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Sustainability Reporting and External Assurance: Evidence From UK Listed Firms

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ABSTRACT

This paper develops and tests a model explaining why some companies obtain external assurance for their sustainability reports while others do not. Our model integrates rational choice and stakeholder theories, providing novel insights into the sustainability assurance literature. Data were collected via an online questionnaire from 105 UK listed companies, and partial least squares structural equation modelling (PLS-SEM) was employed to test the proposed model. We found that decision makers' perceived benefits of external assurance exert a direct positive effect, while perceived costs have a direct negative effect. Indirectly, external assurer independence and market competition positively influence the decision through perceived benefits, whereas adherence to sustainability reporting guidelines has an indirect negative effect. Additionally, institutional investors exert a direct positive impact on the decision to obtain assurance. Interestingly, when institutional investors demand external assurance, the influence of decision makers' perceptions of benefits and costs appears to diminish. These findings advance understanding of the interplay between rational choice and stakeholder theories in shaping decisions to obtain sustainability assurance. The study also carries practical implications for academics, business decision makers, external sustainability assurance providers and policymakers involved in the governance and oversight of sustainability reporting.

1 | Introduction

An increasing number of firms have, in recent years, initiated the disclosure of information concerning their social and environmental impacts (Gonçalves et al. 2020; Baboukardos et al. 2021; Free et al. 2024). Nevertheless, persistent concerns remain regarding the quality and credibility of these disclosures, owing to their largely voluntary nature and the potential for unethical manipulation aimed at constructing a distorted reality that enhances firms' perceived legitimacy among key stakeholders (Helfaya et al. 2019; Zaman et al. 2021; Farooq et al. 2021; Lemma et al. 2023; Sarto et al. 2025). In response to these concerns, stakeholders have increasingly advocated for external assurance by independent and qualified professionals as a means of enhancing the credibility and reliability of corporate social responsibility (CSR) and sustainability reports (Li et al. 2023; Aliyu 2024; Krasodomska et al. 2025). Notwithstanding this growing demand, a substantial proportion of firms continue to forgo external assurance of their sustainability disclosures (KPMG 2022). The underlying motivations for this persistent reluctance remain insufficiently theorised and empirically examined within the extant literature.

Dominated by quantitative studies, the assurance literature focused on a varying set of contextual variables—at the firm level, industry level, and even country level—to explain the

external sustainability assurance purchase decision (Venter and van Eck 2021). However, this body of literature has two noticeable characteristics. Firstly, it has produced inconclusive and contradictory findings across all three levels (Simnett et al. 2009; Kuzey and Uyar 2017; Liao et al. 2018; Clarkson et al. 2019; Kılıç et al. 2021). This may, in part, be attributed to the prevailing theoretical frameworks, which predominantly emphasise the direct effects of selected contextual variables while neglecting their potential indirect or mediating influences (Simnett et al. 2009; Peters and Romi 2015; Liao et al. 2018; Clarkson et al. 2019), despite the significance of such influences, as demonstrated later in this paper. Secondly, the vast majority of studies in this literature have relied on secondary data, which restricts the analysis to publicly available variables. This may explain why some potentially important factors influencing external assurance decisions have been overlooked. In particular, given the fact that obtaining external assurance is voluntary and to some degree, costly (Jones and Solomon 2010; Farooq and de Villiers 2020; Zaman et al. 2021; Lemma et al. 2023), the decision to pursue such assurance can be framed from a cost–benefit perspective (Park and Brorson 2005; Simnett et al. 2009; Jones and Solomon 2010; Hassan et al. 2020). Yet, prior research has seldom applied a comprehensive cost–benefit lens, despite its critical relevance for explaining managerial decision-making in this domain. Consequently, the existing literature offers a fragmented understanding of the factors underlying firms' heterogeneous decisions to obtain external assurance for their sustainability disclosures.

Our study addresses these limitations by proposing a comprehensive framework, grounded in cost–benefit analysis and stakeholder theory, that considers both the direct and indirect roles of determinants of firms' assurance choices. In addition, we collect primary data to examine variables that are not publicly available and therefore have not been quantitatively investigated before.

Our model posits that the decision to procure external sustainability assurance is directly shaped by decision makers' perceptions of its benefits and financial costs, along with the demand or desire of influential stakeholders for such assurance services. Additionally, we contend that factors such as adherence to global reporting guidelines, assurer independence, internal audit capability and market competition may indirectly impact the decision to purchase external sustainability assurance through their influence on decision makers' perceived benefits.

Using data from 105 UK organisations and employing PLS-SEM, our results largely support the hypothesised relationships. Specifically, aligned with the rational choice theory, we find a direct positive impact of perceived benefits of sustainability assurance and a direct negative impact of financial costs of assurance on the decision to obtain one. Additionally, we find that, through the perceived benefits of external sustainability assurance, assurer independence and market competition have an indirect positive impact on external sustainability assurance purchase decisions, while adherence to global reporting guidelines has an indirect negative impact. Under the lens of stakeholder theory, we document a direct positive impact of institutional stakeholders' demand for external sustainability assurance on firms' decisions to procure one. More intriguingly, when simultaneously examining both theories in one model, only the direct impact of institutional stakeholders remains significant, rendering the impact of perceived benefits and financial costs insignificant.

Collectively, our findings suggest that the decision to purchase external sustainability assurance could be subject to a cost–benefit analysis by decision makers but also depends on the desire/demand of influential stakeholders. 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 obtain external assurance irrespective of their perception of the benefits and financial costs if prompted by the demand of influential stakeholders (see, Lemma et al. 2023; Sarto et al. 2025).

This study makes two principal contributions to the literature. First, in contrast to prior research that has typically adopted a single theoretical perspective—such as stakeholder theory, legitimacy theory, signalling theory, or institutional theory—we develop an integrated model that combines managerial rationality with stakeholder pressures. This holistic approach not only facilitates the identification of the dominant theoretical lens in the decision-making process but also enables the analysis of both direct and indirect relationships between contextual factors and managers' choices to seek external assurance. In doing so, the study sheds light on previously inconclusive empirical findings and advances a more comprehensive understanding of the assurance decision-making process.

Second, whereas most prior empirical studies rely primarily on secondary data, our research is among the few to employ primary survey data from CSR and sustainability managers. This methodological design allows us to investigate variables often overlooked in earlier work—such as perceived benefits, assurer independence, internal audit capability, the influence of institutional investors and adherence to global reporting guidelines—which are typically absent from secondary datasets or only indirectly approximated through proxies (Venter and van Eck 2021).

The remainder of the paper is organised as follows. Section 2 reviews the emerging sustainability assurance market and synthesises the literature on firms' assurance purchase decisions. Section 3 outlines the development of the theoretical model and presents the research hypotheses. Section 4 details the research methodology, while Section 5 reports the data analysis and results. Section 6 discusses the findings and their theoretical and practical implications. Finally, Section 7 concludes the paper.

2 | Literature Review

2.1 | Regulations Governing Sustainability Reporting and Assurance

Sustainability reporting has undergone substantial global transformation, driven by increasing demands for standardised, transparent, and verifiable environmental, social and governance (ESG) disclosures (Goerzen et al. 2025). A

landmark development in this area was the establishment of the International Sustainability Standards Board (ISSB) by the IFRS Foundation in 2021. The ISSB was tasked with developing a globally consistent reporting framework to produce clear and enforceable standards that enhance comparability for investors and other stakeholders (IFRS Foundation 2023).

In June 2023, the ISSB issued its inaugural standards IFRS S1 (General Requirements for Disclosure of Sustainability-related Financial Information) and IFRS S2 (Climate-related Disclosures), which took effect in 2024 (ISSB 2023a, 2023b; Al-Hajaya et al. 2025). IFRS S1 establishes the foundational principles for disclosing sustainability-related financial information that affects enterprise value, while IFRS S2 focuses specifically on climate-related risks and opportunities, building upon the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Looking ahead, the ISSB has signalled its intention to expand this framework through additional thematic and sector-specific standards (HM Treasury 2023).

The United Kingdom has positioned itself as an early adopter of these global standards. In July 2023, the UK government announced its commitment to incorporate ISSB standards into national reporting requirements, ensuring alignment with international best practices (UK Department for Business and Trade 2023; HM Treasury 2023). This transition is scheduled to take effect from 2025, following a technical review by the UK Sustainability Disclosure Technical Advisory Committee. The move is consistent with the United Kingdom's broader sustainability agenda, including its legally binding target of achieving net-zero emissions by 2050 and its ongoing efforts to strengthen corporate accountability (UK Department for Business and Trade 2025).

Alongside disclosure requirements, growing attention is being directed toward the assurance of sustainability information as a means of enhancing credibility and stakeholder trust (KPMG 2023). In the United Kingdom, the Financial Reporting Council (FRC) oversees assurance standards, including the application of ISAE 3000 (Revised) for non-financial reporting (FRC 2022). The FRC also monitors market practices and is actively working to expand both the quality and scope of sustainability assurance engagements.

Taken together, these developments highlight the importance of situating any analysis of sustainability reporting within the evolving regulatory landscape. A comprehensive examination of disclosure and assurance requirements is critical not only for contextualising current practices but also for underscoring the rising expectations for UK organisations to produce sustainability reports that are reliable, comparable and independently assured (Goerzen et al. 2025; UK Department for Business and Trade 2025).

2.2 | Factors Affecting the Decision of Purchasing Assurance

Many organisations around the world disclose sustainability information (Haider and Nishitani 2020; Sarto et al. 2025). However, the quality of such information has usually been questioned (Lyon and Maxwell 2011; Farooq and de Villiers 2019; Lemma et al. 2023). This has increased the importance of obtaining external assurance from third parties who verify and formally testify to the quality of the disclosed sustainability information. According to the latest KPMG survey in 2022, around 60% of the world's largest firms had hired external assurers to verify their sustainability disclosure compared to 30% in 2005 (KPMG 2022). A quantitative stream of literature has emerged attempting to explain why some organisations have opted to supplement their sustainability reports with an externally obtained assurance statement while others have not. Table 1 provides a summary of the examined factors, the adopted theories along with the findings.

