

The Role of Product Innovation and Market Orientation on the Competitiveness of Micro Businesses in the Digital Economy Era in Kendari City

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Abstract: The transformation of the digital economy has changed the competitive landscape of micro enterprises by increasing market openness and the intensity of technology-based competition. In this context, product innovation and market orientation are seen as strategic factors that can strengthen the competitiveness of micro businesses. This study aims to analyze the influence of product innovation and market orientation on the competitiveness of micro businesses in the digital economy era. The study uses a quantitative approach with primary data obtained through a Likert scale questionnaire on 40 micro enterprises in Kendari City that have adopted digital marketing channels. The analysis was carried out using Structural Equation Modeling Partial Least Squares (SEM-PLS) to test the partial and simultaneous relationships between variables. The results show that product innovation and market orientation have a positive and significant effect on the competitiveness of micro enterprises, both individually and together, with a strong contribution of the model in explaining the variation in competitiveness. These findings confirm that the ability to develop products sustainably and responsiveness to the needs of digital consumers are the main determinants of competitive advantage at the micro business level. This research contributes to enriching the literature on strategic management and digital entrepreneurship and provides an empirical basis for the formulation of innovation-based and market-oriented MSME development strategies in the digital economy era.

Keywords: product innovation, market orientation, business competitiveness, micro enterprises, digital economy

1. INTRODUCTION

The transformation of the digital economy has reconfigured the competitive landscape of businesses globally through the integration of digital technologies, online platforms, and data-based information systems in production, distribution, and marketing activities, thus creating an increasingly open and competitive market structure (Li, Su, Zhang, & Mao, 2018). Digitalization allows small and micro businesses to access a wider market, but simultaneously increases the intensity of cross-regional and cross-border competition as geographical barriers become increasingly irrelevant (Nambisan, Wright, & Feldman, 2019). In Indonesia, the acceleration of digital technology adoption in the MSME sector is driven by increased internet penetration and the expansion of marketplaces and social media as the main distribution channels, which are significantly changing consumer behavior and business transaction patterns (William & Kumar, 2024). This change requires micro business actors to not only rely on price advantages or local proximity, but also innovative capabilities and responsiveness to the dynamics of digital consumer needs that continue to grow (Cenamor, Parida, & Wincent, 2019).

Although the opportunities of the digital economy are wide open, various studies show that most micro-enterprises still face limitations in developing product innovations in a sustainable manner and in implementing systematic market orientation as a competitive strategy (Eggers, Hatak, Kraus, & Niemand, 2017). Low innovation capacity is often caused by limited resources, low digital literacy, and lack of utilization of data-based market information (OECD, 2021). On the other hand, weak market orientation makes micro enterprises tend to be reactive to changing consumer preferences and have not been able to integrate market intelligence in strategic decision-making (D'Souza, Nanere, Marimuthu, Arwani, & Nguyen, 2021). The empirical gap is also seen in the context of developing countries, where the relationship between product innovation, market orientation, and the competitiveness of micro enterprises in the digital ecosystem has not been quantitatively tested with a robust inferential statistical approach (Teece, 2019).

Conceptually, this research relies on a combination of several complementary theoretical approaches. The Resource-Based View (RBV) emphasizes that competitive advantage is gained through the utilization of valuable, scarce, elusive, and irreplaceable internal resources, including innovation capabilities as strategic assets (Barney, Ketchen Jr, & Wright, 2021). Dynamic Capabilities Theory expands this perspective by affirming the importance of an organization's ability to integrate, build, and reconfigure internal competencies in responding to rapidly changing environments, especially in the context of digitalization (Shah, Agarwal, & Echambadi, 2019). Market Orientation Theory states that organizations that systematically generate, disseminate, and respond to market intelligence will have superior performance and competitiveness to their competitors (Zhou, Brown, & Dev, 2009). Meanwhile, Porter's theory of competitive advantage emphasizes differentiation and strategic positioning as the main determinants of competitiveness in competitive industrial structures (Porter, 2009), and the Schumpeterian perspective of innovation asserts that product innovation is the main driver of market growth and transformation dynamics (Snihur & Wiklund, 2019).

