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Research Paper

Determinants of Cashless Transaction Usage among Culinary MSME Consumers in Tebing Tinggi City

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Abstract

As the digital economy continues to expand rapidly, the adoption of cashless transactions has become increasingly essential, particularly for the Micro, Small, and Medium Enterprises (MSME) sector. Due to the current critical issue, this study will address the topic by adopting a quantitative approach through questionnaires administered to 96 purposively selected consumers of culinary MSMEs in Tebing Tinggi City, with the collected data analyzed using multiple linear regression to examine the influence of ease of use, perceived benefits, and digital literacy on cashless transaction adoption After analyzing the data, it is evident that ease of use and perceived benefits significantly and positively influence the adoption of cashless transactions, whereas digital literacy does not exert a significant effect on consumers' decisions to adopt such payment methods. The findings indicate that simple and practical payment systems, such as QRIS, facilitate consumer participation in financial transactions without requiring advanced digital literacy, while the three examined variables collectively explain 77% of the variation in cashless transaction adoption, underscoring the strong explanatory power of the model. In practical terms, the study demonstrates that initiatives emphasizing convenience and direct benefits are most effective in promoting cashless payment adoption within local communities, thereby offering practical policy guidance for local governments and MSME practitioners, while simultaneously advancing the theoretical discourse on financial technology adoption through empirical evidence from the Indonesian MSME context.

Keywords: *Convenience; Benefit; Digital Literacy; Cashless Transactions; MSMEs*

INTRODUCTION

The rapid development of information technology, the internet, and smartphones has triggered a massive digital transformation in the era of Industry 4.0, particularly in the banking and financial services sector (Kumari & Devi, 2022). Digitalization has fostered innovations, including electronic services and enhanced access to information, while simultaneously driving a fundamental transformation of the payment system from conventional cash-based methods to cashless transactions (Setiawan & Mahyuni, 2020; Yuslem et al., 2022). This transformation has influenced the mindset and behavior of Indonesian society. Transactions that once relied on barter and later on banknotes have now shifted to digital payments through e-wallets such as OVO, Dana, GoPay, and ShopeePay, as well as national standards such as QRIS, the Quick Response Code Indonesian Standard (Rahmayati et al., 2023). This shift reflects changes in consumer behavior, as people are increasingly reluctant to carry cash due to the convenience and practicality of digital payments (Tambunan et al., 2023).

The adoption of cashless payments is aligned with government monetary policy, which aims to create more efficient and transparent financial management while simultaneously driving economic growth (Salamun Bandung, 2021). Bank Indonesia reported a continuous increase in the value of electronic money transactions, from IDR 1.18 billion in January–August 2023 to IDR 1.6 billion in the same period of 2024. Despite the positive national trend in cashless transactions, adoption at the local level, such as among culinary MSMEs in Tebing Tinggi City, Indonesia, faces specific challenges. Research indicates that adoption in this city is still hindered by several factors,

including ease of use. Although digital systems are designed for efficiency, unstable internet connections frequently cause failed or delayed transactions. Consumers perceive these barriers as impractical and ultimately prefer to use cash (Batubara, 2024; Manuaba & Resen, 2021).

Despite the growing use of digital payments, consumers remain hesitant due to concerns over data and fund security, particularly risks of phishing and fraud, which fosters a preference for cash transactions, a concern underscored by the 97,423 reported cases of digital fraud in Indonesia by April 2025, amounting to losses of IDR 2 trillion (Manuaba & Resen, 2021; Apriyadi, 2025). Another barrier is the limited digital literacy, particularly among the elderly, as evidenced by the decline of Tebing Tinggi City's Digital Society Index to 44.43 percent in 2024 (Budiarto, 2024), which highlights how insufficient understanding impedes the adoption of digital payment systems (Nisa et al., 2023). In response to these limitations, the Tebing Tinggi City Government introduced Mayoral Regulation Number 1 of 2021 to promote a cashless society, which has far led to the adoption of cashless transactions by 116 culinary MSMEs; however, the challenges encountered by consumers remain an area that requires further examination, despite the potential of cashless systems to enhance efficiency and transparency in financial management, support business development, and improve service quality within the culinary sector.

Several previous studies have examined the factors influencing the adoption of cashless transactions, yet the results remain varied. Some studies (Robaniyah et al., 2021; Olivia & Marchyta, 2022; Nurhapsari & Sholihah, 2022) found that ease of use, perceived usefulness, and digital literacy (Deschênes, 2024; Xicang et al., 2024) had a positive and significant influence on adoption. However, other studies reported different findings, showing that these factors had no significant influence (Laloan et al., 2023; Handayani et al., 2024; Pradini, 2021). Previous research has identified factors such as security, convenience, and cost, yet the findings remain inconsistent across studies. These inconsistencies may be attributed to differences in research methodology, the variables examined, sample size, and research context. Each study may have employed a unique approach, resulting in diverse findings. Furthermore, factors such as technological developments, changes in consumer behavior, and government policies can also influence research outcomes. Therefore, it is important to consider the research context and methodology when comparing findings in order to obtain a more comprehensive understanding of the factors influencing the adoption of cashless transactions and how these factors may evolve over time.

