

Business Model Innovation and Sustainable Small and Medium Enterprises Performance in Developing Economies: A Systematic Review

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Abstract

The pursuit of sustainable performance among small and medium-sized enterprises (SMEs) has become increasingly important in developing economies that face persistent institutional constraints, yet existing evidence on the relationship between business model innovation (BMI) and sustainable performance remains fragmented and inconsistent. Drawing on Dynamic Capabilities Theory and Stakeholder Theory, this study synthesises the empirical literature to clarify how, and under what conditions, BMI contributes to the sustainable performance of SMEs. Adopting the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (Page et al., 2021), peer-reviewed articles published between 2014 and 2026 were identified from Scopus, Web of Science, and Google Scholar, yielding 29 empirical studies for thematic synthesis. The synthesis identified five dominant themes: BMI as a driver of sustainable performance; sustainable performance as a multidimensional construct; the mediating role of green and eco-innovation; digital transformation as a facilitator of BMI; and the transition toward integrated, sustainability-focused business models. Digital transformation and green innovation emerged as key mediating mechanisms, while access to finance, institutional support, and technological capability operated as significant contextual moderators. The findings indicate that BMI enhances financial, environmental, and social performance by reconfiguring value creation, delivery, and capture, but that this relationship is context-dependent and contingent on the alignment between internal dynamic capabilities and external stakeholder expectations. Because the reviewed evidence is geographically concentrated in Nigeria, generalisability remains limited. The review contributes an integrated, theory-grounded synthesis that maps context-specific pathways for sustainable BMI adoption, with practical implications for managers and policymakers in developing economies.

Keywords: Business model innovation, Developing economies, Digital transformation, Green innovation, Small and medium enterprises, Sustainable performance.

INTRODUCTION

Sustainability was formerly viewed as an afterthought; it has now become a priority strategy for firms operating in uncertain economic, ecological, and institutional environments. This transition is particularly relevant for small and medium-sized enterprises (SMEs), which typically lack sufficient resources and are therefore more susceptible to market, regulatory, and other

pressures. SMEs constitute roughly 90% of all enterprises worldwide and generate more than 50% of global employment (Olubiyi, 2022; Rao et al., 2023).

The challenge of building a sustainable business is compounded in developing nations by persistent structural impediments, including limited access to financing, inadequate physical infrastructure, and unstable governance, all of which hinder the capacity of SMEs to achieve

sustainable development (Etuk, Etuk & Michael, 2014; Orji, Ahmad & Dangana, 2025). The implementation of disruptive innovation has been identified as a vital mechanism enabling Nigerian SMEs to develop sustainable entrepreneurial practices through innovation-based business models (Ibidunni, Ufua & Opute, 2022).

In response to these challenges, business model innovation (BMI) has attracted increasing attention as a strategic mechanism through which firms redesign how value is created, delivered, and captured in order to enhance both competitiveness and sustainability outcomes (Teece, 2010; Zott, Amit & Massa, 2011). In contrast to traditional forms of innovation, BMI adopts a holistic perspective, allowing firms to connect operational, technological, and strategic components to create long-term value (Teece, 2010; Troise, Santoro, Jones & Bresciani, 2024). Emerging empirical evidence suggests that SMEs that actively innovate their business models through digital transformation, eco-innovation, and organisational restructuring tend to outperform their counterparts in financial, environmental, and social terms (Almeida & Wasim, 2023; van Tonder, Bossink, Schachtebeck & Nieuwenhuizen, 2024).

Despite this growing body of literature, research on the relationship between BMI and sustainable SME performance remains fragmented and conceptually dispersed (Badiru, 2024; Shodiya, Shonola & Ogunbayo, 2025). Much of the research undertaken in African contexts relies on the basic principles of sustainability and primarily examines survival techniques rather than integrated innovation pathways (Ilesanmi, 2025; Kuik, Kumar, Diong & Ban, 2023). Furthermore, the mechanisms connecting BMI to sustainable performance remain insufficiently understood, as findings regarding digitalisation, green innovation, and organisational capabilities as mediators and moderators produce inconsistent outcomes across contexts (Adu-Yeboah, Jiang, Frempong, Hossin & Amoako, 2022; Al-Omush, Momany, Hannon & Anwar, 2023).

