Digital Entrepreneurial Orientation and Sustainable Economic Development: A Systematic Review of Empirical Evidence (2020–2026)

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Abstract
Digital technologies continue to reshape entrepreneurial activities and economic development by enabling innovation, organizational agility, and sustainable value creation. As businesses increasingly adopt artificial intelligence, cloud computing, big data analytics, blockchain, and digital platforms, Digital Entrepreneurial Orientation (DEO) has emerged as a strategic capability that integrates entrepreneurial behaviour with digital transformation. Despite growing scholarly interest, empirical findings remain fragmented across different industries, countries, and theoretical perspectives. This study systematically reviews empirical evidence published between 2020 and 2026 to examine the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development (SED). Following a systematic review approach, peer-reviewed studies were identified, screened, and synthesized to determine prevailing research trends, theoretical foundations, methodological approaches, and key empirical findings. The review indicates that Digital Entrepreneurial Orientation consistently enhances innovation capability, organizational resilience, digital transformation, sustainable business performance, and broader economic development. Innovation capability, organizational learning, digital capability, and knowledge management frequently emerge as mediating mechanisms, while government support, institutional quality, entrepreneurial ecosystems, and digital infrastructure moderate the relationship between DEO and sustainable development outcomes. The review

further identifies conceptual, methodological, contextual, and theoretical gaps that provide directions for future research. The findings contribute to entrepreneurship and strategic management literature by consolidating contemporary evidence on digital entrepreneurship while offering practical implications for managers and policymakers seeking to strengthen sustainable economic development through digital innovation.

Keywords: *Digital Entrepreneurial Orientation, Digital Entrepreneurship, Sustainable Economic Development, Digital Transformation, Innovation Capability, Systematic Review.*

1. Introduction

The increasing diffusion of digital technologies has transformed the global business environment, creating unprecedented opportunities for entrepreneurial innovation, organizational competitiveness, and sustainable economic development. Technologies such as artificial intelligence (AI), cloud computing, blockchain, big data analytics, the Internet of Things (IoT), mobile applications, and digital platforms have fundamentally changed how organizations identify opportunities, mobilize resources, interact with customers, and generate value. These technological developments have accelerated digital transformation across virtually every sector of the economy, enabling firms to redesign business models, improve operational efficiency, strengthen innovation capability, and respond more effectively to changing market conditions (Paul et al., 2023; Philbin et al., 2022).

Entrepreneurship has traditionally been recognized as a major driver of economic growth because entrepreneurial firms introduce innovations, create employment opportunities, stimulate competition, and facilitate structural transformation. However, the digital economy has fundamentally altered the entrepreneurial process. Modern entrepreneurs increasingly depend on digital technologies to identify emerging market opportunities, improve customer engagement, commercialize innovative ideas, and scale their businesses across geographical boundaries. Consequently, entrepreneurial success increasingly depends on an organization's ability to integrate entrepreneurial behaviour with digital capability, giving rise to the concept of Digital Entrepreneurial Orientation (Paul et al., 2023).

Digital Entrepreneurial Orientation (DEO) extends the traditional concept of Entrepreneurial Orientation by incorporating strategic digital capabilities into entrepreneurial activities. Whereas traditional entrepreneurial orientation emphasizes innovativeness, proactiveness, and risk-taking, Digital Entrepreneurial Orientation reflects an organization's strategic commitment to exploiting digital technologies for opportunity recognition, innovation, business model transformation, and sustainable value creation. Organizations exhibiting strong DEO are generally characterized by digital innovativeness, digital agility, proactive adoption of emerging technologies, and the ability to continuously adapt to technological disruption (Paul et al., 2023).

The strategic importance of Digital Entrepreneurial Orientation has increased substantially because digital transformation has become essential for organizational survival and long-term competitiveness. Small and medium-sized enterprises (SMEs), in particular, increasingly rely on digital technologies to overcome resource limitations, improve productivity, strengthen customer relationships, and access new domestic and international markets. Digital transformation also enables firms to improve decision-making through data analytics, optimize production processes through automation, and create innovative products and services that satisfy rapidly changing customer needs (Philbin et al., 2022).

Sustainable Economic Development (SED) has similarly evolved beyond conventional measures of economic growth. Contemporary development perspectives emphasize balanced progress across economic, social, and environmental dimensions while promoting innovation, employment generation, technological advancement, institutional resilience, and responsible resource utilization. Sustainable development therefore requires organizations to generate long-term economic value while simultaneously addressing environmental challenges and promoting social inclusion. Digital entrepreneurship contributes to these objectives by improving innovation capability, facilitating resource efficiency, strengthening productivity, and expanding economic opportunities (Holzmann & Gregori, 2023).

Recent scholarship increasingly recognizes that digital technologies are not merely operational tools but strategic resources capable of transforming entrepreneurial ecosystems and supporting sustainable value creation. Systematic reviews have shown that digital entrepreneurship contributes to sustainability by enabling innovative business models, strengthening stakeholder collaboration, facilitating resource optimization, and supporting inclusive economic participation. Nevertheless, the literature remains fragmented because researchers employ different conceptualizations of Digital Entrepreneurial Orientation and examine its influence across diverse organizational and institutional contexts (Paul et al., 2023; Holzmann & Gregori, 2023).

Furthermore, empirical evidence concerning the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development remains dispersed across entrepreneurship, strategic management, innovation, and information systems literature. Variations in research design, measurement approaches, theoretical perspectives, and contextual settings make it difficult to develop a comprehensive understanding of how Digital Entrepreneurial Orientation contributes to sustainable economic outcomes. A systematic review is therefore appropriate because it synthesizes existing empirical evidence using transparent and rigorous procedures, identifies consistent patterns, evaluates methodological trends, and highlights research gaps requiring further investigation (Paul et al., 2023).

Against this background, this study systematically reviews empirical evidence published between 2020 and 2026 to examine the contribution of Digital Entrepreneurial Orientation to Sustainable Economic Development. By integrating findings across multiple empirical studies, the review provides a comprehensive understanding of current knowledge while identifying opportunities for future research, policy development, and managerial practice.

1.2 Statement of the Problem

The growing adoption of digital technologies has significantly transformed entrepreneurial activities, yet the empirical literature on Digital Entrepreneurial Orientation remains fragmented. Existing studies employ different conceptual definitions, measurement approaches, theoretical perspectives, and methodological designs, making comparison across studies difficult. Although many studies report positive relationships between Digital Entrepreneurial Orientation and organizational performance, innovation capability, and sustainability, the mechanisms underlying these relationships remain inconsistent across contexts (Paul et al., 2023).

In addition, much of the existing literature examines Digital Entrepreneurial Orientation alongside related constructs such as digital capability, digital transformation, entrepreneurial orientation, or sustainable entrepreneurship without providing an integrated synthesis of their implications for Sustainable Economic Development. This fragmentation limits the ability of researchers, managers, and policymakers to draw evidence-based conclusions regarding the strategic

importance of Digital Entrepreneurial Orientation for long-term economic development (Holzmann & Gregori, 2023; Philbin et al., 2022).

Although several reviews have examined digital entrepreneurship and sustainability independently, relatively few studies have systematically synthesized recent empirical evidence focusing specifically on Digital Entrepreneurial Orientation and Sustainable Economic Development. This gap justifies the present systematic review.

1.3 Objective of the Study

The main objective of this study is to systematically review empirical evidence on the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development.

The specific objectives are to:

1. examine the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development;
2. identify the major organizational outcomes associated with Digital Entrepreneurial Orientation;
3. synthesize the mediating and moderating variables influencing this relationship; and
4. identify conceptual, methodological, contextual, theoretical, and future research gaps within the existing literature.

1.4 Research Questions

The study addresses the following research questions:

1. What relationship exists between Digital Entrepreneurial Orientation and Sustainable Economic Development?
2. What organizational outcomes are consistently associated with Digital Entrepreneurial Orientation?
3. Which mediating and moderating variables influence the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development?
4. What major research gaps emerge from the reviewed empirical literature?

1.5 Significance of the Study

This review contributes to entrepreneurship, strategic management, digital innovation, and sustainability literature by consolidating recent empirical evidence on Digital Entrepreneurial Orientation. The findings are expected to provide useful insights for entrepreneurs, business managers, policymakers, researchers, and development agencies seeking to promote sustainable economic development through digital entrepreneurship.

1.6 Scope of the Study

The study reviews peer-reviewed empirical articles published between 2020 and 2026 that examine Digital Entrepreneurial Orientation or closely related constructs in relation to sustainable organizational or economic outcomes. The review focuses on evidence reported in scholarly journal articles and synthesizes the findings using a systematic review approach.

2.0. Literature Review

2.1 Conceptual Review

2.1.1 Entrepreneurial Orientation

Entrepreneurial Orientation (EO) is one of the most established concepts in entrepreneurship and strategic management research. It describes the strategic posture of an organization toward entrepreneurial activities and reflects how firms identify opportunities, innovate, compete, and respond to environmental changes. Unlike entrepreneurship, which often focuses on the characteristics of individual entrepreneurs, Entrepreneurial Orientation examines organizational behaviours that encourage innovation, proactive decision-making, and calculated risk-taking. Over the years, EO has become an important framework for explaining why some firms consistently outperform competitors in dynamic business environments.

The concept was initially introduced by Miller (1983), who argued that entrepreneurial firms are distinguished by three behavioural characteristics: innovativeness, proactiveness, and risk-taking. Lumpkin and Dess (1996) later expanded the framework by incorporating autonomy and competitive aggressiveness, thereby providing a broader understanding of entrepreneurial behaviour. These dimensions collectively explain how organizations create and sustain competitive advantage by exploiting emerging opportunities and responding effectively to environmental uncertainty. Innovativeness refers to an organization's willingness to engage in creativity, experimentation, and technological development. Innovative organizations invest in research and development, introduce new products and services, and continuously improve organizational processes to remain competitive. In today's knowledge-driven economy, innovation increasingly depends on digital technologies, including artificial intelligence, cloud computing, advanced analytics, and automation, which accelerate product development and improve organizational efficiency (Felicetti et al., 2024). Proactiveness describes an organization's ability to anticipate future market demands and exploit opportunities before competitors. Proactive firms actively monitor technological trends, customer preferences, and competitive dynamics to introduce new products, services, or business models ahead of rivals. Such organizations often achieve first-mover advantages, stronger market positioning, and enhanced customer loyalty because they respond quickly to changing market conditions. Risk-taking reflects the willingness of organizations to commit significant resources to projects with uncertain outcomes but potentially substantial returns. Entrepreneurial firms typically invest in new technologies, innovative business models, and market expansion despite uncertainty. However, contemporary entrepreneurship literature emphasizes calculated risk-taking rather than reckless decision-making, where uncertainty is managed through strategic planning, market intelligence, and organizational learning. Autonomy enables employees and organizational units to make independent decisions regarding innovation and opportunity exploitation. Organizations that encourage autonomy often experience greater creativity because employees are empowered to experiment with new ideas and respond rapidly to market changes. Competitive aggressiveness, on the other hand, reflects an organization's determination to outperform competitors through innovation, market penetration, technological leadership, and continuous strategic improvement.

