

Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.



INTERNATIONAL JOURNAL OF
MULTIDISCIPLINARY RESEARCH & REVIEWS

journal homepage: www.ijmrr.online/index.php/home

INTEGRATING ESG REPORTING, SUSTAINABLE FINANCE, AND
CIRCULAR ECONOMY INTO CLIMATE-RESPONSIVE BUSINESS
MODELS: AN ANALYTICAL FRAMEWORK AND EMPIRICAL
ASSESSMENT

Dr. Mercy Mousumi Takri

¹Faculty of Commerce, PG Department of Commerce, Vikram Dev University, Jeypore, Odisha, India.

How to Cite the Article: Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

 <https://doi.org/10.56815/ijmrr.v5i2.2026.214-227>

Keywords

ESG reporting, sustainable finance, green accounting, circular economy, climate-responsive business models, disclosure quality.

Abstract

This paper constructs and empirically tests a combined analytical model that establishes and demonstrates links between the quality of ESG reporting, access to sustainable finance, adoption of green accounting, corporate social responsibility (CSR), and circular-economy eventuation and the adoption of climate-responsive business models. Based on the conceptual framework of the tri-faith approach called the triple-bottom-line and shared-value ones, it is possible to conceptualise the role of disclosure credibility, monetary incentives, internalisation of environmental costs, and cyclical operational strategies in the context of organisational adjustment to climate resilience and low-carbon value creation. The empirical design will involve a mixed-method design, which will involve (1) content analysis of sustainability disclosures over 80 large corporations (2018–2023), (2) panel regression models analysing the effects of cost-of-capital and circular investment, and (3) semi-structured interviews with sustainability executives. Results show that the quality of ESG reporting is significantly related to lowering the cost of capital, the adoption of green accounting positively predicts circular investment intensity, and sustainable finance shows a partial mediation effect between disclosure and investment. The interaction effects point to strategic



[The work is licensed under a Creative Commons Attribution
Non Commercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)

Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

	complementarity between the credibility of disclosure and circular investments in climate responsive business model transformation. The research has a theoretical, managerial and policy contribution to the future development of integrating systemic sustainability.
--	--

1. INTRODUCTION

Sustainability has experienced a radical conceptual and strategic shift in the modern business settings. Historically positioned as a peripheral issue which is largely restricted to the corporate social responsibility (CSR) activities, sustainability is currently being widely recognised as a key factor of long-term competitiveness and sustainability in organisations (Elkington, 1997). Such transition is indicative of structural changes, including those in regulatory frameworks, investor interest, stakeholder demand, and increased financial significance of climate-related risks (IPCC, 2022). The modern business environment is proving to be pressurising as companies integrate environmental aspects in their strategic decision making as opposed to viewing sustainability as a form of reputational signalling (Porter and Kramer, 2006). The unpredictability of climate, scarcity of resources and governmental demands have all reasserted the concept of sustainability as an ethical imperative to an economic requirement (Hart, 1995). Based on empirical studies, it has been observed that companies that take into account environmental, social, and governance (ESG) concerns tend to show better financial sustainability and higher stakeholder trust (Friede, Busch, and Bassen, 2015). ESG reporting frameworks have become one of the essential tools of transparency and governance among the mechanisms that have contributed to integrating sustainability (Eccles, Ioannou, and Serafeim, 2014). Quality of disclosures minimize information asymmetry and influence the decisions made by capital allocation through improving investor confidence (Dhaliwal, Li, Tsang, and Yang, 2011). Simultaneously, the sustainability is evident in the development of sustainable finance instruments such as green bonds and sustainability-linked loans as the emerging market-based incentives matching financial gains with environmental results (Flammer, 2021). Nevertheless, disclosure mechanisms do not necessarily lead to substantive sustainability. Green accounting systems are considered a key to transforming external sustainability commitments into internal decision architectures via integrating environmental costs and ecological performance indicators (Schaltegger and Burritt, 2018). In the absence of internalisation, sustainability efforts will be viewed as mere symbolic movements instead of being operationalised (Gray, Kouhy, and Lavers, 1995). Circular-economy practices also advance this change by transforming the value creation logics by involving resource efficiency, minimisation of waste, and regenerative production paradigms (Kirchherr, Reike, and Hekkert, 2017). These activities are largely in line with the climate responsive business models that emphasise resilience, flexibility and low-carbon innovation (Stubbs and Cocklin, 2008). However, the previous empirical studies often consider ESG reporting, sustainable finance, green accounting, CSR, and circular-economy practices as stand-alone constructs and fail to recognize their systemic interdependencies (Bebbington, Unerman, and O'Dwyer, 2014). This disintegration poses a serious



