

Achieving Entrepreneurial Renewal in Resource-Constrained SMEs through Digital Platforms: A Process-Oriented Model

Entrepreneurial
Renewal in Resource-
Constrained SMEs

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ABSTRACT

Small and medium-sized enterprises are vital for economic growth but face challenges in adopting digital transformation due to limited resources. This study aims to explore how digital platforms enable these enterprises to achieve entrepreneurial renewal by developing a process-oriented model. Through a systematic literature review of 50 peer-reviewed studies published between 2010 and 2024, the research examines the role of digital platforms in fostering agility, experimentation, and capability-building across various sectors and regions. Findings reveal that internal drivers, such as entrepreneurial mindset and organizational learning, combined with external support from digital ecosystems and government policies, facilitate transformation. However, barriers like financial constraints, skill shortages, and infrastructural gaps hinder progress, particularly in rural or traditional enterprises. The study proposes a four-stage model Awareness and Motivation, Experimentation and Adoption, Reconfiguration and Scaling, and Strategic Renewal to guide enterprises through iterative transformation. This model emphasizes the dynamic interplay of internal capabilities and external opportunities. In conclusion, the framework offers a structured approach for small and medium-sized enterprises and policymakers to navigate digital transformation, addressing resource constraints and fostering sustainable innovation in diverse contexts.

Keywords: Digital Platforms, Digital Transformation, Entrepreneurial Renewal, Process Model, SMEs.

ABSTRAK

Usaha kecil dan menengah sangat penting bagi pertumbuhan ekonomi, tetapi menghadapi tantangan dalam mengadopsi transformasi digital karena keterbatasan sumber daya. Studi ini bertujuan untuk mengeksplorasi bagaimana platform digital memungkinkan perusahaan-perusahaan ini mencapai pembaruan kewirausahaan dengan mengembangkan model yang berorientasi pada proses. Melalui tinjauan pustaka sistematis terhadap 50 studi peer-review yang diterbitkan antara tahun 2010 dan 2024, penelitian ini mengkaji peran platform digital dalam mendorong kelincahan, eksperimentasi, dan pengembangan kapabilitas di berbagai sektor dan wilayah. Temuan penelitian menunjukkan bahwa pendorong internal, seperti pola pikir kewirausahaan dan pembelajaran organisasi, dikombinasikan dengan dukungan eksternal dari ekosistem digital dan kebijakan pemerintah, memfasilitasi transformasi. Namun, hambatan seperti kendala keuangan, kekurangan keterampilan, dan kesenjangan infrastruktur menghambat kemajuan, terutama di perusahaan pedesaan atau tradisional. Studi ini mengusulkan model empat tahap Kesadaran dan Motivasi, Eksperimentasi dan Adopsi, Rekonfigurasi dan Penskalaan, dan Pembaruan Strategis untuk memandu perusahaan melalui transformasi iteratif. Model ini menekankan interaksi dinamis antara kapabilitas internal dan peluang eksternal. Kesimpulannya,

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Kata Kunci: *Platform Digital, Transformasi Digital, Pembaruan Kewirausahaan, Model Proses, UKM.*

INTRODUCTION

Small and Medium-sized Enterprises (SMEs) are vital to global economies, contributing over 90% of businesses and driving job creation, innovation, and regional development (Li et al., 2018; Kahveci, 2025). However, rapid technological disruptions, evolving consumer behaviors, and increasing pressure for digital innovation challenge their growth and survival (Bhuiyan et al., 2024; Guo et al., 2024). Digital platforms, such as e-commerce marketplaces, cloud computing services, and fintech applications, offer transformative opportunities for SMEs to overcome resource constraints, expand market reach, and enhance operational efficiency (Xie et al., 2022; Omowole et al., 2024; Al Omoush et al., 2025). These platforms enable SMEs to develop dynamic capabilities such as sensing, learning, and reconfiguring which are critical for long-term competitiveness (Christofi et al., 2023; Saeedikiya et al., 2024). Defined as the ability to acquire, assimilate, and apply new knowledge, absorptive capacity plays a pivotal role in enabling SMEs to leverage these platforms effectively (Li et al., 2018). Yet, resource-constrained SMEs, particularly in emerging economies, face significant barriers, including limited financial capital, inadequate digital skills, and infrastructural gaps, which hinder systemic digital renewal (Hokmabadi et al., 2024; Markevičius, 2025; Rafferty, 2025).