Systematic literature reviews are particularly valuable in addressing such gaps, offering structured, transparent, and replicable approaches to aggregating findings across

diverse studies (Troise *et al.*, 2024). This study therefore synthesises the empirical literature on BMI and SME sustainable performance, examines the mediating and moderating mechanisms involved, and identifies the contextual conditions that determine the efficacy of BMI. This study pursues three primary objectives to:

- i. synthesise the empirical evidence on the impact of business model innovation (BMI) on the sustainable performance of SMEs;
- ii. identify the key mediating and moderating mechanisms through which BMI influences SME sustainable performance, and
- iii. analyse the contextual conditions under which BMI is most likely to exert a positive effect on sustainable SME performance.

LITERATURE REVIEW

2.1 Business Model Innovation and Sustainable Performance in SMEs

Business model innovation (BMI) has established itself as a vital strategic tool enabling organisations to modify their value-creation processes in response to environmental change. BMI extends beyond traditional product- or process-focused innovation by integrating organisational transformation with technological advancement and market change to enhance firm performance (Teece, 2010). Business models constitute the basic structure through which organisations establish methods for generating and securing value (Zott *et al.*, 2011).

Organisations are increasingly expected to evaluate financial performance alongside environmental impact and social responsibility through the triple bottom line framework (Elkington, 1997). SMEs in developing economies face particular difficulties in demonstrating sustainable performance owing to institutional voids, inadequate infrastructure, and limited access to financing (Adamu & Sundararajan, 2025; Orji *et al.*, 2025). Prior research indicates that SMEs' ability to translate strategic initiatives into measurable

performance outcomes increases with the use of relational capacity and embedded networks (Salisu, Naala, Abdullahi, Ringim, Abubakar & Gorondutse, 2024).

2.2 Dynamic Capabilities Theory

Dynamic Capabilities Theory explains how firms adapt to fast-changing environments through their ability to develop internal resources and external organisational capabilities (Teece, Pisano & Shuen, 1997). According to Teece (2007), dynamic capabilities comprise three key attributes: sensing new opportunities and threats, seizing opportunities through strategic choices, and reconfiguring organisational resources to sustain competitive advantage.

For SMEs, BMI can be examined as an expression of dynamic capabilities, reflecting the ongoing reconfiguration of how an organisation creates and delivers value to the market (Al-Omush *et al.*, 2023; van Tonder *et al.*, 2024). Innovation capability and organisational resilience have been shown to enhance sustainability performance significantly by enabling firms to adapt to environmental and economic disruption (Olaleye, Lekunze, Sekhampu, Khumalo & Ayeni, 2024). Similarly, entrepreneurial orientation and knowledge-management practices contribute to the development of dynamic capabilities that support sustainable BMI (Korayim, Shaik, Agarwal, Nijjer & Sasso, 2025).

2.3 Stakeholder Theory

Stakeholder Theory examines how multiple stakeholders influence the development of corporate strategy and performance outcomes (Freeman, 1984). SMEs base their sustainable business practices on pressures from

government agencies, consumers, and regulators, redesigning their value propositions to align with stakeholder expectations (Adu-Yeboah *et al.*, 2022).

From a stakeholder perspective, BMI involves restructuring value-creation activities to generate economic, social, and environmental value simultaneously. Eco-innovation and green-management practices are employed to enhance reputation and customer loyalty while mitigating environmental impact (Almeida & Wasim, 2023). The integration of digital technologies further facilitates transparency and stakeholder engagement, strengthening trust and legitimacy (Al-Omush *et al.*, 2023). In developing economies, institutional actors, including government agencies and financial institutions, play a critical enabling role in shaping SME sustainability outcomes (Orji *et al.*, 2025).

