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BUSINESS INTERRUPTION MANAGEMENT IN THE CONTEXT OF THE COVID-19 PANDEMIC FOR SMALL AND MEDIUM-SIZED ENTERPRISES IN SLOVAKIA*

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Abstract. From the beginning of 2020 to the end of 2021, a nationwide survey was conducted to examine business interruption due to the COVID-19 pandemic and to identify the impact of the pandemic on SMEs in the Slovak Republic. It also focused on identifying areas such as risk management with BCM, and crisis management within individual enterprises. The survey was carried out using a questionnaire distributed to SMEs operating in the country. Based on the questions from the questionnaire, four research hypotheses were developed. Based on the results of our investigation, we found that enterprises cannot correctly assess their capability level and manage risks effectively, potentially exposing themselves to further threats arising from such a relationship. There is a correlation between the business sector and the extent to which an enterprise has been affected by a pandemic. Enterprises with implemented risk management areas had operations halted for shorter periods than enterprises without implementation. There is a relationship between business sectors and the extent to which they were affected by the pandemic. The discussion concludes that the pandemic posed a type of threat for which several SMEs were unprepared. At the same time, no established risk minimization procedures would address this issue. Effective implementation of risk management as prevention or crisis management as response and application of BCM principles is one of how enterprises could prepare for risks and crises and increase their resilience.

Keywords: business continuity management (BCM); COVID-19; crisis management; enterprise; resilience; risk management

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Additional disciplines: Business Continuity Management; Crisis Management; Risk Management

1. Introduction

The impact of the pandemic and the governmental anti-pandemic measures taken has affected most enterprises in the world and society as a whole. The business has also been very negatively affected by COVID-19. Many enterprises did not survive after the significant drop in demand caused by the movement restrictions and other significant mobility restrictions imposed by countries to stop the outbreak. Conversely, in some cases, this situation

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has led to new areas of business that some entrepreneurs are taking advantage of, such as home delivery, internet sales, etc. (Cohen 2020). Enterprises worldwide have had to confront and respond to the COVID-19 pandemic. The evolution of the COVID-19 pandemic has had an unpredictable impact on business continuity. Changes in the enforcement of social distancing policies have affected economic and social activities, causing significant complications for enterprises in managing their human and financial resources (Rumman 2022).

Recently, a comparison was made between two economic crises: the economic crisis caused by the pandemic and the climate crisis. In this sense, people have raised the possibility that the response to the economic recession caused by COVID-19 and the climate emergency is interlinked and mutually reinforcing. This is because the coronavirus outbreak presents opportunities to advance the climate agenda alongside broader transitions to sustainability in production and consumption (Cohen 2020, Markard 2020).

The impact of the COVID-19 pandemic and other factors affect business continuity. Both natural and man-made disasters can disrupt business continuity, so enterprises need to be prepared to respond promptly (Smith 2003; Doğrusöz 2022, Muparadzi 2021, Vasović 2022, Shipanga et al. 2022). One of the factors of business continuity sustainability is to ensure the implementation of crisis management and business continuity management (BCM) into the enterprise to improve the management system (Vasović 2022). Riglietti (2022) states that it is BCM that is the key management discipline that, through the framework, can establish measures so that resilience is ensured. Bajgoric (2022) argues that implementing BCM into the enterprise leads to improved enterprise performance. With BCM, enterprises will have a system for organizing their resources and inventory. Consequently, they know how to manage them and use them in a crisis to stabilize them (Croitoru et al. 2021, Nyakato 2022). Alshehhi (2022) states that during pandemics and crises, crisis management also plays an essential role in ensuring business continuity. Crisis management, unlike BCM is a familiar term commonly used and addresses the issue of guaranteeing enterprise resilience. Ewertowski (2022) considers crisis management, BCM, and enterprise resilience as important roles in ensuring societal security due to the issue of protecting society and enterprises from all kinds of crisis phenomena and human failures.

Palačić (2022) understands business continuity as an organization's strategic and tactical capacity to plan for and respond to crises and business disruptions to continue operating at a previously determined acceptable level. BCM is a process that focuses on identifying potential impacts that could disrupt the operational viability of the enterprise and aim to find the most effective solutions to maintain business continuity. BCM focuses on ensuring prevention and recovery, critical elements of increasing resilience to business interruption and other enterprise values (Palačić 2022, Bajgorić 2022). According to Herrmann (2022) BCM is a process of proactive planning that controls the various activities within the enterprise, thereby ensuring the long-term continuity of the enterprise and, thus, the enterprise's prosperity. Through BCM, vital and critical processes are identified that may cause interruption to operations and therefore damage the enterprise's reputation.

