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Strategic Integration of Sustainability-Oriented Business Models for Achieving Multiple SDGs: A Rapid Review of African Firm Practices

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Abstract: This study investigates how firms design and implement sustainability-oriented business models to address multiple Sustainable Development Goals (SDGs) concurrently. Drawing on a rapid review of 168 scholarly articles sourced from Web of Science and Sabinet, and guided by a thematic coding approach, the research offers a comprehensive synthesis of strategies employed across diverse sectors, particularly within the African context. The study identifies five core themes: (1) organisational fundamentals for achieving SDGs, (2) regulatory frameworks supporting sustainability, (3) business strategy implementation, (4) benefits of sustainability practices, and (5) obstacles to SDG integration. Findings highlight the significance of aligning core business strategies with sustainability objectives to foster economic growth, environmental stewardship, and social inclusion. The study also exposes gaps in awareness, regulatory enforcement, and capacity especially among small and medium-sized enterprises (SMEs). An original conceptual framework, the Integrated Sustainability Business Model (ISBM), is introduced to guide firms in synchronising their operations with the SDGs. This framework supports scalable, sector-sensitive, and impact-driven sustainability practices. By offering actionable insights for managers, policymakers, and researchers, the study contributes to the theoretical and practical advancement of sustainable development in emerging markets and supports the broader implementation of Agenda 2030.

Keywords: Sustainable Development Goals (SDGs), Corporate Sustainability, African Firms, Strategic Implementation, Regulatory Frameworks, Business Strategy

Introduction

In recent years, the imperative for businesses to actively contribute to sustainable development has grown significantly amid escalating concerns over environmental degradation, socioeconomic disparities, and economic volatility. As stewards of innovation, production, and employment, firms play a pivotal role in advancing the United Nations Sustainable Development Goals (SDGs), a global blueprint for peace, prosperity, and planetary well-being by 2030 (United Nations, 2015). These goals encompass a wide array of challenges, including poverty eradication, clean energy access, gender equality, climate action, and sustainable industrialisation. Central to this transformative agenda is the emergence of sustainability-oriented business models (SBMs), which integrate environmental and social objectives into the core strategic and operational fabric of firms. Unlike traditional models that prioritise profit maximisation, SBMs are designed to generate shared value by aligning profitability with social and environmental stewardship (Boons & Lüdeke-Freund, 2013; Bocken et al., 2014). However, despite the growing body of literature on sustainable business practices, a comprehensive understanding of how firms simultaneously address multiple SDGs through integrated business model design remains underdeveloped particularly within the African context (Nosratabadi et al., 2019; Majam, 2022).

This study aims to fill that gap by investigating the processes through which firms especially those operating in resource-constrained, high-risk, and institutionally diverse environments such as Africa—develop and implement SBMs capable of contributing to multiple SDGs in parallel. While some prior studies have focused on specific SDGs or single-sector sustainability practices (e.g., energy efficiency, CSR, or green innovation), the cross-cutting nature of sustainability calls for a more holistic, multidimensional analysis (Stubbs & Cocklin, 2008; Lüdeke-Freund et al., 2017). Using a rapid literature review methodology, this research critically examines 168 peer-reviewed articles published between 2019 and 2024 from Web of Science and Sabinet. It seeks to understand not only the strategic mechanisms that underpin sustainability integration but also the contextual barriers, sector-specific dynamics, and measurement frameworks that shape implementation across African industries.

The objectives of this study are fourfold:

1. To identify the conceptual and operational deficiencies in current sustainability frameworks applied by firms;
2. To examine the strategies and practices firms use to integrate sustainability into their business models;
3. To conceptualise how firms navigate the complexity of addressing multiple SDGs concurrently; and
4. To explore the realised and potential outcomes of both opportunities and limitations of sustainability-oriented practices in different sectors.

Through thematic analysis, this study distils key insights into the organisational, regulatory, and strategic levers necessary for successful SDG alignment. By contextualising these findings within the African business landscape where structural inequalities, institutional fragility, and ecological vulnerability converge, the research contributes to a more inclusive and practical understanding of sustainability in business. Ultimately, this work enhances both theoretical knowledge and managerial practice, offering an evidence-based framework for firms, policymakers, and scholars striving to implement integrated sustainability strategies that are both scalable and locally responsive.

Scope And Methodology

Scope of the Study

This study explores how firms develop and implement sustainability-oriented business models (SBMs) to simultaneously address multiple Sustainable Development Goals (SDGs). Focusing primarily on small and medium-sized enterprises (SMEs) and large organisations within the African context, the research investigates sector-specific strategies, challenges, and policy frameworks influencing the adoption and execution of SBMs. The African continent presents a unique setting for this inquiry due to its rapid urbanisation, resource constraints, institutional variability, and uneven economic development (Auriacombe & Van der Walt, 2021; Mbiza & Sinha, 2023).

By examining cross-sectoral practices ranging from manufacturing to services, the study aims to generate a nuanced understanding of how African firms can operationalise sustainability in ways that are not only economically viable but also socially inclusive and environmentally restorative. This regional emphasis addresses a critical gap in the global literature, where sustainability discourse has largely been shaped by experiences and models from the Global North (Zhou et al., 2020; Hermundsdottir & Aspelund, 2021).

Research Design and Methodology

The study adopts a hybrid approach that combines the methodological rigour of a systematic literature review with the efficiency of a rapid literature review(Garritty et al., 2020; Hamel, 2020. While these approaches are often viewed as opposite ends of a spectrum, they can be effectively integrated by retaining the structured processes of systematic reviews while streamlining certain stages to improve timeliness. In this study, the systematic component was reflected in the comprehensive search strategy, use of multiple databases, and adherence to transparent screening procedures guided by PRISMA principles. An initial pool of 625 articles was identified, ensuring broad coverage of relevant literature. This was followed by clearly defined inclusion and exclusion criteria, multi stage screening, and full text assessment to minimise bias and enhance reproducibility.The rapid review component was introduced through purposeful narrowing of the dataset and a focus on the most relevant and recent studies, reducing the final sample to 45 articles. Rather than aiming for exhaustive inclusion, the selection was guided by thematic saturation, ensuring that key patterns and insights were adequately captured. This balance allowed the study to maintain analytical depth while producing timely and context relevant findings. As such, the methodology reflects a continuum where systematic rigour supports credibility, and rapid review principles enhance feasibility and practical value.

Data Sources and Search Strategy

Two databases were selected for their relevance and scope:

- Sabinet, known for its extensive coverage of African scholarship and region-specific journals (UNISA, 2024); and
- Web of Science, a globally recognised repository of high-impact, peer-reviewed research across multiple disciplines (TUT, 2024).
- The initial search yielded 625 publications, which were narrowed down through a multi-stage filtering process. Inclusion criteria limited the review to:
- Articles published between 2019 and 2024,
- Peer-reviewed journal articles,
- English-language publications,
- Studies with a direct focus on SBMs and SDG integration, particularly within the African context.
- Exclusion criteria removed:
- Non-peer-reviewed sources,
- Articles unrelated to business models or SDGs,
- Studies focused exclusively on non-African contexts, unless providing generalisable insights.

