining assurance decision. Based on an extensive literature review, the perceived benefit and cost, size, and profitability were proposed to influence the decision to purchase external assurance. Besides, the current research proposed that four determinant factors would influence the perceived benefit of assurance which in turn would influence the decision to purchase external assurance.

The main findings on the rational choice perspective indicate the following:

i. The internal audit is found to have no impact on the perceived benefit of external assurance.
ii. Assurers’ independence is proven to have a positive association with the perceived benefit of external assurance.
iii. The effect of following CSR reporting guidelines is demonstrated to have a negative association with the perceived benefit of external assurance.
iv. The effect of firms competition is found to have a positive impact on the perceived benefit of external assurance.
v. The perceived benefit is proven to have a positive relation with purchasing assurance.
vi. The cost of assurance is shown to have a negative association with purchasing assurance.
vii. Firm size is found to have positive impact on obtaining assurance, while firm profitability is shown to have no impact on obtaining assurance.

In conclusion, the results obtained from testing the rational perspective imply that the decision to obtain external assurance is subject to cost benefit analysis, whereby rational decision makers are supposed to take into consideration the potential benefit and the associated cost of assurance when deciding to obtain external assurance for their CSR reports. For instance, though obtaining assurance is presumed to add value to the reporting firm by many respondents, it is possible that the cost of assurance might outweigh the benefit of obtaining assurance, which in turn would adversely affect the purchase decision and explains why some firms do not purchase external assurance. This view is also highlighted by prior qualitative findings (Jones and Solomon, 2010; Briem and Wald, 2018). Thus, based on the rationality perspective, the current findings could explain and contribute to the current debate of why some firms obtain external assurance while others do not.

In addition, the findings reveal that some decision makers might have different expectations regarding the perceived benefit of external assurance, due to the impact of assurers' independence, competition and following CSR reporting guidelines on the perceived benefit of external assurance. Examining the factors influencing the perceived benefit can assist in elucidating the mechanism through which these factors influence the perceived benefit, which in turn might affect the decision to obtain assurance. For instance, the finding indicates that assurers' independence is proven to be a determinant factor that influences the perceived benefit of external assurance, which in turn impacts the decision to purchase external assurance. Therefore, the findings validate the current approach adopted by the UK corporate governance code of establishing an audit committee to review and monitor the assurer's independence. Likewise, the findings suggest that firms' competition impacts the perceived benefit. It seems that firms operating in a competitive industry might acknowledge the perceived benefit of assurance more than firms operating in a less competitive industry to retain or enhance their position vis a vis their competitors. Further, the result suggests that adopting recognised CSR reporting guidelines impacts the perceived benefits. Perhaps, decision-makers might not purchase external assurance when their firms adopt CSR reporting guidelines because they believe that adopting such guidelines might serve as a substitute integrity enhancement mechanism.

Second, relying on the stakeholder perspective, two hypotheses were proposed and tested while controlling for firm size and profitability to examine their association with the decision to purchase external assurance. The findings on the stakeholder perspective indicate the following:

i. The demand of other stakeholders is found to have no association with obtaining assurance.
ii. The demand of institutional investors has a strong positive relation with obtaining assurance.
iii. Firm size is found to have positive impact on purchasing assurance, while firm profitability is found to have a partial negative impact on obtaining assurance.

In short, the empirical results show that institutional investors strongly influence the decision to opt for external assurance due to their significant role in monitoring firms' operations, while the other stakeholders are presumed to have less power to influence purchasing assurance.

Third, the current research presumes that incorporating both the rational perspective and the stakeholder perspective offers alternative clarification as to why some firms obtain external assurance while others do not. That is, combining both perspectives will provide better insight into the factors influencing the decision to purchase external assurance and will further explain the variation in assurance practice in the UK. Hence, the factors influencing the decision to purchase external assurance based on rational choice theory and stakeholder theory perspectives were tested all together.

