

PROSPECTS FOR DIGITAL TRANSFORMATION IN RURAL SOUTH AFRICA'S SMALL AND MEDIUM-SIZED ENTERPRISES

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ABSTRACT

The global wave of the coronavirus pandemic has constrained small, medium-sized enterprises to seek out ways to survive. The pandemic has propelled businesses to review their system of operation and embrace the endless benefits inherent in the digital world. However, there is a dearth of empirical studies on the propensities for digitalization in the context of rural-based SMEs in South Africa. To fix this gap, this paper explores the prospects for the digital shift among rural-based South African SMEs. A descriptive survey anchored in a quantitative research method was utilized using a Likert scale questionnaire as a tool for data collection, hence, thousand and sixty-seven (1067) SME owners operating in Ethekwini Municipality rural communities, KwaZulu-Natal province of South Africa were engaged as respondents. It was found that the major barriers to digital transformation amongst the small business owners in the rural setting include: the reluctance of SMEs owners to experiment with digital tools, the risk-averse nature of the rural-based entrepreneurs, limited financial resources and inadequate awareness of available sector-specific digital tools. The outcome of this study further indicates that majority of rural-based South African SMEs are at risk of retrogressing due to inadequate knowledge of relevant digital tools with which they can enhance the level of competitiveness of their businesses. Thus, this paper advocates timeous succour for these SMEs in order to ensure their longevity. Recommendations and future research directions were also offered.

Keywords: Digital technology; digitization; digitalization; eco-systemic network; digital transformation.

I INTRODUCTION

Small and medium-sized firms (SMEs) play a critical role in global economies, and South Africa is no exception. In congruence, a review of the report of the Organisation for Economic Co-operation and Development indicates that the economic progress of many nations is driven by SMEs [1]. This suggests that the promotion of SMEs in a country is a precondition for nation-building. In addition, OECD [1] further affirms that businesses of various sizes, across all sectors are progressively embracing the new wave of digital tools adoption in developing nations such as Mauritius, Egypt, Kenya, India and Malaysia among others. In other words, the wave of digital transformation of firms is a global phenomenon. However, SME performance varies by nation, with industrialized countries performing somewhat better than less developed countries [2]. The foregoing suggests that the outstanding performance of first-world SMEs in recent times has been primarily ascribed to the first-world nations' cutting-edge technological advancements.

Digitalization has been defined as the use of digital tools by entrepreneurs to achieve a competitive edge in the global economy [3]. In congruence, Langley et al. [4] posit that the digital transformation of an

enterprise is a phenomenon that has progressively evolved as a new horizon to pursue in modern economies. In other words, digitalization has the potential to enhance enterprise effectiveness. According to Mukerji [5] digitalization increase marketing effectiveness by 25%; businesses that use digital tools and technologies grow faster than those that do not. Research shows that leveraging digital transformation provides immediate benefits to small businesses [6]. The foregoing suggests that digitalization enables SME's to automate daily operations and minimise extreme reliance on human labour. In other words, the adoption of digital tools bridges the gap between an enterprise and clients, thereby widening the market share of an enterprise. However, despite the tremendous dividends of digitization, the rate of digital tool adoption among small firms in rural African communities is significantly low compared to the rate at which large organizations embrace the use of digital resources [1]. According to Uvarova & Vlanseko [7], lack of awareness of how to use available digital tools in business operations contributes to the poor rate of digital tool adoption among South African micro firms. Uvarova & Vlanseko [7] further posit that SME's often lack the resources required to digitise

all functional areas of business. The foregoing suggests that small businesses in rural African communities lack the capacity to digitise their functional areas of business. Thus, their capacity to reach out to their customers is under severe constraints.

The authors recognized the contextual nature of the discourse surrounding digital transformation globally and the fact that a system that works in the Western world might not produce the desired results in Africa. Tremendous progress has been made in terms of enterprise digitization in Europe, North America, and Asia over the last two decades [8],

however, in developing nations, notably in South Africa, the South African government's efforts to make the country more digital have not yielded major dividends. In order to salvage the situation, Modiba & Kekwaletswe [8] further submit that small firms are trying on their own to experiment with available opportunities that exist in their domains. Moreover, the issue of size is often considered whenever matters pertaining to small and medium-sized businesses are being discussed, the size standards for defining small and medium-sized enterprises in the South African context is analysed below.

