



The Effectiveness of Using Digital Transaction Applications with the Technology Acceptance Model for Financial Management

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Abstract

Purpose: This study aims to examine the effectiveness of digital transaction applications in managing finances for small and medium-sized enterprises (SMEs) in the culinary industry.

Methodology: The Technology Acceptance Model (TAM) was used to analyze the factors influencing the adoption of digital transaction applications among SMEs.

Finding: The results show that perceived usefulness, perceived ease of use, and attitude towards using digital transaction applications have a positive impact on the intention to use these applications. The study also found that external factors, such as individual factors and social factors, influence the adoption of digital transaction applications.

Implication: The findings of this study have implications for the development of digital transaction applications that are tailored to the needs of SMEs in the culinary industry.

Originality: This research is original because it combines the Technology Acceptance Model (TAM) with external factors such as individual and social factors to analyze the adoption of digital transaction applications in the MSME culinary industry.

Keywords: Accounting Information System, Digital Transaction Application, Technology Acceptance Model.

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1. Introduction

Effective financial management is the most important key to the growth of a business, especially for Micro, Small, and Medium-Sized Enterprises (UMKM) (Widjanarko et al., 2022). Digital transaction applications are a way to help UMKM manage their finances. Some benefits of digital transaction applications include: ease of access, affordable costs, and time efficiency (MPR 2024). Some UMKM have started using transaction recording applications such as Moka, e- Cashier, Cash Book, and others (Zamani, 2022). Data from the Ministry of Cooperatives and UMKM shows that only 15% of UMKM in Indonesia use digitalization in their financial transactions. Therefore, it is very important to know how effective the use of digital transaction applications is in meeting the needs and expectations of users? (Dewi, 2023). Knowing how effective digital financial transaction applications are is important because the use of digital transaction applications in their financial management can lead to increased operational efficiency, and increased access to a wider market, which is expected to lead to an increase in business turnover (Firmansyah, 2023).

This research is important because it provides an in-depth understanding of how factors influence the adoption of digital transaction applications by MSMEs in the culinary

sector, which is one of the important sectors in the economy. By understanding these factors, the results of this study can help application developers, the government, and other stakeholders to design more effective strategies in supporting the digitalization of MSMEs. This is expected to increase operational efficiency, expand market access, and ultimately drive overall economic growth, especially among small and medium enterprises.

Based on the background and urgency mentioned above, the research problem formulation is: How effective is the Technology Acceptance Model (TAM) in understanding the factors that influence the use of digital transaction applications by UMKM culinary traders?. The purpose of this study is to analyze the effectiveness of the Technology Acceptance Model (TAM) in understanding the factors that influence the use of digital transaction applications by MSMEs in the culinary sector. This study aims to identify factors such as perceived usefulness, ease of use, and attitudes towards using applications that contribute to MSMEs' intentions to adopt digital transaction technology. The benefits of this study are to provide insight for application developers and stakeholders about the specific needs of MSMEs in the culinary sector, so that the applications developed can be more appropriate and effective, increase operational efficiency, and expand market access which can ultimately increase business turnover.

2. Literature Review

This research is a basic research that examines the extent of digital accounting acceptance by Micro, Small, and Medium-Sized Enterprises (UMKM) and culinary traders in Surakarta. The research will be conducted using variables in the Technology Acceptance Model (TAM) method. The TAM method has been used in various fields of research, including accounting. Research in the field of accounting that uses TAM includes: Research on the adoption of e-money by Sumerta et al. (2019) found that perceived ease of use and perceived benefits positively influence attitudes, which in turn influence the intention to use e-money. Research on the use of e-wallets during the COVID-19 pandemic by Astari et al. (2022) found a positive influence of perceived usefulness, perceived ease of use, and perceived risk on attitudes towards using e-wallets and behavioral intentions. Research on the adoption of accounting information systems (AIS) in startups by Wicaksono et al. (2023) found that perceived usefulness, perceived ease of use, and perceived strategic value all have a significant positive impact on the implementation of AIS by companies, if companies consider AIS to be beneficial, easy to use, and strategically valuable, they tend to adopt it. Research on cost management construction progress by Lee et al. (2022) concluded that "saving costs and resources" is the most important factor for estimating costs based on BIM, the model has a good fit for behavioral intentions, but the relationship between perceived usefulness and behavioral intentions was found to be statistically insignificant. Research on the adoption of technology for crowdfunding stakeholders by Okine et al. (2024) found that ease of use in crowdfunding creates a perceived benefit in the minds of stakeholders. Ease of use is an important stimulus that encourages them to use crowdfunding. Perceived usefulness is proven to be a driver of crowdfunding use. When stakeholders are involved in using crowdfunding, they want to use it again.