This research gap provides an opportunity for a more in-depth study, particularly in the specific context of culinary MSMEs in Tebing Tinggi City, where network limitations and digital literacy remain key issues. Most existing studies have focused on the perspective of service providers or MSME practitioners, while studies from the consumer perspective are still limited. Hence, the novelty of this research lies in analyzing the determinants of cashless transaction adoption, namely ease of use, perceived benefits, and digital literacy, from the perspective of culinary MSME consumers in Tebing Tinggi City, Indonesia. Therefore, to fill this gap, the present study formulates the following research questions:

1. How does ease of use affect the adoption of cashless transactions among culinary MSME consumers in Tebing Tinggi City?
2. How does perceived usefulness affect the adoption of cashless transactions among culinary MSME consumers in Tebing Tinggi City?
3. How does digital literacy affect the adoption of cashless transactions among culinary MSME consumers in Tebing Tinggi City?

By understanding the factors influencing the adoption of cashless transactions, policymakers can formulate more effective strategies to increase the use of digital payments. They can identify areas of improvement in digital payment systems, such as security, convenience, or cost, and

provide appropriate incentives to encourage adoption, including discounts or promotions. The expected contribution of this study is twofold. Theoretically, it provides new literature on the factors influencing digital payment adoption, particularly in areas with specific characteristics and challenges such as Tebing Tinggi City. Practically, it offers recommendations for the local government and MSMEs in Tebing Tinggi City to design more effective strategies to encourage a cashless society and to support digital payment service providers in enhancing the quality of their services.

LITERATURE REVIEW
Basic Concept of Cashless Transactions

Cashless transactions are payment systems that replace physical money (banknotes or coins) with digital or electronic media as the medium of exchange. These involve the electronic transfer of funds from one account to another. Common examples include debit and credit cards, electronic money (e-money), digital wallets (e-wallets), and QR code payments. The evolution of Indonesia's payment system has undergone several phases. Initially, society relied entirely on cash. The shift toward cashless transactions began with the introduction of credit and debit cards in the 1980s and 1990s. However, widespread adoption only accelerated in the 2010s, driven by the rapid penetration of the internet and smartphones. A major milestone was the launch of the Quick Response Code Indonesian Standard (QRIS) in 2019, which unified various e-money and digital wallet providers under a single national standard. This initiative marked a new era in the creation of an integrated and efficient cashless payment ecosystem across the country.

Technological developments have given rise to diverse forms of digital payments, each offering distinct advantages.

1. E-wallets (Digital Wallets): Applications such as OVO, GoPay, Dana, and ShopeePay allow users to store funds digitally and use them for a variety of transactions. Their key strengths are ease of use via smartphones and frequent promotional offers.
2. Mobile and Internet Banking: Banking services accessible through smartphone applications or web browsers enable transfers, bill payments, and even the purchase of mobile credit. Their advantage lies in direct integration with bank accounts, offering flexibility in financial management.
3. QRIS: As a single QR code standard for all digital payments, QRIS allows consumers to complete transactions with any payment application by scanning one code. This reduces complexity for businesses, especially MSMEs, and enhances interoperability within the payment ecosystem.

The adoption of cashless transactions has significant implications at both the macro and micro levels. At the macroeconomic level, benefits include efficiency gains by reducing the cost of printing and circulating currency, improved financial transparency through better transaction tracking, greater accountability and crime prevention, and faster money circulation that stimulates economic growth. At the micro level, consumers and MSMEs enjoy faster and more practical payments, reduced risks of loss or theft, and automatic transaction records that support expense tracking and bookkeeping.

Bank Indonesia has played a central role in advancing the national cashless movement. In addition to launching QRIS, it has introduced policies and public campaigns to educate both consumers and businesses about the benefits of digital payments, with the overarching goal of fostering a modern, efficient, and inclusive economic system.

Culinary MSMEs in Tebing Tinggi City

Under Law No. 20 of 2008, MSMEs are defined as productive enterprises owned by individuals or entities that meet the criteria for micro, small, or medium scale businesses. MSMEs serve as the backbone of Indonesia's economy and provide livelihoods for a significant proportion of the population. The culinary sector is particularly prominent, contributing substantially in terms of both the number of enterprises and the value of transactions. Its labor-intensive nature and frequent role in tourism add further importance to this sector. Nevertheless, culinary MSMEs face unique challenges in adopting technology. Their small scale, limited capital, and uneven levels of education and digital literacy often hinder adoption. Many continue to depend heavily on cash transactions. Yet, shifting consumer preferences compel these businesses to adapt to digital payment systems to remain competitive. This transition requires not only the readiness of MSMEs but also a deeper understanding of the factors that encourage consumer adoption of such technologies.