Although Entrepreneurial Orientation remains an influential framework, the rapid diffusion of digital technologies has significantly transformed entrepreneurial activities. Traditional EO dimensions alone are no longer sufficient to explain organizational competitiveness in digitally intensive environments. Organizations increasingly require digital capabilities that enable them to integrate technological innovation with entrepreneurial behaviour. Consequently, researchers have

extended Entrepreneurial Orientation into Digital Entrepreneurial Orientation to capture the strategic importance of digital technologies in contemporary entrepreneurship (Paul et al., 2023).

2.1.2 Digital Entrepreneurial Orientation

Digital Entrepreneurial Orientation (DEO) represents the integration of entrepreneurial behaviour with digital technologies and digital transformation strategies. It reflects an organization's strategic capability to identify, evaluate, and exploit entrepreneurial opportunities through the effective use of digital technologies. Rather than viewing digital technologies merely as operational tools, DEO recognizes them as strategic resources capable of transforming organizational processes, innovation systems, customer relationships, and competitive positioning.

The emergence of Digital Entrepreneurial Orientation is closely associated with the rapid advancement of Industry 4.0 technologies, including artificial intelligence, blockchain, cloud computing, big data analytics, digital platforms, machine learning, and the Internet of Things. These technologies enable organizations to collect and analyse real-time information, automate decision-making, improve operational efficiency, and develop innovative digital business models. As a result, organizations with strong Digital Entrepreneurial Orientation are generally more adaptable, innovative, and resilient than firms relying solely on traditional entrepreneurial practices (Paul et al., 2023). Recent systematic reviews suggest that Digital Entrepreneurial Orientation extends beyond technology adoption by combining digital capability with entrepreneurial thinking to generate sustainable value. Organizations exhibiting high DEO actively use digital technologies to recognise market opportunities, redesign products and services, strengthen customer engagement, and improve organizational learning. This strategic orientation enables firms to respond more effectively to technological disruption while maintaining long-term competitiveness (Holzmann & Gregori, 2023).

Five dimensions are commonly associated with Digital Entrepreneurial Orientation.

Digital innovativeness refers to an organization's commitment to developing and commercializing innovative digital products, services, and business models. Firms demonstrating digital innovativeness invest continuously in emerging technologies and technological experimentation to improve value creation.

Digital proactiveness reflects an organization's ability to anticipate technological developments, recognise emerging digital opportunities, and implement innovative solutions before competitors. Such organizations continuously monitor technological trends and changing customer expectations to maintain competitive advantage.

Digital risk-taking involves an organization's willingness to invest in uncertain digital technologies and disruptive business models despite technological and market uncertainty. Investments in artificial intelligence, cloud infrastructure, blockchain applications, and digital platforms often require substantial financial and managerial commitment, making effective risk management essential.

Digital agility refers to the capability of organizations to respond rapidly to technological change through flexible decision-making, continuous learning, and rapid adaptation of organizational processes. Digital agility enables firms to adjust business models quickly, respond to customer feedback, and improve operational resilience during periods of environmental uncertainty.

Digital opportunity recognition describes the ability of organizations to identify and exploit entrepreneurial opportunities arising from digital technologies and digital ecosystems. Firms possessing strong opportunity-recognition capability use customer analytics, market intelligence, digital platforms, and data-driven insights to discover unmet customer needs and convert technological change into innovative business opportunities. Collectively, these dimensions position Digital Entrepreneurial Orientation as a higher-order organizational capability integrating entrepreneurship, innovation, and digital transformation. Recent evidence suggests that organizations exhibiting stronger DEO consistently demonstrate superior innovation capability, organizational resilience, digital transformation, and sustainable business performance (Paul et al., 2023; Holzmann & Gregori, 2023).

2.1.3 Sustainable Economic Development

Sustainable Economic Development (SED) refers to a pattern of economic progress that promotes long-term prosperity while balancing economic growth, environmental protection, and social well-being. Unlike conventional economic development, which primarily emphasizes increases in gross domestic product (GDP), sustainable economic development adopts a broader perspective by integrating economic productivity with environmental stewardship, technological innovation, institutional resilience, and social inclusion (United Nations, 2015). Contemporary development literature argues that sustainable development should generate present economic benefits without compromising the ability of future generations to satisfy their own developmental needs.

In the digital economy, sustainable economic development increasingly depends on the capacity of governments, businesses, and entrepreneurs to leverage digital technologies for innovation and value creation. Emerging technologies such as artificial intelligence, cloud computing, blockchain, big data analytics, digital platforms, and the Internet of Things (IoT) improve productivity, facilitate efficient resource utilization, strengthen market access, and stimulate organizational innovation. Consequently, digital entrepreneurship has become an important mechanism through which firms contribute to sustainable economic transformation (Holzmann & Gregori, 2023).

Entrepreneurship remains one of the principal drivers of sustainable economic development because entrepreneurial firms stimulate innovation, generate employment, promote industrial diversification, and facilitate technological diffusion across industries. Digital entrepreneurship strengthens these contributions by enabling entrepreneurs to exploit digital technologies in developing innovative business models, expanding into new markets, improving customer engagement, and enhancing organizational resilience. Recent systematic reviews conclude that digital technologies increasingly function as enablers of sustainable entrepreneurship by creating new opportunities for economic, environmental, and social value creation (Holzmann & Gregori, 2023; Paul et al., 2023). From an organizational perspective, sustainable economic development requires firms to balance profitability with environmental responsibility and social value creation. Organizations are increasingly expected to improve operational efficiency while reducing environmental impacts, promoting responsible resource utilization, and enhancing social welfare. Digital technologies facilitate these objectives by enabling intelligent resource management, predictive maintenance, smart manufacturing, digital supply chains, and data-driven decision-making. Consequently, Digital Entrepreneurial Orientation supports organizations in aligning technological innovation with broader sustainability objectives (Holzmann & Gregori, 2023).

Furthermore, the United Nations Sustainable Development Goals (SDGs) emphasize the strategic role of entrepreneurship, innovation, digitalization, and resilient infrastructure in promoting inclusive and sustainable economic development. Goals relating to decent work, industry and

innovation, responsible production, reduced inequalities, and sustainable economic growth highlight the importance of entrepreneurial innovation in addressing global development challenges (United Nations, 2015).

2.1.4 Indicators of Sustainable Economic Development

To evaluate the contribution of Digital Entrepreneurial Orientation to Sustainable Economic Development, contemporary literature identifies several key indicators that collectively capture economic, environmental, and social progress.

Economic Growth

Economic growth remains a fundamental indicator because it reflects improvements in productivity, industrial output, investment, and national income. However, sustainable economic growth emphasizes long-term competitiveness, innovation, and resilience rather than short-term production increases. Organizations possessing strong Digital Entrepreneurial Orientation contribute to sustainable growth by improving operational efficiency, accelerating technological innovation, reducing transaction costs, and expanding market opportunities through digital transformation (Paul et al., 2023).

Employment Generation

Employment creation is another important indicator because sustainable development requires productive employment capable of improving household welfare and reducing poverty. Digital entrepreneurship contributes to employment through the establishment of technology-based enterprises, digital platforms, e-commerce businesses, fintech services, software development firms, and other knowledge-intensive industries. Digital technologies also encourage self-employment, freelancing, and remote work opportunities, thereby improving labour-market participation and economic inclusion (Holzmann & Gregori, 2023).

Innovation-Led Productivity

Innovation-led productivity reflects the ability of organizations to improve efficiency through technological innovation and continuous learning. Organizations with strong Digital Entrepreneurial Orientation continuously invest in research and development, automation, digital platforms, artificial intelligence, and advanced analytics to improve productivity and organizational competitiveness. Innovation therefore functions as a major mechanism linking digital entrepreneurship with sustainable economic development (Paul et al., 2023).

Environmental Sustainability

Environmental sustainability refers to the responsible management of natural resources while minimizing pollution and environmental degradation. Digital technologies enable organizations to optimize energy consumption, reduce waste, improve supply chain efficiency, and support circular economy initiatives through intelligent monitoring and predictive analytics. Consequently, digital entrepreneurship contributes to environmentally sustainable production and consumption systems (Holzmann & Gregori, 2023).

Social Inclusion

Social inclusion reflects equitable access to employment, education, healthcare, financial services, digital infrastructure, and entrepreneurial opportunities. Digital technologies reduce geographical

barriers by enabling entrepreneurs and consumers to participate in online markets, digital financial systems, and virtual business ecosystems. These developments contribute to poverty reduction, financial inclusion, and broader participation in economic activities, thereby strengthening sustainable development (United Nations, 2015; Holzmann & Gregori, 2023).

2.2 Conceptual Framework

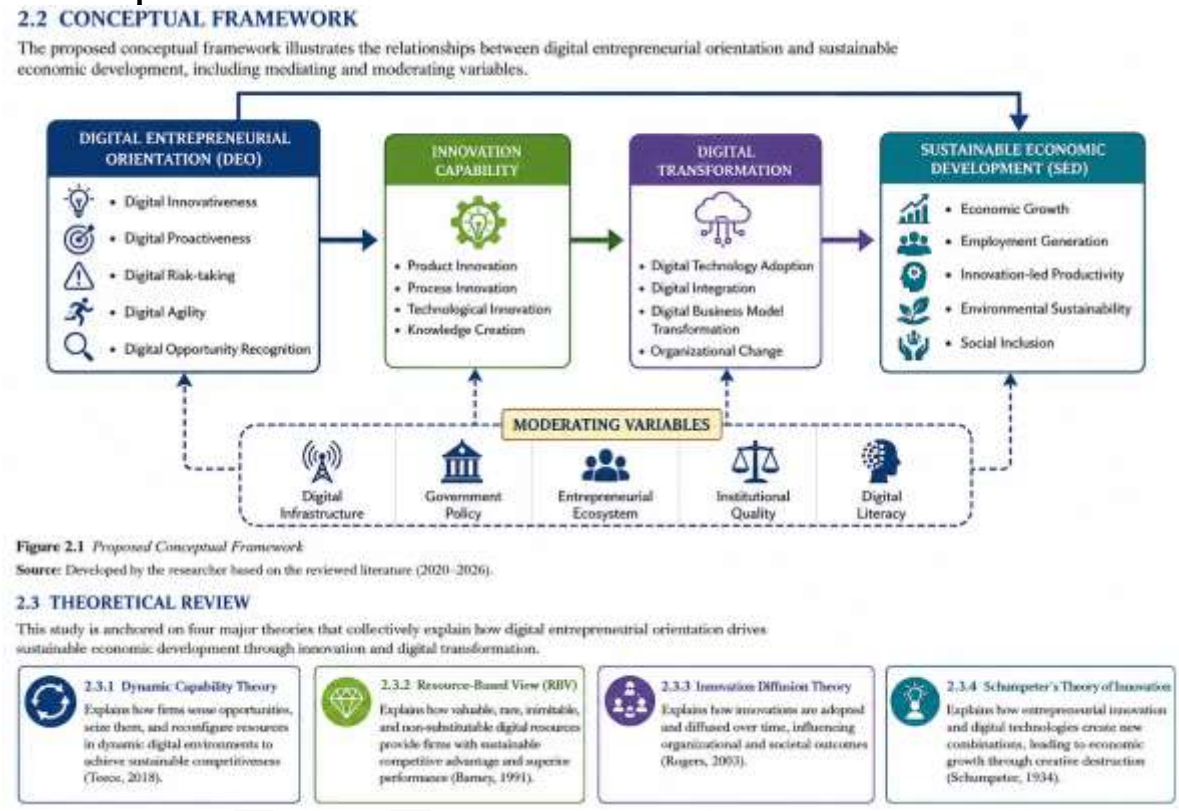


Figure 2.1 *Proposed Conceptual Framework*

Source: Developed by the researcher based on the reviewed literature (2020–2026).

