

# SME Sustainability in Turbulent Times of COVID-19: A Review of Literature and Future Directions

Vanita Yadav

## INTRODUCTION

COVID-19 outbreak of 2020 has changed the stance on how small and large firms do business. Importantly, the pandemic is likely to have a greater influence on the survival and sustainability of small and medium enterprises (SMEs) worldwide. The objective of this chapter is to present a comprehensive review of the state of academic research currently available on COVID-19 and its impacts on SMEs. Specifically, this chapter presents a systematic review of academic literature using the Web of Science database and includes articles published from all years till 1 June 2021. The review findings reveal a total of 36 studies published on SMEs and COVID-19 from different SME sectors and geographic regions in 2020–2021. There were 13 articles published in 2020 and 23 articles (nearing double in six months) published by 1 June 2021. This clearly illustrates a growing urgency in the publications trend.

Present Address:

V. Yadav  $(\boxtimes)$ 

Western Sydney University, Sydney, NSW, Australia e-mail: vanita.yadav@westernsydney.edu.au

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Initial bibliographic analysis of the data reveals research emerging around two broad clusters. The first cluster includes papers around the perceived impact of the pandemic on SMEs including impact on owners, employees and economy. The second cluster included papers around the risk that SMEs are facing, crisis management, resilience and survival strategies for COVID-19. As a next step, in-depth qualitative analysis of the papers was undertaken, and this further revealed six themes emerging from the data. These themes included impact of COVID-19 on SMEs, role of government or state intervention, digital strategies adopted by SMEs for business model innovation, knowledge management and digital learning, work-from-home/hybrid work arrangements and risk management. The literature review findings presented in this chapter offer important implications for research, policy and practice by integrating the state of research on this topical area. Notably, there is a need for further empirical research in this area that can offer insights on SME sustainability.

## LITERATURE REVIEW METHODOLOGY

A literature review is a valuable method of synthesising information and empirical findings of research published on a phenomenon of interest (Linnenluecke et al., 2020). The role of a literature review becomes even more relevant when the phenomenon of interest creates a very significant impact on the survival of organisations and individuals. COVID-19 outbreak has changed the way how small and large firms perceive survival, and it is likely to impact a firm's strategy for the future. There has been an increase in the number of empirical studies and publications in the past two years since the emergence of COVID-19 in 2020.

Bibliometric analysis has been widely adopted in literature search and many researchers suggest combining bibliometric analysis with the qualitative literature review to present in-depth findings (Linnenluecke et al., 2020; Vallaster et al., 2019). Therefore, this study adopts a two-step method for the literature review (Vallaster et al., 2019) to explore the emerging themes in the literature on COVID-19 and SMEs. As a first step, a quantitative approach using bibliometric analysis was adopted for the search using the Web of Science (WoS) Core Collection from all years till mid-2021. In title search was conducted in WoS database and the search query included the following search string: (SMEs AND COVID\*) OR (SME AND COVID\*) OR (Small Business\* AND COVID\*). The

Parameter	Value
Research question	What research themes in the context of COVID-19 and SMEs emerge in existing literature?
Search keywords	In title or abstract
Database	Web of Science
Type of materials	Journal papers and conference papers
Year of publication	All years till June 2021
Selection criteria	1. Preference on peer-reviewed journals (refereed or scholarly), from management field of study
	2. Search for keywords in title and abstract
	3. English language
Analysis method	Content analysis and identification of themes
Total No. of articles analysed	36

 Table 1
 Systematic literature review method protocol

inclusion criteria include language as 'English' and timespan as 'All years'. The literature review method protocol is present in Table 1.

The search findings reveal a total of 36 studies published on SMEs and COVID-19 from different SME sectors and geographic regions during 2020–2021. There were 13 articles published in 2020 and 23 articles published by 1 June 2021. This clearly illustrates a growing publications trend. The second step of the analysis included uncovering themes using thematic analysis. For this all the 36 papers were read and reread to uncover themes emerging from the literature. This stage was guided by the research question—*What research themes in the context of COVID-19 and SMEs emerge from the available literature*?