Vasović (2022) argues that improving enterprise resilience can be achieved through an effective Business Continuity Management System (BCMS). The result of an effective BCMS within an enterprise is an enterprise that can identify its vulnerabilities and has plans to mitigate risks and respond when necessary. Alkhrabsheh (2022), in turn, argues that to maintain business continuity in complex situations, it is essential to adopt suitable administrative safeguards to avoid unnecessary time loss during its resolution. United Nations World Economic Situation and Prospects (2021) claims that "there is no sustainable development without resilience and no resilience without sustainable development. Building economic, social and environmental resilience must guide the recovery from the crisis". Having control over the business environment is impossible. The business environment is constantly changing, giving enterprises room to evolve continuously. Implementing BCM and crisis management in an enterprise expands the range of management approaches enterprises can take to prepare for different events, thereby ensuring business continuity and increasing resilience (Business 2003). Janačković (2022) looks at resilience from two perspectives, as a way of surviving on the one hand and thriving on

the other. He sees thriving as the ability of a resilient enterprise to turn challenges into opportunities. Karunaratne (2022) has the same view and considers resilience a tool for the enterprise to help it respond to unexpected situations. An unexpected situation that could threaten its survival is just used as an opportunity.

According to Herrmann (2022), resilience is a question of sustainability, defined as a system's ability to manage severe perturbations and sustained stress. According to Burhan (2021), resilience focuses on building mechanisms that enable actors to recognize, adapt, and employ resources to fight disruptions before, during, and after a crisis to ensure dependable operation. Marquez-Tejon (2021) introduces the concept of organizational resilience, which he views as the ability of an enterprise to flexibly adapt to environmental changes to maintain the maintenance and achievement of enterprise objectives and thrive. Regarding business continuity, Doğrusöz (2022) views organizational resilience as a set of activities such as planning, responding, rescuing, and strengthening the enterprise itself so that it can survive during a crisis and is prepared for it.

Karunaratne (2022) argues that building resilience rests on creating stability and organizational change within the enterprise. According to Marquez-Tejon (2021), developing resilience should be a strategic corporate goal and the outcome of solid business practices and effective risk management. Each enterprise operates in a different business environment and has various resources. Enterprises are constantly exposed to risks that can affect their development and future direction. Risks are an integral part of the business that affect the enterprise Demyen (2022). Any undetected and unacceptable risk can cause significant negative impacts on business activities if the enterprise cannot respond appropriately and does not have sufficient resources. Risk management and BCM are disciplines that represent a way of creating and increasing the resilience of enterprises to adverse impacts and environmental changes. Risk management and BCM are part of integrated management systems, including the business environment (Bjornsdottir 2022, Foli 2022). Ostapenko (2021) argues that risk management is an effective tool through which the continuity and operability of an enterprise can be ensured even during an adverse situation. Risk management methods and procedures embedded in the enterprise will enable risks to be identified, analyzed, and assessed on time so that the enterprise can then design measures to manage them to an acceptable level. Effective risk identification, analysis, and assessment can prevent risk spread and negative impact on the enterprise. By effectively integrating risk management into business activities, risks can be managed, and losses can be prevented, which can also help to ensure the resilience and sustainability of the business.

Business sustainability is essential to the business environment (Hasbaoui 2022, Mthiyane 2022). Dean (2007, p. 58) defined sustainable business as: "the process of discovering, evaluating, and exploiting economic opportunities that are present in market failures that reduce sustainability, including those that are relevant to the environment". Enterprises, from small start-ups to multinationals, increasingly claim to contribute to a more sustainable future. Increasingly, enterprises and corporations say they take sustainability seriously as part of their business models (Hart 2003, Hockerts 2010, York 2010). Entrepreneurship is seen as the "engine of sustainable development", with its innovative power expected to "bring about the next industrial revolution and a more sustainable future" (Pacheco 2010, p. 464, Hummels 2021). Steal (2005) also argues that entrepreneurship is widely recognized as an engine of economic growth. Sustainable development differs from economic development because sustainable development includes not only economic development (Bromley 1991) but also integrates environmental development (Khan 1993).

