



Full length article

An Evaluation of the Nature and Extent of Challenges Encountered by Small, Medium, and Micro Enterprises (SMMEs) in Botswana During COVID-19

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ABSTRACT

This study sought to identify and evaluate the nature and extent of challenges faced by SMMEs in Botswana during the COVID-19 pandemic. It found that SMMEs in Botswana encountered several challenges but the most important were financial (75.4%), technological (74.4%), and human resource (68.8%) challenges. Specifically, these were drop in sales/business (89.2%), need for accelerated digitisation (45.8%), and capacity to ensure the well-being of employees (58.4%). Also, there were challenges with accessing and utilising government programmes despite a high level of awareness among SMMEs. Some challenges may be more important in some sectors than others as there was a significant association between challenges and SMME industry sector. The dominance of financial, technological, and human resource challenges underscores the central role of they play in SMME operations. It is not enough for governments to avail resources, programmes, policies and frameworks in support of SMMEs. Effort needs to be expended promote uptake.

1. Introduction

The COVID-19 pandemic, which emerged in late 2019 and rapidly spread across the globe, triggered an unprecedented crisis affecting economies, societies, and businesses worldwide (WHO, 2020). Amid this crisis, Small, Micro and Medium-sized Enterprises (SMMEs) emerged as particularly vulnerable entities, facing numerous challenges that threatened their survival and long-term growth. This effect was felt more acutely in the developing economies due to the negative and unique circumstances that characterise these contexts.

Botswana is a landlocked nation located in Sub-Saharan Africa that has traditionally depended on SMMEs to promote its economic growth. The World Bank identifies significant SMME sectors in Botswana as mining,

tourism, agriculture, and manufacturing (World Bank, 2019). These have been reported to contribute significantly to the country's Gross Domestic Product (GDP) and employment generation.

The advent of the COVID-19 pandemic, as everywhere else, disrupted Botswana's economic activities especially those related to the SMME sector. Some of the SMMEs experienced severe setbacks but others displayed greater resilience, thus managing to weather out the pandemic and, in some instances, emerge from the crisis even stronger.

Crises, regardless of nature or type, exhibit similarities in terms of their impacts on economies and the strategies required to mitigate them. These parallels and overlaps, with other crises make the recent COVID-19 pandemic an excellent proxy for the understanding the nature of challenges extent of challenges that SMMEs may face crisis times and the cross-cutting factors associated with them. Consequently, findings from this study may find application in contexts beyond the place of the primary research. This is crucial in view of the possibility of the continued presence of the COVID-19 pandemic as reported recently in various media outlets (DUCHARME, 2024; Alvarez, Judd, & Blackburn, 2024).

The current study utilised the COVID-19 pandemic as a proxy crisis to comprehensively explore the nature and extent of challenges faced by SMMEs in crisis times regardless of type.

2. Literature Review

2.1 Role and Contribution of SMMEs

SMMEs have long been recognised as significant contributors to economic development in both developing and developed countries (Altenburg, 2016). They are crucial to employment generation, income creation, and tax revenue, which, in turn, stimulates economic growth. SMMEs play a significant role in poverty alleviation, a focal theme in many places around the world (ILO, 2015; United Nations Development Programme, 2020). SMMEs contribute significantly to GDP growth, promote local production, and stimulate economic diversification by creating new business opportunities and markets (Ndayishimye, 2024).

In an era of job scarcity and accelerated graduation of multitudes of young people, the SMME sector has become a significant player in job creation. Individuals can access or create job opportunities in the SMME sector thereby reducing unemployment rates, and contribute to poverty alleviation (Ndayishimye, 2024).

According to Ndayishimye (2024), SMMEs have become synonymous with innovation, creativity, adaptability, and entrepreneurial spirit culminating in technological advancements and market disruptions through new products, services, and business models. The unique circumstances obtaining in the SMME environment provide individuals with opportunities to develop and practice indispensable leadership and entrepreneurial competencies thereby enhancing their capabilities and contributing to overall human capital development.

The SMME sector has provided important outlets for sectors of society which would otherwise be side-lined. Such entities include women and marginalised groups. These have managed, through starting and running SMMEs, to become economically emancipated leading improved livelihoods, social status, and a contribution to community development (Ndayishimye, 2024; Ndiaye, Razak, Nagayev, & Ng, Demystifying small and medium enterprises' (SMEs) performance in emerging and developing economies, 2018).

SMMEs play their role in achieving sustainable development goals by balancing economic growth with social and environmental considerations. They achieve this through fostering local production, reducing environmental impact, and supporting community resilience (Ndayishimye, 2024).

2.2 The Botswana SMME Sector

The SMME sector is a crucial component of Botswana's economy which plays a significant role in economic diversification, employment creation, and poverty alleviation. The sections that follow provide an overview of the structure and proportions of the SMME sector in Botswana, based on the latest available data and studies.

Structure of the SMME sector

The SMME sector in Botswana is categorized into three main types of enterprises namely micro enterprises, small enterprises, and medium enterprises. Micro enterprises typically has a workforce of less than six people, and an annual turnover below BWP60 000 (Botswana Institute for Development Policy Analysis (BIDPA), 2022). Examples of micro enterprises in Botswana include small retail shops, hair salons, and street vendors. Small enterprises normally have a workforce of six to 25 people and an annual turnover between BWP60 000, and BWP 1 500 000. Examples of this type of enterprise include small manufacturing units, restaurants, and consultancy firms (Ministry of Investment, Trade and Industry, 2023).

Medium enterprises employ between 26 and 100 people and have an annual turnover of BWP1 500 000 to BWP5 000 000. Examples of this type of enterprise in Botswana include larger manufacturing firms, IT companies, and construction business (Botswana Institute for Development Policy Analysis (BIDPA), 2022).

Contribution to the Botswana economy

SMMEs are considered strategic entities in Botswana, thus the considerable investment quantum that is dedicated to this sector by the government directed towards, establishing, supporting, and growing the sector. The contribution made by the sector in Botswana is discussed in the sections that follow:

According to the MITI (2023), the SMME sector contributes approximately 35% to Botswana's Gross Domestic Product (GDP) which is a significant contribution to the overall economic output of the country. BIDPA (2022) state that SMMEs account for around 50% of the total employment in Botswana implying that the sector is a major source of jobs, particularly in rural areas, where large-scale industries are less prevalent.

Sectoral distribution

According to MITI (2023), the bulk of SMMEs in Botswana fall in the trade and services sectors, with retail trade, hospitality, and personal services being the most common types of businesses. Manufacturing and construction are also significant, though they represent a smaller proportion compared to trade and services.

Regional distribution

LEA (2023) state that SMMEs are predominantly concentrated in urban areas such as Gaborone and Francistown, but there is a growing trend of these enterprises being established in rural and semi-urban regions, in response government initiatives aimed at promoting regional development.

2.3 Challenges and Opportunities

While the SMME sector in Botswana has shown robust growth, it still faces several challenges, some of which are hereby discussed:

Access to finance

According to CEDA (2023), limited access to financial services and credit facilities remains a significant barrier crippling many SMMEs. This is despite the availability of various government schemes. Consequently, many enterprises struggle to secure the necessary funding to expand their operations.

Skills and Training

In Botswana, there is a considerable skills gap among SMME owners and employees which should be addressed through training and capacity-building programs in order to enhance business management and technical skills (Local Enterprise Authority (LEA), 2023).

Regulatory Environment

MITI (2022) points out that complicated regulatory requirements and bureaucratic hurdles impinge on SMME growth. There is therefore need to simplify business registration processes and provide more support to help SMMEs to achieve compliance.

Market Access

According to BIDPA (2022) SMMEs struggle to access both local and international markets which are critical for their growth. Consequently, enhancing market linkages and promoting SMME products and services can provide significant growth opportunities for them.

2.4 Government Support and Initiatives

The government of Botswana has recognised the SMME sector as a strategic partner in growing the national economy through its contribution to job creation and GDP among other things. The government has therefore made significant investments into the sector through several support programs which are outlined below:

Citizen Entrepreneurial Development Agency (CEDA)

CEDA is mandated to provide financial and technical support to SMMEs. These include, among other things, loans and business development services (Citizen Entrepreneurial Development Agency (CEDA), 2023).