The findings indicate that decision makers consider the cost and the potential benefit of external assurance when deciding whether to purchase. However, the generated results suggest that when institutional investors demand the provision of external assurance, decision makers will respond to their demand and that could render their evaluation of the cost and benefit of external assurance irrelevant. More manifest is that when institutional investors request external assurance, firms are more likely to obtain assurance even if decision makers have concerns regarding the potential benefit and associated cost of assurance. The testing of the rational perspective and the stakeholder perspective simultaneously indicated the following:

i. The factors influencing the perceived benefit of external assurance showed the same results in terms of a positive association between the assurer's independence and competition, and a negative association between following CSR reporting guidelines and the perceived benefit, while the role of internal audit has no impact.

ii. The perceived benefits, cost and other stakeholders are proven to have no association with obtaining external assurance.
iii. The institutional investors have the most substantial impact and render irrelevant the effects of the perceived benefit, cost, and other stakeholders on obtaining assurance.
iv. Firm size has a positive impact, while profitability has a partial negative impact on obtaining assurance.

9.3 Research implication and contribution

This thesis aims to understand the importance of external assurance and the factors influencing the decision to voluntarily purchase external assurance in order to contribute to the academic literature on assurance practices. More precisely, to attain the research aim and objectives, a novel theoretical model has been developed by integrating the rational choice theory and stakeholder theory, which was empirically tested using data gathered from UK listed firms through a questionnaire instrument. Therefore, the study's contributions can be realised on several levels, including the theoretical, methodological, and empirical.

First, at the theoretical level, the thesis presents a novel theoretical model by integrating the knowledge obtained from both qualitative and quantitative streams of literature and simultaneously examining the role of rational choice theory and stakeholder theory. Unlike prior studies, this research offers an alternative view on the factors influencing the decision to purchase external assurance by taking into consideration the rationality of decision makers through considering the cost and the perceived benefit of assurance as well as the perspective of stakeholder theory by considering the impact of influential stakeholders. This approach can be considered to enhance understanding of variation in assurance practice and thereby to make a valuable contribution to the literature. Further, prior studies examined the direct impact of contextual factors on the decision to obtain external assurance, while the current study examined the impact of four determinant factors on the perceived benefit of external assurance, which in turn affects the decision to purchase external assurance, to enhance understanding of the mechanism through which each of these determinants affects the decision to obtain assurance.

Second, at the methodological level, this study is one of the few studies to use a questionnaire data collection instrument in combination with secondary data to provide more generalisable and precise findings. Further, based on prior qualitative findings the study developed new measurement constructs for perceived benefit, institutional investors and following CSR reporting guidelines due to their proposed impact on obtaining assurance. In addition, the study has applied sophisticated analysis techniques such as factor analysis and PLS-SEM which have not been used extensively in the assurance literature and add further credibility to the reported findings. Third, at the empirical level, this research is the first study to use survey data to empirically examine the variation in assurance practice from the views of decision makers in the UK context and thereby provide new insights into corporate behaviour.

The research findings offer a number of implications for both researchers and policy makers. For researchers, the developed model offers better understanding of the complexity of the decision to purchase external assurance and more insights into corporate behaviour. Decision makers, whether they decide to purchase external assurance or not, can be subject to different forces which may or may not lead to the same conclusion. Identifying and focusing on these forces are important elements in understanding the external assurance purchase decision. The model proposes that decision makers' rationality and the associated cost-benefit analysis in combination with the effect of influential stakeholders capture some of these forces and explain variations in the decision to obtain external assurance which were observed in practice. The study adds to the growing literature on CSR assurance practices, with precise focus on the factors influencing the decision to obtain external assurance in the UK context.

For policy makers, given the rising importance of businesses understanding their social and environmental impacts, it has become crucial to ensure that the information they voluntarily report on such impacts is reliable and of high quality and to understand the factors which affect their decision to have such information verified by external assurers. The current study explicates these factors and helps to understand the role of each factor in influencing decision makers to either purchase external assurance or not and the significant role of institutional investors in this respect. If supplying external assurance is desired by policy makers, the current findings suggest that they may focus on factors such as assurers' independence and competition due to their significance in enhancing decision makers' perception of the benefits of external assurance. In the corporate governance reform agenda, policymakers should further strengthen the role of the internal audit function as a tool of monitoring and controlling CSR disclosure within firms. Further, policy makers should give further attention to the role of CSR reporting guidelines in reducing the perceived benefit of assurance to avoid diminishing the value of

CSR assurance. The Stewardship Code emphasises institutional investors' role in monitoring corporate management and governance (FRC, 2020). The current thesis reemphasises their vital role in impacting firms' decisions and recommends that institutional investors take full advantage of their monitoring role to enhance firms' accountability. Policy makers could also focus on the powerful role of institutional investors in demanding the provision of external assurance for CSR disclosed information and updating the recommendations of national governance codes. In short, policy makers are encouraged to consider a long-term view of corporate governance and accountability and analyse the current findings to direct the future of policy making.