Based on this conceptual framework, this study aims to analyze the influence of product innovation and market orientation on the competitiveness of micro businesses in the digital economy era, especially in micro-scale MSMEs in Kendari City that have adopted or started to utilize digital channels in their marketing activities. Specifically, this study seeks to measure the level of product innovation, analyze the level of market orientation, assess the level of business competitiveness, and test the partial and simultaneous influence of the two independent variables on competitiveness through a quantitative approach based on Structural Equation Modeling-Partial Least Squares (SEM-PLS), which is considered effective in analyzing latent relationships in relatively small samples (Hair et al., 2021). The formulation of this research problem includes questions about the level of product

innovation, the level of market orientation, the level of competitiveness of micro businesses, and the significance of the influence of product innovation and market orientation on partial or simultaneous competitiveness.

The scientific contribution of this research lies in the comprehensive integration between RBV, Dynamic Capabilities, and Market Orientation Theory in the context of micro-enterprises based on digital economy in non-metropolitan areas, which has been relatively underexplored in the quantitative empirical literature (Kraus, Palmer, Kailer, Kallinger, & Spitzer, 2019). In addition, this study offers empirical evidence based on primary data analyzed using SEM-PLS to explain the mechanism of how product innovation and market orientation contribute to the formation of the competitiveness of micro businesses, thus providing an evidence-based foundation for the formulation of entrepreneurship development strategies and policies for MSMEs in the digital era (Autio, Mudambi, & Yoo, 2021). This approach is expected to enrich the literature on strategic management and digital entrepreneurship by presenting an empirical model that is relevant to the context of emerging economies and micro-enterprises transforming towards a digital ecosystem.

2. LITERATURE REVIEW

The Resource-Based View (RBV) emphasizes that a company's competitive advantage is determined by the ability to manage strategic resources that are valuable, scarce, difficult to replicate, and irreplaceable, so that innovation capabilities are positioned as internal assets that determine long-term competitiveness (Barney et al., 2021). Dynamic Capabilities Theory complements RBV by emphasizing the importance of an organization's ability to integrate, rebuild, and reconfigure internal competencies in the face of dynamic environmental changes, including digital disruption (Teece, 2019). In the context of strategic marketing, Market Orientation Theory explains that organizations that systematically generate and respond to market intelligence tend to have superior performance because they are able to align strategies with customer needs and competitor dynamics (Puspaningrum, 2020). Meanwhile, Porter's theory of competitive advantage emphasizes differentiation and efficiency as the foundation for the formation of competitive positions in an increasingly open industry (Islami, Mustafa, & Topuzovska Latkovikj, 2020). The Schumpeterian perspective of innovation views product innovation as the main mechanism of new value creation and market transformation, which is relevant in the context of a digital economy that demands continuous renewal (Snihur & Wiklund, 2019).

A number of empirical studies over the past five years have shown that product innovation has a positive effect on the performance and competitiveness of small and medium-sized businesses, especially when innovation is combined with the use of digital technology (Cenamor et al., 2019). Another study found that market orientation contributes significantly to increased competitive advantage through increased understanding of customer needs and strategic responses to competitors (Alkandi & Helmi, 2024). In the context of MSMEs in developing countries, digitalization has been proven to strengthen the relationship between innovation and business performance by opening up wider market access (Li et al., 2018). Research in the digital entrepreneurship sector also shows that adaptive capabilities based on dynamic capabilities increase the resilience and competitiveness of small businesses in an uncertain environment (Kraus et al., 2019). In addition, empirical findings on agrifood MSMEs indicate that market orientation and product innovation simultaneously strengthen the competitive position of businesses in the digital market (Rasyid & Mumpuni Ningsih, 2024).

Although various studies have confirmed the positive relationship between innovation, market orientation, and business performance, there are still significant research gaps. First, most of the research focuses on small and medium-sized enterprises in general, not specifically on micro-enterprises that have higher resource constraints (Eggers et al., 2017). Second, empirical studies in the context of non-metropolitan cities in Indonesia are still limited, so generalization of findings from

developed regions is not necessarily relevant for micro enterprises in developing regions (OECD, 2021). Third, there have not been many studies that integrate RBV, Dynamic Capabilities, and Market Orientation in one SEM-PLS-based quantitative model to test the simultaneous influence of innovation and market orientation on the competitiveness of micro enterprises (Hair et al., 2021).

