



RESEARCH ARTICLE

Digital Payments in MSMEs in the Batik Industry in West and Central Java: The Moderating Role of Perceived Risk Move and Intention to Use

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This study aims to analyze the use of digital payment methods by MSMEs as a marketing strategy and explore the moderating role of risk perception in influencing its adoption and effectiveness. Furthermore, the population in this study is batik MSMEs in Central Java and West Java. Sampling was conducted using stratified random sampling technique, which aims to ensure adequate representation of various subgroups in the population. From this process, 258 samples were obtained which were used in the analysis. Data collection was carried out through a survey using a questionnaire distributed online to owners or managers of MSME social media accounts that meet these criteria. The data analysis in this study was carried out using the Structural Equation Modeling (SEM) method with AMOS software. The results of the analysis show that perceived usefulness and ease of use affect the intention to move and intention to use digital wallets in batik MSMEs in Central Java and West Java. Furthermore, it was found that intention to use has an effect on actual use while intention to move has no effect on actual use. Further findings found the moderating role of perceived risk. Perceived risk can inhibit or strengthen the relationship between intention and actual use, depending on how individuals assess the risk.

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INTRODUCTION

The swift advancement of digital technology has significantly influenced numerous facets of life, particularly the business sector. One notable effect of this progress is the increasing adoption of digital payment methods by Micro, Small, and Medium Enterprises (MSMEs) as a strategy to broaden their market coverage. In the context of payments, digital platforms play a strategic role in simplifying transactions and improving operational efficiency. The use of tools such as digital wallets, online bank transfers, and QR codes provide flexibility for MSMEs to interact directly with their consumers (Ryan, 2017).

The use of digital payment methods has become a business demand in the digital era, including for MSMEs, as it offers various benefits such as lower transaction costs, access to a wider market, and the ability to respond to consumers more quickly (Kim & Ko, 2012). However, despite the opportunities offered by digital technology, many MSMEs are still lagging behind when it comes to the adoption of digital payment methods. Various challenges, such as limited technological knowledge, resources, and high risk perceptions related to digital security, are the main barriers. Concerns about potential losses such as technology failure, public criticism, and data leakage add to the burden for MSMEs that do not have sufficient experience in the digital world (Gefen et al., 2003).

These constraints indicate that the adoption of digital payment methods by MSMEs is not always easy. One of the factors that influence the success of implementation is the perceived risk perceived by MSME players. Perceived risk in the use of digital technology refers to their concerns about potential threats, such as data security risks, privacy breaches, or reputational damage due to negative comments from consumers (Featherman & Pavlou, 2003). These perceptions often hinder MSMEs' intention to fully adopt digital payment methods, even though the benefits offered, such as increased efficiency and ease of transactions, are obvious. Therefore, it is important to analyze how perceived risk can moderate the relationship between the use of digital payment methods and the operational effectiveness of MSMEs.

In previous literature reviews, analyzing the level of digital technology adoption usually uses the Technology Acceptance Model (TAM) approach. This study examines the impact of perceived ease of use and perceived usefulness on both the intention to adopt and the actual usage of technology. Research conducted by Daragmeh et al. (2021), Aji et al. (2020), and Munsch (2021) emphasizes two key factors influencing the adoption of digital payment technologies: perceived usefulness and ease of use. Perceived usefulness has been shown to significantly influence the intention to utilize digital payment methods, as it offers advantages like cost efficiency and expanded accessibility (Le & Quang, 2023; Singh & Sinha, 2020). In addition, the ease of use of digital technology is also important in attracting people to adopt digital wallets, as suggested by Chawla & Joshi (2019) and Azamat et al. (2023), who found that this convenience can encourage the adoption of digital financial technology in society.

Thus, this study aims to analyze the adoption of digital payment methods by MSMEs and explore the moderating role of risk perception in influencing their implementation and effectiveness. The results of this study are expected to provide better insights into how MSMEs can overcome these challenges, as well as capitalize on the opportunities offered by digital technology to improve their competitiveness in the global market.