2.4 Conceptual Linkage: Dynamic Capabilities, Stakeholder Theory, and BMI

The integration of Dynamic Capabilities Theory (DCT) and Stakeholder Theory yields a comprehensive framework for explaining how BMI generates sustainable performance in SMEs. Whereas DCT specifies the internal capabilities necessary for innovation and adaptation, Stakeholder Theory clarifies how external forces and stakeholder needs shape organisational responses. Together, they suggest that SMEs achieve optimal sustainable performance when internal capabilities are aligned with external stakeholder demands. This integrated framework also supports the proposition that mediating factors, such as digital transformation, and moderating factors, such as institutional support, condition the success of BMI in generating sustainability outcomes.

management, sustainability studies, and entrepreneurship.

3.1 Research Design

This review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page *et al.*, 2021), which provide a reproducible and transparent procedure for identifying, evaluating, and including or excluding

METHODOLOGY

To synthesise empirical evidence on the relationship between BMI and the sustainable performance of SMEs, this study employs a systematic literature review (SLR). The SLR is particularly appropriate given the multidisciplinary and fragmented nature of the literature, which spans innovation

literature. This approach ensures methodological consistency and minimises selection bias.

3.2 Data Sources and Search Strategy

A comprehensive literature search was conducted across three major academic databases: Scopus, Web of Science, and Google Scholar, selected for their extensive coverage of peer-reviewed articles in management, sustainability, and entrepreneurship. Boolean keyword combinations were developed to maximise the retrieval of relevant articles. The primary search string was: “business model innovation” AND “sustainable performance” AND (“small and medium enterprises” OR “SME”). Additional keywords were incorporated to broaden coverage of related constructs, including “green innovation”, “digital transformation”, “entrepreneurial orientation”, and “organisational resilience”. The search was restricted to peer-reviewed journal articles published between 2014 and 2026 to ensure currency and relevance.

3.3 Inclusion and Exclusion Criteria

The following inclusion criteria were applied:

- Empirical studies (quantitative, qualitative, or mixed methods);
- Studies focusing on SMEs;
- Studies examining business model innovation and/or closely related constructs;

- Studies addressing at least one dimension of sustainable performance (economic, environmental, or social);
- Articles published in peer-reviewed journals; and
- Articles written in English.

The following exclusion criteria were applied:

- Conceptual or theoretical papers without empirical evidence;
- Conference papers, book chapters, and grey literature;
- Studies not focused on SMEs; and
- Studies that do not explicitly link innovation to sustainability outcomes.

3.4 Study Selection Procedure

Study selection was conducted in four sequential stages consistent with the PRISMA workflow. During identification, the initial database search yielded 617 records, with additional studies identified through forward and backward citation tracking. During screening, duplicates were removed and titles and abstracts were screened against the inclusion criteria. During the eligibility stage, the full texts of potentially eligible articles were reviewed, and studies failing to meet the methodological or thematic criteria were excluded, with reasons documented. At the inclusion stage, a total of 29 empirical studies were retained for the final qualitative synthesis. Figure 1 illustrates the detailed selection process.