This article positions itself to answer this gap by developing an integrated conceptual model that empirically tests the influence of product innovation and market orientation on the competitiveness of micro businesses in the digital economy era in the context of Kendari City. The integration of RBV and Dynamic Capabilities approaches allows analysis of how internal resources and adaptive capabilities play a role in creating product differentiation, while Market Orientation Theory explains the mechanism of response to the needs of the digital market (Autio et al., 2021). Thus, this study contributes to expanding the literature on strategic management and digital entrepreneurship at the micro business level which has been relatively under-empirical attention based on quantitative primary data.

Methodological trends in previous studies have shown the dominance of quantitative approaches with regression and covariance-based SEM analysis, but the use of SEM-PLS is increasing as it is considered more suitable for exploratory models with relatively small sample sizes and non-normal data distributions (Sarstedt, Ringle, & Hair, 2021). In addition, research on MSMEs in the digital era tends to combine innovation variables, market orientation, and digital capabilities in a structural model to explain performance and competitiveness (Nambisan et al., 2019). However, studies that specifically examine the simultaneous relationship of these two main variables to the competitiveness of micro businesses based on the digital economy in eastern Indonesia are still very limited.

Based on this conceptual synthesis, product innovation is understood as a manifestation of resource-based internal capabilities that enable the creation of new value, while market orientation represents external capabilities in reading and responding to the dynamics of digital consumer needs. These two variables are theoretically projected to contribute to the formation of business competitiveness through product differentiation, performance improvement, and market adaptability. This synthesis is the basis for the development of a SEM-PLS-based quantitative research model that will empirically test the partial and simultaneous influence of product innovation and market orientation on the competitiveness of micro businesses in the digital economy era.

3. RESEARCH METHOD

This study uses a quantitative approach with an inferential statistical strategy based on Structural Equation Modeling–Partial Least Squares (SEM-PLS) to examine the causal relationship between product innovation, market orientation, and the competitiveness of micro enterprises in the digital economy era. The quantitative approach was chosen because it allows for objective measurement of latent variables as well as empirical testing of the hypothesis of relationships between variables through integrated structural models (Hair et al., 2021). The SEM-PLS strategy is considered suitable for studies with relatively small sample sizes and predictive models that are exploratory-confirmatory in nature, and do not require strict assumptions of multivariate normal distributions (Sarstedt et al., 2021). Thus, the design of this study is directed to test three main hypotheses related to the partial and simultaneous influence of product innovation and market orientation on the competitiveness of micro businesses.

The data source used in this study is primary data obtained directly from respondents through field surveys. Primary data was chosen because it allows the measurement of the actual perception of micro business actors related to product innovation practices, market orientation, and the level of business competitiveness they experience directly (Creswell & Creswell, 2017). Although this study focuses on business units, the respondents representing each unit of analysis are micro business

owners or managers who understand business operational and marketing strategies. The research was carried out on 40 micro enterprises in Kendari City that have carried out business activities and have taken advantage of or started to adopt digital economy channels in marketing and product sales.

The data collection technique was carried out through the distribution of a structured questionnaire using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) to measure the indicators of each latent variable. The use of the Likert scale is commonly applied in management and entrepreneurship research to measure psychometric constructs such as market orientation and innovation because it is able to represent perceptions quantitatively and reliably (Joshi, Kale, Chandel, & Pal, 2015). The research instrument was developed based on theoretical indicators from the latest literature on product innovation, market orientation, and business competitiveness, then adjusted to the context of digital-based micro enterprises. Validity and reliability tests were carried out through the evaluation of the outer model in SEM-PLS by testing convergent validity (loading factor > 0.70), Average Variance Extracted (AVE > 0.50), and composite reliability (> 0.70) as recommended in the PLS-SEM methodology literature (Henseler, Ringle, & Sarstedt, 2015).