Table 1. Size Standards for Defining SMEs in South Africa

Category of firm	Workers	Turnover	Year-end financial report
Micro	Less than 5	Less than R1m	Peak R0.1m
Small	1 to 49	Peak R13m	Peak R5m
Medium	51 to 200	Peak R51m	Peak R19m

Source: South African Government Gazzete (2020) [9]

Table 1 presents the analysis of the number of employees and level of capitalization required for a business to be categorized as SME's in South Africa. It is critical for all businesses, large and small, to go digital in order to survive [10]. However, many South African SMEs still lag behind in terms of digital tools adoption due to several constraining factors [11]. An in-depth review of literature such as McKinsey et al., [12], Gosling [13] as well as Hefler & Gartner [14] suggests that most of the existing digital transformation models are strictly compatible with large and global companies. Specifically, in South Africa, there is no known study that has focused on a sustainable digital pathway for rural-based SMEs to become effectively transformed. Hence, this paper examines the specific barriers to digital transformation in light of the opinions of rural-based SME owners and managers in Ethekweni Municipality in South Africa.

The authors also aimed to acquire insight into rural-based SME owners' perceptions of the benefits of digitalization to business performance and the nation's overall socioeconomic growth. The study was guided by the following research questions. [1] What is the influence of digitalization on rural-based SMEs performance in Ethekwini Municipality? [2] What are the macroeconomic benefits of digitalization? [3] What are the barriers to digital tools adoption amongst the rural-based SMEs in the Ethekwini Municipality? The rest of this study is organized as follows: The focus of Section 2 is an overview of the literature. Section 3 accounts for research methodology, while Section 4 presents the analysis of results, which is followed by a discussion

of findings in Section 5, and lastly, concluding remarks are provided in Section 6 of the study.

II SMES IN RURAL SOUTH COMMUNITIES

Small businesses in rural areas are strategically positioned to meet the requirements of their communities; they could provide jobs and drive community development [15]. This indicates that small businesses in rural areas contribute to the development of their local communities through their continued presence and growth. In other words, supporting SME development is equivalent to promoting nation-building. According to Habtoor et al., [16] posit that, in South Africa, a significant proportion of the rural-based SMEs operate in the underground economy; however, they share similar features with small businesses in cities, such as a lack of entrepreneurial skills, limited resources, a weak innovation culture, and a proclivity to operate in isolation. In congruence, Dremel & Uebenickel [17] opine that rural-based SMEs are often overlooked in spite of their invaluable contribution to nation-building. Hence, an endeavor to gain insight into the barriers to the growth of rural-based SMEs is a worthwhile research project. The authors contend that South Africa must draw on global best practices in the rural integration phenomena, which provides incentives for prospective entrepreneurs to migrate to rural regions in order to ensure rural industrialization. Above all, inadequate infrastructure in rural communities is a major source of concern for small businesses [18]. Surmise to state that government and relevant stakeholders should work together to offer appropriate support for SMEs in both urban and rural communities.

III RESEARCH METHODOLOGY

The study started with an intensive literature review of policy documents, research papers, and reports from South Africa and other parts of the world. The empirical evidence was reached through an exploratory methodology. The study sample consists of owners of small and medium enterprises located in rural communities of Ethekewini Municipality of KwaZulu Natal, South Africa. Data was collected using self-constructed questionnaires which consists of 20 questions. The questions seek to gather information pertaining to the classification of the firms into categories, imperatives of digitalization to the sustainability of the business, rate of digital tools adaption, level of awareness of available digital tools and barriers to digital tools adoption among the rural-based firms. Raosoft sample size calculator $x = Z(c/100) \sqrt{r(100-r)}$ was employed to determine the sample size, hence, $n = 1067$. Where $E = \sqrt{(N-n) \times n / (N-1)}$. A purposive sampling approach was adopted, it enables the researchers to collect data from the SMEs only, across all sectors. Maree & Olivier [19] affirm that purposive sampling is strictly used when a researcher has a specific target in mind. Thus, making it easier to understand the dynamics of digitization of small, and medium-sized enterprises in the rural communities under study. The returned questionnaires were analyzed using the statistical package for social sciences (SPSS) version 25. The descriptive analysis approach was used for data analysis.

IV ANALYSIS OF RESULTS

This section presents the analysis of results obtained from the respondents; these results are presented in sub-themes as follows.