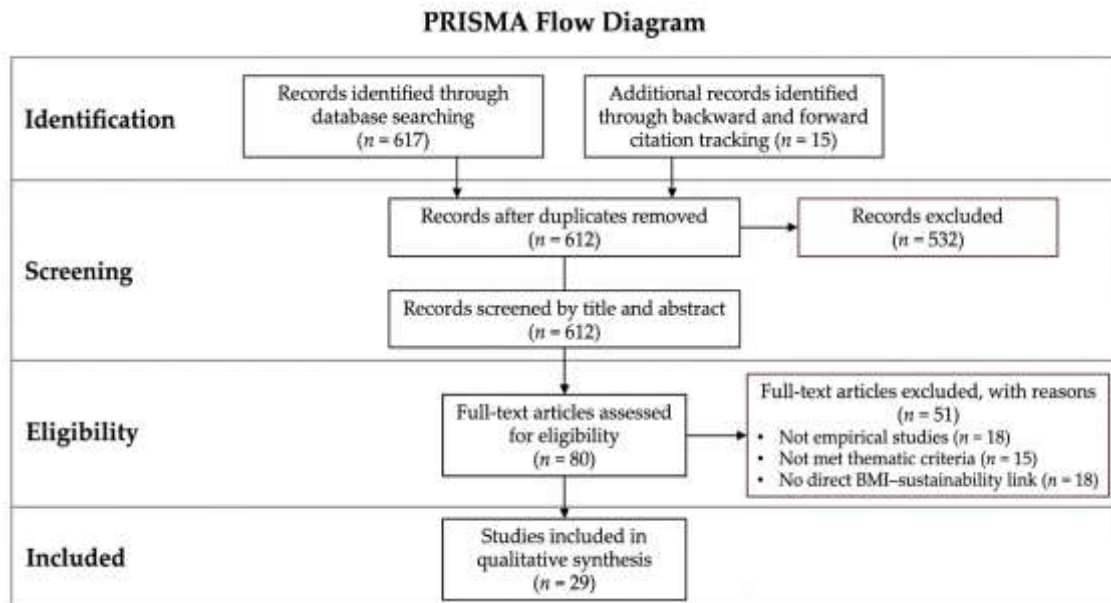


Figure 1. PRISMA flow diagram showing the study selection process.

3.5 Data Extraction and Analysis

A structured data-extraction matrix was developed to capture key information from each selected study, including author(s) and year of publication, study context and geographical location, research objectives, methodological approach, measures of business model innovation, measures of sustainable performance, key findings, and identified mediating and moderating variables. Analysis proceeded through thematic synthesis, involving the coding and categorisation of recurring patterns to identify dominant themes, relationships, and conceptual linkages between BMI and sustainable performance.

3.6 Quality Assessment

The methodological quality of the selected studies was appraised using the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018), which evaluates studies on the basis of the

clarity of the research design, the appropriateness of the data-collection methods, the validity and reliability of the measurement constructs, and the rigour of the data analysis. Studies that did not meet minimum quality standards were excluded to counteract potential bias in the synthesis.

3.7 Limitations of the Methodology

Several methodological limitations should be acknowledged. The review is restricted to English-language publications, which may exclude relevant studies in other languages. Although multiple databases were searched, some studies may not have been captured owing to indexing limitations. Finally, the predominance of cross-sectional designs within the reviewed literature constrains the ability to draw causal inferences regarding the BMI–performance relationship.

RESULTS

4.1 Cross-Study Themes Identified from the Reviewed Literature

Thematic synthesis of the 29 included studies identified five dominant themes explaining the mechanisms and contexts through which BMI drives sustainable SME performance. These are described below.

4.1.1 Innovative Business Models as a Key Component of Sustainable SME Performance

A strong association between BMI and SME sustainable performance was evident across diverse contexts, including Nigeria, Kenya, Ghana, Europe, and Asia. Firms that redesign their value propositions, economic systems, and operations improve their financial stability, environmental performance, and long-term

growth. The effects of BMI exceed those attributable to individual product or process innovation (Abideen, Sakirat & Adio, 2025; Kising'u, 2025).

4.1.2 Sustainable Performance as a Complex, Multidimensional Framework

A shared understanding of sustainable performance as a multifaceted construct, encompassing social, environmental, and economic outcomes, is evident across the literature. A comprehensive and systemic BMI agenda provides fresh approaches to overcoming both internal and external obstacles, requiring the acknowledgement of technological, organisational, and social innovation as interrelated analytical units.

4.1.3 Mediating Role of Green and Eco-Innovation

Open innovation has been identified as a critical mediating mechanism linking knowledge management and entrepreneurial orientation to SME performance (Korayim *et al.*, 2025). Eco-innovation, green products, and knowledge-enabled governance act as bridges between baseline organisational capabilities and firm performance. These approaches are grounded in the resource-based view, the knowledge-based view, and contingency theory, emphasising the strategic use of organisational resources and capabilities.

