

REVIEW

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# Mitigating the Impact of COVID-19 on SMEs Through Government Policy Intervention: A Systematic Literature Review and Bibliometric Analysis

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## Abstract

This paper aims to investigate government policy intervention for mitigating the impacts of COVID-19 on small and medium enterprises (SMEs). This paper has utilized a methodology comprising of bibliometrics, network, and content analyses on 831 documents extracted from the Scopus database to explore the extant literature on this domain. A systematic literature review has also been performed to propose the government policy intervention during the crisis framework. The analysis and review discerned that government policy interventions yielding the greatest success display a pronounced industry focus, regardless of a country's economic context. Notably efficacious interventions encompass government support for market access and promotion, regulatory flexibility, wage subsidies, supply chain bolstering, sustainable long-term support, training and development, digitization aid, and industry-specific access to credit and capital. Collaborative efforts between governments and financial institutions also proved instrumental in expediting SME recovery. Furthermore, initiatives like knowledge-sharing, capacity-building, digitalization of SMEs, and crisis management training played pivotal roles in ensuring SME survival during the COVID-19 pandemic. This paper has also provided guidelines for future research direction.

**Keywords** Government intervention for SMEs, Effective Government Policy Framework for Crisis Management, Pandemic survival and recovery for SMEs, COVID-19 and SME policies, Government support for SMEs, Bibliometric, Systematic literature review

## Introduction

Small and Medium Enterprises (SMEs), being one of the central focuses of governments around the world [1, 2], mainly due to their positive impact on employment creation [3], innovation [4], regional development [5], Gross Domestic Product (GDP) [6], and overall economic

sustainability [7] operate in a large competitive and global environment, which make them prone to contingencies as well as externalities [8]. According to Najib et al. [2], Chen et al. [9] Government support and interventions have already been proven as an effective means for shaping the environment for the SMEs that nurture and foster the growth and contribution of this particular type of business. Nevertheless, unprecedented situations, such as the COVID-19 pandemic, can evidently result in the collapse of different business sectors and industries, including SMEs [10–12], if not the whole economy. The pandemic substantiates that crisis situations need unique prevention and recovery mechanisms from the respective

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governments, without which the severity of the impact can be increased and recovery, prolonged [1, 13].

According to Kowo et al. [5], Mujahid, Begam [6], despite recent breakthroughs, such as Artificial Intelligence and Robotics, in the arena of industrial technologies and production, as well as conglomeration of large business corporations, the SMEs remained the lifeblood of all sorts of economies (e.g., developed and emerging). This significant contribution to the economies justifies the growing number of scholarly publications on SMEs and other closely associated domains. Notwithstanding the presence of a large number of scientific evidence and recommendations, the hardship of these businesses is apparent worldwide without regard to any specific context and eventual impact [14]. Thus, attributing to this contribution and the multiplicity of the SMEs' success determinants, further scholarly endeavors for understanding SMEs and their relationship dynamics in the environments in which they operate is tenable.

When unprecedented crisis events are considered, the feebleness of government policies and existing economic mechanisms, has been proven by recent studies focused on the COVID-19 pandemic, suggesting a significant research gap in the area of crisis management for businesses [9, 15]. The same gap exists when only the SMEs are contemplated [16]. Again, despite the severe impact of the pandemic on the SMEs of smaller economies, very few studies focused on the role of government policies on their survival and recovery [17]. Though various aspects, such as the impact of government support, subsidies, and digitalization on SMEs, have been studied [18], clearly insignificant and insufficient research attention was provided on SMEs management during the crisis phenomenon Chundakkadan, Sasidharan [1] that led to thousands of closures and bankruptcies globally [12, 14, 19, 20]. Deterioratingly, "the role of governments during the unprecedented crisis situations for the businesses" rarely attracted scholarly attention [1, 21], forcing governments around the world to experiment with different strategies for mitigating the impacts of and convalescing from the COVID-19 pandemic, ultimately prolonging the adversities of the SMEs and the economy in general [2, 22]. As the effect of the pandemic started to fade out slowly, the scientific community now has evidence regarding the effectiveness of different government interventions taken during the pandemic for SMEs [9, 13, 16], which allowed and motivated the researchers to ask the following question. *What is the most effective systematic way for governments to facilitate or sustain SMEs' existence, operation, and resilience during a pandemic-like crisis?* The researchers of the present study endeavored to answer this question, which holds the potential to minimize, if not prevent, the negative effect of events

like the COVID-19 pandemic for SMEs. by utilizing Systematic Literature Review (SLR) and Bibliometric analysis techniques.