The TAM method has also been used in research on internal audit professionals, titled "Information technology acceptance in the internal audit profession: Impact of technology features and complexity" by Kim et al. (2009), which found that as feature complexity increases, perceived ease of use decreases, leading to a decrease in system use. Research on the adoption of mobile payment, titled "The moderating effect of experience in the adoption of mobile payment tools in Virtual Social Networks: The m-Payment Acceptance Model in Virtual Social Networks (MPAM-VSN)" by Liébana-Cabanillas et al. (2014), found that the proposed MPAM-VSN model has high explanatory power in predicting the intention to use mobile payment systems in virtual social networks, with external influences (social image and subjective norms) having the greatest impact on the intention to use.

TAM research has also been used in research titled "Online Banking Information Systems Acceptance: An Empirical Examination of System Characteristics and Web

The problem-solving approach that can be used in this research is:

- a. Identification of Important Factors:
Perceived Ease of Use: How easy do UMKM culinary traders feel the application is to use.
Perceived Usefulness: How much they feel the application helps in managing their finances.
Attitude Towards Use: Their general attitude towards using digital transaction applications (Saad et al., 2022).
- b. Data Collection:
Using surveys and interviews to collect data on UMKM's perceptions and experiences with digital transaction applications.
Using the Likert scale to measure perceptions of ease of use and usefulness.
- c. Data Analysis:
Using statistical analysis to test the relationship between TAM factors and the level of acceptance and use of the application.
- d. Implementation Strategy:
Based on the findings, developing recommendations for application developers to improve the user interface and relevant features.
- e. Effectiveness Evaluation:
Measuring UMKM's perceptions and satisfaction again after the implementation of the recommendations to ensure an improvement in their financial management (Juliandi et al., 2023).

3. Methodology

The type of research used in this study is quantitative. The population is the entire group of people and events or things that the researcher wants to investigate and learn about, and then draw conclusions from. The population used in this study is UMKM (Micro, Small, and Medium-Sized Enterprises) actors in Surakarta City who use digital transaction applications. The sampling technique used is Purposive Sampling. Purposive Sampling is a data collection technique that uses the following sample criteria:

- a. UMKM actors in Surakarta City who are active in digital transaction applications.
- b. UMKM actors who have used digital transaction applications for at least 1 month since the questionnaire was distributed.
- c. UMKM that operate in the food and beverage trade sector.

Primary data is data that refers to information obtained directly by the researcher related to the variables of interest for a specific purpose in the research. The data source is obtained by distributing questionnaires to UMKM actors who operate in the food and beverage trade sector and use digital transaction applications as respondents in this study. The data collection technique used in this study is by distributing questionnaires. A questionnaire is a set of questions that have been formulated and will be answered by the respondents (Bougie & Sekaran, 2020). The questionnaire is given directly to UMKM actors who operate in the food and beverage trade sector and use digital transaction applications as a payment tool. The questionnaire consists of questions and statements that are structured. Respondents answer by giving ratings to the answers they have chosen using the Likert scale. The questions in this study are based on previous research and several relevant journals in the process of preparing this study.

4. Results and Discussion

4.1. Results

The first stage of PLS analysis is to evaluate the measurement model. The measurement model is related to the validity and reliability of the data collection instrument. According to theory, an indicator variable that meets the validity and reliability criteria is one that has

an outer loading value of more than 0.70. The results of this study show that all indicator variables have outer loading values of more than 0.70. The Attitude variable has outer loading values ranging from 0.886 to 0.903. For the External Factor - Individual Factor - Skill and Knowledge variable, the outer loading values range from 0.896 to 0.916. For the External Factor - Individual Factor - Time and Resource Availability variable, the outer loading values range from 0.889 to 0.901. For the External Factor - Individual Factor - Attitude and Trust variable, the outer loading values range from 0.900 to 0.912. For the External Factor - Social Factor variable, the outer loading values range from 0.923 to 0.927. For the Perceived Ease of Use (PEOU) variable, the outer loading values range from 0.887 to 0.904. For the Perceived Usefulness (PU) variable, the outer loading values range from 0.882 to 0.913. For the Attitude Towards Use (ATU) variable, the outer loading values range from 0.869 to 0.910.

