The Role of Digital Technology in Improving Small and Medium Enterprises (SMES) Growth (A Theoretical Approach)

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Abstract

This study explored the role of digital technology in enhancing the growth of Small and Medium Enterprises (SMEs). SMEs are essential for economic development, job creation, and innovation, yet their growth is often hindered by limited access to resources, infrastructure, and technology. With a focus on how digital tools such as e-commerce, social media, and cloud computing can address these challenges, the study employed a descriptive survey research design to collect data from 212 SMEs. Findings revealed that while digital technology adoption was widespread, the extent varied, and several challenges persisted, including financial constraints and inadequate infrastructure. The study found that adoption of digital technologies positively enhancesthe growth of SMEs by improving operational efficiency, market reach, and customer engagement. The recommendations of this study include investing in digital skills training, exploring cost-effective solutions, and leveraging government and NGO support programs to enhance the growth of Small and Medium Enterprises (SMEs)

Keywords: *Digital Technology, Small and Medium Enterprises (SMEs), Economic Growth, Technology Adoption.*

INTRODUCTION

Background of the Study

Small and Medium Enterprises (SMEs) are universally recognized as vital contributors to economic growth, job creation, and innovation. Across the globe, SMEs account for over 90% of businesses and contribute significantly to employment and gross domestic product (GDP) in both developed and developing countries. For instance, in the European Union, SMEs represent 99% of all businesses and employ around 100 million people, contributing more than half of the total added value created by businesses (European Commission, 2020). Similarly, in Nigeria, SMEs are estimated to contribute about 48% of the national GDP, accounting for 96% of businesses and 84% of employment (SMEDAN & NBS, 2017). This global and local significance underscores the importance of ensuring that SMEs are supported to thrive in increasingly competitive and technology-driven markets.

The growth of Small and Medium Enterprises (SMEs) ,is crucial for the area's economic development, job creation, and poverty alleviation. SMEs serve as the backbone of the local economy, contributing significantly to the region's gross domestic product (GDP) and providing employment opportunities, especially in a region where large-scale industries are less prevalent (Okpara, 2011). The expansion of SMEs fosters innovation and entrepreneurship, driving economic diversification and resilience in the face of economic challenges. Moreover, the success of SMEshas a ripple effect, stimulating local supply chains and increasing the demand for goods and services, which further supports economic stability and growth (Ayyagari, Beck, &Demirgüç-Kunt, 2007). Therefore, promoting the growth of SMEs is essential for sustainable economic development and improving living standards.

Nevertheless, there are numerous factors that appeared to hinder the growth of SMEs. These factors include limited access to finance, inadequate infrastructure, and a lack of skilled labor. However, in considering the factors that affect the growth of SMEs, studies that explored the role of digital technology in enhancing the growth of SMEs is still at very low level. Digital technology has emerged as a transformative force in the business world, offering tools and platforms that can significantly enhance the efficiency, reach, and profitability of SMEs. From cloud computing and data analytics to e-commerce and digital marketing, these technologies enable businesses to optimize operations, access new markets, and improve customer engagement. Studies have shown that SMEs that adopt digital technologies tend to experience higher growth rates, better customer retention, and increased competitiveness (Bala-Subrahmanya, 2018). For instance, in Nigeria, the government's push towards digitalization, coupled with the increasing availability of affordable digital tools, presents a unique opportunity for SMEsto overcome traditional barriers and achieve sustainable growth.

Therefore, to fill this gap, this study explored the role of digital technology in enhancing the growth of SMEs, identifying the key challenges and opportunities associated with digitalization. By doing so, it provided actionable insights that can help policymakers, business owners, and other stakeholders in fostering a more vibrant and resilient SME sector.

Statement of the Problem

Small and Medium Enterprises (SMEs) play a crucial role in the economic development of the area, contributing significantly to job creation and poverty reduction. However, despite their importance, these SMEs face persistent challenges that hinder their growth and long-term sustainability. SMEs often struggle with limited access to essential resources such as finance, skilled labor, and modern infrastructure. These constraints are exacerbated by the absence of effective business strategies and the underutilization of technology, particularly digital tools, which are vital for competing in today’s fast-paced global market (Okpara, 2011). As a result, many SMEs are unable to scale their operations, innovate, or maintain a competitive edge, which limits their potential to contribute fully to economic growth.

