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SMME COVID-19 Resilience Strategy Effectiveness: Lessons from Botswana

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ABSTRACT

A prior study established that SMMEs in Botswana faced a range of unique challenges during the COVID-19 pandemic. This study sought to determine the resilience strategies utilised by these entities to resolve or alleviate these challenges and the extent of their effectiveness. Through a comprehensive analysis of responses from SMME representative SMMEs in Botswana, the research identified the key resilience strategies and how effective they were in mitigating the adverse effects of the crisis. A strong association was found between the previously identified challenges and the resilience strategies adopted during COVID-19. The associations detected, based on Pearson Chi-Square test, suggest a one-to-many and/or many-to-many relationship. The many-to-many approach is recommended for use during crisis times as it enhances efficiency in resource utilisation.

1. Introduction

The recent COVID-19 pandemic placed tremendous pressure on practically all human invented systems. The pandemic inadvertently provided a natural laboratory for the testing of the resilience of business systems worldwide. The Small, Micro and Medium-sized Enterprises (SMMEs) sector forms the foundation of many economies internationally, particularly in the developing and emerging economies. Consequently, their resilience is a matter of life-and-death for these economies. Understanding the dynamics at play in SMME resilience therefore becomes a need rather than a want in these contexts. This scenario fits the Botswana situation squarely as the country, a landlocked nation located in Sub-Saharan Africa, is keenly focused on the survival and growth of its SMME sector as evidenced by a significant investment into this sector accompanied by a raft of policy and regulatory frameworks that favour it. The advent of the COVID-19 pandemic was a litmus test for these government initiatives as well as robustness of the SMME corporate strategies at both the firm and industry-sector levels. When the pandemic broke out, players in the SMME sector, like other entities locally and internationally, deployed their strategies, in the context of the wider environmental forces, in response. By the

end or waning of the pandemic, some had endured to varying degrees, while others had succumbed. Those SMMEs that remained standing post-COVID-19 are rich sources of business lessons in resilience strategy in its various facets including what works and what doesn't work. This study sought to access that valuable information so that it can be used to inform future decisions on SMME survival strategy, especially in developing economies in Africa and elsewhere.

2. Literature Review

2.1 SMME Resilience Strategies

SMME resilience literature is moderately abundant but limited in its geographic focus (Chaurura & Qutieshat, SMME Crisis Resilience: A Snap Literature Review of the COVID-19 Era, 2024). The African context of SMME resilience seems to be particularly under-researched despite the obvious importance of this sector for these economies. This study therefore focused on the resilience of SMMEs in Botswana as a way of deriving context-specific knowledge for use in addressing the question of SMME resilience in developing economy contexts now and in the future.

During COVID-19, SMMEs invoked several resilience strategies in response. These included, but were not limited to digital transformation, harnessing relationships, building financial capacity, creating competitive products and services, and fostering agility and reconfiguration (Hossain, Akhter, & Sultana, 2022; Tukamuhabwa, Stevenson, & Busby, 2017; Herbane, 2019; Fath, Antje, Noemi, Rudolf, & Sullivan-Taylor, 2021; Zutshi, Mendy, Sharma, Thomas, & Sarker, 2021; Jalilian, Kirkpatrick, & Weiss, 2019; Eggers, 2020). Some of these strategies are hailed as effective by different authors for different reasons. Some researchers such as Ndiaye et al, (2018) argued for the recognition of external factors, including policies on infrastructural and energy services, as drivers of SMMEs' performance. Zutshi et al (2021) advocated for addressing regulatory constraints that hinder SMME compliance with government policies and rules coupled to incentivizing formal registrations of SMMEs and simplifying regulations and taxes (Ndiaye, Razak, Nagayev, & Ng, 2018).