Despite growing scholarly attention, significant research gaps persist in understanding how SMEs navigate digital transformation. According to Khurana et al. (2022), much of the literature focuses on outcomes like technology adoption or digital maturity, neglecting the iterative processes that underpin transformation in resource-scarce contexts. Similarly, Wimelius et al. (2021) highlight those studies often overlook the interplay between digital platforms, internal capabilities, and external ecosystems, resulting in fragmented insights. For instance, while platforms like Shopify or Shopee provide bundled solutions, their impact on entrepreneurial renewal defined as the strategic reconfiguration of business models and value propositions remains underexplored (Min & Kim, 2021; Slimane et al., 2022). Moreover, as noted by Guo et al. (2024), there is a lack of longitudinal perspectives that capture how SMEs progress from digital awareness to strategic innovation, particularly under constraints like poor digital infrastructure or cultural resistance (Rupeika-Apoga & Petrovska, 2022; Yusuf et al., 2024). These gaps are especially pronounced in diverse contexts, were sectoral or regional variations, such as urban versus rural settings, influence transformation trajectories (Uzule & Verina, 2023; Chen et al., 2024).

This study aims to develop a conceptual process model that explains how resource-constrained small and medium-sized enterprises (SMEs) achieve entrepreneurial renewal through digital platforms. Drawing on a systematic literature review of 50 peer-reviewed studies published between 2010 and 2024, this research seeks to synthesize organizational, technological, and ecosystem perspectives to map the transformation journey across four interconnected stages: awareness, experimentation, reconfiguration, and renewal. The study also aims to elucidate the enabling role of digital platforms in this transformation process, identify the key stages and mechanisms involved, and critically assess the application and limitations of theoretical frameworks such as the Dynamic Capabilities View and the Resource-Based View. Furthermore, this study aspires to integrate fragmented insights in the existing literature and provide actionable guidance for SME leaders and policymakers. By adopting a broadly applicable approach while accounting for contextual factors like digital inequalities in emerging markets, the research contributes a structured framework for sustainable digital transformation.

LITERATURE REVIEW

Digital Transformation in SMEs Challenges and Opportunities

Digital Transformation (DT) in Small and Medium Enterprises (SMEs) refers to the integration of digital technologies across business functions to reshape how value is created and delivered (Li et al., 2018; Bhuiyan et al., 2024). Unlike large corporations, SMEs often face constraints such as limited capital, insufficient digital skills, and organizational inertia (Omowole et al., 2024; Guo et al., 2024). These constraints pose serious challenges to adopting emerging technologies like cloud services, digital payments, or big data analytics (Hongyun et al., 2025; Kahveci, 2025). Despite these barriers, DT holds significant opportunities for SMEs to improve operational efficiency, reach broader markets, and innovate business models (Min & Kim, 2021; Xie et al., 2022).

Several studies highlight that digital tools lower entry barriers and offer scalable growth pathways, especially through platforms that support e-commerce, mobile interactions, and digital marketing (Li et al., 2023; Al Omoush et al., 2025). However, digital maturity among SMEs remains inconsistent, with many firms adopting technology in fragmented or reactive ways (Khurana et al., 2022; Christofi et al., 2023). The process is often non-linear, influenced by external shocks such as crises, or internal drivers like entrepreneurial leadership and learning culture (Saeedikiya et al., 2024; Lu & Shaharudin, 2024).

Yet, a persistent gap in the literature lies in understanding how SMEs evolve from initial adoption to full transformation under constraints (Wimelius et al., 2021; Zhang et al., 2022). Few studies provide process-based models or frameworks that clarify the strategic renewal of SMEs via digital platforms (Hokmabadi et al., 2024; Rafferty, 2025). Differentiating between reactive digital adaptation and proactive innovation is crucial to formulating tailored support mechanisms (Tenggono et al., 2024; Markevičius, 2025). Thus, identifying transformation pathways, barriers, and enablers is essential for designing practical policies and capabilities that foster resilience in digitally lagging SMEs.