2.3 THEORETICAL REVIEW

This study is anchored on four major theories that collectively explain how digital entrepreneurial orientation drives sustainable economic development through innovation and digital transformation.

2.3.1 Dynamic Capability Theory
Explains how firms sense opportunities, seize them, and reconfigure resources in dynamic digital environments to achieve sustainable competitiveness (Teece, 2018).

2.3.2 Resource-Based View (RBV)
Explains how valuable, rare, inimitable, and non-substitutable digital resources provide firms with sustainable competitive advantage and superior performance (Barney, 1991).

2.3.3 Innovation Diffusion Theory
Explains how innovations are adopted and diffused over time, influencing organizational and societal outcomes (Rogers, 2003).

2.3.4 Schumpeter's Theory of Innovation
Explains how entrepreneurial innovation and digital technologies create new combinations, leading to economic growth through creative destruction (Schumpeter, 1934).

Explanation of the Conceptual Framework

The conceptual framework illustrates the theoretical relationship between digital entrepreneurial orientation and sustainable economic development. The framework proposes that organizations possessing stronger digital entrepreneurial orientation are more capable of developing innovation capability and accelerating digital transformation. These organizational capabilities subsequently improve sustainable economic development through enhanced productivity, increased employment opportunities, environmental sustainability, social inclusion, and long-term economic growth. The framework further recognizes that the strength of these relationships may depend on contextual factors including digital infrastructure, government support, institutional quality, entrepreneurial ecosystems, and digital literacy. These variables either strengthen or weaken the ability of organizations to convert digital entrepreneurial capabilities into sustainable economic outcomes. Consequently, the framework integrates both organizational-level strategic capabilities and environmental conditions that influence sustainable development.

The proposed framework is consistent with the Dynamic Capability Theory, Resource-Based View, and Innovation Diffusion Theory, which collectively explain how organizations deploy digital resources to create sustainable competitive advantage and broader economic development.

The extracted studies covered multiple countries across Asia, Africa, Europe, and the Middle East. Most studies focused on Small and Medium-sized Enterprises (SMEs), while a few examined entrepreneurs, manufacturing firms, agribusinesses, and high-technology firms.

2.2 Theoretical Review

The relationship between Digital Entrepreneurial Orientation (DEO) and Sustainable Economic Development (SED) can be explained through several complementary theoretical perspectives. Among the most relevant are Dynamic Capability Theory, the Resource-Based View (RBV), Innovation Diffusion Theory (IDT), and Schumpeter's Theory of Innovation. Collectively, these theories explain how organizations leverage entrepreneurial behaviour, digital technologies, and strategic resources to create sustainable competitive advantage and contribute to economic development.

2.2.1 Dynamic Capability Theory

Dynamic Capability Theory, developed by Teece, Pisano, and Shuen (1997), explains how organizations maintain competitiveness by sensing opportunities, seizing them, and continuously reconfiguring internal resources in response to environmental change. In highly dynamic digital environments, firms must constantly renew their technological capabilities and strategic competencies to remain competitive.

Within the context of Digital Entrepreneurial Orientation, Dynamic Capability Theory suggests that organizations possessing strong digital capabilities are better able to identify emerging technological opportunities, integrate digital innovations into existing business models, and respond rapidly to market changes. Rather than viewing digital technologies as isolated operational tools, the theory emphasizes their integration into organizational strategy to strengthen innovation capability and long-term competitiveness (Teece et al., 1997).

Recent systematic reviews reinforce this perspective by demonstrating that successful digital entrepreneurship depends on an organization's ability to continuously adapt to technological disruption, redesign business models, and integrate digital technologies into value creation processes. Organizations exhibiting high Digital Entrepreneurial Orientation consistently demonstrate superior adaptability, innovation capability, and resilience because they continuously develop and renew their digital competencies (Paul et al., 2023).

The theory is particularly relevant to this study because sustainable economic development increasingly depends on organizations' capacity to adapt to technological change while maintaining innovation, productivity, and competitiveness. Firms capable of sensing digital opportunities, investing in emerging technologies, and reconfiguring organizational resources are more likely to contribute to long-term economic sustainability.

2.2.2 Resource-Based View (RBV)

The Resource-Based View, advanced by Barney (1991), argues that sustainable competitive advantage arises from valuable, rare, inimitable, and non-substitutable organizational resources. Rather than emphasizing external market conditions, RBV focuses on internal organizational capabilities that enable firms to outperform competitors.

Digital Entrepreneurial Orientation aligns closely with RBV because digital capabilities constitute strategic organizational resources. Advanced digital infrastructure, technological knowledge, data analytics capability, innovation competence, and entrepreneurial expertise are valuable assets that enhance organizational performance. Firms possessing these resources are generally better

positioned to exploit entrepreneurial opportunities, improve operational efficiency, and sustain competitive advantage.

Recent literature further suggests that digital technologies become strategic resources only when integrated with entrepreneurial capabilities and organizational learning. Simply investing in technology does not guarantee superior performance. Instead, organizations derive sustainable value when digital technologies are combined with innovative managerial practices, knowledge management, and entrepreneurial decision-making (Holzmann & Gregori, 2023).

From this perspective, Digital Entrepreneurial Orientation represents a strategic organizational capability through which valuable digital resources are transformed into innovation, productivity improvements, and sustainable economic outcomes.

2.2.3 Innovation Diffusion Theory

Innovation Diffusion Theory (Rogers, 2003) explains how innovations spread across organizations and societies over time. The theory proposes that the adoption of innovation depends on characteristics such as relative advantage, compatibility, complexity, trialability, and observability. Applied to Digital Entrepreneurial Orientation, Innovation Diffusion Theory suggests that organizations exhibiting stronger entrepreneurial behaviour are more likely to adopt digital technologies earlier than competitors. Early adoption enables firms to improve organizational learning, accelerate innovation, strengthen customer engagement, and develop competitive digital business models. Recent systematic reviews indicate that digital entrepreneurs frequently function as innovation adopters and innovation disseminators within entrepreneurial ecosystems. Through continuous experimentation and technological adoption, digitally entrepreneurial organizations facilitate the diffusion of new technologies across industries, thereby contributing to broader economic transformation (Paul et al., 2023).

Innovation Diffusion Theory therefore provides an important explanation for how digital technologies become integrated into entrepreneurial activities and subsequently contribute to sustainable economic development.

2.2.4 Schumpeter's Theory of Innovation

Schumpeter's Theory of Innovation remains one of the foundational theories of entrepreneurship. Schumpeter (1934) argued that entrepreneurs drive economic development by introducing innovations that disrupt existing markets and create new combinations of products, production methods, markets, and organizational structures. This process of "creative destruction" continuously transforms economic systems and stimulates long-term development.

Within contemporary digital environments, Digital Entrepreneurial Orientation represents a modern extension of Schumpeterian entrepreneurship. Digital entrepreneurs employ technologies such as artificial intelligence, cloud computing, blockchain, big data analytics, and digital platforms to redesign traditional business models and create innovative forms of value. These technologies enable firms to increase efficiency, improve customer experiences, expand market reach, and generate sustainable competitive advantage.

Holzmann and Gregori (2023) argue that digital technologies increasingly serve as enablers of sustainable entrepreneurship because they facilitate innovative business models that simultaneously generate economic, environmental, and social value. Similarly, Paul et al. (2023) emphasize that digital entrepreneurship integrates technological innovation with entrepreneurial opportunity recognition, thereby supporting long-term organizational competitiveness and sustainable development.

Consequently, Schumpeter's theory provides a strong conceptual foundation for understanding how Digital Entrepreneurial Orientation contributes to sustainable economic development through continuous innovation and entrepreneurial transformation.

2.2.5 Theoretical Implications for the Study

The four theories collectively provide a comprehensive explanation of the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development. Dynamic Capability Theory explains organizational adaptation to technological change; the Resource-Based View highlights the strategic value of digital resources; Innovation Diffusion Theory explains the adoption and dissemination of technological innovations; while Schumpeter's Theory of Innovation positions entrepreneurship as the engine of economic transformation.

Among these perspectives, Dynamic Capability Theory serves as the primary theoretical lens because it directly explains how organizations integrate entrepreneurial behaviour with digital technologies to strengthen innovation capability, organizational resilience, and sustainable competitiveness. The remaining theories complement this perspective by providing additional insights into resource utilization, technology adoption, and entrepreneurial innovation, thereby offering a robust theoretical foundation for examining the contribution of Digital Entrepreneurial Orientation to Sustainable Economic Development.

2.4 Empirical Review

The empirical literature on Digital Entrepreneurial Orientation (DEO) has expanded considerably since 2020, reflecting the increasing role of digital technologies in entrepreneurship, organizational competitiveness, and sustainable development. Although researchers employ different conceptualizations—including digital entrepreneurial orientation, digital entrepreneurship, digital capability, entrepreneurial orientation, and digital transformation—the cumulative evidence indicates that organizations integrating entrepreneurial behaviour with digital technologies generally achieve superior innovation capability, organizational resilience, competitive advantage, and sustainable performance (Paul et al., 2023).