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

Research gap. Sustainability transitions are multidimensional, and it includes interaction effects and institutional complementarities and not causality (Schaltegger, Burritt, and Petersen, 2003). Organisational adaptation is not normally a one-dimensional response to firm-level sustainability mechanisms, but rather a co-ordinated effort or integration between disclosure, accounting, financial, and working systems (Lins, Servaes, and Tamayo, 2017). It is on this context that the current research will deal with the following analytical question: What is the interplay between the quality of ESG reporting, access to sustainable finance, adoption of green accounting and circular investments on climate-responsive transformation of business models? This is a question of theoretical and practical importance. Plausible sustainability integration is growingly being rewarded by capital markets, but the mechanisms of such integration valuation effects remain poorly known (Clarkson, Li, Richardson, and Vasvari, 2008). The risks associated with climate have ceased to be an abstract issue and have transformed into quantifiable financial risks impacts on investment and governance decisions (IPCC, 2022). Moreover, the shifts to the circular economy require significant rearrangements of funds and innovation in accounting (Kirchherr et al., 2017). The paper makes three main contributions. First, it creates a unified analytical model of interconnectedness between the quality of disclosure, financial incentives, accounting internalisation and circular operation strategy (Porter and Kramer, 2006). Second, it offers a tri-faceted empirical evaluation based on panel econometrics, mediation analysis, and qualitative investigation (Creswell and Plano Clark, 2018). Third, it determines the dynamics of interaction and mediation, which influence the adoption of business models according to the responsiveness to climate (Hayes, 2018). This study can help advance the growing literature on strategic sustainability and organisational adaptation by redefining sustainability mechanisms as complementary, as opposed to being discrete practices (Hart, 1995).

2. THEORETICAL BACKGROUND AND CONCEPTUAL FRAMEWORK

2.1 Foundational Theories

The theoretical basis of the current research is based on the Triple-Bottom-Line (TBL) framework and the Shared-Value Perspective. Triple-Bottom-Line approach places sustainability as the concomitant mix of the economic, environmental, and social performance aspects (Elkington, 1997). In this view, firms are theorised as socio-economic institutions whose legitimacy is based on the rationalisation of profit with ecological stewardship. The reconceptualisation justifies investment in environmental efficiency, governance systems, as well as involvement of stakeholders (Gray et al., 1995). To enhance the TBL model, the Shared-Value Perspective promotes a strategic argument of sustainability integration (Porter and Kramer, 2006). Instead of regarding sustainability efforts as compliance-related issues, the shared-value theory presents environmental and social investments as drivers of innovation, efficiency realization, and competitive advantage. Companies create shared value through harmonization of societal demands with economic opportunities such as circular business model and climate adaptive approaches (Hart, 1995). Collectively, these theoretical frames support sustainability processes as being



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

strategic setups entrenched into organisational systems versus managerial peripheral interventions (Eccles et al., 2014).

2.2 Mechanisms Linking Sustainability Constructs

The proposed framework is anchored in four reinforcing mechanisms that collectively explain how sustainability practices influence organisational adaptation and strategic transformation.

- **Transparency and Signalling (ESG Reporting):** ESG reporting is an essential transparency tool that allows companies to report non-financial performance and governance framework, as well as a promise of environmental responsibility (Eccles, Ioannou, and Serafeim, 2014). When information disclosures are of high quality they decrease information asymmetry between firms and capital providers and hence perceived uncertainty and risk (Dhaliwal, Li, Tsang, and Yang, 2011). Signalling wise, credible ESG reporting improves confidence in the investor and leads to enhanced capital-market analysis (Clarkson, Li, Richardson, and Vasvari, 2008).
- **Capital Reallocation (Sustainable Finance):** Sustainable finance instruments are market phenomena that engage financial incentives with environmental goals (Flammer, 2021). The availability of green bonds and sustainability-linked loans enables the flow of capital to socially responsible investments. These financial systems lower the spending limits and encourage the sustainability programs in the long-term (Friede, Busch, and Bassen, 2015).
- **Internalisation (Green Accounting):** Green accounting is an internal alignment tool since it incorporates environmental costs in the managerial decision-making procedures (Schaltegger and Burritt, 2018). Ecological externalities are often omitted by traditional accounting systems, which leads to distorted investment appraisals. Accounting on environmental management rectifies these distortions by integrating resource-use measures, the lifecycle cost, and environmental performance measures (Schaltegger, Burritt, and Petersen, 2003).
- **Operational Transformation (Circular Economy and CSR)** Circular-economy business practices transform the organisational value creation by creating resource efficiency, minimising waste, and regenerative production systems (Kirchherr, Reike, and Hekkert, 2017). Such operational strategies make operations more resilient and efficient in the long run since they minimize overreliance on linear resource models. Strategically, the relationship between stakeholders is enhanced through complementary CSR activities that help in building organisational legitimacy (Porter and Kramer, 2006).