The objective of the present study includes identifying key themes and patterns in the publications made on government policy interventions for SMEs during and after the COVID-19 pandemic, targeted at SMEs in-crisis survival and recovery, to develop a comprehensive framework or guidelines to enrich the governmental readiness in managing future pandemic-like crisis. Therefore, the contribution of this research is manifold. First, this research, by revealing the patterns of government policies taken across the world amidst the pandemic, will enable more informed policy-making, targeted interventions, and proactive national- and international-level strategies. Developing economies and least-developed countries will be able to design responses for future pandemic crises that may reduce the vulnerability of their SME sectors. Second, this enhanced understanding of the government policy dynamics in crisis management will expand the knowledge horizon and stimulate future research. Again, as very few scientific studies have been conducted in this area, this research will act as a foundation, with compiled evidence from diverse environments, for comprehending SMEs' performance and sustainability antecedents during crisis situations. Third, the proposed framework will increase governments' readiness and expedite the recovery of the SMEs. Lastly, this cross-disciplinary research will provide valuable insight into different domains, including economics, policy, and crisis management, which will again enhance global economic stability through SMEs' strives. However, a limited number of keywords have been utilized to gather only the research articles published in the area, indicating a major limitation of this research. Future scholarly works should focus on a wider selection of documents, as well as keywords, to further expand the insight accumulated by the researchers of the present study.

The structure of this paper is as follows. Succeeding this introductory chapter, the second chapter presents the literature review conducted for this research. With the third chapter transpiring the adopted methodologies, the researchers presented the findings in chapter four. In chapter five, the findings have been discussed in light of existing literature. The sixth chapter summarized the whole research. This paper concluded with a brief guideline or indication of the possible implications of the findings offered by the present study.

### Literature review

The unprecedented advent of the COVID-19 pandemic changed the global landscape, affecting millions of lives and worldwide economic stability [11, 13, 23]. According

to Delardas et al. [24], the impact of the pandemic is multidimensional, but businesses globally have suffered the most profound and noticeable brunt. Evidence indicates that the pandemic both directly and indirectly affected the global supply chain [4], demand for products and services [25], businesses' operational procedures [20], and customers' habits [25]. Among the business classes or categories, the SMEs were agonized the most, due to their lack of agility, capacity, resiliency, and adaptability [12, 21, 22]. The abruptness of the challenges imposed by the pandemic combined with the vulnerability of the SMEs, forced the governments to intervene and policize in favor of this type of businesses [9, 16, 26]. The acute contributions of SMEs to an economy strained the governments around the world to accentuate their survival and recovery [16, 27]. Apparently, government support played a pivotal role in safeguarding SMEs, as several studies have explored the efficacy of different policies and governmental strategies taken during and after the COVID-19 pandemic for SMEs, especially for their recovery, digital transformation, and resilience [9, 16]. For instance, Chundakkadan et al. [28], identified and observed the monetary support injected by the governments. Other studies, such as the scholarly endeavors by Supari, Anton [23], Takeda et al. [29], revealed governments' intention to induce digitalization of SMEs. However, none of the studies recommend a single best-fit policy intervention for SMEs (see Table 3). The diversity in the needs of SMEs, industries, and customers implies extreme contextualization of governmental strategies [15, 16]. Regardless, due the unprecedented nature of the pandemic and negligible scientific interest on crisis management, a noticeable portion of the governments failed to safeguard SMEs' existence, sustainability, and competitive resurgence. In other words, the existing literature failed to support governments in making informed decisions and effective policy [14, 21].

## Methodology

As already mentioned, the researchers utilized both qualitative and quantitative analysis techniques to identify key themes, publication trends, and emerging patterns, following the guidelines provided by Linnenluecke et al. [30]. The literature search was conducted on the Scopus Database, with the search query presented in Table 1. The search was performed on 31st July 2023, which extracted a total of 831 journal articles published in English (Fig. 1). These documents were then quantitatively analyzed using bibliometric analysis techniques coupled with network and co-occurrence analysis. After identifying the relevancy and most impactful documents in terms of local and global citation, the researchers conducted a systematic literature analysis on 23 documents to identify the discussed policy interventions and recommendations, as well as the applied methodologies of the selected papers. The qualitative analysis technique, SLR, lastly, was used to summarize and report the findings.