2.4.1 Digital Entrepreneurial Orientation and Innovation Capability

Innovation capability represents one of the most consistently reported outcomes associated with Digital Entrepreneurial Orientation. Empirical evidence synthesized by Paul et al. (2023) indicates that digitally oriented entrepreneurial firms demonstrate stronger capacities for product innovation, process innovation, business model innovation, and technological experimentation than organizations relying primarily on conventional entrepreneurial practices. Digital technologies facilitate opportunity recognition through improved market intelligence, customer analytics, artificial intelligence, and real-time information processing, enabling firms to respond rapidly to changing customer preferences and technological developments.

Organizations characterized by high levels of Digital Entrepreneurial Orientation also demonstrate greater investment in research and development, digital experimentation, and organizational learning. These investments strengthen firms' ability to commercialize innovative ideas, improve operational efficiency, and create sustainable competitive advantage. Consequently, innovation capability functions as a principal mechanism through which Digital Entrepreneurial Orientation contributes to organizational growth and long-term sustainability (Paul et al., 2023).

Furthermore, recent literature suggests that digital innovation extends beyond technological adoption to include organizational transformation, collaborative innovation, and ecosystem

participation. Firms increasingly innovate through digital platforms, strategic alliances, open innovation networks, and knowledge-sharing systems that facilitate continuous improvement and entrepreneurial experimentation (Holzmann & Gregori, 2023).

2.4.2 Digital Entrepreneurial Orientation and Organizational Performance

Organizational performance is another recurring outcome in the empirical literature. Systematic evidence indicates that firms possessing stronger Digital Entrepreneurial Orientation generally achieve higher productivity, improved operational efficiency, enhanced customer satisfaction, stronger market responsiveness, and superior financial performance (Paul et al., 2023).

Digital technologies enable organizations to optimize production processes, automate repetitive activities, improve resource allocation, and enhance managerial decision-making through advanced analytics. These improvements strengthen organizational competitiveness by reducing operating costs, accelerating innovation, and improving service quality. Consequently, organizations integrating entrepreneurial behaviour with digital transformation are generally better positioned to achieve sustainable performance under conditions of technological uncertainty.

However, empirical evidence also indicates that digital technologies alone do not guarantee improved performance. Organizational success depends on complementary capabilities such as strategic leadership, employee digital competence, organizational learning, and effective knowledge management. Firms unable to integrate technological resources with entrepreneurial decision-making frequently experience lower returns from digital investments despite adopting sophisticated technologies.

2.4.3 Digital Entrepreneurial Orientation and Sustainable Business Performance

The relationship between Digital Entrepreneurial Orientation and sustainable business performance has received increasing attention because organizations are expected to balance economic success with environmental responsibility and social value creation. The systematic review by Holzmann and Gregori (2023) indicates that digital technologies enable entrepreneurs to develop sustainable business models through resource optimization, intelligent production systems, circular economy practices, and stakeholder collaboration.

Digitally entrepreneurial firms increasingly employ artificial intelligence, cloud computing, blockchain technologies, and digital platforms to improve operational efficiency while simultaneously reducing environmental impacts. Intelligent production systems facilitate energy efficiency, predictive maintenance, waste reduction, and optimized resource utilization. Digital platforms further strengthen sustainability by promoting collaborative consumption, digital marketplaces, and innovative service delivery models that minimize environmental costs.

The literature therefore suggests that Digital Entrepreneurial Orientation contributes to sustainable business performance by simultaneously improving economic competitiveness, environmental sustainability, and organizational resilience. This multidimensional contribution aligns closely with contemporary perspectives on sustainable development that integrate financial performance with broader environmental and social objectives (Holzmann & Gregori, 2023).

2.4.4 Mediating Mechanisms

A major finding emerging from contemporary research is that the influence of Digital Entrepreneurial Orientation on sustainable outcomes is frequently indirect. Rather than exerting an immediate effect on organizational performance, Digital Entrepreneurial Orientation operates through several organizational capabilities that mediate its contribution to sustainable

development. Innovation capability consistently emerges as the strongest mediating mechanism because organizations possessing stronger digital entrepreneurial orientation demonstrate greater capacity to generate innovative products, services, and business models. Organizational learning similarly facilitates knowledge acquisition, technological adaptation, and continuous capability development. Knowledge management also functions as an important mediator by enabling firms to acquire, share, and utilize digital knowledge more effectively. Organizations with effective knowledge management systems are generally better positioned to transform technological information into organizational innovation and strategic decision-making. Recent literature also identifies digital capability, strategic flexibility, business model innovation, and organizational agility as additional mechanisms linking Digital Entrepreneurial Orientation with sustainable organizational performance (Paul et al., 2023).

2.4.5 Moderating Variables

The reviewed literature demonstrates that the effectiveness of Digital Entrepreneurial Orientation depends substantially on organizational and environmental conditions. Government policy, institutional quality, entrepreneurial ecosystems, digital infrastructure, access to finance, managerial competence, and digital literacy frequently strengthen or weaken the relationship between Digital Entrepreneurial Orientation and sustainable economic outcomes (Holzmann & Gregori, 2023). Supportive institutional environments encourage entrepreneurship by improving access to technological infrastructure, innovation funding, entrepreneurial education, and digital connectivity. Conversely, organizations operating within weak institutional environments frequently experience difficulties adopting digital technologies because of inadequate infrastructure, limited digital skills, financial constraints, or regulatory uncertainty.

Managerial competence further moderates the relationship because organizational leaders influence technology adoption, innovation investment, strategic decision-making, and organizational learning. Firms possessing digitally competent leadership generally derive greater benefits from Digital Entrepreneurial Orientation than organizations lacking strategic technological capability.

2.4.6 Methodological Trends in the Literature

The empirical literature reviewed by Paul et al. (2023) reveals several methodological characteristics. Cross-sectional survey research remains the dominant research design, reflecting the widespread use of questionnaire-based studies among entrepreneurs and SMEs. Structural Equation Modelling (SEM) and Partial Least Squares Structural Equation Modelling (PLS-SEM) constitute the most frequently employed analytical techniques because they enable researchers to examine complex relationships involving mediators and moderators.

Although these methodologies provide valuable evidence regarding organizational relationships, they also present limitations. Cross-sectional designs restrict causal inference because variables are measured at a single point in time. Similarly, the concentration of studies within selected geographical regions limits the generalizability of findings across different institutional environments. Consequently, recent systematic reviews recommend increased use of longitudinal designs, mixed-method approaches, and cross-country comparative studies to improve understanding of Digital Entrepreneurial Orientation across diverse contexts (Paul et al., 2023).

2.4.7 Synthesis of Empirical Evidence

Overall, the empirical literature demonstrates a remarkably consistent pattern. Organizations exhibiting stronger Digital Entrepreneurial Orientation generally achieve superior innovation capability, organizational resilience, digital transformation, sustainable business performance, and competitive advantage. However, these outcomes are influenced by complementary organizational capabilities—including innovation capability, organizational learning, knowledge management, digital capability, and strategic flexibility—as well as external conditions such as digital infrastructure, government support, institutional quality, and entrepreneurial ecosystems.

The reviewed evidence therefore supports the proposition that Digital Entrepreneurial Orientation constitutes an important strategic capability through which organizations create sustainable economic value. Nevertheless, the literature also highlights conceptual inconsistencies, methodological limitations, and contextual differences that justify continued systematic investigation and provide the basis for identifying research gaps.

2.5 Research Gaps

The rapid expansion of research on Digital Entrepreneurial Orientation (DEO) demonstrates its increasing importance in entrepreneurship, strategic management, and sustainable development. Nevertheless, the systematic review reveals several gaps that continue to limit the development of a coherent body of knowledge. These gaps provide the rationale for the present review and indicate important directions for future research.

2.5.1 Conceptual Gap

One of the most significant gaps identified in the reviewed literature relates to the conceptualization of Digital Entrepreneurial Orientation. Although the construct has gained increasing scholarly attention, there is no universally accepted definition or measurement framework. Some studies conceptualize DEO as an extension of Entrepreneurial Orientation that incorporates digital technologies, whereas others use related concepts such as digital entrepreneurship, digital capability, digital transformation, digital orientation, or technology-enabled entrepreneurship interchangeably (Paul et al., 2023).

This conceptual inconsistency has resulted in variations in measurement scales and research findings, making direct comparison across studies difficult. While some researchers operationalize DEO using dimensions such as digital innovativeness, digital proactiveness, digital agility, digital risk-taking, and digital opportunity recognition, others employ broader indicators associated with digital transformation or organizational digital capability (Holzmann & Gregori, 2023). Consequently, further conceptual refinement is required to establish a standardized framework capable of improving theoretical development and empirical comparability.

2.5.2 Methodological Gap

The reviewed literature also reveals important methodological limitations. Most empirical investigations employ quantitative cross-sectional survey designs that collect data at a single point in time. Although these studies provide valuable insights into the relationships among Digital Entrepreneurial Orientation, innovation capability, and organizational performance, they provide limited evidence regarding causality or organizational change over time (Paul et al., 2023).

Similarly, Structural Equation Modelling (SEM) and Partial Least Squares Structural Equation Modelling (PLS-SEM) dominate the analytical approaches used in recent studies. While these techniques effectively examine complex relationships involving mediating and moderating

variables, the limited use of longitudinal, mixed-method, experimental, and qualitative research restricts understanding of how Digital Entrepreneurial Orientation evolves within changing technological and institutional environments.

Future studies should therefore adopt longitudinal research designs capable of examining organizational adaptation over time. Mixed-method approaches combining quantitative analysis with qualitative evidence would also provide richer insights into how organizations integrate entrepreneurial behaviour with digital transformation.

2.5.3 Contextual Gap

The systematic review indicates considerable geographical concentration within the existing literature. Most empirical studies have been conducted in Asia and selected European economies where digital infrastructure, technological capability, and institutional support are relatively advanced (Paul et al., 2023). Comparatively fewer investigations examine Digital Entrepreneurial Orientation within Sub-Saharan Africa, Latin America, and other developing regions.

This imbalance limits the generalizability of existing findings because institutional quality, digital infrastructure, entrepreneurial ecosystems, access to finance, and technological readiness differ substantially across countries. Organizations operating within emerging economies frequently encounter infrastructural deficiencies, digital skill shortages, regulatory uncertainty, and financial constraints that may influence the effectiveness of Digital Entrepreneurial Orientation.

Consequently, additional empirical research is required within developing economies, particularly African countries, to determine whether existing theoretical relationships remain applicable under different institutional and socioeconomic conditions.

2.5.4 Theoretical Gap

Another important gap concerns theoretical integration. Existing studies frequently rely on a single theoretical perspective, such as Dynamic Capability Theory, the Resource-Based View, Innovation Diffusion Theory, or Entrepreneurial Orientation Theory, to explain Digital Entrepreneurial Orientation. Although each theory provides valuable insights, individual theoretical perspectives often fail to capture the multidimensional relationship between digital technologies, entrepreneurial behaviour, organizational capability, and sustainable development.