LITERATURE REVIEW

Perceived usefulness and intention to move to digital payment

Perceived usefulness reflects users' beliefs that a system or technology will help improve their performance. According to Munsch (2021), systems that are perceived as useful and able to contribute to effectiveness, productivity, and ease of use are more likely to be adopted. In the context of digital-based payment methods, MSME players who realize the significant benefits of digital payment technology, such as the ability to process transactions quickly, safely, and at lower costs, will be more likely to switch to this system. Aji et al. (2020) found that MSMEs' understanding of the benefits of digital-based payment methods plays an important role in driving their intention to adopt this technology. In addition, socialization of its benefits through various platforms will strengthen users' intention to implement digital payments as part of their business strategy.

Research conducted by Daragmeh et al. (2021) also shows that during the COVID-19 pandemic, MSMEs are increasingly aware of the importance of switching to digital platforms, especially digital-based payments. Generation X and Z, who are mostly active internet users, have shown a significant increase in the use of digital payment methods to purchase goods and services. This shows that when businesses realize the usefulness of technology, they will be more motivated to switch to digital payment systems. The government also plays an important role in socializing the benefits of digital payments, especially to MSMEs, in order to take advantage of this technology to improve their competitiveness and business effectiveness (Aji et al., 2020). In this context, this study formulates the following hypothesis:

H1: Perceived usefulness has significant effect on intention to move digital payment

Perceived usefulness and intention to use digital payment

In addition to influencing the intention to switch, perceived usefulness also plays a major role in determining whether the technology will be actively used. A technology will only be widely adopted if users perceive significant benefits from its use. In the context of digital-based payment methods, its ability to increase transaction efficiency and speed up business processes is the main reason why MSMEs should consider this technology (Venkatesh & Davis, 2000). Singh & Sinha (2020) found that

perceived usefulness plays an important role in encouraging people to use digital payment methods because it offers better transaction speed at a more efficient cost. Users who believe that digital payments will provide more value compared to traditional methods will be more likely to adopt them as part of their strategy.

In addition, research conducted by Kwabena et al. (2019) and Hong et al. (2020) show that digital-based payment systems open up new opportunities for MSMEs in managing their transactions through digital platforms. This payment method allows MSMEs to conduct transactions directly, improve interactions with customers, and speed up the payment process. In addition, by introducing digital payment methods, MSMEs can reduce operational costs and improve access to international markets. In this context, this study formulates the following hypothesis:

H2: Perceived usefulness has significant effect on intention to use digital payment

Perceived ease of use and intention to move to digital payment

Ease of use is a user's perception of how easy a technology is to use. In the context of digital-based payment methods, users who find the technology easy to use are more likely to switch from traditional payment methods to digital payments. Chawla & Joshi (2019) found that ease of use is one of the key elements that influence the adoption of new technology. When technology is perceived as easy to use, users do not feel intimidated by the process of operating the technology and will be more motivated to adopt it. This also applies to digital-based payment methods, where potential users should feel that the system does not require excessive effort to learn and implement (Azamat et al., 2023).

In addition, socialization about ease of use is especially important for people with low education and those over 40 years old, as found by Yang et al. (2021). Ease of use should be introduced to the general public so that they feel confident in using digital payment methods. This research proposes that when users believe that digital payments are easy to use, they will be more motivated to switch and use it as a primary tool in their business transaction strategy. Therefore, the third hypothesis states that ease of use significantly affects the intention to switch to digital-based payment methods. In that context, this study formulates the following hypothesis:

H3: Ease of use has significant effect on intention to move digital payment

Ease of use and intention to use digital payment

Ease of use not only plays a role in driving the intention to switch to new technology, but also in determining whether the technology will be used sustainably. In a study by Senali et al. (2023), it was found that ease of use of technology plays an important role in the adoption of technology by the general public. For ordinary users, a technology will be easier to adopt if they perceive that the technology is easy to use. In the context of digital-based payment methods, this ease includes aspects such as easy to learn, easy to remember, and easy to operate (Venkatesh & Davis, 2000). Research by Malik & Annuar (2021) shows that ease of use is one of the key factors that encourage Malaysians to adopt e-wallets, which is relevant in the context of digital payments.

In addition, Hasan et al. (2023) found that user trust in the product being used also strengthens the relationship between ease of use and intention to use the technology. That is, when users feel that a digital payment method is easy to use and they trust the technology, they will be more likely to adopt and actively use this technology. In this context, this study formulates the following hypothesis:

H4: Ease of use has significant effect on intention to use digital payment

Intention to move and actual use

The shift from conventional payment methods to digital-based payment methods is a form of progress that brings many benefits. With more and more people utilizing digital payments, MSME businesses must provide this option in their buying and selling transactions (Yan et al., 2021). Digital payment methods provide new opportunities for MSMEs to utilize technology in processing transactions, which can have a positive impact on their financial health (Hong et al., 2020; Daud et al., 2022). The move from traditional to digital payment methods is also expected to increase the actual usage of these payment methods.

