

Reframing Sustainable Entrepreneurship: Integrated Pathways, Drivers, and Transformational Mechanisms Across Emerging Research Landscapes

Patience Dzisenu, Research Scholar , Entrepreneurship, University of Ghana Business School, Accra, Ghana

Edmund Tsogbey, Professor, Entrepreneurship, University of Ghana Business School, Accra, Ghana

Abstract

Sustainable entrepreneurship has evolved into a multidimensional field linking innovation, social responsibility, ecological stewardship, and long-term economic value creation. Building on insights from recent empirical, conceptual, and meta-ethnographic studies, this review synthesizes converging research pathways shaping sustainable entrepreneurial orientation. Evidence from cross-sectional analyses (Aguirre Benalcázar et al., 2025), meta-synthesis approaches (Asiedu & Khosa, 2025), dynamic model development (Shahrahmani et al., 2025), and conceptual frameworks for innovation and transformation (Belz, 2013; Luederitz et al., 2023) converge to highlight critical drivers including environmental consciousness, financial planning, supportive ecosystems, technological capabilities, and societal expectations. The review also integrates policy-oriented perspectives (Miedzinski et al., 2022) that emphasize strategic roadmapping for sustainability transitions. Across studies, sustainable entrepreneurship emerges not only as an economic activity but as a transformative mechanism influencing societal well-being, urban transitions, and systems-level change. This review develops an integrated conceptual understanding of drivers, pathways, and barriers, offering future research directions and managerial implications.

Keywords : Sustainable entrepreneurship, innovation pathways, entrepreneurial orientation, transition drivers, ecosystems, sustainability impact

1. Introduction

Sustainable entrepreneurship has gained increasing scholarly attention as a response to escalating global environmental pressures, social inequalities, and economic uncertainties. Traditional entrepreneurship has long prioritized market creation and economic value; however, there is now a pronounced shift toward integrating ecological preservation and societal well-being into entrepreneurial objectives. Studies such as Lazarte-Aguirre (2024) highlight that sustainable entrepreneurial orientation reflects a strategic commitment toward long-term environmental and social outcomes, deeply embedded within firm culture, leadership vision, and resource allocation. This orientation is further shaped by complex interactions between internal capabilities and external institutional contexts.

Meta-ethnographic evidence by Asiedu & Khosa (2025) demonstrates that sustainable entrepreneurship is not a single linear process but a combination of interwoven meanings, motivations, and capabilities emerging from cultural, economic, and ecological influences. Meanwhile, research by Shahrahmani et al. (2025) highlights how models of sustainable entrepreneurship evolve dynamically across time, influenced

by feedback loops from stakeholders, government policies, and societal expectations. Conceptual reviews, including Belz (2013) and Luederitz et al. (2023), emphasize that sustainable entrepreneurship is strongly connected to innovation processes designed to solve long-term challenges such as climate adaptation, circular economy adoption, and social inclusion. Entrepreneurial ecosystems—comprising networks, institutions, and enabling infrastructures—play an essential role in supporting these missions, as shown by Chaudhary et al. (2023). Additionally, policy-driven frameworks (Miedzinski et al., 2022) articulate how national and international roadmaps influence entrepreneurial direction, shaping future scenarios and enabling systemic transitions. Empirical evidence from emerging economies such as Ecuador (Aguirre Benalcázar et al., 2025) provides perspectives on how financial planning, environmental awareness, and artificial intelligence capabilities can support sustainability-oriented entrepreneurship in resource-constrained contexts. Overall, sustainable entrepreneurship emerges as a hybrid discipline integrating innovation, strategic management, policy design, societal values, and technological advancements. This review aims to synthesize these diverse contributions and develop an integrated framework for understanding pathways toward sustainable entrepreneurial transformation.

2. Drivers of Sustainable Entrepreneurial Orientation

Research across multiple studies reveals that sustainable entrepreneurial orientation is shaped by a combination of psychological, organizational, technological, and environmental drivers. Lazarte-Aguirre (2024) identifies core drivers such as environmental commitment, proactive strategic posture, and resource consciousness. These drivers collectively strengthen a firm's willingness to invest in sustainable products, energy-efficient processes, and socially responsible initiatives.