As can be seen from Table 1, the potential explanatory role of many variables has been investigated. However, mixed results were reported for almost all of these variables. For instance, concerning firm-level variables, scholars have examined and reported inconclusive results on the impact of firm size (Kuzey and Uyar 2017; Maroun and Prinsloo 2020), profitability (Liao et al. 2018; Dutta 2019; Clarkson et al. 2019), leverage (Casey and Grenier 2015; Al-Shaer and Zaman 2018; Kılıç et al. 2021), Sustainability/CSR performance and disclosure scores (Cho et al. 2014; Liao et al. 2018; del Mar Miras-Rodríguez and Di Pietra 2018; Clarkson et al. 2019; Maroun and Prinsloo 2020), firms' foreign income (Casey and Grenier 2015; Peters and Romi 2015), firms' listing status and market (Darnall et al. 2009; Branco et al. 2014; Liao et al. 2018; Clarkson et al. 2019) and firms' ownership structure (Ruhnke and Gabriel 2013; Peters and Romi 2015; Kuzey and Uyar 2017; del Mar Miras-Rodríguez and Di Pietra 2018; Clarkson et al. 2019). A few studies have examined the impact of corporate governance factors on obtaining external sustainability assurance. Empirical evidence on some of these factors was also mixed, such as the effect of board size (Kend 2015; Peters and Romi 2015; Liao et al. 2018; del Mar Miras-Rodríguez and Di Pietra 2018; Maroun and Prinsloo 2020; García-Sánchez et al. 2022), board meetings (Kend 2015; Peters and Romi 2015; Martinez-Ferrero et al. 2017; Liao et al. 2018), board independence (Martinez-Ferrero et al. 2017; Liao et al. 2018; Maroun and Prinsloo 2020; Sarto et al. 2025) and existence of CSR/sustainability committee (Ruhnke and Gabriel 2013; Kend 2015; Peters and Romi 2015; Al-Shaer and Zaman 2018; Sarto et al. 2025).

Other scholars have focused on industry-related influential factors, such as the type/sensitivity of industry towards environmental issues and reported inconclusive results. While Cho et al. (2014), Kuzey and Uyar (2017) and Bollas-Araya et al. (2019) found companies in riskier industries to supplement their sustainability report with external sustainability assurance, others reported contradictory evidence (Liao et al. 2018; Dutta 2019; Hassan et al. 2020). Empirical findings of country-level factors are similarly inconclusive. For instance, Simnett et al. (2009); Kolk and Perego (2010); Bollas-Araya et al. (2019); Kılıç et al. (2021) and Baboukardos et al. (2021) found that firms domiciled in stakeholder-oriented countries were more willing to obtain assurance to meet stakeholders' demands, while Sethi et al. (2017) and Seguí-Mas et al. (2018) reported an insignificant association. In addition, Simnett et al. (2009); De Beelde and Tuybens (2015);

and Martínez-Ferrero and García-Sánchez (2017) showed that firms domiciled in countries with stronger legal environments were more likely to purchase external assurance, while Kolk and Perego (2010), Sethi et al. (2017) and Kılıç et al. (2021) reported contradictory evidence.

Among the theories relating to external sustainability assurance, agency, legitimacy, stakeholder and signalling theories dominate the literature (see Table 1). Firstly, adopting the aforementioned theories, prior empirical studies have primarily focused on the direct impact of selected variables and overlooked

TABLE 1 | Empirical research on the decision of purchasing external sustainability assurance.

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
Darnall et al. (2009)	International	Stakeholder	SocietalStakeholders	0
			RegulatoryStakeholders	+
			InternalStakeholders	+
			SupplyChainStakeholders	0
			Size	+
			ListingStatus	+
			ForeignHeadOffice.	+
			IndustryMembership	+/−
Simnett et al. (2009)	International	Not explicitly mentioned	LegalEnvironment	+
			LegalOrigin	+
			IndustryMembership	+/−
			Size	+
			Profitability	0
			Leverage	0
Kolk and Perego (2010)	International	Stakeholder and legitimacy	LegalEnvironment	−
			LegalOrigin	+
			National-CR-Index	+
			Size	0
			CapitalIntensity	0
			IndustryMembership	+/−
Zorio et al. (2013)	Spain	Not explicitly mentioned	IBEX-35 listing	+
			IndustryMemebrship	+/−
			Size	+
			Profitability	0
			Leverage	−
Ruhnke and Gabriel (2013)	Germany, Netherlands, United Kingdom	Stakeholder-agency and signalling	Size	+
			Ownership	0
			CSRcommittee	+
			GRI	+
			FirstCSRreport	0
			Country	0
			IndustryMembership	0
			Profitability	+
			Leverage	0

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
Branco et al. (2014)	Portugal	Not explicitly mentioned	Size	+
			Profitability	+
			Leverage	−
			ListingStatus	−
			Ownership	0
			IndustryMembership	+/−
Cho et al. (2014)	USA	Voluntary disclosure and signalling	Environmentally-Sensitive-Industry (ESI)	+
			FinanceIndustry	+
			CSR-Extensiveness	+
			MarketValue-of-equity	0
			Size	0
			Profitability	0
			Leverage	0
Casey and Grenier (2015)	USA	Legitimacy, stakeholder, and shareholder	Size	+
			Profitability	0
			Leverage	−
			IndustryMembership	+/−
			CSR-Performance-KLD Strengths	+
			CSR-Performance-KLD Concerns	+
			ForeignIncome	+
			Growth	0
			Liquidity	0
			Cost-of-Capital	+
			High-litigationIndustries	0
			Competition	0
			FinancingActivities	0
			DisclosurePolicy	0
			AdvertisingExpense	+
De Beelde and Tuybens (2015)	Europe	Stakeholder	National-CR-Index	−
			LegalEnvironment	+
			IndustryMemebership	0
			TotalAssets	+
			Number-of-employees	0
			Profitability	0
			Leverage	0
			MediaVisibility	0
			Ownership	0

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
Gillet-Monjarret (2015)	France	Legitimacy	MediaExposure	+
			MediaLegitimacy	−
			Firm size	+
			Profitability	0
			DebtRatio	0
			IndustryMemebrship	0
			SustainabilityIndex	+
			GRI	+
Peters and Romi (2015)	USA	Resource dependency, legitimacy and agency	CSRcommittee	0
			CSR-officer	+
			Expert-CSRofficer	+
			CSR-committee-Size	0
			CSR-committee-Expertise	+
			CSR-committee-Meeting	0
			Duality	0
			BoardSize	+
			BoardMeetings	0
			AuditCommittee-(AC)-Size	0
			BoardIndependence	0
			CSR-performance-KLD-Concerns	+
			IndustryMembership	0
			GRI	+
			Size	−
			Profitability	0
			Leverage	0
			Institutionalinvestors	+
			Bid-ask-spread	+
			ForecastDispersion	0
			ForeignIncome	0
Kend (2015)	United Kingdom, Australia	Stakeholder	AC-Meetings	+
			AC-Size	0
			BoardMeetings	0
			BoardSize	0
			SustainabilityCommittee	0
			GovernanceCommittee	0
			Size	0
			AuditFees	0
			OtherAssuranceFfees	0

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
			Profitability	+
			SalesGrowth	+
Sethi et al. (2017)	International	Not explicitly mentioned	CSR-reportQuality	+
			LegalEnvironment	0
			LegalOrigin	0
			IndustryMembership	0
			Size	0
			Profitability	−
Martínez-Ferrero and García-Sánchez(2017)	International	Agency, stakeholder, legitimacy, and neo-institutional	LegalOrigin	+
			Culture	+
			IndustryPressure	0
			Size	+
			Leverage	−
			Growth	+
			IndustryMembership	0
Kuzey and Uyar (2017)	Turkey	Legitimacy, agency, resource availability and signalling	Size	0
			ESI	+
			Leverage	0
			Profitability	−
			Liquidity	+
			FreeCashFlow	0
			Growth	0
			Ownership	0
Martinez-Ferrero et al. (2017)	International	Agency, institutional, socio-emotional wealth	BoardSize	+
			BoardIndependence	+
			FamilyOwnership	+
			BoardSize*FamilyOwner	+
			BoardIndep*FamilyOwner	0
			Size	+
			Leverage	0
			Growth	0
			Profitability	0
			BoardMeetings	+
			FamilyCEO	0
Liao et al. (2018)	China	Institutional, critical mass, resource dependence, and agency	BoardSize	+
			FemaleDirectors	+
			BoardIndependence	0

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
			SupervisoryDirectors	0
			Duality	+
			BoardMeeting	0
			ForeignDirectors	−
			CEO-Overseas-Background	0
			ESI	−
			Size	0
			Profitability	+
			Leverage	0
			FinancialAuditorBig4	0
			State-owned-enterprise	0
			CSR-performance-score	+
			CrossListing	0
			MarketIndex	−
			LawIndex	+
			CSR-Index	0
del Mar Miras-Rodríguez and Di Pietra (2018)	International	Legitimacy, institutional and agency	Rule-Vs-Relation-Based environments	−
			Executives-on-the-board	−
			Ownership	+
			BoardSize	0
			Size	−
			Profitability	0
			Number-of-pages	−
			CSR-performance-score	−
			CSR-committee	0
			Voluntary-CSR-reporting	0
Al-Shaer and Zaman (2018)	United Kingdom	Resource dependency	AC-Size	0
			AC-Independence	+
			AC-Financial-Expertise	+
			AC-Meetings	+
			SustainabilityCommittee	−
			BoardSize	+
			BoardIndependence	0
			BoardMeeting	0
			Size	0
			Profitability	0
			Leverage	+

