

RISK MANAGEMENT STRATEGIES, CUSTOMER SATISFACTION, AND OPERATIONAL EFFICIENCY: KEYS TO MSME SUCCESS IN A COMPETITIVE MARKET

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Abstract. In an increasingly competitive business climate, Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in the economy, both locally and nationally. As such, MSMEs must confront various challenges related to risk management, customer satisfaction, and operational efficiency. This study aims to explore the dynamics between risk management, customer satisfaction, and operational efficiency within the context of MSMEs and how these interactions influence their success. The research utilizes a literature review method with a qualitative approach, gathering data from Google Scholar publications between 2004 and 2024. The study confirms that risk management, customer satisfaction, and operational efficiency are interrelated key factors that significantly impact the success of MSMEs in a competitive market. Through the analysis of relevant case studies, it is evident that effective risk management strategies can help MSMEs navigate market uncertainties and maintain operational stability. High customer satisfaction, achieved through superior product and service quality, contributes to growth and customer loyalty. Operational efficiency, attained through technological innovation and process improvement, allows MSMEs to reduce costs and enhance competitiveness. The integration of these three factors enables MSMEs to meet market challenges and achieve sustainable growth.

Keywords: Risk Management, Customer Satisfaction, Operational Efficiency, MSMEs

Abstrak. Dalam iklim bisnis yang semakin kompetitif, Usaha Mikro, Kecil, dan Menengah (UMKM) memainkan peran penting dalam ekonomi, baik secara lokal maupun nasional. Oleh karena itu, UMKM harus menghadapi berbagai tantangan terkait manajemen risiko, kepuasan pelanggan, dan efisiensi operasional. Penelitian ini bertujuan untuk mengeksplorasi dinamika antara manajemen risiko, kepuasan pelanggan, dan efisiensi operasional dalam konteks UMKM dan bagaimana interaksi ini memengaruhi keberhasilan mereka. Penelitian ini menggunakan metode tinjauan pustaka dengan pendekatan kualitatif, mengumpulkan data dari publikasi Google Scholar antara tahun 2004 dan 2024. Studi ini mengonfirmasi bahwa manajemen risiko, kepuasan pelanggan, dan efisiensi operasional adalah faktor kunci yang saling terkait dan memiliki dampak signifikan terhadap keberhasilan UMKM di pasar yang kompetitif. Melalui analisis studi kasus yang relevan, terlihat bahwa strategi manajemen risiko yang efektif dapat membantu UMKM menghadapi ketidakpastian pasar dan mempertahankan stabilitas operasional. Kepuasan pelanggan yang tinggi, dicapai melalui kualitas produk dan layanan yang unggul, berkontribusi pada pertumbuhan dan loyalitas pelanggan. Efisiensi operasional, yang dicapai melalui inovasi teknologi dan perbaikan proses, memungkinkan UMKM untuk mengurangi biaya dan meningkatkan daya saing. Integrasi ketiga faktor ini memungkinkan UMKM untuk menghadapi tantangan pasar dan mencapai pertumbuhan yang berkelanjutan.

Kata Kunci: Manajemen Risiko, Kepuasan Pelanggan, Efisiensi Operasional, UMKM

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INTRODUCTION

In an increasingly competitive business environment, Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in the economy, both locally and nationally. In Indonesia, MSMEs contribute approximately 60% of the national Gross Domestic Product (GDP) and create over 97% of jobs across the country (Yuliani, 2024). As the economic engine, MSMEs significantly contribute to economic growth and job creation, becoming an integral part of local communities. MSMEs often serve as sources of innovation, flexibility, and rapid adaptability to market changes that larger companies may not be able to meet. Therefore, MSMEs must face various challenges related to risk management, customer satisfaction, and operational efficiency. The success of MSMEs in managing these challenges is instrumental in determining their competitiveness, as well as their ability to survive and thrive in a dynamic and competitive market. Given the diverse and complex challenges, effective strategies in these three aspects are key to ensuring the sustainability and growth of MSMEs.

