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Roles of Digital Transformation on SMEs Performance in Nigeria

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Abstract

This study examines the role of digital transformation in the performance of Small and Medium-Sized Enterprises (SMEs) in Nigeria. Digital transformation is understood as the process of adopting digital technologies such as cloud computing, artificial intelligence, and big data to restructure business models, improve value creation, and achieve sustainable growth. While digital transformation offers opportunities for innovation, competitiveness, and efficiency, SMEs face challenges related to limited resources, lack of strategic direction, inadequate digital skills, and weak infrastructure. The paper highlights that successful digital transformation requires a balance of three key resources: digital technology, human skills, and strategy. The process is not limited to adopting online tools but extends to broader changes in business models, organizational structures, and market approaches. The study reviews global perspectives, noting that SMEs worldwide struggle with similar obstacles, but emphasizes Nigeria's unique context, where low adoption rates and limited training continue to hinder progress. The research also draws on stakeholder theory and the resource-based view to explain how digital transformation impacts organizational performance. Performance is assessed using both financial and non-financial measures, including sales growth, innovation, staff talent, and return on equity. Evidence suggests that when properly implemented, digital transformation enhances competitiveness, drives innovation, and creates opportunities for job generation and poverty reduction. In conclusion, the paper argues that for Nigerian SMEs to thrive in the digital era, they must align strategies with technology and human capital while governments and institutions provide supportive infrastructure and policies.

Keywords: Digital transformation, Innovation, SMEs, Organizational performance.

1 | Introduction

Recent research enhances our understanding of the corporate digital transformation process, and extant literature contributes to the formulation of the idea and meaning of digital transformation. Following a review

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of nineteen common definitions, Vial [1], Seung [2], and Rainey [3] concluded that digital transformation is the procedure of initiating and evoking organizations to embark on strategic approaches through digital technologies such as information, computing, communication, and changing their structures and boundaries, as well as identifying the process of business entity evolution and then generating value paths [4].

Some researchers perceived that it is a high-level change based on digitization that extends beyond the enterprise's core scope and tries to build a new business model. The development of digital technologies and support skills to establish a dynamic digital business model is what digital transformation includes [5]. Others believe that enterprise digital transformation is an approach that causes major changes in enterprise organizational characteristics and reconstructs the organizational structure, behavior, and operating system by combining the use of Information Technology (IT), computing, communication, and connection technologies [6].

It is believed that digital technologies, including cloud computing, big data, blockchain, and artificial intelligence, are embedded to empower enterprises. This enables the development of new models, products, formats, and technologies, ultimately allowing enterprises to achieve a sustainable development model with diverse efficiency [7]. This concept encompasses the four key components that companies must understand to execute digital transformation effectively. To begin, digital transformation is a systemic shift caused by digital technology. Moreover, the major essence of digital transformation is to reconstruct and reinvent value systems. Furthermore, it is the ability to produce new kinetic energy, continuously create new value, and achieve sustainable development.

Lastly, the three most essential components of digital transformation are technology, people (skills), and business-stage-appropriate strategies. As a result, to change digital transformation systematically and effectively, enterprises need suitable talents, the correct method of technology, and a clear path, among other things [8]. The digital transformation of Small and Medium-Sized Enterprises (SMEs) is an approach to addressing issues that are inherently constrained by scale, industry, resources, technology, and stage. Meanwhile, digital transformation is an arduous, intentional process. It encompasses not only the adoption and utilization of online payment and sales technology but also the selection of a business model, transformation model innovation, asset management modifications, and organizational structure optimization.

Logistics, production, marketing, R&D, sales, warehousing, and other interconnections are accomplished methodically, culminating in the achievement of the industrial closed loop, which incorporates all components of data risk, digital logistics, intelligent manufacturing, and other issues [9]. According to several analysts, SMEs have various hurdles regarding digital transformation [10]. First, SMEs are unaware of their own capabilities. Digital transformation is a fundamental transition in organizational philosophy, strategy, structure, and operation that requires substantial planning.

The majority of SMEs aspire to be digital, but they lack well-defined strategic goals and practical measures, and they face challenges in technology, business capacity building, and staff training. Second, digital technology adoption in my country's SMEs is currently low, with more than 70% of SMEs having yet to undergo large-scale digital transformation. The application level of digital technology is poor, as indicated not only by the application depth but also by the application breadth of digital technology. To promote digital transformation, human, material, financial, and other resources are necessary.

