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The Influence of Business Model Canvas and Value Proposition Canvas on MSME Productivity: Structural Analysis Approach

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Business Model Canvas; Business Strategy; Msmes; Productivity; Value Proposition

Abstract

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in economic growth and employment in Indonesia; however, their productivity remains suboptimal due to limitations in business model design and the alignment of value propositions with market needs. This research aims to analyze the effect of the Business Model Canvas (BMC) and Value Proposition Canvas (VPC) on MSME productivity using a structural analysis approach. The research employs a quantitative explanatory method, using primary data collected from 161 MSME respondents via a Likert-scale questionnaire and analyzed with Structural Equation Modeling based on Partial Least Squares (SEM-PLS). The results indicate that both the Business Model Canvas and the Value Proposition Canvas have a positive and significant effect on MSME productivity, with effects partially and simultaneously. Business Model Canvas shows the most dominant influence, while Value Proposition Canvas enhances alignment between value offerings and customer needs. The model explains 78.8% of the variance in MSME productivity. These findings highlight that the integration of business models and value propositions is a key factor in improving productivity and competitiveness of MSMEs.

Introduction

The Business Model Canvas (BMC) is a strategic tool used to describe and manage business models through nine integrated elements, which assist businesses in creating, delivering, and capturing value (Pasaribu et al., 2023). The implementation of the BMC is very important for MSMEs to increase efficiency and adapt to changes that occur in the business environment. Research shows that a structured business model can improve the performance of small businesses through resource optimization and marketing strategies (Imran et al., 2020). In addition, the BMC also has a positive impact on the sustainability and competitiveness of MSMEs, especially in facing the challenges of digitalization and changing consumer behavior (Maulana et al., 2023), making it a crucial factor in increasing MSME productivity.

The Value Proposition Canvas (VPC) is a tool used to ensure alignment between the value offered by a company and customer needs. By focusing on customer jobs, pains, and gains, the VPC plays a role in designing products or services that are relevant and valuable. Research shows that alignment between value propositions and customer needs can improve customer satisfaction and loyalty (Barak & Mokhatar, 2020), as well as the effectiveness of

marketing strategies and competitive positioning (El-Astal & Shaar, 2022). For MSMEs, designing the right value proposition is essential to increasing productivity and performance.

The productivity of MSMEs, a key indicator of business success, reflects the efficiency of outputs relative to inputs. In addition to increased output and revenue, productivity also includes operational efficiency as well as adaptability to market changes. Research shows that MSME productivity is influenced by internal factors such as business strategy, innovation, and resource management (Nuraini & Anwarudin, 2021), as well as external factors such as market conditions and value-based strategies (Ochoa Ortiz et al., 2023). Therefore, the integration of business models and value propositions is essential to increasing the sustainable productivity of MSMEs.

Figure 1. Indonesia's Economic Growth in the Fourth Quarter
Source: BPS, (2024)

MSMEs play a very important role in the Indonesian economy, making a significant contribution to economic output, labor absorption, and economic resilience. Data from the Central Statistics Agency (2024) show the contribution of MSMEs to GDP, labor absorption, exports, and entrepreneurship ratios, with the agriculture, trade, and processing industries serving as the largest labor absorbers between 2019 and 2022. The role of MSMEs has become increasingly vital over the past five years, especially following the COVID-19 pandemic, which has required adaptation and the utilization of digital channels. The government has targeted 30 million MSMEs to adopt digital technology by 2024; however, this digitalization does not necessarily lead to equal increases in productivity.

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in the Indonesian economy. Between 2019 and 2023, MSMEs contributed approximately 60–61% to GDP and absorbed 97% of the total national workforce (Habibi et al., 2025; Aprilia et al., 2025). The COVID-19 pandemic has encouraged MSMEs to adopt digital technology as an effort to sustain business operations and expand market reach (Sirait et al., 2023; Tarigan et al., 2022). The Government of Indonesia has targeted 30 million MSMEs to adopt digital technology by 2024, emphasizing the importance of innovation and digital marketing in increasing productivity (Sirait et al., 2023; Safitri et al., 2025).