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
Fernandez-Feijoo et al. (2018)	International	Legitimacy	Financial auditor Big4	–
			LegalSystem-(English)	0
			LegalSystem-(French)	0
			LegalSystem-(Germany)	+
			LegalSystem-(Scandinavian)	+
			EU-companies	+
			ESI	0
			ConsumerPressure	+
			Size	0
			ListingStatus	0
			CSR-disclosure-Level	+
Seguí-Mas et al. (2018)	International	Institutional, legitimacy and stakeholder	LegalOrigin	0
			ListingStatus	+
			Size	+
			SectorSupplement	+
Dutta (2019)	Finland	Legitimacy	Greenhouse-Gas-Emissions-performance	–
			Water-Consumption-performance	–
			Waste-produced-performance	0
			Size	+
			Profitability	0
			Leverage	–
			Asset age	+
			ESI	0
Clarkson et al. (2019)	International	Signalling	CSR-performance-score	+
			CSR-disclosure-level	+
			Size	+
			Leverage	0
			Profitability	–
			Accruals	0
			FinancialAuditorBig4	–
			Analysts	+
			CrossListing	+
			Voluntary-disclosure-measure	–
			CorporateGovernance-measure	–
			InstitutionalOwnership	–

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
Bollas-Araya et al. (2019)	International	Institutional, legitimacy, stakeholder	Size	0
			LegalOrigin	+
			SectorSensitivity	−
Hassan et al. (2020)	Bangladesh	Signalling	Sustainable-disclosure-index	+
			IndustryMembership	−
			Reporting-Format	+
			Size	+
			Profitability	0
			Leverage	0
Maroun and Prinsloo (2020)	South Africa	Legitimacy	Size	−
			Profitability	0
			Leverage	0
			ESI	0
			FinancialServicesSector	−
			DisclosureExtensiveness	0
			BoardSize	+
			BoardExperience	−
			BoardIndependence	+
Simoni et al. (2020)	Europe	Stakeholder, institutional, signalling and legitimacy	SocialScore	+
			NationalCulture	−
			EnvironmentalScore	+
			BusinessEthicsScore	−
			CorporateGovernanceScore	+
			ESI	0
			GRI	+
			Size	+
			Leverage	0
			Profitability	0
Baboukardos et al. (2021)	International	Stakeholder	Integrated Thinking-(IT)	+
			LegalOrigin-(LEG)	+
			IT*LEG	−
			Size	+
			Leverage	+
			Profitability	+
			Growth	0
			EmissionTradingScheme	+
			UnitedNationsGlobalCompact	+

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
Kılıç et al. (2021)	International	Institutional	LegalOrigin	+
			LegalEnvironment	−
			SustainabilityPerformance	+
			Size	0
			Leverage	0
			Profitability	0
			ESI	0
			Financial-Industry	0
García-Sánchez et al. (2022)	International	Agency	Long-term (LT) Institutional-Investors	+
			Short-term (ST) Institutional-Investors	0
			LT-institutionalInvestors-VotingRight	+
			LT-institutionalInvestors-VotingRight	+
			LT-Institutional-on-the-board	−
			ST-Institutional-on-the-board	−
			PensionFunds	+
			Government-InstitutionalInvestors	0
			FamilyFirms-InstitutionalInvestors	0
			Financial-InstitutionalInvestors	−
			CrossHoldings-InstitutionalInvestors	−
			OtherInstitutionalInvestors	0
			Analysts	0
			CSR-Committee	+
			BoardIndependence	−
			Duality	+
			FemaleDirectors	−
			SustainabilityPerformance (SustainableSocietyIndex)	+
			Industrial-CSR-Practices-Index	0
			Size	+
			Leverage	0
			Profitability	0
			Accruals	0

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
			FinancialAuditorBig4	0
			CSR-Performance-Score	+
			GRI	+
			National-CR-Index	+
			Growth	0
García-Sánchez et al. (2022)	Germany, Netherlands, United Kingdom	Agency	AdvertIntensity	0
			BIndep*FemaleDirectors	0
			BIndep*CSRcommittee	−
			FemaleDirectors*CSRcommittee	+
			Analysts*InstInv	+
			BIndep*Analysts	0
			BIndep*InstInvestors	+
			FemaleDirectors*Analysts,	0
			CSRCommittee*Analysts	+
			FemaleDirectors*InstInvstors	0
			CSRCommittee*InstInvestors	+
			BoardIndependence	−
			CSRcommittee	+
			InstitutionalOwnership	0
			Analysts	0
			Size	+
			Leverage	0
			Profitability	0
			Market-to-book-ratio	0
			BoardSize	+
			Duality	+
			FemaleDirectors	+
Sarto et al. (2025)	Italy	Upper Echelons Theory	Older CEO	+
			Female CEO	+
			CEO with Legal Background	+
			CEO with Higher Educational level	+
			CEO with Industry Expertise	+
			BIG4	+
			Size	−
			Tobin Q	0
			EBITDA	0
			Leverage	0

(Continues)

TABLE 1 | (Continued)

Author(s)	Country	Theory (ies)	The investigated variables Controls	Results
			Duality	+
			BoardIndependence	+
			AuditCommittee	0
			CSRcommittee	+

Note: This table provides a summary of the examined factors by prior quantitative research. Under ***the investigated variables*** column, normal font denotes main variables, while *italic* font refers to control variables. In the results column, the (+) symbol denotes a positive association, (−) negative association, and (0) signifies non-significant results.

the potential for more complex (indirect) relationships. Secondly, these studies have neglected the possibility that the decision to purchase external sustainability assurance may involve a cost–benefit analysis. These limitations may, at least partially, account for some of the inconclusive results reported by previous studies. Given that providing external assurance is a voluntary decision, decision-makers may evaluate the costs associated with obtaining external assurance and the potential benefits for the reporting firm. Evidence from case-based studies supports this notion. For instance, interviewees in studies by Park and Brorson (2005), Jones and Solomon (2010), Sawani et al. (2010), Farooq and de Villiers (2020) and Li et al. (2023) referred to the costs and benefits associated with external assurance. Our paper investigates this sustainability external assurance decision from a different theoretical angle by combining the rationality perspective with the stakeholder perspective. Our theoretical model offers an alternative explanation for the decision-making process of external assurance and provides additional insights into the field.

3 | Conceptual Framework and Hypotheses Development

3.1 | Rational Choice Theory and Sustainability External Assurance

The rational choice theory offers a universal basis for explaining human behaviour, suggesting that human behaviour is shaped by the rewards and punishments, with individuals generally doing things that lead to rewards (Scott 2000; Leeson 2020). It assumes that rational individuals calculate the potential benefits and costs of any action before taking a decision (Scott 2000). While rational choice theory has been widely used to conceptualise investment decisions based on cost–benefit analysis (Cabantous and Gond 2011), its application in sustainability assurance literature is very limited.

Several scholars have emphasised the benefits derived from firms' engagement with external assurers, including enhancing the credibility, transparency and completeness of their sustainability-related disclosures (O'Dwyer and Owen 2005; Simnett et al. 2009; Liao et al. 2018; Li et al. 2023; Al-Hajaya et al. 2025), as well as providing suitable guidance to enhance firms' internal reporting system (Park and Brorson 2005; Jones and Solomon 2010). Simnett et al. (2009) argue that external sustainability assurance could increase the confidence of interested users in the accuracy and validity of the sustainability reporting. Krasodomska et al. (2025) suggest that firms aiming to enhance stakeholder trust through sustainability performance are more inclined to obtain external assurance of their disclosures. Similarly, Amran et al. (2024) provide evidence that sustainability assurance amplifies the positive relationship between sustainability reporting, financial performance and corporate reputation. According to Park and Brorson (2005), several sustainability reporting firms have confirmed the benefits from follow-up meetings with and feedback received from external assurers, which helped to: (1) improve their internal reporting system, (2) adhere to various legal requirements during sustainability documentation and (3) improve the presentation of sustainability reports (Park and Brorson 2005).

From the perspective of rational choice theory, obtaining external assurance can be conceptualised as a deliberate, utility-maximising action. The perceived 'benefits' are operationalised through decision-makers' expectations of enhanced credibility, reliability and accuracy of sustainability information, alongside improvements in internal reporting systems (Park and Brorson 2005; Farooq et al. 2023). These perceived advantages constitute the 'rewards' in rational choice terms and are anticipated to increase the likelihood that firms will seek assurance. Prior qualitative studies on sustainability assurance generally support this view, indicating that when decision-makers are confident in realising these benefits, they are more willing to pursue external assurance (e.g., Park and Brorson 2005; Jones and Solomon 2010; Farooq and de Villiers 2020; Li et al. 2023). Therefore, we predict the following hypothesis:

H1. *There is a positive impact of perceived benefits of external sustainability assurance on the decision to provide external assurance.*

While external sustainability assurance is credited with some benefits as noted above, these are not without costs. Apart from the direct fees paid to external assurers, additional costs involve the time and resources expended by employees and management during the external auditing process (Jones and Solomon 2010; Farooq and de Villiers 2020; Li et al. 2023). For instance, sustainability representatives in the United Kingdom highlight increased costs, scope and time for internal auditing, while others argue that substantial expenses arise due to the large number of business units and the management time required to facilitate the process of engaging with an external assurer (Jones and Solomon 2010). Similar concerns have been reported by

sustainability managers in France, Australia and New Zealand (Gillet 2012; Farooq and de Villiers 2020). Interestingly, an interviewee in Park and Brorson (2005) claimed that "*the fees for an external assurer could be ten times the entire sustainability reporting budget*".