Digital Platforms in Entrepreneurial Renewal

Digital platforms have become essential instruments for enabling entrepreneurial renewal in resource-constrained SMEs. These platforms ranging from e-commerce marketplaces like Shopee and Tokopedia to business management tools such as Shopify and QuickBooks extend beyond transactional functionalities and operate as dynamic innovation ecosystems (Xie et al., 2022; Li et al., 2023). They allow SMEs to bypass traditional limitations related to physical infrastructure, marketing outreach, and supply chain complexity, thereby reducing operational burdens and lowering market entry barriers (Min & Kim, 2021; Malodia et al., 2023). Through participation in these platforms, SMEs can experiment with new business models, engage with customers directly, and utilize real-time analytics for agile decision-making (Christofi et al., 2023; Hongyun et al., 2025).

Entrepreneurial renewal through digital platforms often involves rebranding, upskilling, and exploring new markets or value propositions (Lu & Shaharudin, 2024; Saeedikiya et al., 2024). However, most existing research remains case-based and lacks longitudinal or process-based perspectives that capture the evolution of digital transformation within SMEs (Garzoni et al., 2020; Slimane et al., 2022). There is also a research gap in distinguishing the varying strategic impacts of different platform types such as operational, social, or financial platforms on SME renewal (Zhang et al., 2022; Gupta & Jagtap, 2024).

Moreover, effective utilization of these platforms hinges on SMEs' absorptive capacity and their ability to reconfigure internal capabilities (Wimelius et al., 2021; Kahveci, 2025). Without sufficient digital literacy or change readiness, many SMEs struggle to transition from passive use to strategic innovation (Tenggono et al., 2024; Clemente-Almendros et al., 2024). Understanding the mechanisms by which platforms shape organizational learning and entrepreneurial dynamism is crucial (Anim-Yeboah et al., 2020; Al Omoush

et al., 2025). Thus, future inquiry should examine how SMEs leverage platforms not merely for digitization, but for deep-rooted renewal and long-term competitiveness.

Towards a Process Model: Theoretical Perspectives and Gaps

While scholarly attention to digital transformation in SMEs has increased, much of the existing research remains fragmented, offering limited insights into the full transformation journey SMEs undergo under resource constraints. Theoretical frameworks such as the Dynamic Capabilities View (DCV) and Resource-Based View (RBV) provide important foundations for understanding how firms adapt, but they often fail to account for the unique pressures, agility, and iterative learning required by SMEs operating in uncertain environments (Li et al., 2018; Slimane et al., 2022; Saeedikiya et al., 2024). Moreover, current models tend to emphasize either input capabilities or transformation outcomes, neglecting the crucial temporal and processual stages in between (Zhang et al., 2022; Christofi et al., 2023).

Emerging studies advocate for process-oriented perspectives by linking platform usage, capability evolution, and entrepreneurial renewal, yet these remain underdeveloped and inconsistent in scope (Malodia et al., 2023; Kahveci, 2025; Wang et al., 2025). There is limited understanding of how SMEs transition through key phases initial awareness, adoption, experimentation, adaptation, and eventual strategic renewal (Garzoni et al., 2020; Al Omoush et al., 2025). A robust process model would help explain how SMEs make strategic decisions, develop absorptive capacity, and interact with the broader digital environment over time (Anim-Yeboah et al., 2020; Tenggono et al., 2024).

Additionally, few frameworks explore how constraints financial, technical, or organizational interact with opportunities afforded by digital platforms and ecosystems (Guo et al., 2024; Chen et al., 2024). The lack of integrative, longitudinal models limits both theoretical advancement and practical applicability (Ngoasong, 2018; Clemente-Almendros et al., 2024). Bridging this gap calls for a dynamic, stepwise model of SME digital transformation one that synthesizes strategic renewal, resource bricolage, and contextual fit to support sustainable evolution (Wimelius et al., 2021; Martínez-Peláez et al., 2024; Hokmabadi et al., 2024). Such a model could serve as a critical guide for both scholars and policymakers.

