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Integrating ESG and Circular Economy Principles in Emerging-Market SMEs: A Conceptual Framework for Sustainable Business Transformation

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Abstract

Environmental, social and governance principles and circular economy practices have developed separately over time. Environmental, social and governance principles focus on disclosure and accountability while circular economy practices focus on resource efficiency and reducing waste. However, recent studies show that these two principles can complement each other. Most frameworks that combine social and governance principles and circular economy practices are designed for large companies in developed economies. Medium-sized enterprises in emerging markets are often overlooked, despite their significant contribution to employment and economic growth. This conceptual paper presents a study that develops a framework for combining environmental, social and governance principles and circular economy practices in small and medium-sized enterprises in emerging markets. The study draws on Institutional Theory, the Resource-Based View, and Stakeholder Theory to propose a framework that explains how small and medium-sized enterprises can adopt environmental, social and governance principles and circular economy practices. The framework has three levels: macro-institutional, meso-organizational, and micro-managerial. The study proposes five research propositions to explain how small and medium-sized enterprises can adopt social and governance principles and circular economy practices. The propositions explain the sequencing of social and governance principles and circular economy practice the role of frugal innovation and the influence of institutional voids. The framework contributes to sustainability theory by extending the integration of social and governance principles and circular economy practices to small and medium-sized enterprises in emerging markets. The study provides implications for managers, policymakers and standard-setting organizations that want to promote sustainable business transformation in small and medium-sized enterprises in emerging markets.

Keywords: ESG Integration, Circular Economy, Institutional Voids, Resource-Based View (RBV), Stakeholder Theory, Frugal Innovation, Sustainable Business Models

Introduction

Over the decade environmental, social and governance principles have become a strategic framework for corporate governance, investment decisions and regulatory compliance. At the time the circular economy has emerged to reduce resource consumption, waste generation and extension of product life cycle. Environmental, social and governance principles and circular economy practices have the ultimate goal of sustainable development, but they have developed separately over time (Agyemang et al., 2025; Khan, 2024; Stahel, 2016).

Environmental, social and governance principles are mostly related to measuring financial performance, stakeholder accountability and corporate disclosure (Khan, 2024; Kopnina et al., 2025; Telukdarie & Nyathi, 2026). Circular economy practices are related to redesigning products, production systems and material flows to achieve resource efficiency and environmental sustainability.

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Circular economy practices provide the mechanisms to achieve environmental and social objectives while environmental, social and governance principles provide the governance, reporting and accountability mechanisms for assessing and monitoring circular performance. Therefore, combining social and governance principles and circular economy practices has become an important research direction to promote sustainable business transformation (Agyemang et al., 2025; Jaiswal et al., 2026; Kopnina et al., 2025; Mahwish et al., 2025).

However, most of the literature has focused on companies in developed economies with dedicated sustainability departments, mature reporting systems and greater financial and technological resources. Medium-sized enterprises in emerging markets face different institutional and operational environments. They represent the majority of business enterprises and employment worldwide. They often face constraints in terms of financial resources, technical know-how, sustainability capabilities and institutional voids that hinder the implementation of environmental, social and governance principles and circular economy practices (Malik et al., 2022; Mishra et al., 2025; Rizos et al., 2016; Zighan, 2026). These issues are particularly pronounced in emerging economies where sustainability transitions are often hampered by uncertainty, lack of access to finance, underdeveloped reverse logistics systems and limited availability of secondary material markets. However, small and medium-sized enterprises are increasingly pressured by buyers, financial institutions, export markets and policymakers to show sustainability performance and meet evolving environmental, social and governance standards.

Small and medium-sized enterprises are operating under resource constraints, yet they are expected to incorporate sustainability practices due to external pressures. Prior studies have examined social and governance principles and circular economy practices in small and medium-sized enterprises separately but there is relatively little understanding of how these two sustainability paradigms interact as mutually reinforcing organizational capabilities in resource-constrained environments.

Most existing frameworks assume that companies first make environmental, social and governance commitments before implementing circular economy practices. However, this may not be true for medium-sized enterprises in emerging markets. They often begin to practice circularity in a way such as minimizing waste reusing materials repairing and optimizing resources to reduce their operating costs and increase their efficiency before they formally record these actions in environmental, social and governance reporting systems.

To fill this research gap, this conceptual study develops a framework for combining environmental, social and governance principles and circular economy practices in small and medium-sized enterprises in emerging markets. The paper proposes a conceptual model based on institutional theory the resource-based view and stakeholder theory encompassing the macro-institutional meso-organizational and micro-managerial dimensions.