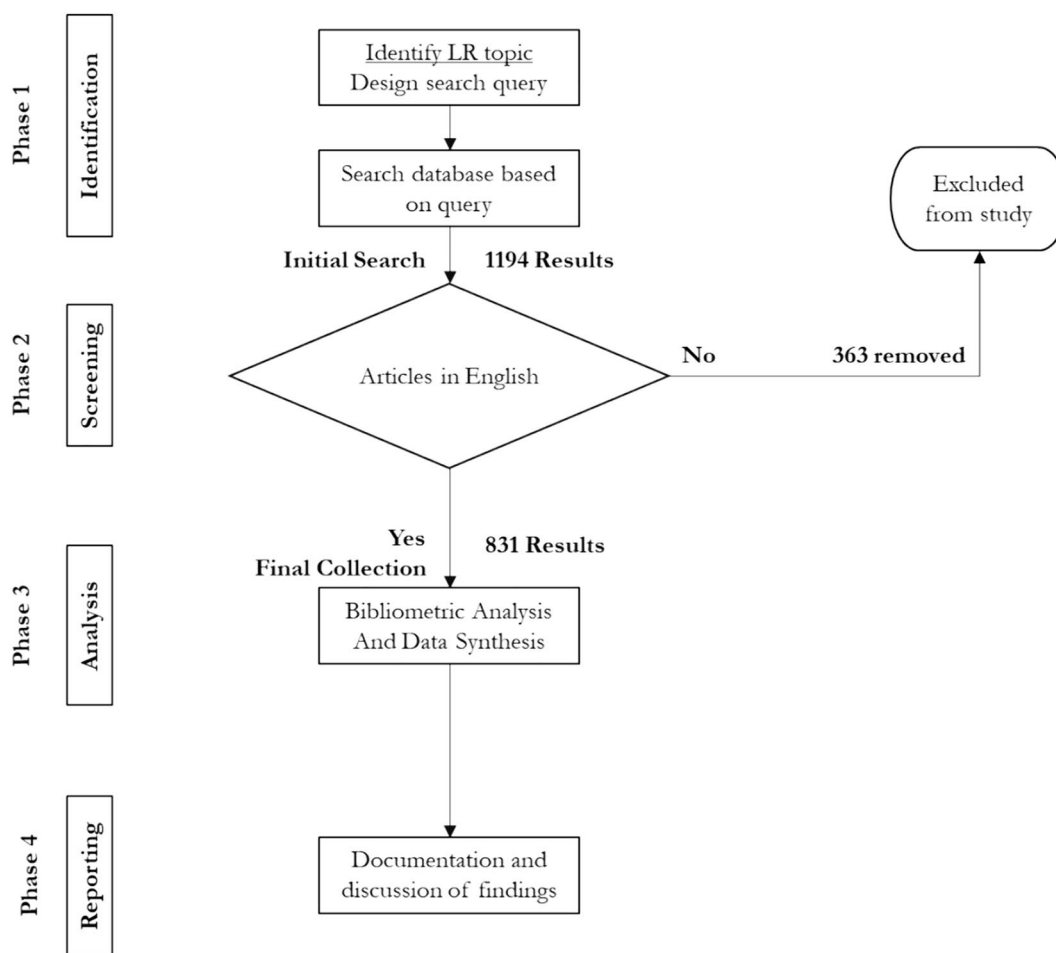
## Analysis and findings

### Summary statistics

As already mentioned, the literature search conducted for this study revealed a total of 831 scholarly works. The analysis on the bibliographic information of these documents revealed the contribution of 418 different sources and 2530 individual authors. Table 2 presents the overview of the data. From 2020 to 2023, the topic celebrated a 108.01% growth rate, which is significantly higher than other comparable topics [31–33]. Among the documents, only 77 are single-authored. The individual who contributed to this topic used 1398 different keywords, indicating diversities between the works. With an average citation of 7.303 the documents published on this topic manifest a wide array of implications. Lastly, the international co-authorship percentage indicates a global collaboration tendency.

**Table 1** Search Query

Steps/process	Description
Domain searched	Economics Business Government and Policy
Search query employed	ALL ("Government policy" OR "government support" OR "policy intervention" AND "Covid-19" OR "pandemic" OR "coronavirus" AND "SME" OR "small business" OR "small firm" OR "small and medium enterprise" OR "medium enterprise") AND (LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2022) OR LIMIT-TO (PUBYEAR, 2023)) AND (LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "ECON") OR LIMIT-TO (SUBJAREA, "SOCI")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (PUBSTAGE, "final")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (LANGUAGE, "English"))
Year range	2020 to 2023



**Fig. 1** Number of articles selected

**Performance analysis**

According to Ellegaard, Wallin [34], the performance of any scholarly area can be measured based on the annual publication and citation trends. Figure 2 presents both of these trends. As the figure indicates, the annual publication number rose sharply every year (from 01st January 2020 to 31st July 2023). The emergence of the COVID-19 pandemic motivated authors around the world to study the role of government interventions since 2020. The annual publication number grew rapidly. For 2023, till 31st July, a total of 324 scientific productions were made in this area. Despite the progressive escalation in the quantum of publications recorded on an annual basis, a conspicuous trend emerges in the form of a discernible decrement in the average annual citation count. This ostensibly counter-intuitive phenomenon finds its rationale in the mitigated impact of the COVID-19 pandemic, which has inevitably cast a pall over the scholarly discourse in different domains.

**Co-occurrence analysis**

The bibliometric analysis allowed the researchers to identify key themes from the most frequently employed keywords. Figure 3 presents the results, which delineate a total of six themes. The first theme, colored in green, suggests that a set of scholarly attention has been devoted to study the crisis situation (e.g., the impact of the pandemic, the performance of the businesses, and unemployment issues). The second theme, colored in yellow, suggests that a noticeable number of studies have been conducted in the area to investigate the government policy measures for managing and mitigating the COVID-19 pandemic crisis. Again, the theme, colored in purple, insinuates that during and after the pandemic, a number of scholars have focused on investigating the digital transformation of SMEs, suggesting a possible motivation of the government and the SMEs to promote and incorporate digitalization for increasing resiliency against the pandemic situation. Furthermore, the analysis revealed a theme concentrating on government support for the