RESEARCH METHOD

This study adopts a Systematic Literature Review (SLR) to explore how resource constrained SMEs achieve entrepreneurial renewal through digital platforms. The SLR was selected for its transparency, replicability, and ability to produce a comprehensive synthesis of relevant studies. The review was guided by three research questions: How do digital platforms facilitate transformation in SMEs? What stages and mechanisms characterize this transformation? and Which theoretical frameworks have been applied, and where do gaps exist? These questions informed the development of a search strategy comprising keywords such as digital transformation, SMEs, digital platforms, entrepreneurial renewal, and resource-constrained. Boolean operators were applied to enhance precision.

The search process was carried out using three prominent academic databases: Scopus, Web of Science, and ScienceDirect. To be included, studies had to meet the following criteria: they had to be peer-reviewed journal articles published between 2010 and 2024, focus on SMEs, examine the role of digital platforms or technologies in business innovation or renewal, and be written in English. Studies were excluded if they concentrated exclusively on large companies, offered purely technical or engineering-oriented solutions without addressing organizational aspects, or did not directly relate to the transformation of SMEs. The literature search targeted peer-reviewed journal articles published between 2010 and 2024 to capture recent trends in digital transformation while ensuring a broad temporal scope. Inclusion criteria required studies to focus on SMEs, address digital technologies or platforms, and explore themes of innovation or transformation.

Data analysis employed a qualitative descriptive approach to synthesize findings and identify recurring themes. Thematic coding was conducted iteratively, categorizing insights into enablers, barriers, and process dynamics of SME digital transformation. This involved coding textual data to map platform roles and transformation stages, with regular cross-checking among researchers to enhance consistency. The analysis culminated in a conceptual process model that integrates organizational, technological, and ecosystem perspectives. By combining rigorous selection, quality assessment, and thematic synthesis, this methodology provides a solid foundation for addressing the research questions and proposing a framework for SME digital transformation.

RESULTS

Key Drivers and Enablers of Digital Transformation in SMEs

The systematic literature review identifies a range of internal and external drivers that enable resource-constrained SMEs to pursue digital transformation and achieve entrepreneurial renewal. Internally, entrepreneurial orientation, characterized by proactiveness, innovativeness, and risk-taking, is a critical driver, as SMEs with visionary leaders are more likely to embrace digital tools strategically (Li et al., 2018; Khurana et al., 2022). A digital mindset among owners or managers fosters openness to technologies like e-commerce platforms or cloud services, encouraging experimentation and capability development (Malodia et al., 2023). Organizational learning, defined as the process of acquiring and applying new knowledge, enables SMEs to adapt digital solutions to their specific needs, enhancing operational agility (Leso et al., 2023; Al Omoush et al., 2025). For example, SMEs that invest in upskilling employees can better leverage platforms like Shopify for integrated business solutions.

Externally, digital platforms such as Shopee, Tokopedia, and QuickBooks serve as vital enablers by providing affordable, scalable tools for marketing, logistics, and financial management (Xie et al., 2022; Bhuiyan et al., 2024). These platforms reduce entry barriers, allowing SMEs to reach broader markets without significant infrastructure investments. Government policies, including subsidies, tax incentives, and digital literacy programs, further support SMEs, particularly in emerging economies where financial constraints are pronounced (Chen et al., 2021; Martínez-Peláez et al., 2024). For instance, initiatives in Southeast Asia have promoted e-commerce adoption among micro-enterprises, enhancing their competitiveness (Tenggono et al., 2024). Customer pressure, driven by growing expectations for online interactions, also compels SMEs to adopt tools like social media marketing or mobile commerce, as seen in retail and service sectors (Yusuf et al., 2024; Sagala & Őri, 2024).