Risk Management is a fundamental aspect of MSME business continuity that must be carefully managed. MSMEs often face various risks that can significantly impact their operations and success. These risks include economic instability, fluctuations in raw material prices, regulatory changes, as well as operational and market risks that can affect costs and profit margins (Ausat & Suherlan, 2021). Political uncertainty or currency fluctuations can cause profound changes in production costs and profitability. MSMEs need to develop comprehensive and adaptive risk management strategies, including effective risk identification, analysis, and mitigation. Implementing these strategies requires a deep understanding of the risks that may be encountered and how they can affect various aspects of the business, enabling MSMEs to take appropriate actions to mitigate their impact.

Customer Satisfaction is one of the key indicators that influence the competitiveness of MSMEs in the market. In a market full of choices, customers have high expectations and tend to switch to competitors if they are not satisfied with the products or services received (Rane et al., 2023). Customer satisfaction is closely related to various aspects, including product quality, after-sales service, and the overall customer experience during interactions with MSMEs. Efforts to improve customer satisfaction often involve improving product and service quality as well as developing responsive and personalized customer service. MSMEs can

implement customer feedback systems and train staff to provide better service to ensure high customer satisfaction. Improving customer satisfaction helps retain existing customers and attract new ones, ultimately contributing to the growth and success of MSME businesses.

Operational Efficiency is another important factor that influences MSME performance. In a tight business environment, MSMEs must manage resources efficiently to maintain competitiveness and improve their operational outcomes. Efficient operational processes can reduce costs, accelerate response times, and increase productivity (Auramo et al., 2004). Strategies such as the adoption of appropriate technology, process improvement, and effective supply chain management are some methods that can be used to achieve operational efficiency. Automation technology can help speed up production processes and reduce labor costs, while good supply chain management can ensure a consistent and quality supply of raw materials. With high operational efficiency, MSMEs can offer more competitive prices and improve the quality and speed of service, which ultimately contributes to customer satisfaction and competitiveness.

These three factors—risk management, customer satisfaction, and operational efficiency—are not standalone but are interconnected and mutually influential. Good risk management can help reduce disruptions in business operations, which in turn can affect customer satisfaction. Conversely, efficient operational processes enable MSMEs to better meet customer expectations and handle risks more effectively (Martínez-Peláez et al., 2023). The interaction between these three aspects is very complex and requires an integrated approach to manage them synergistically. An effective risk management strategy can help minimize operational disruptions that may affect customer satisfaction, while high operational efficiency ensures that MSMEs can provide high-quality products and services at controlled costs.

However, in literature and business practice, these three aspects are often discussed separately without considering how they are interrelated and affect the overall performance of MSMEs. This separation can lead to a lack of understanding of how the integration of these three aspects can be simultaneously applied to enhance the competitiveness and success of MSMEs. Therefore, it is important to explore the relationships between these factors and how they influence each other in order to design more effective and holistic strategies for MSMEs.

Moreover, contextual factors such as the size of MSMEs, industry sectors, and market conditions also influence the implementation of these strategies. Variations in contextual factors can affect how risk management, customer satisfaction, and operational efficiency strategies are applied and adapted to the specific needs of MSMEs. For example, MSMEs in

the technology sector may face different risks and challenges compared to MSMEs in the retail or manufacturing sectors. A deep understanding of the local context is essential for designing strategies that are relevant and effective for MSMEs in various environments and market conditions.

With this background, it is important to conduct an in-depth exploration of how these three factors interact and influence the performance of MSMEs in a competitive market. This research aims to explore the dynamics between risk management, customer satisfaction, and operational efficiency in the context of MSMEs and how these interactions affect their success. The primary goal of this research is to identify and analyze the relationships between these three factors and provide recommendations that can help MSMEs improve their competitiveness and business success.