Table 2. Measurement Model

	M	X1.1	X1.2	X1.3	X1.4	X2	X3	Y
M1.1	0.903							
M1.2	0.893							
M1.3	0.896							
M1.4	0.886							
X1.1		0.916						
X1.2		0.906						
X1.3		0.896						
X2.1			0.889					
X2.2			0.901					
X2.3			0.897					
X3.1				0.912				
X3.2				0.900				
X3.3				0.906				
X4.1					0.923			
X4.2					0.927			
X5.1						0.904		
X5.2						0.887		
X5.3						0.896		
X5.4						0.890		
X5.5						0.895		
X6.1							0.913	
X6.2							0.892	
X6.3							0.882	
X6.4							0.882	
X6.5							0.910	
Y1.1								0.910
Y1.2								0.899
Y1.3								0.869

Source: Data Processed (2024)

In addition to observing Cronbach's Alpha, this study also examines the Composite Reliability value. Composite reliability (ρ_a) is an indicator of internal reliability of a construct in a structural equation modeling. It shows how reliable or consistent the measurement variables are in measuring the construct. As shown in the table, all ρ_a values are above 0.70, which means they meet the criteria. Similarly, for ρ_c . ρ_c represents the construct reliability measured from the relationship between the construct, or latent variable, and the measurement variables related to it. As shown in the table, the ρ_c values are above 0.70, which means they meet the criteria. High reliability values indicate that the construct and related measurements can be relied upon in the analysis. Table 3 shows the details of the Composite reliability (ρ_a) and ρ_c values.

Table 3. Value Breakdown Composite Realibility

	Cronbach's alpa	rho_a	rho_c
Attitude (M)	0,917	0,917	0,941
I. External Factor - Individual Factor - Skills and Knowledge (X1.1)	0,891	0,891	0,932
II. External Factors - Individual Factors - Availability of Time and Resources (X1.2)	0,877	0,877	0,924
III. External Factors - Individual Factors - Attitudes and Beliefs (X1.3)	0,891	0,891	0,932
IV. External Factors - Social Factors (X1.4)	0,831	0,831	0,922
Part B: Perceived Ability (PEOU) (X2)	0,937	0,937	0,952
Part C: Perceived Usefulness (PU) (X3_)	0,938	0,939	0,953
Part D: Attitudes Towards Use (ATU) (Y)	0,873	0,874	0,922

Source: Data Processed (2024)

This study considers the Average Variance Extracted (AVE) value to measure construct validity. The AVE values obtained are above 0.50. The AVE values range from 0.797 to 0.855. The External Factor - Social Factor (X1.4) variable has the highest AVE value of 0.855, while the Attitude Towards Use variable has the lowest AVE value of 0.797. Figure 3 shows the details of the AVE values.

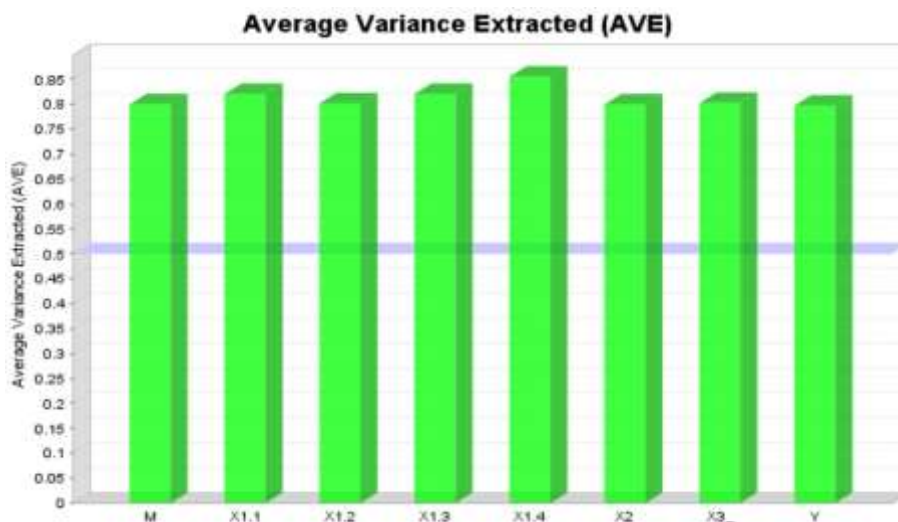


Figure 3. Value Breakdown AVE
Source: Data Processed (2024)

Monotrait ratio (HTMT). HTMT is one method of testing convergent and discriminant consistency in Partial Least Square (PLS)-based path analysis to determine the extent to which a construct differs from other constructs (Minto Waluyo, 2022). The HTMT values in this study are determined in table 4 below.