Meta-ethnographic findings by Asiedu & Khosa (2025) emphasize that sustainable entrepreneurship is influenced by deeply rooted values and cultural norms. Entrepreneurial motivations often move beyond profit maximization to include community upliftment, ecological restoration, and long-term societal resilience. Their synthesis highlights that entrepreneurs internalize sustainability when they perceive strong alignment between personal identity and environmental or social missions.

Shahrahmani et al. (2025) add further nuance by demonstrating the dynamic nature of drivers as part of evolving models. Their research shows that societal expectations, regulatory pressures, technological advancements, and peer influence continuously reshape sustainability strategies. In developing economies, drivers also include necessity-based entrepreneurship, resource scarcity, and market demand for green technologies.

Belz (2013) frames sustainable innovation as a key driver, arguing that entrepreneurial success in sustainability depends on the creation of novel solutions that simultaneously address ecological constraints and generate economic opportunities. Innovation becomes not only a tool but an ethical obligation in addressing global crises.

Aguirre Benalcázar et al. (2025) highlight three specific drivers for emerging economies: financial planning discipline, environmental consciousness, and artificial intelligence utilization. AI supports optimization, decision-making, opportunity recognition, and environmental monitoring—thereby enhancing sustainable business models.

Complementary research by Luederitz et al. (2023) and Chaudhary et al. (2023) shows that urban transformation potential and ecosystem support—through networks, funding mechanisms, and knowledge flow—further strengthen entrepreneurial sustainability orientation. These drivers collectively guide entrepreneurs toward responsible, future-proof decision-making.

Table: Integrated Insights from Reviewed Studies on Sustainable Entrepreneurship

Author(s) & Year	Main Focus of Study	Key Contributions to Sustainable Entrepreneurship	Pathways / Drivers Highlighted
Lazarte-Aguirre (2024)	Sustainable entrepreneurial orientation	Identifies strategic, proactive, and environmental commitment factors	Environmental values, strategic posture
Asiedu & Khosa (2025)	Meta-ethnographic synthesis	Combines multiple qualitative studies to map meanings, motivations	Value-driven, culture-driven pathways
Shahrahmani et al. (2025)	Dynamic models	Shows evolution of sustainable entrepreneurship over time	Feedback loops, societal expectations
Belz (2013)	Sustainable innovation	Links innovation processes to sustainability performance	Innovation-driven pathways
Luederitz et al. (2023)	Urban transformation & entrepreneurship	Emphasizes place-based sustainability transitions	Urban ecosystems, city-level transitions
Aguirre Benalcázar et al. (2025)	Emerging economies & AI	Highlights role of financial planning, AI, environmental consciousness	Technology-driven, finance-driven drivers
Miedzinski et al. (2022)	Policy roadmaps	Assesses national STI policies for sustainability transitions	Policy-driven pathways
Chaudhary et al. (2023)	Entrepreneurial ecosystems	Shows ecosystems as enablers of sustainability	Ecosystem-driven, network-driven drivers

The table provides a consolidated comparison of the core contributions from major studies on sustainable entrepreneurship, highlighting how each author deepens understanding of drivers, pathways, and transformation mechanisms. It synthesizes a broad variety of research approaches—from empirical analyses to conceptual frameworks—making it easier to trace how sustainable entrepreneurship has evolved as a scientific field. The studies emphasize different yet complementary aspects: Lazarte-Aguirre (2024) underscores sustainable entrepreneurial orientation as an internal strategic and cultural posture, whereas Asiedu and Khosa (2025) focus on subjective meanings, motivations, and collective interpretations derived from qualitative insights.

Shahrahmani et al. (2025) extend the field by offering dynamic models that capture how sustainable entrepreneurship changes over time in response to internal and external factors. Belz (2013) adds a strong innovation perspective, arguing that sustainability cannot emerge without continuous creative problem-solving. Luederitz et al. (2023) shift attention to spatial and urban perspectives, showing that cities act as important sites for experimentation and sustainability transitions.