Tebing Tinggi City, located in North Sumatra Province, Indonesia, was selected as the research site because it represents a region actively striving to integrate the digital economy into daily community activities. The city is characterized by a dynamic and growing MSME sector, particularly in the culinary industry, and the local government has demonstrated strong commitment to fostering a cashless society through Mayoral Regulation No. 1 of 2021, which establishes the legal foundation for implementing non-cash transactions, including the use of QRIS. However, despite these initiatives, implementation remains challenging, especially from the consumer perspective. Data from 2024 show that the city's Digital Society Index still requires significant improvement improvement, while infrastructure limitations, such as unstable internet connectivity, often disrupt transactions and negatively impact consumer experiences. These conditions underscore the importance of further investigating how convenience, perceived benefits, and digital literacy shape consumer intentions and behavior in adopting cashless transactions in Tebing Tinggi (Antara News, 2024).

Theoretical Framework

The Technology Acceptance Model (TAM), is one of the most widely applied frameworks for explaining and predicting technology adoption. It emphasizes two primary determinants. First, Perceived Ease of Use (EoU) refers to the extent to which individuals believe that adopting a technology requires minimal effort; in the context of cashless payments, this encompasses the ease of registration, intuitive system design, and seamless transaction processes, which for culinary MSMEs can be reflected in transaction speed, interface clarity, and the absence of technical disruptions. Furthermore, Perceived Usefulness denotes the degree to which individuals believe that technology enhances their performance or productivity, as illustrated by consumers who benefit from faster payments, access to promotional offers, simplified expense tracking, and reduced dependence on cash.

According to TAM, these two variables shape user attitudes, which in turn influence behavioral intentions. The Unified Theory of Acceptance and Use of Technology (UTAUT), on TAM by incorporating four additional factors: performance expectancy, effort expectancy, social influence, and facilitating conditions. While TAM remains the primary foundation of this study, elements of UTAUT, particularly the roles of infrastructure and digital literacy, are also considered to enrich the analysis (Yulika & Atika, 2022).

Digital Literacy in Culinary MSMEs

Digital literacy refers to the ability to access, evaluate, create, and communicate information using digital technologies. It extends beyond technical skills to include critical awareness of how

technology works and its broader social and economic implications. In economic terms, digital literacy encompasses digital financial literacy, the knowledge and skills necessary to use financial technologies safely and effectively. For MSME owners, digital literacy enhances operational efficiency through tools such as social media promotion, online ordering systems, and digital bookkeeping. Owners with higher levels of digital literacy are more likely to adopt cashless payment technologies, thereby increasing sales and efficiency. On the other hand, for consumers, digital literacy equips them to use digital payment applications properly—scanning QR codes, transferring funds, and recognizing security features to avoid fraud. Digitally literate consumers tend to feel safer and more confident when making cashless transactions, which in turn increases their willingness to adopt such methods (Imnur et al, 2023).

The benefits of digital literacy in supporting cashless adoption among culinary MSMEs include: reducing psychological barriers by fostering confidence among business owners, building consumer trust by addressing security concerns, and optimizing benefits by enabling both owners and consumers to fully leverage transaction data, promotions, and financial management tools. Ultimately, digital literacy serves as a bridge that connects traditional culinary MSMEs with the modern digital economy, ensuring that they can adapt and remain resilient in the face of shifting consumer behaviors. Figure 1 below illustrates the research framework of this study.
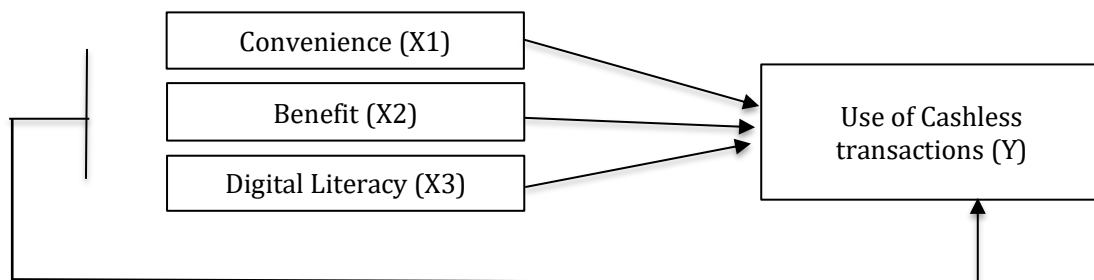

Figure 1. Research Framework

Furthermore, drawing on previous studies on this topic, the hypotheses of the present research are formulated as follows.

