



EXAMINING MSME BUSINESS PERFORMANCE IN CENTRAL JAVA: THE ROLE OF ENTREPRENEURIAL ORIENTATION AND INNOVATION STRATEGY

Jefri Heridiansyah^{1✉}, Ariyani Indriastuti², Wahyudi³, Catur Prabowo⁴

^{1,2,3}Management, STIE Semarang, Indonesia

⁴System Information, STMIK Himsya Semarang, Indonesia

Article Information Abstract

History of article:
Accepted January 2025
Approved February 2025
Published March 2025

Keywords:
Entrepreneurial
Orientation,
Innovation Strategy,
Business Performance,
MSME

This study explains innovation strategy's role in mediating entrepreneurial orientation's effect on MSME business performance. This research was conducted in MSME in Central Java, Indonesia. This analytical study explores empirical relationships using a descriptive observational, cross-sectional, deductive, and quantitative approach, statistical software Smart PLS, and a sample of 260 respondents. The analysis results show that entrepreneurial orientation also has a significant positive effect on innovation strategy, which in turn has a significant positive effect on MSME business performance. Entrepreneurial orientation has a significant positive effect on the performance of MSMEs. Innovation strategy has a mediating factor between entrepreneurial orientation and MSME business performance.

✉correspondence Address:
Jl. Menoreh Utara Raya No.11, Sampangan, Kec.
Gajahmungkur, Semarang, Jawa Tengah
E-mail: jefri@sti Semarang.ac.id

© 2025 Universitas Negeri Semarang
e-ISSN 2502-1451

INTRODUCTION

The World Bank states that Micro, Small, and Medium Enterprises (MSMEs) significantly impact most countries' economies, especially in developing nations (Asian Development Bank, 2020). Most businesses worldwide fall under the classification of MSMEs and play a crucial role in creating jobs (International Labour Organization (ILO), 2019). MSMEs comprise over 90% of all businesses and account for more than 50% of employment opportunities. In developing nations, formal MSMEs can contribute up to forty percent of the Gross Domestic Product (GDP), which could be even higher when informal MSMEs are considered. Due to their substantial economic impact and their status as major employers, many governments prioritize research into MSMEs (Kumar & Gajakosh, 2021). MSMEs can maintain the market advantage of existing products by using specialized marketing resources and competencies (Pei, Guo, Wu, Zhou, & Yeh, 2020).

In Indonesia, MSMEs make a significant contribution to the national economy and have the potential to substantially influence the

country's Gross Domestic Product (GDP) (Muliadi, Darma, & Kasuma, 2020; P. E. Prasetyo, 2020; P. Prasetyo & Kistanti, 2020).

However, these enterprises still encounter various challenges in terms of business management, financial management, human resource management, and entrepreneurship (Hernita, Surya, Perwira, Abubakar, & Idris, 2021; Mayr, Mitter, Kücher, & Duller, 2021; Salamzadeh & Dana, 2021; Sarvari, Chan, Alaeos, Olawumi, & Abdalridah Aldaud, 2021). As such, the Indonesian government's commitment to the 'Making Indonesia 4.0' initiative has provided a conducive environment for MSMEs to embrace digital innovations (Lestari, Abd Hamid, Shamsuddin, Kurniasari, & Yaacob, 2024). When compared, it is evident that human resource competencies, skills, and knowledge in MSMEs are not as strong as those in larger enterprises (Hernita et al., 2021; Purnamawati, Jie, Hong, & Yuniarta, 2022; Surya et al., 2021). Moreover, the human resource practices of many MSMEs do not effectively encourage knowledge creation and exchange. Generally, MSMEs also partake in fewer

management development activities when compared to larger firms (Alhusen & Bennat, 2020; Demirkan, Srinivasan, & Nand, 2022; Heenkenda, Xu, Kulathunga, & Senevirathne, 2022; Madrid-Guijarro, Martin, & García-Pérez-de-Lema, 2021).

Central Java, known for its tourism, agribusiness, and manufacturing, is a hub for various commercial activities, shopping centers, culinary delights, and transit connecting West Java and East Java. These diverse attractions draw domestic and international tourists to visit Central Java. The rise in MSMEs is closely linked to the growth of home industries in Central Java, which saw a 40% increase in the number of MSMEs in 2022 compared to 2017 (Dinas Koperasi Usaha Kecil dan Menengah Provinsi Jawa Tengah, 2022). The expansion of MSMEs in Central Java surpasses the growth of consumer demand, resulting in heightened competition among these businesses for customers. The surge in MSMEs has led to an increasingly competitive MSME industry in Central Java, challenging these enterprises to continuously enhance their performance and provide superior services to their clientele.

Entrepreneurship can produce Micro, Small and Medium Enterprises (MSMEs) entrepreneurs. Entrepreneurship is one of the best breakthroughs to solve the problem of educated unemployment (Nurcaya, Rahyuda, Giantari, & Ekawati, 2024). The lack of utilization of local wisdom potential also triggered the decline in the performance of MSMEs (Nurcaya et al., 2024). The fluctuating growth trend of MSMEs reflects suboptimal performance. Entrepreneurial orientation (EO) is the ability to think and act creatively and innovatively, which can be used as a basis and resource to seek opportunities for success (Singh, Bhowmick, Eesley, & Sindhav, 2021). Entrepreneurial orientation will create resilient MSME managers because they dare to bear risks and can make decisions to turn uncertainty into an opportunity (Bai, Liu, & Zhou, 2020; Dong, Xu, Luo, Nicol, & Liu, 2020; Rofiaty, 2019). Entrepreneurial orientation has a significant impact directly on firm performance, including MSMEs (Bai et al., 2020; Basco, Hernández-Perlines, & Rodríguez-García, 2020; Cenamor, Parida, & Wincent, 2019; Dong et al., 2020; Tajeddini, Martin, & Ali, 2020). As a mechanism for changing the value and satisfaction of certain resources, business innovation is a relatively new manifestation in the nuanced dimension of doing old business or modifying new businesses as a result of differences in the dimension of time, dimension of distance, dimension of education, dimension of the economy, and so on experienced by an entrepreneur (Nawaz et al., 2024; Wiguna et al., 2024).