METHOD

This research employs a literature review method with a qualitative approach to explore risk management strategies, customer satisfaction, and operational efficiency in the context of Micro, Small, and Medium Enterprises (MSMEs) in competitive markets. The qualitative approach allows for an in-depth understanding of the phenomena being studied by gathering information from relevant sources and analyzing it descriptively. In conducting this research, descriptive analysis is used to outline and describe the results of the literature review. Data were obtained through a search on Google Scholar within the publication range from 2004 to 2024. Initially, 34 relevant articles were identified and collected as preliminary data. These articles then underwent a rigorous selection process based on relevance, quality, and contribution to the research topic. After the selection process, 20 articles meeting the criteria were chosen for further analysis. This literature review aims to provide a comprehensive overview of how the three aspects—risk management, customer satisfaction, and operational efficiency—interact and influence the success of MSMEs in competitive markets. Through a qualitative approach and descriptive analysis, this research focuses on gaining a deep understanding of existing literature to identify relevant patterns, trends, and insights related to the research topic.

RESULTS

Risk management is a systematic process designed to identify, analyze, and control risks that may affect the achievement of organizational objectives (Amraoui et al., 2019). This process involves assessing the likelihood and impact of various risks, both internal and

external, and developing strategies to mitigate or manage the negative effects of these risks. The primary goal of risk management is to minimize potential losses, ensure operational continuity, and enhance the organization's ability to respond to emerging challenges and opportunities, thereby achieving business objectives more effectively (Torabi et al., 2016).

Customer satisfaction is a measure of how well a company's products or services meet or exceed customer expectations (Noor et al., 2023). It encompasses aspects such as product quality, service effectiveness, customer experience, and responsiveness to customer needs and complaints. Customer satisfaction is often gauged through surveys or direct feedback and is closely linked to customer loyalty, willingness to recommend the company to others, and the likelihood of continued use of the product or service. High levels of satisfaction reflect the company's success in meeting customer expectations and can enhance its reputation and competitive edge in the market (Hadi & Indradewa, 2019).

Operational efficiency is an organization's ability to utilize resources—such as time, labor, and raw materials—optimally to produce goods or deliver services at the lowest possible cost without sacrificing quality (De Weger et al., 2022). This concept includes effectively managing business processes, reducing waste, and increasing productivity through various strategies, such as automation, process improvement, and supply chain management. The main goal of operational efficiency is to maximize output and profitability while minimizing costs and risks, enabling the company to operate more competitively and be responsive to market changes (Judijanto et al., 2024).

MSMEs, or Micro, Small, and Medium Enterprises, are business categories grouped based on size, scale of operations, and the number of employees or annual revenue. Micro enterprises typically have fewer than 10 employees and very limited annual revenue, while small enterprises have between 10 and 50 employees with larger, yet still relatively small, annual revenues compared to large companies. Medium enterprises have between 50 and 250 employees and higher annual revenues. MSMEs play a crucial role in the economy, contributing to job creation, innovation, and local economic development, and often serve as the driving force in small community economies (Ausat et al., 2022; Ausat & Peirisal, 2021).

DISCUSSION

Risk management is a crucial aspect of ensuring the sustainability of MSMEs, especially amid increasingly complex market uncertainties (Ulupui et al., 2024). MSMEs often face various risks that can affect their stability and growth, such as financial, operational, and market risks. For example, Eiger Adventure, which operates in the outdoor apparel sector, encountered

significant challenges when the prices of their raw materials fluctuated sharply. These price fluctuations can directly impact profit margins, especially since raw materials are a key component in the production process. To address this risk and maintain operational stability, Eiger implemented a risk management strategy involving supplier diversification and fixed-price agreements. This strategy allows Eiger to mitigate the negative impact of raw material price fluctuations, ensuring cost stability and smooth operations. This approach enables Eiger to remain competitive in the market and protect their profits from unpredictable price fluctuations while maintaining customer satisfaction by ensuring consistent product availability.