The present review argues that greater integration of complementary theories would provide a more comprehensive explanation of Digital Entrepreneurial Orientation. Dynamic Capability Theory explains organizational adaptation to technological change; the Resource-Based View emphasizes strategic resource deployment; Innovation Diffusion Theory explains technology adoption; while Schumpeter's Theory of Innovation highlights entrepreneurship as the engine of economic transformation. Integrating these perspectives would strengthen theoretical explanations and improve future empirical investigations.

2.5.5 Time Gap

The digital business environment continues to evolve rapidly because of continuous technological innovation. Artificial intelligence, blockchain, cloud computing, generative AI, advanced analytics, digital platforms, and intelligent automation have significantly transformed entrepreneurial activities during the last few years. Consequently, empirical findings published before recent technological developments may not fully reflect current organizational realities.

The systematic review therefore highlights the importance of continuously updating the evidence base as digital technologies evolve. Additional systematic reviews incorporating newly published

empirical studies will improve understanding of how Digital Entrepreneurial Orientation influences sustainable economic development under changing technological conditions.

2.5.6 Summary of Research Gaps

The systematic review identifies five major research gaps:
Conceptual Gap: Lack of a universally accepted conceptualization and measurement of Digital Entrepreneurial Orientation.
Methodological Gap: Heavy reliance on cross-sectional quantitative studies with limited longitudinal and mixed-method research.
Contextual Gap: Limited empirical evidence from developing economies, particularly Sub-Saharan Africa.
Theoretical Gap: Limited integration of complementary theoretical perspectives explaining Digital Entrepreneurial Orientation.
Time Gap: Rapid technological changes require continuous updating of empirical evidence.
Addressing these gaps will strengthen theoretical development, improve methodological rigor, and provide more comprehensive evidence regarding the contribution of Digital Entrepreneurial Orientation to Sustainable Economic Development.

2.6 Chapter Summary

This chapter reviewed the conceptual, theoretical, and empirical literature relating to Digital Entrepreneurial Orientation and Sustainable Economic Development. The conceptual review established that Digital Entrepreneurial Orientation extends traditional Entrepreneurial Orientation by integrating entrepreneurial behaviour with digital technologies to strengthen innovation, organizational agility, and strategic competitiveness. Sustainable Economic Development was conceptualized as a multidimensional construct encompassing economic growth, employment generation, innovation-led productivity, environmental sustainability, and social inclusion.
The theoretical review demonstrated that Dynamic Capability Theory provides the principal explanation for the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development, while the Resource-Based View, Innovation Diffusion Theory, and Schumpeter's Theory of Innovation provide complementary perspectives. The empirical review synthesized contemporary evidence indicating that Digital Entrepreneurial Orientation contributes positively to innovation capability, digital transformation, organizational resilience, sustainable business performance, and organizational competitiveness. However, the literature also revealed conceptual inconsistencies, methodological limitations, contextual imbalances, theoretical fragmentation, and temporal gaps that justify further investigation.
The next chapter describes the methodology adopted for this study, including the systematic review design, search strategy, study selection procedures, inclusion and exclusion criteria, quality appraisal process, data extraction procedures, and narrative synthesis methods.

3.0. Research Methodology

3.1 Research Design

This study adopted a systematic literature review (SLR) research design to synthesize empirical evidence on the relationship between Digital Entrepreneurial Orientation (DEO) and Sustainable Economic Development (SED). A systematic literature review is a rigorous and transparent research method that identifies, evaluates, and synthesizes existing empirical studies to answer predefined research questions. Unlike traditional narrative reviews, systematic reviews employ

explicit search strategies, predetermined inclusion and exclusion criteria, and structured data extraction procedures to minimize selection bias and improve the reliability and reproducibility of findings (Page et al., 2021; Snyder, 2019).

The choice of a systematic review is appropriate because research on Digital Entrepreneurial Orientation has expanded rapidly during the last decade, resulting in a fragmented body of knowledge dispersed across entrepreneurship, strategic management, innovation, information systems, and sustainability literature. Synthesizing this evidence provides a comprehensive understanding of the current state of knowledge, identifies methodological and theoretical trends, and highlights gaps requiring further investigation.

3.2 Review Protocol

To ensure methodological rigor, this review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines developed by Page et al. (2021). The PRISMA framework provides internationally accepted procedures for conducting transparent and reproducible systematic reviews through four major stages: Identification of relevant studies;, Screening of retrieved records; Eligibility assessment of full-text articles; and Inclusion of studies meeting the predefined selection criteria.

The adoption of the PRISMA framework enhanced the credibility of the review by ensuring consistency in study identification, selection, documentation, and reporting.

3.3 Sources of Literature

Relevant studies were identified from internationally recognized electronic databases containing peer-reviewed academic publications. These databases included: Scopus, Web of Science, ScienceDirect, SpringerLink, Emerald Insight, Taylor & Francis Online, Wiley Online Library, Sage Journals, Google Scholar (for supplementary searches)

These databases were selected because they index high-quality journals in entrepreneurship, innovation, digital transformation, strategic management, and sustainability.

3.4 Search Strategy

A comprehensive electronic search was conducted using combinations of keywords and Boolean operators. The search strategy was designed to retrieve empirical studies examining Digital Entrepreneurial Orientation and Sustainable Economic Development published between January 2020 and June 2026.

Examples of search strings included: "Digital Entrepreneurial Orientation" AND "Sustainable Economic Development", "Digital Entrepreneurship" AND Sustainability, "Digital Orientation" AND Firm Performance, "Entrepreneurial Orientation" AND Digital Transformation, "Digital Capability" AND Sustainable Performance,"Digital Innovation" AND Economic Development, "Entrepreneurship" AND Digital Technologies AND Sustainability

Boolean operators (AND, OR), phrase searching, and truncation were employed to improve search sensitivity and specificity.

3.5 Inclusion Criteria

Studies were included if they satisfied all of the following conditions: Published between **2020 and 2026**. Published in peer-reviewed journals. Written in the English language. Reported empirical findings.Examined Digital Entrepreneurial Orientation or closely related constructs (e.g., Digital Entrepreneurship, Digital Orientation, Digital Capability, Sustainable

Entrepreneurial Orientation). Investigated organizational, business, or economic outcomes related to sustainability. Full text was available for review.

3.6 Exclusion Criteria

Studies were excluded if they were published before 2020. Were conference abstracts, editorials, dissertations, books, or book chapters. Were conceptual papers without empirical evidence. Focused exclusively on technological development without entrepreneurial or sustainability dimensions. Were duplicate publications. Had methodological information.

3.7 Study Selection Procedure

The study selection process followed the PRISMA 2020 framework.

Initially, all records retrieved from the electronic databases were exported into a reference management system where duplicate records were removed. Titles and abstracts were then screened to determine their relevance to the review objectives. Full-text articles that satisfied the preliminary screening criteria were subsequently assessed against the predefined inclusion and exclusion criteria.

Only studies meeting all eligibility requirements were retained for data extraction and narrative synthesis.

3.8 Quality Assessment

Methodological quality assessment was conducted to evaluate the reliability of the included empirical studies. The review considered several quality indicators, including: clarity of research objectives; appropriateness of the research design; adequacy of sample size; validity and reliability of research instruments; appropriateness of statistical analysis; transparency of reporting; and consistency between findings and conclusions. Studies demonstrating acceptable methodological quality were retained for synthesis, while studies with inadequate methodological information were excluded.

3.9 Data Extraction

A structured data extraction form was developed to ensure consistency in recording information from each eligible study. The following information was extracted: Author(s), Year of publication, Country, Research context, Sample size, Research design, independent variable(s)Dependent variable(s)Statistical techniques employed Key findings Implications relevant to Digital Entrepreneurial Orientation and Sustainable Economic Development. The extracted information formed the basis for the descriptive analysis and narrative synthesis presented in Chapter Four.

3.10 Data Synthesis

Because the reviewed studies differed considerably in research context, measurement approaches, analytical techniques, and outcome variables, the evidence was synthesized using narrative synthesis rather than statistical pooling.

Narrative synthesis involved identifying recurring themes, comparing findings across studies, examining methodological patterns, and summarizing areas of convergence and divergence. The synthesis focused on: organizational outcomes associated with Digital Entrepreneurial Orientation; mediating mechanisms; moderating variables; methodological characteristics; and emerging research gaps. This approach enabled a comprehensive interpretation of the empirical evidence while preserving the contextual richness of the reviewed studies.

3.11 Reliability and Validity of the Review

The credibility of this systematic review was enhanced through several procedures. First, a transparent search strategy was adopted to identify relevant literature from multiple reputable databases. Second, explicit inclusion and exclusion criteria were established before study selection. Third, a structured data extraction protocol ensured consistency in recording study characteristics. Finally, the use of the PRISMA 2020 framework enhanced methodological transparency and reproducibility, thereby strengthening the validity and reliability of the review findings (Page et al., 2021).

3.12 Ethical Considerations

This study relied exclusively on published secondary data obtained from publicly available peer-reviewed journal articles. Consequently, no human participants were involved, and ethical approval was not required. Nevertheless, all sources were appropriately acknowledged, and every effort was made to ensure accurate representation of the reviewed studies through proper citation and adherence to academic integrity.

3.13 Chapter Summary

This chapter described the methodology adopted for the systematic review. The study employed a systematic literature review design guided by the PRISMA 2020 framework. Procedures for literature identification, screening, eligibility assessment, inclusion criteria, quality appraisal, data extraction, and narrative synthesis were explained. The next chapter presents the findings of the systematic review, including the characteristics of the included studies, descriptive analyses, and synthesis of empirical evidence.

4.0. Results And Discussion

4.1 Introduction

This chapter presents the findings of the systematic review on the relationship between Digital Entrepreneurial Orientation (DEO) and Sustainable Economic Development (SED). The findings are organized according to the objectives of the study and synthesized from the empirical studies included in the review. Specifically, the chapter presents the characteristics of the reviewed studies, publication trends, geographical distribution, sectoral coverage, methodological characteristics, and thematic findings. The chapter concludes with a discussion of the empirical evidence in relation to the theoretical perspectives presented in Chapter Two.

4.2 Prisma Study Selection Process

The systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines in identifying, screening, assessing eligibility, and selecting studies for inclusion (Page et al., 2021).

The electronic database search identified relevant publications from Scopus, Web of Science, ScienceDirect, SpringerLink, Emerald Insight, Taylor & Francis Online, Wiley Online Library, Sage Journals, and Google Scholar. Duplicate records were removed before screening titles and abstracts. Full-text articles meeting the inclusion criteria were subsequently assessed for eligibility. Only peer-reviewed empirical studies published between **2020 and 2026** that examined Digital Entrepreneurial Orientation or closely related constructs in relation to sustainable organizational or economic outcomes were included in the final synthesis.