Gambar 2. PDRB per Wilayah dalam Persen
Source: BPS, (2024)

MSMEs contribute around 60.5% to Indonesia's GDP (Aprilia et al., 2025) and absorb 97% of the workforce, making them highly important for job creation (Habibi et al., 2025; Tarigan et al., 2022). Digitalization has become a necessity for MSMEs to survive during the pandemic (Sirait et al., 2023), supported by government initiatives such as People's Business Credit (KUR) and digital training programs (Habibi et al., 2025). However, MSMEs still face various challenges, such as limited access to digital resources and capital, which can hinder productivity. Overcoming this gap is essential to maximize the economic potential of MSMEs. In the current context, MSME productivity is influenced by the accuracy of the business model and the ability to formulate value that meets customer needs, not merely by operational outputs. The Business Model Canvas (BMC) maps nine business elements in an integrated manner, while the Value Proposition Canvas (VPC) ensures the alignment of products or services with customer needs. The combination of BMC and VPC is particularly relevant in the face of dynamic competition, changing consumer behavior, and increasing digital penetration, which helps explain differences in MSME performance. The literature shows that digitalization and business model innovation are related to the efficiency and performance of small businesses, but these benefits are highly dependent on the ability to translate resources and market changes into an appropriate value proposition (Sultan & Riyadh, 2025).

The productivity of SMEs is greatly influenced by operational efficiency and strategic alignment with customer needs. The integration of the Business Model Canvas (BMC) and Value Proposition Canvas (VPC) provides a comprehensive framework to enhance the competitiveness of SMEs. BMC enables SMEs to analyze and optimize nine key components, such as customer segments and value propositions, to align with market demand (Innovating culinary business strategies:..., 2024). Case studies, such as Hendys Bakery, show that effective implementation of BMC can improve customer relationships and revenue through targeted strategies (Siregar et al., 2024).

VPC emphasizes a clear focus on customer needs by identifying jobs, pains, and gains, which are critical in developing a relevant value proposition. SMEs that successfully leverage digital technology can enhance their value propositions, as seen in case studies highlighting the role of e-commerce and social media in expanding market reach. The adoption of digital technologies is essential for operational efficiency and sustainable growth, enabling innovation

in business models. However, challenges such as limited digital literacy and access to infrastructure can hinder this transformation, requiring supportive policies and training initiatives (Yani et al., 2025).

Although BMCs and VPCs provide valuable tools for SMEs, it is important to recognize that not all businesses have the resources or readiness to implement these strategies effectively. Some may struggle to adapt to rapid market changes, highlighting the need for tailored support and resources. Normatively (das Sollen), MSMEs are expected to grow productively through structured business model management, responsiveness to market needs, and the ability to utilize technology to expand market access and improve efficiency. However, empirically (das Sein), many MSMEs continue to operate without designing a clear business model, developing a strong value proposition, or thoroughly analyzing how business components relate to their products. According to the OECD, increasing productivity and digitalization remains a top priority for Indonesia. On the other hand, research on MSME productivity in Indonesia remains fragmented and influenced by various direct and indirect factors. This gap indicates that many MSMEs do not consistently achieve strong business management and optimal productivity (OECD, 2024).

Productivity growth for small and medium enterprises (SMEs) is crucial for economic development, yet many SMEs struggle with business model planning and digital transformation. Although Indonesia has a large number of SMEs, the OECD notes that productivity has not reached optimal levels due to fragmented management practices and limited technology integration. Recent studies highlight several key points. A structured business model aligned with market needs is essential to improve SME productivity (Owalla et al., 2021). A clear value proposition is also necessary for SMEs to differentiate themselves and attract customers (Owalla et al., 2021).