4.1.4 Digital Transformation as a Facilitator of BMI

Digital transformation, encompassing cloud computing, digital marketing, process automation, and data analytics, enables SMEs

to enhance competitiveness, customer engagement, and operational efficiency. Cloud computing supports scalable resource allocation, while digital marketing broadens market reach. These capabilities allow SMEs to evolve with shifting market conditions, reinforcing the role of digital transformation as a key enabler of sustained BMI outcomes.

4.1.5 Transition to Integrated, Sustainability-Focused Business Models

The literature reflects a growing shift away from fragmented sustainability efforts toward integrated, sustainability-driven business models in which sustainability is central to value generation, delivery, and capture. The combination of digital transformation, environmentally sustainable practices, entrepreneurial orientation, and contextual business-model adaptation represents the optimal approach for sustaining SME performance across diverse environments.

4.2 Thematic Synthesis Summary

As detailed in Table 1, the literature clusters around five dominant themes. The synthesis reveals universal recognition of the positive impact of BMI while demonstrating that its sustainability pathways, whether digital transformation, eco-innovation, or integrated resilience models, vary by context. The majority of the 29 studies employed cross-sectional survey designs, which limits causal inference. Most studies focused on SMEs in developing economies, particularly Nigeria, constraining generalisability across other organisational and institutional settings.

Table 1. Thematic Synthesis of Included Empirical Studies.

Theme	Supporting Empirical Studies	Key Mechanisms Identified	Contextual Focus
1. Innovative business models as a key factor in sustainable SME performance	Kising'u (2025); Madhavan <i>et al.</i> (2022); Omoyele <i>et al.</i> (2023); Abideen <i>et al.</i> (2025)	Reconfiguration of value offerings and economic systems directly impacts financial security and sustainability.	Kenya, Thailand, Nigeria (mixed developing contexts)
2. Sustainable approach as a complex	Rao <i>et al.</i> (2023); Utaminingsih <i>et al.</i> (2024); Angela <i>et al.</i> (2025)	Integration of economic, social, and environmental metrics into core business	Broad SME applications; performance metrics

performance framework		strategies, rather than isolated efforts.	
3. Mediating role of green and eco-innovation	Adu-Yeboah <i>et al.</i> (2022); Almeida & Wasim (2023); Okeke <i>et al.</i> (2025); Orji <i>et al.</i> (2025)	Eco-innovation, green products, and open innovation act as critical bridges between knowledge management and firm performance.	Ghana, Portugal, UK, Nigeria
4. Digital transformation as a facilitator of BMI	Al-Omush <i>et al.</i> (2023); van Tonder <i>et al.</i> (2024); Korayim <i>et al.</i> (2025)	Cloud computing, data analytics, and digital capabilities enhance operational efficiency and moderate the BMI–performance link.	Knowledge-based economies; transitioning markets
5. Transition to integrated, sustainability-focused models	Kuik <i>et al.</i> (2023); Ilesanmi (2025); Otokiti <i>et al.</i> (2022); Olaleye <i>et al.</i> (2024)	Adoption of circular economy models, resilience frameworks, and strategic organisational adaptability to navigate economic disruptions.	High-volatility environments; Nigeria

Note. Authors' synthesis of the reviewed empirical studies.

DISCUSSION AND IMPLICATIONS

This systematic review confirms a positive relationship between BMI and sustainable performance across diverse geographic and institutional contexts. The majority of the 29 included studies (79%) reported significant positive effects of BMI on at least one dimension of sustainable performance, with the strongest associations observed in studies combining digital transformation and eco-innovation strategies. Beyond establishing this association, the analysis offers a deeper understanding of the mechanisms and conditions through which BMI generates sustainability outcomes.