Table 3: Respondents' views on the influence of digitalization on SMEs performance

<i>Digitalization helps the company to</i>	<i>Responses</i>
<i>1. resource optimization</i>	<i>99%</i>
<i>2. reduce costs</i>	<i>99%</i>
<i>3. enhance the quality of product offering</i>	<i>98%</i>
<i>4. enhance customer satisfaction</i>	<i>89%</i>
<i>5. achieve a higher level of productivity</i>	<i>99%</i>
<i>6. improved business efficiency</i>	<i>89%</i>
<i>7. improvement in market share</i>	<i>96%</i>

4.1 Structural and sectoral classification of Respondents in Ethekewini Municipality

From Table 2, about 56% of the respondents operate micro-businesses while small enterprises account for 26% of the respondents. The last sector in this regard is the medium enterprises which account for 18% of the respondents. In terms of business classification, the majority of the respondents (55%) are engaged in the trading sector, while 34% are involved in manufacturing, while the service sector constitutes 11%. Although the company categorization does not address any of the study objectives, it does shed light on the respondents' sectoral distribution.

Table 2: Structural and sectoral classification of respondents

<i>SMEs size</i>	<i>Responses</i>
<i>Micro enterprise</i>	56%
<i>Small Enterprise</i>	26%
<i>Medium enterprise</i>	18%
<i>Sectors</i>	<i>Responses</i>
<i>Production</i>	34%
<i>Services</i>	11%
<i>Trade</i>	55%

4.2 Influence of Digitalisation on SMEs performance

This section presents diverse views from SME owners on how digitalization has impacted their firms. From Table 3, most respondents agreed that digitization is a process that is necessary to expand the profiles of their organizations. Approximately 99% of respondents agreed that digitalization helps to optimize resources, reduce costs, and achieve higher levels of productivity. Furthermore, at least 90% of respondents agreed that digitalization helps to improve the quality of product offerings, market share, customer satisfaction, and business efficiency.

4.3 Macroeconomic benefits of digitalization of SMEs

This section presents respondents' views on the effect of digitalization on the socioeconomic development of the nation at large. From Table 4, most of the respondents agreed that digitalization is a process required to bring about improvement in the socioeconomic development of the nation. Over 99% of the respondents subscribed to the notion that digitalization stimulates community development and the general economic progress of the nation, in addition, at least 83% of the respondents agreed that digitalization fosters job creation and the creation of new business opportunities. Finally, about 57% of the respondents believed that digitalisation helps to stabilise prices of goods and services in the market.

4.4 Barriers to digital tools adoption among the SMEs

This section presents respondents' views on the barriers to digital tool adoption amongst SMEs in the study area. From Table 5, about 4% of the respondents agreed that their businesses have been digitalized while 96% of the respondents did not believe so. In addition, 39% of the respondents opined that the fear of the unknown is a major roadblock to digital transformation prospects in their domain. Furthermore, 47% of the respondents agreed that they are reluctant to experiment with modern technologies while 88% of the respondents agreed that the problem has to do with lack of funds. The survey outcome further revealed that 72% of the respondents were unaware of the existence of free digital tools such as; Mail marketing, Google Analytics, Free Website Builder WX, Online Service Software and G-suite.

Table 4: Respondents' views on macroeconomic benefits of digitalization of SMEs

<i>Implementation of digitalization will lead to...</i>	
<i>1. accelerate community development</i>	<i>95%</i>
<i>2. economic development of the country</i>	<i>91%</i>
<i>3. creation of new business opportunities</i>	<i>85%</i>
<i>4. job creation</i>	<i>83%</i>
<i>5. price stability</i>	<i>57%</i>

Table 5: Respondents' views on barriers to digital tools adoption amongst the SMEs

<i>Barriers to digital tools adoption...</i>	
<i>1.fear of the unknown</i>	<i>39%</i>
<i>2.reluctance to experiment with modern technologies</i>	<i>47%</i>
<i>3. lack of funds</i>	<i>88%</i>
<i>4.lack of awareness of the available free digital tools</i>	<i>72%</i>

V DISCUSSION

The purpose of this study was to identify the hurdles to digital tools adoption amongst rural-based SMEs as well as the opinions of SME owners regarding the impact of digitalization on their business performance. The majority of the respondents believed that digitalization promotes business performance and the socioeconomic development of the nation at large. The study results indicate that rural-based SMEs are faced with numerous challenges in their bid to go digital. Amongst these challenges are: the reluctance of SMEs to experiment with digital tools, the risk-averse nature of entrepreneurs, limited financial resources, and inadequate awareness of the available digital

tools that have the potential to boost enterprise performance.

Based on the outcome of this study, one of the biggest transformation barriers in the context of rural-based SMEs is their reluctance to experiment with modern technologies. For many of small business owners, the safety of holding on to what they are conversant with seems preferable to trying out an invention. This finding is in line with Habtoor [16] who avers that the entrepreneurial orientation of small firms' owners is a major determinant of their level of digital business practices. In congruence, OECD [1] posits that it may take a considerable length of time for small firms to consider digital tools adoption. In his own view,

Mckinsey et al [12] submit that digital transformation will be successfully implemented when firms are becoming more innovative and are willing to experiment with new technology.

