Jurnal Cendekia Keuangan, ISSN 2827-7643 (Print), ISSN 2810-0964 (Online)
Vol. 4, No. 2 (2025) 71-78

JURNAL CENDEKIA KEUANGAN
JCK
UNIVERSITAS ISLAM KADIRI

Journal homepage: https://ejournal.uniska-kediri.ac.id/index.php/JCK

Risk Analysis of Management and Mitigation in Msmes: Roti Maryam Dinoyo Branch

Mulida Noer Chamila[1], Kholis Mufaidatul Hikmah[2], Mohamad Bastomi[3], Ahmad Idris[4]

[1,2,3]Universitas Islam Malang
[4]Universitas Islam Kadiri

ARTICLE INFO

Keywords:
Business Continuity, MSMEs, Qualitative Approach, Risk Management, Roti Maryam, System Risk.

JEL Classification: G170

Article History:
Received
2025-02-12
Revised
2025-08-23
Accepted
2025-10-01

DOI:
10.32503/jck.v4i2.6787

*Corresponding Author
Management Study Program, Faculty of Economics, Islamic University of Malangi, Jalan Mayjen Haryonoi No. 193, Dinoyo, Lowokwaru District, Malang City, Indonesia.
E-mail address:
mulidachamila@gmail.com[1]

ABSTRACT

Manuscript type: Research paper
Introduction/Main Objectives: Micro, Small, and Medium Enterprises (MSMEs) have a strategic role in the Indonesian economy. However, MSMEs often face risk challenges that interfere with business continuity. **Background Problems:** One of the MSMEs that faces these challenges is Roti Maryam Dinoyo Branch which experiences internal risks such as machine damage, decreased quality of raw materials, and human resource and system risks. **Novelty:** This study highlights a holistic risk management approach in micro-scale MSMEs with specific case studies, offering risk mapping based on impact and probability, which is rarely done in MSMEs in the small food sector. **Research Methods:** This research uses a qualitative approach through observation and interviews with business actors. Data is reviewed to identify, evaluate, and mitigate the risks faced. **Finding/Results:** The results showed that the highest risk lies in running out of raw materials (red zones), while the intermediate risks include fluctuations in demand, decreased jam quality, and dependence on owners. Low risk is found in engine failure. Mitigation strategies include buffer stock, HR training, routine machine maintenance, and automated ordering systems. **Conclusion:** The implementation of effective risk management can improve operational efficiency and business sustainability, as well as reduce the negative impact of uncertainty. Risk evaluation is an important basis for decision-making and strategy formulation. **Research limitation/implications:** This study is limited to one MSME in one location and uses qualitative methods, so the generalization of results is still limited and requires a broader study on MSMEs in other sectors and regions for higher validity.

This is an open access article under the CC BY SA license (http://creativecommons.org/licenses/by-sa/4.0/).

1. Introduction

MSMEs are business activities or businesses run by individuals, households, and small business entities (Lassoued et al., 2024). MSMEs are micro and medium-small businesses (Perramon et al., 2024). Previously, MSMEs were regulated in Law No. 20 of 2008, then regulated in Government Regulation No. 7 of 2021 concerning convenience—protection and Empowerment of Cooperatives and Micro, Small, and Medium Enterprises or PP MSMEs. The number of MSMEs in Indonesia continues to grow (Indrawati et al., 2025). Micro, Small, and Medium Enterprises (MSMEs) have a strategic role and position in Indonesia's economy (Suryani et al., 2024). MSMEs create jobs, drive the wheels of the Indonesian economy, and distribute economic development results (Rakib, 2024).

MSMEs are micro, small, and medium businesses that can be an option for people who want to conduct business activities in any sector (Arranz et al., 2024). Every business must face business risks. Risks can come from within and outside the company (Mola & Roffia, 2025). Risks originating from within the company can be financial, HR, and operational risks, while risks originating from outside the company can be marketing risks (Falkner & Hiebl, 2015). Risks should not be avoided but must be faced with the strengths and opportunities possessed by the company (Crovini et al., 2021). All small and large companies must be more concerned about the risks that must be faced. Business risks will always exist at all times, both from outside and from within the company. Business risks will impact all small, medium, and large businesses.