9.4 Limitation and recommendation for future studies

This research is subject to several limitations that should be addressed by future studies in order to extend the understanding developed under this research.

First, the current study was limited to listed firms in the LSE. Given that the listed firms tend to be more subject to public pressure and extensive media coverage than unlisted firms (Branco *et al.*, 2014), the results may not be generalisable to unlisted, small and medium-sized enterprises. Thus, it would be interesting for future research to examine the assurance practices of non-listed, small and medium firms to understand the factors influencing their decision to obtain external assurance voluntarily. Second, this research examines the factors influencing the decision to purchase external assurance in the UK context for a single year. Future studies, therefore, could adopt a longitudinal survey strategy to advance the findings of this study and to distinguish whether and how the proposed associations in the model change or evolve over time. In addition, due to the cultural and socio-economic environment impact on firms' disclosure it would be very valuable to replicate the developed model in other contexts than the UK and study a cross-country sample to offer evidence for the broader applicability of these results (Sierra *et al.*, 2013). Likewise, there are plentiful opportunities for research into emerging economies' corporate governance to gain insight from comparative analysis in different countries. Brennan and Solomon (2008) state that the issue of culture is a facet of global governance that has received little attention.

Third, the response rate in the current study was low, because reaching individuals with a busy daily schedule is challenging. Besides, the study was conducted during the Covid-19 pandemic, and several participants explicitly refused to participate due to the pressures of COVID-19 on their firms; consequently, future research should seek to obtain a larger response rate to further enhance the survey's representativeness and statistical power (Andersen and Blackburn, 2004).

Fourth, in examining the variables impacting obtaining assurance, the current model made no attempt to examine the factors influencing the level of assurance and the assurer type; therefore, future research might examine the factors influencing the choice of level of assurance and assurer type and compare the results with the findings of this research. In addition, future research could examine the impact of some crucial corporate governance factors such as the involvement of the CSR committee, audit committee, the CSR's complexity and strategy on the decision to obtain assurance. Further, the current study looked at institutional investors as a single group rather than distinguishing between different types of institutional investors. Therefore, future research could examine whether certain institutional investors, such as pension funds, unit trusts and investment trusts, have a different impact on obtaining assurance. Furthermore, in this research there has been no attempt to theorise potential joint effects among firm variables, as the research concentrated on the independent influence of individual variables on the perceived benefit and obtaining assurance. Consequently, future research could focus on such possible joint effects to examine their impact on purchasing assurance.

Finally, whereas the current research uses only quantitative methods, it has been argued that using both quantitative and qualitative methods, or "mixed methods", could provide a more comprehensive understanding of the assurance practices (Bryman, 2015).

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Appendix (1): The final questionnaire

Assurance on corporate social responsibility reports: Evidence from the UK Market

Dear Sir/Madam,

I am a doctoral researcher at Sheffield University Management School and am conducting a research study on corporate social responsibility reporting and its accompanying assurance practices in the UK context. The research aims to investigate the importance of external assurance (i.e. hiring an independent assurer to verify corporate social responsibility reports) and potential factors which affect decisions to hire independent assurers in the UK Market. The importance of the research stems from the lack of understanding of the reasons why some organisations employ an external assurance service whilst others do not. This research is expected to be useful for regulators, decision makers, users of corporate social responsibility reports, and researchers, by examining more closely the importance of external assurance and the factors which may explain the decision to use such services.

Therefore, I would like to invite you to participate in the research project by dedicating no more than 15 minutes of your time to completing the questionnaire. Your participation in the project is voluntary and all your responses will be kept confidential. In addition, your responses will only be used at an aggregate level and hence anonymity will be ensured. The research project has been approved by The University of Sheffield Management School Research Ethics Committee.

