



The Influence Of Digital Adoption On MSME Performance With Competitor Orientation And Market Orientation As Moderating Variables Among Msmes In The Special Region Of Yogyakarta

Raihan Alfathan Dinatis ¹; Ari Pradhanawati ²; Ngatno ³

¹) Program Studi Magister Business Administration, Diponegoro University, Indonesia

^{2,3}) Fakultas Faculty of social and political sciences, Diponegoro University, Indonesia

Email: ¹) raihanalfathan@students.undip.ac.id ; ²) aripradhanawati@lecturer.undip.ac.id

³) aripradhanawati@lecturer.undip.ac.id

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Abstract

This study aims to analyze the effect of digital adoption on MSME performance with competitor orientation and market orientation as moderating variables among MSMEs in the Special Region of Yogyakarta. This study uses a quantitative approach with a survey method through questionnaire distribution to MSME owners. Data analysis was conducted using Partial Least Square-Structural Equation Modeling (PLS-SEM). The results indicate that digital adoption has a positive and significant effect on MSME performance. Competitor orientation strengthens the effect of digital adoption on MSME performance, although the significance level is moderate. Meanwhile, market orientation shows a negative moderating effect on the relationship between digital adoption and MSME performance. The study also finds that competitor orientation and market orientation do not directly affect MSME performance. The findings suggest that digital transformation has become a dominant factor in improving MSME performance compared to traditional market orientation. Therefore, MSMEs need to strengthen their digital capabilities to remain competitive in a dynamic business environment.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play an important role in Indonesia's economic growth. MSMEs are capable of absorbing labor, increasing community income, and supporting regional economic activities. MSMEs also have an important role as an indicator of the economic quality of a region. In the Special Region of Yogyakarta (DIY), the development of MSMEs has grown rapidly, particularly in the culinary, handicraft, fashion, and creative industry sectors.

However, the rapid development of the world and society has forced changes to occur, including the advancement of digital technology, which also affects the business activities of

MSMEs. The utilization of social media, marketplaces, and digital marketing has become one of the important strategies in improving the competitiveness of MSMEs. Ayman stated that digital technologies enable SMEs to improve operational efficiency, market reach, and business performance. Furthermore, (Sugiyanto, 2026) stated that digital marketing is one of the three major aspects that directly increase sales.

Digital adoption allows MSMEs to expand their market reach, improve marketing effectiveness, and strengthen relationships with customers. Furthermore, (Barney, 1991) explained that firms possessing valuable digital capabilities are more likely to achieve sustainable competitive advantage.

Therefore, it is important for MSMEs in the Special Region of Yogyakarta to have strategies that are not only adaptive but also proactive in responding to competitive market dynamics, especially in improving MSME performance (Wasim et al., 2024). If MSME performance improves, the impact will be highly significant on regional economic growth and stability, which will eventually contribute to the national economy (Haq & Huo, 2023).

The success of digital adoption in improving MSME performance does not always produce the same results for every business. Competitor orientation and market orientation are suspected to influence the effectiveness of digital strategies implemented by MSMEs, although previous research findings have shown insignificant effects from both variables. Furthermore, Putra et al. (2026) stated that today's successful marketing companies share one common characteristic: a strong marketing strategy and a robust customer focus.

Competitor orientation influences business actors' ability to understand business competition conditions as well as competitors' strategies. Meanwhile, market orientation relates to the ability to understand consumer needs and changes in consumer behavior. These two factors are predicted to either strengthen or weaken the influence of digital adoption on MSME performance.

Several previous studies have shown differing results regarding the relationship between market orientation and business performance. Therefore, this study is conducted to analyze the influence of digital adoption on MSME performance, with competitor orientation and market orientation as moderating variables among MSMEs in the Special Region of Yogyakarta.

LITERATURE REVIEW

Resource-Based View (RBV)

The Resource-Based View (RBV) explains that a company's competitive advantage originates from the organization's ability to effectively manage strategic resources. (Barney 1991] stated that resources that are valuable, rare, difficult to imitate, and not easily substituted are capable of creating sustainable competitive advantage.

In this study, digital adoption is considered a strategic resource that can improve the competitiveness and performance of MSMEs.