Local Enterprise Authority (LEA)

This government agency offers training, mentoring, and advisory services to help SMMEs grow and become sustainable (Local Enterprise Authority (LEA), 2023).

Economic Diversification Drive (EDD)

The EDD aims to reduce dependence on the mining sector by promoting other industries, particularly SMMEs (Ministry of Investment, Trade and Industry, 2023).

In conclusion, the SMME sector in Botswana is a dynamic and essential part of the economy, contributing significantly to GDP and employment. Despite facing various challenges, continued government support and strategic initiatives can help unlock the sector's full potential and drive sustainable economic growth.

2.5 SMME Welfare in Crisis Times

Nature of crises encountered

Several studies show that SMMEs face a myriad of challenges during crisis times. Crises studied included natural disasters (floods/storms, earthquakes, droughts, etc), global economic crises (depressions), and pandemics (COVID-19, avian viruses, influenza, etc). SMMEs are vulnerable to economic shocks and disruptions emanating from these crises due to several factors including limited resources such as internal capital, compared to larger enterprises (Hossain, Akhter, & Sultana, 2022; Tukamuhabwa, Stevenson, & Busby, 2017; Ndiaye, Razak, Nagayev, & Ng, *Demystifying small and medium enterprises' (SMEs) performance in emerging and developing economies*, 2018; Pongtanalert & Assarut, 2022; Ali, et al., 2021; Guo, Yang, Huang, & Guo, 2020; Eggers, 2020; Nyikos, Soha, & Béres, 2021), and dependence on trade, which exposes them when some exporters withdraw from international markets and shift focus on their domestic markets (Fath, Fiedler, Sinkovics, Sinkovics, & Sullivan-Taylor, 2021).

However, despite the varied nature in scope, response and effectiveness, parallels can be drawn between the different crises and it is these commonalities that lend themselves to the identification and/or development of universal interventions and strategies for managing and controlling the crises leading to the much desired resilience in businesses, including SMMEs.

This study employs the most recent global crisis to impact businesses, COVID-19, as a proxy for the understanding of the challenges faced, the resilience strategies employed to manage them, and the extent of their effectiveness. This provides an evidence-based platform for the identification and/or formulation and deployment of effective resilience strategies for use by all types of SMMEs in response to any type of future crises. If achieved, this would ensure the survival and resilience of SMMEs and grant them an opportunity to continue to fulfil their traditional role as drivers of economic growth and employment creation, among other things.

The special case of the COVID-19 crisis

The Coronavirus Disease 2019 (COVID-19) is a respiratory infection disease first discovered in Wuhan, China in 2019 and is caused by the novel coronavirus SARS-CoV-2 (World Health Organization, 2020; Centers for Disease Control and Prevention, 2020). The disease quickly spread globally leading to a pandemic that impacted these places in many ways including economically. Reviewed literature emphasized the impending economic distress caused by the pandemic and highlighted the recovery strategies that were deployed to manage the crisis. In the dynamic and unpredictable landscape of today's global economy, crises have emerged as formidable disruptors of economic activities, and have created and presented rather unique challenges that may require creative responses from the business community, particularly SMMEs, as well as other stakeholders. In recent times, the COVID-19 pandemic has again reminded us of the lurking economic danger posed by all kinds of crises worldwide. The pandemic therefore provides a timely, appropriate, and convenient crucible for the testing and investigation of the unique challenges that SMMEs may face during crises times. Such knowledge may be applied to a wide array of contexts given the cross-cutting nature and similarities of impacts of different crises that may affect businesses in the future.

The challenges caused by COVID-19

SMMEs were impacted by the pandemic in different ways, depending on the nature of business, geographic location, local economic environment, and entrepreneurial innovative and adaptive capability during the crisis period (Hossain, Akhter, & Sultana, 2022). Dependence on trade, in the era of globalisation, exposed them to economic shocks and disruptions (Fath, Fiedler, Sinkovics, Sinkovics, & Sullivan-Taylor, 2021). The challenges faced by SMMEs as a result of COVID-19 included, operational disruption, supply chain disruption, shortage of internal funds (Zutshi, Mendy, Sharma, Thomas, & Sarker, 2021; Fitriasar, 2020; Eggers, 2020; Ali, et al., 2021; Schepers, Vandekerckhof, & Dillen, 2021; Herbane, 2019), risk of bankruptcy (for example around 60% of SMMEs were at risk of running out of their cash reserves in Hungary) (Nyikos, Soha, & Béres, 2021; Schepers, Vandekerckhof, & Dillen, 2021), scarcity of government stimulation packages during the lockdown and movement control period (Hossain, Akhter, & Sultana, 2022; Tukamuhabwa, Stevenson, & Busby, 2017; Ndiaye, Razak, Nagayev, & Ng, Demystifying small and medium enterprises' (SMEs) performance in emerging and developing economies, 2018; saad, Hagelaar, Velde, & Omta, 2021; Pongtanalert & Assarut, 2022; Nyikos, Soha, & Béres, 2021). In Bangladeshi, for instance, studies revealed that cash flow shortages and supply chain disruptions were critical constraints for SMMEs during the pandemic, impacting their operations and financial stability (Hossain, Akhter, & Sultana, 2022).

Some studies revealed a stepwise, rather than wholesale, impact of organisations by the COVID-19 pandemic starting with the operations function and then the sales functions as the crisis continued (Schepers, Vandekerckhof, & Dillen, 2021).

The pandemic created market uncertainties in the areas of consumer behavior, market dynamics, and demand (Tukamuhabwa, Stevenson, & Busby, 2017; Bak, Shaw, Colicchia, & Kumar, 2023; Fitriasar, 2020). Some exporters withdrew from international markets and shifted focus to their domestic markets during the pandemic (Fath, Fiedler, Sinkovics, Sinkovics, & Sullivan-Taylor, 2021). When foreign partners act in this way it leads to a breakdown of trust and loss of business. In response, SMMEs increasingly turn to host-country partners, potentially leading to a loss of control occasioned by increased power of suppliers and or buyers in a shrunk market space (Fath, Fiedler, Sinkovics, Sinkovics, & Sullivan-Taylor, 2021). Ultimately, international growth prospects are scuttled (Fath, Fiedler, Sinkovics, Sinkovics, & Sullivan-Taylor, 2021).

The economic climate obtaining under the pandemic made it difficult to forecast sales, plan inventory levels, and adapt marketing strategies to meet evolving customer needs, especially in the absence of trusted partners (Zutshi, Mendy, Sharma, Thomas, & Sarker, 2021).

Studies revealed that deficiencies in capacity to adopt, adapt, and utilise digital technologies were an important challenge impacting SMME viability during COVID-19. The capacity deficiency may have emanated from a lack of experience with crisis management in comparison to larger enterprises (Herbane, 2019), or a potential lack of internal R&D capabilities technologies for digitalization (Guo, Yang, Huang, & Guo, 2020) leading to a reliance on external technologies which may be poorly understood or adapted to context. Consequently, some SMMEs were not digitally prepared to face the challenges inherent in transitioning to online operations, implementing remote work arrangements, and leveraging digital tools for communication, collaboration, and customer engagement (Ndiaye, Razak, Nagayev, & Ng, Demystifying small and medium enterprises' (SMEs) performance in emerging and developing economies, 2018; Pongtanalert & Assarut, 2022).

SMMEs also faced challenges in ensuring the health and safety of employees, implementing workplace safety measures, managing remote teams, and addressing employee concerns about job security and work-life balance (Tukamuhabwa, Stevenson, & Busby, 2017; saad, Hagelaar, Velde, & Omta, 2021; Schepers, Vandekerckhof, & Dillen, 2021).

Additionally, SMMEs faced challenges with complying with some government regulations and restrictions, such as large-scale social restrictions affecting business operations (Fitriasar, 2020). In conclusion, the above-mentioned challenges underscored the vulnerabilities of SMEs to external shocks and disruptions and highlighted the need for resilience-building strategies and targeted support to help small businesses navigate the impacts of crises including the COVID-19 crisis. Formulating and deploying such strategies is operationalised through the application of survival theories and conceptual frameworks, both existing and new. The section that follows outlines and discusses some of the established organisational survival theories and conceptual frameworks.