The framework conceptualizes the integration of social and governance principles and circular economy practices as a dynamic capability-building process rather than a compliance exercise. The study develops five research propositions that explain the sequencing of social and governance principles and circular economy practice the mediating role of frugal innovation and the moderating influence of institutional voids. The proposed framework provides a foundation for future empirical validation and offers practical guidance to managers, policymakers and standard-setting organizations aiming to accelerate sustainable business transformation among small and medium-sized enterprises in emerging economies.

Review of Literature

The Evolution of ESG as a Corporate Framework

ESG principles were created by the responsible investing movement in the early 2000s and grew into a broad set of standards used to assess corporate sustainability performance beyond financial metrics (Agyemang et al., 2025; Khan, 2024). Environmental, social and governance reporting was largely voluntary. Mainly used by institutional investors to assess long-term business risks and opportunities. However, the emergence of sustainability taxonomies, disclosure regulations and standardized environmental, social and governance reporting frameworks has made environmental, social and governance principles an increasingly important aspect of corporate governance and strategic management. The governance dimension is the developer of the environmental, social and governance implementation

dimensions with oversight by the board executive accountability, anti-corruption and ethical decision-making (Agyemang et al., 2025; Kopnina et al., 2025).

Simultaneously, the environmental and social dimensions have been recognized as drivers for competitive advantage by improved resource efficiency, stakeholder engagement and responsible supply chain management (Jaiswal et al., 2026; Mahwish et al., 2025; Telukdarie & Nyathi, 2026). The expectations for sustainability were initially developed for publicly traded companies but have progressively been passed down to small and medium-sized enterprises through supply chain due diligence regulations, buyer-led supplier codes of conduct and financial institutions and export market requirements.

Therefore, many medium-sized enterprises are now expected to demonstrate compliance with environmental, social and governance principles regardless of the fact that they have limited financial resources, technical expertise and organizational capacity. The diffusion of social and governance expectations through value-chain relationships is an important mechanism for sustainability adoption among small and medium-sized enterprises and a key foundation of the conceptual framework proposed in this study.

Circular Economy as an Operational Paradigm

The circular economy is an alternative to the traditional linear "take–make–dispose" economic model promoting the continuous circulation of products, materials and resources throughout their life cycle (Khan, 2024; Stahel, 2016). The circular economy aims to preserve the value of materials through reduction, reuse, repair, refurbishment, remanufacturing and recycling than maximizing production and consumption. Foundational studies highlight that the circular economy improves resource efficiency and decreases impacts via closed-loop production systems. More recent works have elaborated on this view by proposing circularity indicators, business model archetypes and assessment frameworks at the firm, industrial and regional levels (Khan, 2024; Kopnina et al., 2025; Telukdarie & Nyathi, 2026).

Circular strategies are often categorized into three types: narrowing resource loops, which decreases resource consumption; slowing resource loops, which extends product life through maintenance, repair and reuse; and closing resource loops, which recovers materials through recycling and remanufacturing. Medium-sized enterprises can usually more easily implement narrowing and slowing strategies because they demand less financial investment than capital-intensive reverse logistics systems and recycling infrastructure. While environmental, social and governance principles emphasize governance, accountability and sustainability reporting the circular economy offers the mechanisms to redesign products, manufacturing processes and supply chains to achieve long-term sustainability outcomes (Khan, 2024; Stahel, 2016).

Emerging ESG–Circular Economy Nexus

Circular economy practices provide means to accomplish environmental and social objectives while environmental, social and governance principles provide governance structures and reporting systems that allow organizations to track, evaluate and report on circular performance to investors and other stakeholders. Some conceptual frameworks have combined environmental, social and governance indicators with circular business models to demonstrate how circular practices boost sustainability performance and long-term organizational resilience. Moreover, recent studies proposed circularity assessment models to complement environmental, social and governance reporting by providing quantitative measures of material efficiency, waste reduction and resource recovery (Kopnina et al., 2025). These assessment approaches have been gradually expanded from firms to industrial clusters, collaborative business ecosystems and regional circular economy networks.

However, most existing environmental, social and governance-circular economy integration frameworks are tailored to corporations with established sustainability systems. Their application in resource-constrained medium-sized enterprises, in emerging economies has not been adequately investigated.

Circular Economy Adoption in SMEs: A Parallel but Disconnected Literature

Another stream of research examines how SMEs adopt circular economy practices, largely independent of the ESG literature. Existing studies show that implementing circular economy practices is challenging for SMEs,

which face constraints such as limited financial resources, a shortage of managers with the requisite skills, inadequate access to technology, insufficient government support, and the absence of effective recycling systems

Researchers group these challenges into three levels:

- *Macro level:* This includes things like government policies, infrastructure and rules.
- *Meso level:* This includes things like the characteristics of the industry relationships with suppliers and support from the market.
- *Micro level:* This includes things like what the organization's capable of what the managers know and what resources are available.