However, entrepreneurial orientation only sometimes significantly impacts company performance (Rachmawati, Suliyanto, & Suroso, 2022). When combined with affective trust, entrepreneurial orientation cannot significantly strengthen or weaken the relationship between business network reach and firm performance, even though other studies require the role of learning orientation (Dong et al., 2020). Entrepreneurial orientation cannot improve firm performance unless combined with other variables, such as networking (Tajeddini et al., 2020). Entrepreneurial orientation can have a significant or insignificant effect on innovation performance (Zhang, O'Kane, & Chen, 2020).

Based on the description above, MSMEs are worth researching, especially in improving their business performance. The model was developed by adding the innovation strategy variable as an intervening variable that bridges the effect of entrepreneurial orientation on MSMEs' performance. This research uses the Resource Base View (RBV) as the leading theory. Another theory used is the Contingency Theory as a supporting theory. RBV theory considers that the company's resources and capabilities are essential because they are the core or basis of its competitiveness and performance. RBV assumes that a company can compete by managing its resources. Resource management becomes a competitive advantage (Nurcaya et al., 2024). Contingency Theory is an organizational theory that states that there is no best way to manage a company. The optimal policy or decision-making depends on the internal and external situations (Ghozali, 2020). These theories are relevant to the variables in the study. This study explains innovation strategy's role in mediating entrepreneurial orientation's effect on MSME business performance.

HYPOTHESES DEVELOPMENT

A higher entrepreneurial orientation will cause the company to make policies or decisions supporting entrepreneurial orientation to achieve company performance (Zhang et al., 2020). Previous research examining this relationship showed significant positive results about the impact of entrepreneurial orientation on innovation strategies (Cenamor et al., 2019; Zhang et al., 2020). Entrepreneurial orientation does not have a maximal effect on innovation strategy. Likewise, innovation strategy does not significantly affect business performance (Rofiaty, 2019). Although entrepreneurial orientation significantly affects innovation strategy, its effect is still relatively low (Ciampi, Demi, Magrini, Marzi, & Papa, 2021). Therefore, it is hypothesized:

H₁: Entrepreneurial orientation has a significant positive effect on innovation strategy.

The field of digital entrepreneurship has become a crucial aspect, contributing to economic innovation (Dirgatama, 2024). Innovation strategy significantly impacts the company's business performance (Hutahayan, 2020; Zhang et al., 2020). A better innovation strategy will lead to better company performance achievements, such as financial and performance in other fields (Fernandez, 2022). However, not all innovation strategies support achieving business performance well (Mendoza, Llopis, Gasco, & Gonzalez, 2021). Corporate innovation strategies, such as cost strategies, have no significant effect on company performance (Nurcaya et al., 2024). Therefore, the following hypothesis is proposed:

H₂: Innovation strategy has a significant positive effect on business performance.

Entrepreneurial orientation, innovation ability, risk-taking ability, and proactive nature are key issues in determining company performance (Ciampi et al., 2021; Dong et al., 2020; Mendoza et al., 2021; Rofiaty, 2019; Thompson, 2009). However, entrepreneurial orientation does not always significantly improve business performance (Arshad et al., 2014; Rachmawati et al., 2020; Tajeddini et al., 2020). Therefore, the following hypothesis is proposed:

H₃: Entrepreneurial orientation has a significant positive effect on business performance.

Entrepreneurial orientation and innovation strategy significantly impact business performance ((Zhang et al., 2020). Entrepreneurial orientation and innovation strategies are generally needed to generate specific ideas, although the mediating role of innovation strategies is not significant (Lita, Faisal, & Meuthia, 2020). Entrepreneurial orientation can only sometimes improve business performance, even though it is mediated by adequate business strategy (Safari & Saleh, 2020). Therefore, the following hypothesis is proposed:

H₄: Entrepreneurial orientation significantly positively affects business through innovation strategy.

METHOD

This analytical study explores empirical relationships using a descriptive observational, cross-sectional, deductive, and quantitative approach (Farashah & Blomquist, 2020; Pitafi, Kanwal, Akhtar, & Irfan, 2018; Pitafi, Kanwal, Ali, Khan, & Waqas Ameen, 2018). The geographical location for this study is Central Java, Indonesia. This study has considered respondents from different locations residing in Central Java, Indonesia, as the population study.

The investigators collected the desired sample data in 2024 (Pitafi, Kanwal, Akhtar, et al., 2018; Pitafi, Kanwal, Ali, et al., 2018). Therefore, the investigators drew a sample from the Central Java Indonesian population. At the same time, people have also started using online social media to communicate and interact. This survey applied non-probability convenience sampling to collect data for further analysis (Avotra, Chengang, Sandra Marcelline, Asad, & Yingfei, 2021).

The investigators recruited available and willing participants to participate in the survey and obtained respondents' prior consent for data collection. This study received responses from 260 participants from MSME in Central Java, Indonesia. This study set the eligibility criteria, and any male or female resident of Indonesia was eligible to participate. The total number of questionnaires distributed to participants was 260. The researchers received 260 valid questionnaires for analysis. Respondents' response rate was 100%. This study excluded incomplete questionnaires and rejected them as they indicated insufficient and unanswered questionnaires. This research was conducted from January until August 2024.

