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## Digital Transformation and Growth Opportunities in the Post-Pandemic: A Qualitative Exploration of Small-Scale Entrepreneurs in the Kumasi Central Market

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Abstract: Business survival and growth, particularly in developing countries in response to the covid 19 pandemic has made digital transformation more paramount. This study looks at the challenges and opportunities of digital transformation among small scale entrepreneurs, specifically market traders at Kumasi central market. The primary research method for this study was qualitative where 20 small scale entrepreneurs were interviewed from each of the five vendors categories such as food vendors, textile, electronics vendors, local art and craft vendors, and household goods vendors. The study showed four main challenges these stakeholders could face, which are lack of professional and digital literacy, affordability factors, reluctance to accept changeable cybersecurity issues. Moreover, despite these hurdles, there occur a break even such as improved access to markets, better interaction with customers, improved efficiency of operations and development of new concepts of doing business. The study has both theoretical and practical contributions which provides insights on traditional marketplaces adjust towards being digitally transformed and offer recommendations for policymakers as well as entrepreneurs used for the study.

**Keyword:** Digital Transformation, Small Scale Entrepreneurs, Digital Literacy, Kumasi Central Market

#### INTRODUCTION

According to Abdul-Azeez et al. (2024) micro and small firms are vital in enhancing the economic development and creating jobs. The discourse on digitisation however has gone ahead to encompass all types of businesses. This encompasses many traditional markets that appeared to resist change that were as recently (Davis & DeWittal, 2022). Moreover, this evolution is not only limited to the high-tech industries and other big players but has also affected individual traders like those in small markets of Kumasi Central Market (Agyapong et al. 2021). There is a great scope for the enhancement of technology application in the traditional markets. According to Ghana Statistical Service (2022) mobile phone use in the Ashanti area,

where Kumasi is situated, was 94% in 2021. Such a high rate of acceptance would provide an open market for mobile technology applications in conventional market processes.

Such technological enhancements have begun to alter the way Kumasi Central Market traders conduct business on a day-to-day basis. Most importantly, according to studies conducted by Akuoko et al. (2022), Nyarko et al. (2022), small scale traders are beginning to embrace new ways of doing business, especially with the introduction of mobile money and Facebook advertising. These modifications are compelling the traders to change their conventional ways of managing stock and serving the customers. Asante (2022) research claimed that the business processes present at Kumasi Central Market have their own understanding of innovation and entrepreneurship.

A study by the Kumasi Metropolitan Assembly (2023) indicated that the average daily sales for market sellers embracing digital payment methods increased by 15% in contrast to those using only money. The COVID-19 epidemic has significantly increased the rate of digitalization among traders in Kumasi market (Owusu et al., 2023; Ofosu-Ampong, 2022). Also, since the first case came up on the 12th of March 2020, Kumasi which is the largest city and market in Ghana has been experiencing an altered business environment due to COVID-19 pandemic. Various commercial activities have been suspended because of lockdowns and enforced social distancing hence compelling traders to embrace digital transactions to prevent joblessness (Shodunke, 2022; Mofijuret al., 2021). Notably, Merchants in Kumasi say that over 40% of vendors at the public market had adopted mobile money and digital platforms use in times of crisis (Kumasi Merchants Association 2022).

Despite the importance of small-scale entrepreneurs to Ghana's economic development and job creation (Abdul-Azeez et al., 2024), little empirical research has been conducted on digital transformation in the traditional African marketplaces where offline markets predominate (Nadkarni & Prügl, 2021; Gaglio et al., 2022). Digital transformation in small and medium-sized enterprises (SMEs) has been studied to some extent by Schwaeke et al., 2024; Clemente-Almendros et al., 2024; Coffie et al., 2021). Nevertheless, the current body of knowledge regarding technology transformation of SMEs is rife with gaps as there has been no long-term post technology transformation studies performed especially recently in the developing economy in the post covid-19.

However, the existing literature on technology transformation by SMEs remains inconclusive as there is no longitudinal post-technology adoption studies conducted recently especially, in a post covid-19 era in the developing economy. Furthermore, whereas small-scale businesses account for around 60% of urban employment in Kumasi (Adjabeng & Osei, 2022), many entrepreneurs struggle to adapt to and exploit new technology for business growth (Khurana et al., 2022). This challenge is particularly observable at the Kumasi Central Market or the Covid-19 period when traders must shift from orthodox ways of doing business to modern practices in the midst of several challenges and changes as a result of the pandemic (Owusu et al., 2023; Ofosu-Ampong, 2022). The lack of in-depth research on these challenges and opportunities creates a large gap in knowledge about the digital transformation of the small entrepreneurship in terms of the traditional market settings. This study bridges the gap in literature about this subject through examination and provides a detailed qualitative description of some of the hindrances and motivators that affect the technology transformation by small scale entrepreneurs within Ghana. This study seeks to achieve the following objectives:

- 1. To explore the unique challenges hindering digital transformation in the post-pandemic in the small-scale entrepreneurs in Ghana.
- 2. To explore the opportunities digital transformation in the post-pandemic in the small-scale entrepreneurs in Ghana.

#### Literature Review

## **Theoretical Review: Diffusion of Innovations**

Everett Rogers' Diffusion of Innovation theory, developed in 1955, has grown in importance as a tool for understanding how new technology and ideas spread across society. Recently many scholars have focused on this theory integrating with other contexts, thus there is a gap that requires attention. For instance, Vargo et al. (2020) developed a conceptual framework that incorporates this theory with service-dominant logic, in which they explain how the value-co creation mechanisms of service ecosystems impact the diffusion process. Other two frameworks contribute to our understanding of digital transformation in micro and small enterprises: the Technology Acceptance Model (TAM), and the Unified Theory of Acceptance and Use of Technology (UTAUT). As Davis (1989) argued, the idea behind applications of TAM is the notion that the perceived ease of use and the perceived usefulness of a system are important variables in its adoption, while Venkatesh et al. (2003) UTAUT model brings focus on social influence and facilitating conditions that are critical in the traditional market such as Kumasi Central Market. Studies conducted by Coffie et al. (2022), Hossain (2020) have been able to take these theories to mobile payment services, embracing technology through mobile payment systems and coins in the case of blockchain technology. Further studies have also broadened the application of these theories to many other contexts. Cao et al. (2022) acknowledge the significance of incorporating the institutional and cultural settings while studying e-service deployment in developing economies, which confirms the flexibility of the theories in various contexts, but their basic purpose is preserved understanding the mechanisms of innovation diffusion.

