Transformation of Food and Beverage MSMEs in the Digital Era

Ika Triana[1*], Nurul Sukma Lestari[2]

[1]Management Department, BINUS Business School Undergraduate Program,
[2]Hotel Management Department, Faculty of Digital Communication and Hotel & Tourism,
Bina Nusantara University,
Jakarta 11480, Indonesia
itriana@binus.edu; nurul.lestari@binus.edu

*Correspondence: itriana@binus.edu

ABSTRACT

Technology challenges for Micro, Small, and Medium Enterprises (MSMEs) are constantly changing. Specifically, this research aims to examine how using digital payments affects the performance of MSME traders in Bekasi's food and beverage industry. The study used quantitative methodology and data processing using Structural Equation Modeling-Partial Least Squares (SEM-PLS) and involved 117 MSME respondents in Bekasi as samples. The results of this study highlight how MSMEs' performance in Bekasi is significantly impacted by their use of digital payment systems. The study shows that MSMEs may maximize the benefits of digital payments if they demonstrate an openness to learning and an acceptance of new technical advancements. Furthermore, as critical components for MSMEs' success in the digital age, the study highlights the vital roles that technology innovation adaptation and training play. MSMEs in the food and beverage industry may improve operational efficiency and competitiveness by identifying and utilizing new technology. This research is limited to certain locations and variables, so further studies are needed with a broader scope and additional variables, such as the role of Pentahelix in developing MSMEs. The implications of this research that can be applied are that adopting technology increases the efficiency, competitiveness, and growth of MSMEs through digitalization and collaboration. Therefore, this research highlights the significance of a proactive strategy for technology integration and ongoing education in enabling MSMEs to prosper in the ever-changing digital ecosystem.

Keywords: digital payment; food and beverage; MSME; performance

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in the global economy, including Indonesia. (Juniarti & Omar, 2021). Data from the Ministry of Cooperatives and Micro, Small and Medium Enterprises (MSMEs) shows around 64.2 million MSMEs in Indonesia today. Interestingly, 40% of this number operates in the food and beverage sector, which shows the importance of this sector in supporting the local economy (Shimomura, 2020). The contribution of MSMEs to Indonesia's Gross Domestic Product (GDP) is very significant, reaching 61.07% or around Rp 8,573.89 trillion (BaliPost, 2021). In addition, MSMEs are also the backbone of labor absorption, which is around 96.6% of the total workforce in Indonesia (Andayana, 2020)This shows that MSMEs are essential for economic contribution, alleviating unemployment, and improving welfare.

MSMEs are defined as businesses or businesses run by individuals, groups, small business entities, or households. This category is divided into three types: micro-businesses, small businesses, and medium businesses. Micro companies typically have fewer than 5 employees, small businesses have between 5 to 19 employees, and medium-sized enterprises have between 20 to 99 employees (Widowati and Khusaeni, 2022). This division helps develop targeted policies to support each category of businesses according to their needs.

In recent years, MSMEs have faced various challenges, including technological change, globalization, and the impact of the COVID-19 pandemic. However, MSMEs have shown remarkable resilience by adopting innovation and digital technology to stay afloat and thrive. The Government of Indonesia has taken various steps to support the growth of MSMEs, including providing access to financing, entrepreneurship training, and adequate infrastructure development. These programs aim to increase the competitiveness of MSMEs in the domestic and international markets.

Overall, the role of MSMEs in Indonesia's economy cannot be ignored. They contribute significantly to GDP and labor absorption, drive innovation, improve people's well-being, and support inclusive and sustainable economic growth.

The performance of MSMEs is significant for Indonesia's economy because of its considerable contribution to GDP and labor absorption. For MSMEs to continue contributing to the economy, it is essential to pay attention to the performance of each MSME. Performance is the result produced by a particular indicator within a predetermined time frame (Prinata et al., 2023). An organization can be declared to have good performance and success if it achieves the desired goals. (Suryani et al., 2020:6). According to research conducted by Gainau (2020), Performance is the achievement of work results realized through activities that integrate capital, hard skills, and soft skills in business.

However, overall, MSMEs have fundamental problems such as a lack of capital, minimal employee skills, and technology knowledge. (Maksum et al., 2020). Especially after the COVID-19 crisis proved the need for small and medium enterprises to digitize and adopt new technologies to be able to compete and survive in today's ever-changing business environment (Zamani, 2022).