Yan et al. (2021) found that the intention to use digital technology is directly related to the likelihood of actual use of the technology. Sharma et al. (2020) also confirmed that the benefits of digital payments encourage businesses to adopt digital strategies in the transaction process. In addition, Rehman & Yaqoob (2022) showed the mediating effect of intention to move on the relationship between perceived usefulness and actual use of digital technology. However, there are still few analyses that specifically examine MSMEs in certain industries, so this study seeks to fill the gap. The proposed hypotheses are:

H5: Intention to move has a significant effect on the actual use of digital payment methods.

Intention to use and actual use

Many previous studies have used the Technology Acceptance Model (TAM) to analyze the influence of perceived usefulness and ease of use in technology adoption. However, most of these studies focus more on the intention to use the technology rather than actual use (Chawla & Joshi, 2019; Tahar et al., 2020; Azamat et al., 2023). There are still very few studies that examine the actual use of digital-based payment methods, especially among MSMEs (Rahayu, 2022; Wongkangwang, 2022). This study aims to explore the influence of intention to use on the actual use of digital payment methods as a transaction tool in MSMEs.

In addition, previous research also shows that intention to use acts as a mediator between perceived usefulness and actual use, as well as between ease of use and actual use. This finding is supported by Al Sharafi et al. (2017) and Atta & Romli (2018), who also found the mediating effect of intention to use. This shows that with the intention to use digital payment methods, the chances of actual use among MSMEs will be greater. Actual use is defined as a condition in which users consistently utilize the system as a tool to simplify transactions, increase efficiency, and achieve better results (Kurniawan et al., 2020). Therefore, the proposed hypothesis is:

H6: Intention to use has a significant effect on the actual use of digital payment.

The moderation role of perceived risk

Risk perception is a user's subjective assessment of the potential loss or harm that may arise from using a particular product or service. In the context of information technology, perceived risk often includes factors such as privacy, security, reliability, and potential financial loss (Kim & Jung, 2019; Awo et al. 2019). Perceived risk can inhibit or strengthen the relationship between intention and actual use, depending on how individuals assess the risk.

Perceived risk has an important role in moderating between intention to use and actual use. Research shows that when users perceive high risks associated with using a technology, they tend to delay or avoid actual use, despite having the intention to use (Ademola et al. 2019). Risks often associated with technology use include the risk of data loss, privacy violations, or potential system failures (Xie et al. 2023).

In the context of intention to move, perceived risk plays a role in delaying or facilitating a user's move from one system to another. Individuals who perceive higher risks associated with switching, such as uncertainty about the security of the new payment method or potential data loss, tend to be more hesitant to switch, even though they are dissatisfied with the current system (Kim & Jung, 2019; Xie et al. 2023). Thus, perceived risk acts as a barrier to the realization of intention to move into actual use. Therefore, this study formulates the following hypothesis:

H7: Perceived risk moderates the effect of intention to move on actual use.

H8: Perceived risk moderates the effect of intention to use on actual use.

RESEARCH METHOD

This study employs a quantitative approach aimed at analyzing the use of digital payment methods by SMEs in the Batik industry in Central Java and West Java, as well as examining the moderating role of perceived risk in the relationship between variables. The population of this study consists of SMEs in the Batik industry from Central Java and West Java. The sampling was conducted using a stratified random sampling technique to ensure adequate representation of the various subgroups within the population. From this process, a total of 258 samples were obtained for analysis. Data collection was carried out through surveys using questionnaires, which were distributed online to the owners or

managers of social media accounts of SMEs that met the specified criteria. The data analysis in this study was conducted using the Structural Equation Modeling (SEM) method with AMOS software. SEM was chosen because it is capable of testing complex relationships between latent variables and accommodates moderation analysis involving perceived risk.