Table 4. Value breakdown HTMT

	M	X1.1	X1.2	X1.3	X1.4	X2	X3	Y
M								
X1.1	1.048							
X1.2	1.060	1.046						
X1.3	1.057	1.053	1.047					
X1.4	1.055	1.060	1.072	1.044				
X2	1.039	1.037	1.049	1.052	1.051			
X3	1.039	1.046	1.045	1.044	1.020	1.023		
Y	1.062	1.066	1.075	1.075	1.079	1.060	1.053	

Source: Data Processed (2024)

Multicollinearity testing was also conducted in this study. The purpose of the multicollinearity test is to examine and determine whether there is a high or perfect

correlation between independent variables in a regression model. This test can be determined by looking at the tolerance value and the variance inflation factor (VIF) value. The test was performed by examining the VIF value or variance inflation factor. The VIF values in this study are shown in Table 5 below.

Table 5. Value breakdown VIF

	VIF
M1.1	3.319
M1.2	2.834
M1.3	2.948
M1.4	2.747
X1.1	2.865
X1.2	2.645
X1.3	2.432
X2.1	2.279
X2.2	2.464
X2.3	2.428
X3.1	2.745
X3.2	2.512
X3.3	2.617
X4.1	2.020
X4.2	2.020
X5.1	3.574
X5.2	3.212
X5.3	3.338
X5.4	3.203
X5.5	3.465
X6.1	3.947
X6.2	3.300
X6.3	2.998
X6.4	3.027
X6.5	3.864
Y1.1	2.668
Y1.2	2.486
Y1.3	2.062

Source: Data Processed (2024)

Structural model testing or Inner Model testing can be done by examining R-square. R-square is also known as the coefficient of determination, which explains how well the dependent data can be explained by the independent data. The value of R-square is used to measure the degree of change in the independent variable towards the dependent variable through the goodness-of-fit model test. R-square values range from 0 to 1, with the closer to 1 indicating a better fit.

The results of the R Square and R Square adjusted calculations in this study are shown in table 6 below.

Table 6. Value breakdown R Square and R Adjusted

	R Square	R Square Adjusted
M	0.947	0.947
X2	0.958	0.958
X3	0.953	0.953
Y	0.935	0.934

Source: Data Processed (2024)

Path coefficients are values that are useful in indicating the direction of the relationship between variables, whether a hypothesis has a positive or negative direction. Path coefficients have values that range from -1 to 1. If the value falls between 0 and 1, it can be stated as positive, while if the value falls between -1 and 0, it can be stated as negative. The results of the path coefficient test in this study are shown in table 7 below.

Table 7. Result Path Coefficient

	M	X1.1	X1.2	X1.3	X1.4	X2	X3	Y
M								
X1.1						0.160	0.380	
X1.2						0.279	0.333	
X1.3						0.416	0.342	
X1.4						0.151	-0.059	
X2	0.431							0.477
X3	0.492							0.313
Y								

Source: Data Processed (2024)

From the table above, it can be seen that the relationship between the external factor variable (X1) and the perceived usefulness variable (X2) and the perceived ease of use variable (X3) is positive. This is evident from the path coefficient values, such as the value of 0.160 between external factor - individual factor - skills and knowledge (X1.1) and perceived ease of use (PEOU) (X2), 0.380 between external factor - individual factor - skills and knowledge (X1.1) and perceived usefulness (PU) (X3), and so on.

The table also shows a positive relationship between the perceived ease of use variable (X2) and the attitude variable (M) and the behavioral intention to use variable (ATU) (Y), reflected in the path coefficient values of 0.491 and 0.477, respectively. Similarly, the table shows a positive relationship between the perceived usefulness variable (X3) and the attitude variable (M) and the behavioral intention to use variable (ATU) (Y), reflected in the path coefficient values of 0.492 and 0.313, respectively.

After completing the measurement model evaluation, the next step is to evaluate the structural model. One of the benefits of evaluating the structural model is to test the research hypotheses. Figure 4.3 shows the indicators and variables used to test the research hypotheses. The indicators have been declared valid. Figure 4 also displays the coefficient values and significance of each hypothesis test.