## **Empirical Review**

## Challenges Hampering Digital Technology Transformation in the Ghanaian SME Sector

The economic crisis today calls for every small medium-sized enterprise (SMEs) to embrace the digital transformation. However, there are fewer instances of successful digital transformation among SMEs, as various factors hinder their progress towards digital adoption. This review of the literature summarises the main challenges SMEs encounter in their pursuit to implement modern digital solutions (Gassiah & Kikula, 2022). Funding, however, appears to be one of the greatest hindrances to the efforts of SMEs in adopting digital technology (Joseph et al., 2021). Abdul-Azeez et al. 2024 cite that underfunded SMEs encounter significant challenges because of the high costs associated with purchasing, integrating, and supporting digital technology. Van Song (2022) indicated in a report that SMEs in developing countries face severe challenges due to limited funding for digital activities, a factor that significantly hinders their technological development.

Another critical problem SMEs face is the absence of digital competencies and expertise. In this case, Biloslavo and Lombardi (2021) point out the lack of any relevant technical knowledge by the owners and employees of the SMEs, resulting in the failure to employ and use the digital equipment. According to Teng et al. (2022), training employees on digital skills is crucial for SMEs to successfully adopt technology and develop a workforce proficient in using digital tools. The absence of adequate digital infrastructure significantly hinders the implementation of SMEs' digital transformation initiatives, especially in developing countries and continents with limited infrastructure. There are, for instance, historical indexes that demonstrate that Surya et al. (2021) declare that the Young People's Network's internet-friendly technology restricted the youth's growth capability to making most of them in SMEs growth and expansion. Eze et al. (2021), focusing on the widespread penetration of digital technologies in almost every aspect, emphasize that the government should enhance the provision of basic digital infrastructure to improve the economic digital transformation of SMES.

Organizational culture often hinders the acceptance of change associated with the digital age in many small and medium-sized enterprises. Canhoto et al. (2021) note that several SME leaders do not embrace digital technologies because of limited appreciation of their benefits and fear of disturbing the current system, or the status quo. Alam et al. (2022) discuss organizational culture and highlight its effects on digital uptake, confirming that conservative and low-risk cultures would impede all efforts aimed at digital transformation. As they progress to the level of implementing digital technologies, small and medium-sized enterprises are also experiencing high levels of cyber security and data protection problems. Pawar and Palivela (2022) explain that SMEs are a target for cyber criminals since they lack the resources to put effective security measures in place. Ioannidou and Sklavos (2021) state that certain exemplary data protection regulations, such as GDPR timing legalisation, pose additional compliance challenges to SMEs, limiting their digital adoption. Most SMEs' digital adoption initiatives lack strategic processes, which hinders their technological progress. Bruce et al. (2023) reveals that a lot of Small and Medium Enterprises (SMEs) are digitalizing in a disjointed way because they have no systematic blueprint or vision in mind during implementation and the absence of a comprehensive plan or long-term strategy leads to waste materials as well as unachieved IT investment targets due to lack of accurate direction in most cases.

## Opportunities Digital Transformation in the Post-Pandemic in the Small-Scale Entrepre neurs in Ghana

Digital technology provides the additional components of resilience and agility. For instance, Purnomo et al. (2021) confirmed that SMEs utilising digital technologies during the epidemic were able to maintain business continuity and adapt to market disruptions with ease. Khurana et al. (2022) noted that the implementation of digitisation increases the robustness of SMEs, allowing them to respond quick to changes and take advantage of new chances. Such agility is the most needed in a present business environment that is getting volatile by the day. The digital space enables small and medium enterprises (SMEs) like never before to expand their access to the market and engage with customers creatively. As pointed out by Bag et al. (2022) social media channels and e-commerce functionalities have the potential to help SMEs capture larger and untapped markets. SMEs were found by Lim (2023) to increase sales in the new normal era by improving customer engagement, building their brands and having a higher potential for sale if they consider using digital marketing strategies. Arsawan et al. (2022) these innovative tools allow them to compete at international level despite their relatively small budgets and giving them a chance to compete with the big players such as multinationals or public companies in different sectors.

Digital technology provides SMEs with the opportunity to streamline business operations, cut costs, and increase efficiency. Subramanian et al. (2021) assert that cloud technology, robotics, and analytical tools aid in the promotion of small and medium enterprises (SMEs). These technologies enhance activity levels, reduce physical labour, and enhance management efficiency by leveraging available data. These findings were supported by Usaiet al. (2021) who provided evidence that SMEs that adopt innovative technologies tend to see vast improvements in their operational performance and efficiency, thus increasing their competitiveness. For example, Joshi and Gupta (2021) have reported the quick development of fintech infrastructures, especially online lending markets, where the small and medium enterprises have a new pool of capital sources, such as peer-to-peer lending and crowdfunding. Government and business support organisations have enhanced the digital capabilities of SMEs, according to Chakuu et al. (2022) by offering digital literacy, training, and motivation, among other resources, as the cornerstone of various initiatives to help SMEs transition to digitalization.

## Digital Transformation in the SMEs in Ghana

Egala et al. (2024) article further addressed another aspect of digital adoption, pointing out that service-oriented SMEs have higher adoption rates compared to both manufacturing and agricultural SMEs. In addition, the importance of the potential benefits of adopting digital technologies for Ghanaian SMEs will be broad and multifaceted. In contrast, Bruce et al. (2023) claimed that the use of technology by small and medium enterprises will improve their processes, give them new opportunities, and enable them to connect better with their clients. According to Boateng et al. (2022), digital tools have enabled SMEs to create markets and thereby grow their businesses, instead of concentrating on building market linkages or access to finance which are commonly referred to as the constraints. The findings indicate significant potential for leveraging digital technology to enhance the competitiveness and recovery capabilities of the SME sector in Ghana.

The expansion of digital financial services has been one of the remarkable transformations within Ghana's growing economy. According to findings made by Agyekum et al. (2022), mobile banking services can help in opening new avenues that facilitate transactions for people and businesses who did not have access heretofore. On the contrary, Amankwah-Sarpong et al. (2023) researched digital financial services and their role on firm development, especially regarding SMEs.

## **METHOD**

This paper used the interpretivist paradigm, the study used an exploratory research design to reveal specifics about the situation under study. The qualitative research approach will seek meaning in how people explain a particular social phenomenon. The study focused on small-scale entrepreneurs in the Kumasi Central Market, located in Ghana's Ashanti Region. Small-scale entrepreneurs in the Kumasi Central Market include food vendors, textile vendors, electronic vendors, local art and craft vendors and household goods. Given the extensive range of vendor categories, levels of digital adoption and business experiences present across the varied participants, the market in question was able to capture a wealth of rich and insightful data for the purpose of qualitative analysis.