RESULT AND DISCUSSION

Data and hypothesis testing in this study used the structural equation model method with AMOS 24 software. The analysis includes prerequisite tests, confirmatory factor analysis (CFA) and hypothesis testing. The prerequisite test consists of data normality test and outlier test. The CFA includes validity test, reliability test and goodness of fit test. Furthermore, the research hypothesis test was conducted.

Normality test and outliers

Normality testing aims to determine whether the distribution of research data follows a normal distribution pattern or not. In the analysis using AMOS, it is required that the data has a normal distribution, which can be seen from the multivariate c.r. value which must be in the range of -2.58 to 2.58. Based on the results of the normality test, the multivariate c.r. value obtained is 1.019, which already meets the requirements of normal distribution. In addition, AMOS analysis also requires data to be free from outliers. Outliers are data that have a mahalanobis d-squared value smaller than the chi-square value. In this study, the chi-square value for 31 indicators with a significance level of 0.001 is 55.0.

Table 2: Mahalanobis distance

Observation number	Mahalanobis d-squared	p1	p2
169	50,728	,003	,485
249	48,407	,005	,356
149	46,926	,007	,283
91	46,707	,008	,135
78	45,255	,011	,159
69	45,165	,011	,074
153	44,538	,013	,057

Table 2 shows that the data in this study has the highest Mahalanobis d-square value of 50.728, which means that no data has a value higher than the chi-square value of 55.0. These results indicate that the data in the study are free from outliers.

Confirmatory factor analysis

CFA testing includes data validity test, reliability test and goodness of fit test. Data validity test refers to Hair et al. (2014) with the criteria that valid indicators have a factor loading value > 0.5 . The validity of the construct refers to the AVE value with the criteria $AVE > 0.5$. Furthermore, construct reliability refers to the composite reliability value with $CR > 0.7$ criteria. The analysis results are shown in table 3.

Table 3: Validity and reliability test

Variable	Item	Loading Factors	AVE	CR
Perceived Usefulness	PU1	0,83	0,63	0,91
	PU2	0,817		
	PU3	0,792		
	PU4	0,707		
	PU5	0,846		
	PU6	0,779		
Ease of Use	EU1	0,764	0,60	0,90
	EU2	0,758		
	EU3	0,789		
	EU4	0,85		
	EU5	0,856		
	EU6	0,62		
Intention to Move	IM1	0,506	0,56	0,77

Variable	Item	Loading Factors	AVE	CR
	IM2	0,706		
	IM3	0,679		
Intention to Use	IU1	0,748	0,52	0,76
	IU2	0,693		
	IU3	0,722		
Actual Use	AU1	0,776	0,55	0,72
	AU2	0,71		
	AU3	0,54		
Perceived risk	RP1	0,838	0,61	0,89
	RP2	0,707		
	RP3	0,799		
	RP4	0,785		
	RP5	0,77		

Table 3 shows that the factor loading value on each item has a value > 0.5 so that based on the criteria of Hair et al. (2014) all indicator items in this study are valid. Furthermore, construct validity in this study is measured from the AVE value with the condition that $AVE > 0.5$. The results show that all research variables meet the validity requirements. As for construct reliability, it is known that all variables have a CR value > 0.7 so that all variables are declared reliable.

Goodness of fit

Testing the goodness of fit is conducted to evaluate the suitability and acceptability of a research model, ensuring that it aligns well with the collected data. In the context of structural equation modeling (SEM) using Amos, the model must satisfy several goodness of fit criteria to be considered valid. This study applies six key indicators to assess model fit: the chi-square value, which should be as small as possible; the probability value, which should exceed 0.05; the Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI), both expected to be greater than 0.90; the Tucker-Lewis Index (TLI), which should also surpass 0.90; and the Normed Fit Index (NFI), similarly required to be above 0.90.

In the initial stage of model testing, two of these criteria failed to meet the required thresholds. Specifically, the chi-square value was found to be 279.981, while the associated probability value was 0.000, significantly below the acceptable level. A chi-square value this large indicates a poor fit between the model and the observed data, while the low probability value suggests that the discrepancies between the model and the data are statistically significant. To address this issue, model modifications were necessary. The modification process often involves referring to the modification index (MI) table, provided in the Amos output, which identifies areas where changes can be made to improve model fit. One common strategy for modification is adding covariance paths between error terms that have high MI values. Another option is to remove or modify items with high MI values to reduce the chi-square value and improve the overall model fit. After applying these modifications, the goodness of fit indices improved, as summarized in Table 4.