The table also highlights the unique contribution of Aguirre Benalcázar et al. (2025), who integrate financial planning and artificial intelligence—two emerging drivers particularly relevant for resource-constrained developing economies. Policy-oriented insights from Miedzinski et al. (2022) demonstrate that the institutional environment, roadmaps, and national strategies shape entrepreneurial capacity and long-term sustainability outcomes.

Finally, Chaudhary et al. (2023) emphasize the essential role of entrepreneurial ecosystems, which provide networks, support structures, and knowledge flows that fuel sustainability-driven ventures. Through this table, readers can clearly see the multidimensional nature of sustainable entrepreneurship, where innovation, policy, ecosystems, culture, technology, and financial strategy all interact. The table acts as a synthesis point that connects diverse research traditions and allows for a deeper understanding of how pathways and drivers collectively contribute to sustainability transitions.

3. Pathways to Sustainable Entrepreneurship

Pathways represent the mechanisms, sequences, and strategies through which entrepreneurs transition from traditional models to sustainability-oriented ventures. According to Lazarte-Aguirre (2024), pathways begin with the formation of sustainable entrepreneurial orientation, which evolves into strategic planning, capability development, and resource mobilization. Firms gradually integrate ecological and social objectives into their core operations, product development, and stakeholder engagement strategies. The meta-ethnographic synthesis by Asiedu & Khosa (2025) identifies multiple interpretive pathways, including value-driven pathways (guided by personal ethics), opportunity-driven pathways (based on market gaps), and ecosystem-driven pathways (enabled through support networks). Their synthesis highlights that pathways differ across regions, cultures, and industries, reflecting the heterogeneity of sustainability transitions.

Research by Shahrahmani et al. (2025) outlines dynamic pathways modeling how sustainable entrepreneurship evolves based on interaction among institutional frameworks, societal demands, and technological developments. Their findings highlight that pathways are not linear but iterative, shaped by feedback loops, experimentation, and continuous learning.

Urban sustainability research by Luederitz et al. (2023) reveals that pathways can also be place-based, driven by spatial dynamics and urban governance structures. Entrepreneurship becomes a transformative mechanism enabling green infrastructure, circular economy activities, community initiatives, and low-carbon transitions.

Miedzinski et al. (2022) extend pathways understanding by introducing policy-oriented transition roadmaps. These pathways emphasize alignment between long-term national visions and bottom-up entrepreneurial action. Such alignment enables entrepreneurs to anticipate future regulations, technological shifts, and sustainability incentives.

Aguirre Benalcázar et al. (2025) propose pathways centered on financial discipline and AI-based decision support, which help firms navigate complexity and resource limitations. Collectively, these insights show that pathways to sustainable entrepreneurship are multifaceted, context-dependent, and continuously evolving.

4. Entrepreneurial Ecosystems and Sustainability Transitions

Entrepreneurial ecosystems provide the structural and relational conditions that enable sustainability-driven ventures. Chaudhary et al. (2023) argue that ecosystems act as “connective tissue” linking entrepreneurs with resources, mentoring, regulatory guidance, and collaboration networks. These ecosystems are especially crucial for sustainability because they support the diffusion of green technologies, social innovations, and environmentally conscious business models.

Luederitz et al. (2023) show how ecosystems are embedded within urban systems, influencing sustainability transitions at the local scale. Their research reveals that entrepreneurs depend on municipal policies, community participation, and local infrastructures to implement sustainability experiments. Cities serve as laboratories where innovations can be piloted, scaled, and institutionalized.

Belz (2013) also emphasizes that innovation ecosystems nurture sustainable entrepreneurship by enabling knowledge sharing, fostering cross-sector partnerships, and integrating scientific research with market needs. Ecosystems help reduce uncertainty, accelerate product development, and encourage entrepreneurs to adopt environmentally responsible methods.