2.2 Effectiveness of SMME Resilience Strategies

Crisis resilience strategies have been reported to have had varying degrees of effectiveness. Some research findings report that the crisis resilience strategies employed by some SMMEs have helped in mitigating the impact of the COVID-19 outbreak by enabling them to adapt to the changing business environment, enhancing their competitiveness, and maintaining operational continuity during crisis (Fitriasar, 2020). A more extensive discussion of the effectiveness of SMME crisis resilience strategies is presented in Chaurura and Qutieshat (2014). Digital transformation in the form of digital platforms, technology, digital marketing, and innovations were found to have helped some organisations to survive crisis and even thrive (Hossain, Akhter, & Sultana, 2022; Guo, Yang, Huang, & Guo, 2020). Collaborations with stakeholders have also been reported to have enhanced SMME crisis resilience (Bak, Shaw, Colicchia, & Kumar, 2023). Some SMMEs built their crisis resilience by building their financial capacity as well as accessing and utilising government financial initiatives and incentives for example in Bangladesh and Finland (Schepers, Vandekerckhof, & Dillen, 2021). Agility and reconfiguration has also been associated with greater crisis resilience among SMMEs (Herbane, 2019). Lastly, good management practices are reported to have improved SMME crisis resilience as well. Overall, the effectiveness of SMME resilience strategies varied with the specific context and implementation. While the efforts of governments in offering stimulus packages are acknowledged, as was the case in Botswana, the challenges in accessing the

support are noted as a significant impediment to their effectiveness. Calls for broader inclusivity across SMME sectors seek to improve access and uptake of these initiatives and programmes (Hossain, Akhter, & Sultana, 2022).

3.0 Methodology

This study employed a mixed methods approach combining qualitative and quantitative methods to ensure both objectivity and in-depth evaluation of the effectiveness of resilience strategies employed by SMMEs in Botswana during the COVID-19 pandemic.

Data collection sites were in the urban and peri urban areas of Gaborone, and Francistown which represent Botswana’s economic hub. The study drew its participants from the SMME population in Botswana, being formally registered entities from all industry sectors in the country.

The sample size was determined using an online sample size calculator named Raosoft (Raosoft Inc, 2004) which was preferred for its use among and its of ease of use even for researchers without a statistics background. A sample size of 377 was obtained as described in Chaurura and Dar (2024). This was partitioned between the study sites as described by Chaurura and Dar (2024). Data was collected using a semi-structured questionnaire and an interview guide. It was then analysed using SPSS software version 24. Analyses included descriptive statistics, associations, and significance testing. Chi-Square test, frequency distribution, and thematic analysis for qualitative data.