Studies from places like India, Malaysia, the Gulf Cooperation Council and sub-Saharan Africa show that one of the reasons Small and Medium Enterprises do not adopt circular business practices is because owners do not know much about them and they do not have access to money (Mishra et al., 2025; Zighan, 2026).

One thing that really helps Medium Enterprises adopt circular economy practices is something called frugal innovation. This means finding ways to create solutions that're good for the environment and do not cost a lot of money (Perera & Badir, 2025). This allows organizations to promote sustainability even when they do not have a lot of money or technology. Recent studies also show that the challenges to implementing circular economy practices are all connected (Mishra et al., 2025).

Research Gap

The existing ESG–CE integration frameworks have been mostly developed for large organizations with large organizational resources and mature sustainability reporting systems. However, their applicability to SMEs with severe resource constraints remains largely unexplored. Another, the barriers and enablers of CE adoption are discussed widely in the SME literature, but most studies regard the implementation of CE in isolation from the increasing ESG expectations from investors, buyers, regulators, and financial institutions.

There has been little theoretical attention to understanding the sequencing of ESG and circular economy adoption in SMEs. Existing frameworks generally assume that ESG commitments lead to circular economy implementation. Yet the practical evidence indicates that many SMEs first adopt circular practices such as waste minimization, repair, reuse, and resource optimization to enhance operational efficiency before formally embedding such activities into ESG reporting systems (Malik et al., 2022; Perera & Badir, 2025).

This conceptual paper proposes an integrated ESG–CE framework that conceptualizes ESG adoption and circular economy implementation as mutually reinforcing organizational capabilities to address these gaps.

Review Methodology

As this is a conceptual paper, the framework and propositions were developed through a structured narrative synthesis of the literature rather than a primary empirical study. Studies were included if they addressed ESG practices, circular economy adoption, or SME sustainability behaviour in emerging-market contexts; purely large-firm or developed-economy studies were retained only where they informed the theoretical baseline against which the SME-specific gap is framed. The screened literature was thematically coded around the three guiding theoretical lenses to surface recurring mechanisms, after which the identified mechanisms were synthesized into the multilevel conceptual framework and the five research propositions presented in Section 3. The illustrative case vignettes in Section 4 were subsequently selected from among the reviewed studies to demonstrate, rather than empirically validate, the applicability of the proposed framework.

Conceptual Framework and Propositions

Theoretical Foundation

The conceptual framework proposed in this paper combines all the theories. Institutional Theory explains how organizations react to coercive, normative and mimetic pressures from governments, regulatory agencies, industry associations, customers and competitors. For SMEs, coercive pressures often come from buyer sustainability requirements, supply chain codes of conduct, export regulations and financial institutions rather than direct regulatory mandates considering that many SMEs fall outside of mandatory ESG reporting thresholds (Agyemang et al., 2025; Malik et al., 2022).

Professional associations, certification bodies and industry norms create normative pressures, while mimetic pressures lead SMEs to emulate sustainability practices of successful peer firms in industrial clusters and business networks.

The Resource-Based View (RBV) extends this perspective by highlighting that the organizational reaction to institutional pressures depends on the availability of valuable, rare, inimitable, and organizationally embedded resources and capabilities. Unlike large corporations with specific sustainability departments and sophisticated reporting systems, SMEs generally rely on the knowledge, flexibility and entrepreneurial skills of owner-managers (Malik et al., 2022; Perera & Badir, 2025). In this regard, frugal innovation is a critical organizational capability that allows SMEs to adopt ESG–CE practices through innovative, resource-efficient and low-cost solutions in the face of high financial and technological constraints (Perera & Badir, 2025).

In Stakeholder Theory, buyers, financial institutions, regulators, suppliers, certification agencies, and consumers are increasingly demanding sustainability performance and responsible business practices (Agyemang et al., 2025; Mahwish et al., 2025). Therefore, SMEs involved in global value chains are incentivised more strongly to adopt ESG and circular economy practices than those engaged in local markets only. The interplay of these three theoretical perspectives forms the basis for the proposed multilevel ESG–CE integration framework.

Proposed Multilevel ESG–CE Framework

The proposed framework conceptualizes the integration of ESG and CE as a dynamic capability-building process that occurs simultaneously at three interrelated levels.