Entrepreneurship and entrepreneurship research focuses on understanding the discovery, exploitation, and creation of entrepreneurial opportunities. However, several barriers prevent opportunities from being exploited, identified, and discovered. These barriers may be associated with market failures that

prevent the efficient functioning of the market (Carter 2006, Dean 2007, Venkataraman 1997). Several studies have also examined different types of entrepreneurship in other countries (Bergmann 2007).

The COVID-19 pandemic has shown that business sustainability is paramount. COVID-19 poses an existential threat to enterprises (especially small and medium enterprises (SMEs)) (Hossain Rokibul 2022). The COVID-19 pandemic has mainly affected SMEs, which account for more than 90% of enterprises worldwide. In this sense, SMEs have a significant role to play in developing the world economy. During the pandemic, it was, and still is, SMEs that were most at risk and vulnerable. The measures taken were a barrier for enterprises that prevented them from operating (Croitoru et al. 2021, Du 2022, Chandak 2022, Iancu 2022, Sarker 2022). The business interruption has become a global problem that has caused a slowdown in the world economy. The continuity of individual enterprise activities is interrupted by changes in the business environment, with the global pandemic COVID-19 being the most frequent cause in recent years (Androniceanu, 2020; Androniceanu & Marton, 2021). Enterprises were unprepared for this change, which affected their operational efficiency (Brand 2022, Dos 2022, Kaya 2022, Yang 2022).

Amankwah-Amoah (2021) reports that the COVID-19 pandemic was identified by the Organisation for Economic Co-operation and Development in 2020 as one of the most significant public health and economic crises of our time.

2. Methodology

Our nationwide survey focused on the interruption of operations due to the COVID-19 pandemic. The identification of the impact of the pandemic on SMEs in the Slovak Republic (SR) is dedicated to the identification of potential problems that arose for SMEs during the pandemic while also focusing on identifying the presence of areas of risk management with BCM, crisis management within the administration of individual enterprises. The survey was conducted using a questionnaire distributed to SMEs operating within the country. The statistical population is made up of a total of 597171 SMEs, with this figure based on the Statistical Office of the Slovak Republic's 2020 survey. The respondents to the questionnaire were the managing directors of the SMEs that were contacted for the survey, who answered the questions on behalf of the enterprises they represent. The statistical unit comprises a total of 1145 SMEs, to which the questionnaire was distributed for the survey. A random sampling method was used for the study. Of these enterprises, a total of 359 SMEs completed the questionnaire and therefore participated in the survey, which forms the statistical population on which the defined hypotheses will be tested, and the statistical questions will be examined. Considering the confidence interval at the 95% level, with a specified estimation error of 5.5% and a proportion of the trait of interest at the 0.5 level, a minimum sample size of a total of 319 respondents is assumed. The statistical population is composed of a total of 359 respondents, representing a sampling error of 5.18%.

The first three questions in the questionnaire covered basic information about the enterprise. They examined its size in terms of the number of employees, the time it has been in the enterprise, and the sector within which it carries out its business activities. This was followed by questions that focused on the extent to which the risk management, BCM, and crisis management processes were implemented in the surveyed organizations and how they were mastered and adopted in these enterprises. Other questions included the risks occurring in the enterprises, the impacts of the COVID-19 pandemic on the enterprises surveyed and on their activities, the extent to which these enterprises were affected by the pandemic, the enterprises' view of the measures implemented, and the enterprises' preparedness to deal with the pandemic situation. The last set of questions concerned the prospects of these enterprises, particularly in the context of pandemic recovery, and possible frameworks for measures to deal with a similar situation in the future. The qualitative and quantitative data thus obtained were processed into a tabulator from which contingency tables were compiled based on an appropriate selection of features for the hypotheses.

