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Impact of the pandemic on SME financial resources – the Polish example

Wpływ pandemii na zasoby finansowe przedsiębiorstw MŚP – przykład Polski

ABSTRACT

The problem of managing financial resources in a turbulent environment focuses on the entrepreneur's recognition of the impact of a changing climate on the consequences of their actions. Therefore, the article attempts to assess the effects of the pandemic on business by identifying access to financial resources in the Small and Medium-sized Enterprises (SME) sector. The study was conducted in the Lower Silesian voivodeship. A questionnaire survey was used in the research technique, and the collected data were subjected to statistical processing (SPSS). Verification of the research question concerning the environment's influence on enterprises' activities showed their predominantly negative influence. The assumptions made in selecting the research sample allow for the formulation of a thesis of broader universality, which should be confirmed in further research, which is an essential contribution to the discussion.

Keywords: pandemic, financial resource management, SME sector, business environment impact, Lower Silesian Voivodeship.

STRESZCZENIE

Problem zarządzania zasobami finansowymi w turbulentnym otoczeniu skupia się na zrozumieniu przez przedsiębiorców wpływu zmieniającego się otoczenia na konsekwencje swoich działań. Dlatego w artykule podjęto próbę oceny wpływu pandemii na działalność gospodarczą poprzez identyfikację dostępu do zasobów finansowych sektora małych i średnich przedsiębiorstw (MŚP). Badanie przeprowadzono na terenie województwa dolnośląskiego. W technice badawczej zastosowano badanie ankietowe, zebrane dane poddano opracowaniu statystycznemu (SPSS). Weryfikacja pytania badawczego dotyczących wpływu otoczenia na działalność przedsiębiorstw wykazała ich przeważnie negatywny wpływ. Założenia przyjęte w procesie doboru próby badawczej pozwalały na sformułowanie tezy o szerszej uniwersalności, która powinna zostać potwierdzona w dalszych badaniach co stanowi to istotny przyczynek do dyskusji.

Słowa kluczowe: pandemia, zarządzanie zasobami finansowymi, sektor MŚP, wpływ otoczenia biznesowego, województwo dolnośląskie.

INTRODUCTION

In a turbulent environment like the pandemic, the problem of financial resources management acquires particular importance in enterprises belonging to the SME sector, where access to financing sources and resources is limited (Alshami, 2019; Bretherton & Chaston, 2005; Owusu et al., 2019; Sipa et al., 2015; Wach, 2008, 2012; Wasiuzzaman, 2019; H. Zhang et al., 2018) and there are no cash reserves (Ghalke et al., 2022). Such business specificity is a difficult barrier to overcome, empha-

sizing the importance of proper resource management, which entails a comprehensive system of evaluating the use of these resources (Nogalski & Niewiadomski, 2020). Adequate attention to this type of action is needed since the market does not tolerate mistakes, and their consequences may be the company's demise (Parkitna, 2020). Legal restrictions, mainly temporary or permanent industry restrictions (Chaber et al., 2020), affect the financial situation of enterprises. In such

business conditions, the impact and management of financial resources have remained independent of the management skills of managers or owners. Previous paradigms of action ceased to be effective. Closing specific industries has resulted in a lack of revenue and, thus, an inability to generate new financial resources. However, the need to shift to e-commerce has compelled the creation of new distribution channels. The authors of this study were prompted to examine the opinions of business entities regarding the legal regulations created at the time, which affected access to financial resources and the efficiency of business operations over a more 2-year period of dealing with the pandemic and its consequences.

Therefore, this study aims to assess the pandemic's impact on SME business conduct by identifying access to finance.

