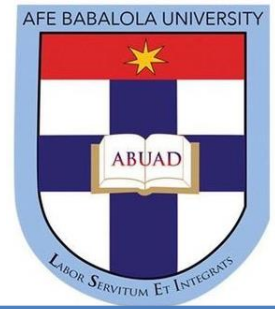




# The Journal of Sustainable Development Law and Policy

ISSN: 2467-8406 (Print) 2467-8392 (Online) Journal homepage: <https://www.ajol.info/index.php/jsdlp>



## Advancing Eco-Entrepreneurship in Nigeria through Transformative Implementation of Sustainable Business Model Innovations

**Josephine Ilesanmi**

**To cite this article:** Josephine Ilesanmi (2025). Advancing Eco-Entrepreneurship in Nigeria through Transformative Implementation of Sustainable Business Model Innovations. The Journal of Sustainable Development, Law and Policy. Vol. 16:1. 256-281. DOI: 10.4314/jsdlp.v16i1.14

**To link this article:** DOI:10.4314/jsdlp.v16i1.14



Published online: January, 2025

Full Terms & Conditions of access and use can be found at  
<https://www.ajol.info/index.php/jsdlp>

## **ADVANCING ECO-ENTREPRENEURSHIP IN NIGERIA THROUGH TRANSFORMATIVE IMPLEMENTATION OF SUSTAINABLE BUSINESS MODEL INNOVATIONS**

Josephine Ilesanmi\* 

### **ABSTRACT**

This article examines how green and sustainable business innovation can be harnessed to advance a just and inclusive decarbonization and energy transition in Nigeria. As the world strives to transition to net zero by 2050 or earlier, the need for business operations to transition from traditional models of operations driven by economic value to a sustainable approach of environmental and social values has become more pressing. As a resource-based economy, Nigeria has made pledges and plans in line with international frameworks to transition and grow renewable energy resources. Yet, lack of clear operational guidelines on effective business strategies needed to effectively advance eco-entrepreneurship remains a key challenge. Eco-entrepreneurship and eco-ventures such as small-medium scale eco-enterprise and energy citizens who generate eco-solutions, innovations, services and products in renewable energy plays a vital role in economy decarbonization strategies. While several studies have highlighted how external factors such as weak or unsupportive governance and policy landscape may hinder successful implementation of eco-entrepreneurial activities, what has remained absent is a holistic evaluation of how lack of internal capacity of eco-ventures themselves can hinder the successful design and implementation of transformative and sustainable business model that are able to capture business opportunities, address risks and make impactful contributions to global sustainability objectives. This article fills a gap in this regard. Drawing lessons from surveyed Nigerian eco-entrepreneurs, this article examines internal governance gaps that hinder sustainable business innovation, such as incompatibility of business aims and models; limited internal capacity on ESG; unsustainable procurement practices and resource constraints are examined in order to identify the ways in which integrative sustainable business model innovation can help close these gaps.

## 1. INTRODUCTION

The Nigerian business sector is currently facing a paradigm shift in operation and management strategies due to climate change pressures. This is because traditional and business-as-usual strategies are driven mostly by economic value leading to unsustainable practices, environmental degradation and resource depletion. Climate change, caused by greenhouse gas (GHG) emissions, especially carbon dioxide (CO<sub>2</sub>), is one of the most pressing planetary emergencies that requires urgent intervention and mitigation strategies<sup>1</sup>. The increased interest in businesses as significant actors in addressing environmental and social impacts of climate change are gaining momentum while customer preferences are also changing as awareness to shift from unsustainable practises grows as the world struggles with the realities of environmental degradation, and resource scarcity. As customer preferences are greening, actors in the business landscape are realizing their urgent need to future proof their businesses in anticipation of climate adaptation policies and regulations, promote financial and investment security by adopting transformational strategies to meet evolving customer demands. Also, ethical considerations to promote the wellbeing of people and planet is an alternative motivation for transformative business strategies. This realization marked the birth of eco-entrepreneurship which is a proactive and transformative approach to transition from conventional business practices which manifests as practises where environmental and social values are simultaneously prioritized with the same level of significance as economic value. These transformative business practises provide climate change adaptive and mitigation strategies integrated into their core values and business design.

---

\* PhD Candidate, Durban University of Technology, South Africa and Research Fellow, Institute for Oil, Gas, Energy, Environment and Sustainable Development (OGEES Institute), Afe Babalola University, Ado Ekiti, Nigeria. Email: 22384684@dut4life.ac.za; josephineilesanmi@gmail.com . ORCID: 0009-0003-7736-9164

<sup>1</sup> Albert J. Gabric. 'The Climate Change Crisis: A Review of Its Causes and Possible Responses'. *Atmosphere* (2023) 14 (7) 1081.

Therefore, global consensus advocate for eco-entrepreneurship as an effective tool for the implementation of decarbonisation and low carbon transition strategies<sup>2 3</sup>.

Decarbonization in the energy sector is multi-factorial, as captured in a 2030 scenario analysis, which identified the business and entrepreneurial ecosystem decarbonisation drivers which included the effective formulation and implementation of Sustainable business model Innovations<sup>4</sup>. Advanced and disruptive sustainable business model innovations (SBMIs) are generated from eco-entrepreneurship activities<sup>5</sup> while ecopreneurs and Energy Citizens operate SMEEs that implement legitimised SBMIs that generate green innovations, products, services, technologies; social enterprise that advocate green policies, facilitate normative and cognitive shift that promote societal participation in decarbonization activities, demand greener products and services, alter market demand and market structure; facilitate societies cognitive and normative transition towards decarbonization practices <sup>6</sup>.

Moving forward, SMEs are the conceptual skeletal framework for the implementation of legitimized SMEEs, they are considered the backbone of any economy and significant contributor to socio-economic development and growth by contributing significantly to GDP and as a source of livelihood. This highlights that economy success is heavily reliant on the growth and proliferation of SMEs. In high GGI

---

<sup>2</sup> Baranova, Polina. 'Multi-stakeholder Networks as Learning Settings towards Pro-environmental Entrepreneurship: Learning through the Diversity and Policy–Practice Interface'. *The International Journal of Entrepreneurship and Innovation*, (2024).

<sup>3</sup> Nan Yang, Dimitrios Dousios, Nikolaos Korfiatis, Konstantinos Chalkatzis. '2023 Mapping the signaling environment between sustainability-focused entrepreneurship and investment inputs: A topic modeling approach'. *Bus Strat Env.* (2024) 1–18.

<sup>4</sup> Beccarello, Massimo, and Giacomo Di Foggia. 'Review and Perspectives of Key Decarbonization Drivers to 2030'. *Energies* (2023)16 (3) 1345.