To achieve the aim of the project, the participation of decision makers who have the required knowledge to answer the questionnaire is necessary, and hence you have been selected. In return for your help, I will be happy to provide you with a summary of the main findings if you wish to receive one.

Thank you for taking the time to complete the questionnaire. I greatly appreciate your cooperation.

If you have any queries or require any further information, please do not hesitate to contact me.

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Consent Form

Please fill in this form if you agree to take part in the research project.

Statement	Yes	No
I have read and understood the project information sheet or the project has been fully explained to me.		
I have been given the opportunity to ask questions about the project.		
I agree to take part in the project. I understand that taking part in the project will include completing a questionnaire.		
I understand that my taking part is voluntary and that I can withdraw from the questionnaire at any time; I do not have to give any reasons for why I no longer want to take part, and there will be no adverse consequences if I choose to withdraw.		
I understand that my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.		
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs.		
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information, as requested in this form.		
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.		

Definition of the key concepts:

Corporate social responsibility (CSR) reporting: The term ‘CSR’ reporting is used to describe any form of reporting on environmental and social performance in addition to financial performance. Many other names are used to refer to CSR reports, as sustainability reports, corporate citizenship reports, social and environmental reports, or triple bottom line reports.

External assurance: A service purchased from external independent assurers who provide assurance to an organization and its external stakeholders about its corporate social and environmental management practices, and the respective information disclosed.

Section A. Firm Characteristics

Q1. How does your organisation publish its corporate social responsibility (CSR) reports to the public? *(Tick all that apply):*

- ◯ **Stand-alone report**
- ◯ **Web-based report**
- ◯ **Within the annual report**
- ◯ **Integrated report**
- ◯ **Other, please specify ________________________**

Q2. Does your organisation follow any of the following reporting guidelines?

• Global Reporting Initiatives (GRI)	◯ Yes	◯ No
• AccountAbility Principles Standards (AA1000 APS)	◯ Yes	◯ No
• International Organisation for Standardisation (ISO)	◯ Yes	◯ No
• Department of Environment, Food, and Rural Affairs (DEFRA)	◯ Yes	◯ No
• Greenhouse Gas Protocol Initiative	◯ Yes	◯ No
• Oil and Gas Industry Guidance on Voluntary Sustainability Reporting	◯ Yes	◯ No
• International Integrated Reporting Council (IIRC)	◯ Yes	◯ No
• Other, please specify ______________________________		

Q3. In which year did your organisation publish its first CSR report?

____

Q4. Did your organisation hire an external assurer to verify its CSR report in the last financial year? ◯ Yes ◯ No

*(If your answer is no, please skip to question **6**)*

Q5. In which year did your organisation hire an external assurer for the first time?

____

Q6. Do you have an internal auditing function in your organisation?

◯ Yes ◯ No

Q7. If your answer to Q6 was "No", does your organisation outsource the internal auditing function? ◯ Yes ◯ No

Q8. How many employees did your organisation employ at the end of the last financial year? ____________________________

Section B. The outcome of external assurance

Q13: Please indicate the extent to which you agree/disagree with each of the following statements:
(Tick one option only for each item)

Providing an assurance statement issued by an external assurance provider which verifies the disclosed information in a CSR report:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. Enhances the credibility of the disclosed CSR information for interested users.	○	○	○	○	○	○	○
2. Indicates organisational transparency regarding the disclosed CSR information for interested users.	○	○	○	○	○	○	○
3. Enhances the reliability of the disclosed CSR information for interested users.	○	○	○	○	○	○	○
4. Enhances the accuracy of the disclosed CSR information for interested users.	○	○	○	○	○	○	○
5. Through the interaction with the external assurer, helps to improve the format of the disclosed CSR information in your organisation.	○	○	○	○	○	○	○
6. Demonstrates to interested users your organisation’s commitment to becoming a good citizen.	○	○	○	○	○	○	○
7. Facilitates, through the interaction with the external assurer, further learning about CSR reporting for future improvement.	○	○	○	○	○	○	○
8. Enhances the reputation of your organisation.	○	○	○	○	○	○	○
9. Attracts institutional investors to your organisation.	○	○	○	○	○	○	○