1. LITERATURE REVIEW

Periods of crisis for SMEs can be extremely difficult for them, especially regarding financing channels. When economic conditions and the business environment are too onerous for SMEs, the competition that stimulates innovation disappears (Gur et al., 2023). The financial shocks caused by COVID-19 were unexpected and do-tactic. SMEs saw a massive drop in demand for their products and services due to nationwide blockades and changes in consumer attitudes. Although revenues fell significantly, SMEs' financial liabilities remained broadly stable (Kaya, 2022). The main reasons SMEs were unable to resume work were a shortage of workers, most of whom were strictly restricted by government regulations, reduced market demand, and a shortage of products to prevent the pandemic (Liu et al., 2022). Declining sales, business disruption, and uncooperative behavior by distributors caused an immediate liquidity crisis and made them reluctant to apply for loans for fear of bankruptcy (Hossain et al., 2022). The emerging economic consequences of the Covid-19 outbreak drastically altered the capacity-building aspirations of SMEs, and the ability to raise short- and long-term finance was severely limited during the pandemic (Liu et al., 2022), which necessitated the search for alternative solutions (Yao & Liu, 2023). The problems of increasing ongoing fixed costs during the pandemic contributed to an increase in the risk of SME insolvency, which rose on average by around 10% at the outbreak and by 21% during the pandemic (Kaya, 2022), which had a significant impact on supply chains and industry. The situation was worse when the SME needed more resources (Ali et al., 2021). National economies have introduced support programs for SMEs, but their effectiveness has been perceived differently by operators in the sector (Kochaniak et al., 2023). The literature shows that the effectiveness of European aid programmers could have been better, with most of the support not reaching the companies most affected by the crisis (D. Zhang & Fang, 2022). Different national economies applied different solutions. Sanctioning policies generated additional costs for SMEs wishing to leave the market.

Policies based on a subsidy per unit produced effectively

prevented SMEs from leaving the market (Hafezalkotob et al., 2023). adaptation has benefited from greater flexibility and adaptability to endogenous and external shocks such as COVID-19 (Skare et al., 2023). There has been an overwhelmingly positive response from businesses that have shifted their focus to daily necessities and life-saving products (Hossain et al., 2022). The increased use of ICT computing and Industry 4.0 during the COVID-19 pandemic helped SMEs improve sterilization and, post-pandemic, product innovation. From a relationship marketing perspective, the COVID-19 pandemic unleashed the power of the digital environment in promoting personalized solutions that can help SMEs develop effective strategies quickly (Bettoli et al., 2022).

The literature demonstrates that in a dynamic, high-risk, uncertain environment, there is little or no frame of reference where causal thinking can be taken into account and that efficiency is the basis for an effective, appropriate response to minimize investment and react quickly as the situation develops (Simms et al., 2022).

The empirical investigation was carried out to find answers to the set research problem, which took the form of the following question:

Q1. How do entrepreneurs assess the impact of a pandemic on a firm's financial resources?

The following methods were used to answer the research question: critical literature analysis and quantitative methods. A grounded theory methodology was used, which entails theory building based on collected empirical data (Glaser & Strauss, 2009).

2. METODOLOGY

In 2020, a survey was conducted on the impact of the pandemic on the financial resources of enterprises measured by profit and operating funds. The sample included 100 business owners from Lower Silesia. Because of the direct method of the survey conduction, this region of Poland was chosen as a representative region. The sample selection can be purposive, as it involved only the owners of companies that operated during the pandemic who agreed to be directly surveyed. Based on the Institute for Territorial Development's report (Zathay et al., 2021), the total number of business entities is estimated to be approximately 380,000. Therefore, on this basis, a minimum representative sample of 96 questionnaires was determined, with a confidence level of 95% and a maximum standard error of 10%.

3. RESULTS

The study results presented here are only a slice of the total analysis Parkitna (2020) conducted during her research. All parts of the survey questionnaire were tested for reliability and based on the calculated Cronbach's Alpha coefficient (Table 1), the level of which indicates a reliable survey presented in the described slice. The obtained values of Cronbach's Alpha coefficient confirm the reliability of the conducted study.

Table 1 Summary of Cronbach's coefficient for 7 Scales of the survey questionnaire

Scale	Cronbach's value
Scale Political and legal factors directly affecting financial resources	0.891
Scale Political and legal factors that indirectly affect financial resources	0.950
Scale Business conditions resulting from pandemics	0.881

Source: Original research results

For the detailed components of the question on the direct effect of the pandemic on the financial resources of the company, the respondents most often gave answers with a weight of 2 – It causes a reduction in revenue and income, and with a weight of 1 It poses a real threat of bankruptcy – a total lack of sales revenue and income, which is a total of more than 66% of the total answers given (Table 2).