Table 4: Goodness of fit test

Goodness of Fit	Kriteria	Cut-off value	Keterangan
Chi-Square	Must be small	173,764	Fit
Probability	$> 0,05$	0,171	Fit
GFI	≥ 0.90	0,939	Fit
AGFI	≥ 0.90	0,919	Fit
TLI	≥ 0.90	0,994	Fit
NFI	≥ 0.90	0,948	Fit

Table 4 shows that all goodness of fit criteria have met the fit criteria, namely chi-square (must be small), probability (> 0.05), GFI (> 0.90), AGFI (0.90), TLI (0.90) and NFI (0.90), so this research model has good model feasibility.

Hypothesis test

Hypothesis testing is based on the regression weight table, where the nature of the influence between variables is determined by examining the estimate values for each variable relationship. These estimate values are presented in Table 5. A positive estimate value suggests a positive influence between the variables, while a negative estimate value indicates a negative influence. To assess the significance of these effects, two key indicators are used: the critical ratio (CR) and the probability (p-value). An effect is considered statistically significant when the critical ratio exceeds 1.96 and the probability is less than 0.05. The detailed results of this hypothesis test are provided in Table 5.

Table 5: Regression weight

	Estimate	S.E.	C.R.	P	Keterangan
IM <--- PU	,480	,123	3,901	,000	Significant
IM <--- EU	,368	,111	3,312	,000	Significant
IU <--- PU	,322	,101	3,199	,001	Significant
IU <--- EU	,600	,098	6,132	,000	Significant
AU <--- IM	1,285	,686	1,874	,061	Insignificant
AU <--- IU	2,601	,622	4,182	,000	Significant

Table 5 presents the hypothesis testing results, revealing that PU (perceived usefulness) has a significant positive impact on IM (intention to move). This is demonstrated by a positive estimated value, a critical ratio greater than 1.96, and a probability value below 0.05, leading to the acceptance of hypothesis H1. Similarly, EU (ease of use) also shows a positive and significant effect on IM, supported by a positive estimate, critical ratio exceeding 1.96, and a probability value below 0.05, confirming hypothesis H2.

Additionally, the analysis shows that PU (perceived usefulness) positively and significantly affects IU (intention to use), with a positive estimated value, a critical ratio above 1.96, and a probability below 0.05, thereby supporting hypothesis H3. EU (ease of use) similarly has a positive and significant influence on IU, as indicated by positive estimates, critical ratio values exceeding 1.96, and probabilities below 0.05, which validates hypothesis H4.

Further testing shows that IM (intention to move) does not have a significant effect on AU (actual use), as evidenced by a critical ratio less than 1.96 and a probability above 0.05, leading to the rejection of hypothesis H5. However, IU (intention to use) demonstrates a significant positive impact on AU, with a positive estimate, critical ratio above 1.96, and probability below 0.05, thereby supporting hypothesis H6.

The moderation role of perceived risk

Furthermore, the moderation analysis of perceived risk. Moderation analysis is done by adding interaction variables in the model. Interaction variable 1 shows the moderating role of perceived risk on the influence of IM and AU. The interaction variable 2 shows the moderating effect of perceived risk on the effect of IU and AU. The results of the moderation analysis are shown in table 7, while figure 1 shows the full model with moderation..

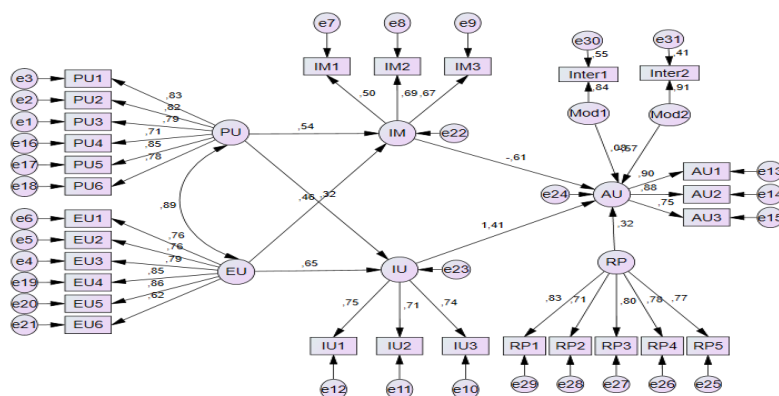


Figure 1: Full model with moderation

Table 7: Moderation analysis result

			Estimate	C.R.	P	Description
AU	<---	Mod1	,013	3,004	,003	RP moderate the effect of IM on AU
AU	<---	Mod2	,088	18,940	,000	RP moderate the effect of IU on AU