3. Methodology:

3.1 Study Design

The study employed a mixed methods approach that allowed for statistical analysis an in-depth exploration of challenges encountered by SMMEs in Botswana during the COVID-19 pandemic (Creswell & Creswell, 2017).

3.2 Study Sites

Data was collected from urban and peri-urban areas of Gaborone, and Francistown which are Botswana's economic hub.

3.3 Study Population

The research studied formal or registered SMMEs in all economic sectors in Botswana.

3.4 Sample Size

The sample size used, calculated using Raosoft online sample size calculator, (Raosoft Inc, 2004), was 377 SMMEs. These were partitioned between the study sites using a ratio of 1:6 (Francistown: Gaborone) based on estimated distribution of SMMEs in Botswana (Statistics Botswana, 2022). Consequently, the respective sample sizes were 54 SMMEs in Francistown & surroundings and 323 SMMEs in Gaborone & surroundings.

Sectoral representativeness (Krejcie & Morgan, 1970) was based on the top 5 industry sectors (wholesale & retail trade, hotels & restaurants, real estate & renting, education, and manufacturing) using a respective ratio of 6:2:2:1:1 (Statistics Botswana, 2022). This meant the following sample size distribution by study site (Gaborone:Francistown): Wholesale & Retail Trade (162:27), Hotel & Restaurant (54:9), Real Estate & Renting (54:10), Education (27:4), Manufacturing (27:4).

3.5 Sampling Approach and Data Collection

Each industry sector was treated as a stratum in which the required number of SMMEs were drawn as per the information above. Convenience sampling was used in-stratum to increase response rate.

A semi-structured questionnaire, containing both close-ended and open-ended questions, was used to collect quantitative data and qualitative data from the selected SMMEs. Usable data was received from 269 of the targeted 377 SMMEs thus resulting in 71.4% response rate, an acceptable level for the purposes of this study. Additional data was obtained from mini-interviews from a select few stakeholders such as officials from relevant

government organisations like CEDA, LEA, Statistics Botswana, etc ensuring triangulation of data sources (Rubin & Rubin, 2012).

3.6 Data Analysis

SPSS statistical software, version 24, was used to perform the quantitative data analysis, encompassing descriptive statistics, associations, and significance testing. This study utilized mostly Chi-Square test, frequency distribution for quantitative data analysis, and manual thematic analysis for the qualitative data (Agresti, 2007; Field, 2013). Manual coding and thematic analysis were used to analyse qualitative data from the open-ended questions in the questionnaire and mini interviews (Miles, Huberman, & Saldana, 2014).

4. Results

Below are the results of the data analysis, presenting graphs, tables and other visuals based on output from SPSS version 24 and thematic analysis of qualitative data.

4.1 Demographics

Industry sectors

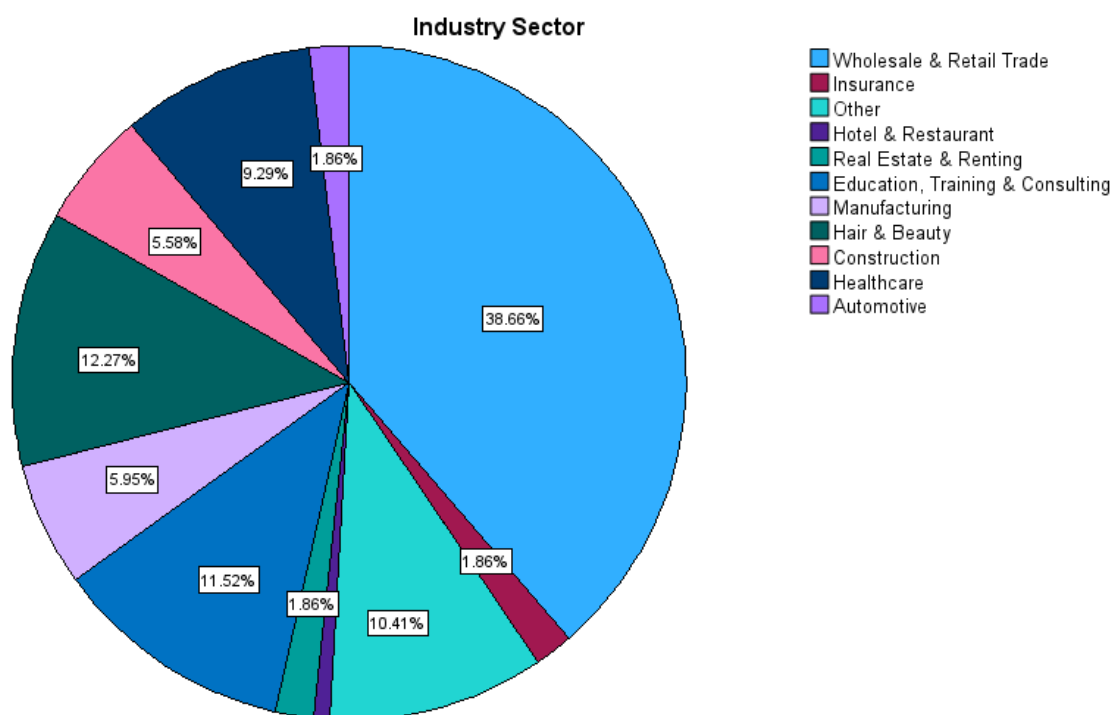


Figure 1. SMME industry sectors that participated in the study

The majority of participating SMMEs, (92.9%) were in the capital city (Gaborone), and surrounding areas, while the remainder (7.1%) were in the second largest city (Francistown), and surrounding areas. Out of the calculated sample size of 377, the study intended to sample 323 SMMEs (86%) from Gaborone and surrounding areas, and 54 (14%) from Francistown and surrounding areas. However, due to below expected response rates in the two locations, the study ended up receiving usable responses from 250 SMMEs from Gaborone and surrounding areas, and 19 from Francistown and surrounding areas resulting in in-location response rates of 77.4% for Gaborone and surrounding areas, and 35.2% for Francistown and an overall response rate of 71.4%. This was a

good response rate that permits the deduction of credible findings and recommendations from the collected data.

The biggest SMME industry sector that participated in the study was the Wholesale and Retail Trade sector which accounted for 38.7% of the participants (Fig 1). Other SMME industry sectors with a higher representation were Hotel & Restaurant sector at 12.3%, and the Real Estate & Renting sector at 11.5%. The remaining portion was made up of SMMEs in the Automotive, Healthcare, Construction, Hair & Beauty, Manufacturing, Insurance, Education, and Training & Consulting, sectors. Representations from this portion ranged from 1.9% to 10.4%. This distribution implies that Botswana’s SMME sector is dominated by the retail and service economic activities. This is in fact corroborated by the government of Botswana’s Ministry of Industry and Trade (MIIT), which asserts that the majority of SMMEs in Botswana operate in the trade and services sectors (Ministry of Investment, Trade and Industry, 2023). It further asserts that the manufacturing and construction sectors are also significant, but represent a smaller proportion compared to trade and services. These findings deviate from those of World Bank (2019) which state that the key SMME industry sectors are mining, tourism, agriculture, and manufacturing. This may be a result of different metrics being used, for instance the World Bank may have been referring to quantum of economic contribution whereas in our study we were referring to absolute numbers and proportion of representation in the sector.