H1: Ease of use has a positive influence on the use of cashless transactions in culinary MSME consumers.

H2: Perceived benefits have a positive influence on the use of cashless transactions in culinary MSME consumers.

H3: Digital literacy has a positive influence on the use of cashless transactions in culinary MSME consumers.

H4: Ease of use, perceived usefulness, and digital literacy are related factors that positively influence the adoption of cashless transactions among culinary MSME consumers.

RESEARCH METHODOLOGY

The population of this study comprises all consumers of culinary MSMEs in Tebing Tinggi City who engage in cashless transactions. The sample was selected using a purposive sampling technique, which, as explained by Sugiyono (2019), involves choosing participants based on specific criteria established by the researcher to ensure their relevance to the research objectives. In this study, the criteria include consumers who have previously used or are currently using cashless transactions when purchasing products from culinary MSMEs in Tebing Tinggi City.

With regard to determining the appropriate sample size, this study follows Tabachnick and Fidell (2007), who recommend a minimum of 50 plus the number of independent variables (m) for

regression analysis, while also noting that a larger sample is necessary if certain independent variables are expected to have small effects. Based on this guideline, the sample size in the present study will be determined either by applying the recommended formula or by adopting the minimum range of respondents generally required for multiple regression analysis, namely between 100 and 200 participants.

Primary data in this study will be obtained through a questionnaire administered both online, using Google Forms, and offline at selected culinary MSME locations. The questionnaire includes items designed to measure the research variables, employing a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). These items are adapted from the work of (Yolanda & Hasanah, 2024), who examined factors influencing MSME actors' adoption of QRIS as a digital payment method. Several questions were modified to align with the specific conditions of the present case study, and the details of the questionnaire items are presented in Table 1.

Table 1. Research Variables and Indicators

Variables	Indicator
Convenience	I find it very easy to use the cashless transaction system in MSMEs.
	The payment process with cashless transactions is very easy to understand.
	The use of cashless transaction applications in MSMEs does not confuse me.
	I do not find it difficult to use cashless transactions for payments at MSMEs.
	Cashless transactions in MSMEs have easy-to-use features.
Benefits	Cashless transactions at MSMEs help me complete payments faster.
	The use of cashless transactions in MSMEs increases my time efficiency.
	I feel that cashless transactions make the process of shopping at MSMEs easier compared to having to carry cash.
	Cashless transactions make it easier for me to manage my personal finances.
	I feel that using cashless transactions at MSMEs makes the shopping experience more practical.
Digital Literacy	I understand how to use digital payment applications such as e-wallets or mobile banking.
	I can follow the instructions and information in the payment app easily.
	I am confident using digital applications when making transactions.
	I can solve minor technical issues in using payment applications.
	I often follow the development of digital payment technology.
Use of Cashless Transactions	I often use the cashless method when shopping at MSMEs.
	I prefer cashless payments over cash.
	I feel accustomed to using cashless systems in various MSMEs.
	I intend to continue using the cashless system in the future when shopping.
	I recommend using cashless to others when shopping at MSMEs.

Source: Author's Work

The collected data will be processed using both descriptive and inferential statistical techniques. Descriptive statistics will be applied to present the characteristics of respondents and

to summarize the distribution of each research variable. To test the hypotheses, this study will employ multiple linear regression analysis to assess both the simultaneous and partial effects of the independent variables on the dependent variable, preceded by classical assumption tests, namely normality, multicollinearity, and heteroscedasticity, with all procedures conducted using SPSS version 22.

FINDINGS AND DISCUSSION
Respondent Demographics

Table 2. Respondent Demographics

Characteristics	Total	%
Gender		
Woman	67	69.79
Man	29	30.21
Age		
13-28 years	81	84.38
29-44 years	15	15.63
Subdistrict		
Bajenis	21	21.88
Padang Hilir	13	13.54
Padang Hulu	17	17.71
Rambutan	11	11.46
Tebing Tinggi City	34	35.42

Source: Author's Work

Based on Table 2 above, a total of 96 respondents were evenly distributed across Tebing Tinggi City. As presented in Table 2, this study categorizes respondents based on characteristics such as gender, age, and subdistrict. The use of age ranges is particularly important as it facilitates data segmentation and interpretation, allowing researchers to identify behavioral patterns and differences across groups. This segmentation is highly relevant for demographic analysis and market-oriented studies, as it helps to capture variations in consumer behavior. In this study, respondents are grouped into Generation Z and Millennial cohorts to examine how differences in age and exposure to technology influence their behavior and preferences in adopting cashless transactions. Such categorization not only enhances the understanding of generational differences but also provides insights that can inform the development of targeted marketing strategies and products aligned with the needs of each generation.