**Table 2** Overview of the Data

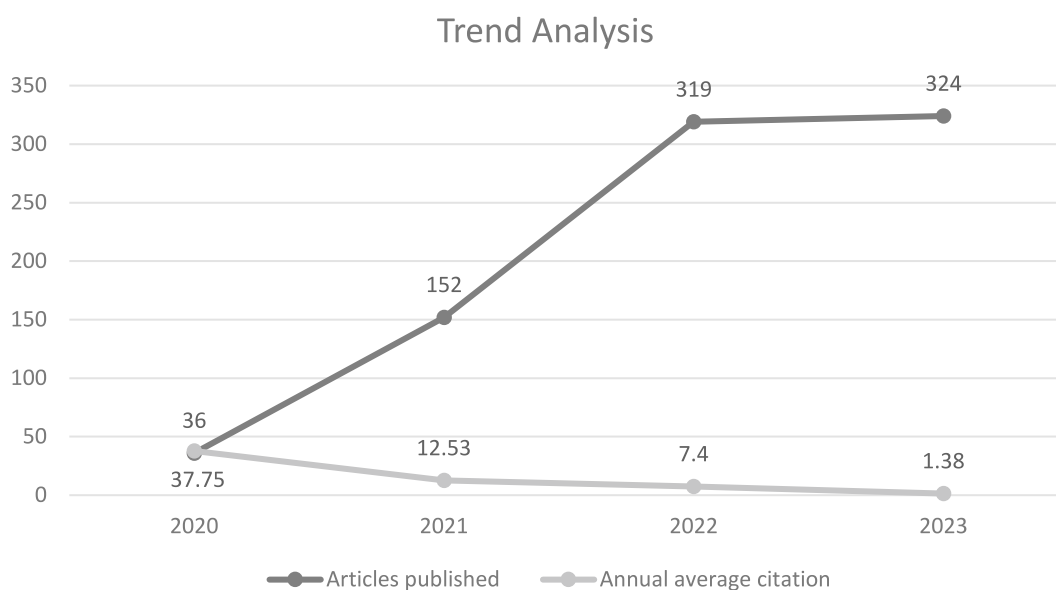
Description	Results
<i>Main information about data</i>	
Timespan	2020:2023
Sources (Journals, Books, etc.)	418
Documents	831
Annual Growth Rate %	108.01
Document Average Age	0.88
Average citations per doc	7.303
References	64,692
<i>Document contents</i>	
Keywords plus (ID)	1398
Author’s keywords (DE)	2682
<i>Authors</i>	
Authors	2530
Authors of single-authored docs	77
<i>Authors collaboration</i>	
Single-authored docs	78
Co-authors per Doc	3.38
International co-authorships %	35.74
<i>Document types</i>	
article	831

sustainable development of SMEs. This theme, colored in red, implies that governments around the world have also emphasized the sustainable development of SMEs along with their recovery. Moreover, the analysis discovered a group of studies that discussed and unearthed the strategies taken by SMEs during the pandemic time. The

thematic map also presents the scholarly interest in studying the financial endowments of SMEs and the impact of subsidies on them. This co-occurrence analysis manifests that, considering the diversity of focus within the selected documents, an SLR for extracting effective government interventions targeted at SMEs’ recovery and resiliency is quite possible.

**Key strategies**

The SLR conducted for this research revealed different strategies taken by the governments to facilitate SMEs’ recovery and post-pandemic development that have been studied rigorously through scientific research endeavors. The review of the literature and other secondary sources indicate the distinctiveness among the strategies taken by the governments [1, 9, 28]. For example, the United States implemented the “Paycheck Protection Program” for workforce continuity [26], the UK introduced the “Coronavirus Business Interruption Loan Scheme” to aid disrupted businesses [35], and Germany initiated the “KfW Special Programme” for financial solutions [25]. Australia’s “JobKeeper Payment” aimed at job retention [13], while South Korea’s “Emergency Management Fund” and Japan’s “Subsidy Program for Sustaining Businesses” focused on crisis management [36, 37]. The researchers also identified interventions implemented by the developing countries. Countries such as, India launched the “Emergency Credit Line Guarantee Scheme” for operational resilience [38], Brazil’s “Pronampe” addressed micro and small enterprises [39], and South Africa established the “COVID-19 SME Relief Fund” as stated by