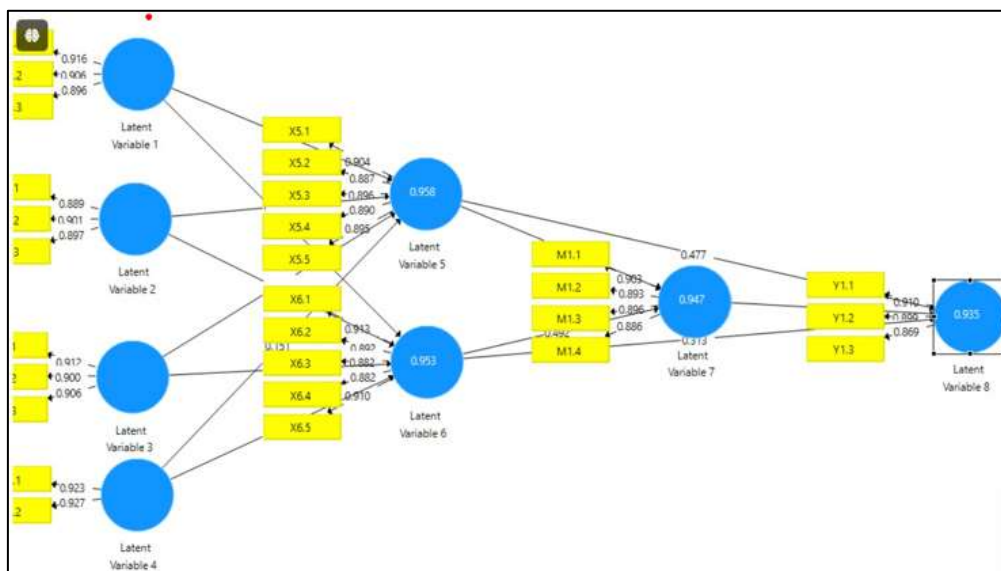


Figure 4. Indicators, variables used to test research hypotheses, coefficient values, and significance
Source: Data Processed (2024)

4.2. Discussion

The results of the data analysis show that all variables used have Cronbach's Alpha and Composite Reliability values greater than 0.70, which indicates that all variables have a high level of internal reliability. The variables also have an AVE value greater than 0.50, which indicates that all of these variables have a high level of convergent validity. The results of the HTMT analysis show that all constructs have high convergent and discriminant consistency, which indicates that all constructs have significant differences with other

constructs. The results of the multicollinearity analysis show that in the regression model used there is no high or perfect correlation between the independent variables. The results of the R-square analysis show that the independent variables in the regression model can explain how far the dependent data can be explained by the independent data. The results of this analysis indicate that the independent variables in the regression model can explain about 50% of the variation in the dependent data.

The results of the Path Test show a positive relationship between the perceived ability variable (X2) on the attitude variable (M) and the attitude towards use variable (ATU) (Y), reflected in the path coefficient value between the perceived ability variable (X2) on the attitude variable (M) showing a value of 0.491 and between the perceived ability variable (X2) on the attitude towards use variable (ATU) (Y) showing a value of 0.477. The table also shows a positive relationship between the perceived usefulness variable (PU) (X3_) on the Attitude variable (M) and the attitude towards use variable (ATU) (Y), reflected in the path coefficient value between the perceived usefulness variable (PU) (X3_) on the attitude variable (M) shows a value of 0.492, and between the perceived usefulness variable (PU) (X3_) on the attitude towards use variable (ATU) (Y) shows a value of 0.313.

This study shows that the use of digital transaction applications in managing the finances of MSMEs culinary traders has a positive impact on operational efficiency and increased business turnover. The study also found that external factors, such as individual factors and social factors, influence the adoption of digital transaction applications. These findings have implications for the development of digital transaction applications tailored to the needs of MSMEs in the culinary industry.

5. Conclusion

This study aims to investigate the acceptance of technology among Small and Medium Enterprises (SMEs) in Surakarta, Indonesia, specifically in the use of digital transaction applications. The study's results show that ease of use, usefulness, and attitude towards use have a significant positive impact on the intention to use digital transaction applications among SMEs. The findings also indicate that external factors, individual factors, and social factors have a significant impact on technology acceptance. The results of this study have implications for policymakers, entrepreneurs, and application developers. The findings suggest that to increase the adoption of digital transaction applications among SMEs, it is crucial to focus on improving ease of use, usefulness, and overall user experience. Additionally, the study highlights the importance of considering external, individual, and social factors that influence technology acceptance among SMEs. Overall, this study contributes to the existing knowledge on technology acceptance and provides insights into the factors that influence the adoption of digital transaction applications among SMEs in Indonesia. The study's results can be used to inform strategies for promoting the use of digital transaction applications among SMEs, which will ultimately contribute to the growth and development of the sector.

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