Peer learning and strategic partnerships amplify these enablers, fostering knowledge exchange and confidence in digital adoption. SMEs participating in industry networks or platform ecosystems gain access to shared resources and best practices, as evidenced by successful transformations in European and Asian markets (Garzoni et al., 2020; Hongyun et al., 2025). These drivers collectively empower SMEs to initiate transformation, but their success hinges on aligning digital tools with strategic goals. The interplay of internal capabilities and external support underscores the need for a structured process to sustain digital renewal across diverse contexts, such as urban versus rural SMEs or manufacturing versus service sectors (Saedikiya et al., 2024).

Barriers and Constraints in the Digital Renewal Process

Despite the opportunities offered by digital platforms, resource-constrained SMEs face persistent barriers that impede their transformation efforts. Limited financial capital is a primary constraint, restricting investments in advanced technologies like big data analytics or enterprise resource planning systems (Rupeika-Apoga & Petrovska, 2022; Guo et al., 2024). Many SMEs, especially in emerging markets, lack the funds to upgrade hardware or subscribe to premium platform services, leading to reliance on basic tools with limited functionality (Markevičius, 2025). Additionally, a shortage of digital skills among employees and managers hinders effective adoption, as SMEs often lack dedicated

IT staff or formal training programs (Leso et al., 2023; Omowole et al., 2024). This skill gap results in superficial or reactive use of technologies, reducing their transformative impact.

Cultural resistance to change is another significant barrier, particularly in traditional or family-owned SMEs, where digital innovation is often viewed as risky or unnecessary (Anim-Yeboah et al., 2020; Malodia et al., 2023). For example, in agricultural SMEs, reluctance to adopt digital tools like online marketplaces stems from entrenched practices and skepticism about technology's value (Burinskienė & Nalivaikė, 2024). Infrastructural limitations, such as unreliable internet connectivity in rural areas, exacerbate digital inequalities, preventing SMEs from fully leveraging platforms like e-commerce or cloud services (Zhang et al., 2022; Uzule & Verina, 2023). Data privacy concerns and uncertainty about return on investment (ROI) further deter SMEs from committing to digital initiatives, as they fear potential risks outweigh benefits (Jiang et al., 2024; Rafferty, 2025).

The misalignment between available technologies and business needs also poses challenges, as SMEs often adopt platforms without a clear strategy, leading to fragmented outcomes (Christofi et al., 2023; Martínez-Peláez et al., 2024). In regions with limited institutional support, such as tailored digital training or subsidies, SMEs struggle to navigate transformation independently, particularly in non-urban settings (Chen et al., 2024). These barriers highlight the need for context-specific interventions that address financial, skill-based, and infrastructural constraints to enable sustainable digital renewal across sectors like retail, manufacturing, or agriculture, and regions with varying digital maturity.

A Synthesized Process Model of Entrepreneurial Renewal

The literature synthesis proposes a four-stage process model for entrepreneurial renewal through digital platforms, tailored to resource-constrained SMEs: Awareness and Motivation, Experimentation and Adoption, Reconfiguration and Scaling, and Strategic Renewal and Institutionalization. In the Awareness and Motivation stage, SMEs recognize the need for digital transformation, often spurred by external pressures such as market disruptions, declining revenues, or competitive threats (Li et al., 2018; Wang et al., 2023). Platforms like social media or e-commerce marketplaces become accessible entry points, offering low-cost solutions for SMEs to explore new opportunities, particularly in retail or service sectors (Min & Kim, 2021; Bhuiyan et al., 2024). This stage is critical for overcoming initial inertia, as SMEs identify digital tools as viable responses to environmental challenges (Saeedikiya et al., 2024).

In the Experimentation and Adoption stage, SMEs engage in low-risk trials, such as launching online sales on platforms like Shopee or adopting digital payment systems like PayPal, which require minimal investment (Slimane et al., 2022; Hongyun et al., 2025). Successful experiments, supported by real-time analytics from platforms, encourage broader adoption of tools like customer relationship management systems or e-invoicing, fostering incremental learning (Garzoni et al., 2020; Tenggono et al., 2024). This stage is characterized by iterative feedback loops, where early successes build confidence and resources for further adoption, as seen in manufacturing SMEs integrating cloud-based inventory tools (Xie et al., 2022).