Duration in operation

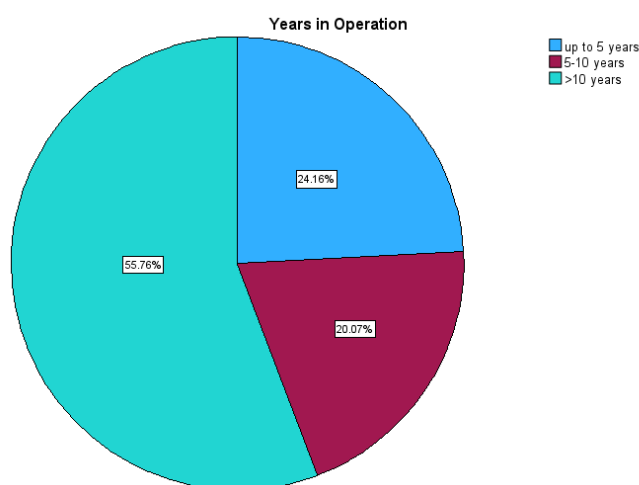


Figure 2. Years in operation for participating SMMEs

The vast majority, 55.8% of participating SMMEs had been in existence and operational for over 10 years (Fig 2). Another 24.2% of the participating SMMEs had been in existence for 5-10 years. Only 20.1% of the SMMEs were between 0-5 years old at the time of participating in this study. MIIT (2023) intimates that 60% of SMMEs in Botswana fail within the first three years of existence due to such challenges as failure to access finance, inadequate skills, and hinderances from the regulatory environment. Consequently, the fact that 55.8% of the SMMEs that participated in this study had been in existence and operational for more that 10 years is a good indication of their tenacity and resilience.

Enterprise size (workforce, annual turnover, and asset value)

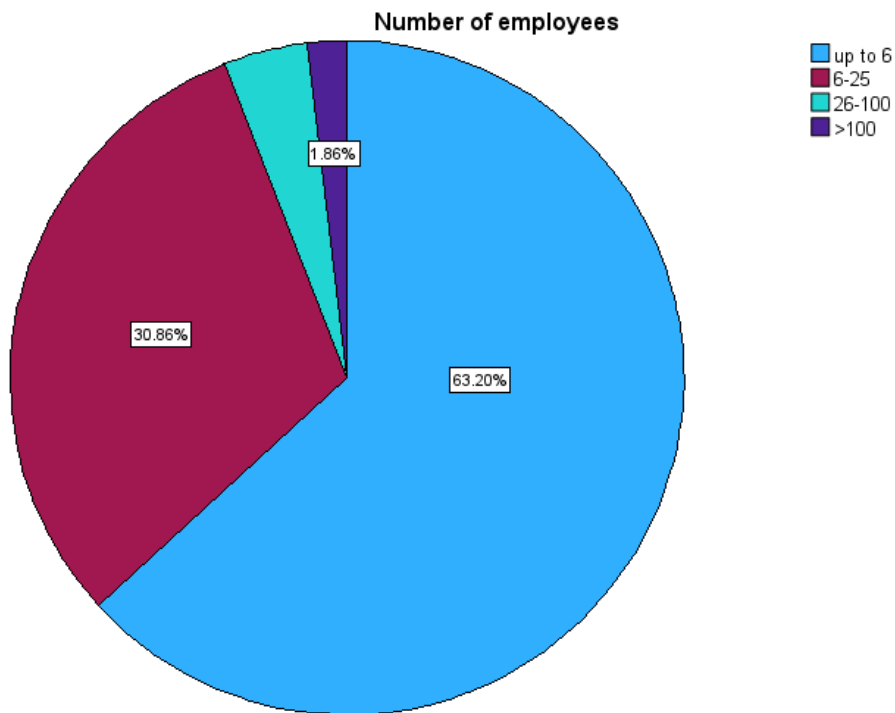


Figure 3. Size of participating SMMEs by number of employees

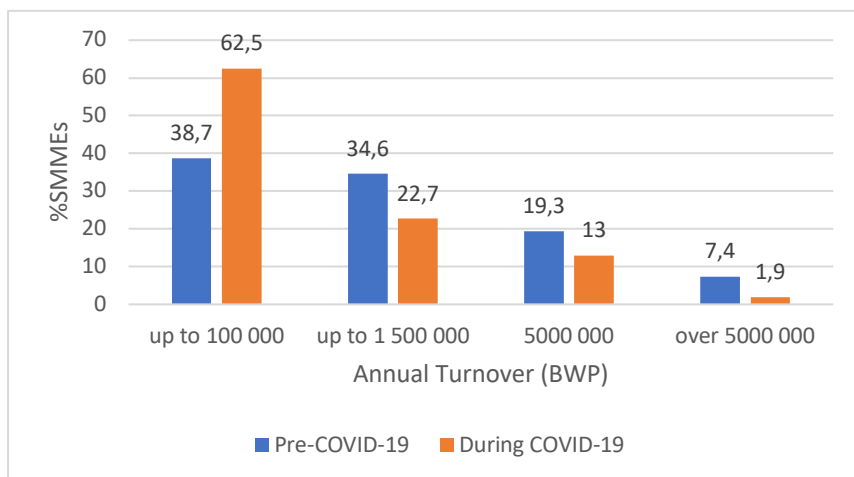


Figure 4. SMME annual turnover pre-COVID-19 and during COVID-19 in Botswana.

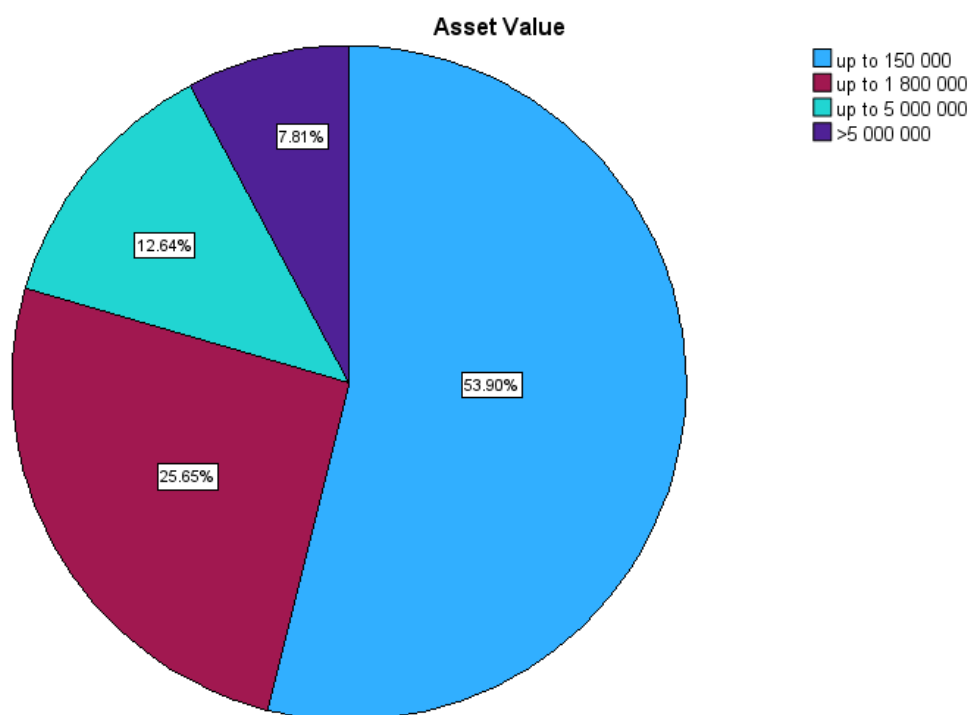


Figure 5. SMME asset value

The bulk of the participating SMMEs (63.2%) had a workforce of up to 6 employees, followed by 6-5 employees (30.9%) (Fig 3) implying that in Botswana, the bulk of SMMEs fall into the micro enterprise category. A tiny proportion had 26-100 employees. This observed distribution is corroborated by MIIT (2023) which asserts that the micro enterprise sector makes up approximately 75% of SMMEs in Botswana. Small enterprises constitute 20% of SMMEs and the balance (5%), is made up of the medium enterprises.

Based on annual turnover, micro enterprises receive less than BWP60 000, small enterprises between BWP60 000 and BWP1 500 000, and medium enterprises up to BWP5 000 000 (Botswana Institute for Development Policy Analysis (BIDPA), 2022; Ministry of Investment, Trade and Industry, 2023). Pre-COVID-19, most SMMEs researched had an annual turnover of up to BWP 100 000 (38.7%), followed closely by those earning up to BWP 1 500 000 (34.6%) (Fig 4). This further supports the view that most of the entities researched fall into the micro- and small enterprise categories.