The investigators of this study distributed self-administered questionnaires to receive participants' feedback. This study used a self-administered scale to avoid vagueness in understanding the questions. Study participants were educated about the survey's purpose and assured of data confidentiality. Survey forms were distributed among recruited people residing in various locations in Central Java, Indonesia. The researchers allowed participants four weeks to return the filled forms. The survey forms were received and screened, and only helpful feedback for data analysis was included.

Indicators of Entrepreneurial Orientation (EO) include innovation (EO1), risk-taking (EO2), and proactive (EO3) (Rofiaty, 2019). Indicators of Innovation Strategy (IS) such as business process improvement (IS1), developing new value from customers (IS2), developing new methods (IS3), and rapid responsive (IS4) (AlQershi, 2021; Telagawathi, Yasa, Giantari, & Ekawati, 2022). Indicators of Business Performance (BP) include business process improvement (BP1), creating new value from customers (BP2), developing new methods (BP3), and rapid Responsive (BP4) (Giantari, Yasa, Suprasto, & Rahmayanti, 2022; Yasa et al., 2021).

This study collected the desired information through a questionnaire based on previous studies (Nurcaya et al., 2024). The study developed a questionnaire on a five-point Likert scale and indicated responses ranging from 1 to 5 (Inthavong et al., 2023). Strong agreement was displayed with 5, while 1 indicated strong disagreement (where 1 = Strongly disagree, 2 =

Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree) (Chatterjee, Chaudhuri, González, Kumar, & Singh, 2022; Dubey et al., 2019; Gupta, Justy, Kamboj, Kumar, & Kristoffersen, 2021). The validity of the theoretical model offered is validated using cross-sectional data. The information was gathered using procedures based on a survey of the target population.

In this study, the data have been analyzed with the help of statistical software Smart PLS for partial least-squares structural equation modeling (PLS-SEM) (K. Latif, Malik, Pitafi, Kanwal, & Latif, 2020). PLS-SEM is a statistical tool used by some researchers in their research studies. It uses robust, superior, flexible, and adequate statistical tools to generate sufficiently competent analytical models (Aman, Abbas, Mahmood, Nurunnabi, & Bano, 2019; Avotra, Chenyun, Yongmin, Lijuan, & Nawaz, 2021; K. F. Latif et al., 2020; Lotfi, Yousefi, & Jafari, 2018; Pitafi, Kanwal, & Khan, 2020). The second part of the questionnaire was used for hypothesis testing (NeJhaddadgar, Ziapour, Abbas, Mardi, & Zare, 2020; Pitafi, Rasheed, Kanwal, & Ren, 2020; Yao, Ziapour, Abbas, Toraji, & NeJhaddadgar, 2022). The analysis of the data for hypothesis testing was based on two phases. The first is the measurement model estimation, and the second is the structural model estimation (Islam, Islam, et al., 2021; Islam, Pitafi, Akhtar, & Xiaobei, 2021; Islam, Pitafi, Arya, et al., 2021; Zhou et al., 2022). In the first phase of measurement model estimation, the survey data were screened for valid and reliable items on the scale. The discriminant and convergent validities of the data were measured (Marchena-Giráldez, Acebes-Sánchez, Román, & Granada-Peinado, 2021). In addition, factor loadings, Cronbach alpha, and average variance extracted (AVE) were used for validity checking. The hypotheses were tested for acceptance or rejection using the values, t-statistics, and p-values obtained for each hypothesis.

RESULT AND DISCUSSION

Validity and Reliability Test

Table 1 and Figure 1 displays the convergent validity. Indicator reliability, and construct reliability and validity. The reliability test results are shown in Table 1 and Figure 1, and they are achieved by calculating Cronbach's Alpha, Composite Reliability, and Average Variance Extracted. The reliability test results are presented in Table 1 and Figure 1. The researcher found that the numbers ranged > 0.7, the highest reported value. Cronbach's Alpha was used to analyze the data collected, and this is the conclusion it yields according to the suggestions given by some researchers (Bjekić, Strugar Jelača, Berber, & Aleksić, 2021; Taber, 2018). The construct composite dependency values vary > 0.7, the highest value recorded for composite dependency. Researchers argue that an adequate Critical Composite (CR) threshold should be set at no less than 0.7, which should be considered acceptable. As a result of the results shown in the Table below, researchers can conclude that the CR criterion has been met. This allows us to conclude that the CR criterion is met. Composite reliability can be used as an alternative to Cronbach Alpha because the CR value is somewhat higher than the Cronbach Alpha value. Still, the difference between the two is insignificant (Malkewitz, Schwall, Meesters, & Hardt, 2023).

Validity convergence is evaluated by testing the average variance obtained (AVE). The AVE values are shown in Table 1 and Figure 1. The results are > 0.5, which is the highest number ever recorded. The absolute minimum value of AVE that may be considered satisfactory is 0.5 (Rouf & Akhtaruddin, 2018). It has been determined that the acceptability threshold has been reached, and convergent validity has been met across all four dimensions. The information presented in the table above serves as the basis of these findings (Rönkkö & Cho, 2022).

Table 1. Correlations and Measures of Reliability

Variables	Cronbach's Alpha	CR	AVE
Entrepreneurial Orientation	.839	.903	.756
Innovation Strategy	.871	.913	.724
Business Performance	.884	.921	.745