Digital technologies such as e-commerce and cloud systems have the potential to increase SME productivity by up to 30% and profitability by 35% (Wulan & Reni, 2024). Case studies show that digital adoption improves operational efficiency and expands market reach (Yani et al., 2025). However, digital implementation faces challenges such as limited digital literacy and inadequate infrastructure (Wulan & Reni, 2024; Yani et al., 2025). Supporting policies and training programs are therefore essential to facilitate SME digital transformation (Yuen, 2023). Nevertheless, some argue that an excessive focus on digitalization may overlook other important aspects, such as financial planning and human resource development, which are equally critical for sustainable growth.

This research addresses a gap regarding the simultaneous impact of BMC and VPC on MSME productivity within structural models, particularly in Indonesia. Previous studies have generally focused on business model innovation or digital transformation in relation to MSME performance. Bibliometric studies also highlight the lack of research examining BMC and VPC as measurable constructs directly linked to MSME productivity, as well as gaps in geographical focus, theoretical development, and interconstruct integration in SME business model and performance research. This study seeks to integrate BMC and VPC into a quantitative model to explain MSME productivity, which has often been applied only in practice (Ndlovu et al., 2025).

The study conducted by Ndlovu et al. (2025) focuses on addressing this gap by exploring the simultaneous impact of the Business Model Canvas (BMC) and Value

Proposition Canvas (VPC) on MSME productivity in Indonesia. In contrast to previous research that emphasized business model innovation or digital transformation in general, this study combines BMC and VPC as measurable constructs within a quantitative model, providing a more comprehensive understanding. BMC, as a structured approach, helps MSMEs identify and leverage business performance drivers such as innovation capability and digital transformation (Muis, 2025). VPC, which focuses on aligning products with customer needs, enables MSMEs to tailor their offerings to market demand, supported by innovation and digitalization ("Innovation and Digitalization as Support...," 2025). The integration of BMC and VPC within a structural model produces a holistic analysis of MSME productivity, which is influenced by various factors such as technology and labor (Sari & Arka, 2023).

The combined use of BMC and VPC provides insights into how these factors interact within a business model framework. However, while this integration offers a promising approach to understanding MSME productivity, it is important to consider the broader context of digital transformation and innovation. Research shows that digital business model transformation, combined with green intellectual capital, can significantly improve MSME performance (Daryono et al., 2024). This indicates that although BMCs and VPCs are valuable tools, they should be part of a broader strategy that includes digital and sustainable practices.

This study employs structural analysis to examine the causal relationships between the Business Model Canvas (BMC), Value Proposition Canvas (VPC), and MSME productivity. This approach was chosen for its ability to comprehensively explain latent relationships between variables, go beyond descriptive analysis or simple regression, and measure the strength of each construct's influence on productivity. Its advantages include: (1) the quantitative application of business models, (2) the operationalization of BMC and VPC dimensions into measurable indicators, and (3) an emphasis on MSME productivity as the outcome variable. The novelty of this study lies in integrating BMC and VPC within a structural analysis framework based on MSME field data, producing an empirical, measurable, and relevant explanation for small business strategy development in the post-pandemic and digitalization era (Owalla et al., 2022).

The structural analysis applied by Owalla et al. (2022) provides a robust framework for testing cause-and-effect relationships between BMC, VPC, and MSME productivity. This approach goes beyond conventional descriptive analysis by offering measurable indicators and focusing on specific productivity outcomes. Its advantages include comprehensive mapping through quantitative assessment of BMC and VPC influences, operationalization into measurable indicators, and a strong emphasis on productivity outcomes. The integration of BMC and VPC within a single structural framework offers a deeper understanding of their combined effects on MSME strategies, particularly in the context of post-pandemic recovery and digitalization. However, qualitative research remains relevant, as it captures the complexity of MSME environments that may not be fully detected through quantitative methods (Thai et al., 2023; Nugroho & Fontana, 2023).