Generational distinctions are shaped by birth cohorts and the socio-economic contexts in which individuals were raised. Generation X, typically born between 1965 and 1980, is often described as the "connection generation," having experienced periods of economic uncertainty alongside the emergence of new technologies. By contrast, Millennials, born between 1981 and 1996, are distinguished by their early and extensive familiarity with digital technology and the internet, which strongly influences their behavior and preferences in technology adoption.

Descriptive Statistics of Research Variables

Descriptive statistical analysis used to describe the characteristics of respondents and the distribution of data for each variable.

Table 3. Descriptive Statistics Results

Variables	Indicator	Mean	Std Deviation
Convenience	BN1	3,572	1,130
	BN2	3,458	1,025
	BN3	3,979	1,169
	BN4	3,718	1,022
	BN5	3,447	1,255
Benefits	FC1	3,677	1,137
	FC2	3,645	1,066
	FC3	3,791	1,035
	FC4	3,875	1,116
	FC5	3,968	1,030
Digital Literacy	DL1	3,864	1,042
	DL2	3,895	0.967
	DL3	3,916	0.958
	DL4	3,729	1,109
	DL5	3,666	1,211
Use of Cashless Transactions	UCT1	3,864	1,032
	UCT2	3,822	0.951
	UCT3	4,041	1,035
	UCT4	4	1,036
	UCT5	3,843	1,108

Source: Author's Work

Research Instrument Testing
Validity Test

According to Sugiyono (2019), validity testing is used to measure the collected questionnaire data to determine whether it is valid for further testing. Valid results indicate that the questions or items in the instrument are relevant and appropriate.

Table 4. Validity Test Results

Variable	Item	r-Count	r-Table	Note
Convenience (X1)	X1.1	0.826	0.200	Valid
	X1.2	0.818	0.200	Valid
	X1.3	0.834	0.200	Valid
	X1.4	0.764	0.200	Valid
	X1.5	0.801	0.200	Valid
Benefit (X2)	X2.1	0.879	0.200	Valid
	X2.2	0.899	0.200	Valid
	X2.3	0.829	0.200	Valid
	X2.4	0.858	0.200	Valid
	X2.5	0.870	0.200	Valid
Digital Literacy (X3)	X3.1	0.845	0.200	Valid
	X3.2	0.872	0.200	Valid
	X3.3	0.868	0.200	Valid
	X3.4	0.829	0.200	Valid
	X3.5	0.740	0.200	Valid

Variable	Item	r-Count	r-Table	Note
Use of Cashless Transactions (Y)	Y.1	0.788	0.200	Valid
	Y.2	0.909	0.200	Valid
	Y.3	0.862	0.200	Valid
	Y.4	0.851	0.200	Valid
	Y.5	0.881	0.200	Valid

Source: Processed results of SPSS 22 (2025)

The results of the validity test indicate that all items or statements under the variables of convenience, usefulness, digital literacy, and cashless transaction usage have calculated r-values greater than the r-table value (0.200). Accordingly, the instrument is considered valid and suitable for further analysis.

Reliability Test

According to Ghozali (2019), reliability testing is a test used to determine the consistency of an instrument (such as a questionnaire) in measuring something. If an instrument is reliable, its measurement results will be stable and consistent.

Table 5. Reliability Test Results

Variable	Cronbach's Alpha	Threshold Value	Reliability Status
Convenience (X1)	0.866	0.60	Reliable
Benefit (X2)	0.917	0.60	Reliable
Digital literacy (X3)	0.881	0.60	Reliable
Use of Cashless Transactions (Y)	0.909	0.60	Reliable

Source**:** Processed results of SPSS 22 (2025)

Based on the table above, it can be concluded that all variables of convenience, usefulness, and digital literacy have a Cronbach alpha value > 0.60. This can be interpreted as meaning that these three variables have met the reliability requirements.

Classical Assumptions

Normality Test

According to Sugiyono (2019), the normality test is used to assess whether the data being studied is normally distributed. The normality test is a test to determine whether research data is normally distributed.

Table 6. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		96
Normal Parametersa,b	Mean	.0000000
	Standard Deviation	2.09068070
Most Extreme Differences	Absolute	.044
	Positive	.044
	Negative	-.042
Test Statistics		.044

One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
Asymp. Sig. (2-tailed)	.200c,d
a. Test distribution is Normal.	
b. Calculated from data.	
c. Lilliefors Significance Correction.	
d. This is a lower bound of the true significance.	

Source: Processed results of SPSS 22 (2025)

Based on the results of the normality test using the Kolmogorov-Smirnov test, the Asymp.Sig (2-Tailed) value is 0.200. Therefore, the result of Asymp.Sig (2-Tailed) is > 0.05. It can be concluded that the data in this research are normally distributed.