To examine the relationship between the variables identified by the survey, the Pearson chi-square test of independence was used. To examine the dependence, the significance level was set at $p < 0.05$. This method was used for all the hypotheses identified to determine whether there was a dependent relationship between the variables. The value of the χ^2 test statistic is:

$$\chi^2 = \sum_{i=1}^R \sum_{j=1}^C \frac{(n_{ij} - E_{ij})^2}{E_{ij}}$$

where:

R - number of rows

C - number of columns

n - number of cells in the table

E_{ij} - expected (theoretical) abundance

To examine the strength of the relationship between the stated variables in the research hypotheses, Cramer's V and Pearson's contingency coefficient were used. Through Pearson's contingency coefficient, the contingency relationship between variables was assessed based on qualitative traits. The coefficient value ranges from 0 to 1, taking the value of 0 in the case of contingency independence of the studied traits and the value of 1 in the case of complete contingency dependence of the studied traits. The values between these two extremes represent different degrees of contingent dependence between the qualitative traits. Pearson's contingency coefficient was used in the evaluation of all hypotheses and is calculated as:

$$C = \sqrt{\frac{\chi^2}{\chi^2 + n}}$$

where:

n - number of cells in the table

χ^2 - chi-square

Cramer's contingency coefficient V determines the most appropriate measure of association between the two variables under study. Cramer's contingency coefficient V takes values from 0 to 1, where 0 indicates no relationship and 1 indicates a perfect relationship. Again, this method was used in examining all the hypotheses stated. Cramer's contingency coefficient V is calculated as:

$$V = \sqrt{\frac{\chi^2/n}{\min(R, C) - 1}}$$

where:

R - number of rows

C - number of columns

n - number of cells in the table

χ^2 - chi-square

For each contingency table, the condition that all expected abundances (E_{ij}) in the contingency table must be $E_{ij} > 1$, and at least 80% of $E_{ij} > 5$ was monitored. This condition is considered a conservative condition when looking for dependencies in contingency tables (Luha 2007).

3. Results

Hypothesis 1 (H1)

H1 was based on the question of whether there is a relationship between enterprises believing they can manage risks and the closure or non-closure of their operations during a pandemic, with the wording being: **"Enterprises that think they are capable of managing risks did not close their operations during the pandemic."**

To confirm or refute this hypothesis, data obtained from the following statistical questions were used:

1. Question 7: Do you think you can manage risks in your enterprise (1 - definitely yes, 5 - not at all)?
2. Question 11: During the COVID-19 pandemic, your enterprise: (Had a stopped (closed) operation; Had a working operation).

Respondents answered question 7 on a numerical scale, assigning each quantitative trait a qualitative value. For question 11, the qualitative data from respondents' answers were divided into two categories to confirm or reject this hypothesis - those confirming the cessation of enterprise operations and those confirming a different type of measure for a functioning operation. A contingency table (Table 1) was then constructed from the statistical data obtained above, and the existence and strength of the relationship between the variables were examined using Pearson's chi-square test of independence, Pearson's contingency coefficient, and Cramer's contingency coefficient V.

Table 1. Contingency table H1

		Do you think you can manage risks in your enterprises?					
		Definitely yes	Rather yes	I don't know	Rather no	Not at all	
During the COVID-19 pandemic, your enterprise:	Had a stopped (closed) operation	4	19	24	4	3	54
	Had a working operation	76	90	102	19	18	305
		80	109	126	23	21	359

Source: Authors

Based on the calculations performed using the above methods, the following results were found:

Pearson's Chi-Quadrat

$$\chi^2 = 8,4905$$

The critical value of the Chi-Quadrat

$$9,4877$$

p value

$$p = 0,0752$$

Given that the observed value of Pearson chi-square is lower than the calculated critical value for this variable, it can be concluded that there is no dependent relationship between the identified variables. Hence, H1 can be considered to be refuted.

Hypothesis 2 (H2)

H2 was based on whether there is a relationship between the business sector and the extent to which the enterprise was affected by the pandemic. The wording was: "**Enterprises in the accommodation and catering sector were the most affected by the pandemic.**"

To confirm or refute this hypothesis, data obtained from the following statistical questions were used:

1. Question 1: *What industry are you in?*
2. Question 10: *Has the situation related to the COVID-19 pandemic affected your enterprise (1 - definitely yes, 5 - not at all)?*

Respondents answered question 1 by selecting from pre-determined qualitative options. For question 10, respondents answered on a numerical scale, with a qualitative value assigned to each quantitative trait. A contingency table (Table 2) was then constructed from the statistical data obtained above, using Pearson's chi-square test of independence, Pearson's contingency coefficient, and Cramer's contingency coefficient V to examine the existence and strength of the relationship between the variables.