The novelty of this study makes a significant contribution compared to previous research. First, it combines the Business Model Canvas and the Value Proposition Canvas into an empirically tested structural model, providing a comprehensive understanding of their relationship in influencing MSME productivity. Second, it focuses specifically on MSME productivity as the dependent variable, rather than general business performance, offering a

more precise perspective. Third, it utilizes empirical data from Indonesian MSMEs in the post-pandemic digital era, reflecting current business dynamics. Fourth, the findings are expected to contribute academically and provide practical recommendations for MSMEs to improve business models and value propositions, making them more adaptive and sustainable.

This study aims to analyze the impact of the Business Model Canvas (BMC) and Value Proposition Canvas (VPC) on MSME productivity through structural analysis, with the objective of developing an empirical model that explains strategic factors driving productivity improvements. It addresses the main issue concerning the relationship between business model design, value proposition formulation, and MSME productivity. Specifically, the study examines the influence of BMC (as a representation of operational business structure) and VPC (as a tool for understanding value–customer fit) on productivity. Furthermore, it analyzes the simultaneous influence of BMC and VPC on variations in MSME productivity through a structural analysis approach, providing a comprehensive understanding of the relationship between business model design, value proposition, and productivity outcomes.

Based on a conceptual framework integrating the Business Model Canvas (BMC), Value Proposition Canvas (VPC), and MSME productivity, this study proposes the following hypotheses. BMC, as a strategic business framework, is expected to have a positive effect on MSME productivity through resource optimization, activity management, and customer relationship enhancement. VPC, which emphasizes value alignment with customer needs, is also expected to contribute positively to MSME productivity through improved customer satisfaction and offering effectiveness. The simultaneous integration of BMC and VPC is expected to have a stronger influence on MSME productivity, as both complement each other in designing market-oriented strategies and improving operational efficiency. The hypotheses of this research are:

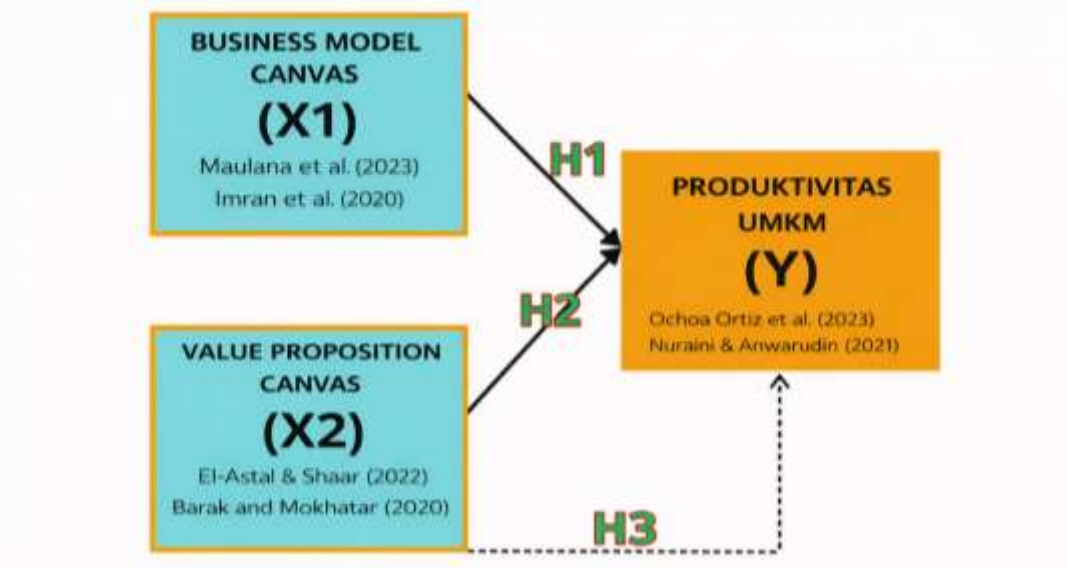

Figure 3. Research Hypothesis

Description:

1. H1: BMC has a positive and significant effect on the productivity of MSMEs.
2. H2: VPC has a positive and significant effect on the productivity of MSMEs.
3. H3: BMC and VPC simultaneously have a positive and significant effect on the productivity of MSMEs.