At the macro level, the external institutional environment (e.g., environmental regulations, ESG reporting policies, industry norms, circular economy legislation, financial incentives, and availability of recycling and reverse logistics infrastructure) affects sustainability transitions (Agyemang et al., 2025; Telukdarie & Nyathi, 2026). These contextual factors shape the institutional environment in which SMEs engage with sustainability initiatives.

At the meso level, the external institutional pressures are transmitted to individual firms through value-chain relationships, buyer sustainability requirements, supplier collaboration, industrial clusters, access to green finance and circular economy intermediaries. These mechanisms enable the dissemination of ESG and circular economy practices in interconnected business networks.

At the micro level, organizational characteristics, such as commitment of owner-managers, absorptive capacity, sustainability awareness, organizational learning and frugal innovation capability, determine whether external sustainability pressures are translated into substantive ESG–CE implementation or mere symbolic compliance (Perera & Badir, 2025).

These three levels of analysis jointly explain how institutional conditions, organizational capabilities, and stakeholder relationships influence ESG–CE integration among SMEs operating in emerging economies.

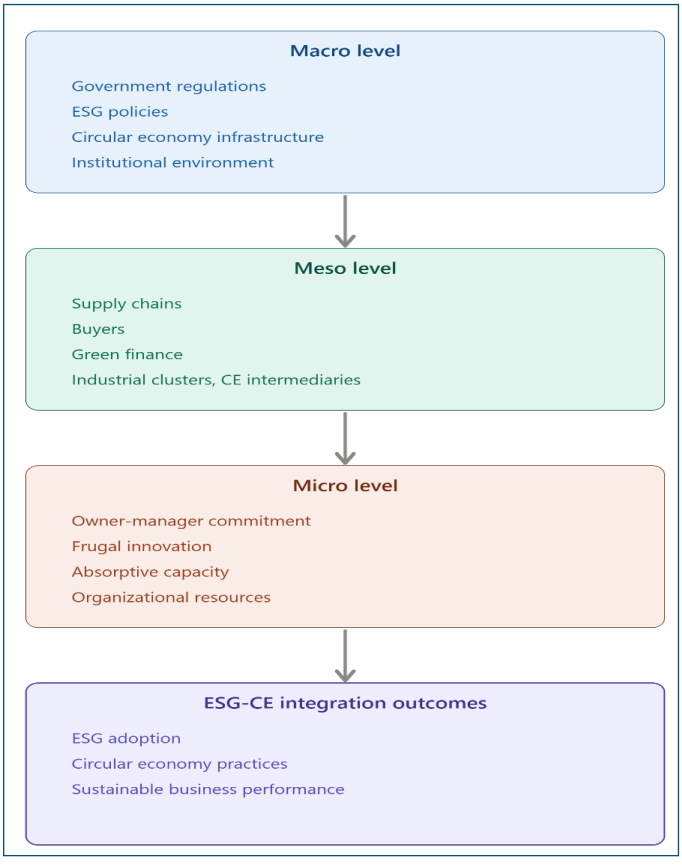


Fig. 1: Proposed Multilevel ESG–CE Integration Framework

Sequencing: Does ESG Precede or Follow CE Adoption in SMEs?

Based on the above-introduced theoretical frameworks and the proposed multilevel framework, five research propositions are developed. These propositions generate testable theoretical relationships that can be examined through future empirical research.

Proposition 1: The adoption of circular economy practices is more likely to happen before formal ESG adoption for resource-constrained SMEs. ESG integration is in response to external stakeholder's requirements rather than as a first driver for circular economy practices implementation.

Explanation: In emerging-market SMEs, resource efficiency and cost reduction often drive the early adoption of circular practices such as waste minimization, repair, reuse and local sourcing. These operational practices are codified into ESG reporting frameworks when external stakeholders (buyers, financial institutions, regulators, or certification bodies) require documented sustainability performance. Thus, the adoption of ESG is often the outcome of already existing circular practices and not the starting point of them.

Frugal Innovation as a Mediating Capability

Whereas big companies can dedicate financial means and specialized human resources to circular redesign, SMEs often reach circular results by optimizing resources, repurposing existing assets and sharing knowledge within local business networks. This ability, commonly known as frugal innovation, allows firms with resource constraints to convert sustainability ideas into viable solutions (Perera & Badir, 2025). In the integrated ESG-CE context, we expect frugal innovation to affect the extent to which external demands from buyers, lenders, and regulators result in substantive adoption of ESG and circular economy practices or just symbolic compliance.