During COVID-19, the proportion of SMMEs earning the lower bracket of annual turnover (up to BWP100 000) increased to 62.5%, while those earning higher annual turnovers decreased (Fig 4). This does not necessarily imply a downgrading of the SMMEs but indicates that SMMEs in Botswana indeed faced difficulties and challenges because of the COVID-19 pandemic.

The majority of the participating SMMEs (53.9%) had an asset value of BWP 150 000, while a few claimed to have an asset value of over BWP 5000 000 (7.8%) (Fig 5). The higher asset values were not necessarily linked to SMME size as measured by employee numbers or annual turnover. This is because some sectors, for instance health, use high-value assets such as laboratory equipment, thereby leading to a disproportionately high asset value compared to the other measures of enterprise size.

SMME representative participant profiles

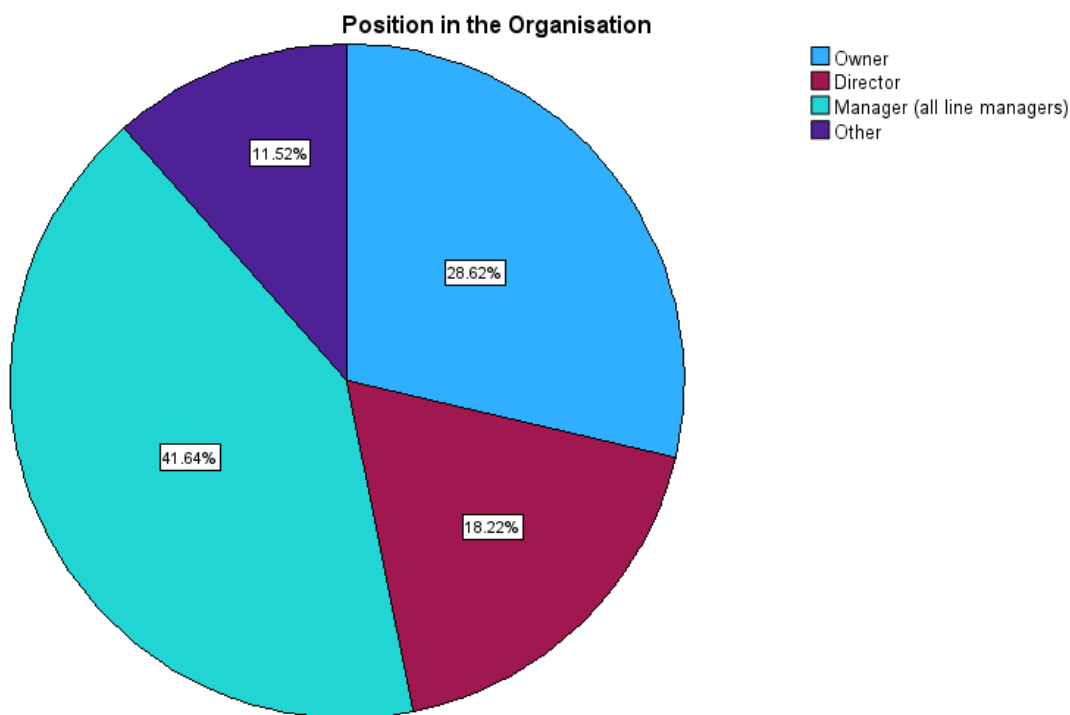


Figure 6. Organisational position of SMME representative in the study

Most of the respondents representing SMMEs were either owners of the SMMEs (28.6%) or Directors (18.2%) making up a cumulative proportion of (46.8%) (Fig 6). The next biggest category of respondents was managerial staff (41.6%), comprising of all kinds of managers regardless of operational function. A small proportion of respondents, categorised as ‘other’, (11.5%), comprised of SMME representatives at any other level in the organisation who were authorised to participate in the study in a representative capacity. This profile of the representative participants for the SMMEs instills confidence that the responses collected during the study provided an accurate account of what transpired in these SMMEs before and during the COVID-19 pandemic.

4.2 Challenges Faced by SMMEs During COVID-19

Overview

Findings from this study indicate that SMMEs in Botswana experienced and were negatively impacted by all the investigated categories of challenges emanating from the COVID-19 pandemic namely financial, operational, market and demand, regulatory and compliance, technological, human resource, strategic, and communication challenges (Fig 7). The proportion of SMMEs agreeing that they were negatively impacted by each of the challenges investigated was more than 50% in all cases. The top three (3) challenges experienced by SMMEs in Botswana were financial (75.4%), technological (74.4%), and human resource (68.8%).

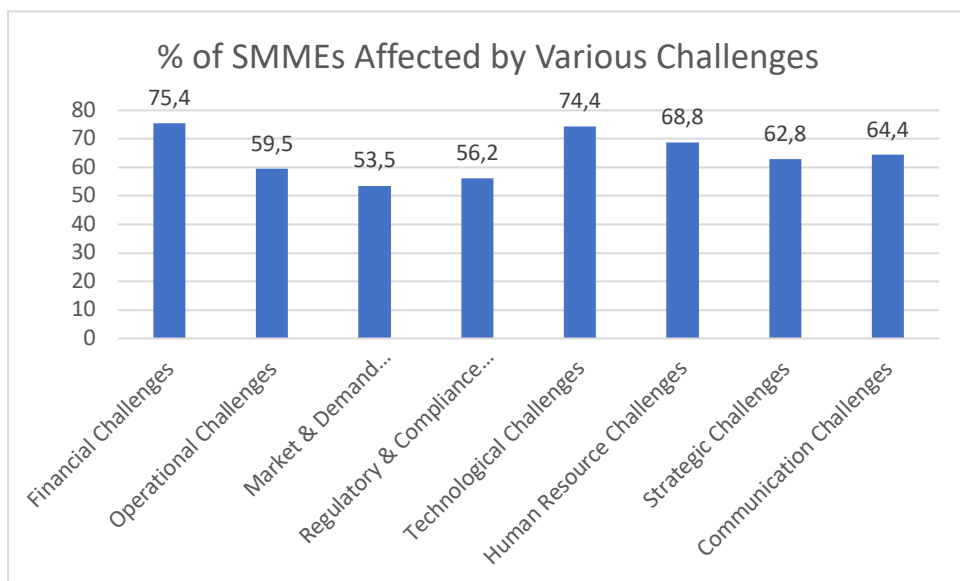


Figure 7. Challenges faced by SMMEs during the COVID-19 pandemic

This roughly agrees with reports from key Botswana government agencies which assert that SMMEs in Botswana continue to face challenges in the form of limited access to finance (Citizen Entrepreneurial Development Agency (CEDA)., 2023), skills and training (Local Enterprise Authority (LEA)., 2023), regulatory environment (Ministry of Investment, Trade and Industry, 2023), and market access (Botswana Institute for Development Policy Analysis (BIDPA), 2022).

This study established, based on Pearson Chi-square tests, a statistically significant association between the challenges encountered and the SMME industry sectors (Tables 1a-c).

Financial challenges

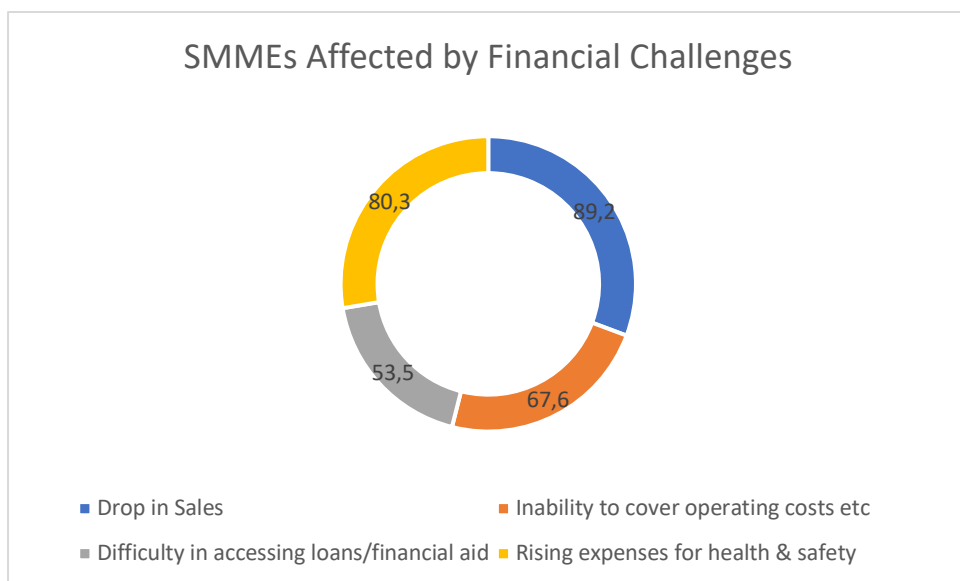


Figure 8. Financial challenges faced by SMMEs in Botswana during the COVID-19 pandemic.