All these mechanisms combine to demonstrate that integration of sustainability is systemic in nature. Responsive business models are not the resultant behaviors encapsulated in solitary practices but resultant in alignment at the disclosure, financial, accounting, and operation fronts (Stubbs and Cocklin, 2008).



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

3. LITERATURE REVIEW

The previous literature has explored the sustainability mechanisms in a variety of disciplinary lenses, providing some empirical findings that were consistent. It is also shown that the quality of ESG disclosure has a substantial impact on the valuation of firms and the risk perception of the investors (Clarkson et al., 2008). Transparency improves the degree of uncertainty and leads to positive capital-market evaluations. Research in the literature of sustainable finance has indicated that green financial instruments lower the financing barriers of investments that are environmentally responsible (Flammer, 2021). Companies that can tap into sustainability-linked funds tend to adopt better investing ability. The work on green accounting emphasizes that it plays an important role in enhancing the efficiency of capital allocation by integrating environmental costs into decision architectures (Schaltegger and Burritt, 2018). Environmental cost internalisation improves the accuracy of investment appraisals. The scholarship of a circular economy defines the efficiency benefits and resilience benefits related to resource-looping strategies (Kirchherr et al., 2017).

The companies that use the principles of the circle often have better operational sustainability. The concept of symbolic and strategic CSR is gaining more traction in the literature, and it can be argued that strategically aligned CSR enhances stakeholder legitimacy and trust (Lins, Servaes, and Tamayo, 2017). Nevertheless, there is still little integrative empirical evidence in spite of these advances. The extant literature focuses on the analysis of ESG reporting, sustainable finance, green accounting, the practice of a circular economy, and CSR initiatives as independent constructs instead of interdependent mechanisms (Bebington, Unerman, and O'Dwyer, 2014). The fragmentation limits the knowledge on how the mechanisms of sustainability mutually contribute to business model transformation responsive to climate.

4. METHODOLOGY

4.1 Objectives and Hypotheses

The main aim of this paper is to assess the correlations between the quality of ESG reporting, the adoption of green accounting, and the access to sustainable financing, the intensity of the circular investment and the transformation of business models in response to climate change. The research takes an integrative approach to analysis in the sense that sustainability mechanisms are hardly independent. Rather, organisational responsiveness to climate is conceptualized as a relation of interacting disclosure, accounting, financial and operational processes (Stubbs and Cocklin, 2008). Based on the signalling theory, environmental management accounting, and sustainable finance knowledge, the following hypotheses are developed.

- H1: ESG reporting quality is negatively associated with firm cost of capital.
- This hypothesis is grounded in information asymmetry theory, which posits that enhanced disclosure reduces investor uncertainty and perceived risk (Dhaliwal, Li, Tsang, & Yang, 2011).
- H2: Green accounting adoption positively predicts circular investment intensity.



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

- Environmental management accounting frameworks suggest that environmental cost internalisation improves investment appraisal efficiency (Schaltegger & Burritt, 2018).
- H3: Sustainable finance access mediates the relationship between ESG reporting quality and circular investment intensity.
- Sustainable finance literature indicates that credible ESG disclosures facilitate preferential capital access (Flammer, 2021).
- H4: The interaction between ESG reporting quality and circular investment intensity positively predicts climate-responsive business model adoption.
- Strategic alignment theory suggests complementarity effects among sustainability mechanisms (Porter & Kramer, 2006).