Proposition 2: The effect of external ESG-CE pressure by buyers, lenders and regulators on how much substantive rather than symbolic ESG-CE integration is achieved by SMEs is mediated by frugal innovation capacity.

Explanation: Frugal innovation allows SMEs to react to external ESG and circular economy pressures despite limited financial and technological resources. By exploiting existing assets, local knowledge and resource efficient problem-solving approaches, SMEs can turn external expectations for sustainability into tangible operational improvements. Thus, frugal innovation enhances the substantive ESG–CE integration and decreases the likelihood of symbolic compliance.

Institutional Voids as a Moderator

Research in the Gulf Cooperation Council and sub-Saharan Africa has shown that while national policies may promote circular economy practices, a lack of supporting infrastructure, such as recycling facilities, markets for secondary materials and reverse logistics systems, greatly restricts implementation by SMEs (Zighan, 2026). These findings suggest that institutional conditions are important to translate managerial commitment to integrate ESG and circular economy practices into meaningful organizational outcomes.

Proposition 3: Institutional voids, such as regulatory ambiguity, inadequate circular infrastructure, and weak market intermediaries, moderate the link between SME managerial motivation to integrate ESG-CE and actual integration outcomes, such that greater institutional voids weaken the translation of managerial motivation into effective ESG-CE implementation.

Explanation: Institutional voids (weak recycling infrastructure, regulatory ambiguity, limited market intermediaries and lack of technical support) limit SMEs' ability to translate managerial commitment into effective sustainability action. Therefore, even the most motivated SMEs might have difficulty in meaningful ESG-CE integration without these supporting institutional mechanisms, as commitment alone cannot replace the external infrastructure needed for implementation.

Value-Chain Position as a Transmission Channel

As suppliers to large organizations, SMEs are increasingly expected to comply with buyer-imposed codes of conduct and sustainability reporting requirements. These value chain relationships serve as channels for ESG and circular economy expectations to SMEs, whether or not they are under direct pressure from investors or end consumers.

Supply-chain involvement is therefore a vital avenue for SMEs to implement integrated ESG.

Proposition 4: SMEs that are suppliers in value chains governed by large ESG-reporting firms are more likely to achieve substantive ESG-CE integration than comparable SMEs outside such value chains, because of the cascading effect of buyer sustainability requirements.

Explanation: SMEs in buyer-driven supply chains are exposed to sustainability standards, technical assistance and ESG reporting expectations through supplier development programmes. These relationships along the value chain allow for the transfer of knowledge on sustainability and practical know-how, thus incentivising SMEs to adopt ESG and circular economy practices more broadly than comparable firms outside of such buyer-linked networks.

Sectoral Circularity Potential as a Boundary Condition

Existing studies on ESG-CE integration showed that the potential to implement circular economy practices differ significantly between sectors. Knowledge- or service-intensive sectors generally offer fewer opportunities for recycling, remanufacturing and resource recovery than do the manufacturing, agri-food and materials-processing sectors. This variation is especially relevant for SMEs, which have limited financial and technological resources to develop new circular solutions in sectors where these practices are not yet well established (Khan, 2024; Kopnina et al., 2025).

Proposition 5: The degree of ESG-CE integration reached by SMEs is contingent upon the circularity potential of the sector at issue. It is expected to find stronger integration in manufacturing, agri-food and materials-processing SMEs than in knowledge- or service-intensive SMEs, irrespective of managerial motivation or institutional pressure.

Explanation: The extent of achievable ESG–CE integration depends heavily on sector-specific opportunities for resource recovery, material reuse, and circular business model adoption. Knowledge intensive service sectors have a lower inherent circularity potential than manufacturing, agri-food and materials processing industries due to their tangible material flows. As a result, firms operating in these resource-intensive industries tend to achieve stronger sustainability integration outcomes than service-based firms, even when institutional conditions and support mechanisms remain broadly comparable across sectors.

Summary of Propositions

Table 1 presents the five research propositions and each proposition identifies a different mechanism including institutional voids, buyer-driven value chains, sectoral circularity potential, resource-based capabilities and stakeholder pressures that influences the way in which SMEs pursue ESG–CE integration. Collectively, these propositions provide a consistent conceptual basis to inform future empirical research on sustainability integration among SMEs operating in emerging market contexts

Table 1: Summary of Propositions

Prop.	*Core Claim*	*Primary Lens*	*Relationship Type*
P1	CE practice precedes formal ESG adoption in SMEs	Institutional theory	Sequencing / temporal ordering
P2	Frugal innovation converts external pressure into substantive integration	Resource-based view	Mediation
P3	Institutional voids weaken the motivation–outcome link	Institutional theory	Moderation
P4	Value-chain embeddedness raises integration via cascading buyer requirements	Stakeholder theory	Direct effect / transmission channel
P5	Sectoral circularity potential bounds achievable integration	Resource-based view	Boundary condition

Illustrative Case Vignettes

The following illustrative case vignettes should be considered as literature-based examples, rather than empirical verification of the proposed research propositions.