Under this category, the study investigated significant drop in sales/business, inability to cover operating costs, difficulty in securing loans or financial aid, and rising expenses for implementing health and safety measures. The top three sub-categories found to most affect SMMEs in Botswana were significant drop in sales/business (89.2%), rising expenses for implementing health & safety requirements (80.3%), and an inability to cover operating costs (67.6%) (Fig 8). These findings are quite logical in the context the COVID-19 pandemic. Sales or business in general was bound to drop since the pandemic-imposed limitations on the usual way of transacting forced a shift to other less familiar and, maybe, less efficient, at least initially, means of transacting such as e-platforms and other online technologies. Additionally, there were several full lockdowns during the pandemic which meant that business transactions either slowed down or ceased completely at such times.

Rising expenses for implementing health and safety requirements were inevitable as businesses were required to acquire and or put in place equipment, measures, and procedures to alleviate the transmission of the COVID-19 virus. Businesses were expected to acquire measurement and monitoring equipment for instance special non-contact thermometers and stationery for recording temperatures to help detect potentially infected individuals. Unscrupulous suppliers of these gargets charged exorbitant prices which placed a significant strain on most SMMEs' meagre resources especially when coupled to the acquisition of fast-moving consumables like sanitisers and dispensers. Businesses were required to avail on-site isolation spaces for holding suspected cases of COVID-19 before they were handed over to the authorities from the Ministry of Health.

Social distancing requirements meant that businesses had to increase their floor areas and or hire more employees to maintain their levels of production or service. The overall impact of these health and safety requirements was an increase in the associated costs thereby negatively impacting the already strained resources of the SMMEs, most of whom are micro enterprises barely making BWP60 000 annual turnover as discussed previously. In addition, SMMEs in Botswana also struggled with operating costs related to financing core business activities. This was aggravated by the rising costs in other areas of the business as discussed above which gobbled up money that would otherwise be used in the running costs of the business.

These findings agree with existing literature from other studies (Hossain, Akhter, & Sultana, 2022; Pongtanalert & Assarut, 2022).

Table 1. Chi-Square Tests: Correlation Between Industry Sector & Financial Challenges

Financial Challenge	Pearson Chi-Square-Asymptotic Significance (2-sided)	Interpretation
Drop in sales/business	<.001	Statistically significant
Inability to cover operating costs	<.001	Statistically significant
Difficulty in accessing loans or financial aid	<.001	Statistically significant

Rising expenses for health and safety	<.001	Statistically significant
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A statistically significant correlation was established between industry sector and all the sub-categories of financial challenges investigated in this study (Table 1).

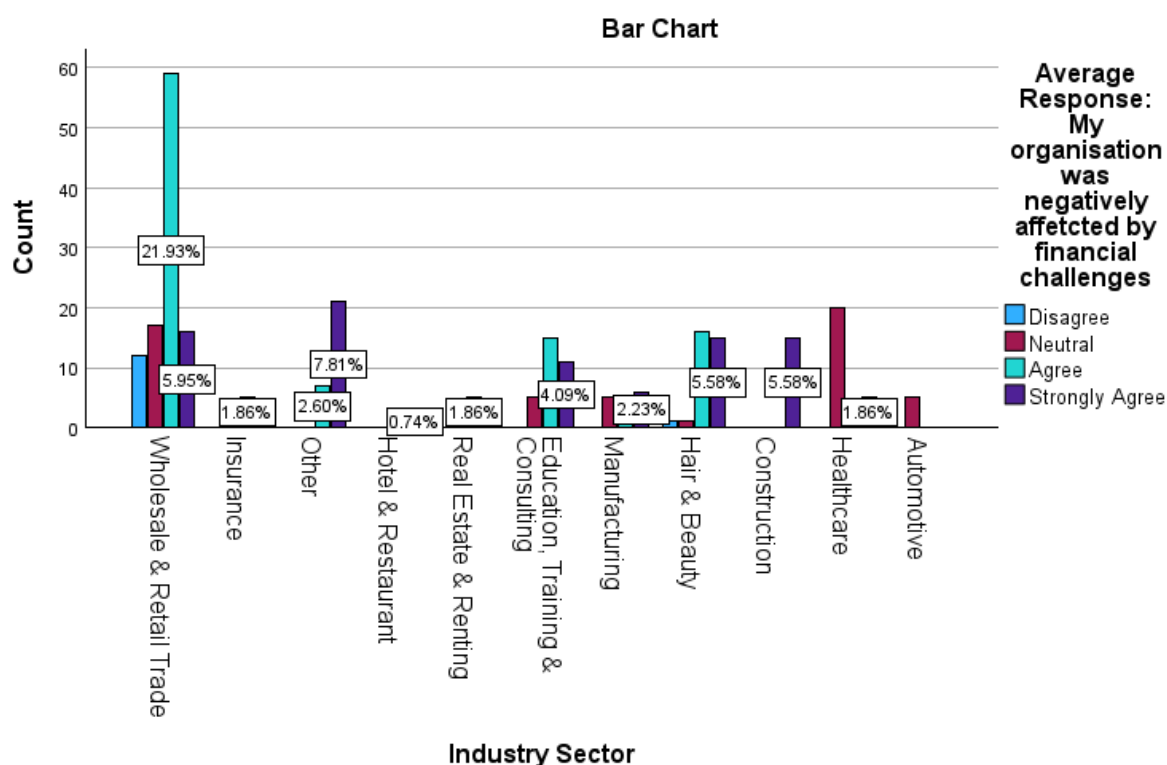


Figure 9. Sectoral association with financial challenges

The sectors reporting significant negative impact from financial challenges were, in descending order: the Wholesale & Retail Trade; Education, Training & Consulting; Hair & Beauty; Construction, sectors. The trend may be reflective of the proportional sectoral representation but may also reflect prejudices of government priority categorisation of SMMEs. Various factors may be responsible for challenges faced by the SMMEs in accessing finance to fund their operations. This issue may require re-looking by government in the interest of fairer treatment of SMMEs to enhance their continued contribution to national economic growth.

Technological challenges

The technological challenges investigated included the accelerated need for digitisation, increased vulnerability to cyberattacks, and inadequate technological infrastructure to support new digital and remote operations. The most prominent technological challenges affecting SMMEs in Botswana during the COVID-19 pandemic were the need for accelerated digitisation (45.8%), inadequate technological infrastructure (35%), and lastly, vulnerability to cyberattacks (25.3%) (Fig 10).