## **REVIEW FINDINGS AND RESEARCH THEMES**

Table 2 summarises the papers that were included in this study including details on the research context, type of the study and type of data used in the papers. There were 32 empirical studies on SMEs from different countries across the globe including USA (3 papers), EU countries (10 papers with 3 papers examining Poland SMEs), China (4 papers), Africa (4 papers), Pakistan (2 papers), Indonesia (2 papers), UK (1 paper), Kuwait (1 paper), Saudi Arabia (1 paper), Brazil (1 paper), Malaysia (1 paper), Mauritius (1 paper) and New Zealand (1 paper). These empirical studies adopted quantitative and qualitative approaches. There were also

Table 2	Table 2         Summary of papers reviewed	reviewed			
$\gamma_{ear}$	Journal	Authors	Research context	Type of study	Data
2021	Small Business Economics	Y. Belghitar et al. (2021) T. Zhang et al. (2021)	UK	Quantitative	Secondary datasets
		T. Zuang Ct al. (2021) Y. Liu et al. (2021) L. Pedauga et al. (2022)	China China Spain	Quantitative Quantitative	Secondary datasets Secondary datasets Secondary datasets
2021	Journal of Banking Regulation	P. F. di Corredera-Catalán Félix and A. Trujillo-Ponce (2021)	EU Spain	Quantitative	Secondary data
2021	International Journal of Disaster Risk Reduction	L. Lu et al. (2021)	China	Quantitative (main) and qualitative (supporting)	Online survey of SMEs and 10 follow-up interviews
2021	Academy of Marketing R. Sannegadu (2021) Studies Journal	R. Sannegadu (2021)	Mauritius Small island developing states	Conceptual	Based on literature and published data
2021	Knowledge and Process Management	V. B. Klein and J. L. Todesco (2021)	Brazil SMEs worldwide	Literature review	SLR (9 papers)
2021	Human Resource Development International	<ul> <li>S. Nachmias and E. Hubschmid- Vierheilig, (2021)</li> </ul>	Europe	Editorial	

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$\gamma_{ear}$	Journal	Authors	Research context	Type of study	Data
2021	World Development	N. Stoop et al. (2021)	Congo Central Africa	Quantitative parametric	Survey—Telephonic Survey of 1,000 respondents (637 households and 363
2021	Risks	Z. Grzegorz et al. (2021)	Poland	Quantitative non-parametric	Secondary data on 88 SMFs
2021	International Journal of Environmental Research and Public Health	K. Grondys et al. (2021)	Poland	Quantitative non-parametric	Survey—Online survey of 496 SMEs
2021	British Food Journal	E. Bivona and M. Cruz Switzerland (2021)	Switzerland	Qualitative	Case study of a Swiss brewery in the food and beeverage industry
2021	Entrepreneurship and Sustainability Issues	<ul> <li>É. Župerkienė et al.</li> <li>(2021)</li> </ul>	Lithuania	Quantitative	Survey
	×.	G. Strakšienė et al. (2021)	Lithuania	Mixed method	Quantitative (survey) and qualitative (focus eroun)
2021	Business and Society Review	M. Anwar and T. Clauß Pakistan (2021)	Pakistan	Quantitative	Survey
2021	Trends in Food Science & Technology	M. Ali et al. (2021)		Literature review	Narrative review
2021	Critical Perspectives on B. Fath et al. (2021) International Business	B. Fath et al. (2021)	New Zealand	Qualitative	Interviews with managers and stakeholders
					(continued)