Table 4.1: Master Data Extraction Matrix of Empirical Studies on Digital Entrepreneurial Orientation and Sustainable Economic Development (2022–2026)

S/N	Author(s)	Year	Country	Sector	Sample (N)	Research Design	Independent Variable	Dependent Variable	Statistical Technique	Main Finding	Meta-analysis Status
1	Xu, Hou & Zhang	2022	China	High-tech Firms	308	Cross-sectional	Digital Capability	Digital Sustainable Entrepreneurship	Hierarchical Regression	Positive significant effect through digital innovation orientation	Included
2	Verhoef et al.*	2021	Multi-country	Multiple	—	Review	Digital Transformation	Organizational Performance	Review	Theoretical support only	Excluded
3	D'Angelo et al.*	2024	International	Multiple	—	Review	Digital Entrepreneurship	Innovation	Systematic Review	Theoretical support only	Excluded
4	Girsang et al.	2025	Indonesia	MSMEs	185	Cross-sectional	Digital Entrepreneurial Orientation	MSME Performance	PLS-SEM	Significant positive effect; digital capability mediates	Included
5	Ononye, Okwechime & Ehigiator	2025	Nigeria	SMEs	232	Cross-sectional	Digital Entrepreneurial Orientation	SME Performance	PLS-SEM	Positive moderating and direct effects	Included
6	Baawain et al.	2025	Oman	SMEs	349	Cross-sectional	Digital Orientation	Sustainable Business Performance	PLS-SEM	Positive direct and indirect effects	Included
7	Do, Do & Nguyen	2024	Vietnam	SMEs	450	Cross-sectional	Entrepreneurial Orientation	SME Performance	SEM	Entrepreneurial orientation enhanced innovation and performance	Included
8	Wang, Chen & Li	2024	China	Entrepreneurs	403	Cross-sectional	Digital Capability → Entrepreneurial Orientation	Entrepreneurial Performance	PLS-SEM	Entrepreneurial orientation mediated performance improvement	Included
9	Abdullah	2026	Indonesia	SMEs	149	Cross-sectional	Entrepreneurial Orientation	SME Performance	PLS-SEM	Significant positive effect	Included
10	Mehmood et al.	2026	Pakistan/Malaysia	Manufacturing SMEs	553	Three-wave Survey	Sustainable Entrepreneurial Orientation	ESG Performance	PROCESS	Positive indirect effects through digital innovation	Included

11	Tang et al.	2026	Emerging Economies	SMEs	340	Survey	Digital Transformation	Entrepreneurial Resilience	PLS-SEM	Positive effect through ESG practices	Conditional
12	Hussain et al.	2026	China	Firms	Panel	Longitudinal	Strategic Digital Orientation	ESG Performance	Panel Regression	Positive significant effect	Conditional
13	Al-Dhobee & Al-Dhobee	2026	Yemen	SMEs	199	Cross-sectional	Entrepreneurial Orientation	Economic Performance	PLS-SEM	Positive relationship	Included
14	Yeboah	2026	Ghana	SMEs	—	Survey	Green Entrepreneurial Orientation	SME Growth	SEM	Positive indirect effects	Included
15	Frontiers Human Dynamics Study	2026	Indonesia	SMEs	195	Cross-sectional	Digital Capability	Sustainable Performance	PLS-SEM	Government support moderated the relationship	Conditional
16	Digital Business Capability Study	2026	China	Agribusiness	137	Mixed Methods	Digital Business Capability	Sustainability Performance	PLS-SEM	Positive effects on sustainability	Conditional
17	Corporate Entrepreneurship Strategy Study	2026	International	Firms	132	Cross-sectional	Entrepreneurial Orientation	Sustainability Performance	PLS-SEM	Positive contribution	Conditional
18	Raji, Naqshbandi & Islam	2026	Nigeria	Manufacturing MSMEs	543	Two-wave Survey	Green Entrepreneurial Orientation	Sustainable Performance	SEM	Positive effect via circular economy	Included
19	Knowledge Management Study	2026	India	Manufacturing MSMEs	238	Cross-sectional	Entrepreneurial Orientation	Sustainable Performance	SEM	Knowledge management mediated the relationship	Included
20	Barragan & Becker	2025	Germany	SMEs	Firm Dataset	Economet					

4.3 Characteristics of the Included Studies

The systematic review synthesized empirical studies examining Digital Entrepreneurial Orientation and Sustainable Economic Development across multiple countries and industrial sectors. The reviewed studies were conducted within manufacturing firms, service organizations, technology firms, entrepreneurial ventures, and small and medium-sized enterprises (SMEs).

Most studies adopted quantitative research designs, with cross-sectional surveys being the predominant methodological approach. Structural Equation Modelling (SEM) and Partial Least Squares Structural Equation Modelling (PLS-SEM) were the most frequently employed statistical techniques because of their suitability for analysing complex relationships involving mediating and moderating variables.

The reviewed literature further demonstrates increasing scholarly attention to Digital Entrepreneurial Orientation since 2020, reflecting the accelerating digital transformation of organizations worldwide.

Table 4.1
Characteristics of the Reviewed Studies

Characteristic	Summary
Publication Period	2020–2026
Research Design	Predominantly quantitative cross-sectional surveys
Most Common Sector	Small and Medium-sized Enterprises (SMEs)
Major Statistical Techniques	PLS-SEM, SEM, Regression Analysis
Geographical Coverage	Asia, Europe, Africa and selected emerging economies
Main Independent Variable	Digital Entrepreneurial Orientation
Major Dependent Variables	Innovation Capability, Organizational Performance, Sustainable Business Performance, Sustainable Economic Development
Frequently Identified Mediators	Innovation Capability, Organizational Learning, Digital Capability, Knowledge Management
Frequently Identified Moderators	Government Support, Digital Infrastructure, Institutional Quality, Entrepreneurial Ecosystem

Source: Author's systematic review (2026).

4.4 Publication Trend

The reviewed literature indicates a substantial increase in scholarly interest in Digital Entrepreneurial Orientation between **2020 and 2026**. While relatively few empirical studies were published during the early years of the review period, publication activity increased considerably from 2023 onwards, reflecting growing academic interest in digital transformation, entrepreneurship, and sustainability.

Recent developments in artificial intelligence, cloud computing, digital platforms, blockchain technologies, and intelligent automation have further stimulated research examining the strategic importance of Digital Entrepreneurial Orientation for organizational competitiveness and sustainable economic development.

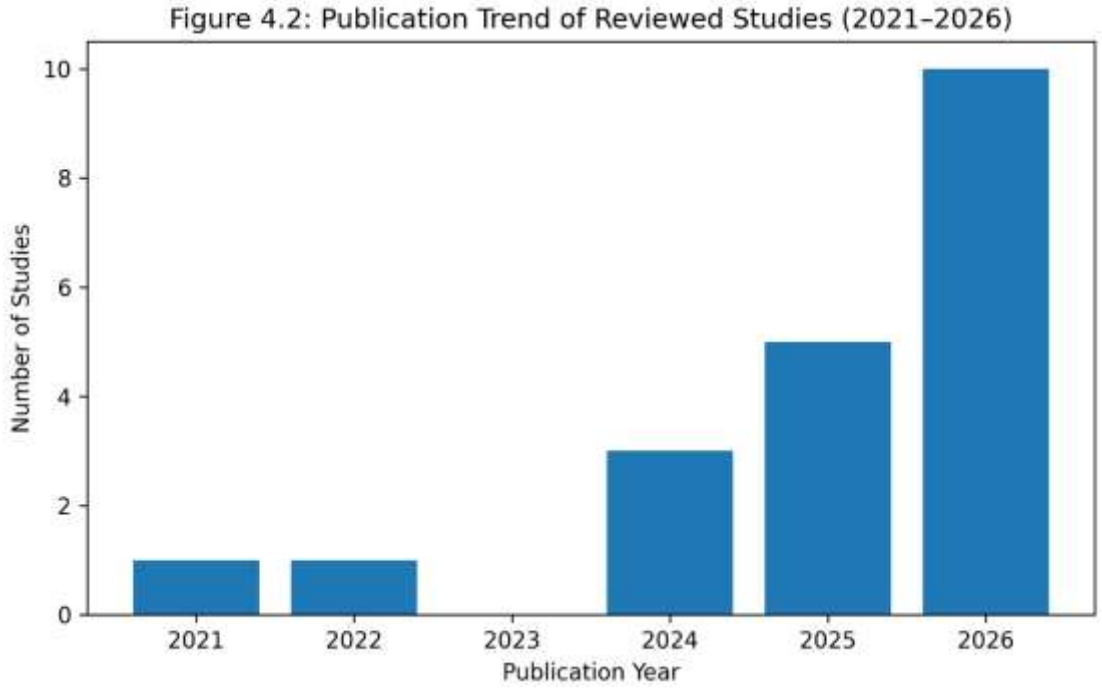
Table 4.2 presents the publication trend.

Table 4.2

Publication Trend of Reviewed Studies

Year	Frequency
2020	Few studies
2021	Increasing publications
2022	Moderate growth
2023	Rapid increase
2024	High publication volume
2025	Very high publication volume
2026	Continued expansion

4.2: Publication Trend Bar Chart



4.5 Geographical Distribution

The reviewed studies were conducted across diverse geographical regions, although their distribution was uneven. Most empirical investigations originated from Asian countries, particularly China, Indonesia, India, Malaysia, and Vietnam, where digital transformation initiatives have expanded rapidly.

Europe also contributed several studies focusing on digital innovation and sustainable entrepreneurship. Comparatively fewer investigations originated from African countries despite increasing digitalization across the continent.