Within the framework of rational choice theory, the "costs" construct is operationalised as the perceived financial fees, managerial time and resource commitments necessary to engage external assurance providers (Park and Brorson 2005; Jones and Solomon 2010; Farooq et al. 2023). These elements represent the "punishments" in rational choice terms. As such, costs are likely to negatively influence the decision to obtain external assurance (Darus et al. 2014; Kend 2015; Farooq and de Villiers 2020; Zaman et al. 2021; Li et al. 2023), and therefore we propose the following hypothesis:

H2. *There is a negative impact of perceived costs of external sustainability assurance on the decision to provide external assurance.*

3.2 | Determinants of External Sustainability Assurance Perceived Benefits

Given the importance of the perceived benefits of external sustainability assurance in the decision to obtain one, identifying the factors which may influence decision makers' perception of such benefits becomes necessary (Sarto et al. 2025). Such factors help us better understand why some decision makers expect more (or less) benefits from external assurance than others (e.g., Park and Brorson 2005; Jones and Solomon 2010; Lemma et al. 2023; Farooq et al. 2023). Based on an extensive literature review, we have identified four important factors, namely internal audit capability, external assurer independence, following sustainability global reporting guidelines and market competition (see, Jones and Solomon 2010; Sawani et al. 2010; Maroun 2018; Farooq et al. 2023).

3.2.1 | Internal Audit Capability

Integral to the corporate governance framework, internal audit functions can enhance the reliability and credibility of sustainability disclosures while identifying areas for improvement (Darnall et al. 2009; Soh and Martinov-Bennie 2015, 2018; DeSimone et al. 2021). Prior qualitative research has indicated that when managers perceive their internal audit function as effective in assuring sustainability disclosures, the perceived benefits of obtaining external assurance are diminished (Sawani et al. 2010; Farooq and de Villiers 2020).

In an interview-based study, Jones and Solomon (2010) report that half of their participants preferred relying on internal audits over external assurance, believing that internal audits sufficiently enhance the credibility of corporate reports (see also Lemma et al. 2023). For example, a sustainability officer noted that their internal audit process ensures the quality of corporate reports, thereby reducing the perceived need for external assurance (Lemma et al. 2023). Similarly, Park and Brorson (2005), Sawani et al. (2010) and Farooq and de Villiers (2020) observe that firms with well-functioning internal audits perceive lower value in purchasing external sustainability assurance.

Consistent with rational choice theory, firms with effective internal audit systems may be less inclined to seek external assurance, as they can already achieve substantial credibility and quality in their sustainability reports internally, reducing the perceived benefits of external engagement (Park and Brorson 2005; Jones and Solomon 2010; Farooq and de Villiers 2017). Accordingly, we anticipate that decision-makers' perceptions of the adequacy of internal audit in assuring sustainability reports will influence their perceived benefits of engaging external assurers. We therefore propose the following hypotheses:

H3a. *There is a negative impact of perceived capability of internal auditors on the perceived benefits of external sustainability assurance.*

H3b. *There is an indirect negative impact of perceived capability of internal auditors on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.*

3.2.2 | Assurer Independence

Independence is a critical factor influencing decision-makers' justification for engaging an external assurer (Jones and Solomon 2010; Farooq and de Villiers 2020; Aliyu 2024). Sustainability managers often hesitate to hire external assurers when concerns exist regarding their independence, arguing that the perceived benefits of such engagements are diminished if assurers are not sufficiently independent (Park and Brorson 2005; Jones and Solomon 2010; Farooq et al. 2023). From a rational choice perspective, decision-makers' perceptions of assurers' independence may therefore serve as a contingent variable that affects the perceived benefits of external sustainability assurance and indirectly, the ultimate decision to engage one (Lemma et al. 2023; Farooq et al. 2023).

Qualitative evidence highlights this effect. For example, sustainability managers indicate that engaging third-party independent assurers is essential for enhancing the credibility of their sustainability disclosures (Jones and Solomon 2010; Farooq and de Villiers 2020; Aliyu 2024). However, the anticipated benefits of external assurance are contingent on the true independence of the assurers tasked with verifying the reports (Jones and Solomon 2010; Farooq and de Villiers 2020). This underscores the positive relationship between perceived assurer independence and the expected value of external sustainability assurance (Sawani et al. 2010).

According to rational choice theory, if firms aim to strengthen the credibility of their sustainability disclosures through external assurance, the assurers must be genuinely independent to confer additional benefits and enhance stakeholder confidence in the reported information (Park and Brorson 2005; Boiral et al. 2019; Boiral and Heras-Saizarbitoria 2020; Amran et al. 2024; Al-Hajaya et al. 2025). Conversely, a lack of independence may substantially reduce the value of engaging an

external assurer. Based on these considerations, we propose the following hypotheses:

H4a. *There is a positive impact of perceived external assurer independence on the perceived benefits of external sustainability assurance.*

H4b. *There is an indirect positive impact of perceived external assurer independence on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.*

3.2.3 | Adopting Sustainability Global Reporting Guidelines

Over the past two decades, both governmental and non-governmental organisations have introduced numerous global initiatives aimed at enhancing the quality and usefulness of sustainability reporting (Helfaya and Kotb 2016; Sarto et al. 2025). Although adherence to these reporting guidelines and standards is voluntary in most jurisdictions, following them is widely believed to enhance the credibility and perceived reliability of disclosed information among stakeholders (Li et al. 2023; Free et al. 2024).

Among the most widely adopted frameworks is the Global Reporting Initiative (GRI). Compliance with GRI guidelines is associated with improved corporate reputation and ensures the quality and completeness of sustainability disclosures (Park and Brorson 2005; Boiral et al. 2019; Yang et al. 2019). Another influential framework is the Integrated Reporting Framework, which has been shown to enhance corporate reporting quality (Baboukardos et al. 2021; Maroun 2018). Similarly, Graffin and Ward (2010) note that adopting International Standards Organisation (ISO) guidelines signals a firm's commitment to trustworthy sustainability reporting, positively influencing stakeholder perceptions.

Given the potential benefits of adhering to GRI and other international reporting standards, firms may be further motivated to complement these efforts with external sustainability assurance. This motivation may arise from the perception that external assurers are less likely to identify reporting deficiencies when GRI guidelines are followed (Ruhnke and Gabriel 2013; Briem and Wald 2018). Indeed, GRI explicitly encourages companies to seek external assurance for their sustainability disclosures (Ruhnke and Gabriel 2013; Gillet-Monjarret 2015). Empirical studies have also identified a positive association between GRI adoption and the likelihood of obtaining external assurance (Gillet-Monjarret 2015; Peters and Romi 2015; Simoni et al. 2020).

However, an alternative perspective, supported by anecdotal and case-based evidence, suggests that in some cases, adopting GRI or similar guidelines may reduce the perceived need for external assurance. Managers may rationally perceive that adherence to these frameworks sufficiently enhances the quality of their sustainability reporting, thereby diminishing the additional benefits of external assurance. For example, Park and Brorson (2005) and Sawani et al. (2010) report that some managers did not pursue external assurance after adopting GRI or other international standards, believing that the guidelines alone provided the desired credibility.

In this study, we examine this alternative perspective and its implications for the decision to procure external sustainability assurance, formalised through the following hypotheses:

H5a. *There is a negative impact of adopting a globally recognised sustainability reporting guideline on the perceived benefits of external sustainability assurance.*

H5b. *There is an indirect negative impact of adopting a globally recognised sustainability reporting guidelines on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.*

3.2.4 | Market Competition

Firms may pursue the disclosure of sustainability information as a strategy to gain competitive advantage by strengthening relationships with key stakeholders (Cao et al. 2019; Čater et al. 2023). Competitive action serves as a mechanism for firms to avoid falling behind rivals, encompassing measures such as price adjustments, product launches and public statements (Lieberman and Asaba 2006; Zucchini et al. 2019), as well as the publication of sustainability information (Cao et al. 2019). Within this context, purchasing external sustainability assurance can itself constitute a competitive action, enhancing the credibility of corporate sustainability reports.

Cao et al. (2019) highlight that publishing sustainability information fosters competitive sustainability practices among industry peers. Furthermore, Casey and Grenier (2015) and Farooq and de Villiers (2020) suggest that firms are more inclined to obtain external sustainability assurance to provide more credible information relative to competitors. Accordingly, it is plausible that inter-firm competition motivates managers to recognise the benefits of sustainability assurance as a means of safeguarding their competitive position (Li et al. 2023; Gerged et al. 2023). For instance, Sawani et al. (2010) report that decision-makers were prompted to prepare and publish sustainability reports, including obtaining external assurance, in response to industry trends, perceiving that such actions would help maintain or enhance their standing relative to competitors. Similarly, sustainability representatives have indicated that external assurance supports their firm's position as a frontrunner in sustainability management (Park and Brorson 2005).

Grounded in rational choice theory, market competition elevates the perceived benefits of assurance such as reputational advantage, thereby making the associated costs more justifiable for firms seeking to maintain competitiveness (Park and Brorson 2005; Li et al. 2023). Based on these arguments, we propose the following hypotheses:

H6a. *There is a positive impact of market competition on the perceived benefits of external sustainability assurance.*

H6b. *There is an indirect positive impact of market competition on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.*

3.3 | Stakeholder Theory and Sustainability External Assurance

Stakeholder theory posits that, for firms to ensure long-term survival, they must address the expectations of their stakeholders and adjust their activities accordingly (Roberts 1992; Cotter and Najah 2012; Deegan 2014). However, given the limitations of resources, firms may not be able to satisfy all stakeholder demands equally and are therefore more likely to prioritise the expectations of powerful and influential stakeholders (Deegan 2014; Higgins et al. 2020).

Institutional investors constitute a particularly powerful and legitimate stakeholder group, especially in firms where they hold significant equity stakes. They play a central role in corporate governance and exert substantial influence over corporate behaviour and disclosure practices (Cotter and Najah 2012; Atkins and Maroun 2015; García-Meca and Pucheta-Martínez 2018; Mallin 2019; García-Sánchez 2020). Prior research suggests that institutional investors significantly shape firms' decision-making processes due to their incentives to monitor and control management more closely (Ingley and Van Der Walt 2004). Cotter and Najah (2012) found that institutional investors influence corporate reporting by demanding high-quality disclosures to mitigate financial risks associated with environmental impacts. Similarly, García-Sánchez et al. (2020) argued that firms produce sustainability information to meet the expectations of institutional investors and be considered a valid investment option.