Section C. External Pressure

Q14. Please indicate the extent to which each of the following stakeholders request your organisation to provide external assurance for the disclosed CSR information:

(Tick one option only for each item)

	To an extremely small extent	To a very small extent	To a small extent	To a moderate extent	To a large extent	To a very large extent	To an extremely large extent
1. Shareholders	○	○	○	○	○	○	○
2. Investors	○	○	○	○	○	○	○
2. Social/environmental groups	○	○	○	○	○	○	○
3. Suppliers	○	○	○	○	○	○	○
4. Customers	○	○	○	○	○	○	○
5. Employees	○	○	○	○	○	○	○
6. Others, please specify ________________	○	○	○	○	○	○	○

Q15. Please indicate the extent to which you agree/disagree with each of the following statements:

(Tick one option only for each item)

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. Institutional shareholders in your organisation require external assurance for the disclosed CSR information.	○	○	○	○	○	○	○
2. Institutional shareholders raise concerns if the disclosed CSR information is not externally assured.	○	○	○	○	○	○	○
3. Institutional shareholders consider your disclosed CSR information only if it is externally assured.	○	○	○	○	○	○	○
4. Your organisation operates in an industry which is highly competitive.	○	○	○	○	○	○	○
5. Employing external assurance for your CSR reports offers your organisation a competitive advantage.	○	○	○	○	○	○	○

6. External assurance reports will be capitalised on by your major competitors in formulating their business strategies.	○	○	○	○	○	○	○
7. If your major competitors employ external assurance for their CSR reports, your organisation will do likewise in response.	○	○	○	○	○	○	○

Section D. Factors affecting the importance of external assurance

Q16. Please indicate the extent to which you agree/disagree with each of the following statements:

(Tick one option only for each item)

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. The internal auditing function in your organisation verifies the disclosed information in your CSR report.	○	○	○	○	○	○	○
2. The internal auditing function in your organisation is effective in verifying your disclosed CSR information.	○	○	○	○	○	○	○
3. Obtaining an external assurance supplements the auditing work undertaken by your organisation's internal auditing function to verify the disclosed CSR information.	○	○	○	○	○	○	○
4. It is financially costly to hire an external assurer to verify the disclosed CSR information.	○	○	○	○	○	○	○
5. The process of verifying your disclosed CSR information by an external assurance provider is time consuming.	○	○	○	○	○	○	○
6. External assurance increases the scope of the work conducted by the internal auditors in your organisation.	○	○	○	○	○	○	○
7. External assurance providers are sufficiently independent to perform their professional obligations and duties.	○	○	○	○	○	○	○
8. External assurers rarely face interference from management when conducting their work.	○	○	○	○	○	○	○
9. Conflicts of interest are rarely present in the work of external assurers.	○	○	○	○	○	○	○

10. Following the global reporting initiative (GRI) guidelines reduces the importance of external assurance in verifying your disclosed CSR information.	○	○	○	○	○	○	○
11. Following the integrated reporting (IR) framework reduces the importance of external assurance in verifying your disclosed CSR information.	○	○	○	○	○	○	○
12. Obtaining International Organisation for Standardisation (ISO) certification reduces the importance of external assurance in verifying your disclosed CSR information.	○	○	○	○	○	○	○
13. Following other reporting guidelines reduces the importance of external assurance in verifying your disclosed CSR information.	○	○	○	○	○	○	○

Section F. General information about yourself

Q17. What is your gender?

○ Male ○ Female ○ Prefer not to say

○ Other, please specify___________________________

Q18. What is your age?

○ Under 25 ○ 25-35 ○ 36-45

○ 46-55 ○ 56-65 ○ Over 65

Q19. Please state which, if any, of the following qualifications you possess (tick all that apply).

○ College qualification ○ University degree

○ Master’s degree ○ Doctorate/ PhD degree

○ Professional qualification ○ Other, please specify ___________________

Q20. What is your current job title?

____

Q21. How many years of experience in your current profession do you have?

In total __________________

In your current post _____________________

Q22. In which industry does your organisation operate?

____

Q23. Would you agree to take part in a follow-up interview? (The interview will aim to obtain further practical insights into the findings of the research study, and will last for approximately one hour in a convenient place and at a time to suit).