Multicollinearity Test

According to Sugiyono (2019), the multicollinearity test is a test to determine whether there is a very strong relationship (high correlation) between the independent variables in a regression model. The purpose of this test is to indicate that each independent variable stands alone and does not influence each others excessively.

Table 7. Multicollinearity Test Results

Variables	Tolerance	VIF	Interpretation
Convenience (X1)	0.159	1,757	There is no multicollinearity
Benefit (X2)	0.501	1,996	There is no multicollinearity
Digital literacy (X3)	0.839	1,192	There is no multicollinearity

Source: Processed results of SPSS 22 (2025)

The results of the multicollinearity test indicate that the tolerance values for perceived ease of use (0.159), perceived usefulness (0.501), and digital literacy (0.839) are all greater than 0.10. Furthermore, the VIF values for perceived ease of use (1.757), perceived usefulness (1.996), and digital literacy (1.192) are all less than 10. These findings confirm that multicollinearity does not occur in this study.

Heteroscedasticity Test

According to Ghozali (2019), the heteroscedasticity test is applied to assess whether the residual variance in a regression model remains constant, a condition known as homoscedasticity. When the residual variance is not constant, heteroscedasticity is said to occur, which can lead to inaccurate standard error estimates. Ideally, a regression model should be free from heteroscedasticity. If the significance value is greater than 0.05, it indicates that heteroscedasticity is not present.

Table 8. Heteroscedasticity Test Results

Variables	Significance Value (Sig.)	Threshold	Conclusion
Convenience (X1)	0.164	0.05	There is no heteroscedasticity
Benefit (X2)	0.718	0.05	There is no heteroscedasticity
Digital literacy (X3)	0.605	0.05	There is no heteroscedasticity

Source: Processed results of SPSS 22, 2025

Based on Table 8 above, the convenience variable is 0.164, the usefulness variable is 0.718, and the digital literacy variable is 0.605. It can be concluded that the heteroscedasticity assumption test is met because the research data show no heteroscedasticity in the regression model.

Hypothesis Testing
Persian Test (T-Test)

According to Sugiyono (2019), the t-test was conducted to test whether there was an influence between the independent variables individually on the dependent variables in this study.

Table 9. t-Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,593	1,207		1,320	.190
	Convenience	.222	.064	.227	3,481	.001
	Benefits	.642	.066	.677	9,738	.000
	Digital Literacy	.093	.054	.092	1,715	.090

a. Dependent Variable: Use of Cashless Transactions

Source: Processed results of SPSS 22 (2025)

Based on the results presented in Table 9, the interpretation of the obtained data is as follows:
  a. The t-test results show that the convenience variable has a calculated t value (3.481) > t table (1.986) and a significance value (p-value) of 0.001 < 0.05. Thus, convenience has a significant effect on the use of cashless transactions.
  b. The t-test results show that the utility variable has a calculated t value (9.738) > t table (1.986) and a significance value (p-value) of 0.000 < 0.05. Therefore, utility has a significant effect on the use of cashless transactions.
  c. The t-test results show that the digital literacy variable has a calculated t value (1.715) < t table (1.986) and a significance value (p-value) of 0.090 > 0.05. Therefore digital literacy does not affect the use of cashless transactions.

Simultaneous Test (F Test)

According to Ghozali (2019), the F test is a test used to test whether the overall regression model is statistically significant.

Table 10. F Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	305,540	1	305,540	18,435	.000b
	Residual	1557,950	94	16,574		
	Total	1863,490	95			

a. Dependent Variable: Use of Cashless Transactions

b. Predictors: (Constant), Digital literacy

Source: SPSS 22 Processing Results (2025)

The results of the F-test presented in Table 10 show a significance value of 0.000, which is

less than 0.05, and a calculated F-value of 106.957, which is greater than the F-table value of 2.70. These findings indicate that digital literacy, convenience, and perceived benefits simultaneously have a significant effect on the use of cashless transactions.

Coefficient of Determination (R²)

According to Sugiyono (2019), the coefficient of determination test is carried out to see how much the dependent variable in the study is influenced by the independent variable.

Table 11. Results of the Determination Coefficient (R^2) Test

		Model Summary		
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.882a	.777	.770	2.124

a. Predictors: (Constant), Digital Literacy, Ease, Usefulness

Source: SPSS 22 Processing Results, 2025

Table 11 presents the coefficient of determination, with an Adjusted R Square value of 0.770, indicating that convenience, perceived usefulness, and digital literacy collectively account for 77% of the variance in cashless transaction usage, while the remaining 23% is attributable to other factors outside the model.

Multiple Linear Regression Analysis

According to Sugiyono (2019), Multiple Linear Regression Analysis is used to analyze how one dependent variable can be explained or predicted by two or more independent variables simultaneously.