In the long run, insufficient strength in the current trend of digital transformation will not help SMEs to perform optimally. Many studies on the effective factors influencing digital transformation have been conducted in recent years. Some studies suggest that an enterprise's strategic vision can be enhanced in six key areas: uniformity and consistency in goal-setting and technology investment, a culture of innovation, control of adequate expertise, the potency of digital capabilities, and the effective use of digital technology.

An enterprise may achieve a strong competitive position through digital transformation [11]. According to several studies, four components are required for effective digital transformation: customer centricity,

governance, innovation, and resource acquisition [12]. In addition to technology adoption, the organization's capacity to adapt and operational excellence in combining external digital services with internal IT support are significant determinants for effective digital transformation [13]. The senior management team's support is equally essential for digital technology [14]

SMEs can achieve success with digital transformation by planning, aligning organizational interests, maintaining constant and frequent communication, providing necessary resources and tools, motivating their people, and establishing clear responsibilities and timetables for deliverables [15]. A shared strategic goal is also required for effective and rapid digital transformation [16]. External digital help is the first and most challenging phase in SMEs' digital transformation projects, with operational technology readiness being the most onerous [17]. Cooperation may be seen at several phases of SME digital transformation projects, such as business requirements assessment, project portfolio building, technology solution selection, and later stages [18].

According to research, three key resources—business strategy, human resources, and IT have a positive effect on SMEs' digital transformation; yet, these factors are barriers to small enterprises' digital transformation [7]. Furthermore, digital transformation improves the business consequences of SMEs [19]. From the three aspects of organization, technology, and environment, six essential criteria for digitally transforming SMEs are identified: government assistance, collaboration, top management, digital strategy, IT infrastructure, and IT management competencies [20]. The moderating influence is employee skills. Digital transformation is a long-term and challenging endeavor that involves problems in technology, corporate capacity creation, people training, and other areas; however, it is not unrealistic.

The fourth industrial revolution is booming, driven by technological advancements. The essence of digital transformation is to quantify all aspects of the business by utilizing digital capabilities, including simulations, feedback, linking, and copying. With precise quantitative data and indices, optimization and real-time analysis can be embarked upon, and management may be transformed to the smallest detail, therefore improving the entire operating performance of the enterprise [21]. It is of primary essence for SMEs to become accustomed to the current wave of technological revolutions,

Based on the accomplishment of many conventional sectors, it is common for organizations to raise the efficiency of each link by thirty percent or more after effecting the digital transformation [22], and the overall firm may advance its operational efficiency [23]. The COVID-19 pandemic has accelerated SMEs' digital transformation [24] and Nigeria's new infrastructure development strategy, resulting in a broader study scope. As a result, this study dwelt on digital transformation. Nonetheless, digital transformation is an engineering project and a continuing technical system that is equally essential for digital transformation [14] as well as the dynamics of the industrial revolution; increasing their capacity to maintain development and manage risk comprises four digital transformation phases that enable the enterprise's digital system development [25].

Furthermore, the most prevalent and complicated stage is digital transformation [26]. With limited resources, most SMEs struggle to deal with this complex issue. There is a need to conduct an exploratory study of SMEs implementing digital transformation, aiming to identify the critical resources [27] that influence this process and help overcome the associated challenges and obstacles [28]. It is believed that digital transformation is purposed at achieving creativity. SMEs have discovered a new paradigm for development through digital transformation [29]. Compared to large corporations, SMEs have the advantage of flexibility and the ability to adopt innovation. As a result, digital transformation is a straightforward technique of organizational change for SMEs.

2 | Literature Review

The business-related fields are essential for revealing the ingredients for achieving a sustainable business and competitive edge, leading to performance differences among enterprises [30]. Businesses are operating in an increasingly volatile environment, marked by stringent economic policies and a global recession. During the

1970s, 1980s, and 1990s, industrial organization academics viewed enterprise resources as homogeneous, meaning they were uniformly distributed among companies, which in turn enhanced organizations' ability to perform effectively within their chosen industry [6]. In the 1990s, there was a shift in attention toward enterprise resources, which is the fundamental cause of business variation [10].