Boolean operators and keyword refinement techniques were applied iteratively. Core search terms included: *"sustainability"*, *"business models"*, *"SDGs"*, *"implementation"*, *"Africa"*, *"firms"*, and *"integration*" (Ajayi, 2023; Vivek et al., 2021).

Data Extraction and Coding

Following the selection of articles, all relevant documents were uploaded into a central repository for systematic organisation and review. Each article was carefully assessed and colour-coded based on its level of relevance to the research question: green indicated direct relevance, yellow represented partial or contextual relevance, and red denoted minimal or no relevance. Subsequently, the research team conducted a deductive thematic analysis guided by the six-phase framework proposed by Braun and Clarke (2006). In the familiarisation phase, researchers thoroughly read and re-read the selected articles, documenting initial observations and identifying emerging patterns (Williams & Moser, 2019). This was followed by the initial coding phase, where key phrases and relevant data segments were manually coded using margin notes as well as digital tools such as Microsoft Word and Excel.

The next phase involved generating themes, during which the codes were organised into preliminary categories and visualised through tables, charts, and mind maps to identify relationships and patterns. These themes were then reviewed and refined collaboratively to ensure internal consistency and clear distinctions between them. Thereafter, each theme was clearly defined and appropriately named to reflect its core meaning and contribution to the research objectives. Finally, in the report production phase, representative excerpts from the literature were selected to support each theme, ensuring transparency and traceability to the original sources (Nowell et al., 2017). To mitigate internal biases inherent in the collected data, this study employed a combination of methodological and analytical strategies embedded within the rapid literature review (RLR) design. First, data source triangulation was implemented by drawing from two complementary databases, namely Sabinet and Web of Science to balance regional specificity with global scholarly rigor, thereby reducing selection bias. Second**,** researcher triangulation was applied, where multiple reviewers independently screened, coded, and interpreted the articles. Discrepancies in coding or interpretation were resolved through iterative discussions and consensus-building, enhancing inter-coder reliability and minimizing subjective bias. Third, a transparent inclusion and exclusion protocol**,** aligned with PRISMA guidelines, was strictly followed to ensure consistency in study selection and to prevent arbitrary filtering of evidence. Additionally, the use of a deductive thematic analysis framework helped anchor data interpretation within predefined research objectives, limiting the risk of overemphasizing anecdotal findings. To further enhance objectivity, a structured coding matrix was used to trace themes directly back to original data excerpts, ensuring auditability and reducing interpretive drift. Finally, reflexivity was maintained throughout the review process, with researchers critically reflecting on their assumptions and potential influences on analysis. Collectively, these measures ensured that the findings are robust, transparent, and minimally affected by internal bias.

Triangulation Techniques

To ensure credibility and minimise bias, the study adopted multiple triangulation strategies:

- Data Source Triangulation: Combining Sabinet and Web of Science enabled cross-validation of regional and global perspectives.
- Researcher Triangulation: Multiple team members conducted independent analyses to enhance reliability (Bans-Akutey & Tiimub, 2021).
- Tool Triangulation: Digital tools (e.g., Excel) supported manual coding, enhancing accuracy in theme identification.

Justification of Methodology

The RLR methodology was particularly well-suited for this investigation due to the time-sensitive nature of the sustainability discourse and the need to inform ongoing policy and management decisions (Smela et al., 2023). The qualitative, deductive thematic analysis enabled the extraction of deep insights from a wide range of studies, making it possible to identify recurring themes across contexts and sectors (Asper & Corte, 2021).

This method allowed the study to remain grounded in real-world business practices while contributing to the theoretical understanding of SBM implementation and multi-SDG alignment in developing economies.

Literature Selection Strategy

The literature selection strategy was designed to ensure the inclusion of high-quality, relevant, and recent studies that directly contribute to answering the core research question: How do firms develop and implement sustainability-oriented business models to address multiple Sustainable Development Goals (SDGs) simultaneously? A meticulous, multi-stage approach was employed, involving defined inclusion and exclusion criteria, database selection, and systematic screening protocols to maintain rigour, validity, and contextual relevance.

Database Selection and Rationale

Two academic databases were prioritised for their complementary strengths:

- Sabinet, a leading platform for accessing peer-reviewed research from Africa, was selected to provide region-specific insights relevant to the African context. Its extensive coverage of more than 500 journals offers a critical lens into localised sustainability practices, policy frameworks, and socioeconomic dynamics (UNISA, 2024).

- Web of Science, a multidisciplinary database recognised globally for its high-impact, peer-reviewed journal coverage, was chosen for its methodological rigour, citation tracking features, and relevance to sustainability, business strategy, and development studies (Vivek et al., 2021; TUT, 2024).

This dual-database strategy ensured both regional depth and global breadth, providing a comprehensive and balanced review of literature relevant to the African business sustainability context. The overview of the database search is shown in Table 1.

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Table 1: Overview of Database search and refinement

Database	Web of Science	Sabinet
Date of search	01/06/2024	01/06/2024
Search Term used	Sustainability, SDGS, Business Model, Firms	Sustainability, SDGS, Business Model, Firms
No Filter	Number of results:	Number of results:
Filter: based on inclusion and exclusion criteria: Sustainability, SDGS, Business Model, Firms	Number of results: 46	Number of results:579
Filter: based on inclusion and exclusion criteria: 2019-2024	Number of results: 19	Number of results:374
Filter: based on inclusion and exclusion criteria: English	Number of results: 0	Number of results:245
Filter: based on inclusion and exclusion criteria: collections (Theology, religion etc.)	Number of results: 3	Number of results:152
Final number of results included	16	152

(Source: Author's own work)

Search Strategy and Keyword Design

The search terms were developed using a modified PICO framework (Population, Intervention, Comparison, Outcome), tailored for sustainability research (Bramer et al., 2018). Boolean operators and truncation methods were employed to maximise precision and recall.

- Population (P): firms, businesses, SMEs, corporations
- Intervention (I): sustainability, sustainable business models, SDG implementation
- Comparison (C): traditional business models (optional)
- Outcome (O): SDG alignment, environmental/social/economic impact, sustainability performance

Example of a composite search string:

("Sustainability" OR "Sustainable practices") AND ("Business models" OR "Enterprise models") AND ("SDGs" OR "Sustainable Development Goals") AND ("Implementation" OR "Integration") AND ("Firms" OR "Companies") AND ("Africa")

Searches were adapted for each database interface and iteratively refined based on relevancy assessments during the initial screening phases.

Inclusion Criteria

To ensure relevance and timeliness, studies had to meet all of the following conditions:

- Time frame: Published between 2019 and 2024 to reflect current thinking, frameworks, and real-world application of SBMs.
- Language: Written in English, ensuring consistency in interpretation.
- Source type: Peer-reviewed journal articles, empirical studies, and high-quality conceptual papers.

- Focus: Articles explicitly discussing sustainability-oriented business models and their alignment with one or more SDGs.
- Context: Emphasis on the African region, or globally relevant studies that provide transferable models or frameworks applicable to developing contexts.