<sup>5</sup> Randika Jayasinghe, Nilmini Liyanage, Caroline Baillie. 'Sustainable waste management through eco-entrepreneurship: an empirical study of waste upcycling eco-enterprises in Sri Lanka'. *Journal of Material Cycles and Waste Management* (2021) 23:557–565

<sup>6</sup> Speich, Matthias, and Silvia Ulli-Ber. 'Applying an Ecosystem Lens to Low-carbon Energy Transitions: A Conceptual Framework'. *Journal of Cleaner Production* 398, (2023): 136429

jurisdictions like the U.K. comprehensive empirical studies have manifested impactful SBMIs with effective implementation strategies that leverage techno-innovation, citizen empowerment and participation.<sup>7</sup>

However, in Nigeria, SBMIs have very limited success rates and require a holistic and comprehensive investigation of the internal and external factors limiting implementation success of SBMIs. SMEs in Nigeria are characterized as having small size operations and management structures<sup>8</sup>. Most SMEs run either sole proprietorship or partnership ownership model, with some subsidiaries and branches in other towns and cities. Notably, SME contributes 46.31 % to Nigeria's Gross Domestic Product (GDP) accounting for 28% of employment and make up 80% of businesses<sup>9</sup><sup>10</sup>. Though SMEs are significant to Nigeria's economy, SMEs that promote sustainable practices are facing slow growth and high mortality rate with inability to break into main stream markets<sup>11</sup>. Is reflected in Nigeria's rating of 42.85 sustainability performance via the Green Growth Index (GGI) compared to other

- 
- <sup>7</sup> Dhir, Amandeep, Sher J. Khan, Nazrul Islam, Peter Ractham, and N. Meenakshi. 'Drivers of Sustainable Business Model Innovations. An Upper Echelon Theory Perspective'. *Technological Forecasting and Social Change* 191, (2023) 122409; Kurek, Juliana, Luciana L. Brandli, Marcos A. Leite Frandoloso, Amanda Lange Salvia, and Janaina Mazutti. 'Sustainable Business Models Innovation and Design Thinking: A Bibliometric Analysis and Systematic Review of Literature'. *Sustainability* (2023) 15 (2) 988
- <sup>8</sup> Okey Okoro Udo. 'Financial Strategies for Sustainability of Small- and Medium-Sized Enterprises in Nigeria'. Ph.D Thesis, Department of Management, Walden University, Management (2022)
- <sup>9</sup> Kankimes Alghazali Mohammed, Umar Inuwa & Victoria A. Enemali. 'Influence of digital accounting system on small and medium scale enterprise performance in Plateau state, Nigeria'. *International Journal of Intellectual Discourse (IJID)* (2024) Volume 7 Issue 1.
- <sup>10</sup> Inegbedion, Henry E., Perejite R. Thikan, Joseph O. David, John O. Ajani, and Fred O. Peter. 'Small and Medium Enterprise (SME) Competitiveness and Employment Creation: The Mediating Role of SME Growth'. *Humanities and Social Sciences Communications* (2024): 11, no. 1 1-10
- <sup>11</sup> Abidemi Opeyemi Bello. 'Influence of Entrepreneurial Characteristics (Risk Taking and Level of Innovation of SMEs) on Business Performance of SMEs in Ibadan Metropolis'. *Proceedings Series Vol. 2 (GEEAH 2023)*

jurisdictions with a supportive eco-EE for SMEs such as the U.K. at 71.64 GGI with SME GDP contribution at 25%<sup>1213</sup>.

In Lagos state, SMEs have the highest number of enterprises in Nigeria at 7.3%, contributing 20% of total GDP and ranking 7<sup>th</sup> in Africa in judication GDP contributions<sup>1415</sup>. Literature shows that SMEs in Lagos, and in many parts of Nigeria, have a slow growth and high mortality rate of 5 years despite being a fertile environment for start-ups and generating the largest number of sustainable enterprises in Africa<sup>1617</sup>. This is due to incompatibility of business aims and models; limited internal capacity on environmental, social and governance (ESG) factors; unsustainable procurement practices and resource constraints which manifest engineered by insufficient research and development, limited collaborations, unsupportive polices and legislations, lack of innovation, ineffective operational strategies, poor implementation strategies and lack of impactful SBMIs, poor management strategies and lack of a comprehensive knowledge-base for decision making.<sup>18</sup> Hence, poor internal business practices and SBMI implementation strategies are major barriers to the growth of SMEEs in Nigeria.

---

<sup>12</sup> Ruben Sabado Jr, Innocent Nzimenyera, Munezero Mihigo Ribeus, Angela Nantulya. '2022-Green Growth Index'. Measuring performance in achieving SDG targets. Global Green Growth Institute. December (2022)

<sup>13</sup> [www.dlaccounts.co.uk](http://www.dlaccounts.co.uk)

<sup>14</sup> (<https://www.agustoresearch.com/report/2023-sme-industry-report/>;

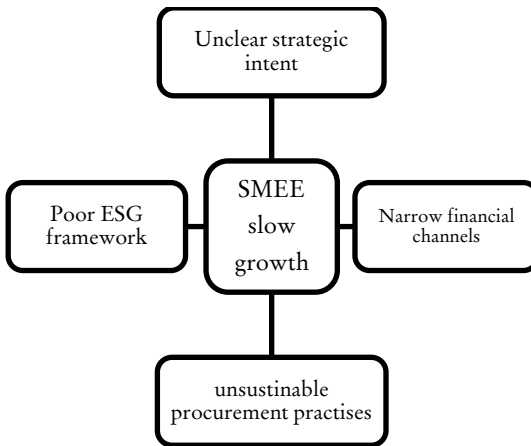
<sup>15</sup> <https://www.vanguardngr.com/2024/05/lagos-gdp-hits-n41trn-ranks-7th-in-africa/>).

<sup>16</sup> Danjuma T. Nimfa, Sazali Abd Wahab, Ahmad Shaharudin Abdul Latiff. 'Challenges and Solutions in the Sustainable Growth of Nigerian SMEs: A Review'. Applied Research International Conference 2021. (2021) Oxfrod U.K.

<sup>17</sup> Manuel Baldin. 'A sustainable view on entrepreneurial ecosystems. The study of the Lagos context'. Ca' Foscari University of Venice (2021/2022)

<sup>18</sup> Danjuma T. Nimfa, Sazali Abd Wahab, Ahmad Shaharudin Abdul Latiff. 'Challenges and Solutions in the Sustainable Growth of Nigerian SMEs: A Review'. Applied Research International Conference 2021. (2021)Oxfrod U.K; Olowe, A. E.1, Akpa, V. O.2, Makinde, O. G.3, Nwankwere, I.A. "Strategic Improvisation and Brand Image of Selected Small and Medium-Scale Enterprises in Lagos State, Nigeria". Journal of Economics, Finance and Management Studies. (2024) 7 (03); Peter Omoyegbagbe, Oiku. 'Innovation and Organisational Resilience among Small and Medium- Sized Enterprises in Lagos State'. International Journal of Business and Technopreneurship Volume 14, No 1, February (2024) 35-48.

Figure 1: Barriers to SMEE growth and proliferation in Lagos and Nigeria



While several studies have examined the importance of eco-entrepreneurship as a tool for climate action and low-carbon transitions, an in-depth examination of the key business strategies and SBMI implementation practices required to overcome the challenges and risks in Nigeria’s eco-entrepreneurial ecosystem hindering the growth of SMEEs has remained absent. The lack of aforementioned empirical research as created a foundational knowledge gap, a prerequisite for the development of further innovative conceptualizations like effective strategy formulation, design and implementation of impactful SBMIs that facilitate the capabilities to capture opportunities and interrogate challenges of establishing, formalizing, and managing SMEEs in Nigeria towards becoming carbon neutral by 2060 or earlier <sup>19</sup>.

This article examines how green and sustainable business innovation can be harnessed to advance a just and inclusive decarbonization and energy transition in Nigeria. Drawing lessons from surveyed Nigerian eco-entrepreneurs, this article examines internal governance gaps that hinder sustainable business innovation, such as incompatibility of business aims and models; limited internal capacity on ESG; unsustainable procurement

<sup>19</sup> Belinda Archibong and Philip Osafo-Kwaako, ‘Delivering Nigeria’s green transition’ in Amar Bhattacharya, Homi Kharas and John W. McArthur (eds), Key to climate action Brookings Institution 2023 (p.3) February 16,

practices and resource constraints are examined in order to identify the ways in which integrative sustainable business model innovation can help close these gaps.