Technology has developed rapidly in recent years, significantly changing business operations (Lew et al., 2020). MSME actors in Indonesia need to be able to master technology to continue to survive in the business world (Prilahardo, 2016) Only by using technology will micro, small, and medium business owners be able to survive and continue to be sustainable (N. S. Lestari et al., 2022). Technology adoption is the choice or decision by an individual or organization to acquire and implement an innovative technology (Baskaran et al., 2020). Technology adoption is clarified by various theories, including the technology acceptance model (TAM) (Dube et al., 2020). TAM is a technology adoption model widely used and studied to predict the adoption and use of technology in a Business (Binyamin et al., 2018). In TAM, evaluation can be measured by perceived usability and perceived ease of use. (Brandis et al., 2019). Previous research has found that technology adoption significantly impacts MSME Performance. (Bagaskara & Aditya, 2022). In addition, using technology in MSME businesses improves time and energy efficiency and reduces the burden through digital payment systems. (Putri et al., 2023). Based on previous research conducted by Lin et al. (2022)It is stated that small companies still have a lower level of digitalization than medium companies, while medium companies themselves are still not entirely digitized compared to large companies. The adoption of technology by MSMEs can provide a competitive advantage. (Andaregie & Astatkie, 2022).

When applying technology in business operations, especially in controlling production activities properly, MSME actors adjust to market trends and technological advances to support business development. (Tirtayasa et al., 2021). This is in line with research conducted by (Melania & Handayani, 2023)The results of his research show that MSME entrepreneurs who have adopted technology in their business operations can simplify the sales process and increase the number of consumers online without the need to transact in person. Technology is often only used for communication between customers and suppliers, but in recent times, business actors have begun to use technology as a payment system (D. A. Lestari et al., 2020).

Digital payments, sometimes called electronic payments, are the transfer of value from one payment account to another using a digital device such as a mobile phone, POS (Point of Sales) or computer, digital communication channels such as mobile wireless data or SWIFT (World Interbank Financial Telecommunication Society) (Mandal & Madaan Dua, 2023). Digital payments are not a single type of payment but rather a term used to describe any payment made electronically (Trivedi & Sanchiher, 2023). Electronic payment methods are commonly used because they are practical, easy, and fast. (Anggarini, 2022).

Based on previous research conducted by D. A. Lestari et al., (2020) MSME entrepreneurs in the city of Palembang got results that digital payments increased revenue from traders. In line with the research conducted by Octavina & Rita, (2021) The result was that financial digitization could greatly help the performance of MSMEs, as proven by research on MSMEs in the culinary sector in the city of Solo. Likewise, a study on MSME traders in the town of Bandung showed that digital payment has a positive and significant influence on the performance of MSMEs (Mutiara et al., 2022). Likewise, the research conducted by Aulia et al., (2022) and Sintya Dewi & Masdiantini, (2023)Digital payments positively and significantly affect the performance of micro, small, and medium enterprises. However, this research contradicts the results obtained by Yunita Leatemia et al., (2023), i.e. payment cashless does not have a significant effect on MSME business performance

This study identifies the challenges of MSME digitalization and analyzes the impact of digital payments on business using the TAM model. Technology implementation strategies are focused on increasing digital literacy, optimizing e-commerce platforms, and adopting digital payment systems. The results are used to formulate policies to accelerate the digital transformation of MSMEs in Bekasi. Based on the background description above and the lack of research that focuses on technology adoption by MSMEs in the Bekasi area, this study aims to examine the influence of digital payment adoption on the performance of MSME traders in the food and beverage sector in Bekasi. The research model of this study is as follows:
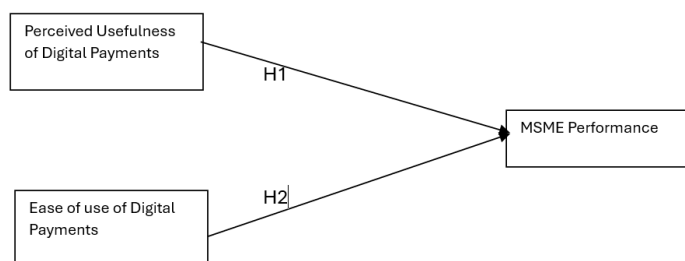

Figure 1. Research Model

Based on Figure 1 above, the hypothesis of this study can be formulated as follows:
H1: The perceived usefulness of digital payments has a significant effect on MSME performance
H2: Ease of use of digital payments has a significant effect on MSME performance

METHODS

This quantitative research examines the influence of digital payment adoption on the performance of MSMEs in Bekasi. The study was conducted between May and June 2022. Questionnaire collection is carried out manually or directly given to traders. The object of this research is Micro, Small, and Medium Enterprises that use digital payment as a means of payment. The population of this study is MSMEs in Bekasi City, West Java Province. Based on data from the Bekasi Central Statistics Agency in 2022, the number of MSMEs in Bekasi, which is the population of this study, is 1,119 units. (Bekasi City Central Statistics Agency, 2022). The sample size must be at least ten times the number of indicators (Hair Jr et al., 2017). The sample in this study consists of 117 traders engaged in food and beverages. This study uses primary data from questions on a questionnaire that represents the indicators of each variable distributed to MSME actors in Bekasi City. Secondary data was obtained from the Central Statistics Agency (BPS) website, journals, and previous research.