RESEARCH METHOD

This study was quantitative research with an explanatory approach that aimed to analyze the impact of the Business Model Canvas (BMC) and Value Proposition Canvas (VPC) on the productivity of MSMEs through structural analysis. The focus of this study was on testing the causal relationships between latent variables, namely BMC and VPC as independent variables, and MSME productivity as the dependent variable. An explanatory quantitative approach was used to explain the relationships between variables empirically and quantitatively (Hair et al., 2021). The data used were primary data obtained through the distribution of questionnaires to MSME actors who served as research respondents, with a sampling technique using purposive sampling based on active business criteria and those who had conducted operational business activities (Sekaran & Bougie, 2020).

The data collection technique was carried out through a structured questionnaire-based survey using a Likert scale to measure respondents' perceptions of the indicators of each variable (Saunders et al., 2021). The data analysis method used was Structural Equation Modeling (SEM) based on Partial Least Squares (PLS), which was chosen for its ability to analyze complex relationships between latent variables simultaneously and its suitability for relatively small to medium sample sizes (Hair et al., 2022).

The research process included the stages of problem identification, preparation of research instruments, data collection, data processing and analysis using statistical software, interpretation of results, and drawing conclusions and recommendations. The outputs targeted in this study were an empirical model explaining the influence of BMC and VPC on MSME productivity, scientific articles to be published in reputable journals, and strategic recommendations for MSME actors to increase business productivity. Achievement indicators included the validity and reliability of the model, the significance of the relationships between variables, and the theoretical and practical contributions of the research results (Sarstedt et al., 2021).

RESULT AND DISCUSSION

This study involved 161 MSME actors who were randomly selected and actively running their businesses. Data was collected through questionnaires to measure the implementation of the Business Model Canvas (BMC), Value Proposition Canvas (VPC), and business productivity levels. The results of data processing showed a positive perception of respondents towards the research variables, with an average score of 3.94 for BMC, 3.94 for VPC, and 3.86 for MSME productivity (Likert scale 1–5). This indicates the application of the concept of a good business model and value proposition as well as increased productivity among MSMEs.

Table 1. Reliability Test

Variable	Cronbach's Alpha	Description
BMC	0,977	Highly Reliable
VPC	0,968	Highly Reliable
Productivity	0,926	Highly Reliable

Source: Primary Data Processed, (2025)

Reliability testing is carried out to understand the consistency of the measuring instrument in the research. The test results showed that all variables had Cronbach's Alpha

values above 0.70, so they were declared reliable. These findings indicate that all indicators in the study can measure constructs consistently.

Table 2. Correlation analysis,

Variable	BMC	VPC	Productivity
BMC	1	0,926	0,872
VPC	0,926	1	0,869
Productivity	0,872	0,869	1

Source: Primary Data Processed, (2025)

Correlation analysis is used to observe the relationship between variables in a study. The results showed that there was a strong and positive relationship between these variables. These findings indicate that the better the implementation of the Business Model Canvas and Value Proposition Canvas, the productivity of MSMEs will increase.

The coefficient of determination (R^2) is used to measure how well an independent variable can explain a dependent variable. $R^2 = 0.788$ (78.8%) This shows that the Business Model Canvas and Value Proposition Canvas can explain 78.8% of the variation in MSME productivity, while the remaining 21.2% is influenced by other variables not included in the study.