**Fig. 2** Performance analysis of the area



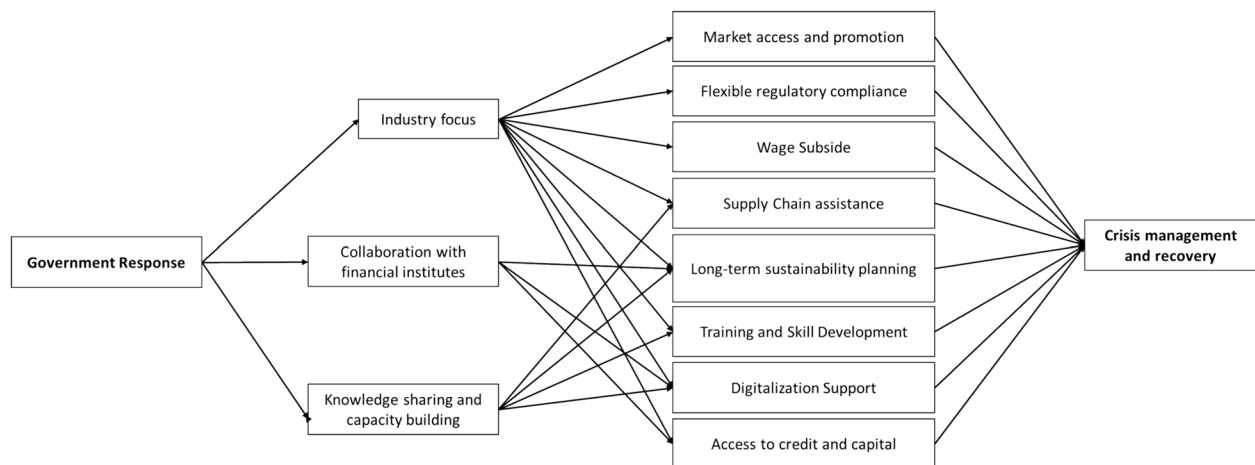
**Table 3** SLR presenting key findings and implications

Authors	Location	Policy or support or findings	Types of intervention	Policy recommendation
Burhan et al. [42]	Pakistan	Government provided financial assistance; Industry faced challenges due to lockdowns and decreased tourism	Financial assistance, policy influence	Enhance financial assistance, develop flexible policies
Janzen, Radulescu [15]	Southern and Eastern Europe	Government policies played a role in supporting small firms, especially in the hospitality sector	Government interventions supporting businesses	Tailor policies for small firms and the hospitality sector
Takeda et al. [29]	South, Southeast, and Northeast Asia	Government support had a significant impact on employment, sales, and cash flow	Government financial support	Continue and adapt government support for SMEs
Juergensen et al. [21]	Europe	Government interventions addressed challenges faced by different types of SMEs	Government support	Tailor support based on SME characteristics
Agarwal et al. [38]	India	Government support facilitated innovation and adaptation in the handicraft sector	Government interventions supporting innovation and adaptation	Foster innovation and adaptability through government policies
Iwuoha et al. [43]	Nigeria	Government interventions had shortcomings in effectively aiding small businesses	Government stimulus packages, some support provided	Enhance effectiveness of stimulus packages
Chundakkadan et al. [28]	International (34 countries)	Government support influenced SME adjustments, layoffs, and strategic decisions	Government financial support programs	Align government support with SME strategies
Estiri et al. [44]	N/A	Government interventions impacted various dimensions of SME resilience	Government support, multifaceted interventions	Implement holistic government interventions
Aničić, Paunović [22]	Serbia	Impact of government actions varied based on SME characteristics and pandemic effects	Government support measures	Tailor government support to SME needs
Chit et al. [11]	Europe	Government support policies and management experience played a pivotal role in SME success	Government support policies, management experience	Strengthen government support and management capabilities
Isabelle et al. [45]	Canada	Effective government policies tailored to SME challenges	Effective government policy responses	Develop tailored government policies
Pu et al. [46]	Bangladesh	Innovative finance, technology, and government support ensured SME sustainability	Innovative finance, technological adaptation, government support	Enhance government support and innovative financing options
Endrődi-Kovács, Stukovszky [47]	Hungary	Government assistance facilitated digital transformation and survival	Government support enabling digital transformation	Continue government support for digitalization
Mahmoud et al. [48]	Nigeria	Government interventions moderated SME responses to COVID-19 disruption	Government support, firm orientation	Implement supportive government policies aligned with firm orientation
Goodhart et al. [49]	N/A	Government balanced stabilization measures with long-term efficiency considerations	Government policy responses to support SMEs	Maintain balance between short-term stabilization and long-term efficiency

**Table 3** (continued)

Authors	Location	Policy or support or findings	Types of intervention	Policy recommendation
Fubah, Moos [12]	South Africa	SMEs employed positive mindset, price reductions, and digitalization strategies with government influence	Positive mindset, reduced prices, digitalization, government support	Continue government support, promote positive mindset, and digitalization
Belghitar et al. [27]	UK	Government interventions positively influenced cash flow, adjustments, and resilience	Government relief measures	Sustain and adapt government relief measures
Calabrese et al. [19]	UK	Government-backed debt funds provided support to SMEs during the pandemic	Government-backed debt funds	Continue government-backed debt fund initiatives
Wang et al. [16]	N/A	Theoretical model presented for government support through interest rate subsidies and loan maturity extensions	Interest rate subsidies, loan maturity extensions	Establish policy-oriented banks, refine risk underwriting
Supari, Anton [23]	Indonesia	Government interventions like new loans, credit restructuring, and interest subsidies enhanced MSME resilience	New loans, credit restructuring, interest subsidies	Offer multiple interventions, assist MSMEs in going digital
Razumovskaia et al. [50]	Russia	Government policies' effectiveness varied in supporting SMEs' economic development	Effectiveness of support instruments, impact on SMEs	Continuously monitor policy effectiveness, enhance impact assessment
Chen et al. [10]	China	Government relief policies like payment deferrals and exemptions impacted SMEs' cash flows and operational recovery	Payment deferrals, exemptions, digitalization	Optimize relief policies and encourage digitalization
Najib et al. [2]	Indonesia	Government support positively impacted business survival through marketing and process innovation	Government support and innovation	Strengthen marketing and process innovation through government support