A Textile-Sector SME in South Asia

Indian textile SMEs, it was found that most firms had adopted circular economy practices such as fabric offcut recovery, water conservation, reuse of process materials, and waste minimization mainly to reduce production costs and improve operational efficiency rather than for formal sustainability goals. These SMEs were integrated into export-oriented supply chains and multinational buyers increasingly demanded they comply with environmental, labour and governance standards through supplier codes of conduct and sustainability audits. Therefore, a lot of companies began to capture and report their existing circular activities within formal ESG reporting frameworks.

This example illustrates how operational circular economy projects can lead to formal ESG adoption, thus supporting Proposition 1. Moreover, it shows that buyer-driven value-chain relationships serve as important channels through which ESG–CE integration is transmitted, consistent with Proposition 4.

A Manufacturing SME in the Gulf Cooperation Council

Evidence from SMEs operating in Gulf Cooperation Council (GCC) countries suggests that although national sustainability strategies and policies promoting circular economy adoption have been introduced, implementation is uneven due to inadequate recycling infrastructure, immature secondary material markets, limited reverse logistics systems and insufficient technical support services (Zighan, 2026). SMEs located in industrial parks with stronger institutional support and better access to recycling facilities show significantly higher levels of circular economy implementation compared to similar firms in less developed regions.

The result obtained support the moderating effect of institutional conditions as suggested in Proposition 3. The more favourable the institutional conditions, the stronger the relationship between managerial commitment and successful ESG–CE implementation. The example also underlines further that policy support is not enough without the right physical infrastructure and institutional capacity.

An Agri-Processing SME in Sub-Saharan Africa

Published studies on manufacturing and agri-processing SMEs in sub-Saharan Africa indicate that ESG-related sustainability initiatives are more effective when organizations actively pursue eco-innovation and have basic governance structures that support sustainability management (Agyemang et al., 2025; Perera & Badir, 2025). However, many SMEs without formalized sustainability structures have been able to implement pragmatic circular economy measures through frugal innovation such as converting agricultural waste to animal feed, compost or alternative raw materials by using locally available resources and inexpensive technologies.

These examples illustrate the potential for frugal innovation to enable resource-constrained SMEs to make meaningful improvements in sustainability, despite the limited financial and technological resources supporting Proposition 2. They also stress the importance of developing organizational capability to facilitate real integration of ESG-CE.

Synthesis of the Illustrative Cases

Together, the three vignettes based on literature illustrate how the proposed research propositions should not be considered as separate mechanisms but rather as interrelated processes that are simultaneously at work at various organizational and institutional levels. The South Asian textile case shows how circular economy practices may come before formal ESG adoption through buyer-driven value-chain pressures. The GCC manufacturing case illustrates the moderating role of institutional conditions in the implementation of sustainability, whereas the sub-Saharan African agri-processing case illustrates the enabling role of frugal innovation under resource-constrained conditions.

These illustrative examples are synthesized from studies published elsewhere, they are to be treated as illustrations

of evidence, not empirical validation. Future research using surveys, comparative case studies, longitudinal studies and structural equation modelling is needed to test the proposed relationships in different emerging-market contexts.

Discussion and Implications

Theoretical Implications

The proposed conceptual framework contributes to the nascent literature on ESG–CE integration by extending existing sustainability theories to the context of SMEs in emerging markets. The previous literature has predominantly viewed the integration of ESG and circular economy from the standpoint of large organizations with well-defined sustainability governance structures and abundant organizational resources. However, this study argues that the sustainability transition of SMEs is different, due to resource limitations, institutional settings, and stakeholder relations.

The main theoretical contribution of this research is that circular economy practices may be precursors to formal ESG adoption in resource-constrained SMEs. This view challenges the dominant assumption in the current ESG literature that formal sustainability governance is a prerequisite to implement the initiatives of circular economy. Rather, the proposed framework recommends practical resource-efficiency measures (e.g., waste minimization, repair, reuse, and local sourcing) for SMEs to improve operational performance prior to their being formally embedded in ESG reporting systems. This alternative sequencing extends the theoretical understanding of sustainability capability development in SMEs.