This article is divided into five sections, this introduction being the first. Section 2 unpacks the nature, scope and benefits of Sustainable Business Innovation (SBMI); Section 3 analyses the barriers to impactful SBMI in the Nigerian context. Section 4 provides a transformative approach to facilitate the advancement of SBMI in Nigeria; and lastly, Section 5 is the concluding section.

## **2. NATURE, SCOPE AND BENEFITS OF SUSTAINABLE BUSINESS MODEL INNOVATION (SBMI)**

Financial inclusion is a critical component in the quest for poverty reduction and sustainable development. It is defined as the process by which individuals and businesses, particularly those in disadvantaged or low-income segments, gain access to useful and affordable financial products and services that meet their needs<sup>20</sup>. This could include transactions, payments, savings, credit, and insurance that are delivered in a responsible and sustainable way<sup>21</sup>.

Traditional business models (BM) that prioritise financial value are no longer viable in light of climate change, coupled with increasing pressure for business models to align with international and national sustainability goals<sup>22</sup>. The SBMIs generated by SMEs and energy citizens focus on addressing climate-related environmental and social concerns<sup>23</sup>. They provide strategies on how enterprises promote value proposition, creation, delivery and capture

---

<sup>20</sup> Eldomiaty T, Hammam R and Bakry R, 'Institutional Determinants of Financial Inclusion: Evidence from World Economies' (2020) 19(2) *International Journal of Development Issues* 217 <https://doi.org/10.1108/ijdi-08-2019-0147>

<sup>21</sup> Ehiogu CP, 'Examining the Role of the Insurance Business in Financial Inclusion in Nigeria' (2022) 7(4) *European Journal of Business and Management Research* 174 <https://doi.org/10.24018/ejbmr.2022.7.4.1530>

<sup>22</sup> Nosratabadi, Saeed, Amir Mosavi, Shahaboddin Shamshirband, Edmundas Kazimieras Zavadskas, Andry Rakotonirainy, and Kwok W. Chau. 'Sustainable Business Models: A Review'. *Sustainability* 11, no. 6 1663.

<sup>23</sup> Marília Bonzanini Bossle, Marcia Dutra de Barcellos, Luciana Marques Vieira, Loïc Sauvé. 'The drivers for adoption of eco-innovation'. *Journal of Cleaner Production* 113 (2016) 861- 872

based on the sustainable triple-bottom framework<sup>24</sup>. Additionally, SBMI is uniquely effective because these business models (BMs) are specifically designed to capture sustainable value via actively reducing environmental and social impacts<sup>25</sup>. They exclusively and innovatively address sustainability issues for stakeholders and community members while promoting sustainable competitiveness<sup>26</sup>. These SBMI are tools that influence business activities to deliver both social, environmental and economic value<sup>27</sup>. They draw from multi-stakeholder engagement and participation and employ techno-innovations and strategies that promote climate adaptation and resilience measures from a sustainability perspective. The internal strategy and external institutional factors are significant determinants for the successful implementation of SBMI<sup>28</sup>.

Furthermore, developing the required institutional and implementation infrastructures is the initial step to the successful formulation and implementation of effective SBMIs<sup>29</sup>. Hence, the successful implementation strategies of SBMI that thrive, interrogate and overcome barriers in the eco-EE and upscale SMEEs into the mainstream market are urgently required to rapidly proliferate SMEEs towards the decarbonisation of economies. The success of SMEEs in the market is reliant on ecopreneurs and energy citizens' capabilities to formulate effective SBMI implementation strategies that capture opportunities from the increasing advocacy for decentralised, decarbonised, deregulated and digitised energy systems, promote environmental and social co-value creation while maintaining revenue streams and sustainable competitiveness.

Various researchers have conceptualised SBMI from the perspective of dimensions, archetypes, and taxonomies, yet various aspects of SBMI and the

<sup>24</sup> Nosratabadi Saeed, Amir Mosavi, Shahaboddin Shamshirband, Edmundas Kazimieras Zavadskas, Andry Rakotonirainy and Kwok Wing Chau. 'Sustainable Business Models: A Review'. *Sustainability* (2019), 11

<sup>25</sup> Jawaria Shakeel a, b, Abbas Mardani c, Abdoulmohammad Gholamzadeh Chofreh d, Feybi Ariani Goni d, Jiri Jaromir Klemes. 'Anatomy of sustainable business model innovation'. *Journal of Cleaner Production* 261 (2020) 121201

<sup>26</sup> *ibid*

<sup>27</sup> Nosratabadi, Saeed, Amir Mosavi, Shahaboddin Shamshirband, Edmundas Kazimieras Zavadskas, Andry Rakotonirainy, and Kwok W. Chau. 'Sustainable Business Models: A Review'. *Sustainability* 11, no. 6 1663.

<sup>28</sup> Aida Salimnezhad and Sohaib Dastgoshade. 'Sustainable Business Model Innovation: A Quantitative Analysis of Relevant Factors'. (2023) International Conference on Innovation, Knowledge, and Management (ICIKM) 10-14

<sup>29</sup> *ibid*

development of conceptual frameworks are still nascent<sup>30</sup>. There are still gaps in knowledge regarding effective implementation and operationalisation strategies for an impactful SBMI<sup>31</sup>. Hence, ecopreneurs and energy citizens require conceptualisations of empirically valid 'fail-proof' strategies to increase mainstream market infiltration<sup>32</sup>. Therefore, identifying the prerequisites to optimise the implementation and operationalisation of SBMI is imperative for increasing the survival rate and contribution of SMEs towards economic decarbonisation<sup>33</sup>.

To effectively decarbonize economies towards achieving climate action and low carbon transition targets, upscaling SBMIs into mainstream markets is imperative, this will require successful implementation of SBMIs and for SMEs to grow and proliferate in the eco-EE<sup>34</sup>. Support from government and non-government institutions has provided some leverage towards implementing SBMI and the proliferation of SMEs. Yet, the high failure rate of SBMI is still relatively understood, leaving ecopreneurs with limited guidance. Empirical studies attribute implementation barriers to lack of clear or effective governance structures; lack of measuring tools, matrix and standards; high production cost and limited incentives; lack of brand awareness; limited networking services and mentorship programs; and ineffective organizational posture/structure and management frameworks<sup>35</sup>.

---

<sup>30</sup> Makhmoor Bashira, Abdulaziz Alfaliha, Sudeepta Pradhanb. 'Sustainable business model innovation: Scale development, validation and proof of performance'. *Journal of Innovation & Knowledge* 7 (2022) 100243 .

<sup>31</sup> Anne Marie Kininmonth. 'A Case Study of Sustainable Business Model Innovation: Bridging the Ideation-Implementation Gap in the New Zealand Tertiary Education Sector'. Southern Institute of Technology Te Pūkenga. Master of Applied Management. (2023)

<sup>32</sup> Agyemang Kwasi Sampene , Fredrick Oteng Agyeman , Fazeelat Aziz. 'Barriers and Drivers of Sustainable Business Model Innovation: Present and Future Research Perspectives'. *Macro Management & Public Policies* 5(1):1-25 (2023)

<sup>33</sup> Aida Salimnezhad and Sohaib Dastgoshade. 'Sustainable Business Model Innovation: A Quantitative Analysis of Relevant Factors'. (2023) *International Conference on Innovation, Knowledge, and Management (ICIKM)* 10-14

<sup>34</sup> Ciulli, Francesca, Ans Kolk, Christina M. Bidmon, Niels Sprong, and Marko P. Hekkert. 'Sustainable Business Model Innovation and Scaling through Collaboration'. *Environmental Innovation and Societal Transitions* 45, (2022): 289-301.