In this case, participants were selected based on purposive sampling technique, and the concept of saturation driven the sample size. Braun and Clarke (2021) notes that the study can achieve thematic saturation with smaller sample sizes provided the study is about a very specific focus group. This implies that a sample size of 20 participants is enough to gather the critical information on digital transformation at the Kumasi Central Market. The data was collected through face-to-face interviews with the informants arranged separately into four groups to address research questions (Creswell & Creswell, 2018; Islam & Aldaihani, 2022; Patton, 2015). This is because, the researcher wanted the information to be validated, and reliability ensured. This research used thematic analysis to figure out and examine patterns from the collected data (Mihas, 2019; Clarke et al., 2016; Merriam & Grenier, 2019). Assurance of trustworthiness and credibility in the research included triangulation, member checking, and inter-coder reliability as said by Creswell (2014), Patton (2015). Confidentiality was also maintained during the data utilisation of this study.

## **RESULTS AND DISCUSSIONS**

The selected respondents for the study digital transformation and growth opportunities in the post-pandemic have been profiled according to their gender, age, educational background, employment status, income level. In total, twenty (20) participants were interviewed from the Kumasi Central Market in the Ashanti region using five groups, namely Food vendors, Textiles vendors, electronic vendors, Local art and craft vendors and Household goods vendors. Four participants were selected to present each group.

## **Profile of Participants**

Notably, all the twenty (20) participants willingly participated in this exercise. Below is the summary of the participant profiles who were involved in the study. The participant profiles of 20 small-scale entrepreneurs in Kumasi Central Market reveal a diverse group across five vendor categories. With a balanced gender distribution of 11 females and 9 males, ages ranging from 28 to 55 and varied educational backgrounds from primary school to bachelor's degrees, the sample represents a broad cross-section of market vendors. Monthly incomes span from 1,200 to 3,500 GHS, with electronics vendors generally earning more than food and craft sellers. Experience varies from as little as 3 years to up to 15 years, which shows that the market consists of both novices and those who have been practicing for quite a while. Even though there seems to be specific patterns among certain categories in terms of sellers' gender distribution like within edibles females dominate hence accounting for high number of food vendors while electronic stuff tends to attract more males.

#### **Discussion of Results**

This section presents the results which were obtained from the field. In line with the research methodology used for the study, thematic analysis was used. Thereby themes emerged from the participants perspectives during the interview. Each participant interview lasted between 10-15 minutes. This is because, the participants were busy and the same time working. The section below provides the themes emerged for the objective one.

# Challenges Hindering Digital Transformation in the Post-Pandemic in the Small-Scale Entrepreneurs in Ghana

To achieve this objective, the study reveals several key themes that align with existing literature while providing meaningful insights into the specific experiences of local entrepreneurs.

## **Technical Expertise and Digital Literacy**

In SMEs, a lack of digital skills and competencies appears to be a damaging factor that restricts the application of digital technologies, especially in traditional markets such as Kumasi Central. The existing literature on the digital revolution in Ghana extensively addresses this issue. For instance, it was established that while some Small and Medium Enterprises were using technologies like social media and internet for business, others were still lagging due to lack of finance, requisite skills and other forms of infrastructure (Abdul-Azeez et al., 2024). In contrast, the research established that there are distinct degrees of technology acceptance biases across sectors, with service-oriented SMEs adopting technology at the greatest rate when compared to industrial and agricultural SMEs (Egala et al., 2024). The disparities in levels of technology integration calls attention to the kind of transformation of an organization and the actualizing specific competencies.

While the post-COVID-19 era has brought about new challenges, it also offers new opportunities for promoting the digital capacities of SMEs in Ghana. According to the study, small and medium enterprises (SMEs) in Ghana face challenges such as inadequate digital skills, limited technological infrastructure access, and lack of finances, which all affect the use of digital strategies (Khurana et al., 2022). The pandemic has intensified the trend towards digitalization in various sectors. According to research, the National Entrepreneurship and Innovation Plan (NEIP) and the establishment of Ghana Digital Centres were among the government initiatives aimed at providing the necessary resources, training, and infrastructure to promote the digitalisation of SMEs (Agyei-Boapeah et al., 2022). These bodies have been established with the main intention of reducing the education barriers when it comes to digital technologies and providing the required skills and knowledge to the various players within.

The research has noted the need for efforts to increase the extent of uptake of the programmes for small or micro-sized enterprises that are often located in difficult business areas such as rural areas or Kumasi central among others (Okundaye et al., 2021).

## Participants expressed that.

"Participant 3 stated that an impediment to the digital growth in businesses comes from SME owners and their employability level where they have no necessary training and technical capabilities. The argument continued in the study that when people have no skills it hinders them from adopting technologies, for they will not employ technologies yet not knowing how to use them. It was also indicated, from the participants, that this deficit would make the personnel either not use the system to the fullest or hate it leading to change resistance regarding digital adoption." (Participant 3)

"Participant one came out saying that he has been using WhatsApp in his business, which he justified by the fact that it is very timesaving since you can message a client within the shortest time possible. After that, he added that most people have the application, which is a bonus when reaching out to clients. This was so since the interviewee explained that this was credibility lent and that it helped bypass the certain layers which were communication barriers as well as provide instant client to professional interactions." (Participant 1)

## **Resistance to Change and Cultural Attitudes**

A lot of research has focused on the problem of change resistance and other socio-cultural factors, which inhibit the use of ICT among SMEs in Ghana especially in the more traditional markets such as the Kumasi Central. Abdul-Azeez et al. (2024), for instance, noted that although some SMEs have embraced the use of social networks and e-commerce tools, still many others are lagging due to factors such as lack of finance, skills, and adequate technology. Such opposition to change is usually a result of entrenched business practices and ignorance of the benefits that would come along with digital transformation. In the research conducted by Egala et al. (2024), it is shown that the digital technology has varying levels of importance based on sectors; for example, the usage of digital technology is far more advanced in-service providing SMEs as opposed to construction and agriculturally based SMEs. This is reflective of the cultural or sectorial belief systems and practices on the attitudes toward digitization, which is very restrictive in this case. Agyei-Boapeah et al. (2022) reviewed the impact of certain government policies, such as the National Entrepreneurship and Innovation Plan and Ghana Digital Centres, on digital transformation implementation and the provision of resources, skills, and systems for SMES. These interventions also contribute towards cultural bridging with the help of educational campaigns that change attitudes towards digitalization. Agyei-Boapeah et al. (2020) noted that there were issues with the ability to operate computers because of lack of financial resources, inadequate equipment and untrained personnel among other factors.