Table 2. Contingency table H2

		<i>Has the situation related to the COVID-19 pandemic affected your enterprise?</i>					
		Definitely yes	Rather yes	I don't know	Rather no	Not at all	
<i>What industry are you in?</i>	Transport, information	6	7	8	3	4	28
	Business services	21	14	14	9	9	67
	Other services	29	21	24	14	15	103
	Agriculture	3	3	3	3	0	12
	Industry	7	8	7	9	5	36
	Construction	7	9	14	8	0	38
	Accommodation, catering	46	10	7	10	2	75
		119	72	77	56	35	359

Source: Authors

Based on the calculations performed using the above methods, the following results were found:

Pearson's Chi-Quadrat	$\chi^2 = 55,5116$
The critical value of the Chi-Quadrat	36,4150
ρ value	$\rho = 0,0003$
Cramer's contingency coefficient	V = 0,1966
Pearson's contingency coefficient	C = 0,3660

Based on the fact that the value of Pearson chi-square is higher than the calculated critical value for this variable, it can be concluded that there is a dependent relationship between the identified variables. At a confidence interval of 95%, based on the calculation of the variable ρ , it is possible to conclude that the calculated dependence is statistically significant since the relationship $\rho < 0.05$ holds. Given that a statistically significant relationship has been found between the variables under study, it is possible to proceed to the calculation of Cramer's contingency coefficient, based on which we conclude that the identified relationship between the variables under study occurs at a low level. Based on the calculation of Pearson's contingency coefficient, it can be concluded that there is a weak contingency relationship between the variables under study. Therefore, H2 can be considered partially confirmed.

Hypothesis 3 (H3)

H3 was based on the question of whether there is a relationship between the implementation of risk management, crisis management, BCM, and how long enterprises had operations interrupted during a pandemic, with the wording being: **"Enterprises with implemented risk management, crisis management, BCM had operations suspended for a maximum of 3 months or not at all."**

To confirm or refute this hypothesis, data obtained from the following statistical questions were used:

1. Question 4: *Do you have.... embedded in the management of your enterprise? (You can tick more than one option).*
2. Question 12: *During the COVID-19 pandemic, you had interrupted operations at (as of 31.10.2021)....*

Question 4 was answered by respondents selecting from pre-determined qualitative options. For question 12, respondents also answered qualitatively from the predefined options. Subsequently, the statistics obtained in question 4 were divided into two categories - those indicating the implementation of risk management, BCM, or crisis management and those that did not include any of these options. A contingency table (Table 3) was then constructed from the statistical data obtained above, and the existence and strength of the relationships between the variables were examined using Pearson's chi-square test of independence, Pearson's contingency coefficient, and Cramer's V contingency coefficient.

Table 3. Contingency table H3

		<i>Do you have.... embedded in the management of your enterprise?</i>		
		Yes	No	
<i>During the COVID-19 pandemic, you had interrupted operations at (as of 31.10.2021)....</i>	Not at all	104	22	126
	Within 1 month	51	8	59
	1 to 3 months	46	12	58
	4 to 6 months	40	17	57
	7 to 9 months	10	11	21
	10 to 12 months	17	5	22
	More than one year	12	4	16
		280	79	359

Source: Authors

Based on the calculations performed using the above methods, the following results were found:

Pearson's Chi-Quadrat	$\chi^2 = 17,4375$
The critical value of the Chi-Quadrat	12,5916
ρ value	$\rho = 0,0078$
Cramer's contingency coefficient	V = 0,2204
Pearson's contingency coefficient	C = 0,2152

Through the application of Pearson's chi-square test, in which the calculated chi-square value is higher than the calculated critical value, it was found that there is a dependent relationship between the variables. The statistical significance of this relationship was confirmed by calculating the quantity ρ , which at the 95% confidence interval takes a value lower than 0.05 (the relationship $\rho < 0.05$ is valid). After identifying a statistically significant relationship, the calculation of the Cramer contingency coefficient was applied. Based on the calculated value, it can be concluded that the relationship between the dependent variables occurs at a low level. Through the calculation of Pearson's contingency

coefficient, it was found that the observed contingency relationship between the variables is weak. Therefore, based on the above calculations, it can be concluded that H3 has been partially confirmed; however, the dependence between the variables is low.