Table 2 Statistical description – financial resources

Financial resources	Frequency	Cumulative percentage
Weight=1 A real threat of bankruptcy – a total lack of income from sales and revenues	30	30.0
Weight=2 It causes a reduction in revenue and income	36	66.0
Weight=3 It has no impact	12	78.0
Weight=4 It results in increased revenue and income	8	86.0
Weight=5 It is a development opportunity for the enterprise – a significant increase in revenue	14	100.0
Overall	100	100.0
Average	2.4000	
Standard deviation	1.36330	
Variance	1.859	
Skewness	0.801	
Standard error of skewness	0.241	
Kurtosis	-0.577	
Standard error of kurtosis	0.478	

Source: Original research results

The presented values of the variable, financial resources, have a mean distribution of 2.40, while the standard deviation is 1.36. After analyzing the variable's dispersion measures, we found a variance of 1.859. The distribution's kurtosis is less than zero and amounts to -0.6577, indicating a platykurtic distribution of the variables. The standard error of kurtosis is 0.478. The analysis of financial resources' skewness revealed a positive skew in the distribution. It means that too many responses with low values of 1 or 2 were obtained during the survey, which implies a real threat of bankruptcy or a reduction in sales revenue and confirms the respondents' feelings about the negative impact of the pandemic on the level of financial resources of the surveyed companies.

In the formulation of the questionnaire, a range scale based on a five-point Likert scale was used, which was found to be the most appropriate (Kaczmarek & Tarka, 2013) where

the individual weights assigned to the answers indicate: 1 – definitely hinders doing business, 2 – hinders doing business, 3 – irrelevant = have a neutral impact, 4 – supports doing business, 5 – definitely supports doing business – the opportunity for growth).

Analyzing the impact of the political environment Q1: Respondents were asked to evaluate the effect of selected factors of the political and legal environment that directly affect financial resources. Upon evaluating the results, it was noted that entrepreneurs identify a negative impact of the following direct factors of the political and legal environment on financial resources:

- legal changes regarding income tax, which was declared by 54% of respondents,
- changes in VAT, as declared by 61% of respondents,
- legal changes regarding the way of conducting business activity, as declared by 52% of respondents,
- ecological regulations, as declared by 50% of all respondents,
- stability of government policy as declared by 49% of all respondents.

Respondents were asked to evaluate the influence of the political and legal environments in terms of their indirect effects on financial resources. In assessing the results obtained, it was noted that entrepreneurs identify a negative impact of the following indirect factors of the political and legal environment on financial resources:

- excessive bureaucracy (number of obligations imposed on entrepreneurs), as declared by 70% of respondents,
- consequences of clerical decisions, as declared by 66% of respondents,
- litigation settlement period, as declared by 62% of respondents,
- staff turnover and lack of qualified personnel in the market, as declared by 52% of respondents,
- change in interest rates as declared by 50% of respondents.

Evaluating the government regulations introduced as a result of the pandemic, it can be concluded that identified from market observations of companies' activities in the market confirmed the negative impact of:

- restrictions on the import of goods and materials, as declared by 71% of respondents,
- restricting product exports, as declared by 51% of respondents,
- deferring receipt of dues, as declared by 51% of respondents.

Inability to provide services full-time, 46 % of respondents indicate its negative impact, while 28 % need a well-established opinion.

The positive impact of introduced regulations:

- deferral of social insurance contributions, as declared by 76% of respondents,
- deferment of lease repayment, as declared by 51% of respondents,

- possibility of loan repayment deferment, as declared by 62% of respondents,
- government financial support, as declared by 61% of respondents,
- tax credits, as declared by 65% of respondents,
- change of fuel prices, as declared by 57% of respondents,
- temporary suspension of activities as declared by 45% of respondents.

CONCLUSIONS

The assumption of the impact of the environment on financial resources during the pandemic was verified in the research question. The alternating opening and closing of the economy, as well as other regulations limiting company freedom of operation, have negatively impacted the financial situation of most companies studied. For this reason, the surveyed entrepreneurs rate most legal environment factors as negatively affecting their business operations. Given most respondents' opinions, business security during a pandemic was threatened.