The results of the analysis show that perceived risk is able to significantly moderate the effect of intention to move on actual use with a P value of 0.003 so that H7 is supported. Furthermore, perceived risk is also able to significantly moderate the effect of intention to use on actual use with a p value of 0.000 so that H9 is supported

DISCUSSION

Digital transformation has become an essential need in the modern era, including in the trade and business sectors. One of the significant changes is the development of payment technology, including digital-based payment methods. This research focuses on the factors that support the shift from conventional payment systems to digital-based payments in SMEs within the Batik industry in West Java and Central Java. In this study, two main aspects proposed to enhance the adoption of digital payment methods are perceived usefulness and ease of use.

Based on various previous studies, the Technology Acceptance Model (TAM) has widely utilized these two aspects, i.e., perceived usefulness and ease of use. However, most research focuses solely on the intention to use technology (Chawla & Joshi, 2019; Tahar et al., 2020; Azamat et al., 2023). There has been little analysis related to the actual usage of digital payment technology (Rahayu, 2022; Wongkangwang, 2022), and no similar studies have been conducted in the SME Batik sector. Therefore, this study aims to examine the factors influencing the transition from traditional payment systems to digital payment methods, as well as their impact on both the intention and the actual use of digital payment technology in Batik SMEs.

This research indicates that in technology adoption, perceived usefulness plays a critical role in encouraging users to transition from traditional to digital payment systems. The first hypothesis test shows that perceived usefulness has a significant impact on the intention to move. These findings demonstrate that if the benefits of digital payments are well-explained to Batik SMEs, it will drive them to transition to this technology. This aligns with the studies by Daragmeh et al. (2021), Aji et al. (2020), Munsch (2021), Karim et al. (2020), and Wicaksono et al. (2023), which state that perceived usefulness influences business actors' attitudes toward adopting digital payment technology.

The shift from traditional to digital payment methods is driven by a higher perceived need and benefit (Daragmeh et al., 2021). In 2020, Generation X and Z showed a significant shift to digital payment methods due to the Covid-19 pandemic, which increased the adoption of digital payment technology as it proved to be more beneficial than conventional methods (Daragmeh et al., 2021; Munsch, 2021). Aji et al. (2020) highlight the importance of the government's role in socializing the benefits of digital payments, particularly to SMEs. With better understanding of this technology's benefits, perceived usefulness is expected to increase. Meanwhile, Karim et al. (2020) emphasize the aspect of security in using digital payments, which also strengthens the perceived usefulness and the intention of business actors to switch. From a business perspective, Wicaksono et al. (2023) state that digital payment is an essential strategy and has even become a necessity in the modern era.

Moreover, perceived usefulness has also been proven to enhance the intention to use digital payment methods among Batik SMEs. The study's findings suggest that the better the understanding of digital payment benefits, the more likely SMEs are to adopt the technology. Le & Quang (2023) also affirm that perceived usefulness can attract more consumers through digital payments due to its broader reach and lower costs.

Singh & Sinha (2020) also emphasize the importance of perceived usefulness in the adoption of digital payment technology, especially among SMEs. For SMEs to adopt digital payment technology, they need to be educated on the advantages and benefits of this technology. This study further highlights that the use of digital payment methods can accelerate transactions, improve productivity, and simplify the overall payment process (Venkatesh & Davis, 2000).

Batik SMEs must understand that digital payment methods open up new opportunities to expand market reach and optimize product sales through digital technology (Hong et al., 2020; Daud et al., 2022). Kwabena et al. (2019) revealed that adopting digital payment technology by SMEs could speed up business processes and reduce operational costs. Therefore, Batik SMEs need to transition to digital payment methods to remain competitive in both domestic and international markets.

In adopting digital payment technology, ease of use is also a crucial factor that encourages technology adoption among business actors. Within the framework of the Technology Acceptance Model, ease of use is one of the key elements that determine whether technology will be recognized and adopted by society (Azamat et al., 2023). This study finds that ease of use can motivate Batik SMEs to use digital-based payment methods, aligning with the findings of Yang et al. (2021), Chawla & Joshi (2019), and Tahar et al. (2020), who state that the ease of use of payment technology can drive people to switch to digital payment methods.