3 | Definition of Small and Medium Scale Enterprises Small and Medium-Sized Enterprises

There is no commonly recognized definition for SMEs. Instead, it is commonly characterized as a collection of metrics such as personnel numbers, nation, industry, turnover, or yearly revenue. For example, Osei et al. [31] and Stubbart [32] used the 30-employee employment criterion to categorize Nigeria's SMEs. Therefore, one of the significant challenges to creating a cross-country analysis of SME data is the absence of a consensus definition of an SME [33]. Berisha's [34] study focuses on the International Labour Organization research that reveals over fifty definitions in seventy-five countries with significant uncertainty in terminology. The European Commission (EU) created a description for micro and SMEs in a recommendation issued in "Extending knowledge-based view: Future trends of corporate social entrepreneurship to fight the gig economy challenges" [35], which also applies to several states outside the EU. In 2005, the EU further suggested, at the request of the Council of Industry, that the Commission narrow the definition of SMEs that the Commission uses [36]. Yet, the diversity of SME definitions has remained unabated. The terminology used for organizations that do not belong to major corporations is a critical topic in the academic literature. It is often used interchangeably with small, medium, or micro-enterprises, yet referring to the same business class.

According to the OECD, 90% of businesses are SMEs, and they engage 63% of the global workforce [37]. Consequently, SMEs are highly vital in economies and should not be overlooked. SMEs are firms that are independently controlled by the owners or co-owners and have a simple governance structure [38]. However, the number of staff varies considerably among the various SME data providers. Ayyagari et al. [39] assert that the threshold band for SMEs is between 0 and 250 personnel, which correlates with the position of a World Bank research [40].

Table 1. Distribution of enterprises by number of employees in different countries.

Regions/ Countries	Micro	Small	Medium	SME	Large
EU countries, Iceland, Norway, and Switzerland	1-9	10-49	50-249	1-249	250+
Australia	0-9	10-49	50-199	0-199	200+
Canada	0-9	10-49	20-499	0-499	500+
Japan	4-9	10-49	50-249	1-249	250+
Korea	5-9	10-49	20-199	5-199	200+
Mexico	0-10	11-50	51-250	1-250	251+
New Zealand	1-9	10-49	50-99	0-99	100+
Turkey	1-19	20-49	50-249	1-249	250+
United States	1-9	10-99	100-499	1-499	500+

Source: [41].

The capitalization, turnover, and employment levels of organizations vary, and the size definition includes (profitability, number of workers, revenue, and network) as applied to all firms.

4 | The Need for Adopting Technology in Small and Medium-Sized Enterprises

Researchers have posited that with a greater emphasis on providing novel services, firm innovation may be viewed as a technique for rejuvenating the enterprise's actions toward goal attainment [42]. Such renewals

include modifications in the businesses' competencies, promoting changes for improvements of items to enhance marketability and competition with similar enterprises [22], [1]. Product digitization is viewed as a primary driver that enables a company to offer its consumers a better value than rivals, thereby gaining a competitive edge in today's changing technological environments and competitions [5]. Technological advancements are strongly linked to corporate digitalization [38]. However, adapting to changes in the corporate environment is still a challenging process for various SMEs [20].

To attain innovation, Companies may require shifting their "capacities and knowledge" that focus on the management practices concerning enterprises' reactions to changes [6]. Hence, enterprise digitization is a vital component of the hierarchical process in decision-making in businesses. Research has also shown that inventive processes may be influenced by several variables that improve the organization's innovation capability [10]. Additionally, Integration and innovation have demonstrated long-term positive impacts on an enterprise's competitive advantage [43].

Marketing capabilities encompass a deep understanding of the customer and technological capabilities that enable the company to integrate manufacturing and production expertise into processes. Both are crucial for enabling organizations to solve problems technically, implement new technologies, tools, and processes, and develop prototypes [11], [12]. Since corporate digitization is a critical component of the global competitive market, the economy must also be propelled by technology rapidly. Therefore, enterprise management should implement strategies that promote market-required innovation to thrive in a changing environment.

5 | Development of Small and Medium-Sized Enterprises in Nigeria

Nations and organizations agree that the spread of entrepreneurial and creative companies helps boost economic growth and decrease poverty in emerging economies [44]. They further posit that SMEs increase competitiveness and innovation, which benefits the economy in terms of efficiency, innovation, and product development. [45] argues that SMEs' growth creates more jobs than that of big corporations because SMEs are labor-intensive. Subsidies to SMEs may thus contribute to poverty reduction [46].