Accordingly, when institutional investors request managers to provide externally assured sustainability information, managers are more likely to comply and purchase such assurance (Cotter and Najah 2012; Peters and Romi 2015). Empirical evidence supports this assertion. Atkins and Maroun (2015) reported that institutional investors were primary users of integrated reports and demanded external assurance to enhance reporting quality. Peters and Romi (2015) similarly documented that firms were more likely to obtain assurance in response to institutional investors' increasing demand for credible sustainability disclosures. García-Sánchez et al. (2022) found that long-term institutional investors drive firms to seek assurance to signal reliability. Furthermore, del Mar Miras-Rodríguez and Di Pietra (2018) observed that firms owned by reference shareholders are more likely to obtain sustainability assurance due to the shareholders' influential role in board appointments and their long-term orientation.

In the context of this study, and from a stakeholder theory perspective, institutional investors are conceptualised as a powerful stakeholder group whose expectations firms must prioritise to maintain legitimacy and secure resources. Their influence is operationalised through their demand for credible and externally assured sustainability information (García-Sánchez et al. 2022). Consequently, this stakeholder pressure is expected to increase the likelihood that firms obtain external assurance. Based on this reasoning, we propose the following hypothesis:

H7. *There is a positive impact of institutional investors' demand for external sustainability assurance on the decision to provide external sustainability assurance.*

3.4 | Stakeholder Theory, Rational Choice Theory and External Sustainability Assurance

The rationality perspective posits that the decision to obtain external assurance is guided by a cost–benefit analysis (e.g., Farooq and de Villiers 2020; Li et al. 2023; Sarto et al. 2025). In contrast, the stakeholder perspective emphasises that such decisions are influenced by the demands of influential stakeholders (e.g., Atkins and Maroun 2015; Clarkson et al. 2019; Farooq and de Villiers 2020; García-Sánchez et al. 2022; Al-Hajaya et al. 2025). Moreover, external pressures on firms to prioritise stakeholder interests have intensified in recent years, reshaping CEOs' perceptions and approaches toward sustainability activities (Liang et al. 2024). While theoretically it is straightforward to predict decision makers' actions when cost–benefit analysis and stakeholder demands align, ambiguity arises when these forces conflict. Specifically, what occurs when decision makers perceive that external assurance is not worth the cost or effort, yet influential stakeholders—such as institutional investors—request its adoption?

Qualitative evidence offers valuable insights into this dynamic. For example, Jones and Solomon (2010) report instances in which sustainability representatives held a negative perception of external assurance benefits but still procured one. This apparent contradiction to rational choice theory can be attributed to the influence of powerful stakeholders who insist on assurance to enhance the credibility and transparency of corporate reports. As discussed earlier, institutional investors, as a particularly influential stakeholder group, can exert significant sway over firms' decision-making processes (Daily and Huang 2001; Ingley and Van Der Walt 2004). Consequently, when these stakeholders demand external sustainability assurance, firms are more likely to comply regardless of the outcome of their internal cost–benefit assessments (Darnall et al. 2009; Cotter and Najah 2012; Peters and Romi 2015; Li et al. 2023).

However, it is important to note that not all institutional investors exert uniform influence or demand external assurance. Clarkson et al. (2019) report a negative association between the proportion of institutional investors and the likelihood of obtaining assurance. Conversely, García-Sánchez et al. (2022) find that the presence of long-term institutional investors positively affects the decision to obtain sustainability assurance, whereas short-term institutional investors show no significant association. Aligning with stakeholder theory, this evidence suggests that when institutional investors explicitly demand external sustainability assurance, managers are likely to respond favorably to this demand, irrespective of their own cost–benefit evaluation. Based on this rationale, we propose the following hypothesis:

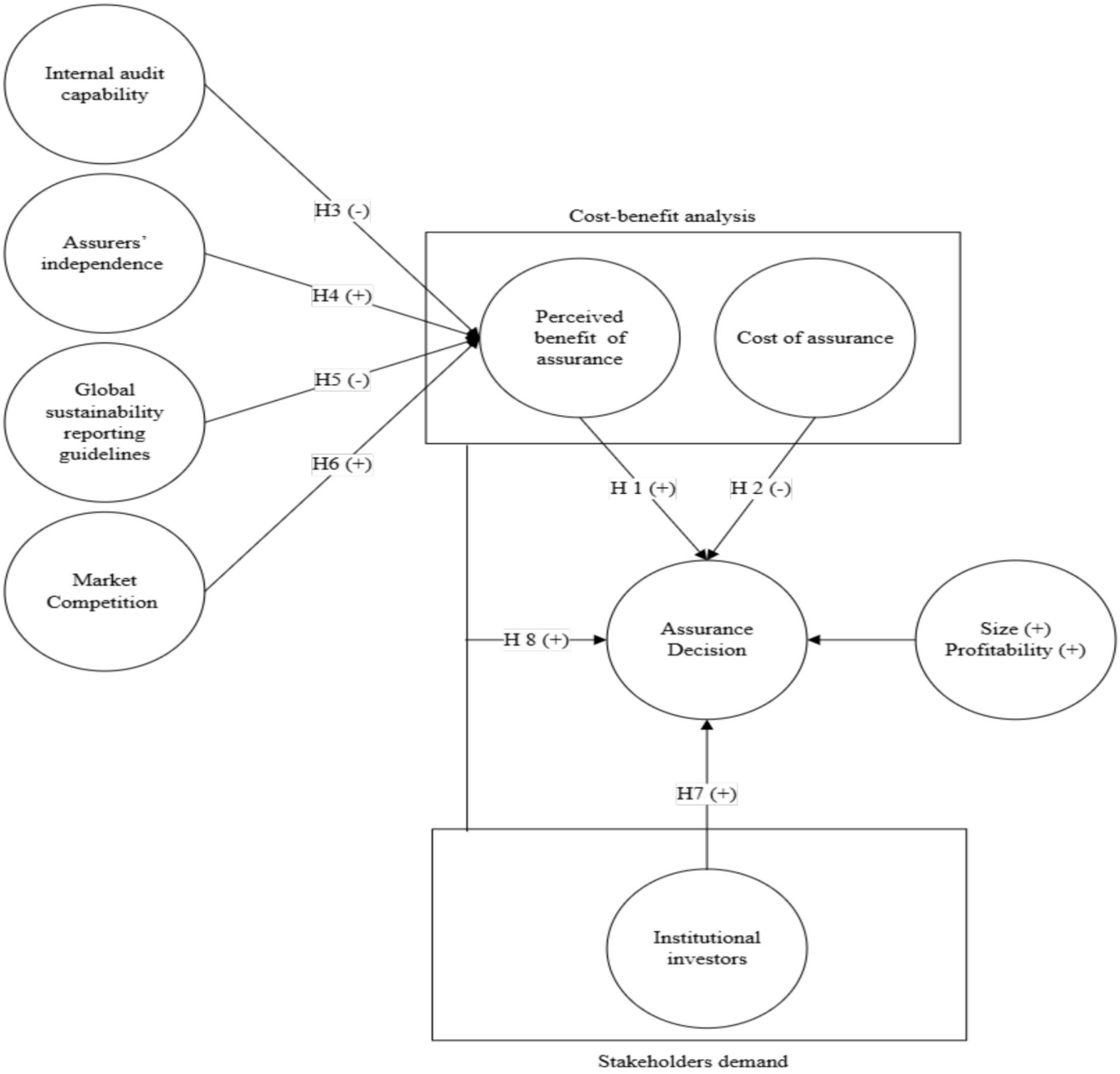

FIGURE 1 | Theoretical model—The influential factors on the external sustainability assurance purchase decision.

H8. *The demand of institutional investors for external sustainability assurance is likely to negate the effect of the cost–benefit analysis on the decision to obtain external sustainability assurance.*

Our theoretical model and the associated hypotheses are visually summarised in Figure 1.

4 | Method

Our empirical study is based mainly on primary data collected through an online questionnaire. We conducted a pre-test by consulting 10 professionals and academics with expertise in the field to confirm the questionnaire's face and content validity. The questionnaire was adjusted based on the feedback received during the pre-test and then distributed to CSR/sustainability managers and decision makers in 1056 UK listed firms known for producing CSR/sustainability reports in April 2020.

After sending five reminders, a total of 237 responses were received, resulting in a 22.4% response rate. This response rate aligns with prior studies, such as Darnall et al. (2009) and Darus et al. (2014), who reported response rates of 24.7% and 22.8%, respectively. Out of the 237 responses, 105 declined to participate for various reasons.[1] Of the 132 (237–105) remaining questionnaires, 17 were empty and 10 were partially completed and deemed unusable due to significant missing values, leaving 105 valid and usable responses for the analysis. Table 2 presents the distribution of our sample firms per industry. Respondents'

TABLE 2 | Sample distribution per industry.

Industry Name	Participating Firms. (%)	Firms obtained assurance. (%)
Basic Materials	11 (10.5)	6 (14.2)
Consumer Discretionary	14 (13.3)	8 (19)
Consumer Staples	3 (2.9)	2 (4.7)
Energy	6 (5.7)	2 (4.7)
Financials	16 (15.2)	5 (11.9)
Health Care	7 (6.7)	2 (4.7)
Industrials	24 (22.0)	6 (14.2)
Real Estate	14 (13.3)	8 (19)
Technology	5 (4.8)	0 (0)
Telecommunications	1 (1)	0 (0)
Utilities	4 (3.8)	3 (7.1)
Total	**105 (100)**	**42 (100)**

average years of experience in their current post were 6 years and in general, 18 years. This provided preliminary assurance of the credibility of the data gathered in this research (Hadid et al. 2016).

Non-response bias was assessed using the wave method. Independent *t*-tests revealed no significant differences between the means of early and late respondents on any of the variables under investigation (Field 2013). This suggests that non-response bias is not a threat to the study's findings. For common method bias, Harman's single factors test (Aguirre-Urreta and Hu 2019) was employed. Exploratory factor analysis showed that the first factor explained only 33% of the total variance, indicating that common method bias is not of high concern in this study (Aguirre-Urreta and Hu 2019).