Risk management refers to risk control practices that maintain the continuity of industrial activities (Brustbauer, 2016). Risk management is essential in micro, small, and medium enterprises (MSMEs) because some risks can result in significant losses (Mihai Yiannaki, 2012). Risk management is important for large companies and MSMEs, who must manage risk to maintain business continuity (Blanc Alquier & Lagasse Tignol, 2006).

In risk management, two sources of risk need to be considered: risks within the company and external companies (Hanggraeni et al., 2019). It is necessary to identify the risks that exist in a company. Carrying out planned planning in an organization is inseparable from the risks arising during its implementation; therefore, the risks cannot be ignored because they can affect a company's sustainability. Risk can be interpreted as uncertainty about a situation that will occur in the future, with decisions made based on various considerations at this time.

This study aims to find out what the level of risk faced by Roti Maryam MSMEs and how to mitigate the risks that can be done, various types of risks faced by Roti Maryam MSMEs, both internal risks such as production problems, and also human resources and internal risks such as machine damage, fluctuations in demand, and also the quality of raw materials to the availability of raw materials for each risk that has been identified So that it can be known which risks have the potential to harm business sustainability.

2. Literature Review

2.1. Management Risk

Every entrepreneur certainly wants to avoid and minimize the occurrence of risks (Jiménez et al., 2024). This is caused by the Inaluri of someone who always wants to be comfortable and not suffer losses from any side (de Araújo Lima et al., 2020). Risk management is recognizing, controlling, calculating, and minimizing possible risks; its function is to assist MSME business actors in making decisions and improving strategies for managing these risks (Arnaudova et al., 2025).

2.2 Internal Risks

Internal risks in MSMEs are often caused by weaknesses in management, such as immature decision-making or the absence of precise strategic planning (Duc et al., 2024). Unstructured financial management, such as untidy financial records or the separation between personal and business finances, is also a significant problem (Kovačević & Vapa-

Tankosić, 2017). Unstructured financial management, such as untidy financial records or the separation between personal and business finances, is also a significant problem (Kotaskova et al., 2020). In addition, the lack of innovation in products or services makes it difficult for MSMEs to compete in an ever-growing market (Foli et al., 2022). Another problem is weak internal communication, leading to miscommunication between teams and decreased operational efficiency (Crovini et al., 2021). All of these risks, if not managed properly, can hinder the growth and sustainability of a business.

2.3 System Risks

System risks in MSMEs often arise due to operational processes and infrastructure weaknesses (Acharya et al., 2017). For example, many MSMEs still use manual systems for transaction recording or stock management, prone to human error (Buganová et al., 2023). In addition, limitations in the application of modern technology make it difficult for MSMEs to compete in the digital era, where efficiency and automation are the primary needs (Virglerova et al., 2022). Another risk is the lack of protection for business and customer data, leading to data leaks or loss if not managed properly (Stjepić et al., 2021). Reliance on a single system without a backup plan can also make MSMEs vulnerable to operational disruptions, such as device breakdowns or software failures.

2.4 HR risk

HR risks in MSMEs often arise from limitations in recruiting and retaining a qualified workforce (Kuděj et al., 2023). Many MSMEs face challenges in providing competitive salaries or adequate facilities, so employees tend to move to larger companies (Dundon & Wilkinson, 2018). In addition, the lack of training and skill development makes it difficult for employees to adapt to market changes or new technologies (Türkeş, 2024). The high turnover rate of employees is also a serious problem because the recruitment and retraining process takes a lot of time and cost (Srhoj et al., 2024). Lack of good coordination and communication between team members often triggers internal conflicts that interfere with productivity (Crovini et al., 2021). These risks can directly impact the operations and sustainability of MSME businesses.

3. Methodology

The MSMEs Roti Maryam Dinoyo Branch research was conducted using a qualitative analysis approach. This qualitative analysis has a meaning, namely a description of the data by describing words and lines of sentences, which shows that this research uses a qualitative approach (Takona, 2024).

This approach aims to know or understand the social situation, events, and obstacles. This research uses data collection techniques, interviews, and informants' observations (Tracy, 2024). This observation stage and interviews aim to obtain results regarding management risks in MSMEs and the mitigation of problems carried out by owners. Roti Maryam MSMEs is a business of Mr Surya, which was established in 2021 and now sells various flavour variants in Roti Maryam, targeting student consumers and residents. In this study, the location used as the research object is next to the campus of the Islamic University of Malang, which is located on Jl. Tata Surya, Bima sakti Dinoyo, Lowokwaru, Malang City. East Java 65144. The time used for this research starts from the beginning of December, which is December 1, 2024.