○ Yes ○ No

Q24. Would you like to receive a summarised copy of the results of the study?

○ Yes ○ No

If your answer was yes to Q23 or Q24 above, please provide your details below:

Name: ____________________________________

E-mail address: ______________________________

Phone number: ______________________________

If you have additional comments, please add them below:

Thank you for your time and assistance in completing this survey.

Appendix (2): The cover letter

Dear Sir/Madam,

I would like to wish you the very best during these challenging times.

You have been selected to take part in a research questionnaire about corporate social responsibility reporting and its accompanying assurance practices in the UK context. The research will be useful in understanding the importance of external assurance and the factors which affect decisions to hire independent assurers in the UK Market. Your company has been identified by using the Financial Analysis Made Easy (FAME) database, which contains financial and non-financial information about UK companies.

I appreciate that this a very anxious time for all of us. However, the questionnaire is part of my PhD research at the University of Sheffield and I have to adopt to the situation as best as I can. Therefore, I would be grateful if you could please dedicate no more than 15 minutes of your time to completing the questionnaire.

To achieve the aim of the project, the participation of decision makers who have the required knowledge to answer the questionnaire is necessary, and hence you have been selected. However, please feel free to forward the questionnaire to a more suitable person in your organisation to assist in providing the most accurate answers to the questions. Your responses will be kept confidential and will only be used at an aggregate level, hence ensuring anonymity.

Here is a link to the questionnaire.

If you have any questions or concerns about the research questionnaire, please feel free to e-mail me at iaalkhataybeh1@sheffield.ac.uk.

I would like you to know how much I value and appreciate your time and efforts in this difficult period, and I wish you and your loved ones all the best.

Yours faithfully,

Ibrahim Alkhataybeh

PhD researcher

Sheffield University Management School

Appendix (3) Model path coefficients controlling Main/Aim

Model path coefficients with control for the dummy variable main and aim "stage one"

	Path Coefficients	Standard Deviation	T Statistics	P Values
AssurIndep -> PercivedBen	0.261	0.09	2.897	0.004
Competition -> PercivedBen	0.481	0.073	6.591	0.000
Cost -> Assurance	-0.212	0.123	1.725	0.085
GRG -> PercivedBen	-0.242	0.066	3.654	0.000
InternalAud -> PercivedBen	0.09	0.084	1.070	0.285
MainAim -> Assurance	0.051	0.089	0.575	0.037
MianAIM -> PercivedBen	-0.006	0.078	0.073	0.942
PercivedBen -> Assurance	0.367	0.076	4.841	0.000
Profitability -> Assurance	-0.042	0.078	0.538	0.591
Size -> Assurance	0.308	0.095	3.255	0.001

Model path coefficients with control for the dummy variable main and aim "stage two"

	Path Coefficients	Standard Deviation	T Statistics	P Values
Instit Share -> Assurance	0.526	0.107	4.902	0.000
Main/Aim -> Assurance	0.161	0.061	2.621	0.009
Other Stake -> Assurance	0.16	0.108	1.482	0.138
Profitability -> Assurance	-0.012	0.092	0.133	0.894
Size -> Assurance	0.086	0.036	2.398	0.017

Model path coefficients with control for the dummy variable main and aim "stage three"

	Path Coefficients	Standard Deviation	T Statistics	P Values
Aim/Main -> PercivedBen	-0.006	0.079	0.072	0.943
AssurIndep -> PercivedBen	0.261	0.091	2.881	0.004
Competition -> PercivedBen	0.481	0.073	6.541	0.000
Cost -> Assurance	-0.054	0.086	0.625	0.532
GRG -> PercivedBen	-0.242	0.065	3.692	0.000
Instit Share -> Assurance	0.47	0.117	4.01	0.000
InternalAud -> PercivedBen	0.09	0.084	1.065	0.287
Main/Aim -> Assurance	0.151	0.065	2.313	0.021
Other Stake -> Assurance	0.13	0.108	1.204	0.229
PercivedBen -> Assurance	0.106	0.075	1.424	0.154
Profitability -> Assurance	0.001	0.089	0.013	0.989
Size -> Assurance	0.091	0.036	2.564	0.010