Table 3. Hypothesis Testing

Hypothesis	Relationship	Coefficient	T -Count	P-Value	Decision
H1	BMC → Productivity	0,476	4,864	<0,001	Accepted
H2	VPC → Productivity	0,434	4,430	<0,001	Accepted
H3	BMC & VPC → Productivity	$R^2 = 0,788$	292,8	<0,001	Accepted

Source: Primary Data Processed, (2025)

Hypothesis testing is carried out to understand the impact of each independent variable on the dependent variable. These findings indicate that all hypotheses in this study are accepted.

Research shows that there is a positive and significant influence of the Business Model Canvas on the productivity of MSMEs. Designing and managing elements of an effective business model correlates with increased productivity. A clear business structure, which includes customer segmentation, distribution channels, key activities, and cost and revenue management, has a critical role in improving business efficiency and results. The Value Proposition Canvas has also been proven to have a positive and significant influence on the productivity of MSMEs. The compatibility between the value offered and the needs of customers is crucial for the success of the business. MSMEs that understand customer needs, reduce risk, and provide tangible benefits tend to have higher sales and customer satisfaction, thus contributing to increased productivity. Simultaneously, the Business Model Canvas and the Value Proposition Canvas have a significant effect on the productivity of MSMEs. Productivity is determined by a good business structure and the ability to create relevant value for customers. The integration of BMC and VPC is key to increasing operational efficiency and success in the market. The combination of business strategy and customer value strategy results in optimal impact on the productivity of MSMEs.

The analysis of this study reveals several important findings regarding the relationship between the Business Model Canvas, the Value Proposition Canvas, and the productivity of MSMEs. First, the Business Model Canvas has a dominant influence on the productivity of MSMEs, which shows that a good business model structure and management are essential to improve efficiency and performance. Second, the Value Proposition Canvas also plays a significant role in increasing customer satisfaction and business success. MSME actors' understanding of customer needs and the right value preparation contribute to increased productivity. Third, the combination of the Business Model Canvas and the Value Proposition Canvas explains most of the variation in MSME productivity, confirming that the integration of business model management and value creation for customers is the key to continuous performance improvement.

This research also identifies aspects that need to be improved by MSMEs, such as income diversification, strengthening business cooperation, and a deep understanding of customer needs. Improvements in these aspects are expected to increase the productivity and competitiveness of MSMEs. This research produced results that are both academic and practical. Academically, this study develops an empirical model that explains the impact of the Business Model Canvas and the Value Proposition Canvas on the productivity of MSMEs, as well as contributing to the field of business management and entrepreneurship. The study also presents empirical evidence that these two variables have a significant influence on business productivity, which strengthens the literature and becomes the scientific basis for further research.

Practically, this study provides recommendations for MSME actors, including optimizing Business Model Canvas elements, improving the quality of value propositions, and strengthening marketing and customer service strategies. It is hoped that the implementation of these recommendations will improve operational efficiency and business success. Another academic result is scientific articles that are compiled in accordance with the standards of reputable journals and are expected to be published in accredited national journals or international journals, which contribute to the development of MSME studies.

CONCLUSION

This study found that the Business Model Canvas (BMC) and Value Proposition Canvas (VPC) had a positive and significant impact on MSME productivity, with BMC supporting structured and efficient business management and VPC ensuring alignment between value offerings and customer needs, thereby enhancing satisfaction and overall business success. The integration of these two frameworks explained a substantial portion of the variation in productivity, highlighting that both internal business structuring and the ability to understand and respond to market demands are critical drivers of MSME performance. Based on these findings, MSME actors are encouraged to strengthen their capabilities in designing and implementing BMC elements—particularly revenue streams, customer relationships, and key partnerships—while also improving their ability to develop clear, customer-focused value propositions. Additionally, government and related institutions should support MSMEs through continuous training, mentoring, and digital literacy programs, alongside promoting the adoption of digital technologies such as e-commerce and data-driven marketing to enhance business effectiveness. Future research should expand the model by incorporating variables

such as digital transformation, financial management, and human resource capability to provide a more comprehensive understanding of the factors influencing MSME productivity.