$\gamma_{ear}$	Journal	Authors	Research context	Type of study	Data
2021	Journal of Chinese Economic and Foreign Trade Studies	R. Aftab et al. (2021)	Pakistan	Quantitative	Survey of SMEs Descriptive statistics
2021	Sustainability	Iva Gregurec et al.		Literature review	SLR (85 papers)
		Li et al. (2021)	Ghana	Quantitative PLS	Survey of 702 owners/managers in Ghanaian food
2021	Africa Journal of Management	S. Aidoo et al. (2021)	Africa	Quantitative	Survey. Multi Survey. Multi source data from managers and owners of 249 SMFs
2021	Cogent Economics & Finance	M. Ssenyonga (2021)	Indonesia	Quantitative	Backcasting methodology for future scenarios
2021	Journal of Public Affairs	A. Ogunsanya (2021)	Nigeria	Conceptual	
2020	Emerging Markets Finance & Trade	Q. She et al. (2020)	China	Quantitative	Secondary data
2020	Sustainability	G. Zimon and R. Dankiewicz (2020)	Poland	Quantitative	Secondary data
2020	Entrepreneurship and Sustainability Issues	Ahmad Al-Fadly (2020)	Kuwait	Qualitative	Phenomenology. Interviews with SME owners
2020	Organizacija	M. Kukanja et al. (2020)	Slovenia (EU)	Quantitative	Survey of 574 managers in tourism industry

Year	Journal	Authors	Research context	Type of study	Data
2020	International Journal of Engineering Business Management	García-Vidal et al. (2020)	Equador	Literature review	Review of 100 McKinsey studies
2020	The Journal of Asian Finance, Economics, and Business	Effendi et al. (2020)	Indonesia	Quantitative	Survey of 250 SME managers/ owners
2020	Journal of Accounting & Organizational Change	M. Nurunnabi (2020)	Saudi Arabia	Qualitative	reflective essay on interviews with 111 SME lead managers
2020	Journal of Economics & Management Strategy	R. Fairlie (2020)	USA	Quantitative	Secondary data-Current Population Survey (CPS) microdata files
2020	Proceedings of the National Academy of Sciences	A. Bartik et al. (2020)	NSA	Quantitative	Survey of 5,800 small businesses
2020	Environmental Hazards	Y. Lu et al. (2020)	China	Mixed method	Online questionnaire (4807 SMEs) and follow-up interviews (203 SMEs)
2020	Geografia Malaysian Journal of Society & Space	Omar et al. (2020)	Malaysia	Qualitative	Phone-based interviews with six SME owners

two mixed method studies adopting qualitative interviews and quantitative surveys. Further, there were conceptual papers including an editorial and literature reviews published.

Bibliographic analysis results are illustrated in Fig. 1 which shows mainly two broad clusters emerging in the data. The first cluster had papers grouping around COVID-19 that included papers covering impact on business, management, performance, technology, environment and economy. The second cluster had papers grouping around SMEs including papers dealing with crisis management, risk, resilience, financial impact including trade credit, sector (like tourism) and geography (like China, Poland and others).

The second step of the literature review using thematic analysis uncovered six key themes in the data, namely impact of COVID-19, role of government or states, business model innovation, hybrid work arrangements, risk management and knowledge management. These themes provide useful insights for further research in this area and can help offer practical guidance for SMEs. Key findings on the themes are discussed

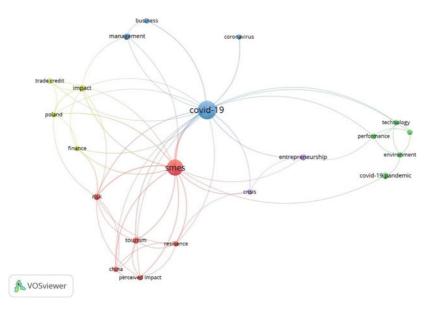


Fig. 1 Bibliometric analysis results



Fig. 2 SME sustainability in turbulent environments—conceptual framework and directions for research and practice

in the following sub-sections and illustrated in Fig. 2 as a conceptual framework for future directions.

### Impact of COVID-19 on SMEs and Their Employees

Majority of the initial studies covered numerous impacts of the pandemic outbreak on SMEs (Belghitar et al., 2021; Grondys et al., 2021; Grzegorz et al., 2021). Markedly, SMEs started to experience the negative impacts of COVID-19 disruptions within few weeks of the onset itself like reduced market demand, disrupted supply chains, workforce interruption due to employees not being able to report to work, job losses and even firm closures. For example, Ssenyonga (2021) reveals surge in unemployment and under-employment. Al-Fadly (2020) reports plight and hardships of SME business owners. SMEs were also reported as 'financially fragile' in

a pandemic situation with increased likelihood of firm closures as most SMEs are likely to run out of cash (Aftab et al., 2021; Liu et al., 2021; Lu et al., 2021).