However, this result was dictated by the survey conducted among still-opened companies thriving on the market.

To summarise the study in terms of the research questions posed and hypotheses tested, the entrepreneurs polled were highly critical of the legal and political changes implemented in the environment.

Given the epidemiological situation in Poland, the legislator's political and legal actions are justified. Additional doubts are raised by the large scale of the legislator's interference in the indicated freedom and, according to the respondents, the low effectiveness of state assistance, which only compensated sufficiently for the losses incurred by entrepreneurs in a few cases. As a result, respondents from industries operating in the pandemic continue to assess its impact on financial resources and the relationship between economic resources and the sourcing of natural resources for production negatively.

REFERENCES

Ali, M. H., Suleiman, N., Khalid, N., Tan, K. H., Tseng, M.-L., & Kumar, M. (2021). Supply chain resilience reactive strategies for food SMEs in coping to COVID-19 crisis. *Trends in Food Science & Technology*, 109, 94–102. <https://doi.org/10.1016/j.tifs.2021.01.021>

Alshami, R. (2019). Impact of Lack of Financial Resources on the Progress of SME in Yemen. *Sumedha Journal of Management*, 8(3), 408–414.

Bettoli, M., Capestro, M., Di Maria, E., & Micelli, S. (2022). Overcoming pandemic challenges through product innovation: The role of digital technologies and servitization. *European Management Journal*, 40(5), 707–717. <https://doi.org/10.1016/j.emj.2022.05.003>

Bretherton, P., & Chaston, I. (2005). Resource dependency and SME strategy: An empirical study. *Journal of Small Business and Enterprise Development*, 12(2), 274–289. <https://doi.org/10.1108/14626000510594656>

Chaber, P., Łapiński, J., Nieć, M., Orłowska, J., & Zakrzewski, R. (2020). Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce. *Raport PARP*, 75.

Ghalke, A., Kumar, S., & Rao, S. V. D. N. (2022). SME financing through public equity: review of the Indian SME exchanges. *Indian Growth and Development Review*, 15(1), 85–97. <https://doi.org/10.1108/IGDR-10-2021-0138>

Glaser, B. G., & Strauss, A. L. (2009). *Odkrywanie teorii ugruntowanej. Strategie badania jakościowego*. Zakład wydawniczy NOMOS.

Gur, N., Babacan, M., Aysan, A. F., & Suleyman, S. (2023). Firm Size and Financing Behavior during COVID-19 Pandemic: Evidence from SMEs in Istanbul. *Borsa Istanbul Review*, 23(4), 804–817. <https://doi.org/10.1016/j.bir.2023.02.001>

Hafezalkotob, A., Nersesian, L., & Fardi, K. (2023). A policy-making model for evolutionary SME behavior during a pandemic recession supported on game theory approach. *Computers and Industrial Engineering*, 177. <https://doi.org/10.1016/j.cie.2022.108975>

Hossain, M. R., Akhter, F., & Sultana, M. M. (2022). SMEs in Covid-19 Crisis and Combating Strategies: A Systematic Literature Review (SLR) and A Case from Emerging Economy. *Operations Research Perspectives*, 9. <https://doi.org/10.1016/j.orp.2022.100222>

Kaczmarek, M., & Tarka, P. (2013). Metoda gromadzenia danych a ekwiwalencja wyników pomiaru systemu wartości w 5- i 7-stopniowych skalach ratingowych Likerta TT – Method of Data Collection and Scores Equivalence in Reference to the Value System Measurement Based on 5- and 7-Point Likert R. *Handel Wewnętrzny*, 346, 42–56. <https://search.proquest.com/docview/2085966174/accountid=46407>

Kaya, O. (2022). Determinants and consequences of SME insolvency risk during the pandemic. *Economic Modelling*, 115. <https://doi.org/10.1016/j.econmod.2022.105958>

Kochaniak, K., Ulman, P., & Zajkowski, R. (2023). Effectiveness of COVID-19 state aid for microenterprises in Poland. *International Review of Economics and Finance*, 86, 483–497. <https://doi.org/10.1016/j.iref.2023.03.038>

Liu, Y., Dilanchiev, A., Xu, K., & Hajiyeva, A. M. (2022). Financing SMEs and business development as new post Covid-19 economic recovery determinants. *Economic Analysis and Policy*, 76, 554–567. <https://doi.org/10.1016/j.eap.2022.09.006>

Nogalski, B., & Niewiadomski, P. (2020). Samoświadomość przedsiębiorstw jako substrat ich dojrzalości w zarządzaniu kosztami. In M. Kowalski (Ed.), *Wyzwania w zarządzaniu kosztami i dokonaniami* (p. 14). Uniwersytet Ekonomiczny we Wrocławiu.