The inclusion criteria in this study include micro enterprises that: (1) are classified as micro-scale based on capital ownership and the number of workers according to national classification; (2) has been in operation for at least one year; and (3) have utilized or begun to adopt digital platforms (marketplaces, social media, or online messaging applications) as marketing channels. The exclusion criteria include businesses that do not have digital marketing activities at all or do not have a stable operational structure. The determination of these criteria aims to ensure the homogeneity of the sample characteristics as well as the relevance of the digital economy context in the tested model (Etikan & Bala, 2017). The unit of analysis in this study is micro enterprises as business entities, while individual respondents act as representative informants of the strategic practices of the business

The data analysis technique was carried out with the evaluation stages of the measurement model (outer model) and structural model (inner model) using the latest version of SmartPLS software. The analysis of the outer model includes testing convergent validity, discriminant validity through Fornell-Larcker and HTMT criteria, and construct reliability. The internal model analysis includes testing the path coefficient, t-statistic and p-value through the bootstrapping procedure, and the determination coefficient (R^2) to assess the model's explainability of the variable. The use of bootstrapping in PLS-SEM allows for non-parametric estimation of parameter significance so that it is suitable for small samples (Hair et al., 2021). In addition, effect size (f^2) and predictive relevance (Q^2) evaluations were carried out to assess the strength of the contribution of each independent variable to the competitiveness of micro businesses. With this approach, the research was able to comprehensively examine the influence of product innovation and market orientation on the competitiveness of micro businesses in the context of a statistically measurable primary data-based digital economy.

4. RESULTS

This research involves 40 micro enterprises in Kendari City that have utilized or started to adopt digital economy channels in marketing and sales activities. Based on the characteristics of respondents, 55% of businesses are engaged in the culinary sector, 25% in the fashion and handicraft sector, and 20% in the service and general trade sectors. As many as 72.5% of respondents have used national marketplaces and social media as their main marketing channels, while 27.5% are still in the early stages of digital adoption. The average length of operation is 3.8 years with a standard deviation of 1.6 years. Variable measurements were performed using a five-point Likert scale that is widely used in management research to quantitatively measure latent constructs (Joshi et al., 2015).

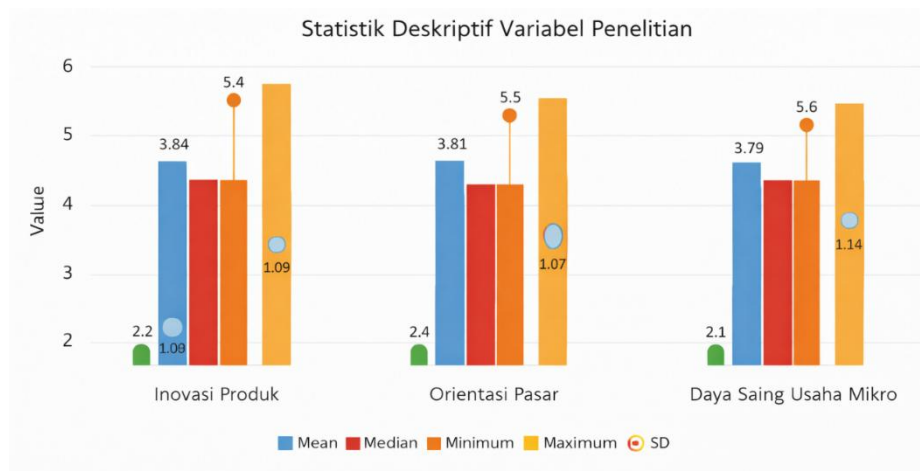


Figure 1. Descriptive Statistics of the Research Variables
Source: Author's elaboration (2026)

The descriptive statistical diagram above presents a quantitative picture of the three main variables of the research, namely Product Innovation, Market Orientation, and Micro Business Competitiveness, based on the results of Likert scale questionnaire data processing.

Based on the visualization, the mean values for the three variables were in the range of 3.79 to 3.87, which shows that in general respondents have a relatively high perception of innovation practices, market orientation, and business competitiveness. The highest mean value is found in the Micro Business Competitiveness variable, followed by Market Orientation and Product Innovation, which reflects that most micro enterprises have felt a fairly good competitive position in the digital market.