Table 12. Results of Multiple Linear Regression Analysis Test

		Coefficients				
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,593	1,207		1,320	.190
	Convenience	.222	.064	.227	3,481	.001
	Benefits	.642	.066	.677	9,738	.000
	Digital Literacy	.093	.054	.092	1,715	.090
	a. Dependent Variable: Use of Cashless Transactions					

Source: SPSS 22 Processing Results, 2025

Based on the results of the analysis, the multiple linear regression equation is formulated as $Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$, which in this study is expressed as $Y = 1.593 + 0.222 X_1 + 0.642 X_2 + 0.093 X_3$.

The constant value of 1.593 represents the expected value of the dependent variable, namely the use of cashless transactions, when all independent variables are equal to zero. The coefficient of Convenience (X1) demonstrates that each unit increase in this variable contributes to an increase of 0.222 in the average use of cashless transactions. Similarly, the coefficient of Benefit (X2) indicates that each unit increase in perceived benefits results in a 0.642 increase in the average use

of cashless transactions. In contrast, Digital Literacy (X3) does not exhibit a significant effect on the adoption of cashless transactions, as the calculated t-value (1.715) is lower than the critical t-table value (1.986) at the 5% significance level.

Discussion

The Influence of Ease of Use on the Use of cashless transactions

The analysis reveals that ease of use has a significant effect on the adoption of cashless transactions. This indicates that when a system is perceived as easier to use, the likelihood of consumers engaging in cashless transactions at MSMEs in Tebing Tinggi City also increases. The significant effect of ease of use can be attributed to factors such as the simplicity of the system, the availability of user-friendly features, and the convenience it provides in daily transactions. An easy-to-use system typically features a clean interface, clear icons, and logical navigation, enabling users to understand its functions quickly without lengthy manuals or special training. For instance, applications that place payment features such as QRIS scanning in prominent and easily accessible positions enhance user convenience.

These findings are consistent with the study by Robaniyah et al. (2021), which also demonstrated that ease of use significantly influences the adoption of cashless transactions. A system that is simple and intuitive encourages consumers to prefer cashless payments over cash because it eliminates unnecessary complexity. Furthermore, the ease of use contributes to greater efficiency in terms of time and energy, enhances transaction satisfaction, and fosters customer loyalty and retention. In addition, a user-friendly system minimizes errors that may occur due to complicated procedures or input mistakes.

The Influence of Usefulness on the Use of Cashless Transactions

The analysis shows that perceived usefulness has a significant influence on the adoption of cashless transactions. This implies that when consumers perceive cashless transactions as more beneficial, the likelihood of their adoption among MSME consumers in Tebing Tinggi City increases. The significant impact of perceived usefulness reflects several advantages of cashless transactions, such as accelerating transaction processes, increasing efficiency by eliminating the need to carry large amounts of cash, and saving time for other activities.

These findings are consistent with previous research by Setyaningtyas (2024), which also confirmed that perceived usefulness significantly affects the adoption of cashless transactions. In this context, perceived usefulness refers to the degree to which consumers believe that using cashless transactions provides added value, including time savings, improved efficiency, reduced risks of loss or theft, and greater convenience in conducting transactions. When consumers recognize these benefits, they are more likely to adopt and consistently use cashless payment technologies, ultimately fostering loyalty to service providers.

Therefore, developers of cashless transaction systems need to prioritize usability aspects to encourage adoption and continued use. This can be achieved by designing user-friendly systems, offering features and functions that provide real value, and ensuring adequate levels of security and privacy.

The Influence of Digital Literacy on the Use of Cashless Transactions

The analysis shows that digital literacy does not significantly affect the use of cashless transactions. This finding can be attributed to the limited educational efforts directed toward digital literacy in the community, particularly among the elderly. Supporting older adults in using technology and participating in the digital world is still often neglected. Many seniors remain excluded from digital literacy initiatives because the teaching approaches are not well-suited to

them and the training is rarely adjusted to their specific needs. Although initiatives such as the Tular Nalar program with the Elderly Digital Academy, organized by Mafindo (Indonesian Anti-Slander Society), funded by Google.org, have been introduced to empower the elderly through digital literacy lessons across 37 provinces, more targeted efforts are needed in light of the growing elderly population.

Beyond the lack of education, the insignificant effect of digital literacy may also stem from consumers' reliance on convenience in payment systems. Many users adopt cashless transactions simply because they make payments easier, particularly through QRIS, whose transaction volume increased by 148.50% in June 2025. This growth was driven by user expansion and a wider acceptance of QRIS among merchants, suggesting that consumers feel confident using the system without needing to develop deeper digital literacy skills. This is consistent with the Technology Acceptance Model (TAM), which posits that perceived ease of use strongly influences the intention to adopt technology. In other words, when technology is intuitive and user-friendly, consumers are encouraged to adopt it without requiring extensive knowledge or training.