Customer satisfaction is a key indicator in assessing the success of MSMEs and can be a determining factor in their market success (Fianto, 2018). Kopi Kenangan, for instance, has successfully increased customer satisfaction by focusing on product quality and customer experience. This coffee industry MSME implemented a customer feedback system that allows them to actively adjust products and services according to customer needs and preferences. Loyalty programs, such as exclusive discounts and special offers for loyal customers, along with responsive customer service, also significantly contribute to increasing customer satisfaction. Through this approach, Kopi Kenangan has strengthened relationships with its customers and supported its growth and expansion in a competitive market. Consistent product quality, quick service, and attention to customer feedback have enabled Kopi Kenangan to build a loyal customer base and minimize customer churn, which is crucial in an industry heavily dependent on reputation and customer experience.

Operational efficiency is a critical key in reducing costs and increasing productivity, which directly impacts MSMEs' competitiveness (Triwahyono et al., 2023). For example, Merek Dagang, an MSME in the manufacturing sector, has successfully implemented automation systems in their production process. The use of this automation technology allows them to reduce downtime and increase machine efficiency, which in turn lowers production costs and increases profit margins. Merek Dagang can offer more competitive product prices, enhancing their market competitiveness and ensuring consistent product quality by adopting this technology. Automation also helps in reducing human error and increasing product consistency, which is crucial in maintaining the quality standards expected by consumers. Improved operational efficiency contributes to cost reduction and allows Merek Dagang to scale production and meet growing market demand more effectively.

The integration of risk management and customer satisfaction is vital in maintaining the stability and growth of MSMEs (Lima et al., 2020). Bukalapak, a leading e-commerce

platform, for example, faced issues related to delivery delays that impacted customer satisfaction. These delays can lead to a decline in customer trust and potentially reduce transaction volumes. To address this issue, Bukalapak implemented a risk management system involving supply chain evaluation and logistics improvements. These enhancements included optimizing delivery routes and improving coordination with logistics partners. Better tracking systems were also implemented to provide transparency to customers regarding the status of their orders. This approach significantly reduced delays and increased customer satisfaction through more timely deliveries and better service. The integration of risk management and customer satisfaction demonstrates how improvements in logistics and supply chain can directly enhance the customer experience and support the success of e-commerce platforms in a competitive market.

The relationship between operational efficiency and customer satisfaction is also highly significant (Carl, 2004). J.CO Donuts & Coffee, which operates in the food and beverage retail sector, is a good example in this regard. They have successfully improved operational efficiency through better inventory management and checkout process optimization. J.CO has increased customer satisfaction and encouraged repeat purchases by reducing customer wait times and ensuring consistent product availability. Efficient inventory management allows J.CO to reduce waste and ensure that popular products are always available to customers. High operational efficiency enables J.CO to provide faster service and respond more effectively to customer needs, which in turn enhances customer loyalty and contributes to sustainable business growth in a highly competitive sector.

Good risk management can also affect operational efficiency by reducing disruptions in business processes (Virglerova et al., 2022). BCA (Bank Central Asia) is a relevant example in this context. BCA faces significant cyber risks in their banking operations, but by implementing strict IT security policies and providing employee training, they have successfully reduced cyber risks and maintained smooth IT operations. These security measures include the use of intrusion detection systems, data encryption, and regular security audits. This approach shows that effective risk management can help reduce operational disruptions and improve long-term efficiency by ensuring that banking systems remain secure and reliably accessible to customers. Good security also increases customer trust, which is essential for retaining and attracting new customers in the banking industry.

The integration of risk management, customer satisfaction, and operational efficiency can be observed in the case study of Gojek, an MSME in the transportation and logistics services sector. Gojek faces significant challenges in managing operational risks, improving customer

satisfaction, and achieving efficiency. Gojek has successfully mitigated operational risks, enhanced service quality through continuous driver training, and improved internal processes to achieve better efficiency by adopting a data-driven management system. The use of data analytics to monitor driver performance and demand patterns helps in more efficient route planning and better resource management. The result of this approach is increased customer satisfaction and better operational efficiency, demonstrating the importance of integrating these three aspects to support the success of MSMEs in the services sector.