## Some of the participants stated that.

"The eighth respondent identified inertia and the tendency to follow the same business practices that have been traditionally used as bottlenecks. This participant said that even though the SME owners and employees may have become accustomed to what is on the place some new technology/way of doing things certainly will be resisted. The same participant articulated the origins of such resistance as the cause to be unwilling to engage with outside parties for fear of Innovative. Communication, job uncertainty, and genuine unawareness of the

return able advocacy of digitization were other significant views outlined in the participant's chapter". (Participant 8)

"The fourth participant explained that they had incorporated Google Ads for the sake of managing corporate ads. Claiming the ad service can connect easily with other google services and stay more canonical which has been beneficial in the collaborative venture and increase of output of the organization. Following the brief, the person mentioned that the system had detailed information on the performance of the advertising as well as the behaviour of the customers making it easier to carry out specific marketing strategies." (Participant 4)

## **Cybersecurity Concerns**

During the process of going digital, especially for small businesses, security issues like cybersecurity and the safety of data and information are becoming more and more important. This is because old ways of managing information aren't giving users enough and up-to-date information anymore. Effah and Nuhu (2017) observed the challenges faced by e-governance reforms and systems in underdeveloped societies such as Ghana. They observed that inadequate infrastructure, limited e-skills, and narrow perspectives of civil servants towards these new reforms are impeding their proper adoption. These issues are also connected to the private sector, with a lot of emphasis on small and medium-scale enterprises, which lack adequate skills and knowledge on how to ensure that their businesses are protected by the relevant strict policies. Agyei-Boapeah et al. (2022) suggested that we can tackle Ghana's inadequate service delivery by maximizing the public's access to ICT and incorporating the other two consistent viewpoints.

Agyekum et al. (2022) delved into the use of mobile phones to facilitate financial inclusion, which is very essential for any state to realise economic growth. However, the boom of such services also has negative consequences, in that it enhances the need for such provisions in the case of the digital service. The development of a country's financial infrastructure is crucial for third-stage economies to flourish. Many factors have contributed to the economic transformation, such as the adoption of electronic money by most small and medium-sized enterprises (SMEs) in the vicinity of Kumasi Central Market. Therefore, it may be necessary to provide cyber security services specifically tailored to these small business owners.

## Perspectives from some of the participants.

"Participant 4 asserted that cyber security and data privacy concerns constituted formidable obstacles that would impact the adoption of digital technologies. To Participant 4, Small and Medium Enterprises (SMEs) may be slow in accepting digital technologies due to cyber fears that come because of hackers and data breaches. He then went ahead to illustrate how major cyber-attacks on organizations and cases involving data leaks reported in newspapers could be associated with fear and distrust especially in companies that transmit sensitive client data through mobile phones." (Participant 4)

## Also, another participant added that.

Participant 6 has reported that they use an online payment system like Tap Tap when they want to make payments because it does several financial tasks automatically thereby enabling one to know the state of business finances. This person also pointed out that this system saves on time and enables decision making. Notably, since the introduction of this technology, cash flow control has greatly improved and errors in book-keeping processes reduced. (Participant 6)

## **Employee Training and Skill Development**

Several research studies have demonstrated the importance of equipping small and medium entrepreneurs in Ghana with digital knowledge and capacities. For instance, Egala et al. (2024) have shown that SMEs that apply digital technologies without serious problems can show improvements in their processes, widen their reach, and interact more efficiently with their clientele. However, it was also noted that there is a disparity in technology adaptation levels across different industries, with more small business activities in the service sector utilizing digital technologies than those in manufacturing and agriculture. This implies that there is a need for specific training for different businesses in Kumasi Central.

Khurana et al. (2022) highlighted those difficulties in improving digital capacity in Ghana's small and medium enterprises such as the absence of digital literacy, uneven technological development and limited access to skills development programs are the major impediments of ICT use by businesses. Agyei-Boapeah et al. (2022) addressed the support provided by government policies, such as the National Entrepreneurship and Innovation Plan, the Ghana Digital Centres, equitable access to resources, and the necessary incentives for those investing in digital marketing, to resolve the current situation. Despite this, Okundaye et al. (2021) pointed out that significant efforts are necessary to make these initiatives impactful, especially with respect to the rural SMEs.

Some participants expressed their feelings during the interview.

During the interview, "Participant 1 highlighted a key challenge to the adoption of information technology in Ghanaian small to medium enterprises involved with mobile phones. This challenge participant said that many invoice creation business might not appreciate what these tools offer in terms of effecting delivery and even having an advantage over the others to remain in the business. For example, because there is little to show or explain, most invoices will be created and processed electronically, which is also decorated. Furthermore, the participant put forward the idea that the root of these misunderstanding procedures could be caused by the lack of exposure to real successes, or inadequate knowledge on return on investment as it relates to information communication and digital technologies." (Participant 1)

## Another participant added that,

Participant 11 reported "using Canva to create artwork and associated content, lauding the design tools and themes that are user-friendly. The usefulness of Canva was highlighted by the participant regarding creating high-resolution images without the need for complex artistic knowledge. The user also explained that because of Canva, the need to seek external support for design work was efficiently eliminated. This, in turn, meant that marketing materials were produced more quickly as well as at a reduced price as less was spent in outsourcing the design work." (Participant 11)

## Opportunities Digital Transformation in the Post-Pandemic in the Small-Scale Entrepre neurs in Ghana.

The study's exploration from the perspective of the participants small-scale entrepreneurs in Kumasi Central Market conforms to the existing body of knowledge on digital technology in business and development in SMEs. The following were the themes emerged from the participants views shared.

## **Expanding Online Presence and Sales Channels**

It is true that the advent of digital devices has made it possible for SMEs to escalate their business activities and interact with clients in unique ways. This change is noticeable, especially in Ghana's digital economy. Boateng et al. (2022) present a synopsis of Ghana's digital economy and observe a substantial rise in certain sectors as more and more people acquire mobile phone usage, extend their internet coverage, and the government pushes for a digital economy. On the other hand, Bruce et al. (2023) have evaluated that even with the fast growth of the sector in Ghana, it is still far below the developed countries, with issues like a lack of infrastructure and digital skills holding back development.