Yang et al. (2021) stresses the importance of promoting the ease of use of digital payment technology, especially to individuals over 40 years of age or those with lower education levels. This can increase digital payment technology adoption among the general population and stimulate national economic growth. Meanwhile, Chawla & Joshi (2019) argue that understanding the ease of use of technology can build public trust in digital payment methods and promote technology adoption.

This research also reveals that ease of use positively influences the intention of Batik SMEs to adopt digital payment methods. Similar findings are reported by Hasan et al. (2023), Malik and Annuar (2021), and Senali et al. (2023), who identified ease of use as a critical factor in adopting payment technology. Malik and Annuar (2021), in their study on payment technology usage in Malaysia, highlighted that perceived usefulness, ease of use, and reward-based incentives are key determinants of digital payment adoption.

To optimize the utilization of digital payment systems, Batik SMEs must be informed about ease-of-use aspects, such as simplicity in learning, recalling, and understanding, as suggested by Venkatesh and Davis (2000). Additionally, Amin et al. (2016) describe perceived ease of use as the degree to which individuals believe that employing technology requires minimal physical or mental effort.

A good understanding of the benefits and ease of use of digital payment technology becomes the key factors in increasing technology adoption among SMEs. By emphasizing these two aspects, it is expected that Batik SMEs' intention to transition from traditional to digital payments will be strengthened, leading to consistent actual use.

This study also reveals the moderating role of perceived risk. These findings are supported by Kim & Jung (2019) and Awo et al. (2019), who state that perceived risk can influence the relationship between intention and actual usage of technology. If business actors perceive high risk, they tend to delay using the technology, even if they already have the intention to do so. Therefore, it is crucial for Batik SMEs to understand how to manage risk in using digital payment technology to ensure its optimal adoption.

The adoption of digital payment technology among Batik SMEs in West Java and Central Java is significantly influenced by perceived usefulness and ease of use, as highlighted in this study. These two factors not only enhance the intention to adopt but also drive actual usage, especially when SMEs are well-informed about the benefits and simplicity of the technology. The findings underscore the need for continuous education and socialization efforts by relevant stakeholders, including the government and financial institutions, to maximize the adoption rate. By addressing perceived risks and emphasizing the advantages, Batik SMEs can unlock new opportunities to improve their competitiveness in the global market.

Future research could explore additional factors that may impact the adoption of digital payment methods, such as cultural influences, technological infrastructure, and financial literacy levels. Moreover, longitudinal studies could provide deeper insights into the long-term effects of digital payment adoption on SME performance and sustainability. With the rapid evolution of technology, continued investigation into emerging trends and barriers will be essential to ensure that SMEs fully leverage digital solutions to support their growth and resilience in the modern business landscape.

CONCLUSION

This study emphasizes that perceived usefulness and ease of use are critical factors influencing the intention to use and the transition to digital payment technology in the SME sector. The results show that perceived usefulness significantly affects SMEs' intention to shift from traditional payment methods to digital ones. Additionally, ease of use has been proven to enhance both the intention and actual use of digital payment technology. SME owners' understanding of the benefits and ease of use of this technology can drive consistent and effective adoption. The study also finds that perceived risk can act as a barrier in the transition to using technology, even when there is already an intention to use it.

For SME managers, it is crucial to improve their understanding and capabilities in using digital payment methods. Continuous socialization and education about the benefits of this technology, such as increased productivity, transaction efficiency, and broader market reach, are necessary. SME managers should also leverage digital technology to accelerate adaptation and compete in both domestic and international markets. Furthermore, SMEs need to grasp the ease-of-use aspects of the technology, such as how easy it is to learn, remember, and understand digital payment systems.

Future research is recommended to delve deeper into the role of perceived risk as a barrier to the adoption of digital payment technology. Further studies should also expand the scope to other SME sectors, such as manufacturing or services, to see if similar results are observed. Moreover, in-depth studies on external factors, such as the role of government, technological infrastructure, and incentives in supporting digital technology adoption among SMEs, are essential. Future research could also focus on a longitudinal approach to observe changes in behavior and the use of digital payment technology over a more extended period.

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