The findings also support previous research by Pradini (2021), which reported that digital literacy had no significant effect on the adoption of cashless transactions. Many consumers are inclined to use such systems immediately without thoroughly understanding the information or technical aspects behind them. In the context of digital payment adoption, digital literacy can refer both to consumers' ability to use technology safely and effectively for transactions and to business owners' ability to implement secure digital payment systems.

In this study, convenience was found to have a positive and significant influence on the use of cashless transactions among MSME consumers in Tebing Tinggi City, as consumers perceive transactions to be simpler. Similarly, perceived usefulness was also found to significantly encourage adoption, as consumers recognize the benefits of faster and more efficient payments. By contrast, digital literacy showed no effect, as many consumers believe that once they can operate the system, further digital skills are unnecessary. Collectively, these three variables simultaneously affect the adoption of cashless transactions in the study context.

Future research could expand the sample size and incorporate additional variables to capture other potential factors influencing cashless transaction adoption. The absence of digital literacy effects in this study may be explained by the overwhelming convenience and usefulness of cashless systems, which reduce the perceived need for deeper digital skills. Therefore, raising awareness of the broader benefits of digital literacy—beyond the simplicity of basic transactions—could improve public understanding and strengthen the digital payment ecosystem.

Overall, these findings contribute new insights into the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) by showing how perceived usefulness, perceived ease of use, and trust shape technology adoption among MSME consumers in Tebing Tinggi. In the local context, the results provide a clearer picture of how consumers accept and use cashless technologies, while also offering practical implications for developing more effective marketing strategies to increase adoption within MSME communities.

CONCLUSION

The convenience variable has a positive and significant effect on the use of cashless transactions among MSME consumers in Tebing Tinggi City, as consumers find it easier to carry out transactions. Perceived usefulness also shows a positive and significant effect, indicating that consumers believe cashless transactions greatly assist them in speeding up the transaction process. In contrast, digital literacy has no significant effect on the use of cashless transactions. This may be because consumers feel that once they are able to use the system, they no longer need to deepen their knowledge of digital literacy in payment systems. Collectively, these three variables

simultaneously influence the adoption of cashless transactions among MSME consumers in Tebing Tinggi City.

Based on these findings, several recommendations are proposed to address the issue. For the government, it is important to develop comprehensive and structured digital literacy programs that strengthen public capacity to use digital technologies, while also integrating digital literacy into the formal education curriculum to equip students with strong technological skills. Whereas for MSMEs, efforts should focus on strengthening digital capabilities to improve efficiency and productivity, as well as leveraging digital tools such as social media promotion and payment systems to enhance performance and transaction efficiency.

Additionally, MSMEs are encouraged to provide consumer education on the safe and effective use of digital technologies. For payment service providers, the priority lies in enhancing consumer skills through training and support, promoting secure and responsible practices such as the use of strong passwords and the protection of personal data, and continuously adapting to technological developments to ensure users can adopt digital technologies effectively and safely.

LIMITATIONS & FURTHER RESEARCH

This study has several limitations that may serve as guidelines for future research. First, the study focused only on three variables, namely ease of use, perceived usefulness, and digital literacy, which together explained 77% of the variation in cashless transaction usage. This indicates that the remaining 23% is influenced by other factors not captured in this model. Future studies are encouraged to include additional variables such as consumer trust in data security, social influence, including recommendations from friends or family, and infrastructure-related aspects such as internet network stability. Expanding the scope of variables would allow for a more comprehensive understanding of the factors that drive or hinder the adoption of cashless payments.

Second, the research employed a quantitative design and relied solely on questionnaires as the data collection instrument. To provide richer insights, future studies may use a qualitative or mixed methods approach, for example, through in-depth interviews or focus group discussions, to explore the reasons behind the findings, particularly why digital literacy did not show a significant effect.

Third, the study was limited to Tebing Tinggi City and focused on the culinary MSME sector. Future research can broaden the scope by including different geographic areas or other MSME sectors, such as retail or services, to examine whether the findings remain consistent across contexts. This would help to determine whether geographic characteristics and business type play a role in the adoption of cashless payment technologies.

Overall, future research is recommended to expand the range of variables, apply mixed methods, and extend the research locations and sectors. In addition, it is important to explore the broader role of digital literacy beyond basic operational skills in order to gain deeper insights into how consumers and business owners understand and maximize the benefits of digital payment systems.

The findings of this study confirm the importance of perceived ease of use and perceived usefulness in the Technology Acceptance Model and the Unified Theory of Acceptance and Use of Technology. At the same time, the results highlight the significance of contextual factors such as trust, demographic characteristics, and social influence. In this way, the study contributes to the refinement of technology adoption theories while offering practical insights that are more aligned with the needs and characteristics of MSME consumers in Tebing Tinggi.

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