One of the most significant barriers to SME growth is the gap in the adoption of digital technology. While digital tools such as e-commerce platforms, digital marketing, and cloud computing have revolutionized the way businesses operate worldwide, SMEs have been slow to integrate these

technologies into their operations. This digital divide has left many SMEs reliant on outdated, manual processes that are inefficient and prone to errors, thereby limiting their ability to expand their customer base, streamline operations, and reduce costs (Eze&Chinedu-Eze, 2018). The lack of digital technology adoption is particularly problematic given the increasing digitalization of the global economy, where businesses that fail to adapt risk being left behind.

The slow uptake of digital technology among SMEscan be attributed to several factors, including limited digital literacy, high costs associated with acquiring and implementing new technologies, and a general resistance to change. Additionally, the region's inadequate infrastructure, such as unreliable internet access and frequent power outages, further hampers the ability of SMEs to leverage digital tools effectively (Oyelaran-Oyeyinka&Lal, 2006). These challenges are compounded by a lack of government support and incentives for digital adoption, which leaves many SMEs struggling to navigate the complexities of digital transformation on their own. Consequently, the gap in digital technology adoption not only impedes the growth of individual SMEs but also undermines the overall economic development.

Addressing this problem is crucial for enhancing the growth and sustainability of SMEs. By identifying the specific challenges that SMEs face in adopting digital technology and exploring the potential benefits of increased digitalization, this research aims to provide actionable insights that can inform policy and business strategies. The study highlighted the necessity of bridging the digital divide to enable SMEs ,to compete more effectively, increase their market reach, and improve operational efficiency. Ultimately, addressing the digital technology gap is essential for fostering a more dynamic and resilient SME sector in the region, which can contribute to broader economic development and poverty alleviation efforts (Afolayan et al., 2015).

Aim and Objectives of the Study

The aim of the study was to examine the role of digital technology in enhancing the growth of Small and Medium Enterprises (SMEs).The specific objectives were to:

1. Assess the types of digital technology adoption among SMEs.
2. Examine the extent of digital technology adoption in the growth of SMEs.
3. Identify the challenges SMEs face in adopting digital technologySMEs.
4. Examine the perceived impact of digital technology adoption on business growth SMEs.
5. Recommend strategies for enhancing digital technology adoption among SMEs.

Significance of the Study

This section discusses the importance of the research. It should explain how the findings will benefit SMEs, policymakers, and other stakeholders. The significance could be in terms of providing insights into the role of digital technology in enhancing SME growth, offering solutions to overcome adoption challenges, and contributing to the broader literature on SME development in emerging economies.

REVIEW OF RELATED LITERATURE

Conceptual Review

This section provides a comprehensive overview of SMEs, highlighting their definition, characteristics, and economic significance. SMEs are generally defined based on criteria such as the number of employees, annual turnover, and asset base, which can vary across countries and regions (Ayyagari et al., 2007). In Nigeria, SMEs are crucial to the economy, contributing significantly to GDP, employment, and poverty reduction. The discussion will cover the unique features of SMEs, including their sectoral distribution, business models, and common challenges. It will also address the critical role SMEs play in driving innovation and regional development.

Digital Technology

This section explores the conceptual framework of digital technology, defining key terms and concepts relevant to the study. Digital technology encompasses a broad range of tools and platforms, including the internet, mobile devices, cloud computing, artificial intelligence, and e-commerce (Brynjolfsson& McAfee, 2014). The discussion will focus on how these technologies can be applied within the context of SMEs to enhance efficiency, competitiveness, and growth. This section will also introduce the concept of digital transformation, emphasizing its importance in the modern business landscape and the potential benefits for SMEs in adopting digital technology.

Types of Digital Technology Adoption among SMEs

Assessing the types of digital technology adopted by SMEsis crucial for understanding how these businesses are leveraging digital tools to enhance their operations. Various forms of digital technology are available, including social media platforms, e-commerce websites, digital payment systems, and cloud computing services. Social media platforms, such as Facebook and Instagram, are particularly popular for marketing and customer engagement, allowing SMEs to reach a broader audience and build their brand presence (Eze et al., 2018). E-commerce platforms, such as Jumia and Konga, provide SMEs with opportunities to sell products online, overcoming geographical limitations and expanding market reach (Chen, Chiang, &Storey, 2012).