**Fig. 4** GPIC framework

analysis indicated six different research focuses. The areas included research on financial endowments and subsidies, impact of the crisis, government policy measures for crisis management, strategies taken by SMEs and governments for digital transformation during the pandemic, government support for sustainable development, strategic approaches employed by the SMEs to initiate recovery from the damages caused by the COVID-19. The SLR allowed the researchers to specify the exact policies formulated by the governments around the world. The SLR further revealed that industry-focused approaches were the most successful ones around the world. Again, it is evident that without continuous development and capacity building, SMEs will not be able to adapt and respond to the changing global environment and future crisis. Attributing to its novelty, the findings of this research will be valuable for governments, businesses, and scholars globally.

### Practical and theoretical implications

This study's foremost contribution lies in its cross-disciplinary approach, offering valuable insights into economics, policy, and crisis management. Hence, it will assist global economic stability through the resilience of SMEs. Most significantly, this research provides valuable directions for the governments of the smaller nations and developing economies to formulate effective and proven policies for the SMEs, that are the most vulnerable entities, in future nation-wide or international crisis. Moreover, the research identifies key themes and patterns in government policy interventions for SMEs during and after the COVID-19 pandemic, aiming to develop a comprehensive framework to enhance governmental preparedness for future pandemic-like crises. Unveiling global policy dynamics empowers informed decision-making,

enabling targeted interventions and strategies. It also addresses knowledge gaps, establishing a foundation for understanding SME performance during crises. Ultimately, the proposed framework accelerates government readiness and expedites SME recovery.

### Limitations and future research avenue

This research employed limited keywords and only one database to collect the scientific publications. Besides, only the articles published in English were considered for the analysis. Future scholars should diversify the selection to expand the horizon that has been explored by this study.

#### Abbreviations

GDP	Gross domestic product
GPIC	Government policy intervention during the crisis
SLR	Systematic literature review
SME	Small and medium enterprises

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None.

#### Author contributions

MN Sakib conceptualized this research; extracted & analyzed the data. MM Rahman drafted the manuscript. MN Sakib formatted, edited, and proofread the document. Additionally, MN Sakib supervised the whole research project.

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#### Availability of data and materials

The data utilized in this research are extracted from the Scopus Database. Hence, the data is available to everyone who has access to the Scopus Database.

#### Declarations

#### Ethics approval and consent to participate

Not applicable.

**Consent for publication**

Not applicable.

**Competing interests**

The authors declare that they have no competing interests.