Nonetheless, the efficacy of SMEs in promoting prosperity and alleviating poverty has been questioned. It is also argued that big firms can take advantage of economies of scale to easily incur the fixed costs associated with product development, thereby increasing efficiency. Other studies have found that smaller companies are neither more labor-intensive nor more effective at employment creation than big corporations [47]. Researchers also question the value of small businesses and emphasize the importance of the business climate that all firms, large and small, face [39]. In contrast to what happens in major corporations, many engineering SMEs' production technologies could limit their flexibility [48]. Dost [49] considers flexibility as a factor of people and not technology. Private sector development is vital for African job generation, growth, and development [50]. Therefore, SMEs' growth is fundamental for the economic development of Africa, increasing employment and reducing poverty in most developing nations' metropolitan areas.

Despite its recognition and importance to local and national economic success, scholars have yet to rigorously explore rural firms' true strengths and shortcomings, at least not in Northern Nigeria. However, the Nigerian Government has made considerable efforts to increase the private sector's capacity by promoting the expansion of small and medium-sized manufacturing firms. Consequently, SMEs have a critical role in driving growth, creating jobs, and reducing poverty in developing nations [51]. SMEs are the foundation of innovative goods and services, new manufacturing processes, economic opening up through the development or extension of new markets, new supply resources, and industrial re-organization [52]. The capacity of these initiatives to disrupt the current state of technology, and the firm's strategy, defines their innovativeness. They account for a sizable proportion of firms in both the official and informal sectors.

While SMEs play a substantial role in the employment and GDP of industrialized countries, there is insufficient evidence to support a similar claim for Nigeria [53]. Additionally, because SMEs have historically not relied on public funding, there is a lack of accountability and no regulatory standards to follow [51].

Furthermore, several problems are impeding the growth of Nigeria's SME sector. These challenges include access to markets, technology, equipment, and financing [39]. Furthermore, Most SMEs are challenged by a lack of managerial abilities [54].

6 | Small and Medium-Sized Enterprises' Performance

Control and planning processes are often interwoven in various enterprises with the challenge of increasing performance and adapting to changing growth [17]. Practitioners and academics work to comprehend and explain differences in corporate performance in the context of market complexity, competitive obstacles, and unpredictability [55]. Enterprises should be able to adapt to changing business environments to increase their flexibility [12]. Value creation is a vital instrument for general performance measures in any organisation since it is considered the essence of performance [15].

Several writers have extensively researched the topic of enterprise performance from various viewpoints. Sullivan et al. [16] revealed that uninterrupted growth is at the core of any company, which can only be formed via maximum performance, and the companies may exist. A corporate organization's success is determined using several financial and non-financial measures. [17] revealed that the performance of the enterprise is strongly related to the value it provides to its stakeholders. Wernerfelt [56] viewed enterprise performance as the capacity to offer acceptable outcomes and activities. An organization achieves its goals by transforming inputs into outputs at the lowest possible cost [57].

Previous writers concluded that performance could encompass company survival in harsh economic climes and high sales, profit, and return on investment growth. Penrose [58] further classified performance into distinct groups: financial performance, product market performance, and shareholder return. Concisely, Performance management is a mechanism for assessing progress toward goals and recognizing and resolving issues that may obstruct the organization's growth in the environment.

The achievement of SMEs reflects how well the firm knows its clients' or customers' goals, wants, and expectations [59]. Performance assessment is essential for evaluating their enterprise networks' specific behaviours and how they operate over time [55]. Organizational performance measurement has taken several forms. According to Magistretti et al. [60], a successful measuring system will have a point of reference, an organization's interaction with the environment, a framework for a complex organization, room for uniqueness, change, and variability, and a guide to performance and action. Previously, financial indicators gauged success with little emphasis on non-financial indices (including loyalty, client satisfaction, and quality) [61], [62]. Financial figures have been suggested to be a relevant index [63], with other measurements, depending on the organisation's purpose and surroundings, being of equal relevance.