In addition to social media and e-commerce, SMEsare increasingly adopting digital payment systems to facilitate transactions. These systems, including mobile payment solutions like PayPal and local alternatives like Flutterwave, simplify the payment process for customers and reduce the risk of cash handling (Brynjolfsson& McAfee, 2014). Cloud computing services, such as Google Drive and Microsoft Azure, are also being used to enhance operational efficiency by providing scalable storage solutions and real-time data access, which are particularly beneficial for inventory management and collaborative work (Martin &Matlay, 2001).

However, the extent and nature of digital technology adoption can vary significantly among SMEs based on factors such as business size, sector, and location. Larger SMEs and those based in urban areas generally show higher levels of digital engagement compared to smaller and rural businesses. This variation is often attributed to differences in resource availability and infrastructure (Bala-

Subrahmanya, 2018). Understanding these differences is essential for identifying gaps and opportunities in digital technology adoption and for tailoring support mechanisms to meet the needs of various SME segments.

The extent of Digital Technology Adoption in the Growth of SMEs

Examining the extent to which digital technology adoption contributes to SME growth involves analyzing how these technologies impact various aspects of business performance. Digital technology, including e-commerce platforms and digital marketing tools, can significantly enhance business growth by expanding market reach and increasing sales. Research by Chen, Chiang, and Storey (2012) shows that SMEs that adopt e-commerce can tap into new markets and experience growth in revenue by reaching customers beyond their local areas.

Digital marketing tools, such as social media advertising and search engine optimization, also play a crucial role in SME growth. These tools enable SMEs to engage with their target audiences more effectively, resulting in increased customer acquisition and retention (Brynjolfsson& McAfee, 2014). By utilizing digital marketing strategies, SMEs can improve their visibility and attract more customers, contributing to overall business growth and competitiveness.

Furthermore, digital technology adoption can lead to improvements in operational efficiency, which supports business growth. Tools like cloud computing and digital inventory management systems help SMEs streamline their operations, reduce costs, and minimize errors (Martin &Matlay, 2001). The increased efficiency gained from these technologies can lead to better resource management and enhanced profitability, further driving the growth of SMEs.

The Challenges SMEs Face in Adopting Digital Technology

Identifying the challenges that SMEs face in adopting digital technology is essential for developing effective support strategies. One of the primary challenges is limited financial resources, which can hinder SMEs' ability to invest in and implement new technologies. Afolayan et al. (2015) found that budget constraints are a significant barrier for many SMEs in Nigeria, affecting their capacity to acquire and maintain digital tools.

Another major challenge is the lack of technical expertise and digital literacy among SME owners and employees. Many SMEs struggle with effectively using digital technologies due to insufficient training and knowledge (Eze&Chinedu-Eze, 2018). This gap in digital skills can lead to underutilization of available tools and reduced benefits from technology investments, highlighting the need for targeted training and support.

Infrastructure inadequacies, particularly in rural areas, also pose significant challenges to digital technology adoption. Oyelaran-Oyeyinka and Lal (2006) identified issues such as unreliable internet connectivity and frequent power outages as common barriers that hinder the effective use of digital tools. Addressing these infrastructural challenges is crucial for enabling broader and more effective adoption of digital technologies amongSMEs.

The Roleof Digital Technology Adoption in Business Growth among SMEs

Examining the perceived impact of digital technology adoption on business growth involves assessing how SMEs view the benefits and effects of these technologies on their operations. Many SMEs perceive that adopting digital technologies, such as e-commerce and digital marketing tools, has positively impacted their business growth by increasing sales and market reach (Chen, Chiang, &Storey, 2012). The ability to sell products online and engage with customers through digital channels is seen as a significant advantage in expanding business opportunities.

SMEs also perceive that digital technology enhances operational efficiency and reduces costs. Tools like cloud computing and digital inventory management systems are believed to streamline operations, improve data management, and reduce operational errors (Martin &Matlay, 2001). These perceived benefits contribute to overall business growth by enabling SMEs to manage resources more effectively and improve their financial performance.However, perceptions of the impact of digital technology can vary among SMEs based on factors such as business size and sector. Larger SMEs and those in urban areas often report more substantial benefits from digital technology adoption compared to smaller and rural businesses. Understanding these perceptions helps to highlight the areas where digital technologies are most impactful and where additional support may be needed to maximize their benefits (Brynjolfsson& McAfee, 2014).