4.0 Results Analysis

4.1 Effectiveness of Resilience Strategies

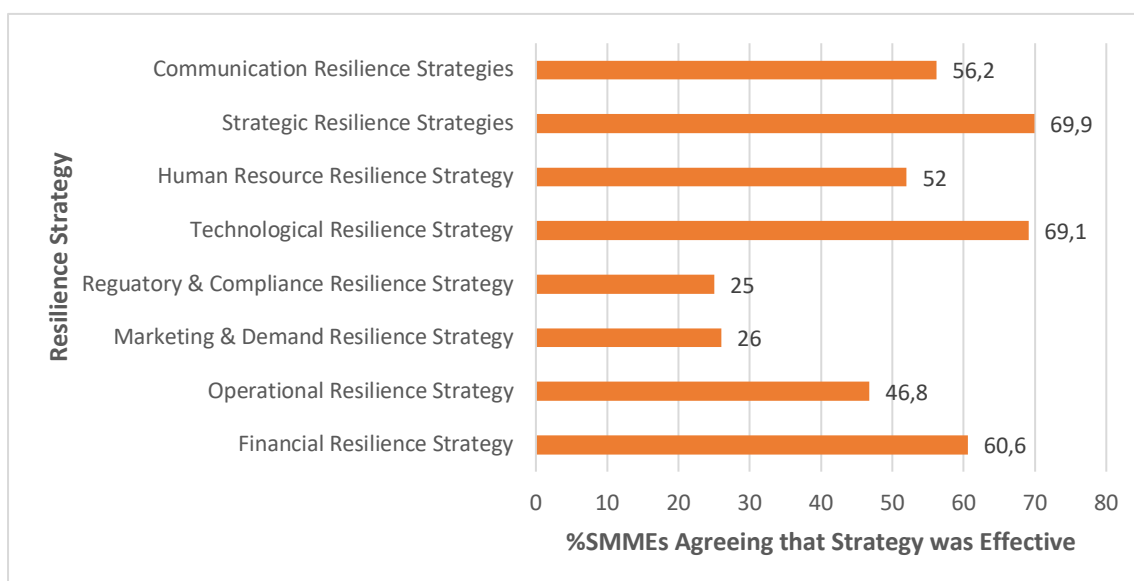


Figure 1. Effectiveness of resilience strategies adopted by SMMEs in Botswana during the COVID-19 pandemic
 The top three (3) resilience strategies that were considered effective by SMMEs in Botswana during the COVID-19 pandemic were strategic resilience strategies (69.9%), technological resilience strategies (69.1%), and financial resilience strategies (60.6%).

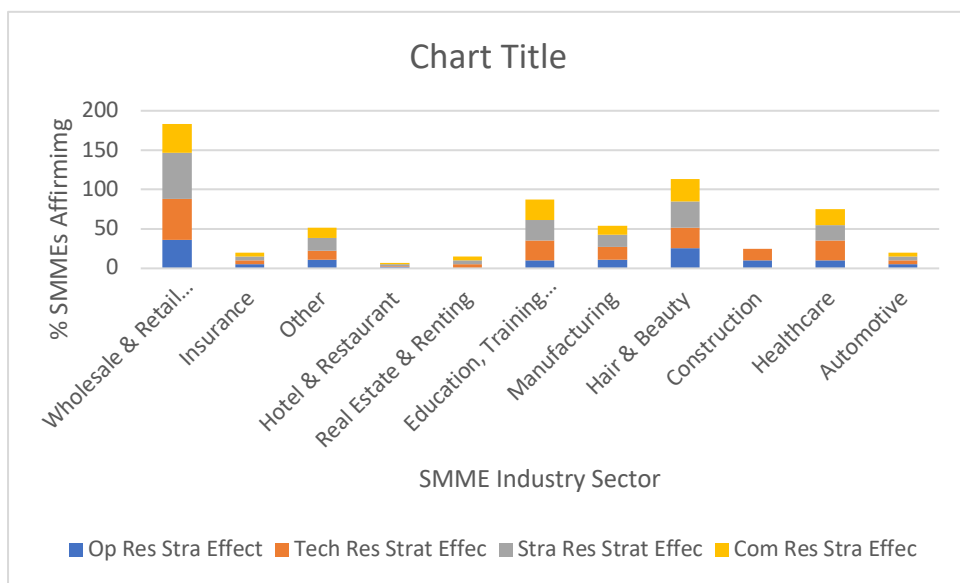


Figure 2. Effectiveness of the top four most used SMME resilience strategies in Botswana during the COVID-19 pandemic by industry sector

The Wholesale & Retail Trade sector had the greatest affirmations for effectiveness of all the top four most used resilience strategies being 59% (strategic resilience strategies), 52% (technological resilience strategies), 36% (communication resilience strategies), and 36% (operational resilience strategies). This was followed by the Hair & Beauty sector, although the order of effective affirmation differed slightly from the order of resilience strategy usage.

Table 1. Ranking of the top four challenges, resilience strategies, and effectiveness during COVID-19

Ranking	Challenge- as per Chaurura & Dar (2024)	Resilience Strategy	Effectiveness of Resilience Strategy
1	Financial Challenges	Strategic Resilience Strategies	Strategic Resilience Strategies
2	Technological Challenges	Technological Resilience Strategies	Technological Resilience Strategies
3	Human Resource Challenges	Communication Resilience Strategies	Financial Resilience Strategies
4	Strategic Challenges	Operational Resilience Strategies	Communication Resilience Strategies

Except for technological challenges, there was no one-to-one mapping between challenge category, resilience strategy category and the opinion on strategy effectiveness.