The findings suggest that BMI functions as an integrative strategic mechanism rather than a standalone innovative act, reconfiguring the value-creation, delivery, and capture processes at a systemic level. This is particularly relevant in developing economies, where innovation serves simultaneously as a source of competitive advantage and as a pathway to sustainability under resource constraints (Ibidunni *et al.*, 2022). BMI also operates as an effective mediator through which risk-

management practices translate into enhanced performance (Mustapha *et al.*, 2023). SMEs that adopt integrated approaches combining digital transformation, eco-innovation, and organisational adaptability are more likely to achieve sustained financial, environmental, and social outcomes (Otokiti *et al.*, 2022; Oyedun *et al.*, 2025; Salami *et al.*, 2024).

The application of Dynamic Capabilities Theory demonstrates that SMEs with strong sensing, seizing, and transforming capabilities can identify sustainability opportunities and adjust their business models accordingly (Teece, 2007). The adoption of digital technologies and green innovation reflects firms' capacity to modify internal processes and detect emerging market developments, consistent with prior findings that innovation capability and organisational resilience significantly enhance sustainable performance (Olaleye *et al.*, 2024).

Nevertheless, the results indicate that BMI does not produce uniform outcomes across SMEs. In resource-constrained environments, limited access to finance, inadequate technological infrastructure, and capability gaps severely restrict the ability to adopt or sustain innovative business models. Stakeholder Theory provides

an explanatory lens for these findings, demonstrating that external stakeholder expectations and institutional forces are primary drivers motivating SMEs to implement BMI (Freeman, 1984). Eco-innovation and sustainable practices are often adopted in response to regulatory compliance and reputational imperatives rather than purely internal strategic intent (Adu-Yeboah *et al.*, 2022; Almeida & Wasim, 2023).

Digital transformation and green innovation serve as complementary enablers of BMI, enhancing operational efficiency, market reach, and environmental goal attainment (Al-Omush *et al.*, 2023; van Tonder *et al.*, 2024). Green-management initiatives significantly enhance SME performance, particularly in Nigerian contexts (Okeke, Mbah & Okeke, 2025), although these advantages remain inaccessible to SMEs in the most resource-constrained developing regions.

A critical insight is the context-dependent nature of sustainable performance. Research in developed economies emphasises high-level innovation models, whereas African-based research primarily examines incremental innovation, resilience, and organisational survival. Institutional context, resource availability, and market maturity jointly determine how BMI affects sustainable performance, with knowledge management and entrepreneurial practices serving as essential components of sustainable BMI (Le, Bui Thi Tuyet & Le Anh, 2025). A “one-size-fits-all” approach is therefore unlikely to be effective; strategies must be tailored to specific contextual realities.

The integration of DCT and Stakeholder Theory reveals that sustainable performance is achievable when internal dynamic capabilities are aligned with external stakeholder demands. The evidence indicates that BMI is most effective when supported by a strong capability base, committed stakeholder engagement, and an enabling institutional environment.

Managerial Implications

Addressing Objective 1 (the impact of BMI on sustainable performance) and Objective 2 (mediating mechanisms), the following guidance is offered for SME managers.

Piecemeal innovation is repeatedly shown to be insufficient for sustained sustainability outcomes. SME managers should adopt a comprehensive approach to BMI that simultaneously develops digital capabilities and environmental sustainability, since these two enablers generate compounding performance gains. Managers should actively leverage stakeholder engagement as a value co-creation mechanism with customers, suppliers, and local communities. Consistent with Dynamic Capabilities Theory, leaders must continuously scan the environment (sensing) and allocate resources responsively (seizing).

Policy and Institutional Implications

Addressing Objective 3 (contextual conditions for effective BMI), the following policy recommendations are proposed. Institutional voids and resource constraints constitute major barriers to BMI adoption among SMEs. Policymakers should develop targeted interventions that explicitly reduce the risk of adopting sustainable innovations, including green-innovation funds tailored to small enterprises and digital-infrastructure grants. Government agencies should facilitate multi-stakeholder innovation ecosystems that enable SMEs, academia, and large corporations to share the financial and technical costs of transitioning toward sustainable business models.