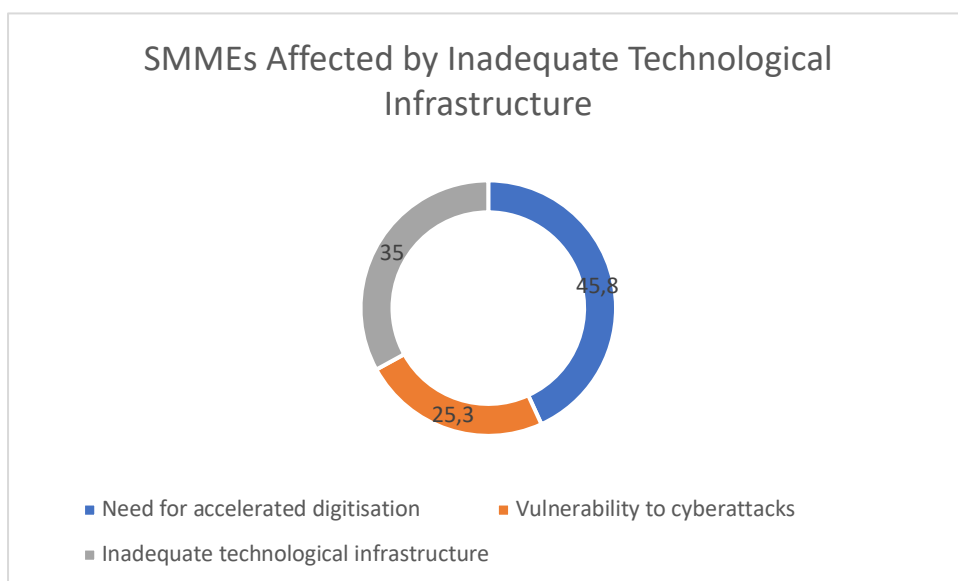


Figure 10. Technological challenges faced by SMMEs in Botswana during the COVID-19 pandemic

The operating environment prevailing during the COVID-19 pandemic demanded increased adoption and use of existing and emerging technologies including. These included, but were not limited to, technologies that support remote operations, or increased automation of processes. Sectors such as education, training and consulting, for instance, could benefit from virtual platforms for meetings and delivery of teaching and learning. Others such as the wholesale and retail trade sector could benefit from e-commerce platforms for marketing and selling their products. Findings, however, indicate that many SMMEs faced challenges with the required pace of digitisation. This was linked to the difficulties in rapidly acquiring, setting up, and utilising appropriate technological infrastructure. In other instances, even if an SMME managed to digitise, they were sometimes ill-equipped to deal with the threats of cybercrime, notably viruses and fraud, given the sophistication of modern-day cybercriminals.

These findings agree with existing literature which states that deficiencies in capacity to adopt, adapt, and utilise digital technologies were an important challenge impacting SMME viability during COVID-19. Capacity deficiencies in this regard are thought to have emanated from a lack of experience with crisis management in comparison to larger enterprises (Herbane, 2019), or a potential lack of internal research and development capability technologies for digitalization (Guo, Yang, Huang, & Guo, 2020) leading to a reliance on external technologies which may be poorly understood or adapted to context. Consequently, some SMMEs were not digitally prepared to face the challenges inherent in transitioning to online operations, implementing remote work arrangements, and leveraging digital tools for communication, collaboration, and customer engagement (Pongtanalert & Assarut, 2022).

Correlation tests using the Pearson Chi-Square test indicated that there is a statistically significant correlation between industry sector and all the sub-categories of technological challenges investigated in this study (Table 2).

Table 2. Chi-Square Tests: Correlation Between Industry Sector & Technological Challenges

Financial Challenge	Pearson Chi-Square-Asymptotic Significance (2-sided)	Interpretation
Need for accelerated digitisation	<.001	Statistically significant
Vulnerability to cyberattacks	<.001	Statistically significant
Difficulty in accessing loans or financial aid	<.001	Statistically significant
Inadequate technological infrastructure	<.001	Statistically significant

The sectors reporting significant negative impact from financial challenges were, in descending order: the Wholesale & Retail Trade; Education, Training & Consulting; Manufacturing, Healthcare Hair & Beauty; Construction, and Automotive sectors (Figure 10c).

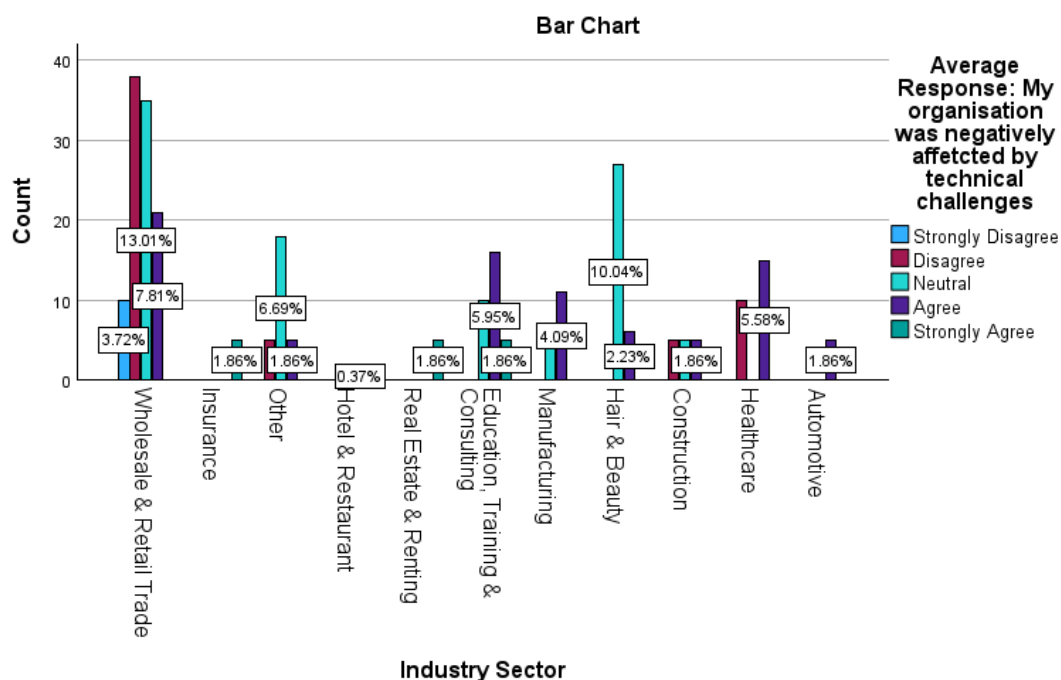


Figure 11. Sectoral association with technological challenges

The trend may be reflective of the proportional sectoral representation but may also emanate from the differential treatment of SMMEs resulting in some SMMEs failing to acquire critical technologies needed in their industry sectors. This may be particularly true for the healthcare and manufacturing sectors where up to date equipment and machinery may seriously impact capacity.

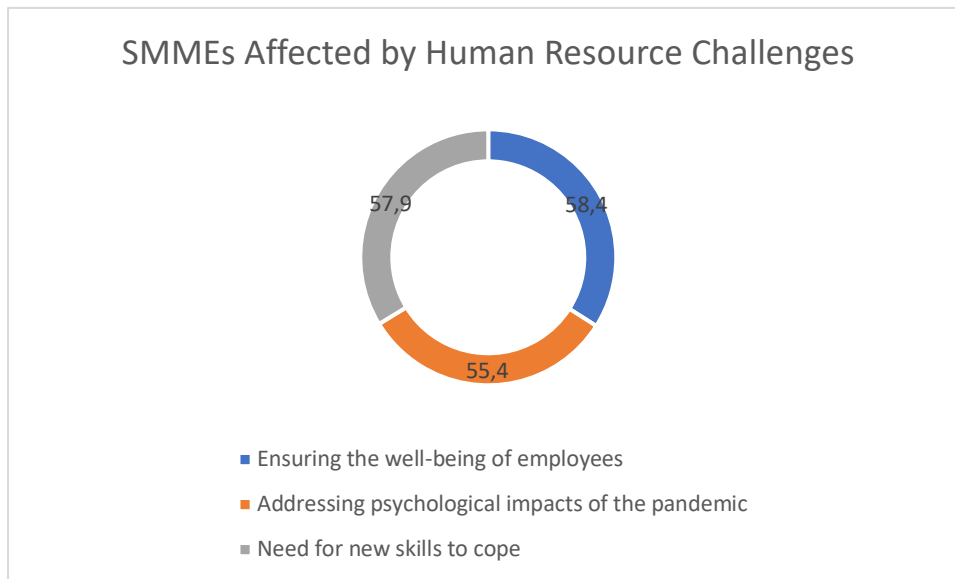
Human resource challenges

Figure 12. Human resource challenges faced by SMMEs in Botswana during the COVID-19 pandemic

In this category, the research investigated issues with ensuring the well-being of employees, addressing the psychological impact of the pandemic on employees, and the need for new skills to adapt to changing business models and technologies. Findings identified issues to do with ensuring the well-being of employees to be the most prominent (58.4%) among SMMEs in Botswana during the COVID-19 pandemic. This was followed by the need for new skills to cope with the pandemic (57.9%), and lastly addressing the psychological impacts of the pandemic on employees (55.4%) (Fig 12).