Digital Adoption

Digital adoption refers to the level of use of digital technology in business activities, such as the utilization of social media, marketplaces, digital marketing, and business applications. The use of digital technology helps MSMEs improve marketing effectiveness, expand market reach, and increase operational efficiency. In addition, digital adoption assists MSMEs in processing market data-based decision making more quickly and accurately (Nugroho et al., 2022).

H1: Digital adoption has an influence on MSME performance.

Competitor Orientation

Competitor orientation refers to a company's ability to understand competitive conditions and competitors' activities. MSMEs that possess strong competitor orientation tend to be more capable of adjusting their business strategies according to market conditions.

H2: Competitor orientation moderates the relationship between digital adoption and MSME performance.

H4: Competitor orientation has an influence on MSME performance.

Market Orientation

(Narver 1990) stated that, "Market orientation is the organizational culture that most effectively creates the necessary behaviors for the creation of superior value for buyers. Therefore, market orientation can be defined as a company's ability to understand customer needs and market changes. Market orientation helps companies create value that aligns with consumer needs. According to Chahal and Bakshi (2015), as well as Distanont and Khongmalai (2020), market orientation has a positive effect on improving company performance.

H3: Market orientation moderates the relationship between digital adoption and MSME performance.

H5: Market orientation has an influence on MSME performance.

METHODS

Research Approach

This study employs a quantitative approach using a survey method. The quantitative approach is used because, according to (Creswell 2017), quantitative research is used to test objective theories by investigating the relationships among variables that can be measured using instruments and analyzed statistically. Therefore, this study aims to objectively examine the relationships among variables through numerical data processing and statistical analysis. The survey method was chosen because the research collects data directly from respondents through the distribution of questionnaires.

This approach is considered appropriate for analyzing the influence of digital adoption on MSME performance, as well as examining the role of competitor orientation and market orientation as moderating variables.

Research Population

The population in this study consists of all Micro, Small, and Medium Enterprise (MSME) owners located in the Special Region of Yogyakarta. The selection of the Special Region of Yogyakarta as the research area is based on the rapid growth of MSMEs and the high level of digital technology utilization in business activities, particularly in the culinary, fashion, handicraft, and creative industry sectors.

Sampling Technique

The sampling technique used in this study is purposive sampling. This technique is employed because the research has specific criteria in selecting respondents to ensure that the data obtained are aligned with the objectives of the study.

The criteria for respondents in this study are as follows:

1. MSME owners that lived in the Special Region of Yogyakarta.
2. Have operated their business for at least two years.
3. Use digital technology in business activities, such as social media, marketplaces, or other digital platforms.
4. Willing to complete the research questionnaire fully.

The use of purposive sampling is expected to obtain respondents who truly understand the implementation of digital activities in running their businesses, thereby making the research findings more relevant.

Data Collection Technique

Data collection in this study was conducted through the distribution of questionnaires to MSME owners. The questionnaire was used as the primary instrument to obtain data regarding digital adoption, competitor orientation, market orientation, and MSME performance. The use of a Likert scale aims to facilitate the process of measuring respondents' perceptions and experiences related to the research variables.

Research Variables

This study consists of several variables, namely:

a. Independent Variable

The independent variable in this study is digital adoption, which refers to the level of digital technology usage in MSME business activities.

b. Dependent Variable

The dependent variable in this study is MSME performance, which refers to the level of business success in achieving business objectives.

c. Moderating Variables

The moderating variables in this study consist of:

1. Competitor Orientation
2. Market Orientation

These two variables are used to examine whether they strengthen or weaken the relationship between digital adoption and MSME performance.

Data Analysis Technique

Data analysis in this study uses the Partial Least Square–Structural Equation Modeling method (PLS-SEM). Joseph F. Hair Jr. stated that research has introduced methodological extensions of the original PLS-SEM method, for example, to uncover unobserved heterogeneity or to assess measurement model invariance. Therefore, the PLS-SEM method was chosen because it is capable of analyzing complex relationships among variables, including the testing of moderating variables within the research model.