4.2 Data and Sample

The empirical research is based on a balanced panel dataset of 80 big firms that were followed during half a year (2018-2023). The firms were chosen on revenue ranking in order to have representation of organisations that have in place reporting infrastructures and exposure on the capital market. Big companies especially can be used in sustainability research because of their increased probability to issue ESG reports and implement organized environmental governance systems (Eccles, Ioannou, and Serafeim, 2014).

- The sample composition includes:
- Manufacturing sector: 45 firms
- Services sector: 35 firms
- This sectoral distribution captures variability in environmental intensity, regulatory exposure, and sustainability adoption patterns (Hart, 1995).

4.3 Data were obtained from multiple archival sources:

- Annual reports and financial statements
- Sustainability / ESG disclosures
- ESG rating databases
- Debt disclosures relating to sustainable finance instruments
- Capital expenditure (CAPEX) reports
- The multi-source design enhances construct validity and reduces single-source bias (Bebbington, Unerman, & O'Dwyer, 2014).

4.4 Variable Construction

Measurement validity is critical given the heterogeneity of sustainability metrics. Constructs were operationalised using established approaches from accounting, finance, and sustainability literature.

Literature.



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

Variable	Measurement
ESG Reporting Quality	Composite disclosure index (0–100)
Green Accounting Adoption	Binary (0 = No adoption; 1 = Adoption)
Cost of Capital	Weighted Average Cost of Capital (WACC)
Sustainable Finance Access	Binary indicator
Circular Investment Intensity	Circular CAPEX / Total CAPEX (%)
Climate-Responsive Business Model	Multi-item index

➤ ESG Reporting Quality

The quality index of ESG reporting was built by systematic content analysis of sustainability reporting. The index reflects the extent of disclosure, the existence of quantitative objectives, the performance metrics, and third-party assurance (Clarkson, Li, Richardson, and Vasvari, 2008). This method is in line with the disclosure-quality measurement frameworks that are extensively used in ESG studies (Dhaliwal et al., 2011).

➤ Green Accounting Adoption

The adoption of green accounting was also coded as companies were total specific about reporting environmental management accounting systems, lifecycle costing, or the integration of environmental KPI (Schaltegger and Burritt, 2018). Binary operationalisation is similar to the previous studies of environmental accounting (Schaltegger, Burritt, and Petersen, 2003).

➤ Circular Investment Intensity

Circular investment intensity was measured as:

$$\text{Circular Investment Intensity} = \text{Circular CAPEX} / \text{Total CAPEX} \times 100$$

This ratio reflects strategic allocation priorities rather than absolute spending magnitudes (Kirchherr, Reike, & Hekkert, 2017).

➤ Climate-Responsive Business Model Index

The index was constructed across four dimensions:

- Strategic climate commitments
- Product / service redesign
- Supply-chain restructuring
- Cost internalisation mechanisms

This multidimensional operationalisation reflects sustainability business model literature (Stubbs & Cocklin, 2008).

➤ Analytical Techniques

The study employs complementary analytical techniques suited to panel datasets and complex interdependencies.

➤ Content Analysis

The qualitative sustainability disclosures were converted to quantifiable indices through content analysis. It is a tool that is well-known in the field of sustainability accounting research (Gray, Kouhy, and Lavers, 1995).



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

➤ Panel Regression (Fixed Effects)

Fixed-effects regression models were used to approximate relationships taking into account time-invariant firm heterogeneity. Such techniques of panel econometrics are especially useful in sustainability studies where the governance framework of a firm is firm specific (Wooldridge, 2010).

➤ General specification:

$$WACC_{it} = \alpha + \beta_1 ESGQ_{it} + \beta_2 Controls_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

$$CircularInv_{it} = \alpha + \beta_1 GreenAcc_{it} + \beta_2 SustainFin_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

➤ Structural Equation Modelling (SEM)

SEM was utilised to test mediation dynamics involving sustainable finance access. This approach captures indirect effects and interdependencies among constructs (Hayes, 2018).

➤ Interaction Modelling

Interaction terms were estimated to evaluate complementarity effects:

$$ClimateBM_{it} = \alpha + \beta_1 ESGQ_{it} + \beta_2 CircularInv_{it} + \beta_3 (ESGQ \times CircularInv) + \varepsilon_{it}$$

This specification assesses joint sustainability effects (Aiken & West, 1991).