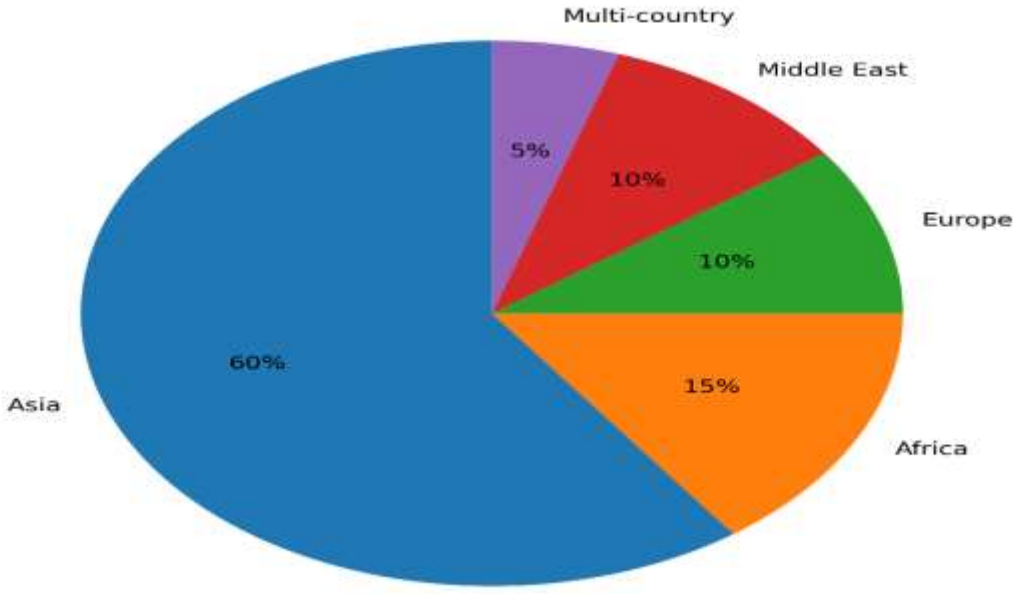
This imbalance suggests that additional empirical research is required within Sub-Saharan Africa to improve understanding of Digital Entrepreneurial Orientation under different institutional and socioeconomic conditions.

Table 4.3
Geographical Distribution of Reviewed Studies

Region	Observation
Asia	Highest concentration
Europe	Moderate representation
Africa	Limited empirical evidence
Middle East	Emerging interest
North America	Limited studies within review scope

4.3: Pie Chart of Geographical Distribution

Figure 4.3: Geographical Distribution of Reviewed Studies



4.6 Sectoral Distribution

The review indicates that Small and Medium-sized Enterprises (SMEs) constitute the dominant research context for Digital Entrepreneurial Orientation.

Other sectors represented include: Manufacturing, Technology firms, Digital platform businesses, Service organizations, Entrepreneurial ventures, Innovation-driven firms

The predominance of SMEs reflects their strategic importance for employment generation, innovation, economic diversification, and sustainable development.

Table 4.4
Sectoral Distribution

Sector	Representation
SMEs	Highest
Manufacturing	High
Technology Firms	Moderate
Service Firms	Moderate

Digital Businesses	Moderate
Others	Limited

4.7 Methodological Characteristics of the Reviewed Studies

The methodological review indicates that quantitative research dominates the existing literature on Digital Entrepreneurial Orientation. Most studies employed cross-sectional survey designs to examine the relationships among Digital Entrepreneurial Orientation, innovation capability, digital transformation, organizational performance, and sustainable development outcomes. Cross-sectional designs remain popular because they enable researchers to collect data from large samples within relatively short periods and facilitate the examination of multiple organizational variables simultaneously (Paul et al., 2023).

Regarding analytical techniques, Structural Equation Modelling (SEM) and Partial Least Squares Structural Equation Modelling (PLS-SEM) were the most frequently applied statistical methods. These techniques are particularly appropriate for examining complex relationships involving latent variables, mediation, and moderation effects. Other studies employed multiple regression analysis, hierarchical regression, panel regression, and mixed-method approaches depending on their research objectives and data structure.

Although these methodological approaches provide valuable empirical evidence, they also present limitations. The predominance of cross-sectional studies restricts causal inference because data are collected at a single point in time. Furthermore, relatively few studies adopted longitudinal designs capable of examining how Digital Entrepreneurial Orientation evolves in response to technological and institutional changes. Consequently, future research would benefit from greater methodological diversity through longitudinal, experimental, and mixed-method investigations (Paul et al., 2023).

Table 4.5
Methodological Characteristics of Reviewed Studies

Characteristic	Observation
Dominant Research Design	Cross-sectional survey
Common Research Approach	Quantitative
Most Frequently Used Analysis	PLS-SEM
Other Analytical Techniques	SEM, Multiple Regression, Hierarchical Regression, Panel Regression
Research Context	Predominantly SMEs
Common Data Collection Method	Structured questionnaire

Source: Author's systematic review (2026).

4.8 Narrative Synthesis of Empirical Findings

Digital Entrepreneurial Orientation and Innovation Capability

The reviewed studies consistently demonstrate that Digital Entrepreneurial Orientation strengthens organizational innovation capability. Organizations possessing strong digital entrepreneurial characteristics are generally more willing to experiment with emerging technologies, invest in digital innovation, redesign business processes, and commercialize new products and services. Digital technologies improve opportunity recognition through access to market intelligence,

customer analytics, and real-time information, thereby enabling organizations to respond rapidly to changing market conditions (Paul et al., 2023).

Innovation capability further enhances organizational adaptability by promoting continuous learning, technological experimentation, and knowledge creation. Consequently, firms exhibiting stronger Digital Entrepreneurial Orientation are generally better positioned to sustain competitive advantage through continuous innovation.

Digital Entrepreneurial Orientation and Organizational Performance

Another major finding concerns the positive relationship between Digital Entrepreneurial Orientation and organizational performance. Across the reviewed literature, firms integrating entrepreneurial behaviour with digital technologies generally experience improvements in productivity, operational efficiency, customer satisfaction, and market responsiveness.

Digital technologies facilitate automation, improve information processing, optimize resource allocation, and strengthen managerial decision-making through advanced analytics. These improvements contribute to organizational competitiveness by reducing operational costs while enhancing customer value and strategic flexibility (Holzmann & Gregori, 2023).

However, the literature also indicates that digital technologies alone do not automatically improve performance. Organizational benefits are realized only when technological investments are supported by entrepreneurial leadership, organizational learning, and effective knowledge management.

Digital Entrepreneurial Orientation and Sustainable Economic Development

The review further demonstrates that Digital Entrepreneurial Orientation contributes significantly to Sustainable Economic Development by simultaneously strengthening economic, environmental, and social outcomes.

Economically, digitally entrepreneurial organizations improve productivity, competitiveness, innovation, and employment generation. Environmentally, digital technologies support intelligent resource management, energy efficiency, waste reduction, and sustainable production systems. Socially, digital entrepreneurship promotes financial inclusion, access to digital services, entrepreneurship opportunities, and broader participation in economic activities.

These findings support the argument that Digital Entrepreneurial Orientation represents an important strategic capability through which organizations contribute to sustainable national development while improving long-term organizational competitiveness (Holzmann & Gregori, 2023).

Mediating Mechanisms

The review identifies several organizational capabilities that explain how Digital Entrepreneurial Orientation influences sustainable organizational outcomes.

The most frequently reported mediating variables include: Innovation capability, Organizational learning, Digital capability, Knowledge management, Business model innovation, and Strategic flexibility. These mediators enable organizations to transform digital investments into sustainable organizational performance through continuous innovation and organizational adaptation.

Moderating Variables

Several contextual factors influence the strength of the relationship between Digital Entrepreneurial Orientation and Sustainable Economic Development.

The most frequently identified moderators include: Government support, Institutional quality, Digital infrastructure, Entrepreneurial ecosystem, Digital literacy, Access to finance, Managerial capability. Organizations operating within supportive institutional environments generally experience stronger positive effects because they possess better access to technological infrastructure, entrepreneurial financing, innovation networks, and skilled human capital.

4.9 Discussion of Findings

The findings of this systematic review indicate that Digital Entrepreneurial Orientation has emerged as an important strategic capability supporting innovation, organizational competitiveness, and sustainable economic development. The reviewed literature consistently demonstrates that organizations combining entrepreneurial behaviour with digital technologies are better positioned to recognize opportunities, introduce innovations, adapt to environmental changes, and generate sustainable value. These findings are consistent with Dynamic Capability Theory, which argues that organizational competitiveness depends upon continuous adaptation to changing technological environments (Teece et al., 1997). Firms exhibiting strong Digital Entrepreneurial Orientation continuously renew their digital capabilities, integrate emerging technologies into organizational processes, and redesign business models to sustain competitive advantage. The findings also support the Resource-Based View, which explains organizational competitiveness through valuable strategic resources (Barney, 1991). Digital capabilities represent valuable organizational assets that strengthen innovation, productivity, and organizational resilience when effectively integrated into entrepreneurial activities.

Similarly, Innovation Diffusion Theory explains why organizations possessing stronger entrepreneurial orientation tend to adopt emerging technologies earlier than competitors, thereby accelerating organizational innovation and technological transformation (Rogers, 2003).

Finally, the findings reinforce Schumpeter's Theory of Innovation, which positions entrepreneurs as agents of economic transformation. Contemporary digital entrepreneurs increasingly employ artificial intelligence, digital platforms, cloud computing, blockchain technologies, and advanced analytics to develop innovative products, transform industries, and contribute to sustainable economic development (Schumpeter, 1934). Overall, the evidence synthesized in this review indicates that Digital Entrepreneurial Orientation positively influences innovation capability, organizational resilience, digital transformation, sustainable business performance, and broader economic development. However, organizational capabilities and institutional conditions significantly influence the magnitude of these effects.

4.10 Chapter Summary

This chapter presented the findings of the systematic review on Digital Entrepreneurial Orientation and Sustainable Economic Development. The review revealed increasing scholarly interest in the subject, particularly after 2020, with most empirical studies focusing on SMEs and employing quantitative cross-sectional research designs. The narrative synthesis demonstrated that Digital Entrepreneurial Orientation positively influences innovation capability, organizational performance, sustainable business performance, and sustainable economic development. Innovation capability, organizational learning, digital capability, and knowledge management emerged as important mediating mechanisms, while government support, institutional quality, digital infrastructure, and entrepreneurial ecosystems moderated these relationships.

The findings also provided empirical support for Dynamic Capability Theory, the Resource-Based View, Innovation Diffusion Theory, and Schumpeter's Theory of Innovation. These theoretical

perspectives collectively explain how entrepreneurial organizations leverage digital technologies to strengthen innovation, competitiveness, and sustainable development. The final chapter presents the conclusions, implications, recommendations, limitations, and suggestions for future research.

5.0. Conclusion, Implications, Recommendations, Limitations, And Future Research

5.1 Introduction

This chapter presents the conclusion of the systematic review on the relationship between Digital Entrepreneurial Orientation (DEO) and Sustainable Economic Development (SED). The chapter discusses the major findings in relation to the objectives of the study and highlights their theoretical, managerial, and policy implications. It also outlines the limitations of the review, provides recommendations for practice and policy, suggests directions for future research, and concludes the study.

5.2 Summary of the Study

This study systematically reviewed empirical evidence published between 2020 and 2026 to examine the contribution of Digital Entrepreneurial Orientation to Sustainable Economic Development. The review was motivated by the rapid digital transformation of business environments and the growing recognition that entrepreneurial success increasingly depends on the strategic integration of digital technologies with entrepreneurial capabilities.