Gregurec et al. (2021) report some industry sectors like travel, aviation, tourism, hospitality, sports, arts and entertainment being more vulnerable during the COVID-19 pandemic as compared to other industries like healthcare, IT and pharmaceuticals industry. Further, SMEs run by women and minority groups were impacted more. For instance, Fairlie (2020) reports a greater negative impact of COVID-19 for women business owners and for people from ethnic minorities in the USA. A study by Stoop et al. (2021) in Africa suggests that the impact of COVID-19 on SMEs and the economy was even higher than the previous virus outbreaks like Ebola Virus in Africa.

#### Role of Government/State Intervention

Studies from various countries suggest that SMEs did benefit from government support by the national or state governments. For instance, Belghitar et al. (2021) in their study from the UK report "without governmental mitigation schemes, 59% of UK SMEs report negative earnings and that their residual life is reduced from 164 to 139 days". They further suggest that the industries or sectors benefiting most from government support were not the industries that were impacted the most by COVID-19. This was due to the nature of the schemes that failed to distinguish between the firms requiring more support versus less support during the pandemic.

A study from China suggests government support policies should target non-state-owned enterprises because they rely on supply chains and do not have stable bank relationships as compared to the state-owned enterprises (Liu et al., 2021). Further, Liu et al. (2021) report access to credit for SMEs was severely impacted due to COVID-19 and government support through state-owned banks in China are less likely to be a complete remedy. A conceptual paper on SMEs in the context of Mauritius proposes enhancing collaborations between the government, SMEs and large private sector firms (Rajesh, 2021).

di Corredera-Catalán Félix and Trujillo-Ponce (2021) analyse the Spanish guarantee model and regional government measures for SMEs to mitigate the impact of the pandemic. They suggest that government guarantee schemes for SMEs can be used to enhance access to finance in pandemic situations and also during the post-COVID-19 era. Aftab et al. (2021) in their study on SMEs in Pakistan also recommend government assistance for SMEs like some form of financial aid to cover salaries of workers and working capital financing schemes to deal with cash shortages during the pandemic. However, they note only 42% SME businesses received any loans or grants to help small businesses in paying employee salaries. This reveals shortage of such support for small businesses in the context of developing countries like Pakistan. There is a need to further explore the role played by governments in supporting SMEs deal with the blow of COVID-19 in other developing countries like India, Bangladesh, Nepal and others.

#### Risk Management Strategy: Resilience and Survival of SMEs

The pandemic has uncovered lacunae in the risk management framework of SMEs. Review results from studies published in 2021–2020 report various risks like economic, financial and operational risks. In general, there is a lack of risk management strategies in SMEs. Grondys et al. (2021) surveyed SMEs in Poland and reported SMEs lacked experience or guidance on risk management while dealing with situations like a pandemic. They conclude risk management framework in Poland is not sufficiently developed, and many small enterprises were not aware of the forms of support available to them. In another study from Poland, Grzegorz et al. (2021) uncover inventory and supply chain management risks in 88 Polish enterprises.

Župerkienė et al. (2021) in their study on SMEs in Lithuania report only some SMEs had contingency funds and small businesses in general lacked preparedness and consistency in terms of dealing with the pandemic. As a result, the risk management strategy adopted was of 'risk avoidance' and SMEs were oriented towards mainly survival. They recommend SME owners and leaders must not only exhibit qualities like determination but also focus on future scenario planning for human resource, finance and risk management to deal with unforeseen conditions. Kukanja et al. (2020) examined crisis management practices in the tourism sector micro, small and medium enterprises in Slovenia during COVID-19. They explored four dimensions of crisis management practices, namely staff, cost control, organisational support and promotion/ marketing practices. Kukanja et al. (2020) report significant differences in use of these crisis management practices across the different types of SMEs in the tourism industry.