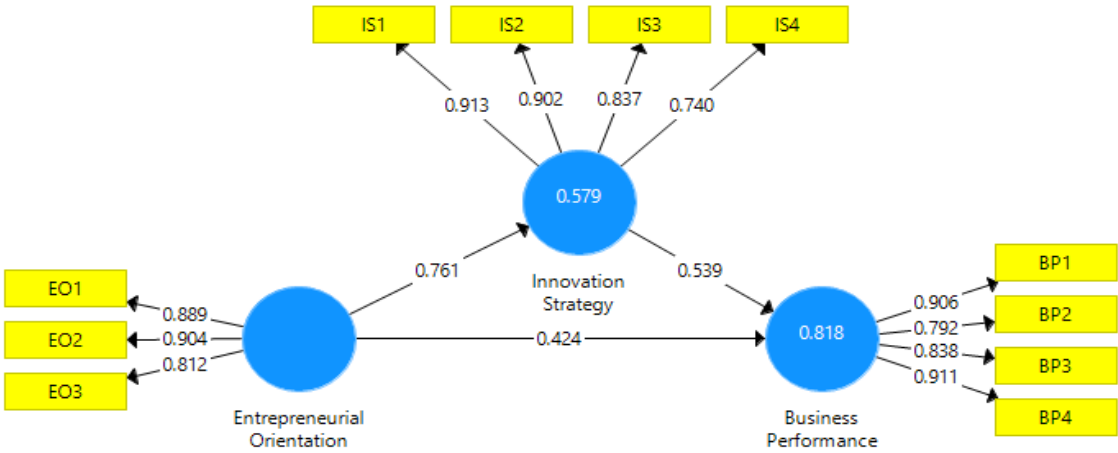


Figure 1. PLS Algorithm

Direct Effects

Table 2 presents the results of β -values, t-statistics, and results. The findings validate the two proposed hypotheses for the direct effects of the study at $p < 0.05$. Thus, the findings indicate significant t-statistics and substantial β -values. The first hypothesis, H1, claims a positive correlation between entrepreneurial orientation and innovation strategy. The results approve H1 with a value of $\beta = 0.761$ and a t-statistic = 27.001. The H2 hypothesis stated a positive correlation between innovation strategy and business performance. The results of this study validate the second hypothesis at a value of $\beta = 0.539$ and a t-statistic = 9.021. The H3 hypothesis stated a

positive and significant between entrepreneurial orientation and business performance. The results validate the third hypothesis at a value of $\beta = 0.424$ and a t-statistic = 6.369.

Mediating Effects

Table 2 indicates the results of the one indirect effect. This study formulated two hypotheses suggesting mediating effects. The H4 hypothesis states that innovation strategy can mediate the influence of entrepreneurial orientation on business performance, supported by a value of $\beta = 0.410$ and a t-statistic = 8.785.

Table 2. Structural Relationships

Hypothesis		Path Coefficients	t-value	Results
EO → IS	H1	.761	27.001	Support
IS → BP	H2	.539	9.021	Support
EO → BP	H3	.424	6.369	Support
EO → BP	H4	.410	8.785	Support

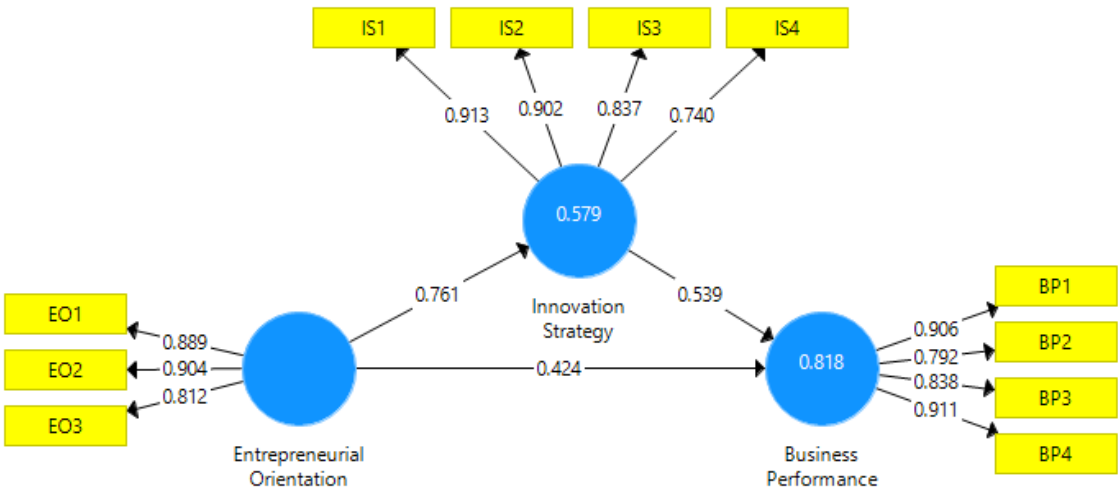


Figure 2. Structural Model

Table 2 shows that the direct effect coefficient of the effect of the entrepreneurial orientation has a significant positive effect on innovation strategy. This shows that entrepreneurial orientation is important in fostering the innovation strategy of MSME owners and managers. The results of this study are supported by previous studies examining the impact of entrepreneurial orientation on innovation strategy (Hutahayan, 2020; Zhang et al., 2020). An innovation strategy is a policy of building a company's ability to utilize limited resources to work in an increasingly complex and challenging environment (Taghizadeh, Karini, Nadarajah, & Nikbin, 2020). The research results are supported by previous studies, which also show significant results (Hamzah, Othman, & Hassan, 2020; Wahyuni & Sara, 2020).

Table 2 shows that the direct effect coefficient of the effect of the innovation strategy significantly impacts the company's business performance (Hutahayan, 2020; Zhang et al., 2020). A better innovation strategy will lead to better company performance achievements, such as financial and performance in other fields (Fernandez, 2022). However, not all innovation strategies support achieving business performance well (Mendoza et al., 2021). Corporate innovation strategies, such as cost strategies, have no significant effect on company performance (Nurcaya et al., 2024). MSME actors create various innovations to achieve a market orientation that is more competitive and environmentally friendly and opens up employment opportunities in the community (Abduh, Remmang, Abubakar, & Karim, 2024).