This study uses the quantitative multivariate partial least squares structural equation model (PLS-SEM) for hypothesis testing and analysis. The research uses this method because it is predictive. (Avkiran, 2018) and widely used in the hospitality sector (Ali et al., 2018)This study analyses and interprets the model in two steps to ensure the validity and reliability of the recommended measurement scale: analysis of the outer model and analysis of the *inner model*. (Hair Jr. et al., 2017).

RESULT AND DISCUSSION

Result

Most MSMEs in this survey were women aged 44–59 years with a diploma education background and working in the culinary sector. Most of their businesses have been running for less than 5 years, indicating that they are still in the early stages of growth. The limited number of employees is less than 5, which indicates a small business scale. In marketing, Instagram is the main platform used, emphasizing the important role of social media in reaching customers. The monthly income of most MSMEs is still below 10 million rupiahs, reflecting the financial stability challenges. These results emphasize the need for support and training in business management and digital marketing strategies to improve MSME performance and income.

This study evaluated various indicators using several methods, including convergent validity, construct reliability, average variance extraction (AVE), and discriminative validity. Convergent validity is assessed by looking at the external loadings of each variable, which should be greater than 0.70 to indicate adequate indicator validity. In addition, this study also measures the reliability of the construct as a latent variable, which must have a value greater than 0.70. It should be noted that Cronbach's alpha is used as a measure of a construct's reliability. This study also uses average variance extraction (AVE) to determine whether the requirements for discriminative validity are met. The minimum threshold for AVE is 0.50, meaning the underlying construct must explain more than half of the indicator's variance (Hair Jr et al., 2017). It can be seen in Table 1 down below.

Table 1. constructs validity and reliability

Construct	Items	Loading	Cronbach's Alpha	Composite Reliability	AVE*
The perceived usefulness of Digital Payments	With the technology, my sales increased (X1.1)	0.94	0.878	0.926	0.807
	My business's earnings are increased by technology(X1.2)	0.818			
	I can operate my business more easily by utilizing technology (X1.3)	0.931			
Ease of use of Digital Payments	I can easily use technology (X2.1)	0.753	0.709	0.837	0.632
	I can master technology quickly(X2.2)	0.829			
	My buyers can use the technology (X2.3)	0.801			
Performance of MSMEs in Bekasi City	I can do the job well (Y1)	0.735	0.854	0.896	0.633
	My business operational costs can be managed well (Y2)	0.755			
	I regularly assess the quality of the goods (Y3)	0.835			
	The use of technology in my business operations has been quite effective (Y4)	0.820			
	I record and evaluate financial reports regularly (Y5)	0.828			

*AVE (Average Variance Extracted)

The results from Table 1 show that all measurements have satisfactory validity and reliability. Thus, the results obtained from this assessment provide confidence that the data used in this study are reliable and meet the validity and realism criteria necessary to produce accurate and reliable findings.

Smart PLS 3 uses a variance-based structural equation modeling (SEM) method to perform the smallest square of the partial. PLS-SEM is a good perspective for exploratory research from the SEM perspective by calculating the described variance (R2) of the dependent variable, the path coefficient (β), and its degree of significance resulting from the bootstrapping sampling approach to evaluate the correlation prediction based on the criteria provided by the Hair et al., (2017). The bootstrapping results can be seen in Figure 2 below.
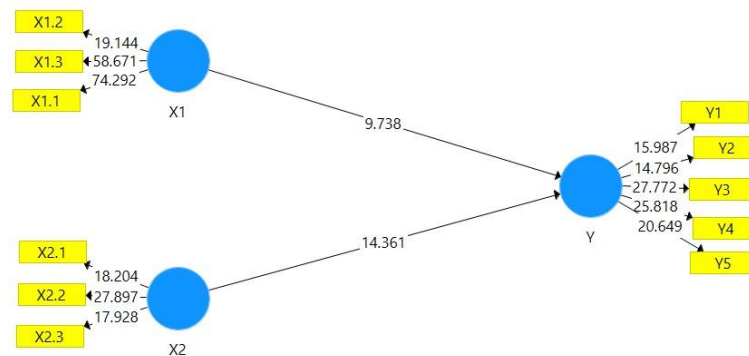
Figure 2. Bootstrapping