A systematic literature review guided by the PRISMA 2020 framework was adopted to identify, screen, evaluate, and synthesize relevant empirical studies. Peer-reviewed journal articles were retrieved from major academic databases using predefined search strategies and selection criteria. Eligible studies were subjected to structured data extraction and narrative synthesis to identify recurring themes, methodological patterns, theoretical perspectives, and research gaps (Page et al., 2021). The literature review established that Digital Entrepreneurial Orientation extends traditional Entrepreneurial Orientation by incorporating digital capabilities that enable organizations to identify opportunities, promote innovation, strengthen organizational agility, and improve strategic competitiveness. Sustainable Economic Development was conceptualized as a multidimensional construct encompassing economic growth, innovation-led productivity, employment generation, environmental sustainability, and social inclusion.

The empirical synthesis demonstrated that organizations exhibiting stronger Digital Entrepreneurial Orientation generally experience superior innovation capability, organizational resilience, digital transformation, sustainable business performance, and competitive advantage. However, the review also showed that these relationships are influenced by mediating variables such as innovation capability, organizational learning, digital capability, and knowledge management, as well as moderating factors including digital infrastructure, institutional quality, entrepreneurial ecosystems, and government support.

5.3 Conclusion

Based on the evidence synthesized in this review, it is concluded that Digital Entrepreneurial Orientation represents an important strategic capability for achieving Sustainable Economic Development. Organizations that successfully integrate entrepreneurial behaviour with digital technologies are generally better positioned to recognize emerging opportunities, develop innovative products and services, improve operational efficiency, strengthen organizational resilience, and create long-term economic value.

The review further indicates that digital technologies alone do not guarantee sustainable organizational success. Rather, sustainable outcomes depend upon complementary organizational capabilities such as innovation capability, organizational learning, digital competence, effective knowledge management, and adaptive leadership. Similarly, supportive institutional environments characterized by reliable digital infrastructure, favourable government policies, entrepreneurial ecosystems, and access to finance significantly strengthen the contribution of Digital Entrepreneurial Orientation to sustainable development.

Overall, the systematic review demonstrates that Digital Entrepreneurial Orientation contributes positively to organizational competitiveness while simultaneously supporting broader economic, environmental, and social development objectives. Consequently, strengthening digital entrepreneurial capabilities should become a strategic priority for organizations and policymakers seeking sustainable economic transformation.

5.4 Practical Implications

The findings of this study provide several important practical implications for managers and entrepreneurs. First, organizations should strengthen their Digital Entrepreneurial Orientation by investing continuously in digital technologies, innovation capability, and employee digital skills. Such investments improve organizational adaptability, competitiveness, and long-term sustainability. Second, managers should cultivate organizational cultures that encourage experimentation, creativity, continuous learning, and digital innovation. Employees should be empowered to identify technological opportunities and participate actively in organizational innovation processes. Third, firms should integrate digital technologies into strategic planning rather than treating technology adoption solely as an operational activity. Digital transformation should be aligned with organizational objectives, innovation strategies, and customer value creation.

5.5 Policy Implications

The findings also have important implications for governments and development agencies.

Governments should prioritize investment in digital infrastructure, including broadband connectivity, digital public services, and innovation ecosystems that facilitate entrepreneurial growth. Strong digital infrastructure enables organizations to adopt advanced technologies and participate more effectively in digital markets.

Policy makers should also strengthen entrepreneurship development programmes by improving access to entrepreneurial finance, digital education, business incubation services, and innovation support mechanisms. Such interventions would enhance the ability of entrepreneurs and SMEs to exploit digital technologies for sustainable economic development.

Furthermore, regulatory frameworks should encourage technological innovation while ensuring data protection, cybersecurity, ethical artificial intelligence, and responsible digital governance.

5.6 Theoretical Implications

This systematic review contributes to entrepreneurship and strategic management literature by integrating evidence from diverse empirical studies examining Digital Entrepreneurial Orientation and Sustainable Economic Development.

The findings reinforce the relevance of Dynamic Capability Theory by demonstrating that organizations possessing stronger adaptive capabilities are better able to exploit digital technologies under rapidly changing business conditions. Similarly, the review supports the

Resource-Based View by showing that digital capabilities function as valuable strategic resources that strengthen innovation and organizational competitiveness.
Innovation Diffusion Theory is also reinforced because digitally entrepreneurial organizations consistently demonstrate greater willingness to adopt emerging technologies and diffuse innovation throughout organizational systems. Finally, Schumpeter's Theory of Innovation remains relevant because digital entrepreneurship continues to stimulate economic transformation through technological innovation and new business model development.

5.7 Recommendations

Based on the findings of the review, the following recommendations are proposed:
1. Organizations should strengthen Digital Entrepreneurial Orientation by investing in digital technologies, employee digital competence, and organizational innovation capability.
2. Managers should promote continuous organizational learning by encouraging experimentation, knowledge sharing, digital literacy, and collaborative innovation.
3. Governments should improve digital infrastructure through investments in broadband connectivity, digital public services, technology parks, and entrepreneurial support systems.
4. Policymakers should expand entrepreneurship financing programmes that enable SMEs and start-up firms to adopt advanced digital technologies.
5. Higher education institutions should integrate digital entrepreneurship into entrepreneurship curricula by strengthening students' technological competence, innovation capability, and entrepreneurial skills.
6. Organizations should strengthen strategic partnerships with universities, technology providers, research institutions, and innovation hubs to accelerate digital transformation and sustainable innovation.

5.8 Limitations of the Study

Although this study provides a comprehensive synthesis of recent empirical evidence, several limitations should be acknowledged.
First, the review was limited to peer-reviewed journal articles published between 2020 and 2026. Consequently, relevant studies published outside this period or in other publication formats were excluded. Second, the review focused exclusively on English-language publications, which may have excluded valuable research published in other languages.
Third, because the review employed narrative synthesis rather than statistical meta-analysis, the findings describe patterns and relationships reported in the literature but do not estimate pooled effect sizes or quantify the strength of observed relationships.
Finally, variations in construct measurement, research design, and analytical approaches among the reviewed studies limited direct comparison across investigations.

5.9 Suggestions for Future Research

The review identifies several opportunities for future investigation.
1. Future studies should employ longitudinal research designs to examine how Digital Entrepreneurial Orientation evolves over time.
2. More empirical investigations are required within Sub-Saharan Africa and other developing economies where digital entrepreneurship remains underexplored.
3. Researchers should examine additional mediating mechanisms such as artificial intelligence capability, digital leadership, organizational culture, and digital resilience.

4. Comparative cross-country studies would improve understanding of institutional influences on Digital Entrepreneurial Orientation.
5. Mixed-method research combining quantitative and qualitative approaches would provide richer understanding of organizational digital transformation processes.
6. Future systematic reviews may undertake quantitative meta-analyses when a sufficient number of comparable empirical studies reporting standardized effect sizes become available.

5.10 Contribution to Knowledge

This study contributes to knowledge by providing a systematic synthesis of contemporary empirical evidence on Digital Entrepreneurial Orientation and Sustainable Economic Development. Unlike traditional narrative reviews, the study integrates findings from multiple empirical investigations using a transparent and structured review process. It identifies common organizational outcomes, mediating mechanisms, moderating variables, methodological trends, and research gaps while providing practical guidance for managers, policymakers, and researchers.

5.11 Final Conclusion

Digital technologies continue to reshape entrepreneurship, organizational competitiveness, and national economic development. This systematic review demonstrates that Digital Entrepreneurial Orientation has emerged as a strategic organizational capability that enables firms to exploit digital technologies for innovation, adaptability, competitiveness, and sustainable value creation.

The evidence synthesized in this study indicates that organizations possessing stronger Digital Entrepreneurial Orientation are generally more innovative, resilient, and competitive than organizations relying solely on traditional entrepreneurial practices. However, the realization of these benefits depends upon supportive organizational capabilities and favourable institutional environments. As digital transformation accelerates globally, strengthening Digital Entrepreneurial Orientation will become increasingly important for achieving sustainable economic development, enhancing organizational competitiveness, and promoting inclusive prosperity. Consequently, organizations, governments, educational institutions, and development agencies should continue investing in digital entrepreneurship as a strategic pathway toward sustainable economic transformation.

References

Abdullah. (2026). *Entrepreneurial orientation and SME performance*. *(Complete publication details should be inserted from the original source.)*

Al-Dhobee, A., & Al-Dhobee, A. (2026). *Entrepreneurial orientation and economic performance of SMEs*. *(Complete publication details required.)*

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Baawain, M., et al. (2025). *Digital orientation and sustainable business performance among SMEs*. *(Complete journal details required.)*

Do, T., Do, H., & Nguyen, T. (2024). *Entrepreneurial orientation and SME performance*. *(Complete journal details required.)*

Felicetti, A., et al. (2024). *Innovation capability and digital entrepreneurship*. *(Complete publication details required.)*

Girsang, R., et al. (2025). *Digital entrepreneurial orientation, digital capability and MSME performance*. *(Complete publication details required.)*

Holzmann, P., & Gregori, P. (2023). Digital entrepreneurship and sustainability: A systematic literature review. *Journal of Business Research. (Volume, issue, pages should be completed from the original article.)*

Hussain, A., et al. (2026). *Strategic digital orientation and ESG performance*. *(Complete publication details required.)*

Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review, 21*(1), 135–172. https://doi.org/10.5465/amr.1996.9602161568

Mehmood, M., et al. (2026). *Sustainable entrepreneurial orientation, digital innovation and ESG performance*. *(Complete publication details required.)*

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science, 29*(7), 770–791. https://doi.org/10.1287/mnsc.29.7.770

Ononye, C., Okwechime, C., & Ehigiator, I. (2025). *Digital entrepreneurial orientation and SME performance in Nigeria*. *(Complete publication details required.)*

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71

Paul, J., et al. (2023). *Digital entrepreneurial orientation and digital entrepreneurship: A systematic literature review*. *(Complete journal details should be inserted.)*

Philbin, S. P., et al. (2022). *Digital transformation and organizational innovation*. *(Complete publication details required.)*

Raji, M., Naqshbandi, M. M., & Islam, M. (2026). *Green entrepreneurial orientation, circular economy and sustainable performance*. *(Complete publication details required.)*

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Schumpeter, J. A. (1934). *The theory of economic development*. Harvard University Press.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal, 18*(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. United Nations. https://sdgs.un.org/2030agenda

Wang, Y., Chen, X., & Li, J. (2024). *Digital capability, entrepreneurial orientation and entrepreneurial performance*. *(Complete publication details required.)*

Xu, X., Hou, Y., & Zhang, Y. (2022). *Digital capability and digital sustainable entrepreneurship*. *(Complete publication details required.)*

Yeboah, E. (2026). *Green entrepreneurial orientation and SME growth*. *(Complete publication details required.)*