Table 2 shows that the direct effect coefficient of the effect of the entrepreneurial orientation, innovation ability, risk-taking ability, and proactive nature are key issues in determining company performance (Ciampi et al., 2021; Dong et al., 2020; Mendoza et al., 2021; Rofiaty, 2019; Thompson, 2009). However, entrepreneurial orientation does not always significantly improve business performance (Arshad et al., 2014; Rachmawati et al., 2020; Tajeddini et al., 2020).

Table 2 shows that the indirect effect coefficient of the effect of the entrepreneurial orientation variable (EO) on MSME business performance (BP) through the innovation strategy variable (IS) is 0.410. These results indicate that the innovation strategy variable is significantly proven to mediate the effect of entrepreneurial orientation on MSME business performance. Entrepreneurial orientation has a significant positive impact on MSME business performance. This indicates that entrepreneurial orientation has a strong relationship to improving the performance of MSMEs. These results align with previous studies examining the relationship between entrepreneurial orientation and improving MSME performance (Indrawati,

Caska, & Suarman, 2020; Rofiaty, 2019; Telagawathi et al., 2022).

In this study, entrepreneurial orientation's specific influence on MSME performance is to instill confidence or self-confidence in MSME owners or managers. Entrepreneurial orientation must build confidence in their competencies so that MSMEs have good business performance. This means confidence in competence will facilitate MSME business performance and economic growth. Technology resources have a significant positive impact on MSME business performance. This result aligns with several research results that show that technology resources strongly impact the improvement of MSME performance (Hutahayan, 2020; Wahyuni & Sara, 2020). The results of testing the hypothesis of the indirect effect of the entrepreneurial orientation construct on MSME business performance through innovation strategy are unidirectional and significant. The mediating role of the innovation strategy variable is partial. This means that part of the effect of entrepreneurial orientation on MSME performance is intervened by innovation strategy (Telagawathi et al., 2022). The model was developed by including innovation strategy variables as mediators. The aim is to discover how entrepreneurial orientation, directly and indirectly, affects improving MSME business performance. Entrepreneurial orientation directly improves the business performance of MSMEs. This means that MSME owners and managers must improve their innovation, risk-taking, and proactive capabilities. In addition to the direct effect, entrepreneurship indirectly affects MSME business performance through innovation strategies. This indicates that to improve the business performance of MSMEs, owners and managers must increase entrepreneurial orientation so that it has an impact on innovation strategies. In the next stage, the innovation strategy will have an effect on improving MSME business performance. Knowing the condition of competitors can also be done by utilizing internet technology. Thus, innovation and opportunity utilization are more easily detected. The reach of internet information is international. Overall, the results of this study support the RBV theory and Contingency Theory. RBV states that optimal resource management will increase competitive advantage. Contingency Theory is an organizational theory that states that there is no best way to manage a company. The optimal policy or decision in decision-making depends on the internal and external situations (Ghozali, 2020).

CONCLUSION

The study on business performance concept development within the industry of Micro, Small, and Medium Enterprises (MSMEs)

sheds light on crucial factors influencing the sustainability and success of these businesses. The research offers valuable insights into enhancing business performance in this sector by examining the role of entrepreneurial orientation and innovation strategy. The findings suggest that entrepreneurial orientation plays a vital and positive role in influencing the performance of MSMEs. Entrepreneurial orientation also significantly affects innovation strategy and positively impacts MSME business performance. Overall, the results emphasize the importance of entrepreneurial orientation and innovation strategy in determining the sustainability and success of MSMEs.

This study also found various limitations, mainly due to the following. 1) This study only uses an owner or manager of an MSME in Central Java, Indonesia, so the research results cannot be generalized outside the region. 2) Include a small and specific sample size that may limit the generalizability of the findings beyond the study population. Additionally, it only considers the role of entrepreneur orientation, innovation strategy, and business performance, while other factors may also affect the readiness of young entrepreneurs to establish start-up business performance.

In the future, it is necessary to consider choosing other mediating variables, such as marketing mix capabilities, Segmenting, Targeting, and Positioning capabilities, all of which are marketing capabilities. In addition, adopting social media strategies can improve business performance and product performance, which can also be considered as another mediating variable. In addition, based on the findings, governments can consider implementing programs and initiatives aimed at enhancing the entrepreneurial orientation, innovation strategy, and business performance of potential entrepreneurs. Lastly, this study offers a contribution to the literature on entrepreneurship, shedding light on how these factors influence entrepreneurial orientation, innovation strategy, and business performance. In the context of Indonesia, some policies need to be closely monitored to ensure they target the right audience and contribute positively to young entrepreneurs. These policies include providing social assistance to vulnerable MSMEs, offering tax incentives for MSMEs, relaxing and restructuring credit for MSMEs, expanding working capital financing for MSMEs, involving ministries, state-owned enterprises, and local governments in supporting MSMEs products, and providing e-learning training.

REFERENCES

Abduh, T., Remmang, H., Abubakar, H., & Karim, A. (2024). Entrepreneurship and

MSME market orientation toward creative industries: Society Era 5.0 in Makassar city. *Asian Economic and Financial Review*, 14(2), 76–87.

Alhusen, H., & Bennat, T. (2020). Combinatorial innovation modes in SMEs: mechanisms integrating STI processes into DUI mode learning and the role of regional innovation policy. *European Planning Studies*, 29(4), 1–27.

AlQershi, N. (2021). Strategic thinking, strategic planning, strategic innovation and the performance of SMEs: The mediating role of human capital. *Management Science Letters*, 11, 1003–1012.

Aman, J., Abbas, J., Mahmood, S., Nurunnabi, M., & Bano, S. (2019). The influence of islamic religiosity on the perceived socio-cultural impact of sustainable tourism development in pakistan: A structural equation modeling approach. *Sustainability (Switzerland)*, 11(11).