4.1 | Variables Measurement

4.1.1 | Dependent Variable

The decision to obtain external assurance was measured by asking respondents whether their firm engaged an external assurer for its sustainability report. A dummy variable was then constructed, with a value of 1 indicating that the firm obtained external sustainability assurance and 0 otherwise (Liao et al. 2018; Al-Hajaya et al. 2025).

4.1.2 | Independent and Control Variables

Owing to the absence of established measures in prior quantitative studies, we developed instruments for three constructs: perceived benefits of external assurance, institutional investors and adherence to global sustainability reporting guidelines. The measures employed in this study are presented in the Appendix. *Perceived benefits of external assurance* were operationalised using eight items, derived from descriptions and findings in previous qualitative research on sustainability assurance (Ball et al. 2000; Bushee and Noe 2000; Park and Brorson 2005; Hodge et al. 2009; Sawani et al. 2010; Darus et al. 2014). A high score for items indicates a strong benefit from obtaining assurance (e.g., enhancing the credibility and transparency of sustainability disclosures and improving a firm's reputation) and a low score reflects a lack of benefit. Similarly, we formulated three items based on the work of Lewis and Mackenzie (2000), Pohl and Tolhurst (2010) and Atkins and Maroun (2015) to create a measure for the impact of *institutional investors* on the external assurance purchase decision. These items assess whether institutional investors raise concerns when sustainability information is not externally assured and whether they actively demand assurance. To capture the extent to which the sampled firms adhered to globally recognised sustainability reporting guidelines, we developed four indicators based on prior qualitative research (Park and Brorson 2005; Sawani et al. 2010; Darus et al. 2014; Atkins and Maroun 2015; Farooq and de Villiers 2017).

Each indicator captures the extent to which *adherence to major sustainability reporting guidelines* (e.g., GRI, IR, ISO and other relevant frameworks) influences the perceived benefits of obtaining external assurance. *The assurance cost construct* was measured using three items: two adapted from Darus et al. (2014) and a third derived from Jones and Solomon (2010). Respondents were asked to indicate the extent to which obtaining assurance is financially costly, time-consuming and expands the scope of internal auditors' work.

Internal audit function capability was measured using three indicators: two adapted from Sawani et al. (2010), also used by Alzeban and Gwilliam (2014) and Darus et al. (2014), and the third indicator derived from Jones and Solomon's (2010) qualitative study. This construct evaluates the extent to which decision makers perceive their internal audit function as adequate and effective in assuring CSR reports. *Assurer's independence* was operationalised using three items taken from Alzeban and Gwilliam (2014) 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. *Firm competition* was measured with four indicators, all adapted from prior studies (e.g., Jaworski and Kohli 1993; Sawani et al. 2010; Darus et al. 2014; Feng et al. 2019). This construct captures the intensity of competition facing a company and how competitors are perceived to respond to the firm's decision to obtain external sustainability assurance.

Furthermore, to control for the effects of *firm size* and *profitability*, secondary data were collected from the FAME database. Following prior literature, total assets were used as a proxy for firm size, as larger firms are more visible and experience greater stakeholder pressure, which may influence their decision to obtain external assurance (Hassan et al. 2020; Sarto et al. 2025). Return on assets (ROA) was employed as a proxy for firm profitability, given that more profitable firms typically possess greater resources to support the publication of high-quality, credible disclosures and are more likely to seek external assurance

(Martinez-Ferrero et al. 2017; Sethi et al. 2017; Al-Shaer and Zaman 2018; Farooq et al. 2021). All latent variables in this study were measured using a 7-point Likert scale.

5 | Analyses and Results

To test our model and hypotheses, we used Partial Least Squares Structural Equation Modelling (PLS-SEM), a statistical technique that simultaneously analyses multiple relationships and is commonly used in the accounting literature (Hadid and Al-Sayed 2021; Hadid and Hamdan 2022). PLS-SEM assumes that the data are not normally distributed. Therefore, we applied the bootstrapping technique, a non-parametric test, to assess the level of significance of the estimated path coefficients. Following Hair et al. (2017) recommendation, we utilised 5000 bootstrapped samples in SmartPLS 3 software to enhance confidence in the stability of our results. Stone-Geisser's Q^2 value is calculated through the blindfolding procedure to assess the model's out-of-sample predictive power. A Q^2 value greater than zero indicates that the model has predictive relevance for the dependent construct and the associated reflective indicators (Hair et al. 2017). PLS-SEM was selected for its capability to handle small sample sizes, non-normally distributed data, single-item constructs and complex models with many constructs and relationships (Hadid et al. 2016; Hadid 2019; Hair et al. 2019).

5.1 | Validity and Reliability

Following the recommendations of Hair et al. (2017), we assessed construct reliability and validity by examining factor loadings, composite reliability and average variance extracted (AVE). As shown in Table 3, the composite reliability for all multi-item constructs is above the 0.70 threshold, indicating sufficient reliability of the constructs. The majority of indicators have a loading of over 0.7 on their corresponding construct[2] and all constructs achieved an AVE greater than 0.5, confirming convergent validity.

Discriminant validity was evaluated using the Fornell-Larcker criterion by comparing the square root of each construct's AVE to its correlation with any other construct (Hair et al. 2017). Table 4 shows that the square root of AVE for each construct exceeds its correlation with other constructs in the model, thus supporting the discriminant validity.

5.2 | Hypothesis Testing

Our theoretical model and hypotheses underwent testing in three stages. Initially, to assess the rational choice theory, Model 1 incorporated two variables (perceived benefits and costs), four determinants of perceived benefits (internal audit, assurer's independence, adherence to global sustainability reporting guidelines and competition), along with firm size and profitability to control for their potential effect. Model 1 facilitated the testing of H1–H6b. Model 2 focused on the stakeholder theory assumption, introducing institutional shareholders along with firm size and profitability to test H7. Finally, Model 3 included all variables to test H8. Table 5 presents the results. Notably, R^2 values in all models exceed 0.10. Therefore, exogenous constructs are reliable predictors of the endogenous constructs (Hair et al. 2019). Moreover, Q^2 values for the perceived benefits construct and

TABLE 3 | The measurement model.

Construct/item	Loading	Composite Reliability	AVE
Perceived benefit		0.947	0.693
Percived1	0.895		
Percived2	0.872		
Percived3	0.880		
Percived4	0.867		
Percived5	0.770		
Percived6	0.787		
Percived7	0.746		
Percived8	0.829		
Cost		0.810	0.692
Cost1	0.998		
Cost2	0.623		
Institutional shareholders		0.936	0.829
InstSha1	0.908		
InstSha2	0.932		
InstSha3	0.891		
Internal audit		0.889	0.729
IntAud1	0.818		
IntAud2	0.771		
IntAud3	0.961		
Assurer's independence		0.888	0.726
AssIndep1	0.895		
AssIndep2	0.843		
AssIndep3	0.816		
Competition		0.893	0.736
Competition2	0.920		
Competition3	0.795		
Competition4	0.855		
Global reporting guidelines (GRG)		0.938	0.792
GRG1	0.919		
GRG2	0.900		
GRG3	0.820		
GRG4	0.917		

TABLE 4 | Correlation matrix and discriminant validity using Fornell-Larcker criterion.

Construct	1	2	3	4	5	6	7	8	9	10
1 Assurance	**1.000**									
2 Assurer's independence	0.394	**0.852**								
3 Competition	0.323	0.356	**0.858**							
4 Cost	−0.254	−0.221	−0.108	**0.832**						
5 Global reporting guidelines	−0.268	−0.228	−0.055	0.131	**0.890**					
6 Institutional shareholders	0.674	0.479	0.588	−0.331	−0.291	**0.910**				
7 Internal audit	0.179	0.295	0.458	0.010	0.119	0.350	**0.854**			
8 Perceived benefit	0.486	0.514	0.627	−0.154	−0.317	0.570	0.359	**0.832**		
9 Profitability	0.069	−0.055	0.140	0.058	−0.231	0.192	−0.001	0.134	**1.000**	
10 Size	0.413	0.261	0.138	0.056	−0.345	0.235	0.162	0.271	0.238	**1.000**

assurance construct are greater than zero, supporting the model's predictive relevance.

Regarding the research hypotheses, in Model 1, we observed a positive impact of perceived benefits on the external assurance decision ($\beta = 0.368$, $p < 0.01$), supporting H1. Additionally, a significant negative impact of the cost of assurance ($\beta = -0.214$, $p < 0.05$) on the assurance decision was found, supporting H2. Contrary to expectations, internal auditors' capability did not significantly influence perceived benefits ($\beta = 0.099$, $p = 0.141$) or indirectly the assurance decision ($\beta = 0.036$, $p = 0.154$), failing to support H3a and H3b. Assurer's independence had a significant positive impact on perceived benefits ($\beta = 0.258$, $p < 0.01$) and a significant positive indirect impact on the assurance decision ($\beta = 0.095$, $p < 0.01$), confirming H4a and H4b. Adhering to global reporting guidelines had a significant negative impact on perceived benefits ($\beta = -0.247$, $p < 0.01$) and a significant negative indirect impact on the assurance decision ($\beta = -0.091$, $p < 0.01$), supporting H5a and H5b. There was evidence of a significant positive effect of firm competition on perceived benefits ($\beta = 0.476$, $p < 0.01$) and a significant positive indirect effect on the assurance decision ($\beta = 0.176$, $p < 0.01$). These results support H6a and H6b. Firm size showed a positive association with the assurance decision ($\beta = 0.337$, $p < 0.01$), while firm profitability had no effect ($\beta = -0.040$, $p = 0.535$).

In Model 2, we found evidence of a significant positive impact of institutional investors on the decision to purchase external sustainability assurance ($\beta = 0.634$, $p < 0.01$), which supports H7. Firm size was positively associated with obtaining external assurance ($\beta = 0.288$, $p < 0.01$), while firm profitability was insignificant ($\beta = -0.121$, $p = 0.098$).