Table 2. Chi-Square Tests: Correlation Between the Most Effective Resilience Strategies and the Most Encountered Challenges During COVID-19

Challenge vs Perceived Effectiveness of Resilience Strategy	Pearson Chi-Square-Asymptotic Significance (2-sided)	Interpretation
STRATEGIC RESILIENCE STRATEGIES		
Effectiveness of Strategic Resilience Strategies vs *Financial Challenges	<.001	Statistically significant
Effectiveness of Strategic Resilience Strategies vs *Technological Challenges	<.001	Statistically significant
Effectiveness of Strategic Resilience Strategies vs *Human Resource Resilience Strategies	.004	Statistically significant
Effectiveness of Strategic Resilience Strategies vs *Strategic Challenges	<.001	Statistically significant
TECHNOLOGICAL RESILIENCE STRATEGIES		
Effectiveness of Technological Resilience Strategies vs *Financial Challenges	<.001	Statistically significant
Effectiveness of Technological Resilience Strategies vs *Technological Challenges	.013	Statistically significant
Effectiveness of Technological Resilience Strategies vs *Human Resource Challenges	<.001	Statistically significant
Effectiveness of Technological Resilience Strategies vs *Strategic Challenges	<.001	Statistically significant
FINANCIAL RESILIENCE STRATEGIES		
Effectiveness of Financial Resilience Strategies vs *Financial Challenges	<.001	Statistically significant
Effectiveness of Financial Resilience Strategies vs *Technological Challenges	.001	Statistically significant
Effectiveness of Financial Resilience Strategies vs *Human Resource Resilience Strategies	<.001	Statistically significant
Effectiveness of Financial Resilience Strategies vs *Strategic Challenges	<.001	Statistically significant
COMMUNICATION RESILIENCE STRATEGIES		
Effectiveness of Communication Resilience Strategies vs *Financial Challenges	<.001	Statistically significant
Effectiveness of Communication Resilience Strategies vs *Technological Challenges	<.001	Statistically significant
Effectiveness of Communication Resilience Strategies vs *Human Resource Resilience Strategies	<.001	Statistically significant
Effectiveness of Communication Resilience Strategies vs *Strategic Challenges	.008	Statistically significant

The Pearson Chi-Square values obtained indicate that there was a strong and statistically significant correlation between the resilience strategies considered most effective and the challenges most encountered by SMMEs in Botswana during COVID-19.

Table 3. Where and how do you think your organisation could have done better in responding to the negative impact COVID-19 pandemic? (Question 6.1)

Theme	Code	Description
Organizational Preparedness and Resilience	Contingency Planning	Making advance preparations
	Flexibility and Adaptation	Being responsive, adaptive, and willing to use alternative means.
Operations and Service Delivery	Alternative Delivery Methods	Alternative delivery methods
Employee Support and Well-being	Mental Health and Counselling	Putting in place programmes and interventions to assist employees cope mentally with the pandemic.
Strategic Diversification	Diversification into Other Sectors	Employing diverse strategies to mitigate or overcome the COVID-19 challenges.

Table 4. Where and how do you think the government of Botswana could have done better in helping SMMEs in responding to the negative impact COVID-19 pandemic? (Question 6.2)

Theme	Code	Description
Financial Support and Subsidies	Expanded Subsidies	The need for more diversified and continued financial support.
	Ease of Access to Financial Relief	Simplifying access to relief programs.
	Regulation and Monitoring	Better oversight and distribution of relief funds to avoid corruption.
	VAT Reduction	The size and impact of VAT reduction.
Infrastructure and Resources	Provision of Equipment and Facilities	Supplying necessary equipment and dedicated facilities for SMMEs.
	Support for Compliance	Ensuring SMMEs have what they need to meet regulatory requirements.
	Recognizing SMMEs and Tuition Centers	Inclusion and support for all business types, including tuition centers.

Policies and Regulations	Flexibility in Regulations:	Adjusting policies to be less stringent and more inclusive.
	Tax Concessions:	Early tax concessions for broader economic relief.
Communication and Information	Enhanced Communication:	Improving communication with SMMEs about available programs and resources.
	Guidance and Advisory Services:	Providing more guidance and support services to SMMEs.
Supportive Actions	Direct Support and Assessment:	Proactive measures to understand and support SMMEs' needs.
General Perception of Government Efforts	Positive Feedback:	Acknowledgment of the government's efforts and recognizing room for improvement.