<sup>35</sup> Agyemang Kwasi Sampene, Fredrick Oteng Agyeman , Fazeelat Aziz. 'Barriers and Drivers of Sustainable Business Model Innovation: Present and Future Research Perspectives'. *Macro Management & Public Policies* 5(1):1-25 (2023)

Hence, SMEEs must devise knowledge-based actions that optimise capacity to implement SBMI into mainstream markets and proliferate SMEEs<sup>36</sup>.

A review of the qualitative anatomisation of SBMI illuminates the categorisation of SBMI into four components<sup>37</sup>:

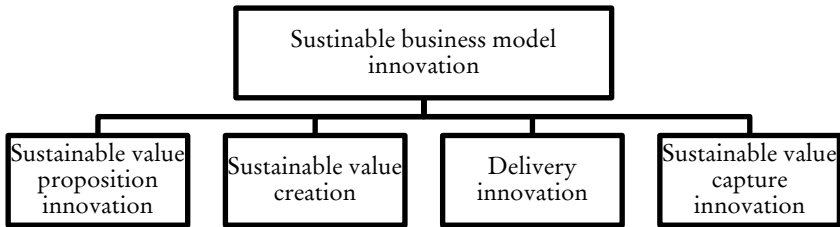


Figure 2: Anatomisation of sustainable business model innovation

Sustainable value proposition innovation (SVPI) represents what value is offered by the enterprise by harnessing novel and sustainable opportunities while intentionally building long-term customer and community relationships; Sustainable value creation (SVC) and Delivery innovation (DI) captures enterprise strategies to innovate novel networks, collaborations and partnerships of sustainable value chain; and Sustainable value capture innovation (SVCI) represents an enterprises ability to capture economic, social and environmental co-value creation by formulating sustainable financial BM and strategic cost systems. The unpacking of the nature of SBMI allows for a conceptual scan to identify key points for integration of strategic business practices that promote the successful implementations of SBMI.

## 2. 1 Promoters of SBMI

Promoting the formation and successful implementation of SBMI required the deployment of innovative business strategies that transform existing

<sup>36</sup> Aida Salimnezhad and Sohaib Dastgoshade. 'Sustainable Business Model Innovation: A Quantitative Analysis of Relevant Factors'. (2023) International Conference on Innovation, Knowledge, and Management (ICIKM) 10-14

<sup>37</sup> Jawaria Shakeel, Abbas Mardani, Abdoulmohammad Gholamzadeh Chofreh, Feybi Ariani Goni, Jiri Jaromír Klemes. 'Anatomy of sustainable business model innovation'. Journal of Cleaner Production 261 (2020) 121201

business models or create novel sustainable business models<sup>38</sup>. Due to their narrow range of value proportions, simplified strategic business practices are imperative to formulate and implement effective SBMI in SMEs<sup>39</sup>.

Recent empirical studies and bibliometric reviews have attempted to propose a myriad of strategies and best practices that promote the formulation and implementation of SBMIs<sup>404142434445</sup>. However, collating these recommendations captured in simplified promoters or transformative strategies which included autonomy, knowledge empowerment, advocacy and collaboration as features commonly found in successful SBMIs and enterprises that have successfully interrogated eco-EE barriers towards growth and proliferation.<sup>46</sup>

---

<sup>38</sup> Viktor Pettersson Isak Ylinentalo. "SMEs sustainable transformation; the benefit of external help". Luleå University of Technology Department of Social Sciences, Technology and Arts. Industrial and Management Engineering MSc. (2022).

<sup>39</sup> Federico Cosenz \*, Enzo Bivona. Fostering growth patterns of SMEs through business model innovation. A tailored dynamic business modelling approach. *Journal of Business Research* 130 (2021) 658–669

<sup>40</sup> Koppiarahaj Karuppiyah, Bathrinath Sankaranarayanan, Syed Mithun Ali. "A systematic review of sustainable business models: Opportunities, challenges, and future research directions". *Decision Analytics Journal* 8 (2023) 100272

<sup>41</sup> Nancy M.P. Bocken<sup>a,b</sup>, Thijs H.J. Geradts<sup>c,d</sup>. "Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities". *Long Range Planning* 53 (2020) 101950

<sup>42</sup> Arash Najmaei · Zahra Sadeghinejad. "Green and sustainable business models: historical roots, growth trajectory, conceptual architecture and an agenda for future research—A bibliometric review of green and sustainable business models". *Scientometrics* (2023) 128:957–999

<sup>43</sup> Herman I. Staß, Maria Bengtsson, Siarhei Manzhynski. "Cross-sectoral collaboration in business model innovation for sustainable development: Tensions and compromises". *Bus Strat Env.* (2022);31:445–463.

<sup>44</sup> Wendy Stubbs , Megan Farrelly , Kyra Fabianke , Sarah Burch and Pavit Ramesh. "Sustainable business models in 'lighthouse' small to medium enterprises". *Journal of Management & Organization* (2023), page 1 of 24

<sup>45</sup> Liu Hui a, \*, Zhongqing Luo b, Kunxin Liu c, Swathi A. "Impact of pollution prevention practices and green environmental practices on sustainable performance: Empirical evidence from Chinese SMEs". *Environmental Research* 255 (2024) 118991

<sup>46</sup> Stelios Kavadias, Kostas Ladas, Christoph Loch. "The transformative business model". *Harvard Business Review*. (2016).

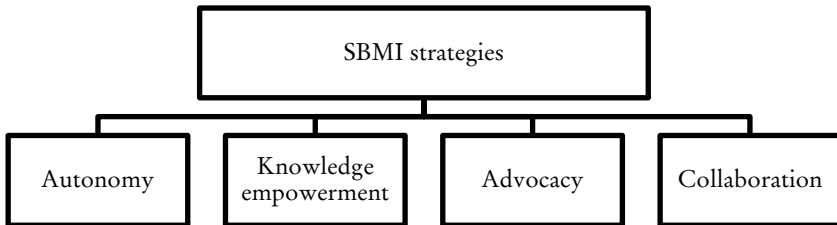


Figure 3: Successful SBMI implementation promoters

### 2.1.1 Autonomy

This captures customers flexibility to choose how product or services is provided, who to source from, and where products or services are generated. This is facilitated by the integration of novel information technology infrastructure and advanced data management systems<sup>47</sup>. The subjectivity of SBPI due to the fast pace of sociological and technological development is reflected in the increasing demand for personalisation of SBPI. The integration of techno-innovations harnesses the capabilities of SBMI to provide customer tailored- SBVI by leveraging technologies such as the Internet of things, artificial intelligence, blockchain and cloud technologies<sup>48</sup>. These infrastructures enable value-based pricing for SVTI, which is a significant determinant of enterprise revenue and profit margin<sup>49</sup>. Integrating advanced technologies can upscale perceived value, which SMEEs can monetize<sup>50</sup>.

### 2.1.2 Knowledge development and Awareness programs

Social innovation initiatives significantly influence SBMI potential to

<sup>47</sup> Jason Kobina Arku, Yunfei Shao 1 and Shadrach Twumasi Ankrah. 'Building a Hierarchical Enablers Framework for Service Business Model Innovation for Sustainable Performance: Evidence from Ghana's Electricity Sector'. Sustainability (2024), 16,3191.

<sup>48</sup> ibid

<sup>49</sup> ibid

<sup>50</sup> Ibid

successfully capture environmental and social value<sup>51</sup>. Educating customers and communities via guerrilla marketing on the deceptive tactics of larger enterprises, such as the purchase of green certificates as a claim to deliver green products and services. Also, workshops and capacity-building training programs can increase acceptance of SBMI, creating awareness, promoting legitimisation, and societal and investor interest of eco-entrepreneurial activities<sup>52</sup>. Additionally, knowledge building increases innovations for SBVI and SVCI which promotes sustainable competitive advantage in the market via green energy education, green R&D, green innovation capacity building courses/ workshops, accelerators are platforms for capacity building and human capital generation transitioning stakeholders and indigenous community members into active citizens able to recognise and capture sustainable opportunities and successfully implement SBMI. Additionally, encouraging citizen engagement through non-government organisations (NGOs), green energy programs, idea incubation workshops, for-profit green energy consultancy, energy nudges and gamification initiatives pull valuable input for knowledge-based decision making that ensures SBMI implementation bears minimal environmental and social risks<sup>53</sup>.