Different performance measurements are required for each organisation's unique strategies. Using many organisational factors to measure performance yields the best results [64]. Attaran [65] suggests that a business network that has survived a complex, dynamic, and turbulent environment will be considered effective in terms of performance. The total growth of a company is analyzed in performance measurement by assessing an organisation's strategy [66], [67]. The management of product quality, return on equity, staff talent, quality, innovativeness, return on equity, total return in years, long-term investment, and sales growth are all classified as performance measurements by [68].

In their study on the link between company success and digitalization in the Turkish Automotive Supplier Industry, Grab et al. [69] identified production and productivity as performance markers. According to Penev. [70], Bessonova and Goryacheva [71] and Solberg et al. [72] suggest that enterprise performance can be evaluated using either objective or subjective criteria.

7 | Digital Transformation

Several studies have been done on digital transformation [2], [1], [73-75]. Previous work revealed the corporate digital transformation process, and extant literature contributes to formulating the idea and meaning of digital

transformation [1], [73]. Fichman et al.[74], [45] identified the sudden shift from the conventional era into the golden era of the digital invention, with innovative digital devices used for varied business applications. Since the 1980s, significant new technologies have been introduced every decade; currently, technology consumers expect continuous innovations in several fields [74].

The current phase of Digital transformation methods differs significantly from the industrial period. This distinction is accentuated in solutions incorporating digital technology with traditional goods [73]. Currently, managers and owners of SMEs are adopting creative business methods that utilize digital devices [75]. The embedded gadgets employed in these businesses exchange data with systems under dedicated networks. Thus, emphasizing the need to understand how digitization affects innovation.

Academics believe the transformation process reaches beyond an organization's core business and aims to develop newer models. Chen et al. [5] reflect how the development of technologies and support skills influences business models. Huang et al. [6] work indicated the significance of entrepreneurship in facilitating the adoption of digital skills in businesses. Amidst Digital Transformation's benefits, enterprises experience serious challenges, such as personnel's inclination to stick to previous ways of doing things and costs associated with the transformation process [73]. Fichman et al. [74] classified digital transformation into the categories of the digital process, product innovation, and enterprise (business) innovation model.

The digital process was further categorized into discovery, development, diffusion, and impact stages. The discovery phase creates room for idea generation and appraisal. An enterprise may generate its own inventions or actively seek ideas beyond its boundaries [8]. The idea for the technology evolved into a functional invention throughout the development stage. During the diffusion stage, the invention spreads via its prospective consumer base. Finally, the idea's full potential is realized during the impact stage. The inventive firm obtains the benefit at the inventive stage as the invention has grown into a product [74]. Cui et al. [76] noted that "open innovation" refers to how organizations handle incoming and outward inventions without attempting to own the ideas. Cui et al. [76] also examined the implications of digitalization on open inbound innovation, contending that strategic IT alignment works as a moderator for inbound innovations. As it enhances search possibilities, good IT strategic alignment increases the volume and quality of the company's innovation.

According to Dewett and Jones [77], digitization lessens the impacts on organizational factors, thereby enhancing innovation. Additionally, improved internal communications have enabled better collaboration and coordination. Dibrell et al. [78] found evidence to support their claim that profitability in SMEs is positively correlated with an innovative company strategy that emphasizes digitization. Rejecting their alternative hypothesis, which stated that only innovation is positively connected to financial performance in SMEs lends credence to Dewett and Jones [77] assertion. Nylén and Holmström [73] further presented a management framework that allows firms to alter their operations in real-time to suit digital improvements.

8 | Major Determinants for SMEs' Digital Transformation

SMEs' digital transformation isolates problems that are essentially constrained by scale, industry, resources, technology, and stage. Meanwhile, digital transformation is a time-consuming and intentional process. Logistics, production, marketing, research and development, sales, warehousing, and other interconnections are completed methodically, culminating in the achievement of the closed industrial loop, which incorporates all components of data risk, digital logistics, and intelligent manufacturing.

SMEs are confronted with numerous challenges in the digital transformation process [10]. Currently, the application level of digital technology is poor, as indicated by digital technology's application depth [79]. Human, material, financial, and other resources are essential to facilitate digital transformation. Most SMEs are excited about digital transformation but lack defined practical pathways and strategic goals, and face challenges in technology, human training, and business capacity building. Also, the current utilization of digital

technology in Nigerian SMEs is poor, with more than 70% of SMEs still lacking large-scale digital transformation.