REFERENCES

Aprilia, N., Subroto, W. T., & Sakti, N. C. (2025). The Role of Small and Medium Enterprises (SMEs) in Supporting the People's Economy in Indonesia. International Journal of Research and Scientific Innovation, XI(XII), 368–376. https://doi.org/10.51244/ijrsi.2024.11120036

Barak, M., & Mokhatar, S. S. (2020). Value proposition and customer satisfaction: Evidence from small businesses. Journal of Business and Retail Management Research, 14(3), 45–56. https://doi.org/10.24052/JBRMR/V14IS03/ART-05

Daryono, D., Dewi, M., & Udin, U. (2024). Digital Business Model Transformation and MSME Performance: The Mediating Role of Green Intellectual Capital. Journal of Logistics, Informatics and Service Science. https://doi.org/10.33168/jliss.2024.0628

El-Astal, A., & Shaar, A. (2022). The role of value proposition design in enhancing competitive advantage. International Journal of Innovation and Business Strategy, 16(2), 78–89. https://www.ijibs.com/index.php/ijibs/article/view/198

Habibi, M. R., Ramadhan, F. M., Handayani, S., Habibi, M. R., Ramadhan, F. M., & Handayani, S. (2025). Analisis Deskriptif Kualitatif tentang Peran Usaha Mikro, Kecil, dan Menengah (UMKM) terhadap Pertumbuhan Ekonomi di Indonesia. 2(2), 81–90. https://doi.org/10.71417/j-sime.v2i2.1129

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook. Springer. https://doi.org/10.1007/978-3-030-80519-7

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2022). Advanced issues in partial least squares structural equation modeling. SAGE Publications. https://us.sagepub.com/en-us/nam/advanced-issues-in-partial-least-squares-structural-equation-modeling/book270945

Imran, M., Hamid, S., Aziz, A., & Hameed, W. (2020). The role of business model innovation in SMEs performance. Journal of Small Business and Enterprise Development, 27(2), 223–240. https://doi.org/10.1108/JSBED-01-2019-0008

Innovating culinary business strategies: the application of the business model canvas in indonesia's sme landscape. (2024). https://doi.org/10.5281/zenodo.13377673

Maulana, A., Rahman, F., & Putri, D. (2023). Implementation of business model canvas in improving SME performance in the digital era. Journal of Entrepreneurship and Business, 5(1), 12–25. https://doi.org/10.31098/jeb.v5i1.2023

Muis, I. (2025). A PRISMA-Guided Systematic Review on the Business Performance of Small and Medium Enterprises in Indonesia. Journal Of Accounting And Finance Management, 6(3), 1381–1387. https://doi.org/10.38035/jafm.v6i3.2261

Ndlovu, M. N., Ndlovu, E. N., & Ebewo, P. E. (2025). The Intersection of Business Models and SME Performance: A Bibliometric Analysis of Research Trends. Administrative Sciences, 15(4), 143. https://doi.org/10.3390/admsci15040143

Nugroho, A. S., & Fontana, A. (2023). BUILDING MSME COMPETITIVENESS ADVANTAGES THROUGH CAPACITY BUILDING OF BUSINESS MODEL INNOVATIONNaya Saing UMKM Melalui Peningkatan Kapasitas Inovasi Model Bisnis. Jurnal Riset Manajemen Sains Indonesia: JRMSI, 14(01), 70–81. https://doi.org/10.21009/jrmsi.014.1.08

Nuraini, N., & Anwarudin, O. (2021). Factors affecting productivity of small and medium enterprises. Journal of Economic Development, 19(1), 55–67. https://doi.org/10.20473/jed.v19i1.2021

Ochoa Ortiz, M., Perez, L., & Gomez, R. (2023). SME productivity and performance: A strategic perspective. Journal of Business Research, 158, 113–125. https://doi.org/10.1016/j.jbusres.2022.113125

Owalla, B., Gherhes, C., Vorley, T., & Brooks, C. (2022). Mapping SME productivity research: A systematic review of empirical evidence and future research agenda. Small Business Economics, 58(3), 1285–1307. https://doi.org/10.1007/s11187-021-00450-3

Pasaribu, R. D., Shalsabila, D., & Djatmiko, T. (2023). Revamping business strategy using Business Model Canvas (BMC), SWOT analysis, and TOWS matrix. *Heritage and Sustainable Development*, *5*(1), 1–18.