Ownuś, J., Ismail, M. Bin, Osman, M. H. B. M., & Kuan, G. (2019). Financial literacy as a moderator linking financial resource availability and SME growth in Ghana. *Investment Management and Financial Innovations*, 16(1), 154–166. [https://doi.org/10.21511/imfi.16\(1\).2019.12](https://doi.org/10.21511/imfi.16(1).2019.12)

Parkitna, A. (2020). *Determinanty efektywności małego przedsiębiorstwa*. Oficyna Wydawnicza Politechniki Wrocławskiej. <https://www.d-bc.wroc.pl/publication/145697>

Simms, C., McGowan, P., Pickernell, D., Vazquez-Brust, D., & Williams, A. (2022). Uncovering the effectual-causal resilience nexus in the era of Covid-19: A case of a food sector SME's resilience in the face of the global pandemic. *Industrial Marketing Management*, 106, 166–182. <https://doi.org/10.1016/j.indmarman.2022.08.012>

Sipa, M., Gorzeń-Mitka, I., & Skibiński, A. (2015). Determinants of Competitiveness of Small Enterprises: Polish Perspective. *Procedia Economics and Finance*, 27, 445–453. [https://doi.org/10.1016/S2212-5671\(15\)01019-9](https://doi.org/10.1016/S2212-5671(15)01019-9)

Skare, M., de las Mercedes de Obesso, M., & Ribeiro-Navarrete, S. (2023). Digital transformation and European small and medium enterprises (SMEs): A comparative study using digital economy and society index data. *International Journal of Information Management*, 68, 102594. <https://doi.org/10.1016/j.ijinfomgt.2022.102594>

Wach, K. (2008). *Regional environment for small and medium-sized enterprises*. Publishing House of the Cracow University of Economics.

Wach, K. (2012). *Europeizacja małych i średnich przedsiębiorstw*. Wydawnictwo Naukowe PWN.

Wasiuzzaman, S. (2019). Resource sharing in interfirm alliances be-

tween SMEs and large firms and SME access to finance: A study of Malaysian SMEs. *Management Research Review*, 42(12), 1375–1399. <https://doi.org/10.1108/MRR-10-2018-0369>

Yao, Z., & Liu, Y. (2023). How Covid-19 impacts the financing in SMEs: Evidence from private firms. *Economic Analysis and Policy*, 79, 1046–1056. <https://doi.org/10.1016/j.eap.2023.06.036>

Zathey, M., Wałęga, A., Acedońska, K., Balachowski, J., Cieślak, R., Drewnicka, K., Halicka-Borucka, M., Kasprzak, M., Książek, S., Kukuła, M., Lesisz, R., Lesiw-Głowacka, K., Lisiewicz, K., Mańkowska, K., Molecki, B., Mongiało, M., Maleszka, W., Mykhailovska, O., Nickarz, M., ... Zięba, D. (2021). *Analiza Gospodarcza Dolnego Śląska*. Instytut Rozwoju Terytorialnego. <https://dawg.pl/wp-content/uploads/2021/07/Analiza-Gospodarcza-Dolnego-Slaska.pdf>

Zhang, D., & Fang, Y. (2022). Are environmentally friendly firms more vulnerable during the COVID-19 pandemic? *Journal of Cleaner Production*, 355. <https://doi.org/10.1016/j.jclepro.2022.131781>

Zhang, H., Gao, N., Wang, Y., & Han, Y. (2018). Modeling risk governance and risk perception in personal prevention with regard to food safety issues. *British Food Journal*, 120(12), 2804–2817. <https://doi.org/10.1108/BFJ-04-2018-0229>