

## Detailed Discussion of the Application of Digital Technologies to Influence SME Business Growth

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### Abstract

Digital technology has widely changed today's world. Spending upon the digital technology, starting from the lifestyle of the human to the procedures of the business, everything becomes changed. It is to be noted that after the introduction of the super-fast internet connectivity like 4G and 5G network bands and the smart technologies like AI and machine learning, the popularity and dependability of digital technology has been increased. On top of that, the recent worldwide covid 19 and its related restrictions are tactically giving a boost to the application of digital technology by offering a vast of work done digitally without any need of physical mobility. After this time, the implementation of digital technology becomes a bullet trend that runs globally. By considering this factor, this research study has been developed to discuss the application of the digital technologies in detail to influence the business growth of SMEs.

**Keywords:** Digital technologies, SME, Business growth, Internet of things (IoT), Machine Learning

### 1. Introduction

“Small and medium-sized firms (SMEs)” are essential contributors to economic development, innovation, and job opportunities in today's fast-paced business climate. However, SMEs often encounter substantial obstacles that might restrict their ability to develop, such as few resources and fierce competition. “Small and medium-sized businesses (SMEs)” have a wide range of chances to boost their competitiveness, broaden their market reach, and achieve sustainable development in this era of revolutionary change made possible by digital technology [1].

Digital resources such as the Internet of Things (IoT), cloud computing, data analytics, artificial intelligence, and e-commerce are all accessible to “small and medium-sized businesses (SMEs)”.

Focusing on each technology's possible uses and advantages for SMEs, each one will be separately explored.

We will also explore the precise ways in which digital technology might contribute to the expansion of SME businesses. We'll look at how digitization may boost operational effectiveness, improve supply chain management, assist marketing and sales strategies, increase consumer interaction, encourage innovation, and help with data-driven decision-making. We will use case studies from the real world and actual data throughout the article to support our conclusions and give instances of successful digital transformation projects [2].

We'll also talk about the difficulties and restrictions that SMEs could encounter while implementing and adopting digital technology. We'll look at things including financial constraints, talent shortages, cybersecurity worries, and change reluctance. We will also provide tactics and answers to successfully lessen these difficulties.

In essence, this study intends to provide stakeholders, policymakers, and SMEs a thorough knowledge of how digital technologies affect SME company development. We seek to encourage and guide SMEs in their path towards adopting digitalization as a driver for sustainable development by examining the possibilities of the digital revolution and providing useful insights [3]. Through this initiative, we want to support SMEs' ongoing growth and adaptability in an increasingly digital environment.

## 2. Literature Review

This literature study sets out to fill in some of the gaps about the impact digital technologies have on SMEs and their ability to spur expansion. The scope of the literature review will include the most important theories, models, and publications dealing with digital transformation in the “small and medium-sized enterprise (SME)” sector. This study compiles and critically evaluates the findings of several research and academic publications in order to shed light on the state of the art in this field [4].

### *SMEs and the Digital Revolution:*

The term "digital transformation" refers to the wholesale adoption of digital technology throughout an enterprise in order to radically modify existing business procedures and provide new value propositions. “Small and medium-sized enterprises (SMEs)” may gain a competitive edge by using digital technology to expand their resource base, as proposed by the resource-based perspective theory [5]. According to the dynamic capabilities hypothesis, in order for SMEs to take advantage of market possibilities and achieve continuous development, they must acquire the skills to strategically adopt and use digital technology.