### **2.1.3 Advocacy**

This includes green energy advocates and social movements that consistently lobby for supportive policy reforms that support mainstreaming SBMI, such as developing community microgrids and peer-to-peer delivery technologies<sup>54</sup>. These energy advocates debunk misconceptions of centralised governance structures and BMs and promote the concept of localism and locally produced energy as greener energy, which has sparked the transitioning of investor interest towards localised SBM start-ups<sup>55</sup>. These are

---

<sup>51</sup> Darja Mihailova. 'Redefining business models for the energy transition: Social innovation and sustainable value creation in the European energy system'. *Energy Research & Social Science* 100 (2023) 103114

<sup>52</sup> Aida Salimnezhad and Sohaib Dastgoshade. 'Sustainable Business Model Innovation: A Quantitative Analysis of Relevant Factors'. (2023) *International Conference on Innovation, Knowledge, and Management (ICIKM)* 10-14

<sup>53</sup> Darja Mihailova. 'Redefining business models for the energy transition: Social innovation and sustainable value creation in the European energy system'. *Energy Research & Social Science* 100 (2023) 103114

<sup>54</sup> Zhang, Yaomin, Jonatan Pinkse, and Andrew McMeekin. 'Hybrid Governance of Digital Platforms: Exploring Complementarities and Tensions in the Governance of Peer Relationships'. *Strategic Organization*, (2024).

<sup>55</sup> *ibid*

a type of social eco-enterprise with business strategies that mobilise national, municipality and community-led funding for green energy promotion and implementation; they are considered to be business models that influence SBCI and DI such as generating and distribution of green energy<sup>56</sup>. Notably, knowledge and advocacy are radical SBMIs that are away from a service-driven and firm-centric approach to an eco-ventures implementation approach. This illuminates new and diverse relationships with communities and public and private sector actors<sup>57</sup>.

### 2.1.4 Collaboration and Partnership

Enterprises operating outside their local network of support could be linked to an increased implementation failure rate for SBMI<sup>58</sup>. They are also unsustainable BMs that increase the environmental and social risk, e.g., CO<sub>2</sub> emissions and sourcing outside local jurisdiction, leading to a lack of community and stakeholder economic empowerment and engagement. To optimize the full potential of a SBMI, community and stakeholder integration is imperative<sup>59</sup>. The SVCI and DI must integrate multi-stakeholders through trustworthy locally-based supply chains that harness the proximal human capital potential and utilise locally-generated technology platforms<sup>60</sup>. The successful implementation of SBMI must adopt strategies that emphasis co-value creation via strategic interactions and partnerships with costumers, producers, transmitters, distributors and other actors in the localised eco-EE<sup>61</sup>.

The conceptual integration of the components and promoters of the SBMI illuminates innovative business practices and techniques which augment and

---

<sup>56</sup> Darja Mihailova. 'Redefining business models for the energy transition: Social innovation and sustainable value creation in the European energy system'. *Energy Research & Social Science* 100 (2023) 103114

<sup>57</sup> Ibid

<sup>58</sup> Aida Salimnezhad and Sohaib Dastgoshade. 'Sustainable Business Model Innovation: A Quantitative Analysis of Relevant Factors'. (2023) *International Conference on Innovation, Knowledge, and Management (ICIKM)* 10-14

<sup>59</sup> Myrtge Velter, Verena Bitzer, Nancy Bocken. 'A boundary tool for multi-stakeholder sustainable business model innovation'. *Circular Economy and Sustainability* (2022) 2:401–431

<sup>60</sup> Jason Kobina Arku, Yunfei Shao, and Shadrach Twumasi Ankrah. 'Building a Hierarchical Enablers Framework for Service Business Model Innovation for Sustainable Performance: Evidence from Ghana's Electricity Sector'. *Sustainability* (2024), 16,3191.

<sup>61</sup> Ibid

promote the successful implementation of SBMI by SMEEs. These transformative strategies holistically capture the eco-innovations, opportunities and governance frameworks required to facilitate the establishment and growth of SMEEs via a formulated multi-objective mapping framework of business practices depicted in figure 2.

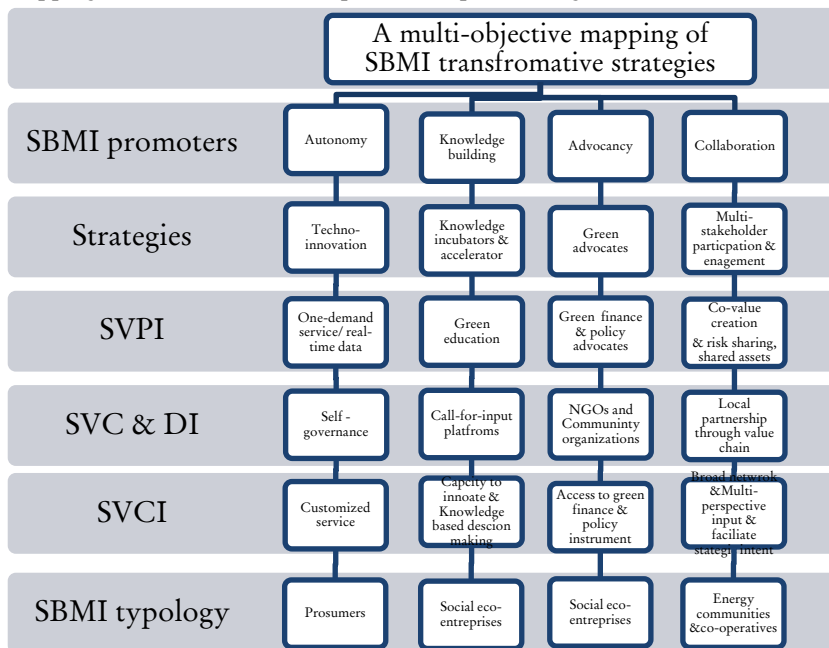


Figure 4: multi-objective mapping of SBMI transformative strategies

The implementation of SBMI faces eco-EE barriers such as lack of brand awareness, lack of incentives and mentoring programs, high cost of production, lack of governance, limited data and metrics systems to assess and disclose ESG impact of SBMI and are considered reasons for the high failure rate of SBMI<sup>62</sup>. Hence, it is imperative to adopt management frameworks and measuring tools

<sup>62</sup> Agyemang Kwasi Sampene , Fredrick Oteng Agyeman , Fazeelat Aziz. ‘Barriers and Drivers of Sustainable Business Model Innovation: Present and Future Research Perspectives’. *Macro Management & Public Policies* | 5(1):1-25

that promote transparency and accountability that effectively capture SBMI implementation impacts for disclosure and investor confidence. There is a high risk of measuring the success of SBMI based on financial performance and profit maximization<sup>63</sup>; hence, adopting a holistic and sustainable management framework that captures both financial and non-financial factors promotes sustainable value creation and increases the successful implementation of SBMI.