4. Results and Discussion

4.1. Identification of Operational Risks in Roti Maryam MSMEs

Internal Risks

One of the main internal risks is the shortage of raw materials. These shortages can be caused by several factors, including inaccurate raw material calculations, a sudden increase in demand, or shipping delays from suppliers. When there is a shortage of raw materials, bread production will be hampered, potentially leading to the inability to fulfil customer orders. This not only has an impact on customer satisfaction but can also be detrimental to the company's reputation.

Other factors, such as engine damage, must be considered. The machinery used in the bread production process is essential for smooth operation. If the machine is damaged, the production process will be stopped, and the repair cost can be significant. Therefore, regular maintenance and periodic machine inspections are highly recommended to minimize the possibility of damage that could interfere with production.

Product quality is another aspect that must be well maintained. The declining quality of the jam raw materials used in Maryam Bread must be taken seriously. If the jam is not stored correctly or exposed to unstable temperatures, it can deteriorate in quality and make the product unfit for consumption. A decline in product quality will harm consumers and negatively impact the company's reputation, so it is important to implement strict storage and quality control standards.

System Risks

The system risk is that demand fluctuations are a significant challenge. The demand for Maryam bread tends to be lower on weekends or during certain seasons. If production is not adjusted to this demand pattern, then bread can pile up and result in financial losses due to storage costs and potentially wasteful products that are not sold. Therefore, it is important for business owners to conduct regular market analysis and adjust production strategies to be more responsive to changes in demand.

HR Risk

Finally, dependence on business owners in procuring raw materials is also a significant risk. If the owner is too busy or unable to manage procurement efficiently, this can lead to delays in the purchasing process and potentially result in errors in the selection of raw materials. To address this, it is important for business owners to consider delegating tasks to trusted employees or using a more efficient inventory management system.

Overall, this risk analysis shows that Usaha Roti Maryam needs to implement an effective risk management strategy to identify, evaluate, and control these risks in order to remain operational and ensure that the business thrives in a competitive market.

Risk identification in Roti Maryam MSMEs focuses on several existing risk factors, from internal risk factors, system risks, and operational risks to the risk of dependence on MSME owners. The identification of risks is based on the analysis of the level of probability and the level of cohesion. Frequency and impact can be measured on a scale of 1 to 5 with an assessment level of 5, 4, 3, 2, and 1, which can be identified as a persistent, frequent, moderate, rare, or rare risk. Meanwhile, in the impact scale with values of 1, 2, 3, 4, and 5, the risk of very light, light, medium, severe, and hefty impacts can be identified.

4.2. Risk Assessment

In conducting risk analysis on MSMEs of the Roti Maryam Dinoyo Branch, it is important to identify and evaluate various risks that can affect business sustainability. Based on the findings of previous research, several main risk categories need to be considered.

First, Human Resources (HR) risks also need to be observed. A lack of experts in the production process and a lack of employee training can result in low operational efficiency. This can potentially hinder innovation and product development, so it is important to improve HR competencies through structured training programs.

Second, Raw Material Risk is another crucial factor, especially related to price fluctuations and the availability of raw materials. Rising raw material prices can affect production costs and profit margins, while supply constraints can disrupt production.

Third, Operational Risks must be considered, including problems in the production process and lack of innovation. Inefficient processes can lead to a waste of resources and time, so there is a need for an evaluation of the existing operational system.

Fourth, Equipment or Machine Risk is also a concern, where the use of machines that have not been maximized and technology that is still manual can limit productivity. Therefore, investment in more modern and efficient technologies is highly recommended to increase competitiveness.

Table 1. MSME Risk Resiger "Roti Maryam"

Code	Identify Operational Risks	Sources of Risk	Impact
A1	Shortage of raw materials	Internal Risks	Production is hampered, consumer orders are not fulfilled, and customers are lost.
A2	Fluctuations in Consumer Demand	System Risks	Products pile up, and financial losses due to unused raw materials.
A3	Damage to Machinery or Cookware	Internal Risks	The production process is stopped, and the repair cost is high.
A4	Jam Quality Decreases	Internal Risks	The product becomes unfit for consumption, causing customer complaints and reputational damage.
A5	Dependence on Owners	HR Risk	The owner's workload is too heavy, which is a risk.