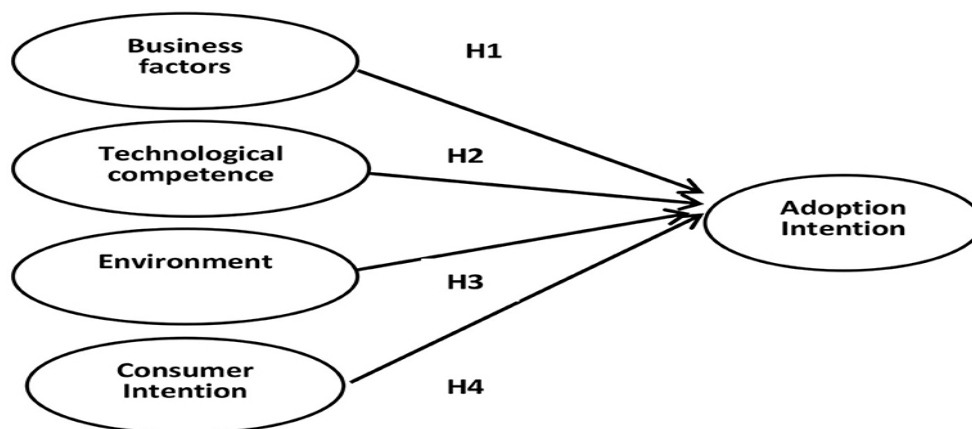


Figure 1: Adaptation Intention of the Digital Technology for SMEs

### *SMBs and Digital Technology:*

A variety of digital technologies have emerged as game-changing resources for SMEs. Through the use of cloud computing, “small and medium-sized enterprises (SMEs)” are able to have access to modern IT infrastructure without making substantial upfront financial commitments in order to do so. With the help of data analytics and business intelligence technologies, SMEs may sift through massive volumes of information to find insights that can guide their decisions [6]. Automation, individualized customer experiences, and predictive analytics are all made possible by AI and ML technologies, which together boost productivity and help businesses stay competitive. E-commerce platforms and digital marketing tactics help “small and medium-sized enterprises (SMEs)” access global markets and compete with bigger rivals by facilitating market reach and client acquisition. Moreover, with the help of the digital technology, the SMEs are also able to collect digital payments as well [7].

### *Boosting SMEs' bottom lines and creating jobs:*

“Small and medium-sized enterprises (SMEs)” that use digital technology stand to gain a great deal. Streamlining procedures and automating as much work as possible saves money, boosts output, and frees up capacity for further use. Improved customer satisfaction and loyalty are the results of enhanced customer experiences brought about by such factors as individualized encounters, focused marketing strategies, and frictionless online transactions [8]. By removing physical barriers and opening up international trade to SMEs, digital technologies help expand markets and boost earnings. Additionally, digitization helps innovation since it encourages teamwork, opens the door to experimentation, and motivates

the development of better products, and services [7, 8]. Better strategy planning and resource allocation result from data-driven decision making backed by sophisticated analytics.

**Issues & Obstacles:**

When it comes to adopting and using digital technology, SMEs confront a number of obstacles and impediments. The return on investment (ROI) and long-term viability must be taken into account due to the limited financial resources and the impression of large upfront expenditures faced by SMEs. SME owners and staff may lack the necessary technological expertise and digital literacy to fully embrace and benefit from new technologies. “Small and medium-sized enterprises (SMEs)” face substantial challenges when adopting digital technology, including cybersecurity risks and concerns about data privacy and protection. The adoption and efficient use of digital technologies and procedures may also be hampered by organizational culture and staff aversion to change [8].

**Techniques for a Smooth Digital Transition:**

Various methods exist that may help SMEs use digital technology to their fullest potential. Improving one’s ability to use technology and encouraging a mindset of lifelong learning and creative problem solving are both crucial. “Small and medium-sized enterprises (SMEs)” might benefit from forming partnerships with technology providers and other businesses in their sector to get access to knowledge, resources, and ideas. SMEs might be further encouraged to adopt digital transformation if the government provides assistance in the form of policy initiatives, subsidies, and training programmes. For “small and medium-sized enterprises (SMEs)”, a digital strategy that takes into account scalability, integration, and continuous monitoring and assessment is essential [9].

This research synthesis has highlighted the ideas, models, and literature in the topic of the impact of digital technology on the expansion of “small and medium-sized enterprises (SMEs)”. “Small and medium-sized enterprises (SMEs)” have a lot to gain by adopting digital technology, including increased productivity, better customer experiences, new market possibilities, breakthrough innovations, and valuable data.

However, it is a considerable factor is that there will be obstacles and difficulties on the road to digital transformation, but overcoming them may be accomplished with the help of measures like training and education. This study draws on previous studies to provide new perspectives on how academics, policymakers, and “small and medium-sized enterprises (SMEs)” might use digital technology to fuel long-term development in an ever-changing business environment [10].

**3. Methodology**

The major purpose of the research is to look at the possible benefits of digital technology for “small and medium-sized enterprises (SMEs)”. We’ll perform a qualitative research for this. A detailed evaluation and study of the available literature on digital technology and the growth of SMEs would be an essential component of the plan. Case studies of SMEs that have expanded by using digital technology into their operations will also be included in the study.