### 3. BARRIERS TO IMPACTFUL SBMI IN THE NIGERIAN CONTEXT

Several crucial factors significantly hinder the successful implementation of SBMI strategies in Nigeria. Identifying and addressing these factors is imperative to formulate contextual business strategies to overcome SBMI implementation barriers in Nigeria's eco-EE towards the country's rapid growth of eco-entrepreneurial activities. Studies generally identify a lack of innovation, efficiency and inability to fully deploy sustainability objectives by Nigerian SMEs as key barriers to SBMI in Nigeria<sup>64</sup>. SMEs in Nigeria must build capacity and constantly formulate impactful strategies to remain sustainability competitive in the rapidly changing eco-EE and in view of national and international energy transition and low carbon targets.

A review of multi-case studies of Nigerian SMEs highlights the main barriers that hinder the successful implementation of SBMI including lack of synchronisation of business aims, organisational and business model structure due to unclear strategic intent, low capabilities and lack of intellectual and human capital to effectively integrate ESG principles into business strategies due to poor socio-technical skills and outdated infrastructure, lack of educational and capacity development programs; lack of measuring tools and frameworks for risk assessment which creates ambiguity and unsustainable procurement practices; and limited innovations for resources leading to narrow financial channels<sup>65,66,67,68</sup>. The following

---

<sup>63</sup> ibid

<sup>64</sup> Dotun Olaleye Faloye, Idowu Owuoye, Olakunle Jayeola. 'The Key Drivers of Business Model Innovation in Developing Countries Firms: Survey of Micro and Small Scale Enterprises in Nigeria'. *International Journal of Research and Innovation in Social Science (IJRISS)* (2021) 05(07):148-157

<sup>65</sup> Preye Elizabeth Buowari. 'Factors Required for Small Business Sustainability in Nigeria'. D.B.A, Department of Management, Walden University. (2015)

<sup>66</sup> Nkiruka Ifekwem & Ogundeinde Adedamola, 'Survival Strategies and Sustainability of Small and Medium Enterprises in the Oshodi-Isolo Local

paragraphs unpack the barriers above.

### **3.1 Incompatibility of business aims and models**

In Nigeria, there is limited information on strategies adopted to formulate and implement SBMI, reflected in the unclear strategic intent of most SMEEs<sup>69</sup>. Hence, ecopreneurs are not equipped to engage in informed business practices and gauge the impacts and risks of implemented business practices. This led to poor business planning and formulation of BMs that do not align with the core values and aims of the SMEE. The lack of synchronisation between business model designs and organisational structure is a significant barrier to SMEE development and growth. This manifests as delays in decision-making and a lack of a dynamic organizational structure in management and team competencies, which can hinder coordination, promote ambiguity in employee roles and responsibilities, and deploy outdated business strategies as the SMEE evolves and grows in the dynamic eco-EE. Other limitations due to unclear or unsynchronised strategic intent of SMEEs in Nigeria include low customer confidence in eco-products and services and increased suspicion and risk of greenwashing, which increases the risk of regulatory and litigation implications. Hence, SMEEs in Nigeria must build skill and human capacity and broaden knowledge-base reflected in organisational structure to design effective strategic intents and formulations that dynamically synchronise eco-enterprise core values, SBMIs and organisational structure that reflect core sustainability values from the start-up, growth and establishment phase of the eco-enterprise.

### **3.2 Limited internal capacity on ESG**

Another internal barrier for SMEEs is the lack of capacity for integration of ESG principles into business strategies. In Nigeria, ESG implementation business strategies face barriers like current organisational culture, unfavourable regulations and policies, risks associated with new SBMI, poor

---

Government Area of Lagos State'. ActA Univ. SApientiAe, economicS And BUSineSS, 4 (2016) 103–118

<sup>67</sup> Federal Ministry of Finance, budget and national planning. Reviewed National Integrated infrastructure master plan 2020:2 para 2;

<sup>68</sup> Abiola Temidayo Micheal-Bucknor. Adopting Sustainability framework in procurement and its significance in developing countries with a focus on Nigeria (Dissertation submitted for the award of Master of Science Degree, 2023).

<sup>69</sup> Preye Elizabeth Buowari. 'Factors Required for Small Business Sustainability in Nigeria' (D.B.A, Department of Management, Walden University, 2015)

data and data management, lack of resources and poor infrastructure<sup>701</sup>. Additionally, a descriptive survey highlighted a lack of intellectual capital and poor capabilities, engineering a shortage of skilled human resources, significantly impacting the implementation of enterprise sustainability practices<sup>72</sup>,

The core ESG principles of eco-entrepreneurship manifest as SBMIs and business practises that promote environmental health such as emission reduction measures and biodiversity conservation; social practices that integrate the needs of stakeholders, provide fair wages and uphold human right principles. It also includes the promotion of workplace diversity, multi-stakeholder perspective and inclusion on the management level <sup>73</sup>. The integration of ESG principles in SMEs significantly affects business success; it determines access to green bank loans, percentage of interest rate, and investor interests and affects the overall image and value of eco-enterprise<sup>74</sup>.

The integration of ESG principles is imperative for the long-term growth and sustenance of SMEs. An increase in global climate change awareness has led to increased stakeholder pressure for eco-enterprises to address business activities that generate environmental, social and governance risk factors<sup>75</sup>. The evolving governance landscape and related policy implications of novel green policies and standards generate increased investor concerns about ROI, leading to a lack of investor interest. Hence, ecopreneurs in Nigeria are required to formulate impactful ESG mitigation strategies to promote brand reputation and unique value proposition which encourages customer and

---

<sup>70</sup> Nkemdilim Iheanachor. 'Sustainable Business Practices by Nigeria' chapt 7 in Jose C. Sanchez and Brizeida Hernandez-Sanchez, *Sustainable Organizations- Models, application, and New Perspectives* (2021)

<sup>71</sup> Abiola Temidayo Micheal-Bucknor. 'Adopting Sustainability framework in procurement and its significance in developing countries with a focus on Nigeria' (Dissertation submitted for the award of Master of Science Degree, 2023).

<sup>72</sup> Ajike, Emmanuel O. , Nnorom Goodluck K , Kwarbai Jerry D. & Egwuonwu T. K. 'Intellectual Capital and Performance Sustainability of SMEs in Lagos Nigeria' (2016) 4 (1) *International Journal of Advanced studies in Business strategies and management*.

<sup>73</sup> Constanze Chwallek, Lara Nawrath, Anzelika Krastina, Leva Bruksle. 'Supportive research on Sustainable Entrepreneurship and Business Practices' (Lapland University of Applied Sciences Ltd, 2024) 3.

<sup>74</sup> *ibid*

<sup>75</sup> Syed Quaid Ali Shah, Fong-Woon Lai and Muhammad Kashif Shad. 'Exploring the effect of enterprise risk management for ESG risks towards green growth'. *International Journal of Productivity and Performance Management*. 1741-0401

investor interest. By integrating environmental, social and governance factors in the business operations and strategy, SMEEs can maintain a sustainable competitive advantage.

However, in Nigeria, SMEEs lack the capabilities, required knowledge, financial support and institutional ability in the long term to formulate SBMIs that generate income while simultaneously addressing environmental and social concerns<sup>76</sup>. Business practices implemented by SMEEs in Nigeria lack the required techno-innovations to capture and measure the ESG risk factors of business operations.

### **3.3 Unsustainable procurement practices**

The external regulatory landscape in Nigeria provides a skeletal base for the promotion of sustainable procurement and localism for business activities based on the 2007 *Procurement Act of Nigeria* which provides section 34 on Domestic Preference ordering a minimum of 40% local sourcing of services and goods by all enterprises<sup>77</sup>. Also, through the National Energy Efficiency Action Plan, awareness programs and workshops were conducted to promote private and public sector sustainable procurement of green energy products<sup>79</sup>. However, there is a lack of enforced regulations and outdated and unclear legislation that do not reflect the current realities of Nigeria's eco-EE<sup>80</sup>. This manifests a lack of capacity and partnerships throughout the supply chain process of SMEEs, limited incentives for suppliers to adopt sustainability practices coupled with low innovative collaborations and partnerships with local and international actors in the eco-EE, causing major

---

<sup>76</sup> Abiola Temidayo Micheal-Bucknor. 'Adopting Sustainability framework in procurement and its significance in developing countries with a focus on Nigeria'(Dissertation submitted for the award of Master of Science Degree, 2023).