5.0 Discussion

The top three (3) resilience strategies that were considered most effective by SMMEs in Botswana during the COVID-19 pandemic were strategic resilience strategies (69.9%), technological resilience strategies (69.1%), and financial resilience strategies (60.6%) (Fig 1). However, the most used resilience strategies by SMMEs in Botswana during COVID-19 were strategic resilience strategies, technological resilience strategies, communication resilience strategies, and operational resilience strategies. The relationship between the resilience strategies considered most effective and those most utilised is not immediately clear, but they do not all match one-for one (Table 1). The Wholesale & Retail Trade sector had the greatest affirmations for effectiveness of all the top four most used resilience strategies being 59% (strategic resilience strategies), 52% (technological resilience strategies), 36% (communication resilience strategies), and 36% (operational resilience strategies). The sectoral differences in perceptions on the effectiveness of different resilience strategies may reflect the differences in the nature of challenges encountered in the different industry sectors during the pandemic, thereby suggesting that there may have been a good alignment between resilience strategies used by SMMEs in Botswana and the sector-specific challenges experienced.

Table 1 juxtaposes the ranking of COVID-19 challenges, the resilience strategies used, and perceived effectiveness of resilience strategies utilised from position 1 (highest position), to 4 (lowest position). What is most apparent from that table is that, except for technological challenges, there doesn't seem to be a one-to-one mapping between challenges, strategies, and effectiveness ranking. Logically, one would expect a one-to-one mapping between, for instance, financial resilience strategies and financial challenges, operational challenges and operational resilience strategies, etc. However, as demonstrated here and corroborated by significance testing, this is not the case. Statistical significance testing using the Pearson Chi-Square test (Table 2) indicated that practically all the resilience strategies utilised by SMMEs in Botswana had a statistically significant association with all the challenges that were encountered during the pandemic. Specifically, a strong and statistically significant association was found to exist between the resilience strategies considered most effective by the SMMEs (strategic resilience, technological, financial, and communication resilience strategies) and the challenges most encountered by SMMEs in Botswana during COVID-19, namely financial, technological, human resource, and strategic challenges (Chaurura & Dar, An Evaluation of the Nature and

Extent of Challenges Encountered by Small, Medium, and Micro Enterprises (SMMEs) in Botswana During COVID-19, 2024).

Although there is no one-for-one match between some of the resilience strategies considered most effective and some of the most encountered challenges, it is still possible to have, overall, a statistically significant association due to the existence of one-to-many and/or many-to-many relationships between resilience strategies employed and challenges encountered. An example comes from strategic resilience strategies (agile pivoting of new business models, scenario planning, and environmental monitoring) which were considered effective against several challenges (one-to-many association). The technological challenges (need for accelerated digitisation, vulnerability to cyber attacks, and inadequate technological infrastructure) all require decisions and intervention at the strategic level of the enterprise. A strategic decision can be made to, for instance, commit financial resources to acquire additional technological infrastructure and software, including anti-virus software and other technologies that improve security when using e-commerce and online platforms. The statistically significant association found may, therefore, imply a good fit between the challenges encountered by SMMEs in Botswana during the COVID-19 pandemic and the resilience strategies that they utilise in response.

It is, however, important to point out that an affirmation that a resilience strategy was effective was purely perceptual not being guided by any standardised measure(s). Regardless, it is still possible that respondents relied upon some coordinates or guideline that was important to them to conclude whether a given resilience strategy was effective or not. In view of this, it would be important, during further studies, to decipher such guidelines or coordinates then evaluate them in terms of; (i) range, (ii) similarities and differences, (iii) appropriateness, and (iv) extent to which they measure strategy effectiveness.

Resilience strategies that were considered less effective by SMMEs during the pandemic were regulatory & compliance (25%), and marketing & demand resilience strategies (26%) (Fig 1). Again, it is important to highlight that this finding is purely perceptual and that different conclusions may be reached if different approaches are used to extract data. Indeed, other studies have reported that regulatory compliance and strategies hinged upon marketing and demand can enhance crisis resilience.