Technology plays a crucial role in enhancing risk management, customer satisfaction, and operational efficiency (Iskandar, 2023). Telkom Indonesia is a relevant example in this regard. Telkom Indonesia has implemented cloud-based management systems and analytical tools by using analytics technology to predict operational risks and manage communication networks. The implementation of this technology improves operational efficiency and enhances their ability to respond to issues quickly, which in turn contributes to increased customer satisfaction through more reliable services. Analytical technology helps in monitoring and analyzing network performance in real-time, enabling problem detection and resolution before they impact customers. With this innovation, Telkom Indonesia can maintain a high level of service and better meet customer expectations.

However, strategy implementation often faces challenges. Unilever Indonesia, for example, struggled to align risk management strategies with customer satisfaction and operational efficiency. This issue arose due to resource limitations and the complexity of processes that needed to be managed. Unilever faced challenges in ensuring that all parts of the organization could work together to address risks while maintaining quality standards and customer satisfaction. For MSMEs, it is essential to address these challenges with appropriate solutions, such as clear responsibility allocation, the use of suitable technology, and adequate employee training, to ensure that implemented strategies are well integrated and effective in achieving their business goals.

The size of MSMEs affects how they implement risk management strategies, customer satisfaction, and operational efficiency. Small MSMEs, such as Tahu Pong, often face resource limitations that affect their ability to implement comprehensive strategies. Tahu Pong, as a small MSME, may not have a large budget for advanced technology investments or intensive employee training. On the other hand, medium-sized MSMEs like Sido Muncul have more resources to invest in technology and training, enabling them to manage risks, improve customer satisfaction, and achieve operational efficiency more effectively. This difference highlights how the size and capacity of MSMEs influence the strategies they implement, with

larger MSMEs having advantages in terms of economies of scale and the ability to implement more complex solutions.

This discussion emphasizes that risk management, customer satisfaction, and operational efficiency are interrelated elements that influence the success of MSMEs in a competitive market. The case studies presented illustrate how integrated strategies can help MSMEs overcome market challenges, enhance competitiveness, and achieve sustainable growth. The practical implications of this research are the need for MSMEs to develop holistic and adaptive strategies that encompass these three aspects to ensure their long-term success. With the right approach, MSMEs can optimize their performance in the market, face challenges more effectively, and seize opportunities for sustainable growth.

Table 1. Key Findings on Risk Management, Customer Satisfaction, and Operational Efficiency for MSMEs

Aspect	Key Finding	Case Example
Risk Management	Effective risk management helps SMEs handle market uncertainties and maintain operational stability. Strategies such as supplier diversification can mitigate risk impacts.	Eiger Adventure mitigated raw material price fluctuations through supplier diversification.
Customer Satisfaction	High customer satisfaction contributes to growth and customer loyalty. Feedback systems and loyalty programs can enhance customer experience.	Kopi Kenangan improved satisfaction through customer feedback and loyalty programs.
Operational Efficiency	Operational efficiency reduces costs and increases productivity. Automation technology and process improvements can enhance operational efficiency and competitiveness.	Merek Dagang implemented automation to reduce production costs and improve profit margins.
Strategy Integration	Integrating risk management, customer satisfaction, and operational efficiency helps SMEs address market challenges and achieve sustainable growth.	Gojek used data integration to manage risks, improve service quality, and enhance efficiency.
Technology Impact	Technology plays a crucial role in enhancing all three aspects. Using analytics and cloud-based systems can improve risk management,	Telkom Indonesia used analytics to predict risks and improve operational efficiency.

	customer satisfaction, and operational efficiency.	
Implementation Challenges	Implementing strategies can face challenges such as resource limitations and process complexity. Suitable solutions are necessary to address these challenges.	Unilever Indonesia faced challenges aligning risk management strategies with customer satisfaction and efficiency.
SME Size and Strategy	SME size influences their ability to implement strategies. Small SMEs may face resource constraints, while medium-sized SMEs have more resources for investment in technology and training.	Tahu Pong faced resource constraints, while Sido Muncul could invest more in technology and training.