In Model 3, the impact of the four determinants of perceived benefits remained qualitatively unchanged compared to Model 1. Interestingly, however, perceived benefits no longer exerted an influence ($\beta = 0.099$, $p = 0.103$), nor did the cost construct ($\beta = -0.076$, $p = 0.204$). The impact of institutional investors remained positive and significant ($\beta = 0.546$, $p < 0.01$). These findings support Hypothesis 8, suggesting that the demand of influential stakeholders, particularly institutional investors, neutralises the impact of the cost–benefit analysis on purchasing assurance. The influence of firm size and profitability remained qualitatively unchanged. Table 6 summarises the results.

6 | Discussion and Implications

6.1 | Discussion

This paper set out to contribute to the sustainability/CSR external assurance literature by developing and testing a more complex theoretical model than in prior studies to explain variations in the decision to obtain external assurance observed in practice (e.g., Simnett et al. 2009; Kolk and Perego 2010; Peters and Romi 2015; Al-Shaer and Zaman 2018; Liao et al. 2018; Maroun and Prinsloo 2020; García-Sánchez et al. 2022). Analysing data from 105 UK listed firms, we document a direct positive impact of external *sustainability* assurance perceived benefits and a direct negative impact of its associated costs on the decision to seek external *sustainability* assurance. We also find an indirect positive impact of external assurer's independence and market competition and an indirect negative impact of adopting global sustainability reporting guidelines on external *sustainability* assurance purchase decision through their influence on perceived benefits. Furthermore, we provide empirical evidence of a direct positive impact of institutional investors on the decision to procure external assurance. Of particular interest is our finding that while decision makers' cost–benefit analysis significantly influences their choice to provide external sustainability assurance, this influence may diminish when powerful stakeholders, such as institutional investors, express interest in or demand the provision of external *sustainability* assurance. In other words, organisations are more likely to purchase external *sustainability* assurance when powerful stakeholders request it, even if decision makers have concerns regarding its benefits and associated costs (see, Jones and Solomon 2010; Farooq and de Villiers 2020).

The above results validate the premise of the rational choice theory, which has not been quantitatively examined before in the sustainability assurance literature and corroborate the findings of the few existing qualitative studies on the important role of decision makers' cost-benefit analysis in the determination to

TABLE 5 | The results of the structural models.

Model 1				
	Direct effect		Indirect effect	
Relations	**Standardised coefficients**	***p*-value***	**Standardised coefficients**	***p*-value***
PerceivedBenefit -> Assurance	0.368	0.000		
Cost -> Assurance	−0.214	0.045		
InternalAudit -> PerceivedBenefit	0.099	0.141		
AssurIndepdepdence -> PerceivedBenefit	0.258	0.001		
GRG -> PerceivedBenefit	−0.247	0.000		
Competition -> PerceivedBenenfit	0.476	0.000		
Profitability -> Assurance	−0.040	0.535		
Size -> Assurance	0.337	0.000		
InternalAudit -> PerceivedBenefit -> Assurance			0.036	0.154
AssurIndepdepdence -> PerceivedBenefit -> Assurance			0.095	0.004
GRG -> PerceivedBenefit -> Assurance			−0.091	0.002
Competition -> PerceivedBenenfit -> Assurance			0.176	0.000

	R^2	*p*-value	Adjust. R^2	*p*-value	Q^2
Assurance	0.400	0.000	0.376	0.000	0.320
Perceived Benefit	0.566	0.000	0.549	0.000	0.344

Model 2	**Standardised coefficients**	***p*-value***	**Standardised coefficients**	***p*-value***
InstitutionalShareholders -> Assurance	0.634	0.000		
Profitability -> Assurance	−0.121	0.098		
Size -> Assurance	0.288	0.000		

	R^2	*p*-value	Adjust. R^2	*p*-value	Q^2
Assurance	0.553	0.000	0.539	0.000	0.506

Model 3	**Standardised coefficients**	***p*-value***	**Standardised coefficients**	***p*-value***
PerceivedBenefit -> Assurance	0.099	0.103		
Cost -> Assurance	−0.076	0.204		
InternalAudit -> PerceivedBen	0.100	0.141		
AssurIndependence -> PerceivedBen	0.258	0.001		
GRG -> PerceivedBenefit	−0.249	0.000		
Competition -> PerceivedBenefit	0.474	0.000		
InstitutionalShareholders -> Assurance	0.546	0.000		
Profitability -> Assurance	−0.108	0.094		
Size -> Assurance	0.288	0.000		
InternalAudit -> PerceivedBenefit -> Assurance			0.009	0.252

(Continues)

TABLE 5 | (Continued)

Model 3		Standardised coefficients	*p*-value*	Standardised coefficients	*p*-value*
AssurIndepdepdence -> PerceivedBenefit -> Assurance				0.026	0.129
GRG -> PerceivedBenefit -> Assurance				−0.024	0.129
Competition -> PerceivedBenenfit -> Assurance				0.047	0.108
	R^2	*p*-value	Adjust. R^2	*p*-value	Q^2
Assurance	0.572	0.000	0.550	0.000	0.488
Perceived Benefit	0.566	0.000	0.548	0.000	0.344

*One-tailed *p*-values for independent variables and two-tailed *p*-values for the control variables.

TABLE 6 | Summary of the main results.

Hypothesis	Results
H1: There is a positive impact of perceived benefits of external sustainability assurance on the decision to provide external assurance.	Supported
H2: There is a negative impact of perceived costs of external sustainability assurance on the decision to provide external assurance.	Supported
H3a: There is a negative impact of perceived capability of internal auditors on the perceived benefits of external sustainability assurance.	Rejected
H3b: There is an indirect negative impact of perceived capability of internal auditors on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.	Rejected
H4a: There is a positive impact of perceived external assurer independence on the perceived benefits of external sustainability assurance.	Supported
H4b: There is an indirect positive impact of perceived external assurer independence on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.	Supported
H5a: There is a negative impact of adopting a globally recognised sustainability reporting guidelines on the perceived benefits of external sustainability assurance.	Supported
H5b: There is an indirect negative impact of adopting a globally recognised sustainability reporting guidelines on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.	Supported
H6a: There is a positive impact of market competition on the perceived benefits of external sustainability assurance.	Supported
H6b: There is an indirect positive impact of market competition on the decision to provide external sustainability assurance through the perceived benefits of external sustainability assurance.	Supported
H7: There is a positive impact of institutional investors' demand for external sustainability assurance on the decision to provide external sustainability assurance.	Supported
H8: The demand of institutional investors for external sustainability assurance is likely to negate the effect of the cost–benefit analysis on the decision to obtain external assurance.	Supported

seek external assurance. For instance, Park and Brorson (2005), Jones and Solomon (2010) and Farooq and de Villiers (2020) interviewed sustainability managers/representatives and found that decision makers are more willing to obtain external assurance if they positively envisage its potential benefits compared to its costs (see, for example, Li et al. 2023). Furthermore, our results affirm the premise of stakeholder theory regarding the impact of powerful stakeholders. They also provide valuable insights and contribute to resolving certain ambiguities present in prior quantitative studies within the sustainability assurance

literature (e.g., Peters and Romi 2015; Clarkson et al. 2019; García-Sánchez et al. 2022).

For instance, institutional investors have been argued to play a significant role in monitoring firms' operations and are under high pressure to consider social and environmental performance in their investment decisions (see, Wong and Millington 2014). Consequently, one might expect them to positively influence firms' decisions to provide external assurance for sustainability-disclosed information. Nevertheless, prior studies examining the role of institutional investors in the sustainability assurance literature have reported mixed results. While Peters and Romi (2015) found a direct positive impact of institutional investors, Clarkson et al. (2019) reported a direct negative impact on the provision of external assurance for sustainability reporting.

It is worth noting that both studies used secondary data to operationalise the institutional investors variable, focusing on the existence and ownership size of institutional investors. Clarkson et al. (2019), on the one hand, measured institutional investors as the percentage of total institutional ownership to total outstanding shares. Peters and Romi (2015), on the other hand, used a dummy variable for measuring this variable where 1 was assigned when a firm was majority owned by institutional investors and 0 otherwise. Unlike these previous studies, we measured the influence of institutional investors through primary data by focusing on the extent to which they showed interest in and requested external *sustainability* assurance. Consequently, given prior studies' mixed results and the way they measured institutional investors, the positive impact of institutional investors captured in our study suggests that managers' decision to supply external *sustainability* assurance is not necessarily influenced by the percentage of institutional investors or their investment volume but rather by whether they pay attention to external sustainability assurance and demand it due to their powerful and legitimate influence on decision makers (del Mar Miras-Rodríguez and Di Pietra 2018). Drawing on the Jones and Solomon's (2010) qualitative study, we found that some managers expressed a negative perception towards the costs and benefits of obtaining external sustainability assurance but purchased one. Our findings suggest that such managers might have been influenced by powerful institutional investors who rendered their costs-benefits analysis irrelevant.

Kend (2015) explored the impact of external sustainability assurance audit fees (i.e., costs of obtaining external sustainability assurance) on the decision to procure one. However, no significant relationship was found based on data from 220 UK and Australian listed firms. This finding may be surprising considering qualitative research emphasising the role of external sustainability assurance costs in the decision to provide one (e.g., Park and Brorson 2005; Jones and Solomon 2010; Gillet 2012). Our study proposes two potential explanations for this insignificant impact. Firstly, in some of the sampled firms examined by Kend (2015), institutional investors might have requested external sustainability assurance, compelling managers to supply it regardless of the associated costs. Second, even in the absence of institutional investors' requests for external sustainability assurance, firms may still choose to procure it despite the high costs if they believe the benefits outweigh the costs.