It is curious that no statistically significant association was found between strategic resilience strategies, the resilience strategy category considered most effective by respondents, financial challenges (Table 2), the most encountered challenge category during COVID-19 (Table 2) as (Chaurura & Dar, An Evaluation of the Nature and Extent of Challenges Encountered by Small, Medium, and Micro Enterprises (SMMEs) in Botswana During COVID-19, 2024). This is even more baffling given the fact that the top three sub-categories of financial challenges (significant drop in sales/business, rising expenses for implementing health & safety requirements, and an inability to cover operating costs) can certainly be addressed by strategic resilience strategies through, for instance, scenario planning or implementing new business models. This scenario may emanate simply from non-use or improper use of strategic resilience strategies to address financial challenges in their various forms, rather than from actual ineffectiveness of the resilience strategy. Consequently, SMMEs need to carefully choose the resilience strategies for the identified challenges and to ensure proper use to ensure effectiveness.

Respondents were also asked to give their suggestions on how they thought their organisations and the government could have improved SMME resilience during the COVID-19 pandemic. Various suggestions were

advanced. With respect to organisational input, respondents proposed that they could have addressed three thematic areas namely (i) Organizational Preparedness and Resilience, (ii) Operations and Service Delivery, (iii) Employee Support and Well-being, and (iv) Strategic Diversification. Organisational preparedness and resilience could have been improved through contingency planning, flexibility, and adaptation. These actions are invaluable especially in the context of a crisis.

Respondents advocated for improved operations and service delivery specifically through the creation and/or adoption of alternative delivery methods. This view could have been influenced by the negative impact that COVID-19 had on transport and logistics thereby exposing its inherent weaknesses especially in crisis times. Concerning employee support and well-being, respondents felt that mental well-being was most important. They felt that organisations could have done more in terms of putting in place programmes and interventions to assist employees to cope mentally with the pandemic. Employees were going through a lot both socially and at work. Frequent lockdowns that were implemented to control the spread of the pandemic created stressful situations for people in general as they were forced to stay in proximity with other people for longer periods than they were used to. Provisions often ran out and there was a lot of uncertainty about their jobs among other things. These situations created high levels of mental distress which took a toll on employees.

Respondents also felt that their organisations could have done more with respect to strategic diversification by employing diverse strategies to mitigate or overcome the COVID-19 challenges.

On the part of government, respondents proposed a lot more improvement areas compared to organisations (Table 4). The first was financial support and subsidies which respondents felt needed to be expanded and diversified, and, additionally, to be sustained until conditions improve. It was felt that there was need to improve ease of access to financial relief by simplifying the processes of access to relief programs. In addition, they believed that there was need for better oversight in the distribution of relief funds to avoid corruption. Finally, with respect to financial support and subsidies, respondents thought that the size and impact of VAT needed reduction.

Government could have done better in the provision of equipment and facilities by supplying necessary equipment and dedicated facilities for SMMEs. SMMEs could also have been given better support for compliance by ensuring that they have what they need to meet regulatory requirements. All SMME industry sectors should have been included and supported, including tuition centers.

Policies and regulations could have been made less stringent and more inclusive to improve uptake of government initiatives. More tax concessions could have provided broader economic relief. Lastly, respondents wanted government to improve communication with SMMEs concerning available programs and resources.

6.0 Conclusion

The top three (3) resilience strategies considered effective by SMMEs in Botswana during the COVID-19 pandemic were strategic resilience strategies (69.9%), technological resilience strategies (69.1%), and financial resilience strategies (60.6%). An especially strong and statistically significant association was found between these resilience strategies and the challenges most encountered by SMMEs in Botswana during COVID-19 (financial, technological, human resource, and strategic challenges). This suggests a good fit between the challenges encountered by SMMEs in Botswana and the resilience strategies employed to resolve them.

Synthesis of the findings on challenges encountered, resilience strategies utilised, and the perceived effectiveness of these strategies point to a one-to-many or many-to-many relationship between the most used resilience strategies and the most encountered challenges among SMMEs in Botswana during COVID-19. A one-to-many or many-to-many approach may be better at ensuring efficiency in resources usage as it uses one strategy to resolve multiple challenges. Such strategies may be identified using various techniques or tools such as the Ishikawa analysis. From this study, strategic resilience strategies, technological resilience strategies, and financial resilience strategies are all good candidates for a one-to-many or many-to-many application to resolve financial, technological, human resource, and strategic challenges.

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