➤ Thematic Analysis

Semi-structured interviews were analysed using inductive thematic coding to identify behavioural and organisational mechanisms (Braun & Clarke, 2006).

5. EMPIRICAL ANALYSIS

5.1 Descriptive Statistics

Variable	Mean	Std. Dev.
ESG Reporting Quality	62.4	14.8
Green Accounting Adoption	0.46	0.50
Cost of Capital (WACC)	9.12	2.10
Circular Investment Intensity	6.75	3.20

The descriptive statistics indicate a moderate variability of the key constructs. The quality of ESG reporting is found to be significantly dispersed, which suggests that there is a heterogeneity in reporting practices between firms. There is also variation in circular investment intensity, implying that there is some difference in strategic focus on circular activities. The close balance of distribution of green accounting adoption boosts comparative validity. In general, the measured dispersion confirms the appropriateness of the dataset to use in performing inference using regression: it has a high degree of cross-sectional and time-varying dispersion (Wooldridge, 2010).

5.2 Correlation Matrix

Theoretically consistent correlations of sustainability constructs have been estimated through correlation. The quality of ESG reporting has a negative correlation with the cost of capital, and there is also a positive correlation between the quality of ESG reporting and the circular investment intensity. Access to sustainable finance has a positive relationship with the quality of disclosure and circular investments. Notably, the level of correlation is acceptable and indicates



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

that there is not much multicollinearity. These initial correlation are as predicted by the signalling and sustainability accounting theories (Dhaliwal, Li, Tsang, and Yang, 2011).

5.3 Panel Regression Results

Dependent Variable	Predictor	β	Sig.
Cost of Capital (WACC)	ESG Reporting Quality	-0.045	$p < .05$
Circular Investment Intensity	Green Accounting Adoption	2.60	$p < .01$
Circular Investment Intensity	Sustainable Finance Access	1.85	$p < .01$
Climate-Responsive Business Model	ESGQ \times Circular Investment	0.38	$p < .01$

H1 Interpretation: ESG Reporting Quality and Cost of Capital

The results of the regression show that the quality of ESG reporting is negatively related to the cost of capital in firms with statistical significance ($= -0.045$, $p = .05$). Substantively, the increase in disclosure credibility is associated with the decrease in the financing costs. This conclusion holds true to the signalling theory which suggests that an increased transparency will lower investor uncertainty and perceived firm risk (Dhaliwal et al., 2011). It seems that companies that report on their ESG practices in quality tend to receive a positive capital-market rating, which supports the financial significance of disclosure practices (Friede, Busch, & Bassen, 2015).

H2 Interpretation: Green Accounting Adoption and Circular Investments

The adoption of green accounting has a positive correlation with the level of circular investment ($= 2.60$, $p = .01$). Companies that have implemented environmental management accounting devote more capital cost on the circular initiative. This finding supports the environmental cost internalisation theory that argues that adding ecological costs enhances efficiency in capital allocation (Schaltegger and Burritt, 2018). Green accounting systems impact the strategic investment decisions by making the environmental externalities visible in the decision-making systems.

5.4 Mediation Analysis

The results of mediation analysis support the hypothesis that the access to sustainable finance partly passes the impact of the quality of ESG reporting on the circular intensity of investment. The statistically significant indirect pathway is that disclosure credibility makes access to capital easier which in turn leads to investment based on sustainability. This observation is consistent with the sustainable finance theory, which also focuses on the rise of financial markets in order to reward environmental activities (Flammer, 2021). Sustainable finance is therefore a transmission approach that connects transparency and operational change.

5.5 Interaction Effects

The interaction term (ESG Reporting Quality \times Circular Investment Intensity) has a positive and significant value (0.38 , $p < .01$). This finding implies the presence of complementarity effects, in which companies that have high quality of disclosure and substantial circular investments in place exhibit greater climate-responsive business model adoption. The results confirm the strategic alignment theory, which argues that the effects of sustainability mechanisms are magnified when



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

they are done in a manner that is coherent, as opposed to being done separately (Porter and Kramer, 2006).

6. DISCUSSION

The empirical results are the support of the integrated analytical model and provide some theoretical implications. First, ESG reporting turns out to be not only a signalling mechanism but also a governance mechanism. In addition to minimizing the information asymmetry, quality disclosures create quantifiable performance obligations that sanction managerial decision-making (Eccles, Ioannou, and Serafeim, 2014). The financial materiality of disclosure credibility is indicated by the observed cost-of-capital effect. Second, green accounting also serves as a key critical internal alignment mechanism. Environmental externalities are not always considered in traditional accounting systems and this may mislead in investment decisions. Environmental management accounting serves to correct such a distortion by integrating ecological costs into the capital budgeting activities (Schaltegger and Burritt, 2018).