Table 2. Identification of Operational Risks and levels

Operational Risk	Identify Risks	Probability	Impact	Rating
Internal Risks	Shortage of raw materials.	4	4	16
	Engine breakdown.	2	3	6
	The quality of the jam decreases.	3	4	12
System Risks	Demand Fluctuations.	3	3	9
HR Risk	Owner dependency.	3	4	12

Based on Table 2 above, the following is an explanation of the rating: 1-8 indicates a low-risk level, 9-15 indicates a medium-risk level, and 16-25 indicates a high-risk level. By identifying these risks, MSMEs of the Roti Maryam Dinoyo Branch can formulate appropriate mitigation strategies, such as better capital management, increased human resource training, and periodic evaluations of raw materials and production equipment suppliers. These measures will help reduce the negative impact of these risks and ensure business continuity during fierce market competition, but there are several risks and levels. There is one risk of running out of raw materials (A1) risk being in the high or red zone, and there are three quality risks: fluctuations in demand (A2) and declining jam quality (A4), dependence on the owner (A5) is at a medium level, namely the orange zone, while the other risk level 1 is at a low level as damage to the engine (A3).

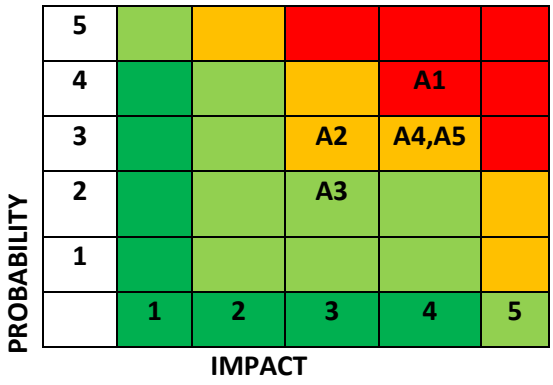


Figure 1. Risk Matriks

Based on the risk matrix above, here are some explanations: The dark green rectangle shows a very low level of risk; The light green rectangle indicates a low level of risk; The orange rectangle indicates a moderate risk level; and The red rectangle indicates a high level of risk.

4.3. Risk Evaluation

Risk Evaluation at Roti Maryam MSMEs Dinoyo branch is crucial to ensure smooth operations and business sustainability. The first step to be taken is to thoroughly identify risks, including the risk of raw material shortages, demand fluctuations, machine failures, and decreased product quality. Once these risks have been identified, it is important to sort them out based on their impact so that the focus can be directed to the risks that have the most potential to harm the business. Here are some risk evaluations that can be done on MSMEs Roti Maryam Dinoyo Branch:

Table 3. Operational Risk Evaluation in MSMEs "Roti Maryam"

Risk Type	Risk	Rating	Risk Evaluation
High Risk	Running out of raw materials	16	Mitigation and immediate action
Medium Risk	Demand fluctuations	9	Mitigation and monitoring
	The quality of the jam decreases	12	Mitigation and contingency plans
	Owner dependency	12	Mitigation and contingency plans
Low Risk	Damage to the engine	6	Mitigation

By identifying risks in MSMEs Roti Maryam, they can identify existing problems. There will be actions that can be taken, such as evaluation and risk mitigation, to prevent financial losses and equipment failures that hinder the running of a business; the results of risk evaluations can be the basis for decision-making and information about existing risks, and their impact can help management in choosing what alternatives to use in overcoming problems in these efforts to build strong business resilience.

As for the risk table above, it can be analyzed that the risks in Roti Maryam MSMEs have a matrix area with several colours, such as red, orange, light green, and dark green. There are several meanings in the colour matrix; if the red colour shows a very high or critical risk that requires immediate action to reduce the impact, this orange colour has high viscosity. It requires special attention and stronger mitigation measures; this light green colour indicates a moderate risk, then it needs to be monitored and may require light mitigation measures; the dark green colour is low risk, so it can be tolerated and does not require extraordinary measures. As for some of the risks in Roti Maryam MSMEs, one risk indicates the red zone of running out of raw materials (A1), and some indicate the orange and green zones.