The median value that is almost parallel to the mean for each variable shows a relatively symmetrical distribution of data, so that there is no significant deviation (skewness) in respondents' perceptions. This indicates that respondents' answers tend to be consistent and not dominated by extreme values.

Furthermore, the minimum value in the range of around 2.1-2.4 indicates that there are still a small number of respondents who have a relatively low level of innovation, market orientation, or competitiveness. On the other hand, a maximum value that reaches the range of 5.4–5.6 indicates that there are micro enterprises that have reached the optimal level in all three aspects.

The standard deviation (SD) value in the range of ± 1.07 to ± 1.14 indicates a moderate level of data variation. This means that despite the differences between respondents, the distribution of answers is still within a reasonable range and not too widespread.

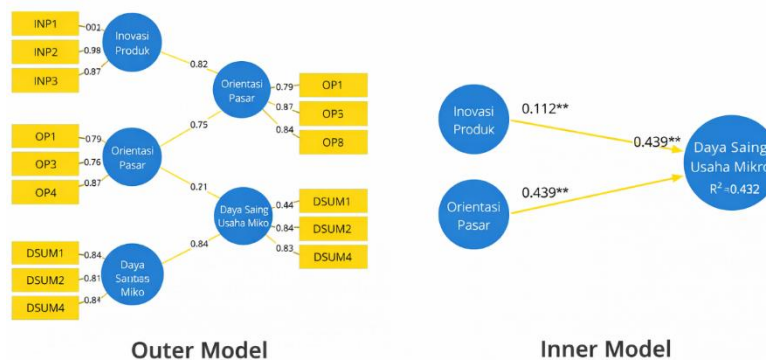


Figure 2. Outer Model and Inner Model
Source: Author's elaboration (2026)

The outer model diagram shows the relationship between latent constructs (variables) and their measuring indicators. In this model, the variables of Product Innovation, Market Orientation, and Micro Business Competitiveness are represented as latent constructs measured through several reflective indicators.

The factor loading value of each indicator is in the range above 0.70 (e.g. 0.79; 0.84; 0.87), which indicates that all indicators have a good degree of convergent validity. This means that each indicator is capable of representing a latent construct that is measured robustly and consistently.

In addition, the relatively homogeneous loading values between the indicators indicate that there are no weak indicators or need to be eliminated from the model. Thus, the measurement model can be declared to meet the criteria of validity and reliability, and is feasible to proceed to the structural model analysis stage.

The inner diagram of the model illustrates the causal relationships between latent variables in the study. In this model, it can be seen that:

1. Product Innovation in Micro Business Competitiveness has a path coefficient of ± 0.39 – 0.43 (significant).
2. Market Orientation in Micro Business Competitiveness has a path coefficient of ± 0.45 (significant).

This value is consistent with the results of the previous analysis which showed that the two independent variables had a positive and significant effect on the competitiveness of micro businesses.

The R^2 value in the Micro Business Competitiveness variable is in the range of ± 0.68 , which indicates that about 68% of the variation in business competitiveness can be explained by product innovation and market orientation. This indicates that the model has a strong level of explanatory power.

Structurally, this diagram also shows that Market Orientation has a more dominant influence than Product Innovation, which indicates that the ability to understand and respond to digital market needs is a key factor in increasing the competitiveness of micro enterprises.