Insufficient commitment to the current transformation trend will not aid the long-term success of SMEs. Several studies show improvements are required in the following areas: appropriate intellectual assets and expertise; adaptability to innovativeness; continuity of vision, and investment in digitization [11]. Through digital transformation, a company may achieve a strong competitive position.

The enterprise's capacity to adjust its operational expertise in integrating digital services sourced from external environment IT support is critical for effective digital transformation [80]. The senior management team's backing is equally critical to effective digitization [14]. Consistent planning in the organization, adequate and efficient provision of resources, frequent communication, motivation strategy, and schedules for deliverables may all aid SMEs in their digital transformation efforts [15]. For successful and rapid digital transformation, a unified strategic aim is also essential [16].

External digital help is the most challenging phase in SMEs' digital transformation projects, with operational technology readiness being the most onerous [17]. Cooperation may be seen in many phases of SME digital transformation initiatives, including project portfolio, business assessment, and technological initiatives [18]. According to the study, three critical resources-IT, business strategy, and human resources have a beneficial influence on SMEs' digital transformation. Yet, the identified variables constitute hurdles to SMEs' digital transformation. Furthermore, digital transformation enhances the financial outcomes of SMEs [19].

Six critical variables for SMEs' digital transformation have been identified from the three aspects of the environment, technology, and organization: top Management, government aid, IT infrastructure, digital strategy, administrative competencies, and partnership [12]. Digital transformation is a long-term and challenging job that faces hurdles in technology, organizational capacity growth, personnel training, and other areas, but it is not insurmountable [81]. SMEs can only iteratively develop if they focus on essential areas and integrate external aid based on their strengths.

9 | Theoretical Review

The theoretical review aims to provide a theoretical foundation for the investigation. Stakeholder theory and resource-based view are two related ideas to this investigation. Both theories influence the analysis of corporate performance. Combining the primary external threats and opportunities with the main internal weaknesses and strengths gives room for thriving strategic formulation, allowing SMEs to be eternally competitive and develop.

10 | Stakeholder Theory

Freeman presented the stakeholder idea in [82], which asserts that individuals and organizations with a vested interest in the company's success, aims, and activities, or the actions of its constituents, have an impact on what the organization accomplishes [83], [62]. This managerial concept describes the nature of the organization. It reflects how business administrators work, addressing key questions such as the enterprise goal and management responsibilities to stakeholders.

According to Friedman [84], the organization is considered a collection of stakeholders with key objectives to balance their interests, wants, and points of view. Leaders should, therefore, perform roles in not just guiding the company but also safeguarding the rights and participation of its stakeholders to ensure the enterprise's survival and protect each member of the group's investment. The term “stakeholders” refers to “those groups without which the firm would cease to exist” [85]. Stakeholder theory rejects the separation of research and begins with the idea that values are intimately related to doing business [85].

Barney [57] highlights business leaders' value for their stakeholder group. Penrose [86] classified the three values of the stakeholder model as descriptive methods, instrumental approaches, and normative approaches. Despite general belief, the study of Penrose [86] revealed a dearth of evidence from the field to suggest that

the stakeholder concept leads to better organizational success. Researchers have suggested that the normative approaches, which focus on what is good for society, are the most effective way to make a case for stakeholder theory [11], [12], [14], [16]. Identifying and evaluating stakeholders' expectations leads to business performance.

The relevant aspects a business must manage are investors, workers, customers, the community, and the government. High-performing businesses meet the needs of investors, consumers, employees, the government, and society. According to Freeman et al. [85], stakeholder theory falls short of offering a strategy for day-to-day management decision-making. In addition, Freeman et al. [85] outlined three critical critiques of stakeholder theory. Firstly, the Stakeholder theory has often been misrepresented, highlighting the need to recognize that shareholders are stakeholders [22]. Secondly, researchers thoughtfully investigated the complexity of dealing with stakeholders and deciding how to approach varied groups [5]. Thirdly, they inflated and made unachievable the problem of "whose values matter?"

The theory of stakeholders has been selected for varied reasons in research [10]. Different writers [11], [18] used the idea to understand performance. Furthermore, it enables one to describe firm performance in terms of financial and social factors, as indicated by Bhatti [87]. Finally, the idea of enterprise performance derived from stakeholders' theory offers a solid foundation for establishing the construct's bounds and metrics.