These criteria were selected to capture the latest advancements, especially given the recent acceleration in sustainability research and the policy momentum surrounding the UN's 2030 Agenda (United Nations, 2015; Auriacombe & Van der Walt, 2021).

Exclusion Criteria

Articles were excluded if they met any of the following:

- Published prior to 2019, to maintain topical relevance.
- Not focused on business models or sustainability implementation (e.g., purely environmental science or policy with no business application).
- Not relevant to the African context, unless providing widely applicable insights or comparative analysis.
- Not peer-reviewed, such as editorials, opinion pieces, newsletters, or unverified grey literature.
- Published in languages other than English.

This approach was designed to filter out outdated, irrelevant, or low-quality content, ensuring a focused and credible evidence base (Hermundsdottir & Aspelund, 2021; Garritty et al., 2020).

Screening and Selection Process

The screening process followed a four-step protocol, consistent with PRISMA guidelines (Page et al., 2021):

1. Initial Retrieval: A total of 625 articles were identified across both databases.
2. Title and Abstract Screening: Using the inclusion/exclusion criteria, 393 articles were retained after deduplication.
3. Full-Text Review: 220 articles were examined for methodological relevance, context alignment, and theoretical contribution.
4. Final Selection: 45 articles were selected based on content relevance, contribution to thematic saturation, and regional representation.

Articles were stored in a shared digital repository, and each was colour-coded for relevance:

- Green – high relevance and direct contribution to the research question
- Yellow – partial relevance or contextual background
- Red – low or no relevance

Limitations of the Selection Process

Despite its strengths, the literature selection process faced several limitations:

- Database scope constraints excluded access to subscription-restricted content or grey literature.
- Language bias may have excluded valuable non-English studies from francophone or lusophone African countries.
- Contextual generalisability of global articles to African markets may not always be accurate.

However, triangulation through multiple researchers and regional prioritisation helped mitigate these limitations and enhance the credibility and relevance of the final dataset (Bans-Akutey & Tiimub, 2021; Zhou et al., 2020).

Application of Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were systematically applied through a multistage screening process to distil the most relevant, high-quality sources for this study. A total of 625 articles were retrieved initially using the defined search parameters across Sabinet and Web of Science databases. The screening process, aligned with PRISMA guidelines (Page et al., 2021), was implemented in the following sequential steps:

Stage 1: De-duplication and Preliminary Filtering

After removing duplicate entries, the total number of unique records was reduced to 393. Articles were then filtered based on title relevance, publication date (2019–2024), language (English only), and source type (peer-reviewed journal articles). This preliminary screening ensured that only the most contextually and temporally appropriate literature advanced to the next stage (Garritty et al., 2020).

Stage 2: Abstract Screening

Out of 393 records, 245 articles passed the abstract review. Abstracts were assessed for relevance to core constructs: business models, sustainability integration, SDG implementation, and geographic/contextual focus on Africa or comparable developing regions. Articles lacking theoretical, empirical, or contextual alignment with these constructs were excluded (Hermundsdottir & Aspelund, 2021).

Stage 3: Full-Text Review and Relevance Coding

Following the abstract screening, 220 full-text articles were reviewed in detail. At this stage, a relevance coding system was introduced to categorise articles into three tiers:

- Green: Directly aligned with the research question (e.g., empirical studies on SBM–SDG integration within African firms).
- Yellow: Partially relevant or conceptually adjacent (e.g., policy reviews or theoretical discussions on sustainability without business model focus).
- Red: Not relevant (e.g., technical environmental assessments, non-business-related sustainability discussions).

This coding system, reviewed and validated by multiple researchers, ensured a consistent and bias-minimised selection approach (Bans-Akutey & Tiimub, 2021).

Stage 4: Final Inclusion

From the 220 full-text articles assessed, 45 articles were ultimately selected for inclusion in the thematic analysis. The final set met all inclusion criteria, contributed substantively to the research objectives, and represented a balance across sectors and business types (e.g., SMEs, multinational firms, public-private partnerships). Articles were selected to ensure both thematic saturation and contextual diversity, with a strong emphasis on African perspectives (Kimanzi, 2019; Adu-Yeboah et al., 2023).

Exclusion Outcomes

The exclusion process is summarised in Table 2, and the Overview of the article's selection process is shown in Figure 1 while Figure 2 presents the Overview of the PRISMA chart.

Table 2: Overview of the Exclusion Process

Stage	Criteria Applied	Articles Excluded
Preliminary Screening	Pre-2019, non-English, non-peer-reviewed	232
Abstract Screening	Conceptual or contextual irrelevance	148
Full-Text Review	Lack of depth or connection to research question	27
Not accessible	Restricted access or unavailable full text	13

(Source: Author's own work)