CONCLUSION

This systematic review investigated how business model innovation affects the sustainable performance of small and medium enterprises. The evidence confirms that BMI is a crucial driver of financial, environmental, and social performance. The success of BMI is contingent on the alignment between internal organisational capabilities and external stakeholder demands, mediated by digital transformation and green innovation, and moderated by contextual factors such as access to finance, institutional support, and technological capability.

The integrated framework developed by combining Dynamic Capabilities Theory and Stakeholder Theory explains how SMEs achieve sustainable results through business

model innovation. Dynamic capabilities enable organisations to identify marketplace opportunities and build resource bases, while stakeholder engagement directs the nature and scope of business-model reconfiguration.

BMI implementation yields better results when firms deploy digital transformation, green innovation, and organisational resilience as complementary strategies (De, Chowdhury, Dey & Ghosh, 2020; Utaminingsih, Widowati & Witjaksono, 2024). However, structural limitations in developing economies such as restricted financial resources, limited technological capabilities, and insufficient institutional backing, constrain the adoption of these strategies. Context-specific approaches are therefore essential rather than standardised models. This study contributes a structured synthesis linking multiple research streams on BMI and sustainable SME performance, identifies the mediating and moderating mechanisms involved, and offers both theoretical and practical guidance. The deployment of more sustainable solutions and technologies generates customer benefit, shareholder value, and economic growth (Olaleye *et al.*, 2024; van Tonder *et al.*, 2024); in turn, the creation of social, economic, and environmental value advances broader stakeholder welfare (Almeida & Wasim, 2023; Madhavan, Sharafuddin & Chaichana, 2022; Omoyele, Olubiyi, Lanre-Babalola, Obadare & Onikoyi, 2023).

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The predominance of cross-sectional and survey-based studies in the reviewed literature limits the ability to establish causal relationships, while the geographical concentration of studies in Nigeria constrains generalisability across different institutional and cultural settings. The limited availability of qualitative studies further restricts understanding of the practical challenges SMEs face in implementing BMI. Future studies should therefore prioritise longitudinal and process-based designs to establish causal relationships and to track the evolution of the BMI–performance link over time. Qualitative case studies would help to unpack the implementation processes, managerial tensions, and day-to-day strategic decisions involved in transitioning to sustainable

business models. Finally, cross-country comparative studies are needed to examine how institutional quality, regulatory stringency, and cultural dimensions moderate the BMI–performance relationship beyond the current geographical concentration in Nigeria.

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Appendix 1. Data-Gathering Matrix of Reviewed Empirical Studies

Author(s)	Topic	Key Findings	Recommendations	Contribution to Present Study
Abideen <i>et al.</i> (2025)	Management innovation and SME sustainability	Management innovation significantly enhances SME sustainability	SMEs should embed innovative management practices	Demonstrates management innovation as a component of BMI in sustainability outcomes
Adamu & Sundararajan (2025)	Entrepreneurship and SME sustainability	Entrepreneurial orientation positively affects sustainability	Policy support for entrepreneurship development	Shows entrepreneurial orientation as an antecedent to sustainable business models
Adu-Yeboah <i>et al.</i> (2022)	Corporate sustainability and SME performance	Green innovation mediates sustainability and performance	SMEs should invest in green innovation	Supports mediation mechanisms within the BMI–performance relationship
Almeida & Wasim (2023)	Eco-innovation and SME performance	Eco-innovation improves long-term business performance	Promote eco-innovation adoption	Provides evidence of environmentally driven BMI in developed contexts
Al-Omush <i>et al.</i> (2023)	Digitalisation and SME competitive performance	Digitalisation strengthens the BMI–performance link	SMEs should invest in digital capabilities	Highlights digital-driven business model innovation
Angela <i>et al.</i> (2025)	Green performance management and SME sustainability	Green management improves economic sustainability	Adoption of structured green metrics	Reinforces sustainability metrics within business models
Badiru (2024)	Entrepreneurial behaviour and SME performance	Entrepreneurial behaviour positively impacts performance	Training programmes for entrepreneurs	Identifies behavioural foundations of business model innovation
Ibidunni <i>et al.</i> (2022)	Disruptive innovation and sustainable entrepreneurship	Disruptive innovation supports sustainable entrepreneurship	Encourage innovation ecosystems	Adds disruptive innovation to BMI pathways