CONCLUSION

This research confirms that risk management, customer satisfaction, and operational efficiency are key interconnected factors that have a significant impact on the success of MSMEs in competitive markets. Through the analysis of relevant case studies, it has been demonstrated that effective risk management strategies can help MSMEs navigate market uncertainties and maintain operational stability. High customer satisfaction, achieved through superior product and service quality, contributes to customer growth and loyalty. Operational efficiency, obtained through technological innovation and process improvements, enables MSMEs to reduce costs and enhance competitiveness. The integration of these three factors helps MSMEs face market challenges and achieve sustainable growth.

The implications of this research suggest that MSMEs should develop and implement strategies that integrate risk management, customer satisfaction, and operational efficiency. Good risk management can protect MSMEs from potential disruptions and unexpected losses, while high customer satisfaction supports business loyalty and growth. Enhanced operational efficiency helps MSMEs reduce costs and increase profitability. Therefore, MSMEs need to invest in technology and training to improve these three aspects, as well as actively monitor and adjust their strategies to respond to market changes.

RECOMMENDATIONS

Based on the findings of this research, several important recommendations can be proposed. First, MSMEs should adopt a data-driven risk management approach and leverage technology to monitor and evaluate risks in real-time. Educating and training employees on

potential risks is also important to minimize their impact. Additionally, a focus on customer satisfaction is crucial; MSMEs should continuously gather customer feedback and make necessary adjustments to products and services to meet their needs. Loyalty programs and responsive customer service can enhance customer satisfaction and encourage repeat purchases. To improve operational efficiency, MSMEs should invest in automation technology and efficient management systems to increase productivity and reduce costs. Operational efficiency can also be enhanced through continuous internal process improvements. Finally, it is essential for MSMEs to integrate risk management, customer satisfaction, and operational efficiency strategies into their planning and operational execution. The use of analytical tools and data-driven management systems can facilitate this integration and help MSMEs effectively address market challenges.

This research has several limitations that need to be considered. First, the analysis only covers case studies available on Google Scholar, which may not encompass the full spectrum of MSMEs across various sectors. Second, the qualitative approach of the literature review may limit the generalizability of the findings to all types of MSMEs, given that specific characteristics and challenges may differ between industry sectors. Third, the data drawn from the 2020-2024 period reflects market conditions and risks that may change in the future, so these research findings may need to be updated to reflect recent developments. Finally, this research relies on the availability and quality of the selected articles, which may affect the depth and accuracy of the analysis

REFERENCES

- A Y A Fianto. (2018). Antecedents of customer satisfaction for small medium enterprises product in Indonesia. *International Journal of Civil Engineering and Technology*, 9(11), 2691–2702.
- Amraoui, S., Elmaallam, M., Bensaid, H., & Kriouile, A. (2019). Information Systems Risk Management: Litterature Review. *Computer and Information Science*, 12(3), 1–20. <https://doi.org/10.5539/cis.v12n3p1>
- Auramo, J., Tanskanen, K., & Småros, J. (2004). Increasing operational efficiency through improved customer service: process maintenance case. *International Journal of Logistics Research and Applications*, 7(3), 167–180. <https://doi.org/10.1080/13675560412331298446>
- Ausat, A. M. A., & Peirisal, T. (2021). Determinants of E-commerce Adoption on Business Performance : A Study of MSMEs in Malang City , Indonesia. *Journal On Optimizations Of Systems At Industries*, 20(2), 104–114. <https://doi.org/10.25077/josi.v20.n2.p104-114.2021>
- Ausat, A. M. A., Siti Astuti, E., & Wilopo. (2022). Analisis Faktor Yang Berpengaruh Pada Adopsi E-commerce Dan Dampaknya Bagi Kinerja UKM Di Kabupaten Subang. *Jurnal Teknologi Informasi Dan Ilmu Komputer (JTIK)*, 9(2), 333–346. <https://doi.org/10.25126/jtiik.202295422>