The Reconfiguration and Scaling stage involves aligning internal processes, such as supply chain management or employee roles, with platform capabilities to achieve strategic integration (Meier et al., 2025; Kahveci, 2025). For instance, retail SMEs may use Shopify's analytics to optimize inventory, while service-based SMEs adopt QuickBooks for financial streamlining, enhancing operational efficiency (Chen et al., 2024). This stage marks a shift from ad-hoc use to deliberate alignment, with variations across sectors like agriculture, where platform integration may focus on supply chain traceability (Jiang et al., 2024).

In the Strategic Renewal and Institutionalization stage, digital transformation becomes embedded in the SME's core strategy, fostering continuous innovation and competitive

advantage (Lu & Shaharudin, 2024; Wang et al., 2025). This model, conceptualized as a cyclical process with feedback loops, accommodates contextual variations, such as urban SMEs leveraging robust internet infrastructure versus rural SMEs facing connectivity challenges (Martínez-Peláez et al., 2024; Yusuf et al., 2024). The iterative nature ensures that SMEs can adapt and scale their digital efforts systematically across diverse industries and regions.

Table 1. Summary of Selected Articles on SME Digital Transformation (n=50)

Author(s) & Year	Region	Focus Area	Platform/Tool Discussed	Key Findings
Li et al. (2018)	China	Entrepreneurial Orientation	E-commerce platforms	Leadership mindset is key to transformation.
Bhuiyan et al. (2024)	South Asia	External Enablers	Shopee, Facebook	Digital platforms expand SME reach affordably.
Malodia et al. (2023)	India	Cultural Barriers	Social media, cloud services	Organizational culture shapes digital openness.
Leso et al. (2023)	Europe	Skill Gaps	Digital payment tools	Digital training enhances SME adaptability.
Meier et al. (2025)	Germany	Reconfiguration	Shopify, ERP systems	Alignment improves process integration.
Martínez-Peláez et al. (2024)	Latin America	Institutional Support	E-commerce, government apps	Tailored policies bridge digital gaps.
Xie et al. (2022)	China	Operational Efficiency	Inventory platforms	Platform data improves decision-making.

Table 1 provides a concise summary of selected articles focusing on the digital transformation of Small and Medium Enterprises (SMEs) across different global regions. The studies reviewed highlight diverse thematic areas such as entrepreneurial orientation, external enablers, cultural barriers, skill gaps, operational efficiency, institutional support, and business process reconfiguration. For instance, Li et al. (2018) emphasizes the role of leadership mindset in driving transformation within China's e-commerce landscape, while Bhuiyan et al. (2024) underscore how platforms like Shopee and Facebook help South Asian SMEs expand their market reach at low cost. In India, Malodia et al. (2023) identify organizational culture as a key determinant of digital openness, especially regarding the use of social media and cloud tools. Meanwhile, Leso et al. (2023) and Meier et al. (2025) examine how upskilling and platform alignment enhance SME adaptability and process integration in Europe and Germany, respectively. Studies by Martínez-Peláez et al. (2024) and Xie et al. (2022) further stress the importance of institutional support and platform-based data analytics in boosting operational performance, especially in Latin America and China. Collectively, these findings reflect the multifaceted nature of SME digital transformation.

DISCUSSION

This systematic literature review illuminates the complex, iterative process of digital transformation in resource-constrained SMEs, highlighting the interplay of internal drivers, external enablers, and persistent barriers. According to Li et al. (2018), internal factors such as entrepreneurial orientation and a digital mindset among SME leaders are pivotal, enabling firms to view digital platforms like Shopee or Shopify as opportunities for innovation rather than mere tools. These traits foster a culture of risk-taking and adaptability, crucial for navigating the uncertainties of digital adoption in resource-scarce contexts. Organizational learning further amplifies this process, as SMEs that actively acquire and apply new knowledge can integrate digital tools into their operations more effectively, as noted by Al Omoush et al. (2025). For instance, retail SMEs in Southeast Asia have leveraged social media analytics to refine marketing strategies, demonstrating how learning drives transformation (Bhuiyan et al., 2024).