Ilesanmi (2025)	Sustainable BMI in Nigeria	Sustainable BMI enhances SME resilience	Legal and policy support for SBMI	Central empirical support for the study's core construct
Kising'u (2025)	Business model innovation and SME performance	BMI positively influences SME performance	SME managers should redesign business models	Direct empirical evidence linking BMI to performance
Korayim <i>et al.</i> (2025)	Entrepreneurial orientation and SBMI	EO drives sustainable BMI	Strengthen leadership and technology transfer	Explains leadership-driven BMI mechanisms
Kuik <i>et al.</i> (2023)	Circular business models in SMEs	Circular models enhance sustainability	Support SME circular transitions	Provides review benchmark and synthesis logic
Le <i>et al.</i> (2025)	Humane entrepreneurship and SBMI	SBMI mediates humane entrepreneurship and performance	Invest in knowledge management	Supports mediation models used in synthesis
Madhavan <i>et al.</i> (2022)	BMI and sustainable performance	BMI significantly improves sustainable performance	Strategic BMI adoption	Methodological benchmark for empirical modelling
Mustapha <i>et al.</i> (2023)	Risk management and BMI	BMI mediates risk management and performance	Integrate risk strategies into BMI	Shows BMI as an organisational integration tool
Okeke <i>et al.</i> (2025)	Green management and SME sustainability	Green practices enhance sustainability	Environmental compliance strategies	Reinforces environmental dimension of BMI
Olaleye <i>et al.</i> (2024)	Innovation capability and resilience	Innovation capability drives sustainability	Build adaptive capacity	Supports resilience outcomes of BMI
Olubiyi (2022)	Sustainable innovation and customer satisfaction	Sustainable innovation improves satisfaction	Align innovation with customer needs	Adds customer-value perspective to BMI
Omoyele <i>et al.</i> (2023)	BMI and sustainable entrepreneurship	BMI promotes sustainable entrepreneurship	Encourage BMI adoption	Core Nigerian empirical support
Orji <i>et al.</i> (2025)	Green products and SME sustainability	Green products improve performance	Develop eco-products	Links value-proposition innovation to sustainability

Otokiti <i>et al.</i> (2022)	Resilient business models	Resilient models support SME survival	Adaptive business models	Supports resilience-based BMI theory
Oyedun <i>et al.</i> (2025)	Renewable energy adoption	Renewable adoption improves sustainability	Policy incentives for energy innovation	Extends BMI to energy and infrastructure innovation
Rao <i>et al.</i> (2023)	Sustainable SME practices	Integrated practices improve benchmarking	Adoption of sustainability metrics	Conceptual anchor for sustainability constructs
Salami <i>et al.</i> (2024)	Entrepreneurial development and sustainability	Training improves SME sustainability	Expand SME capacity building	Contextualises BMI in insecure environments
Salisu <i>et al.</i> (2024)	Networks and sustainable performance	Networks influence sustainable outcomes	Strengthen SME networks	Highlights relational mechanisms in BMI
Shodiya <i>et al.</i> (2025)	Management innovation and sustainability	Positive sustainability effects confirmed	Promote managerial innovation	Reinforces organisational innovation dimension
Troise <i>et al.</i> (2024)	Sustainable business models	Institutional support enables SBMs	Support enabling environments	Provides synthesis and adoption logic
Utaminingsih <i>et al.</i> (2024)	SBMI drivers	Both internal and external factors influence SBMI	Align internal capabilities with external pressures	Integrates multi-level determinants
van Tonder <i>et al.</i> (2024)	Digital BMI and performance	Digitally driven BMI improves performance	Digital strategy integration	Strengthens digital BMI evidence base