

Challenges Facing ICT Use during COVID-19 Pandemic: The Case of Small, Medium and Micro Enterprises in South Africa

Hlombe Gqoboka, Godfred Anakpo*, Syden Mishi

Department of Economics, Nelson Mandela University, Port Elizabeth, South Africa

Email: hlombengesig@gmail.com, *Godfred.Anakpo@mandela.ac.za, Syden.Mishi@mandela.ac.za

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Abstract

COVID-19 and its related restrictions have led to the closure of over 60% of Small, Medium and Micro Enterprises (SMMEs) largely due to the inability to move from physical to online business model. Using the desk research technique, this study examines the ICT challenges of SMMEs, coping strategies and the road map for redress in South Africa. Findings reveal challenges such as inadequate digital infrastructure, lack of funds for digital investment, lack of digital literacy, and nature of SMMEs' business and trade model are major ICT use challenges faced by the SMMEs. SMMEs adopt measures such as laying off workers, changing to high consumable products, and changing marketing techniques to simple online marketing models and pricing strategies to cope with some of the challenges. Based on the findings, we recommend complementarity of the role of key stakeholders, including business owners, governments, telecommunication industry players or internet service providers, and business owners, as an indispensable approach. Businesses need to plan to build resilience against any unforeseeable eventualities that might have catastrophic impacts on their businesses. The government needs to provide financial bailout and business recovery funds at an affordable cost to businesses to help them acquire the necessary infrastructure needed to embrace the change. Furthermore, long-term investment in digital infrastructure by the government toward universal access to the internet by businesses is very necessary. It is also suggested that important industrial actors, such as those in the telecommunications industry, collaborate with the government to achieve universal access to the internet and other ICT technologies by people and SMMEs. This should include a digital literacy program to teach and equip businesses. Special interventions in the form of market security for businesses that are vulnerable are also recommended.

Keywords

ICT Use, Challenges, COVID-19 Pandemic, SMMEs, South Africa

1. Introduction

Digital technology is believed to enable companies to quickly change their business model from traditional physical methods. With the move from physical to online model fast-tracked by the outbreak of the COVID-19 pandemic, companies are currently planning rather than long-term. Corporate initiatives that use digital technology to leverage new skills to transform organizational strategies and processes are known as digital transformation (Warner & Wäger, 2019). There has been a rapid change and development in digital technology over the past few years with 5G networks and 3D printing being the latest developments in the digital world which are growing at a fast rate. The time gap has decreased in the transformation of digital technology, which was not forecasted in the beginning due to the “new normal” birthed by COVID-19 and its related policy.

While some types of businesses have been able to creatively adapt using digital technology, small and medium-sized enterprises (SMEs) find it difficult to move from physical to online (Anakpo & Mishi, 2021, 2022). Larger companies have a comparative advantage because they have more resources among others which makes the transition to a digital model easier than small and medium-sized companies. While the application of ICT is a major innovation that characterised the 4th industrial revolution (Anakpo & Kollamparambil, 2022a, 2022b; Anakpo & Oyenubi, 2022), the outbreak of COVID-19 has fast-tracked this transition. However, ICT use in the era of the COVID-19 pandemic remains unsolved and a challenge, especially in South African SMMEs (which represent about 98% of the formal economy across all sectors in South Africa), leaving a knowledge gap. A deeper understanding of ICT use and challenges faced by SMMEs is crucial to shaping interventions and policy toward salvaging these businesses and enhancing their operation and growth. Using desk research technique, this study seeks to address the following objectives: 1) Identify the ICT challenges faced by SMMEs amidst the COVID-19 pandemic in South Africa. 2) Understand the coping mechanisms of SMMEs to ICT challenges amidst COVID-19 and the roadmap for redress.

2. COVID-19 Impact and ICT Challenges of SMMEs

The COVID-19 pandemic has had detrimental effects on businesses as more than four out of ten business owners reported that supplier input costs have increased. A third of larger SMME businesses reported that operations were disrupted by logistics, and 21% reported they had supply and or merchandise shortages (Anakpo & Mishi, 2021; Veselovská, 2020). As a result of all these external variables, nearly seven out of ten small business owners are experiencing

cash flow issues. This is primarily due to a delay in customer payments (or clients simply failing to pay their accounts), as well as an unanticipated increase in personal protective equipment (PPE) costs. All the changes contributed to a third of SMME firm owners being unable to pay their employees' salaries, forcing a quarter of them to lay off workers (Jafta, Anakpo, & Mishi, 2022; Komanisi, Anakpo, & Mishi, 2022) with severe livelihood implications (Hlungwane, Anakpo, & Mishi, 2022). The airline and tourism industries have seen a significant decline in online reservations due to travel restrictions. Consumer demand for online grocery shopping on sites such as Pick n Pay has skyrocketed. As a result of the current economic climate, some businesses have closed their physical stores and offices, while airlines have reduced their flying schedules. To protect their employees, many businesses, manufacturers, and production lines have had to shut down. The inability to work from home due to inadequate technological infrastructure has had an influence on the supply chain, resulting in the closure of e-commerce stores.