Figure 1: Overview of the article's selection process

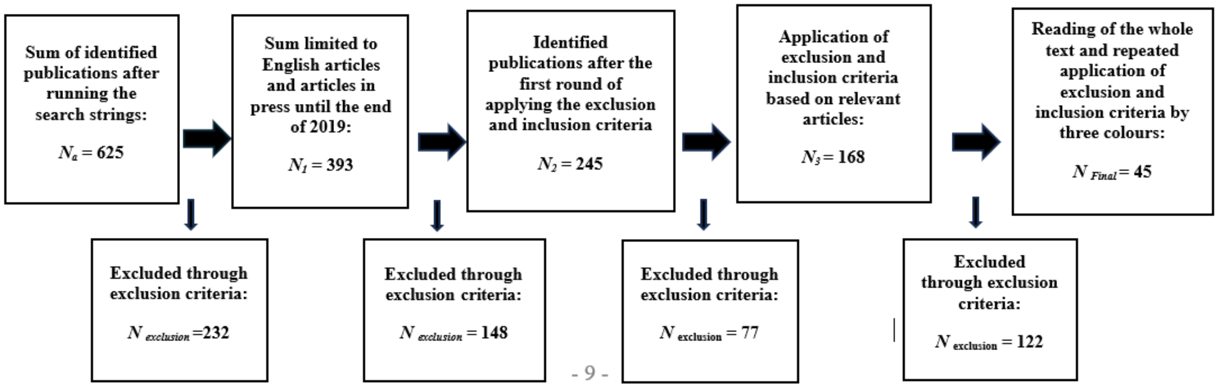
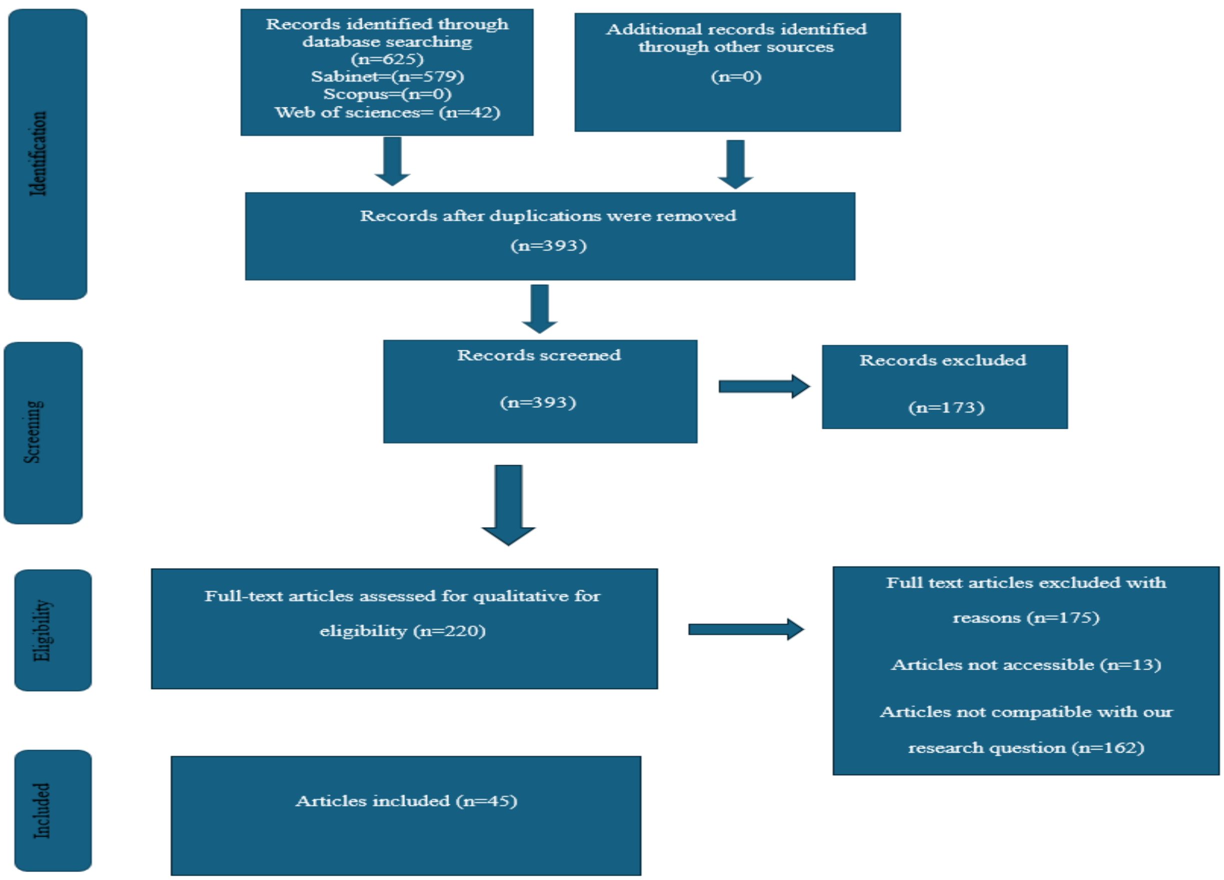


Figure 2: Overview of the PRISMA chart



(Source: Author's own work)

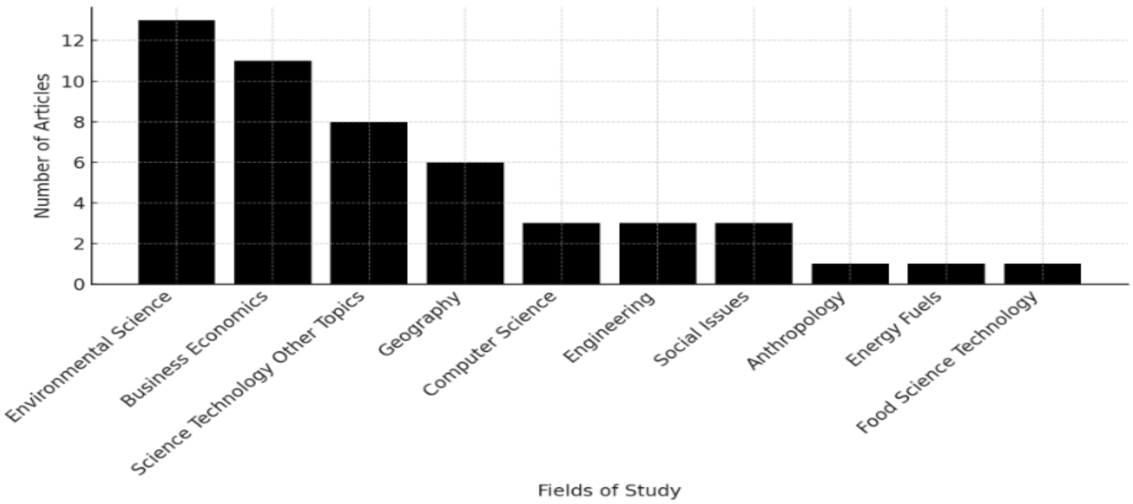
Summary and Justification

This rigorous selection protocol ensured that the final literature corpus was:

- Thematically aligned: Each article contributed directly to at least one of the study's four objectives.
- Contextually grounded: Emphasis was placed on African markets and firms, addressing a key gap in sustainability literature (Zhou et al., 2020).
- Methodologically diverse: Included studies represented conceptual, case-based, and empirical work, enriching the robustness of the thematic synthesis.

While the exclusion of non-English and grey literature may present a limitation, the methodological integrity and use of triangulation strengthen the credibility of the data set (Smela et al., 2023; Nowell et al., 2017).

Figure 3. Distribution of Reviewed Articles by Academic Field



(Source: Author's own work)

Table 2: Study Characteristics Overview

Study	Authors	Year	Title	Journal	Research Focus	Methodology	Context	Key Findings
1	Stubbs & Cocklin	2008	Conceptualizing a "Sustainability Business Model"	Organisational & Environment	Integration of sustainability into business models	Conceptual framework	Global	Emphasized the significance of integrating sustainability into core business strategies
2	Kimanzi	2019	Assessing SMEs' Awareness Level about Sustainability Issues	Journal of Emerging Trends in Economics and Management Sciences	SMEs and sustainability awareness	Case study	South Africa	Identified a significant lack of awareness about sustainability practices among SMEs
3	Adu-Yeboah et al. 2023	2023	Corporate Sustainability and Service Innovation; Moderating role of absorptive capacity	South African Journal of Business Management	Corporate sustainability dimensions on service innovation	Empirical analysis	Africa	Highlighted the importance of resilience and adaptation in sustainable

								business operations
4	Bonfanti et al.	2023	The contributions of manufacturing companies to the achievement of sustainable development goals	Business Strategy and the Environment	Manufacturing and SDGs	Empirical analysis	Global	Explored how manufacturing companies can support SDGs through economic, environmental, and social initiatives
5	Auriacombe & Walt	2021	Fundamental policy challenges influencing sustainable development in Africa	African's Public Service Delivery and Performance Review	Policy challenges in sustainable development	Policy analysis	Africa	Discussed the core components of sustainable development and the challenges faced by African nations
6	Zufle & Schneider	2023	Reaching the Sustainable Development Goals through business-to-business partnerships	African Journal of Innovation and Entrepreneurship	B2B partnerships and SDGs	Case study	Germany and Africa	Demonstrated the importance of global partnerships in achieving SDGs

(Source: Author's own work)

Figure 3 provides the Distribution of Reviewed Articles by Academic Field, while Table 3 presents an overview of the studies included in the sample, summarizing their key characteristics, thematic contributions, and relevance to the research question. They help in organising the information systematically, making it easier to identify patterns and draw conclusions

Thematic Coding Process

To identify key insights from the selected literature, the study employed a deductive thematic analysis based on the six-phase framework developed by Braun and Clarke (2006). This approach was selected for its flexibility and rigour in identifying patterns across qualitative data and its strong alignment with the study's objectives.