Asian Development Bank. (2020). Outlook 2020. Retrieved from https://globalfert.com.br/pdf/outlook_globalfert2020.pdf

Avotra, A. A. R. N., Chengang, Y., Sandra Marcelline, T. R., Asad, A., & Yingfei, Y. (2021). Examining the Impact of E-Government on Corporate Social Responsibility Performance: The Mediating Effect of Mandatory Corporate Social Responsibility Policy, Corruption, and Information and Communication Technologies Development During the COVID era. *Frontiers in Psychology*, 12, 4221.

Avotra, A. A. R. N., Chenyun, Y., Yongmin, W., Lijuan, Z., & Nawaz, A. (2021). Conceptualizing the State of the Art of Corporate Social Responsibility (CSR) in Green Construction and Its Nexus to Sustainable Development. *Frontiers in Environmental Science*, 9, 541.

Bai, W., Liu, R., & Zhou, L. (2020). Enhancing the learning advantages of newness: The role of internal social capital in the international performance of young entrepreneurial firms. *Journal of International Management*, 26(2), 100733.

Basco, R., Hernández-Perlins, F., & Rodríguez-García, M. (2020). The effect of entrepreneurial orientation on firm performance: A multigroup analysis comparing China, Mexico, and Spain. *Journal of Business Research*, 113, 409–421.

Bjekić, R., Strugar Jelača, M., Berber, N., & Aleksić, M. (2021). Factors Affecting

- Entrepreneurial Intentions of Faculty Students. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 26(2), 1–13.
- Cenamor, J., Parida, V., & Wincent, J. (2019). How entrepreneurial SMEs compete through digital platforms: The roles of digital platform capability, network capability and ambidexterity. *Journal of Business Research*, 100(March), 196–206.
- Chatterjee, S., Chaudhuri, R., González, V. I., Kumar, A., & Singh, S. K. (2022). Resource integration and dynamic capability of frontline employee during COVID-19 pandemic: From value creation and engineering management perspectives. *Technological Forecasting & Social Change*, 176, 1–13.
- Ciampi, F., Demi, S., Magrini, A., Marzi, G., & Papa, A. (2021). Exploring the impact of big data analytics capabilities on business model innovation: The mediating role of entrepreneurial orientation. *Journal of Business Research*, 123, 1–13.
- Demirkan, I., Srinivasan, R., & Nand, A. (2022). Innovation in SMEs: the role of employee training in German SMEs. *Journal of Small Business and Enterprise Development*, 29(3), 421–440.
- Dinas Koperasi Usaha Kecil dan Menengah Provinsi Jawa Tengah. (2022). Data UMKM di Jawa Tengah.
- Dirgatama, C. H. A. (2024). Exploratory and confirmatory factor analysis of digital entrepreneur skills. *Problems and Perspectives in Management*, 22(2), 299–312.
- Dong, B., Xu, H., Luo, J., Nicol, C. D., & Liu, W. (2020). Many roads lead to Rome: How entrepreneurial orientation and trust boost the positive network range and entrepreneurial performance relationship. *Industrial Marketing Management*, 88, 173–185.
- Dubey, R., Gunasekaran, A., Childe, S. J., Roubaud, D., Fosso Wamba, S., Giannakis, M., & Foropon, C. (2019). Big data analytics and organizational culture as complements to swift trust and collaborative performance in the humanitarian supply chain. *International Journal of Production Economics*, 210, 120–136.
- Farashah, A. D., & Blomquist, T. (2020). Exploring employer attitude towards migrant workers: Evidence from managers across Europe. *Evidence-Based HRM*, 8(1), 18–37.
- Fernandez, V. (2022). Environmental management: Implications for business performance, innovation, and financing. *Technological Forecasting and Social Change*, 182, 121797.
- Ghozali, I. (2020). *25 grand theory: Teori Besar Ilmu Manajemen, Akuntansi dan Bisnis (Untuk Landasan Teori Skripsi, Tesis dan Disertasi)*. Semarang: Yoga Pratama.
- Giantari, I. G. A. K., Yasa, N. N. K., Suprasto, H. B., & Rahmayanti, P. L. D. (2022). The role of digital marketing in mediating the effect of the COVID-19 pandemic and the intensity of competition on business performance. *International Journal of Data and Network Science*, 6(1), 217–232.
- Gupta, S., Justy, T., Kamboj, S., Kumar, A., & Kristoffersen, E. (2021). Big data and firm marketing performance: Findings from knowledge-based view. *Technological Forecasting and Social Change*, 171(1), 1–36.
- Hamzah, M. I., Othman, A. K., & Hassan, F. (2020). Mediating effects of individual market orientation on the link between learning orientation and job performance. *Journal of Business and Industrial Marketing*, Vol. 35, pp. 655–668.
- Heenkenda, H., Xu, F., Kulathunga, K., & Senevirathne, W. (2022). The Role of Innovation Capability in Enhancing Sustainability in SMEs: An Emerging Economy Perspective. *Sustainability (Switzerland)*, 14(17), 10832.
- Hernita, Surya, B., Perwira, I., Abubakar, H., & Idris, M. (2021). Economic business sustainability and strengthening human resource capacity based on increasing the productivity of small and medium enterprises (SMES) in Makassar city, Indonesia. *Sustainability (Switzerland)*, 13(6), 1–37.
- Hutahayan, B. (2020). The mediating role of human capital and management accounting information system in the relationship between innovation strategy and internal process performance and the impact on corporate financial performance. *Benchmarking*, Vol. 27, pp. 1289–1318.
- Indrawati, H., Caska, H., & Suarman, H. (2020). Barriers to technological innovations of SMEs: how to solve them? *International Journal of Innovation Science*, Vol. 12, pp. 545–564.
- International Labour Organization (ILO). (2019). Financing Small Businesses in Indonesia: Challenges and Opportunities. In *Innovation Strategies in the Food Industry: Tools for Implementation*.
- Inthavong, P., Rehman, K. U., Masood, K.,