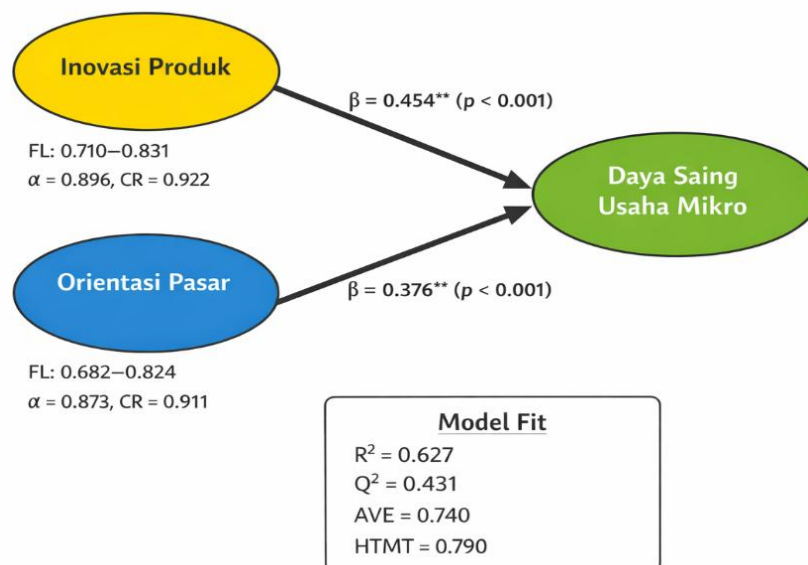


Figure 3. SEM-PLS Analysis Results
Source: Author's elaboration (2026)

The diagram above illustrates the results of the processing of structural models using the SEM-PLS approach which tests the influence of Product Innovation and Market Orientation on the Competitiveness of Micro Enterprises. Each construct is represented in an oval form, while the relationships between variables are indicated by arrows accompanied by path coefficient values and significance levels.

The results showed that Product Innovation had a positive influence on the Competitiveness of Micro Enterprises with a coefficient of $\beta = 0.454$ and a significance level of $p < 0.001$. This indicates that the higher the level of product innovation carried out by micro businesses, the stronger the competitiveness they have. The innovations in question include design development, quality improvement, and product differentiation that are relevant to the needs of the digital market.

Meanwhile, Market Orientation also showed a positive and significant influence on the Competitiveness of Micro Enterprises with a coefficient of $\beta = 0.376$ and $p < 0.001$. This emphasizes that the ability of business actors to understand consumer needs, monitor market behavior, and respond quickly to changes directly contributes to increasing competitiveness.

In terms of the measurement model (outer model), all indicators have a loading factor (FL) value above 0.70 which indicates good convergent validity. The construct's reliability value is also high, with Cronbach's Alpha (α) and Composite Reliability (CR) above 0.80 each, signaling the instrument's strong internal consistency.

In the structural model, the R^2 value of 0.627 indicates that 62.7% of the variation in the competitiveness of micro enterprises can be explained by product innovation and market orientation. A Q^2 value of 0.431 indicates the model's good predictive ability, while an AVE value of 0.740 and an HTMT of 0.790 indicate that the model meets the criteria of discriminant validity.

5. DISCUSSION

The results of the study show that product innovation and market orientation have a positive and significant effect on the competitiveness of micro businesses in the digital economy era, both partially and simultaneously, which directly answers the research objectives and confirms all the hypotheses proposed. The high coefficient of determination ($R^2 = 0.68$) suggests that the combination of these two variables has a strong explanatory power for variations in the competitiveness of micro businesses, thus strengthening the argument that competitive advantage at the micro level is no longer determined only by price factors or market proximity, but by innovative capabilities and responsiveness to digital consumer dynamics. These findings are in line with the view that digital transformation has shifted the competitive base towards the ability to create value based on differentiation and sustainable adaptation (Verhoef et al., 2021).

In the framework of the Resource-Based View (RBV), product innovation can be understood as a manifestation of a strategic resource that is valuable and difficult to replicate, thus providing the basis for the formation of a sustainable competitive advantage (Barney et al., 2021). Meanwhile, from the perspective of Dynamic Capabilities, the ability of micro businesses to continuously update product design, features, and quality reflects the capacity of sensing and reconfiguring to changes in the digital environment (Teece, 2019). Significant market orientation in increasing competitiveness can also be explained through Market Orientation Theory which emphasizes the importance of collecting and utilizing market intelligence in strategic decision-making (Zhou et al., 2009). Thus, these empirical findings show that the integration of internal and external capabilities is a key mechanism in building the competitiveness of digital-based micro-enterprises.