Externally, digital ecosystems play a transformative role by bundling services like logistics, payments, and analytics, reducing operational burdens for SMEs. Xie et al. (2022) emphasize that platforms like Tokopedia enable SMEs to access global markets with minimal infrastructure, particularly in emerging economies. Government support, such as subsidies or digital literacy programs, further lowers adoption barriers, especially for micro-enterprises in rural areas, as highlighted by Chen et al. (2021). However, Guo et al. (2024) note that external pressures, such as customer demand for online interactions, often force SMEs into reactive adoption, which can lead to fragmented outcomes if not guided by a strategic framework. Peer networks and industry partnerships also enhance transformation by facilitating knowledge exchange, as seen in European SMEs adopting cloud-based solutions through collaborative ecosystems (Sagala & Óri, 2024).

Despite these enablers, significant challenges persist, particularly in resource-constrained settings. Limited financial capital and digital skills remain major obstacles, with many SMEs lacking the resources to invest in advanced technologies or train staff, as pointed out by Rupeika-Apoga and Petrovska (2022). Cultural resistance, especially in family-owned SMEs in traditional sectors like agriculture, often stifles innovation, with owners viewing digital tools as risky or irrelevant (Anim-Yeboah et al., 2020). Infrastructural gaps, such as poor internet connectivity in rural regions, exacerbate the digital divide, limiting SMEs' ability to leverage platforms fully (Zhang et al., 2022). According to Markevičius (2025), the misalignment between technology and business needs further complicates transformation, as SMEs may adopt platforms like QuickBooks without integrating them strategically, resulting in suboptimal outcomes.

The proposed four-stage model Awareness and Motivation, Experimentation and Adoption, Reconfiguration and Scaling, and Strategic Renewal offers a dynamic framework to navigate these challenges. This model reflects the non-linear nature of transformation, with feedback loops enabling SMEs to build on early successes, as supported by Lu and Shaharudin (2024). However, its implementation may face limitations, such as varying applicability across sectors (e.g., manufacturing vs. services) or regions with differing digital maturity (Martínez-Peláez et al., 2024). Future research could test this model through longitudinal studies or field experiments to validate its efficacy, particularly in underrepresented contexts like rural African SMEs (Yusuf et al., 2024).

CONCLUSION

This study provides an understanding of how digital transformation unfolds in resource-constrained SMEs, emphasizing the pivotal role of digital platforms as catalysts for entrepreneurial renewal. The systematic review highlights that internal driver, such as entrepreneurial orientation and organizational learning, empower SMEs to leverage platforms like e-commerce marketplaces and cloud services to overcome resource limitations and enhance competitiveness. External enablers, including government support and digital ecosystems, create an environment conducive to transformation by reducing operational and financial barriers. However, challenges like limited digital skills, infrastructural gaps, and cultural resistance often hinder progress, particularly in traditional or rural SMEs. The proposed four-stage process model, Awareness and Motivation, Experimentation and Adoption, Reconfiguration and Scaling, and Strategic Renewal, offers a structured framework to guide SMEs through this iterative journey. By mapping the dynamic interplay of internal capabilities and external opportunities, this study underscores that digital transformation is not a one-time event but a continuous cycle of learning and adaptation, enabling SMEs to achieve resilience and long-term innovation across diverse sectors like retail, manufacturing, and agriculture.

The findings yield significant implications for both theory and practice, while acknowledging limitations and avenues for future research. Theoretically, the process model bridges fragmented knowledge by integrating organizational, technological, and ecosystem perspectives, providing a foundation for studying SME digitalization. Practically, SME leaders should prioritize digital literacy and strategic alignment with

platforms, while policymakers should develop tailored programs, such as region-specific training and infrastructure investments, to address digital inequalities. However, this study's reliance on a literature review limits its empirical depth, as it lacks primary data to validate the model across diverse contexts. Additionally, the model may vary in applicability across sectors or regions with differing digital maturity, such as urban versus rural settings. Future research should employ longitudinal studies to track SME transformation over time or conduct field experiments to test the model's efficacy in specific industries, such as agriculture or services, and underrepresented regions, like rural Africa or Latin America, to enhance its generalizability and practical impact.

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