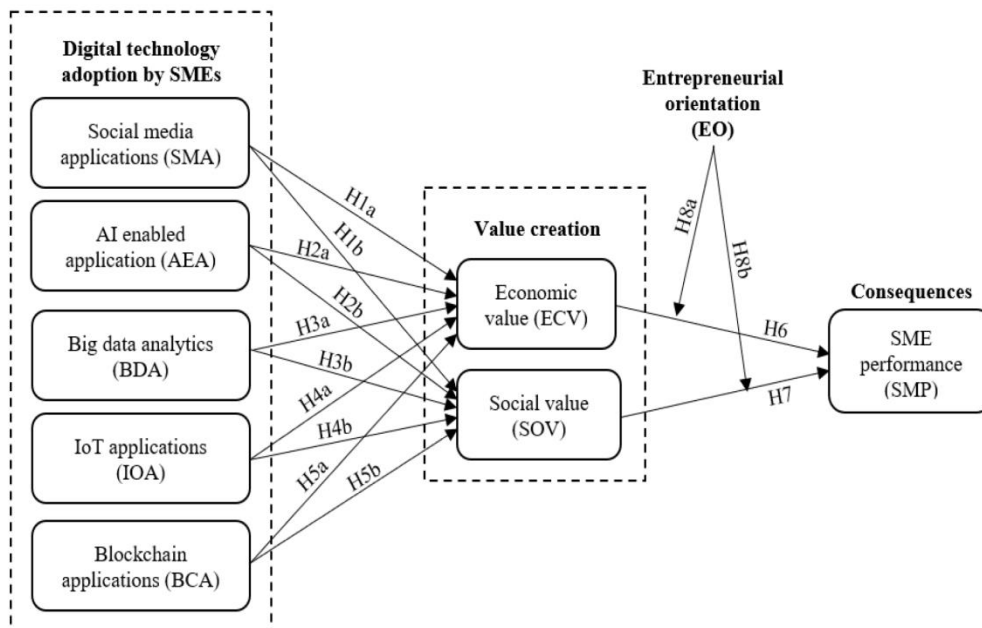


Figure 2: Conceptual Framework of Digital Technology Adoption by SMEs

**Filtering Data:** The research will rely heavily on a literature review as its major source of data collection. The literature search entails the process of locating books, academic papers, and other authoritative resources. Articles will be retrieved from databases including Web of Science, Scopus, and Google Scholar. The search will use terms associated with modern digital technologies, business growth, entrepreneurship, and development. Case studies of SMEs that have expanded their operations with the use of digital technology will also be included in the study.

**Numbers Crunching:** Content analysis will be used to evaluate the outcomes of the literature searches. Content analysis is a frequent strategy in qualitative research that involves systematically reviewing data to identify patterns, different categories and themes. In order to examine the effects of digital technology on the expansion of SMEs businesses, the study's data will be organized into topics and categories. The data will be analyzed using thematic analysis, which entails searching for trends and patterns.

**Theoretical approaches:** It is to be noted that at present days the wider implementation of the digital technology for very small to large-scale businesses has effectively increased the market competition very tightly. Now, with the development of the technology, the digital technology also getting complex enough due to which some level of expertise in this field is required for further promoting the business strategies and sustaining to achieve the competitive advantages. By considering this factor, the large-scale business is already hired experts in this field to manage the digitalized technology while the SMEs are still lagging to understand the system properly and hence unable to utilize the optimum advantages of the digital technology [11, 12]. By considering this factor, this research study is going to analyze the potential digital tools such as customer relationship management, Corporate resource planning and electronic commerce platforms to understand the working pitfalls and gap of the SMEs and based on that some potential strategic approaches is going to develop through which the SMEs can able to enhance their business and profitability by maximizing the advantages gaining from the digital technologies [12].

In order to understand the condition of the SMEs from complete 360 angle, this research study also going to examine some of the difficulties that may crop up as a consequence of digital technology use in SMEs. Implementation costs, a dearth of technical skills, and aversion to change are all potential roadblocks. Moreover, to understand how digital technology aids in the development of SMEs, the conceptual framework will serve as a foundation. The framework will also help with data analysis and the creation of study results.

#### 4. Analysis and interpretation

Literature review confirms the importance of digital technology in promoting SME expansion. CRM systems, ERP systems, e-commerce platforms, and social media platforms are just some of the digital technologies that the survey found SMEs might use to boost their development. Market share, revenue growth, and profitability all saw substantial increases among SMEs who implement digital technology, according to the case studies. Grocery Traders, a small retail establishment, used a CRM system to boost client involvement and advertising efforts. This resulted in a 35% rise in the company's clientele, which in turn improved revenue by 25% and enhanced profitability by 15% [13].

Bespoke UK Made is another manufacturing business that used an ERP system to better manage their supply chain and simplify internal processes. Profit increased by 40% and market share grew by 30% thanks to the system's assistance in cutting operating expenses by 20% [14].