The integration of digital technologies into the operations of micro, small, and medium-sized businesses in Ghana is closely linked to the overall technological advancements in the country. In this regard, Ofosu-Ampong and Acheampong (2022) investigate the expansion of economic activities using mobile phones in Ghana and help to signal that using more mobile phones may be associated with more growth. Likewise, Davis and DeWittal (2022) critically examined the contribution of broadband internet to the enhancement of digital innovation and entrepreneurship in Ghana and called for lowered-cost policies to increase possible usage of broadband internet. These studies focus on the practice of asylum, which enables most of the features and services that contribute to the online dominance of small and medium-sized enterprises. Agyekum et al. (2022) delved into the issue of mobile money use in Ghana and illuminated its potential to boost financial inclusion for the betterment of society and the economy.

## Participants shared that,

According to participant 3, "Tonaton served as an internet shop which was commendable due to its ease in operating it and unique characteristics. For instance, he/she indicated that one could appear like a professional by creating a store on Tonaton and managing stock very efficiently. Furthermore, the same person showed that Tonaton had increased company's clientele significantly besides skyrocketing its sales altogether." (Participant 3)

Once more, another participant said that "he uses WhatsApp in doing business, allegedly it helps a lot in messaging with customers. According to him, the app is popular and well-known by many people hence it becomes easy to reach out to them through this media. He also confirmed that the platform's commonness eases exchanging of information thus there are present possibilities of quick chats with one's clientele." (Participant 1)

#### **Innovation and Differentiation**

Scholars strongly agree that the introduction of technology, particularly digital sources, can stimulate innovation in businesses through management practices (Eze et al., 2021). Vendors involved in the business improvement of the Kumasi Central Market Akosombo can benefit greatly from this opportunity for creativity. Using digital tools in businesses can enhance production and customer service, leading to improved market performance (Abdul-Azeez et al., 2024). For instance, Small and Medium Enterprises (SMEs) could utilize ecommerce services at a higher rate, compared to their traditional forms of marketing (Boateng et al., 2022). Significantly helping to aggregate financial inclusion for women-owned SMEs is the technological development of mobile money, which encloses credit facilities, and online transactions, developed most recently, as reported by Agyekum et al. (2022). Other studies demonstrate the effectiveness of digital marketing techniques in brand building and arousal of customer interest in SMEs (Opoku et al., 2023; Davis & DeWittal, 2022).

The use of such techniques has seen further advancement as companies use more data and more tools for the integration of this data in (MIS) management information systems, especially in the development of metrics for SMEs on client satisfaction (Owusu et al., 2023). Digitization may seem to have a negligible effect on the new and existing concepts of providing better-fit products and serving better customers, given that modern public technology deployment is accessible to all businesses, big or small (Eze et al., 2021). Besides, there is also a certain optimism regarding the use of digital ecosystems and cooperation networks in promoting new ideas and expanding businesses for small businesses (Clemente-Almendros et al., 2024; Akuoko et al., 2022).

Some participants shared insightful views.

Participant 11 said that "he uses Canva for the creation of graphics and promotional material because it has easy-to-use design tools as well as templates. The participant stressed that with Canva a person could make professional content without having much experience in designing anything at all. He also mentioned how this tool helped him or her avoid using expensive experts in the field to design staff leading better ROI on production so that such should also reduce marketing turnaround periods while saving money for both activities." (Participant 11)

Participant 6 reported "using a online payment system like Tap Tap when it comes to paying or receiving money. The person shared that the technology is designed in a way that automates different financial responsibilities and provides insights to the organization's finances. This application saves time and aids in making sound choices according to them which quantifies all that. Additionally, one expressed how useful this invention was especially because it had been instrumental on cash flow controls including elimination errors during bookkeeping." (Participant 6)

## **Digital Marketing Strategies for Brand Awareness**

Customer interactions can be improved through digital marketing and social media channels, which will also significantly enhance loyalty to the respective brand names thereby boosting sales for SMEs. It is important for this review because it has focused on the aspect of small and medium enterprises as well as their marketing strategies using digital marketing platforms. This aspect of effective use of digital marketing platforms is shown by the authors through various forms like websites and emails among others rather than just relying on oral advertisement such as word of mouth (Nyarko et al., 2022; Akuoko et al., 2022). Asante (2022) indicates that social media plays a major role in narrowing down organizational boundaries thus supporting effective communication between organizations with its customers.

Owusu et al. (2023) who maintains that they deliberate communication on top of providing a framework for understanding how small enterprises active their clients through increasing both frequenting and intensively when using these communication tools such as means of marketing and sales processes. Digital marketing has significantly changed marketing strategies for small businesses especially those based at Kumasi Central Market. The same sentiment is shared by Ofosu-Ampong (2022) who insists that SME should clearly understand digital marketing and keep most social network services going to engage their customers. Mofijur et al. (2021) these forums also offer the SMEs different audiences for constant interactions, sharing information as well as promoting a particular brand.

Some participants shared their perspectives.

Participant number 4 claimed that "using Google Ads in running business adverts. Google Ads are known to integrate well with other Google services and happen to

be reliable, improving coordination and output. He/she went further to explain that this site offered insight in ad performance and client behaviour hence paving way for better advertising campaigns." (Participant 4)

Participant 8 said that "using Facebook for advertising purposes since it could be used for chatting at a very fast rate and merged with other productivity applications. Moreover, he/she made it clear that through this social media website, customers could communicate with them instantaneously thereby saving time. This participant added that the business managed to get more customers through targeting or wide coverage available in this platform, and engagement rates had increased significantly." (Participant 8)

## **Accessing New Markets and Expanding Globally**

As it is commonly recognized in the literature, the emergence of digital markets in the global marketplace has notably helped SMEs by opening international markets and value zones thereby promoting collaboration (Arsawan et al., 2022). In new market economies, this aspect is critical since it allows them access to local as well as global markets. Boateng et al. (2022) observe that it is possible for digital businesses operating in Africa to reach beyond country borders and focus on global customers. Therefore, according to these researchers, e-commerce enables entrepreneurs to sell their products online from anywhere worldwide where they are connected to the internet unlike in traditional trading systems.

Bruce et al. (2023) also discusses issues, vacancies, and openings that firms in e-markets face. They argue that the trade has continued to expand due to the introduction of recent technologies which have made it easier for countries in the world to engage in different forms of trading including exchanging commodities & services, among others. However, it is important to note that the local perspective focuses more on crossing so-called geographical boundaries without using digital technology. Besides, Agyei-Boapeah et al. (2022) contribute to the debate by examining how the polyvalency of the government-supported Entrepreneurship and Innovation Plan (NEIP) of Ghana assists the SMEs in their digital transition and global ambitious endeavours. The research emphasizes the importance of some focused government programs that could provide entrepreneurs with the necessary services and training to make the digitalization process easier and more beneficial in terms of even international market access.