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**References**

- Chundakkadan R, Sasidharan S (2023) The role of government support on e-commerce and firm innovation during pandemic crisis. *Econ Anal Policy* 78:904–913. <https://doi.org/10.1016/j.eap.2023.04.021>
- Najib M, Rahman AAA, Fahma F (2021) Business survival of small and medium-sized restaurants through a crisis: the role of government support and innovation. *Sustainability* 13(19):10535. <https://doi.org/10.3390/su131910535>
- Abisuga-Oyekunle OA, Patra SK, Muchie M (2020) SMEs in sustainable development: their role in poverty reduction and employment generation in sub-Saharan Africa. *Afr J Sci Technol Innov Dev* 12(4):405–419
- Xie X, Han Y, Anderson A, Ribeiro-Navarrete S (2022) Digital platforms and SMEs' business model innovation: exploring the mediating mechanisms of capability reconfiguration. *Int J Inf Manage* 65:102513
- Kowo SA, Adenuga OAO, Sabitu OO (2019) The role of SMEs development on poverty alleviation in Nigeria. *Insights Reg Dev* 1(3):214–226
- Mujahid N, Begam A (2019) SMEs output and GDP growth: a dynamic perspective. *J Asian Bus Strategy* 9(1):53–65
- Garrido-Prada P, Lenihan H, Doran J, Rammer C, Perez-Alaniz M (2021) Driving the circular economy through public environmental and energy R&D: evidence from SMEs in the European union. *Ecol Econ* 182:106884
- Saad MH, Hagelaar G, van der Velde G, Omta S (2021) Conceptualization of SMEs' business resilience: a systematic literature review. *Cogent Bus Manag* 8(1):1938347
- Chen K, Liu X, Li Y, Linderman K (2023) Government support and cross-border innovation: the effect of China's textquotesingles innovative city policy on Chinese firms'textquotesingle patenting in the United States. *Prod Oper Manag* 32(6):1793–1811. <https://doi.org/10.1111/poms.13941>
- Chen J, Cheng Z, Gong RK, Li J (2022) Riding out the COVID-19 storm: How government policies affect SMEs in China. *China Econ Rev* 75:101831. <https://doi.org/10.1016/j.chieco.2022.101831>
- Chit MM, Croucher R, Rizov M (2022) Surviving the COVID-19 pandemic: the antecedents of success among European SMEs. *Eur Manag Rev* 20(1):113–127. <https://doi.org/10.1111/emre.12525>
- Fubah CN, Moos M (2022) Exploring COVID-19 challenges and coping mechanisms for SMEs in the South African entrepreneurial ecosystem. *Sustainability* 14(4):1944. <https://doi.org/10.3390/su14041944>
- Watson T, Buckingham P (2023) Australian government COVID-19 business supports. *Aust Econ Rev* 56(1):124–140
- Singh S, Pruthi N (2023) SME survival during the COVID-19 pandemic: an outlook of threats and digital transformation. Strengthening SME performance through social media adoption and usage, pp. 201–212. IGI Global.
- Janzen B, Radulescu D (2022) Effects of COVID-19 related government response stringency and support policies: evidence from European firms. *Econ Anal Policy* 76:129–145. <https://doi.org/10.1016/j.eap.2022.07.013>
- Wang SS, Goh JR, Sornette D, Wang H, Yang EY (2021) Government support for SMEs in response to COVID-19: theoretical model using Wang transform. *China Finance Rev Int* 11(3):406–433. <https://doi.org/10.1108/cfri-05-2021-0088>
- Aslam R, Rehman S, Nasir A (2023) Investigating the relationship between government support and SMEs' sustainability through financial and green lenses. *J Bus Ind Mark* 38(11):2379–2389
- Elhusseiny HM, Crispim J (2022) SMEs, barriers and opportunities on adopting industry 4.0: a review. *Procedia Comput Sci* 196:864–871
- Calabrese R, Cowling M, Liu W (2021) Understanding the dynamics of UK Covid-19 SME financing. *Br J Manag* 33(2):657–677. <https://doi.org/10.1111/1467-8551.12576>
- Ufua DE, Olujobi OJ, Tahir H, Al-Faryan MAS, Matthew OA, Osabuohien E (2022) Lean entrepreneurship and SME practice in a post COVID-19 pandemic era: a conceptual discourse from Nigeria. *Glob J Flex Syst Manag* 23(3):331–344. <https://doi.org/10.1007/s40171-022-00304-1>
- Juergensen J, Guimón J, Narula R (2020) European SMEs amidst the COVID-19 crisis: assessing impact and policy responses. *J Ind Bus Econ* 47(3):499–510. <https://doi.org/10.1007/s40812-020-00169-4>
- Aničić Z, Paunović B (2022) The Covid-19 crisis and small and medium-sized enterprises (SMEs) in Serbia: responsive strategies and significance of the government measures. *JEEMS J East Eur Manag Stud* 27(3):404–433
- Supari S, Anton H (2022) The impact of the national economic recovery program and digitalization on MSME resilience during the COVID-19 pandemic: a case study of bank rakyat indonesia. *Economies* 10(7):160. <https://doi.org/10.3390/economies10070160>
- Delardas O, Kechagias KS, Pontikos PN, Giannos P (2022) Socio-economic impacts and challenges of the coronavirus pandemic (COVID-19): an updated review. *Sustainability* 14(15):9699
- Remeikienė R, Gasparėnienė L, Fedajev A, Arsić S, Noga G (2023) Challenges of entrepreneurship development in Europe in the light of the pandemic crisis. *J Bus Econ Manag* 24(2):354–367
- Wang Q, Kang W (2023) Small businesses and government assistance during COVID-19: evidence from the paycheck protection program in the US. *Environ Plan A Econ Space* 55:2147
- Belghitar Y, Moro A, Radić N (2021) When the rainy day is the worst hurricane ever: the effects of governmental policies on SMEs during COVID-19. *Small Bus Econ* 58(2):943–961. <https://doi.org/10.1007/s11187-021-00510-8>
- Chundakkadan R, Natarajan RR, Sasidharan S (2022) Small firms amidst COVID-19: financial constraints and role of government support. *Econ Notes*. <https://doi.org/10.1111/ecno.12206>
- Takeda A, Truong HT, Sonobe T (2022) The impacts of the COVID-19 pandemic on micro, small, and medium enterprises in Asia and their digitalization responses. *J Asian Econ* 82:101533. <https://doi.org/10.1016/j.asieco.2022.101533>
- Linnenluecke MK, Marrone M, Singh AK (2020) Conducting systematic literature reviews and bibliometric analyses. *Aust J Manag* 45(2):175–194
- Bakır M, Özdemir E, Akan Ş, Atalık Ö (2022) A bibliometric analysis of airport service quality. *J Air Transp Manag* 104:102273
- Khudhair HY, Jusoh DAB, F Abbas A, Mardani A, Nor KM (2020) A review and bibliometric analysis of service quality and customer satisfaction by using Scopus database. *Int J Manag*, 11(8).
- Sahabuddin M, Sakib MN, Rahman MM, Jibir A, Fahlevi M, Aljuaid M et al (2023) The evolution of fintech in scientific research: a bibliometric analysis. *Sustainability* 15(9):7176
- Ellegaard O, Wallin JA (2015) The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics* 105:1809–1831
- Cowling M, Nightingale P, Wilson N (2023) COVID-19 lending support and regional levelling up: evidence from UK loan guarantee schemes. *Reg Stud* 57:1–16
- Lee S, Yoon C (2022) Factors of the adoption of O2O Service platforms: evidence from small businesses in Korea. *Sustainability* 14(23):15813. <https://doi.org/10.3390/su142315813>
- Takahashi K, Hashimoto Y (2023) Small grant subsidy application effects on productivity improvement: evidence from Japanese SMEs. *Small Bus Econ* 60(4):1631–1658
- Agarwal V, Mathiyazhagan K, Malhotra S, Pimpunchat B (2023) Building resilience for sustainability of MSMEs post COVID-19 outbreak: an Indian handicraft industry outlook. *Socioecon Plann Sci* 85:101443. <https://doi.org/10.1016/j.seps.2022.101443>
- Tupy IS, Silva FF, Diniz GFC, Montenegro RL, de Queiroz SA, Ferraz D (2023) Resilient regions in Brazil: unfolding the effects of COVID-19 from a socioeconomic perspective. *Int Reg Sci Rev* 46(5–6):649–677
- Mahmud K, Joarder MMA, Sakib K (2023) Customer fintech readiness (CFR): assessing customer readiness for fintech in Bangladesh. *J Open Innov Technol Market Complex* 9(2):100032. <https://doi.org/10.1016/j.oiitmc.2023.100032>
- Ehret M, Olaniyan R (2023) Banking the unbanked. Constitutive rules and the institutionalization of mobile payment systems in Nigeria. *J Bus Res* 163:113845. <https://doi.org/10.1016/j.jbusres.2023.113845>