<sup>77</sup> Federal Republic of Nigeria Official. 'Public Procurement Act, 2007 Gazette'. The Federal Government Printer. FGP 107/72007/1,000 (OL 73)

<sup>78</sup> Abiola Temidayo Micheal-Bucknor. 'Adopting Sustainability framework in procurement and its significance in developing countries with a focus on Nigeria' (Dissertation submitted for the award of Master of Science Degree, 2023).

<sup>79</sup> Inter-ministerial committee on renewable energy and energy efficiency (ICREEE). 'National Energy Efficiency Action Plans' (NEEAP) (2015-2030)

<sup>80</sup> Hassan Bala. 'Public Procurement Act and its application for practice'. Unimaid Journal of Private and Property (UJPPL) 6(1):71-80

barriers to sustainable procurement<sup>81</sup>. Additionally, low sustainability awareness of stakeholders and shareholders inhibits the abilities to identify and capture sustainable procurement opportunities hence slowing the transition to sustainable practices<sup>82</sup>.

### 3.4 Resource constraints

Finally, the lack of supportive financial channels and low-interest rate loans limit implementation of sustainability practices and innovation in SMEEs which require high initial start-up costs<sup>83 84</sup>. The external factors in the eco-EE such as unsupportive policies, high interest rate of loans, lack of political will has forced ecopreneurs to source funds from loan sharks with high interest rate<sup>85</sup>. Also, due to the ambiguity in risk measurements and matrix system, investors are unable to predict risk and estimate ROI coupled with the dynamic policy landscape, investors fear policy implications and potential litigations<sup>86</sup>. Hence, investors are unwilling to release funds to facilitate and augment SMEE establishment and growth. The lack of funds and collaborations with institutions and government organisations has limited research and development, which restrains accelerators and incubators from formulating impactful SBMI. Hence, SMEEs in Nigeria must transition from traditional sourcing of funds and embrace disruptive and transformative practices to generate resources and pull the required funds to generate impactful SBMI implementation strategies.

Hence, the poor implementation of SBMI in SMEEs can be linked to interconnecting factors related to low internal capacities, limited techno-

---

<sup>81</sup> Abiola Temidayo Micheal-Bucknor. 'Adopting Sustainability framework in procurement and its significance in developing countries with a focus on Nigeria' (Dissertation submitted for the award of Master of Science Degree, 2023).

<sup>82</sup> Ibid

<sup>83</sup> Preye Elizabeth Buowari. 'Factors Required for Small Business Sustainability in Nigeria'. D.B.A, Department of Management, Walden University. (2015)

<sup>84</sup> Dioha, Michael O., and Atul Kumar. 'Exploring Sustainable Energy Transitions in Sub-Saharan Africa Residential Sector: The Case of Nigeria' (2019) 117 *Renewable and Sustainable Energy Reviews* 109510.

<sup>85</sup> Veronica Dinla Jumfongai1, Ndamsa Dickson Thomas. 'The Role of Informal Financing on the Sustainability of Entrepreneurship in Kumba Municipality'. *International Journal of Economics and Business Administration International Journal of Economics and Business Administration* X(Issue 2):130-163

<sup>86</sup> Aminu Abdullahi and Emmanuel Izuagie. 'Environmental, Social and Governance (ESG) Disclosure and Market Based Performance of Petroleum Marketing Firms in Nigeria'. *International Journal of Accounting, Finance, and Administrative Research* Vol. 1 Issue 3, (2024)

innovations and weak institutional ability. Also, the lack of capabilities and poor infrastructure can be linked to low funding and ineffective or insufficient training and incubator programs. However, to promote investor interest and venture capital, SMEEs must adopt a disruptive and transformative approach that supports capability development; generate and integrate advanced-green technologies, collaboration, and decentralized governance systems of autonomy and autarky to capture, generate and report accurate data that reflects ESG risk mitigation strategies. Additionally, policy and regulatory landscape play a major role in empowering and promoting localism and community development through subsidies, tax breaks, policy sandboxes, policy layering and enforcement of the 2007 *Procurement Act of Nigeria* to match Nigeria's current realities.

#### **4. TRANSFORMING THE SBMI LANDSCAPE IN NIGERIA: RECOMMENDATIONS**

The adoption of the four main transformative features: Autonomy, knowledge building, advocacy and collaboration can promote a disruptive and innovative approach to the successful implementation of SBMI by SMEEs in Nigeria.

##### **4.1 Optimizing business aims and SBMIs via knowledge-building and human capital development**

Firstly, ensuring the synchronisation of business aims with impactful business models requires the development of capabilities and socio-technical skills to formulate strategic intent. This comprises of the business mission, vision, objective and goals strategically formulated with an in-depth understanding of the external factors in the eco-EE that prevent growth barriers<sup>87</sup>. Recent empirical studies identify lack of an informed and structured strategic development plan as a major hindrance to effectively formulating and implementing SBMIs<sup>88,89</sup>. It also hinders SMEE establishment and growth.

---

<sup>87</sup> Matthias Nkuda. 'Case Methodology as a Pivot of Strategic Management' . Current Perspective to Economics and Management (2019) 2(38)

<sup>88</sup> Gabriela Citalli Lopez-Torres. 'The impact of SMEs' sustainability on competitiveness Measuring Business Excellence' 27(2) 27:1 (2023), pp. 107-120,

<sup>89</sup> Antonia Madrid-Guijarro and Antonio Duréndez. 'Sustainable development barriers and pressures in SMEs: The mediating effect of management commitment to environmental practices'. *Bus Strat Env.* (2024);33:949–967.

Furthermore, in the existence of effective business strategies by SMEEs, the organisational structure must reflect the objective of the business strategy to ensure a smooth implementation process. Organizational design is an essential factor for SBMI, reflecting the organisational culture and internal business environment. It influences SMEEs ability to harness dynamic capabilities that foster knowledge development and innovation<sup>90</sup>. The organizational design determines the core values of an enterprise, which manifests in the business posture, SBMs and operational practices of the enterprise <sup>91</sup>. A knowledge-oriented and capacity-building leadership structure in enterprises fosters awareness and innovation, which boosts sustainable competitive advantage. Therefore, emerging enterprises like SMEEs seeking the establishment and generation of impactful SBMI must reinforce knowledge and capacity-building training for proper team coordination and formulation of innovative networking strategies to promote knowledge management and augmentation of business strategies in the internal environment of SMEEs. This is required to make informed business decisions and manifest successful implementation strategies.

#### **4.2 Boosting ESG business management practices via autonomy and collaborative innovations**

The ESG rating has become a significant tool for investor due diligence <sup>92</sup>. The increased awareness of investor due- -diligence and the desire to future-proof Return On Investment (ROI) requires SMEEs to formulate business intents and SBMIs that capture both environmental, social and governance (ESG) risks and opportunities. There is increasing requirements to avoid litigation risks and resource deficiency with the transitioning policy and regulatory landscape. The effective integration of ESG principles into business practices facilitates community acceptance of green innovations and the adoption of eco-entrepreneurial activities. There is a need for the integration of monitoring and measuring tools to be utilised while implementing SBMIs to promote transparency and autonomy in reporting,

<sup>90</sup> Aida Salimnezhad and Sohaib Dastgoshade. 'Sustainable Business Model Innovation: A Quantitative Analysis of Relevant Factors'. International Conference on Innovation, Knowledge, and Management (ICIKM) (2023) 10-14

<sup>91</sup> Vinicius Minatogawa, Matheus Franco, Izabela Simon Rampasso, Maria Holgado, Diego Garrido, Hernan Pinto and Ruy Quadros. 'Towards Systematic Sustainable Business Model Innovation: What Can We Learn from Business Model Innovation'. Sustainability (2022), 14, 2939.