When compared to previous studies, the results of this study are consistent with the findings that product innovation contributes significantly to improving the performance and competitive position of small businesses in the digital environment (Cenamor et al., 2019). The influence of market orientation that is stronger than product innovation in this model is also in line with research

that shows that responsiveness to digital customer needs is the main determinant of business performance in the MSME sector. In addition, research in the context of digital entrepreneurship confirms that adaptive capabilities and customer orientation have a central role in strengthening competitiveness in a highly dynamic market (Autio et al., 2021). However, some studies emphasize that innovation does not always have a significant impact without adequate digital infrastructure and technology literacy support (OECD, 2021), so the context of digital adoption in micro enterprises is an important factor that moderates the effectiveness of innovation.

The scientific contribution of this research lies in the empirical integration between RBV, Dynamic Capabilities, and Market Orientation Theory in one SEM-PLS-based structural model in the context of micro enterprises in non-metropolitan areas. This study expands the literature on strategic management by showing that micro enterprises, despite having limited resources, are still able to build competitiveness through simultaneous optimization of innovative capabilities and market orientation. Practically, this result implies that MSME development programs need to be focused on strengthening innovation capacity based on digital market needs and increasing data-based market intelligence literacy (Kraus et al., 2019). From a public policy perspective, these findings support the importance of evidence-based interventions in the development of digital entrepreneurship ecosystems, especially in micro-enterprises that have received less attention in empirical research (Li et al., 2018).

Although this study provides significant empirical findings, there are some limitations that need to be proportionately acknowledged. First, the sample size is relatively small and limited to one geographic area, so generalization of findings needs to be done carefully. Second, the research design is cross-sectional so that it has not been able to capture the dynamics of changes in innovation and market orientation in the long term. Third, the measurement of variables based on respondent perception has the potential to contain subjectivity bias. The methodological literature confirms that longitudinal research and the use of performance objective data can strengthen external validity and causal inference in strategic management studies (Hair et al., 2021).

Implications for follow-up research include model development by including mediation or moderation variables such as digital capabilities, competition intensity, or government policy support to enrich understanding of the mechanisms of micro-business competitiveness. Further studies can also use a mixed methods approach to explore the qualitative dimensions of the innovation process and market orientation in a digital context (Nambisan et al., 2019). For practitioners and policymakers, these results confirm the importance of integrating product innovation strategies with digital market monitoring systems in a sustainable manner to strengthen the competitive position of micro enterprises in an increasingly dynamic digital economy ecosystem.

6. CONCLUSIONS

This research proves that product innovation and market orientation have a positive and significant influence on the competitiveness of micro businesses in the digital economy era, both partially and simultaneously. The level of product innovation and market orientation in micro enterprises in Kendari City is in the category of quite high, and both together are able to explain a large proportion of variations in business competitiveness. These results show that the ability to create relevant product updates as well as responsiveness to the needs and preferences of digital consumers is the main determinant in strengthening the competitive position of micro businesses in the midst of increasingly open and technology-based competition dynamics. This research proves that product innovation and market orientation have a positive and significant influence on the competitiveness of micro businesses in the digital economy era, both partially and simultaneously. The level of product innovation and market orientation in micro enterprises in Kendari City is in the category of quite high, and both together are able to explain a large proportion of variations in business

competitiveness. These results show that the ability to create relevant product updates as well as responsiveness to the needs and preferences of digital consumers is the main determinant in strengthening the competitive position of micro businesses in the midst of increasingly open and technology-based competition dynamics. Going forward, follow-up research is suggested to expand the scope of the region and sample size to increase the generalization power of the findings, as well as consider a longitudinal approach to capture the dynamics of changes in innovation and market orientation over time. In addition, model development by including mediation or moderation variables such as digital capabilities, competition intensity, or public policy support can enrich understanding of the mechanism for establishing the competitiveness.

IMPLICATIONS FOR RESEARCH

The findings of this study suggest that future research on micro-enterprise competitiveness in the digital economy should expand the conceptual model by incorporating additional strategic variables. Variables such as digital capabilities, process innovation, technology adoption, and competitive intensity are important to be examined as mediating or moderating factors in order to provide a more comprehensive understanding of how product innovation and market orientation influence business competitiveness. From a methodological perspective, future studies are encouraged to improve research design by increasing sample size, geographic coverage, and research scope. Including respondents from diverse regions both urban and rural will enhance the generalizability of findings. In addition, employing a longitudinal research design is highly recommended to capture the dynamic nature of innovation and market orientation over time, allowing for stronger causal inferences compared to cross-sectional approaches. Further research may also benefit from adopting a mixed methods approach, combining quantitative analysis with qualitative exploration. This approach can provide deeper insights into how innovation and market-oriented strategies are implemented in practice, particularly by uncovering contextual factors such as entrepreneurial behavior, organizational culture, and barriers to digital adoption among micro-enterprises. Overall, this study opens opportunities for advancing both conceptual and empirical models in entrepreneurship and strategic management research, particularly in understanding how micro-enterprises can enhance their competitiveness within an increasingly digitalized economic environment..