Next is the hypothesis test, where the results can be seen in Table 2 below:

Table 2. Hypothesis Results

	t-Value	P-Values	Information
X1→Y	9.738	0.000	Accepted
X2→Y	4.361	0.000	Accepted

Based on the results listed in Table 3, it can be concluded that the results of hypothesis testing can be concluded. These findings significantly influence Micro, Small, and Medium Enterprises (MSMEs) performance based on certain factors. First, the study's results found that digital payments significantly positively impact the performance of MSMEs in terms of perceived usability. This is reflected in the t-count value of 9.738 with a significant level (p) of less than 0.05. Therefore, it can be concluded that the usefulness of digital payments felt by MSMEs significantly improves performance; H1 is declared accepted.

Second, regarding the ease of using digital payments, the results show a positive significant effect on the performance of MSMEs. This is strengthened by a calculated t-value of 14,361 with a significant level (p) of less than 0.05. Thus, it can be concluded that the ease of using digital payments significantly affects the performance of MSMEs, and H2 is declared accepted. Overall, these findings provide empirical support for the importance of the usability and ease of use of digital payments in improving the performance of MSMEs. This can be the basis for developing strategies and policies that support adopting digital payment technology among MSMEs to increase competitiveness and operational efficiency.

This study identifies the challenges of MSME digitalization and analyzes the impact of digital payments on business using the Technology Acceptance Model (TAM) (Friska et al., 2024). The technology implementation strategy focuses on increasing digital literacy, optimizing e-commerce platforms, and adopting digital payment systems. TAM is used to understand how perceptions of ease and benefits of technology influence MSME digital adoption, ultimately increasing their competitiveness and business growth (N. P. Lestari & Choirunnisa, 2025). The results are used to formulate policies to accelerate the digital transformation of MSMEs in Bekasi.

Discussion

The result of this study is that the adoption of digital payments has a significant influence on the performance of MSMEs in the city of Bekasi, in line with previous research conducted by (Aulia et al., 2022; Mutiara et al., 2022; Sintya Dewi & Masdiantini, 2023). However, it should be noted that these results differ from the findings produced by the study. Yunita Leatemia et al., (2023).

Based on the previous literature, adopting digital payment technology can be a positive catalyst for improving the performance of MSMEs. This study shows that MSMEs can maximize the benefits of digital payments if they are willing to learn and accept current technological developments.

Based on real data of MSMEs in Indonesia, hypotheses H1 and H2 are accepted because digital payments are proven to increase MSMEs' efficiency, effectiveness, and income. Transaction digitization accelerates the payment process, improves the accuracy of financial records, and expands market reach through e-commerce and social media (Zidni Husnia Fachrunnisa et al., 2024). In addition, the ease of use of digital payment systems encourages wider adoption because they are practical, flexible, and reduce operational costs. Digital transformation also helps MSMEs adapt to market changes and increase their competitiveness. Stable and affordable internet access factors also play a role in accelerating the integration of digital technology in MSME operations (Namira, 2022). The willingness to keep up with technological developments is crucial to improving MSMEs' competitiveness and operational efficiency. Therefore, this study suggests that training and adaptation to technological innovation are key elements of MSME success in the digital era.

CONCLUSION

Technology adoption is essential to improve the performance of Micro, Small, and Medium Enterprises (MSMEs). MSMEs can expand their market reach, drive sales, and drive business growth by building a solid digital presence through websites and social media platforms, integrating cloud computing solutions, and leveraging e-commerce channels. In addition, implementing digital payment systems, using data analysis for informed decision-making, and providing training and technology support enable MSMEs to improve operational efficiency, increase customer engagement, and mitigate risks. Collaboration in an ecosystem of MSMEs, technology providers, academics, and government agencies further accelerates technology diffusion and fosters innovation, resilience, and competitiveness. Using technology, MSMEs can open new opportunities, encourage sustainable growth, and significantly contribute to economic development and job creation.

This study implies that technology adoption helps MSMEs improve efficiency, expand markets, and drive growth through digitalization and e-commerce. Training support and digital payment systems strengthen decision-making, while collaboration with various parties accelerates innovation and competitiveness. MSMEs can develop sustainably by optimizing technology and contributing to the economy and employment. The disadvantage of this study is the limited location of the research and variables so that further research can be carried out with additional locations and the addition of variables such as the role of Pentahelix (government, academics, community, business, and media) in developing MSMEs.

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