Below were some of the insights from the participants.

Participant 7"One time I wanted to put LinkedIn into use but as a source of promoting knowing that the interface is nice and more accommodating,' he said of the ease to use aspect of LinkedIn. The person also shared that LinkedIn helped a great deal in making advertisements as well as maintaining interaction with the clients since all are up to speed. Also, the person noted that the professional network in the various sectors and with different the target audience contributed significantly to the increased efficiency in multimarket marketing and accumulating the conference leads."

Participant 15 "adopted Facebook Advert for managing social networks and hailed it as an instrument capable of scheduling posts and performing analysis. The fellow underscored the role of Hootsuite in economizing time through prescheduling posts and offering important knowledge about social networks performance. He also added that this instrument made it possible for their company to have a uniform social network presence over different platforms, while at the

same time making it easier for them to strategize based on performance data when planning their content".

## **Summary of Findings**

The study explored digital transformation and growth opportunities in the post-pandemic: A qualitative exploration of small-scale entrepreneurs in Kumasi central market. It was the objective of this research to answer the following research questions. (a) What are the challenges hindering digital technology adoption in the Ghanaian SME sector? (b) What are the opportunities on the digital adoption journey in the post-pandemic of the Ghanaian SMEs?

The results include key technology adoption by SMEs in Ghana and discuss frequently encountered issues as well as challenges noted in traditional markets like Kumasi Central Market. These were revealed from the study such as financial barriers, a lack of expertise in science and technology, and a low level of digitisation make it challenging to integrate technology. Moreover, despite these obstacles, there exist opportunities that can be exploited by these small-scale entrepreneurs like email marketing, and social networking among other tools have greatly helped companies in building their brand names, moving into new markets, and competing globally using the internet.

## **CONCLUSION**

This study highlights the challenges and unmet opportunities for SMEs applying digital technology in the Kumasi Central Market. Though there are still constant financial and technological challenges, the growing acceptance of mobile money and social media platforms among SMEs gives hope for future entrepreneurs. Notwithstanding the current limitations, this study shows how SMEs in underdeveloped countries may use digital tools to maintain competitiveness in a fast-changing global market. Moreover, the study concludes that despite the impediments, there is a change in attitude of SMEs to the significance of digitalisation in such activities as reaching the target market, customer contacts, and creativity processes. Social networks, e-commerce, and digital funding campaigns are the three nascent technologies that small entrepreneurs are using to gain consumer recognition as well as enter their value chains and global markets.

## **Study Implications**

The study contributes to the theory of Diffusion of Innovations by demonstrating how digital technologies diffuse among SMEs in Kumasi Central Market. Adoption of mobile money and use of social media advertisement forms a 'reinventive' practice in the market as opposed to other traditional engagements. It alters the existing practices instead of replacing it entirely; also coinciding with the 'reinvention' stage according to Rogers-theory where early adopters tend to tweak innovations to suit their unique local contexts. The results also enhance the Technology Acceptance Model (TAM) as well as the Unified Theory of Acceptance and Use of Technology (UTAUT) by putting an emphasis on the concept of social influence within traditional market settings. The study emphasizes that the bias occurred when a vendor decided to adopt digital means influenced not by the perceived ease of use and benefit alone as dominant within TAM but also by peer recommendations and observed success in the vendor's network.

On the other hand, policymakers will benefit from these results as they help push for government interventions that support this group through the provision of accessible training programs, monetary benefits through subsidized loans or grants, and good internet service. In practice, this study suggests that small entrepreneurs could use well-known and easily accessible digital platforms as a starting point for their digital transformation process, thereby avoiding a complete overhaul at once and instead adopting it gradually.

## Recommendations

Establishing focused digital literacy interventions for small-scale traders in local markets such as Kumasi Central Market. The focus will be on training in overcoming practical issues that these market vendors encounter when interacting with digital ecosystems, such as mobile payments, social media marketing, and the basic e-commerce model. This recommendation responds to the gaps in supported issues in the technical know-how of traditional market vendors and their change aversion. Introduce and implement a well-rounded blended financial assistance scheme that comprises subsidized loans, grants, and cost-sharing arrangement solely designed for digital transformation projects.

Future research should explore the influence of government policies on promoting digital adoption, especially in rural markets. Furthermore, comparative analyses among various developing economies could provide significant insights into the applicability of their findings to alternative market conditions. Future research may also employ quantitative methodologies to investigate the relationship between digital adoption and company growth in SMEs.

## REFERENCE

- Abane, J.A., Adamtey, R. and Kpeglo, R., (2024). The impact of social capital on business development in Ghana: Experiences of local-level businesses in the Kumasi Metropolitan Area. *Social Sciences & Humanities Open*, 9, p.100775.
- Abdul-Azeez, O., Ihechere, A.O. and Idemudia, C., (2024). SMEs as catalysts for economic development: Navigating challenges and seizing opportunities in emerging markets. GSC Advanced Research and Reviews, 19(3), pp.325-335.
- Addae, G., Oduro-Kwarteng, S., Fei-Baffoe, B., Rockson, M.A.D., Ribeiro, J.X.F. and Antwi, E., (2021). Market waste composition analysis and resource recovery potential in Kumasi, Ghana. *Journal of the Air & Waste Management Association*, 71(12), pp.1529-1544.
- Adjabeng, F. and Osei, F., (2022). The Development of Small Medium Enterprises and Their Impact on the Ghanaian Economy. *Open Journal of Business and Management*, **10**, 2939-2958.
- Agyapong, D., Jones, P., Boohene, R., Agyapong, G.K., Frimpong, S. and Boachie-Mensah, F.O., (2022). Analysis of Socio-Demographics of Necessity-driven Entrepreneurs in Selected Cities in Ghana. *Journal of Business and Enterprise Development (JOBED)*, 10, pp.73-112.
- Agyei-Boapeah, H., Evans, R. and Nisar, T.M., (2022). Disruptive innovation: Designing business platforms for new financial services. *Journal of Business Research*, 150, pp.134-146.
- Agyekum, F.K., Reddy, K., Wallace, D. and Wellalage, N.H., (2022). Does technological inclusion promote financial inclusion among SMEs? Evidence from South-East Asian (SEA) countries. *Global Finance Journal*, *53*, p.100618.
- Akuoko, P.B., Amoako, C. and Owusu-Ansah, J.K., (2022). Compliance, resistance and innovations: reflections of informal traders' responses to kejetia redevelopment in central Kumasi, Ghana. *African Geographical Review*, 41(4), pp.452-467.
- Alam, K., Ali, M.A., Erdiaw-Kwasie, M.O., Murray, P.A. and Wiesner, R., (2022). Digital transformation among SMEs: Does gender matter?. *Sustainability*, 14(1), p.535.
- Amoah, J., Bruce, E., Shurong, Z., Bankuoru Egala, S. and Kwarteng, K., (2023). Social media adoption in smes sustainability: evidence from an emerging economy. *Cogent Business & Management*, 10(1), p.2183573.
- Arsawan, I.W.E., Koval, V., Rajiani, I., Rustiarini, N.W., Supartha, W.G. and Suryantini, N.P.S., (2022). Leveraging knowledge sharing and innovation culture into SMEs sustainable