Safitri, N., Dinana, A., & Mashudi, M. (2025). MSMEs as the Backbone of the Economy: Optimizing Potential and Facing Various Challenges. Public Service, 2(1), 28–38. https://doi.org/10.61166/service.v2i1.10

Sari, L. P., & Arka, S. (2023). Pengaruh kredit usaha rakyat, tenaga kerja dan teknologi terhadap produktivitas usaha mikro kecil dan menengah (umkm) di kota denpasar. Ekonomi Dan Bisnis Universitas Udayana (e-Journal), 309. https://doi.org/10.24843/eeb.2023.v12.i02.p16

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. Handbook of Market Research. https://doi.org/10.1007/978-3-319-05542-8_15-2

Saunders, M., Lewis, P., & Thornhill, A. (2021). Research methods for business students (9th ed.). Pearson. https://www.pearson.com/en-gb/subject-catalog/p/research-methods-for-business-students/P200000003164

Sekaran, U., & Bougie, R. (2020). Research methods for business: A skill building approach (8th ed.). Wiley. https://www.wiley.com/en-us/Research+Methods+for+Business%3A+A+Skill+Building+Approach%2C+8th+Edition-p-9781119664657

Sirait, H., Basuki, R. A., Rosalina, S. S., Supriyanto, S., & Sari, E. (2023). MSMEs Digitalization: The Future Economic Ecosystem After the Covid-19 Era. Wacana: Jurnal Sosial Dan Humaniora, 25(4). https://doi.org/10.21776/ub.wacana.2022.025.04.03

Siregar, N. H., Ramadhani, S., & Harahap, M. I. (2024). Strategy Analysis Using the Business Model Canvas Method. Jurnal Manajemen Bisnis, 11(1), 536–546. https://doi.org/10.33096/jmb.v11i1.767

Sultan, A. A., & Riyadh, H. A. (2025). Assessing digital transformation in SMEs: Using the canvas model in China and Indonesia. International Journal of Organizational Analysis, 33(10), 3827–3854. https://doi.org/10.1108/IJOA-08-2024-4757

Tarigan, Z. N. A. B., Dewi, F. N., & Pribadi, Y. (2022). Keberlangsungan usaha mikro, kecil, dan menengah di masa pandemi: dukungan kebijakan pemerintah. Jurnal BPPK, 15(1), 12–23. https://doi.org/10.48108/jurnalbppk.v15i1.666

Wulan, T. S., & Reni, R. (2024). Digital Transformation as a Catalyst for SMEs Productivity and Profitability in the Digital Era. Journal of Economic Education and Entrepreneurship Studies, 5(4). https://doi.org/10.62794/je3s.v5i4.4543

Yani, A., Manafe, M. W. N., Santosa, S., Yani, A., Manafe, M. W. N., & Santosa, S. (2025). Analysis of the Role of Digital Technology in Driving Business Model Innovation in MSMEs: Implications for Enhancing Operational Efficiency and Sustainable Economic Growth. Technology and Society Perspectives, 3(1). https://doi.org/10.61100/tacit.v3i1.253

Yuen, T. M. (2023). Going Digital for SMES: Adapting Business Model and Seizing Opportunities to Achieve Sustainable Business Performance. International Journal of Academic Research in Business & Social Sciences, 13(2). https://doi.org/10.6007/ijarbss/v13-i2/16370