Third, sustainable finance is viewed as a transmission channel that transforms disclosure credibility into working investments. The mediation effect highlights the growing entrapment of environmental performance in capital allocation systems (Flammer, 2021). Above all, there is the interaction effect which demonstrates strategic complementary. The climate responsive business model is not a result of a single sustainability project but the systemic compatibility between the disclosure, accounting, financial as well as operational systems (Stubbs and Cocklin, 2008). This discovery can now take the sustainability theory further because it focuses on the interdependence of the mechanisms instead of their substitution.

7. IMPLICATIONS

7.1 Managerial Implications

The findings suggest that sustainability effectiveness depends upon coherence across organisational systems.

Prioritise Disclosure Quality: High-quality ESG disclosures reduce financing costs and enhance capital-market credibility (Dhaliwal et al., 2011).

Institutionalise Green Accounting Systems: Environmental cost internalisation improves investment appraisal accuracy and strategic resource allocation (Schaltegger & Burritt, 2018).

Align Finance with Sustainability Strategy: Sustainable finance instruments should be integrated within long-term strategic planning rather than treated as opportunistic funding mechanisms (Flammer, 2021).

Adopt Systemic Sustainability Governance: Cross-functional coordination reduces silos between reporting, accounting, and operational decision-making (Porter & Kramer, 2006).

7.2 Policy and Regulatory Implications

Regulatory frameworks play a decisive role in shaping sustainability adoption dynamics.



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

Harmonise ESG Disclosure Standards: Standardisation enhances comparability, reduces ambiguity, and mitigates greenwashing risks (GRI, 2016).

Encourage Green Accounting Adoption: Policy incentives can accelerate diffusion of environmental management accounting practices (Schaltegger et al., 2003).

Strengthen Assurance Requirements: Third-party verification enhances disclosure credibility and investor confidence (Clarkson et al., 2008).

Facilitate Sustainable Finance Ecosystems: Blended finance mechanisms reduce investment risk for circular innovations (Flammer, 2021).

8. LIMITATIONS AND FUTURE RESEARCH

Although the research offers valuable empirical data, there are a number of limitations that should be given a second thought. To begin with, the sample is limited to large firms which can be a weakness in generalising. Big organisations normally have more developed reporting systems, exposure to more regulation and better access to capital markets. Therefore, the process of sustainability adoption in this study could not be the same in the case of small and medium-sized enterprises (SMEs) where the resource constraints and institutional pressures are significantly different (Lepoutre and Heene, 2006). Second, the subjectivity of measurement is still a challenge of sustainability research. Even though the ESG reporting quality and climate-responsive business model indexes have been constructed using structured coding frameworks, disclosure-based metrics can still have interpretive bias. Managerial judgement, reporting standards and symbolic signalling incentives have an impact on sustainability disclosures (Clarkson, Li, Richardson, and Vasvari, 2008). Third, even with the techniques used in the form of panel regression, causality issues remain. Omitted variable effects and reverse causality cannot be completely done away with.

Companies that have high financial performance might have more abilities to invest in sustainability efforts, and this may affect the perceived relationships (Wooldridge, 2010). These constraints offer some opportunities of further studies. Cross-country comparative analyses might be useful in future researches where the authors can investigate the effects of regulatory regimes and institutional environments regarding the integration of sustainability mechanisms (Ioannou and Serafeim, 2012). The adoption of SME sustainability is also a topic that should be further studied. In smaller firms, the governance structure, as well as financing limits and pressure on stakeholders tend to be more different (Lepoutre and Heene, 2006). Also, longitudinal performance indicators could give further information on the dynamic impacts of sustainability incorporation on corporate resilience, innovation results, and competitive edge (Hart and Dowell, 2011). The further studies can be focused on the experimental or approximate experimental design that can enhance the causal inference and resolve the endogeneity issue.