REFERENCES

- Alkandi, I., & Helmi, M. A. (2024). The impact of strategic agility on organizational performance: the mediating role of market orientation and innovation capabilities in emerging industrial sector. *Cogent Business Management* 11(1), 2396528.
- Autio, E., Mudambi, R., & Yoo, Y. (2021). Digitalization and globalization in a turbulent world: Centrifugal and centripetal forces. *Global Strategy Journal*, 11(1), 3-16.
- Barney, J. B., Ketchen Jr, D. J., & Wright, M. (2021). Resource-based theory and the value creation framework. *Journal of management*, 47(7), 1936-1955.
- 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, 196-206.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage publications.
- D'Souza, C., Nanere, M., Marimuthu, M., Arwani, M., & Nguyen, N. (2021). Market orientation, performance and the mediating role of innovation in Indonesian SMEs. *Asia Pacific Journal of Marketing and Logistics*, ahead-of-print. doi:10.1108/APJML-08-2021-0624

- Eggers, F., Hatak, I., Kraus, S., & Niemand, T. (2017). Technologies that support marketing and market development in SMEs—Evidence from social networks. *Journal of small business management* 55(2), 270-302.
- Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics Biostatistics International Journal*, 5(6), 00149.
- 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.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Islami, X., Mustafa, N., & Topuzovska Latkovikj, M. (2020). Linking Porter's generic strategies to firm performance. *Future Business Journal*, 6(1), 3.
- Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British journal of applied science technology Analysis & Strategic Management*, 7(4), 396-403.
- Kraus, S., Palmer, C., Kailer, N., Kallinger, F. L., & Spitzer, J. (2019). Digital entrepreneurship: A research agenda on new business models for the twenty-first century. *International Journal of Entrepreneurial Behavior Research Horizon*, 25(2), 353-375.
- Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 28(6), 1129-1157.
- Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research policy*, 48(8), 103773.
- Porter, M. E. (2009). The competitive advantage of nations, states and regions. *Harvard Business School*.
- Puspaningrum, A. (2020). Market orientation, competitive advantage and marketing performance of small medium enterprises (SMEs). *Journal of Economics, Business, Accountancy Ventura*, 23(1), 19-27.
- Rasyid, H., & Mumpuni Ningsih, G. (2024). The Role of Digital Technology in the Transformation of Agriculture Toward Smart Farming. *Journal of World Science*, 3(1), 1-7. doi:10.58344/jws.v3i1.523
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of market research* (pp. 587-632): Springer.
- Shah, S. K., Agarwal, R., & Echambadi, R. (2019). Jewels in the crown: Exploring the motivations and team building processes of employee entrepreneurs. *Strategic Management Journal*, 40(9), 1417-1452.
- Snihur, Y., & Wiklund, J. (2019). Searching for innovation: Product, process, and business model innovations and search behavior in established firms. *Long Range Planning*, 52(3), 305-325.
- Teece, D. J. (2019). A capability theory of the firm: an economics and (strategic) management perspective. *New zealand economic papers* 53(1), 1-43.
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of business research*, 122, 889-901.
- William, & Kumar, S. (2024). The Role of Digital Technologies in Enhancing Agricultural Economic Efficiency. *Stallion Journal for Multidisciplinary Associated Research Studies*, 3, 255-263. doi:10.55544/sjmars.3.5.19
- Zhou, K., Brown, J., & Dev, C. (2009). Market orientation, competitive advantage, and performance: A demand-based perspective. *Journal of business research*, 62, 1063-1070. doi:10.1016/j.jbusres.2008.10.001