According to Thomas D. Cook and Donald T. Campbell (1979), PLS can be used to test overall validity. This analysis is intended to answer a series of interrelated research questions in a single, systematic, and comprehensive analysis by modeling the relationships between multiple independent and dependent variables simultaneously (Gefen et al., 2000). According to Anders Gustafsson and Michael D. Johnson (2004), PLS is also considered capable of overcoming multicollinearity and data distribution issues.

In addition, PLS-SEM is appropriate for predictive research and is less restrictive regarding data normality assumptions.

The stages of analysis in this study include:

1. Outer Model Testing

According to Joseph F. Hair Jr. et al. (2014), outer loading and Average Variance Extracted (AVE) are used to test convergent validity. Therefore, the researcher uses this testing model to obtain accurate results.

- Convergent validity test
- Discriminant validity test
- Reliability test

2. Inner Model Testing

- R-Square test
- Path Coefficient test
- Hypothesis testing

Through these stages, the study is able to determine the validity and reliability of the instruments while simultaneously testing the relationships among variables in the research model.

RESULTS

Table 1. Research Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Digital Adoption -> MSME Performance	0.578	0.585	0.122	4.735	0.000
Digital Adoption x Competitor	0.243	0.263	0.167	1.454	0.073
Digital Adoption x Market Orientation -> MSME Performance	-0.224	-0.219	0.161	1.386	0.083
Orientation -> MSME Performance	0.150	0.176	0.128	1.172	0.121
Market Orientation -> MSME Performance	0.180	0.167	0.147	1.218	0.112

Outer Model

The results of the outer model testing indicate that all indicators have outer loading values above 0.50, meaning that all indicators are considered valid. The Average Variance Extracted (AVE) values for each variable are also above 0.50, indicating that convergent validity has been achieved. In addition, the reliability test results show that all variables have Cronbach's Alpha and Composite Reliability values above the minimum threshold, indicating that the research instruments are reliable.

Inner Model

The test results show an Adjusted R-Square value of: This value indicates that 71.9% of the variation in MSME performance can be explained by the variables included in this study. This study uses the adjusted R-Square because it can accurately measure the confidence level of adding exogenous variables in improving the predictive power of the model (Ghozali, 2016; Hair, 2009).

Hypothesis Testing

The test results indicate that digital adoption has a positive and significant effect on MSME performance, with a coefficient value of 0.578 and a P-value of 0.000. Competitor orientation is able to strengthen the influence of digital adoption on MSME performance, with a coefficient value of 0.243 and a P-value of 0.073. Meanwhile, market orientation shows a

negative moderating effect on the relationship between digital adoption and MSME performance, with a coefficient value of -0.224 and a P-value of 0.083.

The findings of this study are consistent with the guideline stating that the minimum cut-off value for Cronbach's Alpha and Composite Reliability is 0.60 (Hair et al., 2017). This study also finds that competitor orientation and market orientation do not have a direct effect on MSME performance.

DISCUSSION

The results of this study indicate that digital adoption is the main factor influencing MSME performance. These findings support the perspective of the Resource-Based View (RBV), which explains that digital capability is a strategic resource capable of increasing a firm's competitive advantage. In the context of this study, MSMEs that are able to utilize digital technologies such as social media, marketplaces, and online marketing tend to have better capabilities in increasing sales, expanding market reach, and reaching consumers more effectively. The utilization of digital technology also helps MSMEs improve operational efficiency and accelerate communication processes with customers. In today's technological era, consumers are increasingly accustomed to using digital platforms to search for information and conduct transactions. Aljuboori et al. (2021) and Hooley et al. (2005) also highlighted that innovation, as well as marketing resources and capabilities, are important aspects of a company's competitiveness. Therefore, MSMEs that are able to adapt to digital developments have greater opportunities to survive and grow compared to MSMEs that still rely on conventional business methods. The results also show that competitor orientation strengthens the influence of digital adoption on MSME performance. This finding indicates that MSMEs that understand competitive conditions will obtain more optimal benefits from digitalization. MSME owners who actively observe competitors' strategies tend to adapt more quickly in terms of digital marketing strategies, product innovation, and business promotion according to market developments. In addition, competitor orientation helps MSMEs understand their business position amid increasingly intense competition. By understanding competitors' strengths and weaknesses, MSME owners can determine more appropriate and competitive digital strategies. Therefore, digitalization will provide more optimal results when supported by the business owners' ability to analyze market competition conditions.