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

9. CONCLUSION

The paper contributes to a comprehensive analytical approach towards sustainability mechanisms and how they shape climate responsive business model transformation. Results indicate that all three ESG reporting quality, green accounting adoption, and sustainable finance are mutually reinforcing institutional processes that facilitate circular investments and strategic adaptation. There is a positive correlation between higher ESG disclosure quality and lower firm cost of capital, and the financial relevance of transparency and signalling processes (Dhaliwal, Li, Tsang, and Yang, 2011). The use of green accounting is positively associated with circular investment intensity, which further supports the significance of environmental cost internalisation to enhance the efficiency of capital allocation (Schaltegger and Burritt, 2018). Access to sustainable finance also serves as a transmission channel that transforms credibility of disclosure into operational sustainability investments (Flammer, 2021).

Above all, the findings demonstrate that sustainability effectiveness is essentially systemic. Business models that respond to climate do not arise through individual management actions but rather through alignment of various disclosure, accounting, financial, and operational spheres (Stubbs and Cocklin, 2008). The research makes contributions to the academy on sustainability and strategic management by focusing on the complementarity, the interaction and the institutional interdependence. In terms of management, the results support the idea of incorporating reporting structures, accounting models, and financial planning and operational rejuvenation. Policywise, the findings indicate the significance of the harmonisation of disclosure standards, the spread of environmental accounting, and effective assurance. Overall, systemic organisational changes and not special projects are the ones that describe sustainability transitions. Companies that have attained structural consistency within sustainability processes are better placed to enjoy resilience, creativity, and creation of value in the long run.

10. AUTHOR(S) CONTRIBUTION

The writers affirm that they have no connections to, or engagement with, any group or body That provides financial or non-financial assistance for the topics or resources covered in this Manuscript.

11. CONFLICTS OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship, And/or publication of this article.

12. PLAGIARISM POLICY

All authors declare that any kind of violation of plagiarism, copyright and ethical matters will\ Take care by all authors. Journal and editors are not liable for aforesaid matters.

13. SOURCES OF FUNDING

The authors received no financial aid to support for the research.



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

REFERENCES

- [1] Bebbington, J., Unerman, J., & O'Dwyer, B. (2014). Sustainability accounting and accountability. Routledge.
- [2] Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- [3] Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure. *Accounting, Organizations and Society*, 33(4–5), 303–327. <https://doi.org/10.1016/j.aos.2007.05.003>
- [4] Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.
- [5] Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*, 86(1), 59–100. <https://doi.org/10.2308/accr.00000005>
- [6] Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857. <https://doi.org/10.1287/mnsc.2014.1984>
- [7] Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone Publishing.
- [8] Flammer, C. (2021). Corporate green bonds. *Journal of Financial Economics*, 142(2), 499–516. <https://doi.org/10.1016/j.jfineco.2021.01.010>
- [9] Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233. <https://doi.org/10.1080/20430795.2015.1118917>
- [10] Global Reporting Initiative (GRI). (2016). *GRI sustainability reporting standards*. Global Reporting Initiative. <https://www.globalreporting.org>



Mercy Mousumi Takri (2026). *Integrating ESG Reporting, Sustainable Finance, and Circular Economy in to Climate-Responsive Business Models: An Analytical Framework and Empirical Assessment*, International Journal of Multidisciplinary Research & Reviews, 5(2), 214-227.

- [11] Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting. *Accounting, Auditing & Accountability Journal*, 8(2), 47–77.
- [12] Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4), 986–1014.
- [13] Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- [14] Intergovernmental Panel on Climate Change (IPCC). (2022). *Climate change 2022: Impacts, adaptation and vulnerability*. Cambridge University Press. <https://www.ipcc.ch>
- [15] Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation & Recycling*, 127, 221–232. <https://doi.org/10.1016/j.resconrec.2017.09.005>
- [16] Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance. *Journal of Finance*, 72(4), 1785–1824. <https://doi.org/10.1111/jofi.12505>
- [17] Porter, M. E., & Kramer, M. R. (2006). Strategy & society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78–92.
- [18] Schaltegger, S., & Burritt, R. (2018). *Contemporary environmental accounting: Issues, concepts and practice*. Routledge Studies in Accounting.
- [19] Schaltegger, S., Burritt, R., & Petersen, H. (2003). *An introduction to corporate environmental management*. Routledge.
- [20] Stubbs, W., & Cocklin, C. (2008). Conceptualizing a “sustainability business model.” *Organization & Environment*, 21(2), 103–127. <https://doi.org/10.1177/1086026608318042>