The first is A1; running out of raw materials is a high risk, and the impact is high in frequency. It can be caused by inaccurate raw material calculations, sudden increases in demand, and delivery delays from suppliers, but it can be overcome by increasing the accuracy of raw material calculations, creating buffer stocks, and verifying suppliers. The second is A2, which is demand fluctuations with moderate risks and medium-level impacts. This can be overcome by special weekend promotions, developing new products, and analyzing seasonal demand trends. Third, A3, damage to machinery or cooking equipment, has a low level of risk and moderate impact. Due to the machine's service life, lack of maintenance, inappropriate use, mitigation carried out routine maintenance, preparing manual equipment as a backup, and considering machine insurance. Fourth, A4, Decreased Jam Quality has a medium risk level and high impact. Due to improper storage, unstable room temperature, and contamination, mitigation is carried out by paying attention to storage temperature, using airtight

containers, and conducting periodic quality checks. Fifth, A5, Dependence on Owners with a medium risk level and high impact. Because the owner is responsible for all the purchase of raw materials, the mitigation delegates the purchase task to trusted employees, creating an automated ordering system. From the discussion above, it can be seen that the risk in Roti Maryam MSMEs is high, medium, and low. Therefore, some of the risk mitigations listed above can be carried out to increase maximum sales and stable business strength.

5. Conclusion

The conclusion of the risk analysis of management and mitigation in MSMEs of Roti Maryam Dinoyo Branch shows that good risk management is critical to maintaining business continuity. These MSMEs face various risks, such as machine failure, decreased product quality, and dependence on business owners, which can disrupt business operations and reputation. To overcome these risks, it is recommended that MSMEs implement several mitigation strategies. This includes performing maintenance on the machine, regularly supervising product quality, and delegating tasks to trustworthy employees. In addition, it is also important to conduct periodic market analysis so that production can be adjusted to existing demand.

With effective risk management, MSMEs can reduce potential losses and increase business competitiveness and sustainability in the long term. In addition, conducting periodic market analysis is highly recommended to adjust production to existing demand. With these steps, it is hoped that Roti Maryam MSMEs can operate more efficiently and sustainably and compete in an increasingly competitive market.

References

Acharya, V. V, Pedersen, L. H., Philippon, T., & Richardson, M. (2017). Measuring systemic risk. *The Review of Financial Studies*, *30*(1), 2–47. https://doi.org/10.1093/rfs/hhw088

Arnaudova, R., Viza, E., & Cano, M. (2025). Rethinking risk management in times of crisis: the effect of COVID-19 on small and medium-sized enterprises in Scotland. *The TQM Journal*, *37*(2), 484–503. https://doi.org/10.1108/TQM-12-2022-0353

Arranz, C. F. A., Arroyabe, M. F., & de Arroyabe, J. C. F. (2024). Organizational transformation toward circular economy in SMEs. The effect of internal barriers. *Journal of Cleaner Production*, *456*, 142307.

Blanc Alquier, A. M., & Lagasse Tignol, M. H. (2006). Risk management in small-and medium-sized enterprises. *Production Planning & Control*, *17*(3), 273–282.

Brustbauer, J. (2016). Enterprise risk management in SMEs: Towards a structural model. *International Small Business Journal*, *34*(1), 70–85.

Buganová, K., Hudáková, M., Šimíčková, J., & Mošková, E. (2023). Disparities in the Implementation of Risk Management in the SMEs. *Systems*, *11*(2), 71.

Crovini, C., Santoro, G., & Ossola, G. (2021). Rethinking risk management in entrepreneurial SMEs: towards the integration with the decision-making process. *Management Decision*, *59*(5), 1085–1113.

de Araújo Lima, P. F., Crema, M., & Verbano, C. (2020). Risk management in SMEs: A systematic literature review and future directions. *European Management Journal*, *38*(1), 78–94.

Duc, D. A., Hoi, L. Q., Van Dao, L., Lien, V. T. P., Hang, N. T., & Huong, T. L. (2024). Corporate environmental responsibility and the business risk of Vietnamese SMEs: the mediating role of internal control. *Risk Management*, *26*(1), 2.

Dundon, T., & Wilkinson, A. (2018). HRM in small and mediumsized enterprises (SMEs). In *Human resource management* (pp. 194–211). Routledge.

Falkner, E. M., & Hiebl, M. R. W. (2015). Risk management in SMEs: a systematic review of available evidence. *The Journal of Risk Finance*, *16*(2), 122–144.