Ali et al. (2021) undertook a review of literature on supply chain resilience in the context of food industry SMEs and suggest resilience is critical for food security. They advise supply chain resilience in food sector SMEs can be decomposed into four phases, namely readiness, response, recovery and growth. They further state that food industry SMEs can have two types of supply chain resilience strategies: proactive and reactive. Ali et al. (2021) suggest there is a need to cultivate resilience and risk management in SMEs dealing with COVID-19.

Fath et al. (2021) explored risk and resilience in international relationships of New Zealand SME exporters during the pandemic. They uncover changes in the network relationships during COVID-19 in terms of relationship strength and opportunity outlook. Fath et al. (2021) report weak relationship ties either remained weak or broke during the pandemic. However, strong relationship ties between network partners increased resilience and network partners supported each other through development of stronger or new ties during COVID-19. They conclude that a pandemic or a crisis situation is not the appropriate time to develop and nurture weak ties in international markets because the main focus of SME export firms is on survival in such conditions. As a result, SMEs focus on their main market and on strengthening existing strong ties.

Aidoo et al. (2021) studied adaptive resilience in 249 African SMEs from Ghana during COVID-19. They focused on adaptive resilience as it entails actions taken by firms during adverse and disruptive conditions. They describe adaptive resilience as a form of perseverance and retrenchment which influences performance of SMEs. Past research reports direct links between adaptive resilience and firm performance. But Aidoo et al. (2021) find adaptive resilience indirectly influencing firm performance through strategic renewal during pandemic conditions.

## Evolving Nature of Work in SMEs

Onset of the pandemic witnessed changes in the nature of work in large as well as small and medium enterprises across the globe. Due to the mobility restrictions imposed by governments worldwide the transition to remote/work-from-home, online and hybrid work arrangements became a logical workforce disruption for survival. Župerkienė et al. (2021) recognise some SMEs in Lithuania were able to transition to the virtual space with their employees working remotely. Nachmias and Hubschmid-Vierheilig (2021) report European SMEs being 'forced to change' by moving their work and operations to remote environments. Zhang et al. (2021) examined the relationship between work-from-home and SME performance during COVID-19 in USA. They find small businesses performing better overall with industry variations in American states that had higher work-from-home rates. They further report increase in workfrom-home rates even after the local mobility and travel restrictions were uplifted.

Strakšienė et al. (2021) report most SMEs in western Lithuania were successful in overcoming technical difficulties while transitioning their work online during the pandemic. They find many workers indicated their preference to work remotely in future also and some expressed their interest in hybrid work arrangements like mixing remote work and work-from-home. Strakšienė et al. (2021) report problems related to work-from-home fell under two groups. The first group of problems were around IT infrastructure which could occur due to equipment shortages, disrupted internet services and increased costs. The second group of problems were around human resources management factors like employee digital communication skills, employee attitude or emotion while working from remote locations and inadequate methods of organising/coordinating distributed remote work.

### Business Model Innovation for SME Sustainability

Bivona and Cruz (2021) explored business model innovation in the Swiss food and beverage industry. They suggest three processes for implementing business model innovation in SMEs that can help deal with the COVID-19 crisis, namely the ability to leverage available resources, the ability to transform existing resources into new innovative products and the ability to mobilise network resources. They recommend collaboration and knowledge sharing amongst business partners as an essential criterion for business model innovation during a crisis like the COVID-19 pandemic. Strakšienė et al. (2021) suggest investment in technology and IT tools is likely to help SMEs enhance the value proposition of their business model and offer innovative products.

Gregurec et al. (2021) examined the impact of COVID-19 on sustainable business models in service sector SMEs. They report agility being critical for SMEs and suggest adaption of SME business models by incorporating digital technologies to ensure continuity of service. They recommend reliance on digital technologies as a transformation driver for SME business models. For example, SMEs shifted towards social media platforms and mobile technologies during the pandemic for the *communication channel* used to reach customers and the way SMEs *manage customer relationships* during the pandemic using social media and mobile technologies. This transformed two (channels and customer relationships) out of the nine building blocks in a firm's business model canvas (Osterwalder & Pigneur, 2010). There could be possibilities of further innovation in the remaining building blocks for SME business model innovation.