A second contribution is the conceptualization of frugal innovation as a mediating organizational capability that helps SMEs translate external sustainability pressures into meaningful ESG–CE implementation. Large corporations often rely on massive financial investments and dedicated sustainability teams, while small and medium-sized enterprises (SMEs) often reach sustainability goals by means of low-cost innovations, resource optimization and creative problem-solving.

The framework also conceptualizes institutional voids as moderating factors of ESG–CE integration. Weak regulatory enforcement, lack of recycling infrastructure, lack of technical support, and lack of secondary material markets can threaten the effectiveness of managerial commitment toward sustainability implementation.

Managerial Implications

The proposed framework has several practical implications for SME owner-managers, supply-chain partners and sustainability practitioners.

The study shows that many SMEs are already doing activities that align with circular economy principles, such as reducing waste, re-using, repairing, re-manufacturing and optimizing resources. Instead of designing new sustainability programmes, managers should systematically identify, document and communicate these existing practices in formal ESG reporting frameworks to improve stakeholder confidence and market competitiveness.

Moreover, frugal innovation should be viewed as a strategic capability of SMEs and not just a response to their financial constraints. By being resource-efficient, organizations can make significant improvements in sustainability with little or no new capital investment. Promoting employee participation, knowledge sharing, and joint problem-solving may additionally improve ESG–CE implementation with operational flexibility (Perera & Badir, 2025).

Additionally, managers should actively collaborate with supply-chain partners, industry associations, certification bodies and financial institutions to access sustainability knowledge, technical assistance, green finance opportunities and capacity-building programmes. The participation in collaborative business networks can significantly lower the barriers to implementation and accelerate the integration of ESG–CE (Agyemang et al., 2025; Mahwish et al., 2025).

Finally, SME managers should see ESG compliance as more than just a reporting requirement, but rather as a strategic tool to improve operational efficiency, build stronger stakeholder relationships, boost organizational

resilience, and generate long-term competitive advantage (Kopnina et al., 2025; Telukdarie & Nyathi, 2026).

Policy and Standard-Setting Implications

The proposed framework has a number of implications for policymakers, regulatory agency and sustainability standard-setting organizations that seek to promote ESG–CE integration among SMEs.

First, sustainability policies designed for large corporations should not be directly transferred to SMEs without considering their financial, technical and institutional constraints. SMEs are likely to embrace simplified ESG reporting frameworks, sector-specific guidance and phased implementation strategies rather than complex compliance requirements (Mishra et al., 2025).

Further, governments should invest in enabling infrastructure such as recycling facilities, reverse logistics systems, secondary material markets and digital platforms enabling industrial symbiosis to complement sustainability regulations. Such investments may significantly mitigate institutional obstacles existing in the current implementation.

Furthermore, public policies should promote collaboration between large corporations and SME suppliers through supplier development programmes, technical assistance initiatives, green procurement policies and sustainability training. ESG–CE practices diffuse effectively across industrial ecosystems through buyer-driven value chains (Malik et al., 2022).

Finally, financial institutions and development agencies should scale up access to green finance, sustainability-linked loans and innovation support programmes specifically designed for SMEs. Improved access to financial and technical resources will increase the ability of SMEs to implement integrated ESG–CE strategies, contributing to broader national sustainability and circular economy goals (Jaiswal et al., 2026).

Scope and Limitations

The main goal of the proposed study is to develop a theoretical foundation to understand ESG–CE integration and to develop research propositions that could guide future empirical research. The framework aims to help researchers, practitioners and policymakers understand the interaction between institutional pressures, organizational capabilities, stakeholder relationships, and sector-specific characteristics in influencing sustainability transitions in SMEs. However, few limitations of the study should be acknowledged. First, the proposed framework is conceptual and has not been empirically tested by primary data. Thus, the relationships described by the five research propositions are still of a theoretical nature and require empirical testing to establish their generalizability. Second, the study draws exclusively on published secondary literature and illustrative case vignettes to develop and explain the proposed framework. Although these sources provide important theoretical and contextual insights, they cannot substitute for empirical evidence gathered directly from SMEs.

Third, the illustrative case vignettes used in this paper are based on previously published studies and are only intended to demonstrate the potential applicability of the proposed framework. They do not constitute an empirical test of the propositions put forward, nor do they include all SMEs in emerging markets. Fourth, the conceptual framework is mainly concerned with SMEs in emerging economies and thus the applicability of the framework to large enterprises or organizations in developed economies might be limited because of differences in institutional environments, resource availability, sustainability maturity and regulatory requirements.