The process enabled the development of a structured thematic framework that distilled cross-sectoral practices, strategic challenges, and sector-specific dynamics in how firms implement sustainability-oriented business models (SBMs) aligned with multiple Sustainable Development Goals (SDGs).

Overview of the Coding Methodology

The thematic analysis was conducted manually, supported by Microsoft Excel for data organisation, code tabulation, and thematic grouping. The process followed these core phases:

1. Familiarisation with Data: All 45 selected articles were read and re-read by the research team. Initial observations, recurring terms, and concepts directly related to SDG alignment and business strategy were recorded (Williams & Moser, 2019).
2. Initial Coding: Each article was coded line-by-line for relevant ideas, using short descriptive phrases or "in vivo" labels (i.e., verbatim phrases from the literature). These codes captured fundamental constructs such as "regulatory barriers," "strategic alignment," "CSR-driven models," and "green innovation."
3. Generating Initial Themes: Related codes were grouped into broader categories to form potential themes. Visual tools such as mind maps and thematic matrices were used to identify overlaps and interdependencies (Nowell et al., 2017).
4. Reviewing Themes: Themes were evaluated for internal coherence and external distinction. Redundant or overly broad categories were refined through discussion and iterative validation by the research team (Smela et al., 2023).
5. Defining and Naming Themes: Finalised themes were assigned clear, descriptive titles and structured explanations. Each theme was accompanied by a definition and a list of associated subcodes and source articles to ensure traceability.
6. Writing and Interpretation: Exemplary quotes and data excerpts were drawn from the articles to support each theme. Themes were interpreted in light of the research objectives and synthesised into a narrative structure aligned with the research questions.

Deductive Approach Justification

The choice of a deductive approach where codes are predefined based on the study's objectives and theoretical framework ensured alignment with specific questions concerning SDG integration, sustainability practices, and sectoral challenges. This method allowed the researchers to validate or challenge existing conceptual assumptions found in the literature while maintaining an open stance to emerging patterns (Braun & Clarke, 2006; Finlay, 2021).

Coding Validation and Triangulation

To enhance analytical validity and inter-coder reliability, the study incorporated the following triangulation mechanisms:

- Researcher Triangulation: Multiple team members conducted independent coding of the same articles. Discrepancies were resolved through collaborative discussion until consensus was achieved (Bans-Akutey & Tiimub, 2021).
- Data Triangulation: Articles were sourced from a variety of sectors and disciplines, enabling the identification of universal themes as well as industry-specific nuances.
- Methodological Triangulation: Coding outputs were tested against thematic maps, code frequency tables, and cross-sectoral comparisons to verify internal consistency and thematic saturation (Smela et al., 2023).

Coding Framework Structure

The coding matrix was structured using four columns as shown in Table 4. For instance:

- Code: "Lack of SME awareness of ISO standards"
- Category: Regulatory knowledge gap
- Theme: Laws and regulations that promote SDGs
- Excerpt: "ISO 14000 is well known, while GRI and CDP remain unfamiliar to most SME managers" (Kimanzi, 2019)

This structure ensured that each theme was empirically supported and grounded in the literature.

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Table 4: Thematic Coding Matrix Structure

Column	Description
Codes	Short, descriptive phrases highlighting key insights from each article.
Categories	Grouped codes reflecting thematic clusters (e.g., benefits, barriers, implementation strategies).
Themes	Final thematic constructs aligned with research objectives.
Excerpts	Representative quotes or passages from the articles validating the codes.

(Source: Author's own work)

Final Themes Identified

Thematic saturation was reached when no new themes emerged from the data. The final five themes were:

1. Organisational Fundamentals of Achieving the SDGs
2. Laws and Regulations that Promote the SDGs
3. Possible Outcomes of Sustainability Pursuance by Firms
4. Obstacles to Achieving the SDGs
5. Business Strategies and Implementation of Sustainability Initiatives

These themes form the analytical foundation for the findings and discussion section, offering a comprehensive lens through which to understand how African firms approach SDG alignment.

Thematic Analysis and Key Findings

The thematic analysis resulted in the identification of five interrelated themes that capture the central dynamics of how African firms integrate sustainability into their business models in pursuit of the SDGs. These themes emerged from a deductive coding framework, validated through repeated review cycles, triangulation, and cross-sectoral comparisons.

Each theme corresponds directly to one or more of the study's four research objectives, ensuring tight alignment between the data and the overarching research agenda. Importantly, the themes were not treated as isolated categories but as part of a systemic continuum, reflecting the interdependent nature of sustainability implementation in real-world business contexts.

The five dominant themes identified are as follows:

Theme 1: Organisational Fundamentals for Achieving the SDGs

This theme reflects the internal capabilities, resources, and leadership mechanisms that firms require to drive sustainability. Common elements include strategic alignment with corporate values, employee engagement in SDG goals, knowledge management systems, and board-level commitment. Many firms adopt sustainability reporting frameworks (e.g., GRI, ESG metrics) to formalise their efforts (Hermundsdottir & Aspelund, 2021; Adu-Yeboah et al., 2023).

Theme 2: Laws and Regulations that Promote the SDGs

A recurring insight is that well-designed and enforced regulatory frameworks act as critical enablers of sustainability practices. Governments that provide clear environmental, social, and governance (ESG) guidelines encourage firms to internalise SDG goals. However, gaps in enforcement and policy coherence across African countries create challenges for consistent implementation (Auriacombe & Van der Walt, 2021; Kimanzi, 2019).

Theme 3: Business Strategy and Implementation Mechanisms

This theme captures the tools, frameworks, and operational models through which firms translate sustainability ambitions into practice. Successful examples include green innovation, circular economy models, supply chain sustainability, and shared value strategies. Firms that integrate sustainability into core functions rather than relegating it to CSR departments, are more likely to achieve long-term impact (Bocken et al., 2014; Nosratabadi et al., 2019).

Theme 4: Possible Outcomes of Sustainability Pursuance by Firms

Many studies report positive outcomes of SBM adoption, including improved stakeholder trust, brand equity, regulatory compliance, and access to new markets or green financing. Some firms also reported increased productivity through operational efficiencies and employee motivation. However, the outcomes were often sector-dependent and influenced by the firm's scale, resources, and maturity level (Zhou et al., 2020; Smela et al., 2023).