## Knowledge Management and Digital Learning in SMEs

Nachmias and Hubschmid-Vierheilig (2021) report European SMEs adopted digital learning as a tool to afford normality in their business operations. They provide examples of online activities like working from home, use of digital communication tools, use of shared online work folders on the cloud and undertaking online learning remotely. Nachmias and Hubschmid-Vierheilig (2021) recommend using the knowledge gained during the pandemic to plan learning strategies for SME businesses of future. They emphasise the role of leadership in providing support for digital learning and employee wellbeing in SMEs.

Klein and Todesco (2021) reviewed the literature on SME response to COVID-19 pandemic and proposed knowledge management as a strategy to build organisational resilience. They submit competitive advantage through knowledge creation begins at the individual level and then expands through interactions at community levels like the department, division and organisational levels. They recommend the need for knowledge management using digital technologies to learn, adapt, monitor and anticipate new disruptions or challenges.

## DISCUSSION AND CONCLUSION

This chapter presented insights from a systematic review of academic literature using the Web of Science database including articles published from all years till 1 June 2021. The review results reveal studies examining the impact of COVID-19 on SMEs and their coping strategies have more than doubled in number from 2020 to 2021. This clearly exemplifies a growing urgency of research in this area. Majority of the studies have examined varying impact of COVID-19 pandemic on SME businesses and how they survived the crisis. Going forward, there is a need to change the focus from examining impact to exploring strategies and guidelines for SME long-term substantiality post-pandemic. This chapter offers a framework of future directions to extend the body of knowledge in the area of sustainable SME strategies for turbulent environments like the pandemic. A narrative summary of findings grouped around key themes emerging from the review is presented in the chapter, and the conceptual model is illustrated in Fig. 2.

Results reveal varied attempts in identifying contingency factors in the context of SMEs like examining exporter's network relationships during COVID-19 (Fath et al., 2021). Future research can explore SME network relationships for building resilience in business relationships (Fath et al., 2021). Further, Aidoo et al. (2021) explored the indirect influence of adaptive resilience on firm performance through strategic renewal during COVID-19 in African manufacturing sector SMEs. They suggest the need to examine role played by strategic renewal for resilience in disruptive situations to enhance our understanding of risk and resilience.

Issues and challenges of distance or remote work are also underresearched (Strakšienė et al., 2021). Moreover, the concept requires development of a homogenous definition as its interpretations are varied. Zhang et al. (2021) posit remote working arrangements like work-fromhome as a Schumpeterian '*creative destruction*' force which is likely to leapfrog remote work adoption and influence evolution of hybrid workplaces of the future SMEs. Nachmias and Hubschmid-Vierheilig (2021) suggest COVID-19 pandemic has induced a change in perception on how SME businesses perceive learning. They recommend introduction of 'human-centric' digital learning strategies for small businesses of future. Future studies are needed to develop a taxonomy of remote work and its implications for SME businesses.

To conclude, results reveal studies advocating risk management, digital adoption, knowledge management and financial strategies for SME survival and resilience. For example, having 'precautionary savings' especially in the case of SMEs for black swan events including pandemics can be potential risk management strategy. Some studies report positive influence of technology adoption in dealing with the pandemic crises. For example, a study from Indonesia reported the use of social media for digital marketing their products and connecting with customers during the pandemic lockdown. Studies from Poland and China explored financial strategies like moderate to highly conservative trade credits that some SMEs adopted during COVID-19. Another study reported having an international market base like 'being global' helped in firm survival and performance. Many studies emphasise the role of government support as an enabler in dealing with turbulent business environments. There is a need to further examine empirically what works in pandemic situations using scenarios and simulations for future preparedness.

There is also a need for further research on business model transformations using technologies like social media and mobile technologies that many SMEs adopted to tide through the crisis (Gregurec et al., 2021). Bivona and Cruz (2021) posit the ability to use internal resources, the ability to transform existing resources into innovative products and the critical ability to mobilise collaborations with network partners as the key to business model innovation in SMEs. They also highlight the need for further research to enhance our understanding of business model innovation and its relationship with SME performance during a turbulent environment.

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