

CHALLENGES AND ENABLERS OF SUSTAINABILITY IN SMES: A CONCEPTUAL REVIEW

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Sustainable business practices are increasingly important for resilience, long-term competitiveness, and positive social and environmental benefits. However, the acceptance of sustainability remains low, particularly among small businesses in developing nations. This conceptual paper explores the factors that promote and hinder sustainable business practices in Malaysian small-medium enterprises (SMEs) by applying multiple theoretical perspectives, including Institutional Theory, Resource-Based View (RBV), Natural Resource-Based View (NRBV), Knowledge-Based View (KBV), Green Theory, and the Diffusion of Innovation Theory. These theories offer SMEs a thorough lens to see, apply, and react to sustainability opportunities and challenges. This study identifies key driving sustainability adoption such as cost savings, improved capital assets, improved market positioning, improved brand reputation, and increased long-term business growth. Whereas, limited financial resources and reliance on government assistance, human resource challenges, and legal and technology barriers are among several crucial elements still preventing the adoption of sustainability in SMEs. This research presents a strategic model of enablers for the adoption of SME sustainability by combining theoretical ideas and existing literature. It highlights the importance of lean and green business strategies in removing obstacles to sustainability. The study also highlights the role of government agencies, regulatory bodies, and NGOs in formulating targeted initiatives to support SMEs in adopting sustainable practices. Understanding these barriers can accelerate sustainability transitions, enhance SMEs' contribution to the circular economy, and align business practices with Malaysia's Environmental, Social, and Governance (ESG) and Sustainable Development Goals (SDG) aspirations.

Keywords: SMEs, Sustainability, Sustainability Theory, Sustainability Advantages, Sustainability Barriers



INTRODUCTION

Nowadays, many companies integrate sustainability as a fundamental perspective through a holistic approach that examines businesses' economic, environmental, and social aspects. The United Nations (UN) led in promoting sustainable development across international platforms. However, since the industrial era, human activities have unintentionally set off a chain reaction of climate disturbances and environmental disasters while creating social conflicts and economic volatility (Sunny et al., 2025).

Salas-Zapata & Ortiz-Muñoz (2019) define sustainability through four key applications. First, sustainability as a framework of social-ecological criteria guiding human behaviour. Second, sustainability as an aspirational vision for humanity realised through the alignment of social and ecological objectives within a specific reference system. Third, sustainability as an entity, occurrence, or phenomenon present within particular social-ecological systems. Fourth, as a methodology that integrates social and ecological factors into the analysis of activities, processes, or human creations. Sustainability adoption offers long-term benefits for SMEs including cost savings (Omowole et al., 2024), improved capital assessment (Oyewole et al., 2024), and enhanced market position (Krishnan et al., 2024). Additionally, adopting sustainability improves brand reputation (Nkup et al., 2024), fosters community engagement (Guerrero, 2024), drives innovation, facilitates technology adoption for enhanced competitiveness, and strengthens long-term business growth (Lakshminarayana et al., 2023). SMEs can also enhance operational efficiency and resource effectiveness by integrating technologies such as Artificial Intelligence (AI) and Internet of Things (IoT) into sustainable practices (Alkhodair & Alkhudhayr, 2025).

SMEs play a crucial role in achieving Malaysia's aspirations for a low-carbon economy and mitigating climate change impacts. The Malaysian government and related agencies have supported SMEs' sustainability efforts by providing guidelines, sustainability frameworks, climate assessment tools, financial resources, and green solutions. Examples of such initiatives include the New Industrial Master Plan 2030, i-ESG Framework, Simplified ESG Disclosure Guide (SEDG), and PKS Lestari by SME Corp. Malaysia (Alliance Bank, 2025).

However, despite increasing global emphasis on sustainability practices, SMEs in Malaysia have exhibited slower adoption. This is largely due to barriers such as lack of awareness, resource constraints, and insufficient knowledge. Therefore, the objective of this paper is to identify the challenges hindering the adoption of sustainable practices in SMEs.