11 | Resource-Based Theory

The resource-based theory better explains the fundamental premises of business growth, business performance, and digital transformation, as well as the core properties of SMEs: digital transformation strategy, digital technology, and employee digital skills [56]. It is emphasized that each organization is distinguished by the variety (other than uniformity) of services provided. Companies may therefore demonstrate some heterogeneity or diversity, with some retaining a competitive edge [57]. Given this, the theory asserts that corporate management's goal is to identify, grow, and deploy this component of recognizing essential resources to maximize economic gains. Companies may demonstrate some heterogeneity or diversity, with some retaining a competitive edge [57]. Teece et al. [88] posit that companies should vary their internal structures and abilities to adapt to the changing business environments.

Their coordination will aid in improving the business transformation process [22]. However, several studies suggest that SMEs face challenges in starting their digital section due to resource shortages. Business dynamics may help facilitate the digital transformation process [89]. Furthermore, learning, perception, digital managers, integration, and vital resources influence the corporate digital transformation of businesses, with the constructs of learning and perception having a more significant influence on digital transformation [90]. Since stakeholders are a form of resource, they are embedded in the resource-based theory.

Hence, the resource-based theory will be employed to achieve the theoretical framework of this study. Three interrelated impacts of corporate entrepreneurship mediate the interaction between performance and organizational behavior [91]. Thus, influences the role of digital transformation and enterprise performance on business innovation, including the combined influence of digital transformation and entrepreneurial orientation on business innovation. The resource-based theory will incorporate enterprise development, performance, and digital transformation concepts. As a result, this study will focus on three essential SME resources: digital technology, employee digital skills, and digital transformation strategy. As a result, this study will focus on three key SME resource bases: digital technology, employee digital capabilities, and digitization strategy.

12 | Conceptualizing the Theory into a Framework

According to resource-based philosophy, a business comprises several elements and resources. Companies' resources are unique and varied for several reasons, and this heterogeneity is problematic as it creates variances in firm competitiveness. Conversely, only resources that comply with the VRIN framework may be employed

as a basis for competitive advantage. Particularly, VRIN stands for valuable resources (the foundation for companies to develop and implement corporate strategies and achieve efficiency); rare resources (resources are valuable because they are scarce, and this scarcity creates a competitive advantage niche); and imitable resources (resources that cannot be reproduced or duplicated, and do not have close substitutes).

Businesses possess a variety of resources that can be transformed into unique abilities. These resources are static and difficult to imitate among businesses, serving as the foundation of their long-term competitive advantages [56]. When compared to the company's external circumstances, the internal conditions of the firm are critical in achieving a competitive advantage in the market. As a result, this study identified three key components necessary for SMEs to engage in digital transformation: digital technology, employee digital skills, and a digital transformation strategy.

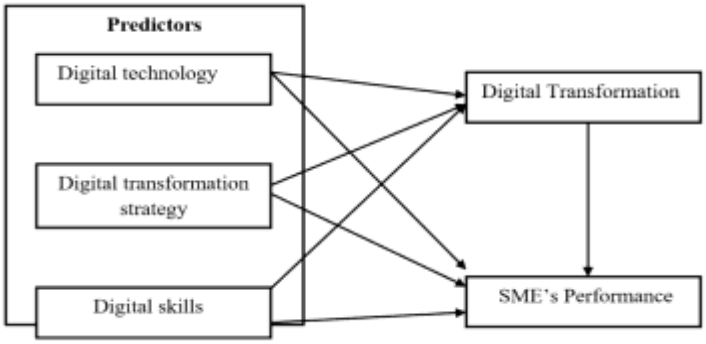

Fig. 1. Conceptual model.

13 | Digital Technology

Advanced technologies, such as artificial intelligence and cloud computing, are redefining Business methods in corporate Organizations [64]. The Internet of Things (IoT) facilitates data interchange within and outside corporate Organizations [66]. Furthermore, advancements in blockchain technology can compensate for unforeseen shortcomings in data mining and security, providing an unfailing assurance for artificial intelligence [63], [64].