Finally, the framework does not explicitly integrate industry-specific quantitative indicators, organizational performance measures, or longitudinal sustainability results. Future research should also explore factors such as national regulatory differences, firm size, ownership structure, digital transformation, technological readiness and cultural influences, which may also impact ESG–CE integration. Therefore, the proposed framework should be seen as a theoretical basis that needs to be refined and validated for different industrial sectors, geographical locations and institutional contexts.

Conclusion and Future Research

This study proposes a conceptual framework that integrates circular economy (CE) practices with environmental, social, and governance (ESG) principles for SMEs in emerging markets. The framework draws

on Institutional Theory, the Resource-Based View, and Stakeholder Theory and explains how institutional pressures, organizational capabilities, and stakeholder relationships affect the integration of ESG–CE. The propositions for research developed here offer a theoretical foundation for the understanding of sustainability transitions in resource-constrained SMEs.

The framework discusses the role of frugal innovation, institutional conditions and value-chain relationships in enabling ESG-CE integration. It also indicates that circular economy practices might push formal ESG adoption in many SMEs and offers an alternative view to the existing sustainability literature.

As this study is conceptual in nature, further empirical validation of the proposed framework is needed through survey-based studies, Structural Equation Modelling (SEM/PLS-SEM), comparative case studies or longitudinal research in different industries and countries. Such investigations will help to refine the framework and improve the applicability of the framework to promote sustainable business transformation in SMEs.

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

AI Disclosure Statement

All conceptual development, interpretation of the literature, preparation of the proposed framework, and final scientific content were independently reviewed, verified, and approved by the authors.

References

Agyemang, A., Osei, A., & Kongkuah, M. (2025). Exploring the ESG-circular economy nexus in emerging markets: A systems perspective on governance, innovation, and sustainable business models. *Business Strategy and the Environment, 34*(9), 5901–5924. https://doi.org/10.1002/bse.4278

Jaiswal, T., Hasan, M. A., Das, S., & Tiwari, V. (2026). Advancing sustainable services through ESG and circular economy: Technology-driven pathways for supply chain transformation. *Sustainable Development*, *34*(5), 7384–7399. https://doi.org/10.1002/sd.70744

Khan, T. (2024). Circular-ESG model for regenerative transition. *Sustainability, 16*(17), Article 7549. https://doi.org/10.3390/su16177549

Kopnina, H., Fellinger, E., de Jong, J., & Bowden, A. (2025). Bridging ESG and the circular economy: Advancing corporate sustainability through the updated R-hierarchy and circularity scoring model. *Visions for Sustainability*, (23), 9–41. https://doi.org/10.13135/2384-8677/11829

Mahwish, R., Shad, M. K., Lai, F. W., & Hamad, S. (2025). A conceptual framework for integrating ESG profiling with circular economy practices to enhance dual dimensions of firm performance. *Engineering, Technology & Applied Science Research, 15*(4), 8167–8178.

Malik, A., Sharma, P., Vinu, A., Karakoti, A., Kaur, K., Gujral, H. S., Munjal, S., & Laker, B. (2022). Circular economy adoption by SMEs in emerging markets: Towards a multilevel conceptual framework. *Journal of Business Research, 142*, 605–619. https://doi.org/10.1016/j.jbusres.2021.12.076

Mishra, S., Sahoo, D., & Mohapatra, S. (2025). Barriers to circular economy adoption in MSMEs: A WINGS analysis of challenges in developing economies. *Circular Economy and Sustainability, 5*(6), 4919–4944. https://doi.org/10.1007/s43615-025-00668-3

Perera, R., & Badir, Y. (2025). Bridging the gap between the source of innovation and the implementation of circular economy principles in SMEs within emerging economies: The mediating role of frugal innovation. *Business Strategy and the Environment, 34*(2), 1847–1863. https://doi.org/10.1002/bse.4074

Rizos, V., Behrens, A., Kafyeke, T., Hirschnitz-Garbers, M., & Ioannou, A. (2016). Implementation of circular economy business models by small and medium-sized enterprises (SMEs): Barriers and enablers. *Sustainability, 8*(11), Article 1212. https://doi.org/10.3390/su8111212

Stahel, W. R. (2016). The circular economy. *Nature, 531*(7595), 435–438. https://doi.org/10.1038/531435a

Telukdarie, A., & Nyathi, M. H. L. (2026). ESG and circular business models: Towards a sector-specific circular–ESG integration framework. *Sustainability, 18*(8), Article 4006. https://doi.org/10.3390/su18084006

Zighan, S. (2026). Barriers to circular economy transitions in emerging markets: Insights from the GCC and implications for sustainable development. *Sustainable Development*, *34*(1), 210–225. https://doi.org/10.1002/sd.70177