- competitive advantage. *International journal of productivity and performance management*, 71(2), pp.405-428.
- Asante, K.T., Kumi, E. and Kodom, M., (2024). Post-COVID economic crisis, citizen-state relations, and the Electronic Transactions Levy (E-levy) controversy in Ghana. *World Development Perspectives*, 35, p.100621.
- Asante, L.A., (2022). The politics of market redevelopment in African cities: Insight from two market projects in Ghana. *Geoforum*, 131, pp.136-150.
- Bag, S., Srivastava, G., Bashir, M.M.A., Kumari, S., Giannakis, M. and Chowdhury, A.H., (2022). Journey of customers in this digital era: Understanding the role of artificial intelligence technologies in user engagement and conversion. *Benchmarking: An International Journal*, 29(7), pp.2074-2098.
- Bai, C., Quayson, M. and Sarkis, J., (2021). COVID-19 pandemic digitization lessons for sustainable development of micro-and small-enterprises. *Sustainable production and consumption*, 27, pp.1989-2001.
- Biloslavo, R. and Lombardi, R., (2021). Knowledge transferring and small and medium enterprise's (SME's) effectiveness: emerging insights and future directions. *Business Process Management Journal*, 27(6), pp.1747-1774.
- Boateng, H., Ampong, G.O.A., Adam, D.R., Ofori, K.S. and Hinson, R.E., (2022). The relationship between social interactions, trust, business network, external knowledge access and performance: a study of SMEs in Ghana. *VINE Journal of Information and Knowledge Management Systems*, 52(5), pp.633-649.
- Bruce, E., Shurong, Z., Ying, D., Yaqi, M., Amoah, J. and Egala, S.B., (2023). The effect of digital marketing adoption on SMEs sustainable growth: Empirical evidence from Ghana. *Sustainability*, 15(6), p.4760.
- Byrne, O. and Shepherd, D.A., (2015). Different strokes for different folks: Entrepreneurial narratives of emotion, cognition, and making sense of business failure. *Entrepreneurship theory and practice*, 39(2), pp.375-405.
- Canhoto, A.I., Quinton, S., Pera, R., Molinillo, S. and Simkin, L., (2021). Digital strategy aligning in SMEs: A dynamic capabilities perspective. *The Journal of Strategic Information Systems*, 30(3), p.101682.
- Cantoni, D. and Yuchtman, N., (2021). Historical natural experiments: Bridging economics and economic history. In *The handbook of historical economics* (pp. 213-241). Academic Press.
- Cao, Y., Kou, F., Hu, H. and Wan, G., (2022). How gamified cooperation and competition motivate low-carbon actions: An investigation of gamification in a popular online payment platform in China. *Journal of Environmental Management*, 324, p.116259.
- Clemente-Almendros, J.A., Nicoara-Popescu, D. and Pastor-Sanz, I., (2024). Digital transformation in SMEs: Understanding its determinants and size heterogeneity. *Technology in Society*, 77, p.102483.
- Cobbinah, P.B., Amoako, C. and Asibey, M.O., 2019. The changing face of Kumasi central, Ghana. *Geoforum*, 101, pp.49-61.
- Coffie, C.P.K., Tetteh, E.D., Emuron, A. and Darkwah, J.A., (2022). COVID-19 and mobile payment diffusion: Lessons for future mass diffusion and continual usage. *Journal of Innovation Management*, 10(1), pp.20-41.
- Coffie, C.P.K., Hongjiang, Z., Mensah, I.A., Kiconco, R. and Simon, A.E.O., (2021). Determinants of FinTech payment services diffusion by SMEs in Sub-Saharan Africa: evidence from Ghana. *Information Technology for Development*, 27(3), pp.539-560.
- Corvello, V., Verteramo, S., Nocella, I. and Ammirato, S., (2023). Thrive during a crisis: the role of digital technologies in fostering antifragility in small and medium-sized

- enterprises. Journal of Ambient Intelligence and Humanized Computing, 14(11), pp.14681-14693.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3),319–339
- Davis, G.F. and DeWitt, T., (2022). Seeing business like a state: Firms and industries after the digital revolution. *Strategic Organization*, 20(4), pp.860-871.
- Effah, J. and Nuhu, H., (2017). Institutional barriers to digitalization of government budgeting in developing countries: A case study of Ghana. *The Electronic Journal of Information Systems in Developing Countries*, 82(1), pp.1-17.
- Egala, S.B., Amoah, J., Bashiru Jibril, A., Opoku, R. and Bruce, E., (2024). Digital transformation in an emerging economy: exploring organizational drivers. *Cogent Social Sciences*, 10(1), p.2302217.
- Eze, S.C., Chinedu-Eze, V.C. and Bello, A.O., (2021). Some antecedent factors that shape SMEs adoption of social media marketing applications: a hybrid approach. *Journal of Science and Technology Policy Management*, 12(1), pp.41-61.
- Gaglio, C., Kraemer-Mbula, E., & Lorenz, E. (2022). The effects of digital transformation on innovation and productivity: Firm-level evidence of South African manufacturing micro and small enterprises. *Technological Forecasting and Social Change*, 182, 121785.
- Gassiah, N. and Kikula, J., (2022). Challenges small and medium enterprises (SMEs) face in acquiring loans from commercial banks in Tanzania. *African Journal of Business Management*, 16(4), pp.74-81.
- Ioannidou, I. and Sklavos, N., (2021). On general data protection regulation vulnerabilities and privacy issues, for wearable devices and fitness tracking applications. *Cryptography*, 5(4), p.29.
- Joseph, T., Obikaonu, P., Ariolu, C., Nwolisa, C. and Aderohunmu, A., (2021). Smes intervention programmes in nigeria: evaluating challenges facing implementation. *Applied Journal of Economics, Management and Social Sciences*, *2*(1), pp.16-25.
- Khurana, I., Dutta, D.K. and Ghura, A.S., (2022). SMEs and digital transformation during a crisis. The emergence of resilience as a second order dynamic capability in an entrepreneurial ecosystem. *Journal of Business Research*, 150, pp.623-641.
- Lim, W.M., (2023). Transformative marketing in the new normal: A novel practice-scholarly integrative review of business-to-business marketing mix challenges, opportunities and solutions. *Journal of Business Research*, 160, p.113638.
- Marolt, M., Zimmermann, H.D. and Pucihar, A., (2022). Social media use and business performance in SMEs: the mediating roles of relational social commerce capability and competitive advantage. *Sustainability*, 14(22), p.15029.
- Mofijur, M., Fattah, I.R., Alam, M.A., Islam, A.S., Ong, H.C., Rahman, S.A., Najafi, G., Ahmed, S.F., Uddin, M.A. and Mahlia, T.M.I., (2021). Impact of COVID-19 on the social, economic, environmental and energy domains: Lessons learnt from a global pandemic. *Sustainable production and consumption*, 26, pp.343-359.
- Nadkarni, S. and Prügl, R., (2021). Digital transformation: a review, synthesis and opportunities for future research. *Management Review Quarterly*, 71, pp.233-341.
- Nyarko, B., Oppong Mensah, N., Boateng, K.A. and Donkor, A., (2022). Influences of E-commerce Adoption on Sales performance among agrochemical input dealers in the Ghanaian City. *Cogent Business & Management*, 9(1), p.2038763.
- Ofosu-Ampong, K. and Acheampong, B., (2022). Adoption of contactless technologies for remote work in Ghana post-Covid-19: Insights from technology-organisation-environment framework. *Digital Business*, 2(2), p.100023.