- Ausat, A. M. A., & Suherlan, S. (2021). Obstacles and Solutions of MSMEs in Electronic Commerce during Covid-19 Pandemic: Evidence from Indonesia. *BASKARA: Journal of Business and Entrepreneurship*, 4(1), 11–19. <https://doi.org/10.54268/BASKARA.4.1.11-19>
- Carl A, S. (2004). The Relationship between Operational Efficiency and Customer Service. *Transportation Journal*, 43(3), 48–58.
- De Weger, E., Drewes, H. W., Van Vooren, N. J. E., Luijkx, K. G., & Baan, C. A. (2022). Engaging citizens in local health policymaking. A realist explorative case-study. *PLOS ONE*, 17(3), e0265404. <https://doi.org/10.1371/journal.pone.0265404>
- Ferreira de Araújo Lima, P., Crema, M., & Verbano, C. (2020). Risk management in SMEs: A systematic literature review and future directions. *European Management Journal*, 38(1), 78–94. <https://doi.org/10.1016/j.emj.2019.06.005>
- Hadi, D. P., & Indradewa, R. (2019). The Service Quality Effect on Corporate Reputation, Customers Satisfaction, and Loyalty. *Journal of Multidisciplinary Academic*, 3(3), 51–56.
- Iqbal Noor, Alhidayatullah, & Amal, M. K. (2023). Dimensions of Service Quality in Influencing Customer Satisfaction. *Adpebi International Journal of Multidisciplinary Sciences*, 2(2), 189–197.
- Iskandar, Y. (2023). Digital Transformation Model and the Role of HR in Indonesian MSMEs. *International Journal of Business, Law, and Education*, 4(2), 1427–1453. <https://doi.org/10.56442/ijble.v4i2.334>
- Judijanto, L., Bahrun Thalib, Haryanto, & Al-Amin. (2024). ai-based decision making in macro and microeconomics: toward optimal efficiency. *Prosiding Seminar Nasional Indonesia*, 2(2), 206–218.
- Martínez-Peláez, R., Ochoa-Brust, A., Rivera, S., Félix, V. G., Ostos, R., Brito, H., Félix, R. A., & Mena, L. J. (2023). Role of Digital Transformation for Achieving Sustainability: Mediated Role of Stakeholders, Key Capabilities, and Technology. *Sustainability*, 15(14), 11221. <https://doi.org/10.3390/su151411221>
- Rane, N., Achari, A., & Choudhary, S. P. (2023). Enhancing customer loyalty through quality of service: Effective strategies to improve customer satisfaction, experience, relationship, and engagement. *International Research Journal of Modernization in Engineering Technology and Science*, 5(5), 427–452. <https://doi.org/10.56726/IRJMETS38104>
- Torabi, S. A., Giah, R., & Sahebjamnia, N. (2016). An enhanced risk assessment framework for business continuity management systems. *Safety Science*, 89, 201–218. <https://doi.org/10.1016/j.ssci.2016.06.015>
- Triwahyono, B., Rahayu, T., & Kraugusteeliana, K. (2023). Analysing the Role of Technological Innovation in Improving the Operational Efficiency of MSMEs. *Jurnal Minfo Polgan*, 12(1), 1417–1426. <https://doi.org/10.33395/jmp.v12i1.12791>
- Ulupui, I. G. K. A., Zairin, G. M., Musyaffi, A. M., & Sutanti, F. D. (2024). Navigating uncertainties: a tri-factorial evaluation of risk management adoption in MSMEs. *Cogent Business & Management*, 11(1), 1–19. <https://doi.org/10.1080/23311975.2024.2311161>
- 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>
- Yuliani, A. (2024). *Kemenkop UKM: 3,79 Juta UMKM Sudah Go Online*. Kementerian Komunikasi Dan Informatika. https://www.kominfo.go.id/content/detail/11526/kemenkop-ukm-379-juta-umkm-sudah-go-online/0/sorotan_media