Strategies for Enhancing Digital Technology Adoption among SMEs

Recommending strategies for enhancing digital technology adoption among SMEs involves identifying practical approaches to overcome existing challenges and support technology integration. One key strategy is providing financial support and incentives to help SMEs invest in digital technologies. Governments and financial institutions can offer grants, subsidies, or low-interest loans to ease the financial burden on SMEs and encourage technology adoption (Afolayan et al., 2015).

Another effective strategy is to improve digital literacy and technical skills among SME owners and employees. Implementing training programs and workshops can help bridge the knowledge gap and enable SMEs to utilize digital tools more effectively (Eze&Chinedu-Eze, 2018). Partnerships with educational institutions and technology providers can also facilitate skill development and support SMEs in adopting and integrating new technologies. Addressing infrastructural challenges is also crucial for enhancing digital technology adoption. Investments in improving internet connectivity and power supply in rural areas can help SMEs overcome barriers related to infrastructure (Oyelaran-Oyeyinka&Lal, 2006). Additionally, providing access to support services, such as technical assistance and consultancy, can help SMEs navigate the complexities of digital technology adoption and maximize the benefits of these tools.

Theoretical Framework

The theoretical framework sets the foundation for understanding how digital technology adoption influences SME growth. It provides the underlying theories that guide the research, helping to frame the study's hypotheses and research questions.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is one of the most widely used theories to explain how users come to accept and use technology. TAM suggests that perceived usefulness and perceived ease of use are the primary factors influencing an individual's decision to adopt a technology (Davis, 1989). In the context of SMEs, this model can be used to understand the factors that influence business owners' and managers' decisions to adopt digital technologies. The discussion will explore how TAM has been applied in previous studies on SMEs and digital technology adoption, particularly in developing regions.

Diffusion of Innovation Theory (DOI)

The Diffusion of Innovation (DOI) Theory, developed by Everett Rogers, explains how, why, and at what rate new ideas and technologies spread through cultures (Rogers, 2003). DOI identifies different adopter categories, including innovators, early adopters, early majority, late majority, and laggards, each with distinct characteristics. This theory is relevant in analyzing how digital technology adoption occurs within SMEs, identifying the factors that influence the rate and extent of adoption. The discussion will also explore the barriers and facilitators of innovation diffusion among SMEs.

Digital Technology and Business Growth

This section examines the relationship between digital technology adoption and business growth, particularly within the SME sector. It will review literature that discusses how digital technologies such as e-commerce, social media, and digital payment systems have contributed to the growth and expansion of SMEs by enabling them to reach new markets, improve operational efficiency, and enhance customer engagement (Chen, Chiang, &Storey, 2012). The discussion will also address the economic and competitive advantages that SMEs can gain by leveraging digital tools and platforms.

Role of Digital Technology in SME Development

This section delves into the specific ways in which digital technology can support SME development. It will discuss how digital tools facilitate access to finance through crowdfunding platforms, improve supply chain management via digital logistics solutions, and enhance marketing efforts through targeted digital advertising (Martin &Matlay, 2001). The section will highlight case studies and examples of SMEs that have successfully integrated digital technology into their business models, leading to significant growth and development outcomes.

Conclusion

Digital technology adoption among SMEs has significantly contributed to their growth by enhancing operational efficiency, expanding market reach, and improving customer engagement. The integration of advanced digital tools has streamlined processes, reduced costs, and facilitated better decision-making, allowing SMEs to operate more competitively. Furthermore, digital technologies have enabled businesses to tap into broader markets and engage with customers more effectively, driving sales and fostering brand loyalty. However, to fully realize these benefits, it is essential to address the challenges associated with technology adoption. These challenges include

limited financial resources, inadequate technical skills, and resistance to change, which can impede the successful implementation and utilization of digital technologies. By proactively addressing these issues, SMEs can better leverage digital advancements to sustain and accelerate their growth in an increasingly digital economy.

Recommendations

i. SMEs should invest in training programs to enhance their employees' digital skills and improve technology utilization.
ii. SMEs should explore cost-effective digital solutions that fit their budget and offer high returns on investment.
iii. SMEs should take advantage of government and NGO programs aimed at supporting digital technology adoption.

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