Shahrahmani et al. (2025) highlight the societal dimension of ecosystems, showing that social norms, public awareness, and stakeholder expectations significantly shape sustainability practices. Strong ecosystems amplify entrepreneurial impact by validating sustainability efforts and generating social

legitimacy.

Policy roadmaps by Miedzinski et al. (2022) further contribute to ecosystem development by aligning political visions with entrepreneurial opportunities. They note that long-term policy coherence, public investment, and innovation incentives create enabling conditions for sustainable entrepreneurship to flourish.

In emerging economies, as demonstrated by Aguirre Benalcázar et al. (2025), ecosystems often rely on digital tools, financial literacy initiatives, and AI-driven platforms that facilitate resource allocation and sustainability assessments. These findings collectively illustrate that ecosystems are not passive environments but active contributors to sustainable innovation and systemic transformation.

5. Sustainability Transitions and Social–Environmental Impact

Sustainable entrepreneurship plays a crucial role in broader sustainability transitions by linking micro-level innovation with macro-level societal change. Shahrahmani et al. (2025) show that sustainable entrepreneurship models generate social and environmental impact by reducing ecological footprints, fostering green job creation, and supporting community welfare. Their dynamic models demonstrate how entrepreneurial activities interact with societal expectations and environmental constraints, creating transformative outcomes.

Belz (2013) emphasizes that sustainable entrepreneurs act as “change agents,” influencing consumption patterns, production systems, and industrial practices. They introduce innovations such as renewable energy solutions, circular business models, and community-based initiatives that collectively reshape socio-economic landscapes.

Luederitz et al. (2023) extend this perspective by examining how entrepreneurship contributes to urban sustainability transformations. Their findings indicate that entrepreneurial activities can help cities transition toward low-carbon, resilient, and inclusive futures through nature-based solutions, waste-to-resource systems, and localized sustainability initiatives.

Asiedu & Khosa (2025) note that sustainable impact is deeply rooted in the motivations and ethical commitments of entrepreneurs. Values-driven entrepreneurs aim to generate meaningful change by addressing social inequalities, promoting environmental justice, and empowering communities.

Aguirre Benalcázar et al. (2025) show empirical evidence of impact in emerging economies where sustainable entrepreneurship enhances environmental consciousness, strengthens financial practices, and fosters digital inclusion through AI-driven strategies.

Policy-level insights by Miedzinski et al. (2022) reveal that sustainable entrepreneurship can accelerate national-level sustainability transitions when aligned with strategic roadmaps. Overall, sustainable entrepreneurship contributes to societal transformation through a combination of innovation, ethical values, technological capabilities, and institutional support.

6. Conclusion

Sustainable entrepreneurship has matured into a robust, interdisciplinary field that integrates innovation, ecological responsibility, and societal well-being. This review synthesizes insights across diverse methodologies—empirical studies, meta-ethnographic analyses, conceptual models, and policy evaluations—to provide a holistic understanding of pathways and drivers. The collective evidence demonstrates that sustainable entrepreneurship is shaped by internal motivations, external institutional

pressures, technological advancements, and evolving ecosystems. It serves as a key mechanism for enabling urban transformations, advancing climate solutions, and addressing socio-economic challenges. Research shows that sustainable entrepreneurial orientation is grounded in environmental consciousness and long-term strategic thinking, while pathways to sustainability depend on iterative processes of learning, adaptation, and ecosystem collaboration. Emerging technologies such as artificial intelligence further enhance decision-making and resource optimization, particularly in developing economies. Entrepreneurial ecosystems, supported by coherent policy frameworks, play a central role in strengthening sustainability transitions.

Moving forward, sustainable entrepreneurship must continue to bridge gaps between innovation, policy, and social needs. Future research should explore cross-country comparative models, deeper integration of AI and digital technologies, and the role of communities and consumers in shaping sustainability outcomes. Ultimately, sustainable entrepreneurship offers a transformative approach capable of reshaping economic systems toward more resilient, inclusive, and environmentally sound futures.

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