Theme 5: Obstacles to Achieving the SDGs

Despite increased awareness, firms face significant challenges in implementing sustainability. These include lack of awareness, inadequate technical expertise, insufficient financial resources, policy uncertainty, and resistance to change. SMEs in particular reported difficulty accessing sustainability resources, which further exacerbates the implementation gap (Majam, 2022; Mbiza & Sinha, 2023). The Structure of the thematic coding framework used in analysis is presented in Table 5.

Table 5: Thematic Coding of Reviewed Literature

DATA EXCERPTS	Grouping code	category	Theme	Article
"Sustainability has become a core part of business in the 21st century. Businesses of all sizes and sectors are facing increased expectations to ensure that the world's social and environmental challenges are met, in keeping with the prescripts of Sustainable Development Goals (SDGs)".	Social and environmental challenges	SDG	Organizational fundamentals of achieving the SDGs	Journal of Emerging Trends in Economics and Management Sciences (JETEMS) 10(4):154-158 (ISSN: 2141-ngibe7016) Assessing SMEs' Awareness Level about Sustainability Issues: A Case of Pietermaritzburg (South Africa)-Based SMEs Mathew Kimweli Kimanzi Central University of Technology, South Africa
"In South Africa, the government has created National Cleaner Production Centers (NCPC) in various parts of South Africa, and this clearly indicates that enough is not being done to create awareness among the SMEs."	Lack of awareness among the SMEs.	Disadvantages/challenges of implementing sustainable business models	Obstacles to achieving the SDGs by firms	Journal of Emerging Trends in Economics and Management Sciences (JETEMS) 10(4):154-158 (ISSN: 2141-7016) Assessing SMEs' Awareness Level about Sustainability Issues: A Case of Pietermaritzburg (South Africa)-Based SMEs Mathew Kimweli Kimanzi Central University of Technology, South Africa
"Besides, it is prudent for firms to engage in corporate sustainability practices to build and maintain sustainability core competencies [5]. The practice of sustainability provides firms the necessary leverage to gain entry into new markets and opportunities."	Build and maintain sustainability core competencies	Benefits of sustainability	Possible outcomes of sustainability pursuance of firms	Frempong, M.F.; Mu, Y.; Adu-Yeboah, S.S.; Hossin, M.A.; Adu-Gyamfi, M. Corporate Sustainability and Firm Performance: The Role of Green Innovation Capabilities and Sustainability Oriented Supplier–Buyer Relationship. Sustainability 2021, 13, 10414. https://doi.org/10.3390/ su131810414 Academic Editors: David K. Ding

"The article aims to provide the methodological approach to develop a conceptual model to ensure effective financial corporate governance implementation in municipalities in South Africa. Effective financial corporate governance helps to determine the strategic objectives, direction and performance of the municipality in addressing the community's needs and challenges."(p.21)	Effective financial corporate governance	Business model	Business strategies as implementation initiatives by firms	T Majam*, Considerations Towards Building a Conceptual Model for Effective Financial Corporate Governance for Municipalities in South Africa, Administration Publica | Vol 30 No 2 June 2022
"Good implementable corporate governance must be strengthened by the following mechanisms to ensure its success, namely: the legislature, Parliament, an independent media, a well-informed society, enhanced transparency, implementable financial legislation, as well as skilled and knowledgeable political and administrative role players."(P.24)	Well-informed society, enhanced transparency, implementable financial legislation	Regulatio n	Laws and regulations that promote the SDGs	T Majam*, Considerations Towards Building a Conceptual Model for Effective Financial Corporate Governance for Municipalities in South Africa, Administration Publica | Vol 30 No 2 June 2022

(Source: Author's own work)

Data Analysis

The five themes identified through the thematic analysis organisational fundamentals, regulatory frameworks, strategy implementation, outcomes of sustainability practices, and barriers to SDG achievement are now analysed in greater depth. This section synthesises the thematic insights with supporting evidence from the reviewed literature, drawing connections to the study's research objectives. It also evaluates how African firms, operating in diverse and often constrained environments, are navigating the complex process of aligning their business models with multiple SDGs.

Organisational Fundamentals for SDG Integration

The internal structure and culture of a firm significantly determine the success of sustainability-oriented business models (SBMs). Studies consistently emphasised the role of visionary leadership, sustainability literacy among staff, and dedicated sustainability teams as drivers of SDG integration (Adu-Yeboah et al., 2023; Hermundsdottir & Aspelund, 2021).

Firms that embed sustainability into their mission statements, performance metrics, and internal training programs are better positioned to achieve long-term transformation. For instance, large firms with integrated reporting mechanisms—aligned with GRI or ESG frameworks—demonstrated greater accountability and coherence in aligning operations with SDG targets.

Key insights:

- Internal alignment of vision, leadership, and structure is essential.
- Sustainability training, knowledge sharing, and performance incentives reinforce integration.

Regulatory Enablers and Policy Frameworks

The analysis revealed that clear, coherent, and enforceable regulatory frameworks serve as critical catalysts for sustainability practices. Governments that institutionalise mandatory sustainability reporting, offer green tax incentives, and establish monitoring agencies create conditions in which firms are more likely to align with SDGs (Auriacombe & Van der Walt, 2021).

However, regulatory inconsistency, weak enforcement, and fragmented policy landscapes remain major issues across African countries. Many SMEs operate in informal sectors or under weak institutional oversight, reducing the incentive or capacity to adopt SBMs.

Key insights:

- Effective regulation enhances firm accountability and standardisation.
- Lack of institutional capacity and uneven enforcement remain critical bottlenecks.

Business Strategy and Implementation Mechanisms

A prominent theme across the literature was the diversity of business model innovations firms are employing to meet SDG goals. Examples include:

- Circular economy models: Reducing waste and increasing resource reuse in manufacturing.
- Inclusive value chains: Integrating marginalised suppliers or customers to promote equity (Nosratabadi et al., 2019).
- Digital transformation: Leveraging ICT to improve energy efficiency and access to clean services.

The analysis showed that successful firms do not treat sustainability as an add-on (e.g., CSR), but rather as a core strategic function. Strategic alignment between sustainability goals and business objectives enhances resilience, competitiveness, and long-term value creation (Bocken et al., 2014).

Key insights:

- Strategic integration is more impactful than peripheral CSR programs.
- Sectoral context influences the types of business models deployed.

Outcomes of Sustainability Practices

Firms adopting sustainability-oriented models reported a wide range of benefits, including:

- Enhanced brand reputation and customer loyalty,
- Access to environmentally linked capital and preferential procurement,
- Reduced operational costs through resource efficiency,
- Improved employee morale and retention.

These outcomes, however, were not evenly distributed. Firms with stronger organisational capacity and market access experienced more tangible returns. Conversely, smaller firms struggled to convert sustainability investment into measurable performance gains, often due to limited scalability and measurement tools (Smela et al., 2023; Zhou et al., 2020).

Key insights:

- Outcomes are more pronounced in firms with strategic alignment and capacity.
- SME outcomes are constrained by scale, visibility, and resource limitations.