- Shaukat, Z., Hnydiuk-Stefan, A., & Ray, S. (2023). Impact of organizational learning on sustainable firm performance: Intervening effect of organizational networking and innovation. *Heliyon*, 9(2023), e16177.
- Islam, T., Islam, R., Pitafi, A. H., Xiaobei, L., Rehmani, M., Irfan, M., & Mubarak, M. S. (2021). The impact of corporate social responsibility on customer loyalty: The mediating role of corporate reputation, customer satisfaction, and trust. *Sustainable Production and Consumption*, 25, 123–135.
- Islam, T., Pitafi, A. H., Akhtar, N., & Xiaobei, L. (2021). Determinants of purchase luxury counterfeit products in social commerce: The mediating role of compulsive internet use. *Journal of Retailing and Consumer Services*, 62, 102596.
- Islam, T., Pitafi, A. H., Arya, V., Wang, Y., Akhtar, N., Mubarik, S., & Xiaobei, L. (2021). Panic buying in the COVID-19 pandemic: A multi-country examination. *Journal of Retailing and Consumer Services*, 59, 102357.
- Kumar, B., & Gajakosh, A. R. (2021). MSMEs Issues and Prospectus of Uttarakhand: A Conceptual Investigation with Special Reference to COVID-19. *SEDME (Small Enterprises Development, Management & Extension Journal): A Worldwide Window on MSME Studies*, 48(3), 299–310.
- Latif, K. F., Nazeer, A., Shahzad, F., Ullah, M., Imranullah, M., & Sahibzada, U. F. (2020). Impact of entrepreneurial leadership on project success: mediating role of knowledge management processes. *Leadership and Organization Development Journal*, 41(2), 237–256.
- Latif, K., Malik, M. Y., Pitafi, A. H., Kanwal, S., & Latif, Z. (2020). If You Travel, I Travel: Testing a Model of When and How Travel-Related Content Exposure on Facebook Triggers the Intention to Visit a Tourist Destination. *SAGE Open*, 10(2), 2158244020925511.
- Lestari, E. D., Abd Hamid, N., Shamsuddin, R., Kurniasari, F., & Yaacob, Z. (2024). Investigating the factors of SMEs' business resilience in the post-pandemic crisis of COVID-19 with technology adoption as a quasi-moderator: a multigroup analysis of Indonesian and Malaysian SMEs. *Cogent Business and Management*, 11(1), 2301135.
- Lita, R. P., Faisal, R. F., & Meuthia. (2020). Enhancing small and medium enterprises performance through innovation in Indonesia: A framework for creative industries supporting tourism. *Journal of Hospitality and Tourism Technology*, 11(1), 155–176.
- Lotfi, M., Yousefi, A., & Jafari, S. (2018). The effect of emerging green market on green entrepreneurship and sustainable development in knowledge-based companies. *Sustainability (Switzerland)*, 10(7), 2308.
- Madrid-Guijarro, A., Martin, D. P., & García-Pérez-de-Lema, D. (2021). Capacity of open innovation activities in fostering product and process innovation in manufacturing SMEs. *Review of Managerial Science*, 15(7), 2137–2164.
- Malkewitz, C. P., Schwall, P., Meesters, C., & Hardt, J. (2023). Estimating reliability: A comparison of Cronbach's α , McDonald's ω t and the greatest lower bound. *Social Sciences and Humanities Open*, 7(1), 100368.
- Marchena-Giráldez, C., Acebes-Sánchez, J., Román, F. J., & Granado-Peinado, M. (2021). Validation of the spanish version of the work group emotional intelligence profile short version (WEIP-S) in the sports context. *International Journal of Environmental Research and Public Health*, 18(2), 1–13.
- Mayr, S., Mitter, C., Kücher, A., & Duller, C. (2021). Entrepreneur characteristics and differences in reasons for business failure: evidence from bankrupt Austrian SMEs. *Journal of Small Business & Entrepreneurship*, 33(5), 539–558.
- Mendoza, G., Llopis, J., Gasco, J., & Gonzalez, R. (2021). Entrepreneurship as seen by entrepreneurs in a developing country. *Journal of Business Research*, 123, 547–556.
- Muliadi, Darma, D. C., & Kasuma, J. (2020). MSMEs as mediation in the effects of investment credit , interest rates , and labor on economic growth : Evidence from Indonesia. *IJFBS: International Journal of Finance & Banking Studies*, 9(2), 1–12.
- Nawaz, T., Goh, G. G. G., Ong, J. W., Yasri, Y., Ali, A., & Waluyo, D. E. (2024). The catalytic role of self-regulation in the association of proactive personality with entrepreneurial intention among potential entrepreneurs. *Cogent Business and Management*, 11(1), 2366436.
- NeJhaddadgar, N., Ziapour, A., Abbas, J., Mardi, A., & Zare, M. (2020). Correlation between general health and sexual function in older women in an Iranian setting. *Journal of Education and Health Promotion*, 9(1).
- Nurcaya, I. N., Rahyuda, I. K., Giantari, G. A. K., & Ekawati, N. W. (2024). Business