LITERATURE REVIEW

Underpinning Theories in Sustainability in SMEs

Research on sustainability practices by SMEs utilises multiple theoretical frameworks that explain the dynamics and challenges of this process. These theoretical frameworks illustrate how SMEs can implement sustainable practices in their operations through a combination of internal abilities and external business environment factors. Researchers studying SME sustainability adoption often rely on Institutional Theory and several resource-based perspectives, including RBV, NRBV, KBV, and Green Theory. Each framework offers unique insights into the drivers of sustainability adoption in SMEs.

Prior studies utilise institutional theory, which primarily examines the external influences that push SMEs to embrace sustainable practices. The article demonstrates how regulatory frameworks, alongside customer expectations and community pressures, influence corporate behaviour as well as reporting methods.

According to this theory, SMEs often face pressure from multiple institutional actors which can either promote or obstruct their ability to implement sustainability practices (Binaluyo, 2024).

The Resource-Based View (RBV) and Natural Resource-Based View (NRBV) explore how SMEs can leverage internal capabilities and resources for sustainable outcomes. The RBV asserts that competitive advantages arise from firms' ability to utilise resources effectively, while the NRBV extends this view by incorporating environmental factors in resource management. Absorptive capacity, along with innovation culture and strategic resource allocation, are crucial elements for achieving sustainable practices (Toan et al., 2025; Zhang & Lim, 2024).

The Knowledge-Based View (KBV) asserts knowledge application and innovation as vital drives for sustainability. It suggests that knowledge sharing and innovation enhance SMEs sustainability performance, making environmental awareness and sustainable innovation crucial for entrepreneurial success (Karar et al., 2025).

Green Theory is employed to explore the impact of green entrepreneurship on business sustainability. It examines how green structural capital and environmental dynamism influence the relationship between green entrepreneurship and sustainability outcomes. This theory provides insights into how SMEs can navigate environmental challenges by adopting green practices and fostering innovation (Tekala et al., 2024).

The Diffusion of Innovation Theory helps explain the slow adoption of sustainability practices among SMEs. This model has been updated to incorporate external influences that encourage the adoption of sustainability innovations and recognize the significance of social and cultural contexts in the diffusion process (Sampepajung et al., 2024).

While these theories form compelling grounds for understanding the adoption of sustainability in SMEs, the practical challenges and constraints are real. These include resource constraints, the lack of access to sustainable technologies, and the need for government backing and incentives that can stall any kind of advances in sustainable practices. Socio-economic conditions also shape the effectiveness of green management strategies, highlighting the importance of context-specific approaches (Omowole et al., 2024; Toan et al., 2025).

Barriers and Challenges in Sustainability Implementation

Sustainable business practices are increasingly sought after by SMEs globally, offering the potential for profitability, resilience, and beneficial social and environmental outcomes. Álvarez Jaramillo et al. (2019) reviewed 50 studies and identified the barriers faced by SMEs when implementing initiatives for sustainable development. The slow sustainability implementation was due to lack of resources, the high initial capital cost of implementing sustainability measures, and lack of expertise. Other challenges include data security concerns, insufficient managerial support, resistance to technological change, lack of skilled workforce, and weak regulatory enforcement (Abdul Basit et al., 2024).

Similarly, Elhusseiny & Crispim (2021), after reviewing 54 studies, highlight that developing countries face even greater challenges in adopting Industry 4.0 technologies. These challenges include technical barriers such as inadequate information and communication technology (ICT) infrastructure, a lack of skilled employees and managers, and difficulties with IoT and cloud computing.

Organizational barriers arise from financial constraints, insufficient management support, resistance to change, and a lack of research and development (R&D) infrastructure. Additionally, legal barriers, such as poor collaboration between managers and departments, and technological barriers, including limited knowledge of advanced service technologies, further hinder sustainability efforts.

Similar challenges have been identified in country-specific studies. In Pakistan, for instance, the unavailability of financing and education are the primary obstacles to recognizing and addressing environmental sustainability issues. The absence of legislation and regulations further weakens compliance with environmental safety standards, leading to a general lack of concern for sustainable practices among SMEs. Key factors influencing sustainability adoption include the awareness and attitudes of owners and managers, customer demand, and government policies (Durrani et al., 2024).