Digital technology is essential given the current economic crisis of the COVID-19 pandemic, as it can attract more consumers and deliver their products over time without the need for consumers to go to physical stores. Larger collaborations, compared to small businesses, have received sufficient funding from the government to address the impact of the COVID-19 pandemic on profitability and sustainability. Financing large businesses as compared to small businesses has had a negative impact on small businesses, as they need the most money. The ability of large companies to adapt to ICT as they move from physical technology to online technology, for example, Checkers, allows customers to make purchases online, saving the retail outlet from losing earnings as a result of not being able to sell items to consumers, which could lead to oversupply. Many owners lack the business and ICT skills needed for SMME survival and sustainability, making it more difficult to meet growth requirements (Wendt et al., 2021). The start-up of SMMEs was assumed to have failed due to the inability to embrace "new normal" due to ICT challenges deepened by lack of funds and inherent factors (such as business size), lack of management skills and abilities, human qualities, financial conditions, and poorly implemented business plans (Bamata et al., 2019). Regarding the adoption of ICT during the COVID-19 pandemic, the ICT infrastructure of informal enterprises is poor. Poor infrastructure hinders the adoption of ICT. Large companies were able to meet their growth needs because they had the business and management skills needed to make informed and rapid decisions that would support their success.

The primary reason small businesses continue to face growth challenges in developing countries, despite significant support from governments and other organizations, is their technological capabilities or lack thereof (Arinaitwe, 2006). Small businesses are still hindered by their lack of technological implementation (due to the nature of SMMEs' business and trade model), despite great technological advancements globally. Without this technology, these small businesses find it difficult to neither compete nor grow (Arinaitwe, 2006). For

instance, there is evidence that more than half of the world's population does not have access to the internet which is a clear example of a lack of digital infrastructure and services. Areas with extended network connectivity experience major barriers to maintaining high speed connectivity unlike regions in developing countries. The digital divide is widened by infrastructure issues as well as the need for environmentally friendly energy between urban and rural areas. Network connections are not afforded by most people even if they have them (Mishi & Anakpo, 2022; Tshabalala, Anakpo, & Mishi, 2021). For instance, about 2 billion individuals cannot afford mobile devices, let alone internet connection fees. Africa presents a difficulty in developing digital skills that will allow individuals to take advantage of digital technologies and produce value in the ICT or internet sector. The outbreak of COVID-19 has greatly exposed Africa's vulnerability in terms of ICT infrastructure which has caused many SMMEs to suffer significantly.

3. ICT Coping Strategies by the SMMEs

SMMEs have tackled the COVID-19 epidemic and maintained a sustainable path to profitability to add brand value to the consumer's eye. Remote working, shorter value chains, social distance, and advanced technology have been used to achieve this. Dismissing some workers as a cost-cutting measure for the company is one of the strategies SMMEs is using to address COVID-19 challenges and help to regain lost profits (Nagem, 2020; Anakpo & Mishi, 2021). Product planning, information management, new approaches to supplier partnerships, and new pricing ideals were additional means of maintaining SMMEs. Other SMMEs are using resilience strategies that include shifting their sales focus to online channels, procuring new suppliers, and doing telework. Some small businesses are adapting to changing situations by developing new items such as face masks and rapid testing techniques which ensures that the small business finds opportunities for growth which is essential given the current economic crisis. Letting customers know of products, services and prices helps some SMMEs cope with COVID-19 challenges as it maintains customer relations and trust which is essential for any small business (Fubah & Moos, 2022).

4. Roadmap to Digital Application by SMMEs

The development of universal digital infrastructure is one of the first objectives in the involvement of digital applications. This can be accomplished through a private-public partnership, in which the government takes charge and plays a major role in providing funding commitments, policies, and incentives to run in cooperation with the private sector for long-term sustainability. The main industrial players involve the telecommunication industry which is operating hand in hand with the government in attaining universal access in relation to ICT technology and internet access by individuals in rural and urban areas. Universal access to the internet will lessen the burden and encourage SMMEs to tap into

internet use and expand their operation. This however necessitates the development of a sustainable energy infrastructure to pave the way for digital installation, apparatus, and associated devices (Mishi & Anakpo, 2022).

Redesigning the industry helps break down barriers and remove barriers to digital use and narrow ICT gap between bigger enterprises and SMMEs. For example, in the early days of personal computers, access to the internet was probably limited to a small number of computers. After that, cell phones, such as smartphones, appeared. As a result, some low-income people who could not afford a PC are now able to buy a cell phone and access the internet. The establishment of the industry has been a great success in enabling the elderly, the minority, and the rural people to communicate with mobile phones.

Digital skills are an important prelude to digital applications. Physical access to the internet is a must for digital use, but for it to be fully utilized; it must be compatible with digital skills. This includes both formal and informal training, additional digital skills education, value-added applications in the digital environment. Technology is constantly evolving and growing rapidly, so education needs to be strong to keep up with change. Globalization in technology is essential for the sustainable development of all emerging economies in the digital age. However, achieving this globally requires sound decisions and budget planning.

The government needs to set a proper budget for the technology used and provide details of the practical steps that have been taken to implement it. Lastly, financial assistance will also go a long way to empower SMMEs businesses too.

5. Conclusion and Recommendations

Conclusively, this study identifies challenges such as inadequate digital infrastructure, lack of funds for digital investment, lack of digital literacy, and nature of SMMEs' business and trade model as major ICT use challenges faced by SMMEs. Based on the findings, we recommend complementarity of the role of key stakeholders including business owners, governments, telecommunication industry players or internet service providers, and business owners, as the indispensable approach. Businesses need to plan to build resilience against any unforeseeable eventualities that might have catastrophic impacts on their businesses. The government needs to provide financial bailout and business recovery funds at an affordable cost to businesses to help them acquire the necessary infrastructure needed to embrace the change. Furthermore, long-term investment in digital infrastructure by the government toward universal access to the internet by businesses is very necessary. It is also suggested that important industrial actors, such as those in the telecommunications industry, collaborate with the government to achieve universal access to the internet and other ICT technologies by people and SMMEs. This should include a digital literacy program to teach and equip businesses. Special interventions in the form of market security for businesses that are vulnerable are also recommended.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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