- Ofosu-Ampong, K., (2021). Determinants, barriers and strategies of digital transformation adoption in a developing country Covid-19 era. *Journal of Digital Science*, 3(2), pp.67-83.
- Opoku, F., Forkuor, D. and Abass, K., (2023). Toward maximising profits from markets: an analysis of the management structure of markets in Kumasi, Ghana. *SN Business & Economics*, 3(3), p.63.
- Owusu, B., Kutor, S.K. and Ablo, A.D., (2023). COVID-19 pandemic: Ghana and the geographies of blame. *Geojournal*, 88(1), pp.279-290.
- Pawar, S. and Palivela, H., (2022). LCCI: A framework for least cybersecurity controls to be implemented for small and medium enterprises (SMEs). *International Journal of Information Management Data Insights*, 2(1), p.100080.
- Purnomo, B.R., Adiguna, R., Widodo, W., Suyatna, H. and Nusantoro, B.P., (2021). Entrepreneurial resilience during the Covid-19 pandemic: navigating survival, continuity and growth. *Journal of Entrepreneurship in Emerging Economies*, 13(4), pp.497-524.
- Qalati, S.A., Ostic, D., Sulaiman, M.A.B.A., Gopang, A.A. and Khan, A., (2022). Social media and SMEs' performance in developing countries: Effects of technological-organizational-environmental factors on the adoption of social media. *Sage Open*, *12*(2), p.21582440221094594.
- Sarpong, F.A., Sappor, P., Nyantakyi, G., Ahakwa, I., Esther Agyeiwaa, O. and Blandful Cobbinah, B., (2023). From traditional roots to digital bytes: Can digitalizing ESG improves Ghanaian rural banks' brand equity through stakeholder engagement, and customer loyalty? *Cogent Business & Management*, 10(2), p.2232159.
- Schwaeke, J., Peters, A., Kanbach, D.K., Kraus, S. and Jones, P., (2024). The new normal: The status quo of AI adoption in SMEs. *Journal of small business management*, pp.1-35.
- Shodunke, A.O., (2022). Enforcement of COVID-19 pandemic lockdown orders in Nigeria: Evidence of public (non) compliance and police illegalities. *International journal of disaster risk reduction*, 77, p.103082.
- Smidt, H.J. and Jokonya, O., (2022). Factors affecting digital technology adoption by small-scale farmers in agriculture value chains (AVCs) in South Africa. *Information Technology for Development*, 28(3), pp.558-584.
- Subramanian, G., Patil, B.T. and Gardas, B.B., (2021). Evaluation of enablers of cloud technology to boost industry 4.0 adoption in the manufacturing micro, small and medium enterprises. *Journal of Modelling in Management*, 16(3), pp.944-962.
- Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H. and Idris, M., (2021). Economic growth, increasing productivity of SMEs, and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), p.20.
- Teng, X., Wu, Z. and Yang, F., (2022). Research on the relationship between digital transformation and performance of SMEs. *Sustainability*, 14(10), p.6012.
- Usai, A., Fiano, F., Petruzzelli, A.M., Paoloni, P., Briamonte, M.F. and Orlando, B., (2021). Unveiling the impact of the adoption of digital technologies on firms' innovation performance. *Journal of Business Research*, 133, pp.327-336.
- Van Song, N., Mai, T.T.H., Thuan, T.D., Van Tien, D., Phuong, N.T.M., Van Ha, T., Que, N.D. and Uan, T.B., (2022). SME financing role in developing business environment and economic growth: empirical evidence from technical SMEs in Vietnam. *Environmental Science and Pollution Research International*, 29(35), p.53540.
- Vargo, S. L., Akaka, M. A., & Wieland, H., (2020). Rethinking the process of diffusion in innovation: A service-ecosystems and institutional perspective. *Journal of Business Research*, 116, 526–534.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D., (2003). User acceptance of information technology: toward a unified view. *MIS Q. 27 (3)*, 425–478 (2003).

- Yu, S., Abbas, J., Draghici, A., Negulescu, O.H. and Ain, N.U., (2022). Social media application as a new paradigm for business communication: the role of COVID-19 knowledge, social distancing, and preventive attitudes. *Frontiers in Psychology*, 13, p.903082.
- Zaato, S.G., Ismail, M., Uthamaputhran, S., Owusu-Ansah, W., Owusu, J., Md. Shuaib, A.S. and Hassan, H., (2021), November. How Social Capital Activates the Entrepreneurial Orientation of SMEs Performance in an Emerging Country in Covid-19 Pandemic. In *International Conference on Business and Technology* (pp. 661-692). Cham: Springer International Publishing.
- Zahra, S.A., Liu, W. and Si, S., (2023). How digital technology promotes entrepreneurship in ecosystems. *Technovation*, *119*, p.102457.