Employee well-being refers to a state of balance in the different aspects that affect employees including, but not limited to, physical health, provisions, and social aspects. If employee well-being is compromised, it will be reflected in their compromised productivity as they will not be able to focus well on their job responsibilities. The fact that a high proportion of the respondents pointed out that their organisations faced challenges with ensuring the well-being of employees implies that business operations may have been negatively impacted. The need for adopting and using emerging technologies in mitigating the negative impacts of the pandemic, as discussed under technological challenges, directly demands the development of associated skills in the workforce. LEA (2023) pointed out that there is a notable skills gap among SMMEs owners and employees in Botswana and that training and capacity building programs are essential to enhance business management and technical skills. The fact that a significant proportion of SMMEs reported challenges in addressing the need for new skills in the workforce implies that business operations such as using online platforms for conducting meetings, or delivering teaching and learning, in the case of the education, training and consulting sector, may have been negatively impacted leading to reduced efficiency and effectiveness.

Difficulties in addressing the psychological impact of the pandemic on employees and maintaining morale could lead to compromised productivity in employees. In extreme cases, psychological issues can lead to social problems such as depression and suicide and suicidal tendencies.

Thematic analysis yielded additional human resource challenges under the theme ‘workforce challenges. Some respondents in the construction sector reported that their organisation’s employees left for more stable jobs as the industry faced project shortages. This has the effect of causing a brain drain for the sector.

Table 3. Chi-Square Tests: Correlation Between Industry Sector & Human Resource Challenges

Financial Challenge	Pearson Chi-Square-Asymptotic Significance (2-sided)	Interpretation
Ensuring the well-being of employees	<.001	Statistically significant
Addressing the psychological impact of the pandemic on employees and maintaining morale	<.001	Statistically significant
Need for new skills to adapt to changing business models and technologies	<.001	Statistically significant

The Pearson Chi-Square test indicate that there is a statistically significant correlation between industry sector and all the sub-categories of human resource challenges investigated in this study. This correlation can be seen in figure 13 below.

The sectors reporting significant negative impact from human resources challenges were, in descending order: the Wholesale & Retail Trade; Education, Training & Consulting; Hair & Beauty; Construction, and Automotive sectors. The trend may be reflective of the proportional sectoral representation.

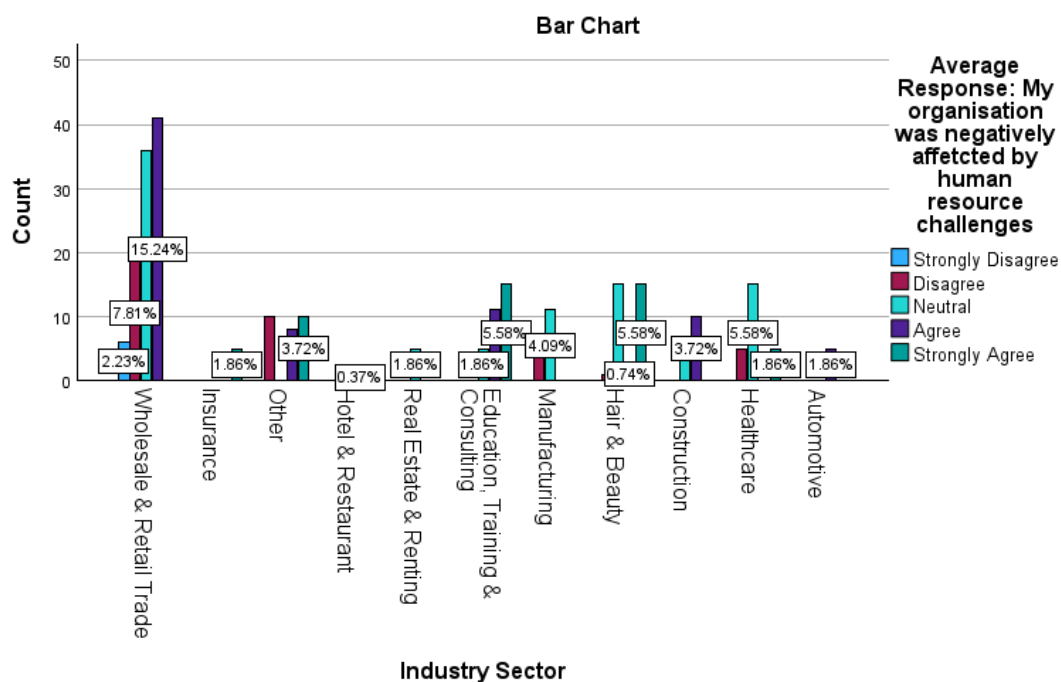


Figure 13. Sectoral association with human resource challenges

Overall, COVID-19 restrictions on human movement, requirements for social distancing, and actual cases of sickness and quarantine certainly amplified the human resources challenges faced by SMMEs in Botswana.

Additional challenges (thematic analysis)

Table 4. Additional Challenge(s) Encountered During COVID-19.

Theme	Code	Description
Supply Chain Issues	Increased Shipping Costs	Shipping goods from overseas became more expensive.
	Delays in Importing Components	Imported components faced significant delays.
	Delayed Supplier Deliveries	Suppliers took longer to deliver goods, slowing down the organization's operations.
Financial Challenges	Financial Issues (Rental and Salary Arrears)	Organizations struggled with paying rent and salaries on time.
	Cash Flow Problems	There was a lack of cash flow to support ongoing operations.
Demand and Business Impact	Lockdowns and Reduced Demand	Lockdowns led to reduced demand and shifted priorities, creating uncertainty.

	Budget Reallocations	Customer budget reallocations diverted resources away from important projects.
	Loss of Business	Organizations lost business due to changing customer priorities and budget cuts.
Workforce Challenges	Loss of Employees	Employees left for more stable jobs as the industry faced project shortages.
	Lack of Projects	There were fewer projects available, causing instability in employment.
Operational Strain	Increased Workload	The need for lab testing and other operations increased, leading to a higher workload.
	Increased Lab Testing Demand	The demand for lab testing during COVID-19 surged, adding pressure to the organization.
No Additional Challenges	No Additional Challenges	Respondents did not identify any further challenges affecting their organization.

Additional challenges identified were supply chain and logistics issues, demand and operational strain. Shipping goods from overseas became more expensive and this negatively affected SMMEs such as the wholesale & retail trade sector and others which heavily depend on imported goods. Imported components and goods faced significant delays as suppliers took longer to deliver goods thus slowing down the organization's operations. Lockdowns during COVID-19 led to reduced demand and shifted priorities, creating uncertainty. Customer budget reallocations diverted resources away from important projects in sectors such as construction leading to loss of business.

Other respondents in the health sector such as testing laboratories reported increased volume of business which led to a corresponding increase in workload, sometimes requiring the hiring of additional staff. This was due to the mandatory testing for COVID-19 especially for those travelling across national borders.

5. Conclusion

should summarize the key findings and the relevance to the field. Authors are also encouraged to provide practical implications of their research.

SMMEs operating in Botswana, as elsewhere, were significantly negatively impacted by the COVID-19 pandemic, with some likely to bear the effects into the foreseeable future. The main challenges detected in this study were financial, technological, and human resource related. These were found to be generally significantly associated with SMME industry sector and showing trends that placed the Wholesale & Retail Trade and the Education, Training & Consulting sectors at the top of the most affected. These trends may have other underlying drivers but may be reflective of proportional sectoral representation as a base factor with other accompanying

challenge specific factors such as differential access to information, finance, and the prevailing operating environment. The identification and elucidation of these challenges may be instrumental in formulating resilience strategies for SMME survival in varied contexts during crisis times.

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Declaration of Conflicting Interests

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