Foli, S., Durst, S., & Temel, S. (2022). The link between supply chain risk management and innovation performance in SMEs in turbulent times. *Journal of Entrepreneurship in Emerging Economies*, *16*(3), 626–648.

Hanggraeni, D., Ślusarczyk, B., Sulung, L. A. K., & Subroto, A. (2019). The impact of internal, external and enterprise risk management on the performance of micro, small and medium enterprises. *Sustainability*, *11*(7), 2172.

Indrawati, H., Caska, C., Hermita, N., Sumarno, S., & Syahza, A. (2025). Green innovation adoption of SMEs in Indonesia: what factors determine it? *International Journal of Innovation Science*, *17*(1), 19–37.

Jiménez, A., Arrieta, Y., Nuñez, M. A., & Villanueva, E. (2024). Management of Strategic Risks for the Sustainability of SMEs in the Manufacturing Sector in Antioquia. *Sustainability*, *16*(5), 2094. https://doi.org/10.3390/su16052094

Kotaskova, A., Lazanyi, K., Amoah, J., & Belas, J. (2020). Financial risk management in the V4 Countries' SMEs segment. *Investment Management and Financial Innovations*.

Kovačević, V., & Vapa-Tankosić, J. (2017). Exploratory analysis on internal risks in SMEs and financial institutions in Serbia. *Interdisciplinary Management Research XIII*, 718–732.

Kuděj, M., Civelek, M., Erben, M., Masárová, J., & Kubálek, J. (2023). Navigating global markets: The role of enterprise risk management and human resource management in SME international expansions. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, *18*(4), 1075–1103.

Lassoued, N., Khanchel, I., Fakhfakh, I., & Etteyeb, M. (2024). Entrepreneur characteristics and financing patterns in SMES of MENA countries: Overcoming the burdens of liability of newness. *Journal of International Development*, *36*(2), 1507–1535.

Mihai Yiannaki, S. (2012). A systemic risk management model for SMEs under financial crisis. *International Journal of Organizational Analysis*, *20*(4), 406–422.

Mola, L., & Roffia, P. (2025). Digitalizing sales channels in wine business SMEs: the role of internal and external factors between opportunities and risks. *British Food Journal*. https://doi.org/10.1108/BFJ-06-2024-0648

Perramon, J., Bagur-Femenías, L., del Mar Alonso-Almeida, M., & Llach, J. (2024). Does the transition to a circular economy contribute to business resilience and transformation? Evidence from SMEs. *Journal of Cleaner Production*, *453*, 142279.

Rakib, M. (2024). Impact of digital literacy, business innovation, competitive advantage on the existence of SMEs: A quantitative study in Makassar City, Indonesia. *Quality-Access to Success*, *25*(198), 277–283.

Srhoj, S., Vitezić, V., Giannozzi, A., & Mikulić, J. (2024). Tourism SME default: A note on predictors. *Tourism Management*, *103*, 104910.

Stjepić, A.-M., Pejić Bach, M., & Bosilj Vukšić, V. (2021). Exploring risks in the adoption of business intelligence in SMEs using the TOE framework. *Journal of Risk and Financial Management*, *14*(2), 58. https://doi.org/10.3390/jrfm14020058

Suryani, T., Fauzi, A. A., Sheng, M. L., & Nurhadi, M. (2024). Developing and testing a measurement scale for SMEs' website quality (SMEs-WebQ): Evidence from Indonesia. *Electronic Commerce Research*, *24*(3), 1763–1794. https://doi.org/10.1007/s10660-022-09536-w

Takona, J. P. (2024). Research design: qualitative, quantitative, and mixed methods approaches. *Quality & Quantity*, *58*(1), 1011–1013.

Tracy, S. J. (2024). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact*. John Wiley & Sons.

Türkeş, M. C. (2024). Driving Success: Unveiling the synergy of E-Marketing, sustainability, and technology orientation in online SME. *Journal of Theoretical and Applied Electronic Commerce Research*, *19*(2), 1411–1441. https://doi.org/10.3390/jtaer19020071

Virglerova, Z., Panic, M., Voza, D., & Velickovic, M. (2022). Model of business risks and their impact on operational performance of SMEs. *Economic Research-Ekonomska Istraživanja*, *35*(1), 4047–4064. https://doi.org/10.1080/1331677X.2021.2010111