Meanwhile Bangladesh faces similar challenges, where resource constraints, regulatory changes, and a limited capacity for innovation significantly hinder the pace of sustainability adoption. To address these challenges, strategies such as vertical integration, customer engagement, and leveraging prior knowledge have been identified as potential solutions (Gomes, 2024).

A study in Iran further underscores the complexity of sustainability integration, identifying financial constraints, organizational structure challenges, and external influences as key barriers. Financial constraints include high initial investment costs, operational expenses, limited access to funding sources, and financial risk. Organizational and human resource challenges encompass leadership commitment, employee engagement, expertise, and policy alignment. Additionally, external factors such as supply chain limitations, market pressures, and a lack of public and political support exacerbate sustainability adoption difficulties (Chenari, 2023).

Closer to home in Indonesia, institutional constraints, particularly environmental and socio-cultural factors, pose significant barriers to sustainability adoption. Gunawan et al. (2022) found that a lack of knowledge about sustainable products and resistance to change due to entrenched mindsets and cultural norms are key obstacles. Moreover, inadequate government support and bureaucratic challenges further complicate SMEs' efforts to implement sustainability initiatives. Similarly, Setiawati & Mastarida (2024) emphasized that Indonesian SMEs struggle with limited innovation, adaptability, flexibility, and resource integration, all of which are essential for fostering social responsibility.

In Malaysia, the key factors influencing the sustainability of Malaysian SMEs, despite barriers, include awareness, pressures, competitiveness, and company image. Awareness is identified as the primary reason for implementing sustainable practices. However, challenges such as financial issues, limited knowledge and skills, and a lack of resources hinder these efforts (Akhtar et al., 2024). Hussain et al. (2022) point out that some major barriers impede the sustainability of SMEs in Malaysia, stemming from the absence of proper sustainability goals integrated into the operations and management practices. Furthermore, numerous SMEs exhibited hesitance in adapting to the evolving market conditions, thereby limiting their capacity to implement effective sustainability strategies. This was subsequently challenged by various obstacles to attaining long-term sustainability and addressing the persistent issues of limited financial resources and reliance on government assistance. Additional obstacles include insufficient understanding of environmental rules, limited community engagement capabilities, and resource limitations that hinder the development of sustainability initiatives for SMEs in Malaysia (Abu Hassan et al., 2023).

Even in developed countries, SMEs face heavy financial strains when implementing sustainability-oriented practices. Such barriers are related to a lack of awareness of the various sustainable finance available, eligibility criteria for financial instruments, and lengthy application procedures that mostly discourage access to financing. These impediments suppress the SMEs' ability to finalise the needed funding to incorporate ESG within their operations. Thus, even when sustainable financial instruments become available, many SMEs are incapable of forging them into effective strategies to benefit sustainability initiatives (Kuteesa et al., 2024; Moursellas et al., 2023).

CONCLUSION

The sustainability mechanisms of modern SMEs are shaped by their specific contexts, meaning they do not operate on the same plane. In developing countries, SMEs face unique challenges, such as inadequate infrastructure and limited technological access, which further exacerbate sustainability barriers. Consequently, SMEs in relatively developed geographical areas have better access to resources and support systems, enabling them to implement sustainable practices more effectively. It is crucial to acknowledge these contextual variations when designing and adapting sustainability strategies for SMEs across different settings.

As the one of the backbones of the economy, SMEs must ensure their ability to integrate sustainable practices into their operations, as this is fundamental to achieving national ESG aspirations. SMEs should take immediate action to overcome identified barriers while seeking support from policymakers, financial institutions, and other stakeholders. The integration of sustainability into business operations not only addresses environmental concerns but also aligns with economic and social objectives. By doing so, businesses can enhance operational efficiency, improve performance and competitiveness for long-term success, and promote environmental stewardship.

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