Meanwhile, market orientation shows a negative moderating effect on the relationship between digital adoption and MSME performance. This result indicates the possibility of over-market orientation or a misconnection between digital strategies and market needs. This condition may occur when MSME owners focus too heavily on short-term market changes, causing the implemented digital strategies to become less consistent and less effective.

In some situations, MSME owners may change their digital marketing strategies too frequently in response to changing market trends or consumer preferences. As a result, digitalization implementation becomes less focused and does not provide maximum impact on business performance improvement. This finding suggests that understanding the market remains important, but it must be balanced with business strategy consistency and strong digital implementation capabilities. However, literature reviews by Liao et al. (2011) and Raju et al. (2011) show that previous research results regarding the influence of market orientation on company performance have been inconsistent. This relationship may be moderated by various factors such as the competitive environment, technology, competitive intensity, product life cycle, and market growth. Although the relationship between market orientation and SME performance tends to be positive (Lonial & Carter, 2015), small businesses must still create superior and sustainable customer value in order to achieve above-average profits (Porter, 1985). Furthermore, competitor orientation and market orientation do not directly influence MSME performance. This finding indicates that traditional business strategies alone are not sufficiently effective without

strong digital capabilities. In the era of modern business competition, MSME owners are not only required to understand the market and competitors, but also to effectively utilize digital technology to improve business competitiveness.

The findings of this study indicate that digital transformation has become an essential requirement for MSMEs in responding to changes in consumer behavior and business environment developments. Digital capability is no longer merely a complementary aspect of business activities, but has become a major factor determining the success and sustainability of MSME businesses.

CONCLUSION

This study shows that digital adoption has a positive and significant effect on MSME performance in the Special Region of Yogyakarta. The findings indicate that the higher the level of digital technology usage in business activities, the better the business performance achieved by MSMEs. The utilization of digital technologies such as social media, marketplaces, and digital marketing helps MSMEs improve marketing effectiveness, expand market reach, and strengthen customer relationships. This study also shows that competitor orientation strengthens the influence of digital adoption on MSME performance. This finding indicates that business owners who understand competitive conditions and competitors' strategies tend to utilize digitalization more effectively. Therefore, the ability to understand competitors becomes a supporting factor in improving the successful implementation of digital technology in MSMEs.

Meanwhile, market orientation shows a negative moderating effect on the relationship between digital adoption and MSME performance. This result indicates that excessive focus on short-term market changes may cause digital strategy implementation to become less optimal. Therefore, MSME owners need to balance their understanding of market needs with the consistency of the digital strategies they implement.

In addition, competitor orientation and market orientation do not directly influence MSME performance. This finding suggests that understanding the market and competitors alone is insufficient to improve business performance without strong digital implementation capabilities. In the context of this study, digital capability becomes a more dominant factor compared to traditional business strategies. Overall, the results of this study indicate that digital transformation has become the main factor in improving MSME competitiveness in the era of technological development. Therefore, MSMEs need to continuously improve their digital capabilities in order to survive and grow in an increasingly competitive business environment.

LIMITATION

This study has several limitations that should be considered. First, the research was conducted only on MSMEs in the Special Region of Yogyakarta, therefore the findings cannot yet be generalized to other regions with different business characteristics and economic conditions. Each region has different levels of digital development, consumer behavior, and business competition, which may produce different findings.

Second, this study uses a quantitative approach through questionnaire distribution, meaning that the data obtained are highly dependent on respondents' perceptions, experiences, and understanding of the research questions. This condition allows for subjectivity in respondents' answers, which may affect the research results. Third, this study only uses digital adoption, competitor orientation, and market orientation variables in explaining MSME performance. In fact, there are still many other factors that may influence business performance, such as innovation, managerial capability, human resource quality, digital literacy, and government support for MSME development.

Therefore, future research is recommended to include additional variables such as innovation, digital literacy, or managerial capability in order to obtain more comprehensive findings. In addition, future studies may also use qualitative or mixed-method approaches to gain a deeper understanding of the digital transformation process among MSMEs.

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