<sup>92</sup> Alagbe, Emmanuel Abiodun. 'Environmental social governance and firm performance of multinational companies in Nigeria'. *Fuoye Journal of Accounting and Management* (2021) 4(1)

which is required for investor interest and consumer acceptance. To capture a comprehensive ESG risk assessment or materiality assessment, there is a need for a broad knowledge base achieved through collaborative innovations with community engagement, multi-stakeholder input and feedback through call-for-input platforms required to capture the specific ESG needs of the community and locality of business operations.

Additionally, the integration of advanced techno-innovations such as cloud computing, meters reader, and cloud big data software is used to audit and accurately assess SBMI implementation risks. These technologies enable SMEEs autonomy to effectively implement ESG risk management strategies. Also, the formulation of social eco-enterprises that focus on training and capacity development workshops such as accelerators and incubators address socio-technical challenges and build human capital. A large knowledge pool of multi-stakeholder perspectives helps design effective implementation strategies for SBMI and holistically capture ESG risks and opportunities. Eco-enterprises must promote sustainable business practices by building internal capacity and vast networking and collaborative initiatives to ensure SMEE business practices meet short-term financial needs without compromise while addressing societal and environmental challenges. Also, unfavourable external factors in the policy landscape and governance portfolio must be addressed by advocating for green policy and regulatory reforms that enforce the submission of materiality assessments as a requirement to access low-interest green loans and incentives. Lastly, institutional restructuring and specialization can pull the level of constitutional power required to formulate transparent and effective governance and regulator standards for effective ESG monitoring and reporting.

#### **4.3 Optimizing sustainable procurement practices via advocacy and collaborative innovations**

Moving the discussion forward, recommendations to address unsustainable procurement through the supply chain of SMEEs in Nigeria include advocacy strategies by social movements and green advocates through NGOs and community organizations that pressure external governing actors towards favourable green policy reforms and financing; stricter regulations and enforcements; funding for human capital development; capacity building on sustainable supply chain management courses and workshops. Consequently, the 2007 *Procurement Act of Nigeria* should be updated to match the current socio-economic realities of Nigeria. Additionally,

collaborations with educational institutions, information, communication and technology (ICT) centres, and local innovators can formulate innovative real-time cloud platforms that promote seamless networking and communication between local suppliers and SMEEs. This enables the formulation and emergence of novel actors and SBMs that promote localism, community engagement, citizen empowerment, and sustainable economic growth while actively decarbonising the economy towards the climate action and low carbon transition targets.

#### **4.4 Broadening financial channels via collaborative social innovations**

Finally, lack of funding and resource availability is reported as a significant barrier to SBMI successful implementation. In Nigeria, SMEEs must transition from traditional approaches of resource-sourcing to disruptive and transformative strategies via innovative collaborations. These collaborations can be technology- based (smart trading, block chain, RE database systems and platforms, and metaverse technology integration); social-based (awareness and information campaigns, green local projects, and crowd funding platforms); institutional-based ( mission driving policies, institutional restructuring for ease of policy diffusion, community-led governance and stakeholder participation in policy-making process); and collaborative-innovations (spin-offs, joint ownership, green local investors, energy sharing, peer-to-peer, community-based, hybrid peer-to-peer). These innovations facilitate the effective implementation of autonomous SBMIs that provide self-governance and resources for the BOP in Nigeria as prosumers. Prosumers can generate and sell renewable energy to generate revenue while engaging in sustainable practices. Other SBMs, like local or community partnerships, energy communities and cooperatives, provide a broad network for resource sourcing, risk and asset sharing that boost the local economy and encourage local partnerships throughout the value chain. Also, innovative and strategic collaborations with institutions can unlock various resource opportunities such as incentives, subsidies, tax-breaks and policy sandboxes. Other financial channels can be formulated from social innovative collaborations such as crowd funding and crowd sourcing.

In view of the unique socio-economic and political challenges in Nigeria, the above recommendations promote the formulation of transformative and disruptive business practises adoptable by SMEEs in Nigeria, which help overcome internal and external barriers towards the successful implementation of SBMIs in Nigeria. Implementing SBMI is one of the crucial stages of the SBMI process and best practices must be formulated to

interrogate internal and external barriers in Nigeria's Eco-EE<sup>93</sup>. Adopting the four main features: Autonomy, knowledge building, advocacy, and collaboration can promote a transformative approach to the successful implementation of SBMI by SMEEs in Nigeria. A disruptive and transformative approach enlightens and provokes community members to become active and effective human capital to successfully implement SBMIs, interrogate unfavourable policies and build a supportive localized and international network to augment business activities sustainably.

## 5. CONCLUSION

To achieve Nigeria's climate action and low carbon transition plans, there is an urgent need for home-grown sustainable SMEE that generate sustainable business model innovations (SBMIs) such as eco-innovations, green technologies, green institutions, eco-products and services to promote renewable energy (RE) and nature-based enterprises, services and solutions. Hence, there is an urgent need for the generation and rapid growth of SMEEs who formulate and implement impactful SBMIs; design effective ESG management frameworks, advocate supportive institutional and governance structures and innovate disruptive means of generating resources which are effective at legitimising and facilitating SMEEs growth towards economic decarbonisation.

The implementation of SBMI significantly determines the success of eco-entrepreneurial and business activities. Hence, best practices and recommendations based on Nigeria's socio-economic context that interrogate internal and external barriers in Nigeria's eco-EE are imperative to achieving Nigeria's climate action and low-carbon transition targets.

A holistic evaluation of how the lack of internal capacity of eco-ventures themselves can hinder the design and implementation of transformative and sustainable business models that are able to capture business opportunities, address risks and make impactful contributions to Nigeria's sustainability objectives, show the need for disruptive and transformative frameworks and

---

<sup>93</sup> Dotun Olaleye Faloye, Idowu Owoeye, Olakunle Jayeola. 'The Key Drivers of Business Model Innovation in Developing Countries Firms: Survey of Micro and Small Scale Enterprises in Nigeria' (2021) 05(07) International Journal of Research and Innovation in Social Science (IJRISS) 148-157

business strategies that promote economic empowerment for the BOP community in Nigeria, educate and provoke civil society into sustainability actions and generate human capital with high socio-technical skills. Also, the recommended strategic innovations address the absence of a supportive legislative and regulatory framework in Nigeria and must be formulated to interrogate the lack of clear operational guidelines and governance structures needed to effectively integrate ESG risk mitigation measures and advance eco-entrepreneurship implementation business strategies. Through advocacy, green policy reforms, empirically valid policy layering proposals, locally generated techno-innovations, collaborations, and networking platforms, new strategies, actors, and frameworks will emerge that facilitate the effective implementation of SBMI in Nigeria.

The contextualised recommendations made will enable SMEEs to capture new techniques, strategies, and technologies and broaden resource channels that augment and support the implementation of SBMIs to create sustainable competitive advantage and contribute to the growth of a sustainable national and global economy. Hence, addressing the internal and external barriers of the eco-EE is imperative to promote SBMI implementation and SMEE organisation success, which has consequential effects on the regional economy and global contribution towards decarbonization and net zero global targets.