Hypothesis 4 (H4)

H4 was built around the question of whether there is an association between the type of enterprise (by size) and the extent to which it has been affected by the pandemic, with the wording being: **"The smaller the enterprise, the higher the degree to which it is affected by the pandemic."**

To confirm or refute this hypothesis, data obtained from the following statistical questions were used:

1. Question 2: *According to the number of employees, your enterprise is: (a micro enterprise, small enterprise, or medium enterprise).*
2. Question 10: *Has the situation related to the COVID-19 pandemic affected your business (1 - definitely yes, 5 - not at all)?*

Respondents answered question 2 by selecting from pre-determined qualitative options. For question 10, respondents answered on a numerical scale, with each quantitative trait assigned a qualitative value. A contingency table (Table 4) was then constructed from the statistical data obtained above, using Pearson's chi-square test of independence, Pearson's contingency coefficient, and Cramer's contingency coefficient V to examine the existence and strength of the relationship between the variables.

Table 4. Contingency table H4

		<i>Has the situation related to the COVID-19 pandemic affected your business?</i>					
		Definitely yes	Rather yes	I don't know	Rather no	Not at all	
<i>According to the number of employees, your enterprise is:</i>	Microenterprise	69	28	35	31	16	179
	Small Enterprise	36	22	35	18	11	122
	Medium enterprise	14	22	7	7	8	58
		119	72	77	56	35	359

Source: Authors

Based on the calculations performed using the above methods, the following results were found:

Pearson's Chi-Quadrat	$\chi^2 = 22,3898$
The critical value of the Chi-Quadrat	15,5073
ρ value	ρ = 0,0042
Cramer's contingency coefficient	V = 0,1766
Pearson's contingency coefficient	C = 0,2423

Based on the fact that the Pearson chi-square value is higher than the calculated critical value of this variable, it can be concluded that there is a dependence between the identified variables. For the 95% confidence interval based on the calculation of the variable ρ, it can be concluded that the calculated correlation is statistically significant, as the relationship ρ<0.05 holds. Given the statistically significant correlation between the variables, we then proceeded to calculate Cramer's contingency coefficient. We conclude that the correlation identified by the Pearson chi-square test occurs at a low level. From Pearson's contingency coefficient calculation, it can be concluded that there is a weak contingency correlation between the variables under study. Therefore, H4 can be considered partially confirmed.

4. Discussion

One of the four stated hypotheses addressed in this research was disproved, and the remaining three were partially confirmed. None of the stated hypotheses was fully confirmed, but this opens the way for further future study and discussion of the specificities of the pandemic that may have influenced these results.

H1 was built around the question of whether there is a correlation between enterprises thinking they can manage risks and the closure or non-closure of their operations during a pandemic. In the context of disproving this hypothesis, it is helpful to reflect on whether the ability of enterprises to manage risk is indeed related to the maintenance of a functioning operation in the particular environment created by the pandemic. There is also the possibility that enterprises cannot correctly assess their capacity to manage risk properly and effectively, thereby potentially exposing themselves to further threats arising from such a relationship. Therefore, the refutation of this hypothesis creates scope for future closer examination of the risk management capabilities of enterprises and their perceptions of this area.

Ostapenko (2021) argues that the risk management methods and practices embedded in the enterprise will enable risks to be identified, analyzed, and evaluated promptly so that the enterprise can then design measures to manage them to an acceptable level. By effectively identifying, analyzing and assessing risks, we can prevent the spread and, in particular, the negative impact of hazards on the enterprise, which could cause interruption of operations or even complete closure.

H2 was built around whether there was a relationship between the business sector and the extent to which the enterprise was affected by the pandemic. Through statistical examination, it was found that there was a relationship between the industry of the enterprises surveyed and the extent to which they were affected by the pandemic. However, this relationship is relatively weak and cannot be seen as entirely indicative. This may be due to the specific circumstances of the pandemic and, in particular, to regional differences in the strength of the pandemic's impact on business sectors.