Similarly, Casey and Grenier (2015) investigated the direct impact of market competition on firms' decision to supply external assurance. However, their results found no support for its potential impact. Our model proposes that competition may affect the decision to purchase external assurance but indirectly through its influence on the perceived benefits variable. Therefore, in cases where managers' cost-benefit analysis does not drive their decision to supply external assurance due to a stronger influence from powerful stakeholders (i.e., institutional investors), market competition may lose its influence since its mediator (i.e., perceived benefits) also loses its influence.

Finally, our results, indicating an indirect negative impact of following global sustainability reporting guidelines, contrast with the findings of several quantitative studies that reported a direct positive impact of adhering to GRI guidelines on the provision of external sustainability assurance (e.g., Ruhnke and Gabriel 2013; Gillet-Monjarret 2015; Peters and Romi 2015; Simoni et al. 2020). Our results align more closely with the conclusions drawn from qualitative research conducted by Park and Brorson (2005) and Sawani et al. (2010), who reported that some managers do not perceive the need for external sustainability assurance when their companies adopt GRI or other international guidelines. These managers believe that the benefits of external sustainability assurance could be alternatively achieved through the adoption of GRI. Therefore, our findings, in conjunction with prior research, indicate that while some firms following GRI guidelines may decide to supplement them with external sustainability assurance, as they believe their external assurer may not highlight significant issues requiring substantial efforts to rectify (e.g., Ruhnke and Gabriel 2013; Gillet-Monjarret 2015; Peters and Romi 2015; Simoni et al. 2020). Others may choose not to do so due to the lower perceived benefits from external sustainability assurance (Park and Brorson 2005; Sawani et al. 2010).

6.2 | Implications

Our study's findings have important implications for researchers, business decision makers, external sustainability assurance providers and policy makers. For researchers, our study underscores the importance of developing intricate theoretical models. These models should not only consider direct impacts but also explore indirect ones. Such complexity enhances our understanding of the factors affecting the managers' decisions to obtain sustainability external assurance and the mechanisms through which this effect is exerted. Integrating rational choice and stakeholder theory allowed us to account for the mixed findings in prior studies. This suggests that emerging regulatory shifts toward more mandatory sustainability and assurance practices may significantly influence firms' cost–benefit considerations when deciding whether to obtain external assurance.

For corporate decision makers, our findings underscore the substantial influence of powerful stakeholders—particularly institutional investors—on the decision to procure external sustainability assurance. Organisations are more likely to engage external assurance even when decision makers have reservations

regarding its perceived benefits and associated costs. This highlights the need for managers to reassess their decision-making processes by considering not only conventional cost–benefit analyses but also the strategic importance of meeting stakeholder expectations, particularly when influential stakeholders express interest in or demand external assurance. Practically, this implies that decision makers should proactively engage with key stakeholders to understand their expectations regarding assurance while also weighing the potential opportunity costs of inaction, such as diminished stakeholder trust or loss of competitive advantage. Consistent with the rationality perspective, decision makers are encouraged to integrate cost–benefit assessments with ongoing stakeholder engagement to make more balanced and strategically informed assurance decisions.

For external sustainability assurance providers, our findings highlight the critical role of decision makers' perceptions of their independence. Assurance independence was found to exert an indirect influence on the decision to obtain assurance by enhancing the perceived benefits of external assurance. Consequently, assurance providers should prioritise establishing and communicating a strong reputation for independence and transparency, both in the scope and execution of their services. Emphasising independence and credibility at the core of their service offering will help attract more organisations and encourage broader adoption of external assurance.

Moreover, assurance providers should demonstrate how their services align with the expectations of influential stakeholders, particularly institutional investors, who strongly shape assurance adoption decisions. Attention should also be given to adherence to high-quality standards, such as ISAE 3000 (Revised) and the International Ethics Standards for Sustainability Assurance (IESSA), which establish global ethical and independence requirements for sustainability assurance engagements, thereby strengthening stakeholder trust in assured sustainability reports (IESBA 2025).

Our findings carry significant implications for regulators. Regulatory frameworks should recognise and to some extent, accommodate the role of stakeholders in influencing organisations to procure external assurance. This may involve developing guidelines that encourage firms to consider stakeholder expectations as part of the assurance decision-making process. Furthermore, given the observed relationship between adherence to global sustainability reporting standards and assurance practices, regulators might provide guidance on how these standards can be effectively integrated while allowing firms flexibility according to their specific circumstances.

Our results also underscore the importance of assurer independence, highlighting the need for robust regulatory oversight of assurance providers. In this context, the UK Department for Business and Trade's proposed registration regime for sustainability assurance providers under the Audit, Reporting and Governance Authority (ARGA) (UK Department for Business and Trade 2025) represents a key step forward, ensuring that approved providers meet rigorous independence and qualification requirements. Looking ahead, should mandatory assurance be introduced, as currently under consultation, our findings suggest that both cost–benefit considerations and stakeholder demands will continue to play a central role in shaping firms' responses. A phased implementation, potentially supported by a "comply or explain" approach, could facilitate a smoother transition toward mandatory assurance.

7 | Conclusion

Building on an extensive literature review of both qualitative and quantitative studies on sustainability/CSR assurance, we developed and tested a conceptual framework that integrated two theoretical perspectives (i.e., rational choice perspective and stakeholder perspective) to enhance our understanding of the reasons for which some firms purchase external sustainability assurance while others do not. Analysing data from 105 UK organisations and employing partial least squares structural equation modelling, the results largely supported the hypothesised relationships.

Like most studies, this research is subject to certain limitations. Firstly, the current study faced a challenge with a low response rate, as reaching individuals with busy daily schedules proved difficult. Additionally, the study took place during the Covid-19 pandemic, with several participants explicitly refusing to participate due to the pressures of COVID-19 on their firms. Future research should aim for a higher response rate to bolster the survey's representativeness and statistical power. Secondly, this research delves into the factors influencing the decision to purchase external sustainability assurance in the UK context using a survey methodology within a single year. Consequently, our findings do not imply causation between the examined variables. Future studies could employ a longitudinal survey strategy to further the insights of this study and discern whether and how the proposed associations in the model change or evolve over time. Thirdly, considering the impact of cultural and socio-economic environments on firms' disclosure, it would be valuable to replicate the developed model in other contexts and study a cross-country sample. This approach could provide evidence for the broader applicability of these results. Fourthly, the current study treated institutional investors as a single group, without distinguishing between different types of institutional investors. Future research could explore whether and how the findings of our study vary depending on certain institutional investors, such as pension funds, unit trusts and investment trusts. Such research would contribute significantly to our understanding of the factors influencing the decision to purchase external sustainability assurance.

Despite these limitations, we contend that our current study and findings offer valuable insights into the sustainability assurance literature, contributing to a better understanding of the factors influencing the decision to obtain external sustainability assurance and the mechanisms through which such influence is exerted.

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Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

[1] Reasons for non-participation included being unable to assist at the time (61 participants), company policy (10 companies), workload pressure due to COVID-19 (9 respondents), high demand for participation in research studies (8 respondents), not applicable (7 companies), and certain constraints (7 companies). Additionally, three companies refused to participate because they were no longer listed.

[2] The following indicators were removed due to low loading on their intended construct; Cost3 (from the cost construct) and Competition1 (from the competition construct).

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Appendix A

Did your organization hire an external assurer to verify its Sustainability/CSR report in the last financial year? ○ Yes ○ No.

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

Scale:

(1) Strongly disagree (2) Disagree (3) Somewhat disagree (4) Neither agree nor disagree (5) Somewhat agree (6) Agree (7) Strongly agree.

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

Percived1. Enhances the credibility of the disclosed Sustainability information for interested users.

Percived2. Indicates organizational transparency regarding the disclosed Sustainability information for interested users.

Percived3 enhances the reliability of the disclosed Sustainability information for interested users.

Perceived4. Enhances the accuracy of the disclosed Sustainability information for interested users.

Percived5. Through the interaction with the external assurer, it helps to improve the format of the disclosed Sustainability information in your organisation.

Percived6. Demonstrates to interested users your organization's commitment to becoming a good citizen.

Perceived 7. Facilitates, through the interaction with the external assurer, further learning about Sustainability reporting for future improvement.

Percived8. Enhances the reputation of your organisation.

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

IntAud1. The internal auditing function in your organization verifies the disclosed information in your Sustainability report.

IntAud2. The internal auditing function in your organisation is effective in verifying your disclosed Sustainability information.

IntAud3. Obtaining an external assurance supplements the auditing work undertaken by your organization's internal auditing function to verify the disclosed Sustainability information.

Cost1. It is financially costly to hire an external assurer to verify the disclosed Sustainability information.

Cost2. The process of verifying your disclosed Sustainability information by an external assurance provider is time-consuming.

Cost3. External assurance increases the scope of the work conducted by the internal auditors in your organization.

AssIndep1. External assurance providers are sufficiently independent to perform their professional obligations and duties.

AssIndep2. External assurers rarely face interference from management when conducting their work.

AssIndep3. Conflicts of interest are rarely present in the work of external assurers.

GRG1. Following the global reporting initiative (GRI) guidelines reduces the importance of external assurance in verifying your disclosed Sustainability information.

GRG2. Following the integrated reporting (IR) framework reduces the importance of external assurance in verifying your disclosed Sustainability information.

GRG3. Obtaining International Organisation for Standardisation (ISO) certification reduces the importance of external assurance in verifying your disclosed Sustainability information.

GRG4. Following other reporting guidelines reduces the importance of external assurance in verifying your disclosed Sustainability information.

InstSha1. Institutional shareholders in your organization require external assurance for the disclosed Sustainability information.

InstSha2. Institutional shareholders raise concerns if the disclosed Sustainability information is not externally assured.

InstSha3. Institutional shareholders consider your disclosed Sustainability information only if it is externally assured.

Competition1. Your organization operates in an industry that is highly competitive.

Competition2. Employing external assurance for your sustainability reports offers your organization a competitive advantage.

Competition3. External assurance reports will be capitalized on by your major competitors in formulating their business strategies.

Competition4. If your major competitors employ external assurance for their Sustainability reports, your organization will do likewise in response.