Several studies have proven that artificial intelligence can help with digitization [60]. The IoT is critical in digital transformation [60], [62] .Corporate Managements are therefore increasingly using social media to influence overall business performance [66]. Therefore, due to digital technology and the usage of these advanced technologies, the value chain is shifting, and emerging ecosystems and industrial barriers are blurring. A growing number of established firms are modifying their models to adapt to market trends and expand their scope of operations.

14 | Digital Skills

According to Kane [67], the key to successful digitization is employees. Consequently, all members of the workforce are essential to the successful launch of the corporate management digitization strategy [69]. Individual cognitive and process capacities are rapidly evolving, supporting the digital revolution in companies [92]. Bessonova & Goryacheva [71] investigated employee digital literacy as a key determinant of digital transformation preparation.

Solberg et al. [72] posited that employees' digital mentalities influence whether they stay or exit a firm's digitization initiative. The performance of SMEs' growth and innovation is correlated with individual digital competence [83]. However, many firms have failed to embrace digital transformation due to a lack of human resources and workers' digital capabilities [93]. Businesses must construct virtual means in their operations to harness resources and prepare for the future [94]. Organizational empowerment is only effective if the right people are empowered.

15 | Digital Transformation Strategy

For effective digital transformation, a digital transformation plan is essential. By building a successful, transparent, and robust digital transformation plan, one may ensure that the digital shift is as seamless as possible. A digital transformation plan is analogous to a personalized map that may be helpful in organizational change. Many traditional firms prioritized creating and implementing a digital transformation strategy before transforming themselves [95]. Four digital transformation strategies are distinguished by two dimensions: the use of digital technology and the development of digital business models [96]. The research claims that SMEs are improving their digital transformation plans by adopting new technology and values that reshape business models [97].

In recent times, most enterprises have progressed from the digital transformation strategy stage to the plan execution stage [98]. A new strategy implementation framework, comprising planning, execution, and review stages, can be implemented in digital transformation [99]. To summarize, digital transformation is the ideal strategy for an enterprise, and it must be integrated across the whole operation, business, and performance evaluation process. To give the most satisfactory customer experience, it is no longer enough to be at the technological forefront; all aspects of decision-making, work, and collaboration must be digitalized.

16 | Digital Transformation and Performance

Previous studies have suggested that digitization affects a company's financial success [100]. Enterprise digital transformation boosts business performance [101]. In major businesses, state-owned firms, mature organizations, and non-manufacturing (service) industries, digital transformation positively impacts corporate performance. Several advantages of digitization for businesses include transitioning and enhancing traditional stock enterprises. By trading traditional products, digital technology, raising the level of large-scale production, and realizing value benefits like efficiency improvement, quality improvement, and cost reduction can be achieved.

SME digital transformation is driven by three essential resources (business strategy, people resources, and IT), and it influences the performance of SMEs [102]. Finally, the positive effects of digital transformation on dynamic corporate capacity and creative performance are more pronounced when the mindsets of employees are prepared before the transformation process [91].

17 | Complementarity of Resources

The organization's agility and operational expertise in mixing external digital services with internal IT support are essential elements for effective digital transformation and technology adoption [13]. Other studies discovered that corporate digital transformation requires considering the following factors: innovation culture compatibility; vision, strategy, and digital transformation investment alignment; intellectual property and know-how; and digital technology strength [11]. Strategies for digital transformation promote both short- and long-term financial performance [103]. Big data, IoT, blockchain, and performance are all intertwined [87].

Management, technology, marketing, and innovation abilities impact SME performance [104]. Therefore, digital transformation is an ongoing process for businesses. Iterative development, data-driven digital goods and services, and digital technology to build intelligent operations are crucial. Long-term digital transformation necessitates technology innovation and intelligent operations. Businesses can make precise and fast choices by combining data, intelligence, and technology, and constantly improving the user experience for game-changing outcomes.

18 | Conclusion

Enterprises require a clear strategy and appropriate resources to promote digitization. Perhaps the right technology and management framework will ensure SMEs thrive in the changing economic environment.

Due to increasing client needs, company innovation through digitalization has become vital. Hence, increasing research on digitization has a significant impact on SME performance.

Author contributions

EE: Conceptualization, Introduction, Editing, Resources, Visualization.

AAG: Conceptualization, Literature Review, Editing, Resources.

OTO: Design, Conceptualization, Editing.

AOA: Editing. The authors read and approved the manuscript.

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