Obstacles to Achieving the SDGs in Business

Despite increasing awareness, multiple structural and operational barriers hinder widespread adoption of SBMs. Key challenges identified across the literature include:

- Limited knowledge of sustainability reporting tools such as GRI, CDP, or ISO 26000 (Kimanzi, 2019),
- Short-term profit orientation that undermines long-term sustainability planning,
- Lack of financing mechanisms for SMEs to invest in green technologies,
- Ambiguity in government policy, especially where sustainability is not mainstreamed.

Moreover, the fragmented nature of sustainability discourse in some African firms—where responsibility is confined to niche roles or departments—dilutes the strategic importance of SDG alignment.

Key insights:

- Knowledge and capacity gaps are major inhibitors of SDG implementation.
- Stronger support ecosystems (regulatory, financial, informational) are needed to close the sustainability gap.

Cross-Sectoral and Contextual Insights

While thematic patterns were consistent across sectors, the depth and maturity of sustainability practices varied significantly:

- The financial and energy sectors showed higher integration of sustainability due to compliance-driven reforms and market incentives.
- The manufacturing and informal sectors were more likely to face implementation gaps due to cost constraints and regulatory disconnects.
- Public-private partnerships (PPPs) emerged as a useful mechanism to spread sustainability awareness and share resources.

Additionally, firms operating in regions with supportive government frameworks, active civil society, and regional sustainability networks were more successful in embedding SDG principles. The analysis reveals that while African firms are making strides in integrating sustainability into business models, the journey is uneven. Strategic alignment, regulatory coherence, and organisational capacity are key differentiators between firms that achieve meaningful SDG outcomes and those that fall short.

Conceptual Framework: The Integrated Sustainability Business Model (ISBM)

Drawing from the thematic and data analysis of 45 peer-reviewed studies, this section proposes a practical, evidence-informed model, the Integrated Sustainability Business Model (ISBM) designed to support firms, particularly in Africa and other developing regions, in aligning their business strategies with multiple Sustainable Development Goals (SDGs). The ISBM framework builds on the principles of systems thinking, shared value creation, and strategic sustainability, offering a holistic structure through which firms can address the environmental, social, and economic dimensions of the SDGs simultaneously.

Rationale and Theoretical Foundations

The conceptual framework is grounded in the Triple Bottom Line (TBL) approach (Elkington, 1998), the Business Model Canvas for Sustainability (Bocken et al., 2014), and recent advances in sustainability innovation systems (Lüdeke-Freund et al., 2017). The framework incorporates:

- Organisational internal factors (leadership, culture, capacity),
- External environmental factors (regulation, policy support),
- Strategic levers (business model design, innovation mechanisms),
- Performance outcomes (economic, social, environmental impact).

It is specifically designed to be context-responsive, acknowledging the unique institutional, financial, and cultural realities facing African firms (Mbiza & Sinha, 2023; Auriacombe & Van der Walt, 2021).

Structure of the ISBM Framework

The ISBM consists of five interconnected pillars, each mapped to the major themes identified in the study as presented in Table 6. Each pillar reinforces the others in a circular feedback system, allowing firms to iterate and adjust based on internal performance assessments and evolving external demands.

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Table 6: Key Pillars of the Integrated Sustainability Business Model (ISBM)

Pillar	Core Focus	Key Components
1. Organisational Capacity	Internal readiness and alignment	Vision & leadership; employee engagement; sustainability knowledge; reporting tools (e.g., GRI, ESG)
2. Enabling Regulatory Environment	External policy support	Clear legal frameworks; incentives; penalties; policy coherence
3. Strategy and Implementation	Business model design and execution	Circular economy, shared value, inclusive supply chains, digital sustainability
4. Outcomes and Value Creation	Results of sustainability integration	Economic growth, brand value, social equity, environmental impact
5. Constraints and Enablers	Barriers and support systems	Financial access, technical expertise, institutional capacity, stakeholder networks

(Source: Author's own work)

Dynamic Pathways for SDG Alignment

Rather than following a linear progression, the ISBM operates on a dynamic, adaptive pathway, allowing firms to enter or strengthen different areas based on their maturity, sector, and strategic intent. For example:

- A startup may begin with innovation-driven sustainability in pillar 3, and later build reporting systems in pillar 1.
- A mature firm with established capacity may use pillar 4 metrics to refine its long-term ESG strategy.

This flexibility enhances the scalability and transferability of the model across sectors and firm types.

Practical Application of the Framework

The ISBM is designed to be used by:

- Managers: To diagnose gaps and opportunities in their firm's sustainability journey.
- Policymakers: To identify where public interventions (e.g., tax breaks, capacity-building) could enhance private sector contributions to SDGs.
- Researchers: To structure future empirical work on SBM–SDG alignment in emerging economies.

A firm seeking to apply the ISBM could conduct a self-assessment under each pillar, assign readiness scores, and design targeted interventions to strengthen weak areas. This operationalisation supports evidence-based decision-making.

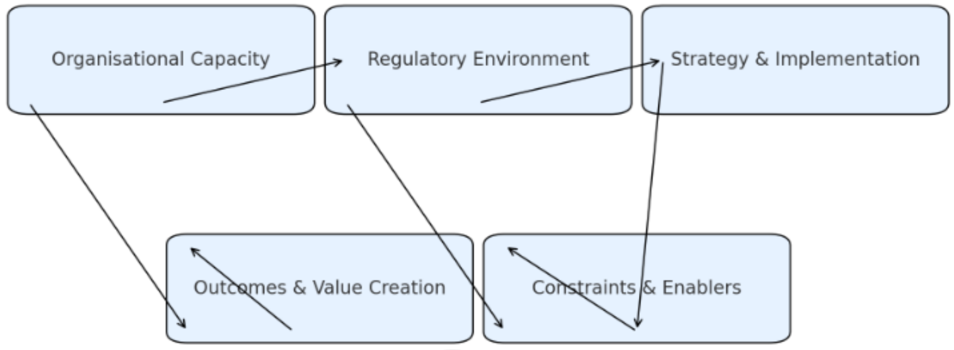
Contribution to Theory and Practice

The ISBM contributes to the literature by:

- Bridging the gap between high-level SDG rhetoric and firm-level strategic implementation,
- Providing a context-sensitive model grounded in African realities,
- Offering a scalable diagnostic tool for business model transformation aligned with sustainability.

This framework as shown in Figure 4 complements existing sustainability models while addressing their limitations in applicability to developing economies and resource-constrained firms

Figure 4: Integrated Sustainability Business Model (ISBM) Framework for SDG Alignment



(Source: Author's own work)

Discussion and Findings

This study set out to explore how firms, particularly within the African context, develop and implement sustainability-oriented business models (SBMs) that support the achievement of multiple Sustainable Development Goals (SDGs). Drawing on a thematic synthesis of 45 peer-reviewed articles, five interconnected themes were identified, and these informed the development of the Integrated Sustainability Business Model (ISBM). This section critically discusses the implications of these findings in light of the research objectives, broader literature, and contextual realities of emerging markets.