- performance concept development apparel industry MSMEs in Bali. *Uncertain Supply Chain Management*, 12(1), 315–322.
- Pei, X. L., Guo, J. N., Wu, T. J., Zhou, W. X., & Yeh, S. P. (2020). Does the effect of customer experience on customer satisfaction create a sustainable competitive advantage? A comparative study of different shopping situations. *Sustainability (Switzerland)*, 12(18), 1–19.
- Pitafi, A. H., Kanwal, S., Akhtar, S., & Irfan, M. (2018). Investigating the employee work performance in task interdependence and ESM environment. *International Journal of Information Systems and Change Management*, 10(3), 266–292.
- Pitafi, A. H., Kanwal, S., Ali, A., Khan, A. N., & Waqas Ameen, M. (2018). Moderating roles of IT competency and work cooperation on employee work performance in an ESM environment. *Technology in Society*, 55, 199–208.
- Pitafi, A. H., Kanwal, S., & Khan, A. N. (2020). Effects of perceived ease of use on SNSs-addiction through psychological dependence, habit: The moderating role of perceived usefulness. *International Journal of Business Information Systems*, 33(3), 383–407.
- Pitafi, A. H., Rasheed, M. I., Kanwal, S., & Ren, M. (2020). Employee agility and enterprise social media: The Role of IT proficiency and work expertise. *Technology in Society*, 63, 101333.
- Prasetyo, P. E. (2020). The Role of Government Expenditure and Investment for MSME Growth: Empirical Study in Indonesia. *Journal of Asian Finance, Economics and Business*, 7(10), 471–480.
- Prasetyo, P., & Kistanti, N. (2020). Human capital, institutional economics and entrepreneurship as a driver for quality & sustainable economic growth. *Entrepreneurship and Sustainability Issues*, 7(4), 2575–2589.
- Purnamawati, I. G. A., Jie, F., Hong, P. C., & Yuniarta, G. A. (2022). Analysis of Maximization Strategy Intangible Assets through the Speed of Innovation on Knowledge-Driven Business Performance Improvement. *Economies*, 10(6), 149.
- Rachmawati, E., Suliyanto, & Suroso, A. (2022). Direct and indirect effect of entrepreneurial orientation, family involvement and gender on family business performance. *Journal of Family Business Management*, 12(2), 214–236.
- Rofiaty. (2019). The relational model of entrepreneurship and knowledge management toward innovation, strategy implementation and improving Islamic boarding school performance. *Journal of Modelling in Management*, 14(3), 662–685.
- Rönkkö, M., & Cho, E. (2022). An updated guideline for assessing discriminant validity. *Organizational Research Methods*, 25(1), 6–14.
- Rouf, M. A., & Akhtaruddin, M. (2018). Factors affecting the voluntary disclosure: a study by using smart PLS-SEM approach. *International Journal of Law and Management*, 60(6), 1498–1508.
- Safari, A., & Saleh, A. S. (2020). Key determinants of SMEs' export performance: a resource-based view and contingency theory approach using potential mediators. *Journal of Business and Industrial Marketing*, 35(4), 635–654.
- Salamzadeh, A., & Dana, L. (2021). The coronavirus (COVID-19) pandemic: challenges among Iranian startups. *Journal of Small Business & Entrepreneurship*, 33(5), 489–512.
- Sarvari, H., Chan, D. W., Alaeos, A. K. F., Olawumi, T. O., & Abdalridah Aldaud, A. A. (2021). Critical success factors for managing construction small and medium-sized enterprises in developing countries of Middle East: Evidence from Iranian construction enterprises. *Journal of Building Engineering*, 43, 103152.
- Singh, S. H., Bhowmick, B., Eesley, D., & Sindhav, B. (2021). Grassroots innovation and entrepreneurial success: Is entrepreneurial orientation a missing link? *Technological Forecasting and Social Change*, 164, 119582.
- Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H., & Idris, M. (2021). Economic growth, increasing productivity of smes, and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 1–37.
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48, 1273–1296.
- Taghizadeh, S. K., Karini, A., Nadarajah, G., & Nikbin, D. (2020). Knowledge management capability, environmental dynamism and innovation strategy in Malaysian firms. *Management Decision*, Vol. 59, pp. 1386–1405.
- Tajeddini, K., Martin, E., & Ali, A. (2020). Enhancing hospitality business performance: The role of entrepreneurial

- orientation and networking ties in a dynamic environment. *International Journal of Hospitality Management*, 90(February), 102605.
- Telagawathi, N. L. W. S., Yasa, N. N. K., Giantari, I. G. K. A., & Ekawati, N. W. (2022). The role of innovation strategies in mediating covid-19 perceptions and entrepreneurship orientation on Endek weaving craft business performance. *Uncertain Supply Chain Management*, 10(3), 913–922.
- Wahyuni, N. M., & Sara, I. M. (2020). The effect of entrepreneurial orientation variables on business performance in the SME industry context. *Journal of Workplace Learning*, Vol. 32, pp. 35–62.
- Wiguna, A. A., Sularso, R. A., Suroso, I., Handriyono, H., Wulandari, D., & Susanto, A. B. (2024). Strengthening micro-entrepreneurs in Indonesia through technical marketing strategies. *Contaduria y Administracion*, 69(2), 316–340.
- Yao, J., Ziapour, A., Abbas, J., Toraji, R., & NeJhaddadgar, N. (2022). Assessing puberty-related health needs among 10–15-year-old boys: A cross-sectional study approach. *Archives de Pediatrie*, 29(4), 307–311.
- Yasa, N. N. K., Giantari, I. G. A. K., Sukaatmadja, I. P. G., Sukawati, T. G. R., Ekawati, N. W., Nurcaya, I. N., ... Astari, A. A. E. (2021). The role of relational and informational capabilities in mediating the effect of social media adoption on business performance in fashion industry. *International Journal of Data and Network Science*, 5(4), 569–578.
- Zhang, J. A., O’Kane, C., & Chen, G. (2020). Business ties, political ties, and innovation performance in Chinese industrial firms: The role of entrepreneurial orientation and environmental dynamism. *Journal of Business Research*, 121, 254–267.
- Zhou, Y., Draghici, A., Abbas, J., Mubeen, R., Boatca, M. E., & Salam, M. A. (2022). Social Media Efficacy in Crisis Management: Effectiveness of Non-pharmaceutical Interventions to Manage COVID-19 Challenges. *Frontiers in Psychiatry*, 12, 626134.