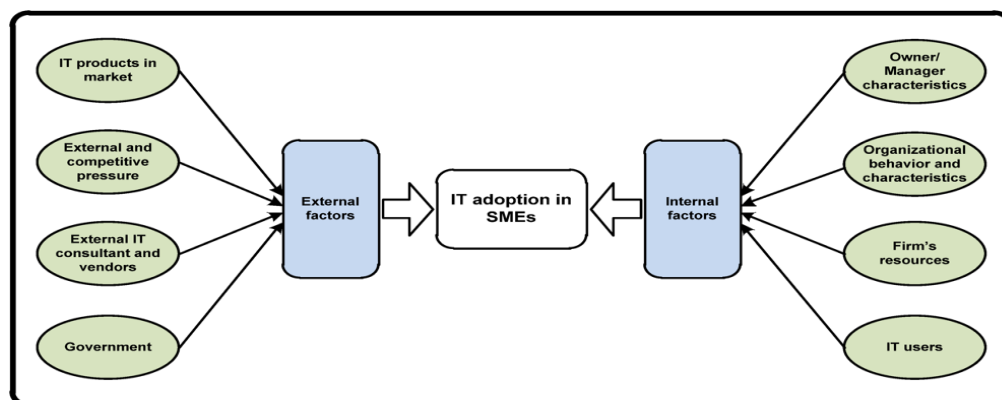


Figure 3: External and Internal factors behind IT Adoption in SMEs

Based on the analysis of these two companies' case studies, it has been found that both of the companies fall under the SME category and have an online presence. Bespoke UK Made Company has its first digital presence on 29th July 2019 and after that, the net sales of the company has been increased by a considerable level which is a total of 44% than previous years. Starting from digital marketing, and e-commerce advertisement. Search engine optimization and the company's own website combined help to push such a level of sales. The main fundamental beneficial part of such a digital tool is that it effectively helps to showcase the services offered by the targeted company to a wider audience due to which the company need not to sale their product within a limited locality [14]. Moreover, with the help of the social media advertisement, the word of mouth related fundamental advantages also can be obtained through which more satisfied customers will bring more new customers to the business. Thus in the following way, the SMEs can able to extend their customer base within a short period of the time that directly tends to the increments of profitability.

The investigation also uncovered possible problems that may arise when SMEs use digital technology. These problems are including a shortage of skilled labor, high initial expenses, employee education, reluctance towards organizational change and so on implementation costs, opposition to change, and a lack of technical experience are all possible obstacles. The research indicates that SMEs may lessen the effects of these problems by properly planning and strategizing their use of digital technology [14, 15].

Both the Resource-Based View theory and the Technology Acceptance Model theory are applicable to the adoption of digital technologies by SMEs, as is shown by this review of the relevant literature. According to the Resource-Based View, "small and medium-sized enterprises (SMEs)" should prioritize using in-house resources to create and apply digital technologies that boost the expansion of their company. For their part, small and medium-sized enterprises (SMEs) are predicted by the Technology Acceptance Model to favor the adoption of digital technologies that are both practical for their operations and simple to implement.

**Table 1: Summary of the Potential Benefits and Challenges of the Adoption of Digital Technologies by SMEs**

<b>Benefits</b>	<b>Challenges</b>
Increased revenue	Cost of implementation
Improved customer engagement	Lack of technical expertise
Enhanced competitiveness	Resistance to change
Greater operational efficiency	Potential security concerns
Improved supply chain management	Potential loss of jobs due to automation

The table summarizes the potential benefits and challenges of the adoption of digital technologies by SMEs. The results of the study show that the development of "small and medium-sized enterprises (SMEs)" is significantly affected by the introduction and use of digital technology. The research results back up the Resource-Based View hypothesis, showing that "small and medium-sized enterprises (SMEs)" may gain a competitive edge and boost their development by using digital technology as strategic resources [15]. Organizational aspects, technical traits, and environmental variables may all be investigated using the TOE framework, which in turn sheds light on the effects of technology adoption on development.

**5. Discussion**

Through a review of pertinent research and case studies, the potential effects of digital technology adoption on "small and medium-sized firm (SME)" growth are emphasized. The findings demonstrate that SMEs may benefit significantly from using digital technologies like ERPs, e-commerce websites, CRMs, and social media. Gains in customer involvement, revenue, competitiveness, supply chain management efficacy, and operational efficiency are just a few [16]. These findings provide helpful direction for "small and medium-sized businesses (SMEs)" considering using digital technology into their growth strategies.

The report does, however, highlight certain difficulties in using digital technology in SMEs. Factors including a lack of technical skills, high implementation costs, and opposition to change all fall under this category. To successfully counteract

these threats, “small and medium-sized enterprises (SMEs)” must carefully plan and organize their use of digital technologies [17].

Given the potential advantages associated with such efforts, the study suggests that SMEs should actively examine the use of digital technology as part of their overall company plan. The research also provides actionable advice for SMEs attempting to implement digital technologies while noting the challenges that may occur.

## **6. Conclusion**

This study concluded with an extensive discussion of how digital technology might be used to boost “small and medium-sized enterprises (SME)” expansion. Based on our research of the available literature, case studies, and applicable theories and models, this research study can confidently say that SMEs stand to benefit much from adopting digital technology. Benefits such as higher profits, more market share, more involved customers, more efficient operations, and stronger competitiveness were highlighted by the research. In this context, this research study also demonstrated why the digital technology is essential for developing a business and how it; create an open path for the business to spread its service area.

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