Organisational Readiness as a Precondition for SDG Implementation

One of the most consistent findings is that internal organisational factors such as leadership vision, employee engagement, and sustainability capacity serve as the foundation for successful SDG integration. Firms with a clear sustainability strategy embedded in their corporate culture, operations, and reporting systems were more likely to demonstrate meaningful SDG impact (Adu-Yeboah et al., 2023; Hermundsdottir & Aspelund, 2021).

This aligns with Bocken et al. (2014) and Lüdeke-Freund et al. (2017), who argue that sustainability must move beyond performative CSR to become a central component of business strategy. Notably, SMEs lag behind large firms in institutionalising such structures, due to capacity constraints and lack of access to sustainability knowledge and tools (Kimanzi, 2019; Mbiza & Sinha, 2023).

Regulation as Both Enabler and Constraint

The findings highlight a paradox in regulatory influence: where policies are coherent, transparent, and enforced, they serve as strong enablers of corporate sustainability. However, in many African contexts, policy fragmentation, weak enforcement, and political instability diminish the regulatory incentive for firms to adopt SDG-aligned practices (Auriacombe & Van der Walt, 2021).

This is particularly relevant for environmental standards, where voluntary adoption of ISO 14000 or GRI guidelines remains low due to lack of government support and private sector engagement (Zhou et al., 2020). As Garza-Reyes et al. (2019) note, effective sustainability uptake in developing countries requires alignment between regulatory institutions and industry frameworks—a gap that remains wide in many African economies.

Strategy and Innovation as Catalysts for Sustainability Transformation

Strategic business model innovations such as circular economy practices, digital transformation, and inclusive value chains, emerged as key levers for advancing sustainability goals. Firms that integrate these innovations into core operations rather than treating them as peripheral add-ons are more likely to realise long-term economic and social value (Nosratabadi et al., 2019; Bocken et al., 2014).

These practices contribute to value co-creation, particularly in sectors such as agriculture, energy, and ICT, where sustainability intersects with competitiveness (Stubbs & Cocklin, 2008). Moreover, firms that engage in multi-stakeholder collaborations including public-private partnerships and supply chain alliances reported more sustained outcomes (Hermundsdottir & Aspelund, 2021).

Uneven Benefits and the Role of Scale

While many firms report positive outcomes from adopting SBMs such as enhanced reputation, access to green finance, and stakeholder trust, these benefits are unevenly distributed. Larger firms often reap the rewards due to better access to resources, technical expertise, and visibility. In contrast, SMEs face structural disadvantages in capitalising on sustainability, often due to financial, technological, or informational gaps (Majam, 2022; Smela et al., 2023).

This echoes Porter and Kramer's (2011) concept of *shared value*, where economic and societal benefits are most robust when business goals and development priorities intersect. However, the literature reviewed suggests that without targeted support mechanisms, the potential of SMEs to contribute meaningfully to the SDGs will remain underutilised.

Systemic Barriers to SDG Achievement

Firms across all sectors reported systemic and recurring obstacles: poor access to sustainability metrics, limited awareness of global frameworks, short-term financial pressure, and inconsistent government engagement. These challenges are compounded in settings marked by low institutional trust, corruption, and fragmented infrastructure (Zhou et al., 2020; Mbiza & Sinha, 2023).

Even when firms express commitment to sustainability, the absence of enabling ecosystems including financial incentives, capacity-building programs, and coherent governance creates inertia. This highlights the need for a multi-scalar approach that mobilises actors across government, private sector, and civil society to co-create a conducive environment for sustainability transformation (Garritty et al., 2020; Adu-Yeboah et al., 2023).

Theoretical Contribution of the ISBM Framework

The proposed Integrated Sustainability Business Model (ISBM) offers a contextual and adaptive framework for firms seeking to align their business models with multiple SDGs. Unlike one-size-fits-all models developed in the Global North, the ISBM incorporates feedback loops, sectoral diversity, and policy fragmentation realities faced by African firms.

The framework contributes to theory by bridging three core domains:

- Strategic management, through integration of sustainability into core business strategy;
- Development studies, by aligning firm-level behaviour with global development goals;
- Institutional theory, by acknowledging the regulatory and normative systems shaping firm behaviour.

In practical terms, it provides a diagnostic tool for firms and policymakers to assess SDG readiness, design interventions, and track sustainability performance.

Conclusion and Recommendations

This study examined how firms, particularly within the African context, design and implement sustainability oriented business models to support the achievement of multiple Sustainable Development Goals. Drawing on a rapid literature review and a careful thematic analysis of 45 peer reviewed articles, five key themes were identified: organisational fundamentals, regulatory frameworks, strategy and implementation, outcomes of sustainability practices, and systemic constraints. These themes informed the development of the Integrated Sustainability Business Model, a flexible and context aware framework that can guide firms in aligning their operations with the SDGs. The findings show that firms that embed sustainability into their core strategy and daily operations, rather than treating it as an add on activity, are more likely to achieve meaningful and lasting impact. Organisational readiness, including leadership commitment, staff awareness, and internal alignment, plays a central role in this process. At the same time, the regulatory environment remains a double edged factor. Where policies are clear and properly enforced, they encourage firms to adopt sustainable practices. However, weak or inconsistent regulation continues to limit progress in many African settings. While firms benefit from sustainability through improved reputation, efficiency, and access to new opportunities, these benefits are not evenly shared. Smaller firms, especially SMEs, often face financial and technical challenges that limit their ability to fully participate.

To ensure that these conclusions are reliable, the study followed a structured and transparent approach that reduces internal bias. Rather than relying on individual studies, conclusions were drawn from patterns that appeared consistently across multiple sources. Insights were compared across sectors and contexts to ensure balance, and a clear coding framework guided the analysis to keep it aligned with the research objectives. In addition, the research process involved continuous discussion and agreement among team members to reduce personal interpretation. The study also remained mindful of its limitations, including database coverage and language restrictions, and avoided making claims that go beyond the available evidence. As a result, the conclusions presented are grounded, balanced, and relevant to real world conditions. Based on these findings, several practical recommendations emerge. Business leaders should make sustainability a central part of their strategy, invest in building internal capacity, and make use of digital tools and innovation to improve performance and transparency. Collaboration with other firms, government bodies, and institutions can also help address resource gaps and support long term progress. For policymakers, there is a need to strengthen regulatory frameworks, improve enforcement, and provide targeted support for smaller firms through funding, training, and incentives. Creating an enabling environment where businesses are supported rather than constrained will be key to accelerating progress.

For researchers, future work should focus on deeper and more context specific studies, including long term analyses and the development of practical tools for measuring sustainability performance. Expanding research into under studied regions and sectors will also help build a more complete understanding of how sustainability can be achieved in different settings. In conclusion, this study contributes to both theory and practice by linking broad sustainability goals with what firms can realistically do. The Integrated Sustainability Business Model provides a practical guide that can be adapted across industries and contexts. As the world moves closer to the 2030 Agenda, firms in Africa have a real opportunity to lead through innovation and inclusive growth. However, this will only be possible if firm level efforts are supported by strong institutions, clear policies, and meaningful collaboration across all stakeholders.

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