The impact of the pandemic and the governmental anti-pandemic measures taken have affected most enterprises in the world and society as a whole, affecting all business sectors. Many enterprises only survived following the significant drop in demand caused by the restriction of customers entering the premises. Establishments that were only generating sales when their operations were open could not cope with the limits imposed. Therefore, sectors such as accommodation and catering establishments had the most difficulty adapting and were most affected by the pandemic. It was challenging and sometimes impossible to adapt to the changes. The impact of constant changes in the enforcement of social distance policies created significant complications for enterprises in retaining business (Rumman 2022; Androniceanu et al., 2022).

H3 was built around whether there was a relationship between the implementation of risk management, crisis management, BCM, and how long enterprises had operations interrupted during the pandemic. H3 confirmed that enterprises with implemented MR, KM, and BCM had operations suspended for a maximum of 3 months or not at all. The results suggest an association between risk management, BCM, or crisis management implementation and how long enterprises had operations suspended. In this case, however, it is questionable whether the enterprises have these processes appropriately implemented and, if so, how effective these were in the particular situation associated with the pandemic.

In H3, Vasovic's (2022) assertion that the sustainability of business continuity depends on implementing crisis management and BCM into the enterprise while improving the management system was confirmed. Also, Bajgorić (2022) argues that implementing BCM into the enterprise would improve the performance of the enterprise while ensuring effective management of resources and inventory within the enterprise. Through BCM in the enterprise, the management and utilization of these resources in the event of a crisis would be aligned (Nyakato 2022), which was also evident in enterprises with embedded risk management, crisis management, or BCM into the enterprise.

H4 was built around whether there is an association between the type of enterprise (by size) and the extent to which it has been affected by the pandemic. The statistical survey found a relationship between the industries of the enterprises surveyed and the extent to which they were affected by the pandemic. However, this relationship is relatively weak and cannot be considered entirely indicative. One possibility is that the COVID-19 pandemic affected the business sector in a particular way, the impacts of which could be observed in all types of enterprises regardless of their size. This case, therefore, creates scope for future research to confirm or refute such an explanation.

The COVID-19 pandemic has shown that business sustainability is paramount and was particularly disrupted during the pandemic for SMEs. The COVID-19 pandemic mainly affected SMEs, which play a significant role in developing the world economy. The measures taken were restrictions for enterprises, which caused the closure of establishments (Brand 2022, Yang 2022). Enterprises needed to prepare for the changes in the business environment, and the continuity of various activities in enterprises was interrupted. Based on the results from the nationwide questionnaire, SMEs were the ones most affected by the pandemic. Their overall functionality was affected.

Based on the comparison of the research results with the claims of other authors, it can be concluded that the claims about the importance and relevance of risk management, crisis management and business continuity management as important tools for the functioning of small and medium-sized enterprises in times of crisis and their ability to cope with unexpected events have been confirmed. The impact of the pandemic on different enterprises has manifested itself in different ways. Nevertheless, enterprises that had implemented these tools could overcome the effect of the crisis significantly better than SMEs lacking these tools. Therefore, the results of this survey have further highlighted the need for and importance of risk management, crisis management and business continuity management, which has also been discussed by other authors and confirmed by their findings.

5. Conclusions

The pandemic was a particular type of threat for which only a few businesses were prepared in advance, and damage minimization procedures needed to be in place. However, the survey results showed that although the pandemic affected almost all areas of social life, its impact on individual businesses was different but varied based on the characteristics of the companies.

This new finding opens up a space for reflection on how some of the practices and processes inherent in risk management, BCM and crisis management could be innovated and optimized to enable businesses to confront, prepare for and deal effectively with such threats in the future. At the same time, it raises the question of how to adapt these procedures and processes to the individual needs of each business. The findings from this research provide a practical insight into how the pandemic has affected the functioning of SMEs and what measures or processes have proven most effective in mitigating its negative impacts. They show that, given the relationship between risk management as a crisis prevention tool and crisis management as an effective response to unforeseen crises, BCM can be used in both phases, providing businesses with several options to prepare for potential risks and increase the resilience of their business. However, the research findings and results may have been partly influenced by the number of SMEs involved.

For this reason, it would be desirable to repeat a similar survey with a higher return rate of questionnaires. Another factor may be regional differences in the internal factors of the business environment, which are highly significant within the Slovak Republic. Government measures also firmly determined the pandemic's impact on SMEs. For this reason, it is desirable to compare the results of similar surveys abroad, as differences in measures at the national level may distort the final results.

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