42. Burhan M, Salam MT, Hamdan OA, Tariq H (2021) Crisis management in the hospitality sector SMEs in Pakistan during COVID-19. *Int J Hosp Manag* 98:103037. <https://doi.org/10.1016/j.ijhm.2021.103037>
43. Iwuoha VC, Aniche ET, Ezirim GE, Alumona IM, Obiorji JN (2021) Impact of COVID-19 lockdown and social distancing policies on small businesses in south-eastern Nigeria: whither the stimulus packages? *J Poverty Soc Justice* 29(2):231–239. <https://doi.org/10.1332/175982721x16124992938824>
44. Estiri M, Dahooie JH, Skare M (2022) COVID-19 crisis and resilience of tourism SMEs: a focus on policy responses. *Econ Res-Ekonomska Istrazivanja* 35(1):5556–5580. <https://doi.org/10.1080/1331677x.2022.2032245>
45. Isabelle DA, Han Y, Westerlund M (2022) A machine-learning analysis of the impacts of the COVID-19 pandemic on small business owners and implications for Canadian government policy response. *Can Public Policy* 48(2):322–342. <https://doi.org/10.3138/cpp.2021-018>
46. Pu G, Qamruzzaman M, Mehta AM, Naqvi FN, Karim S (2021) Innovative finance, technological adaptation and SMEs sustainability: the mediating role of government support DURING COVID-19 pandemic. *Sustainability* 13(16):9218. <https://doi.org/10.3390/su13169218>
47. Endrődi-Kovács V, Stukovszky T (2022) The adoption of industry 4.0 and digitalisation of Hungarian SMEs. *Soc Econ* 44(1):138–158. <https://doi.org/10.1556/204.2021.00024>
48. Mahmoud MA, Mahmoud A, Abubakar SL, Garba AS, Daneji BA (2021) COVID-19 operational disruption and SMEs' performance: the moderating role of disruption orientation and government support. *Benchmarking Int J* 29(9):2641–2664. <https://doi.org/10.1108/bj-03-2021-0131>
49. Goodhart CAE, Tsomocos DP, Wang X (2023) Support for small businesses amid COVID-19. *Economica* 90(358):612–652. <https://doi.org/10.1111/ecca.12460>
50. Razumovskaia E, Yuzvovich L, Kniazeva E, Klimenko M, Shelyakin V (2020) The effectiveness of russian government policy to support SMEs in the COVID-19 Pandemic. *J Open Innov Technol Market Complex* 6(4):160. <https://doi.org/10.3390/joitmc6040160>
51. Choi I (2022) Efforts of South Korean local governments to expand the good landlord movement: focus on property tax reduction and exemption. *Global Bus Finance Rev* 27(6):89–103. <https://doi.org/10.17549/gbfr.2022.27.6.89>
52. Wang S, Li X, Li Z, Ye Y (2023) The effects of government support on enterprises' digital transformation: evidence from China. *Manag Decis Econ* 44(5):2520–2539. <https://doi.org/10.1002/mde.3831>
53. Wang J, Liu B, Chan KC, Fung A (2023) What is the role of government trust in a firm's R&D investments? *Evid SMEs China Econ Rev* 79:101968. <https://doi.org/10.1016/j.chieco.2023.101968>

in the areas of Strategic Management, Technology Management, Sustainability, and Human Resource Management.

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