Further, the research findings suggest that the use of digital instruments involves some levels of risks. In other words, the adoption of new digital tools is rural-based SME owners could be the reason why they were unwilling to finance digital transformation ideas. In other words, small firms that hesitate to invest in innovation are indeed at risk of falling behind.

The majority of the respondents believed that digital transformation could be costly, hence, lack of funds is a major setback; however, this notion is sponsored by a lack of awareness of free digital tools in the market. The foregoing suggests that, unlike the micro firms, the medium-sized firms were better positioned to embrace modern technological tools. This finding echoes the view of Gosling [13], who affirms that a digitization project in a medium-sized firm tends to be quite effective when at least a few of the employees therein possess adequate digital skills. Thus, SME owners should consider bringing in new staff that are digitally smart in order to assist in promoting the culture of innovation in the system. The SMEs digital lag in rural communities is associated with a range of constraints and barriers such as lack of knowledge and financial incapacity.

Regarding the issue of classifying the respondents according to their levels of digitization, majority of the respondents operate businesses without any digital transformation ideas. This contradicts the work of Mckinsey et al [12] who submit that the era of experimenting with digital tools is over, a blueprint for success does not exist anywhere. Thus, it is imperative for individual enterprise owners to study the success stories of highly digitized firms in the same line of business in order to understand what works and what does not. In congruence, Hughes [20] affirms that effective digital transformation cannot be attained by leveraging the talent within an organization. Entrepreneurs need to research other organizations in order to attract digital talent. The implication of the foregoing is that there is a tendency for entrepreneurs to get hooked on the status quo.

The survey outcome also indicates that majority of the participants were unaware of the existence of free digital tools such as Mail marketing, Google Analytics, Free Website Builder WX, Online Service Software and G-suite. This finding signifies a need for a digital awareness program for small

usually an experimental process. Hence, the risk-averse nature of the majority of the rural-based SME owners which could be explained as the fear of the unknown tends to make the digital transformation process a daydream. Surmise to state that the conservative nature of the majority of the

business operators, especially in rural communities. This finding is in line with the work of Gosling [13], who affirms that the progress of digital transformation in an ecosystem depends on the available digital leadership. Digital leaders need to enlighten other firms about the existence and the use of new digital resources. Surmise to state that SME owners should network and make adequate consultations in order to make the right choice of digital technologies.

VI CONCLUSION AND POLICY IMPLICATIONS

The article examined the obstacles hindering rural-based SMEs in South Africa from adopting digital tools required to enhance the level of competitiveness of their businesses. The study uncovers the risk-averse nature of South African rural-based SMEs owners which might have tremendous implications on the digital lag in the nations' SMEs subsector. The authors contend that digital transformation is a journey that does not happen overnight. Therefore, a thorough grasp of the processes is required for a successful digital transition. Such procedures may include a number of steps, such as the use of a variety of technologies for various objectives, choosing the best transformation strategy, integrating digital tools into all areas of their operations, networking, and learning about the dynamics of digitalization from the experiences of other, comparable businesses that are making progress in this regard.

The authors further contend that, if South African rural-based SME's are to experience a successful transition into the digital age and offer real value to customers, the acquisition of core digital skills is imperative. Above all, a properly implemented digitalization process of SMEs is not meant to enhance the level of productivity of businesses only, it will ultimately lead to the development of the national economy.

Based on the outcome of the study the following recommendations were made to guide the policymaking efforts of stakeholders.

- To encourage small businesses in their efforts to ascend the digital progress ladder, a funding

model that is specifically designed with rural-based SMEs' needs in mind could be devised.

- Government and non-governmental organizations could offer non-financial assistance to rural-based SME owners, such as the promotion of networking opportunities. This will provide business owners access to key information they need to improve their company profiles.
- The digital master plan for South Africa should include provisions for the rural and disadvantaged segments of the SME subsector. It must be emphasized that any assistance provided to operators in this subsector fosters community development, which in turn promotes nation-building.

VII SUGGESTION FOR FURTHER RESEARCH

The article examined the obstacles hindering rural-based SMEs South Africa from adopting digital tools required to enhance the level of competitiveness of their businesses. It would be worthwhile to advance further research efforts on in-depth investigations of the current digital status of other African countries, as this would significantly increase the productive capacity of small businesses in Africa and grant them a competitive advantage in the global market.

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