



**THE EFFECT OF E-WALLET APPLICATION USE ON FINANCIAL
MANAGEMENT EFFICIENCY IN SMALL AND MEDIUM ENTERPRISES
(SMEs) IN UMBULHARJO DISTRICT**

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Abstract

This study aims to analyze the effect of the use of E-Wallet applications on the efficiency of financial management in Small and Medium Enterprises (SMEs) in Umbulharjo District. Efficiency in financial management is defined as an effort to optimize the use of financial resources to minimize waste, accelerate decision-making, and increase the competitiveness of SMEs in the market. The increasing adoption of digital payment systems has changed the way businesses manage their finances, with E-Wallet applications becoming a popular choice among SMEs. The research method used is quantitative with a survey approach, with research subjects being owners or managers of SMEs who actively use E-Wallet applications as a financial transaction tool. The sample was taken by purposive sampling of 100 respondents. The results of this study emphasize the importance of utilizing digital financial technology, especially E-Wallet, in supporting the efficiency of SME financial management in the digital era. The results show that the use of E-Wallet applications has a very significant effect on the efficiency of SME financial management partially. This is indicated by a value of 26.609 which is much greater than t (table) 1.984 and a significance value of $<0.001 <0.05$. The correlation coefficient (R) of 0.937 indicates a very strong relationship between e-wallet use and financial management efficiency. The coefficient of determination (R Square) of 0.878 indicates that 87.8% of the variation in financial management efficiency can be explained by e-wallet use, while the remaining 12.2% is influenced by other factors.

Keywords: E-Wallet, Financial management efficiency, SMEs, Umbulharjo District

INTRODUCTION

Efficient financial management of SMEs is the ability to optimally organize and control financial resources to minimize waste, accelerate decision-making, and achieve business goals, thereby maintaining continuity and competitiveness in the market. The effectiveness of financial management in the SME sector is correlated with the use of financial technology that can shorten the transaction process and support accurate financial recording and reporting (Lestari et al . 2024) . Meanwhile, according to Natalia and Sutomo (2025) , one of the main factors causing the low performance of SME fund management is due to the owner's limited knowledge of effective financial management, such as budgeting, cash flow management, and systematic transaction reporting. Financial management is an absolute necessity for SMEs to survive and thrive amidst competitive market competition.

The relevance of effective SME cash management is further strengthened by the development of various innovations in digital financial systems adopted by small and medium enterprises. Research by Wayan et al . (2025) shows that SME capital management strategies include not only digitalization of financial processes, such as the use of e-wallet platforms, which have encouraged transparency, accuracy, and speed of financial management in the SME environment (Maulidah et al . 2022) . In a previous study on the efficiency of SME financial management, it was found that the use of e-wallets made a significant contribution to optimizing the financial recording process, facilitating transactions, and monitoring cash flows in real-time in the SME environment (Sukma and Paradisa 2025) .

The importance of digital literacy as a determining factor in SME financial governance is further reinforced by the findings of other studies that underscore the close relationship between digital transformation and increased effectiveness of overall financial management. Krisdiyawati *et al.* (2022) emphasized that the digital revolution, particularly through e-wallet applications, has brought about changes in SME managerial behavior in developing more systematic, effective, and responsive financial strategies. Research by Aflagaly and Kusumowati (2025) identified that SMEs with high levels of e-wallet utilization are better able to manage cash flow, optimize accounts payable and receivables management, and utilize historical transaction data to determine business development strategies. Research by Nurhaedah *et al.* (2025) added that e-wallet-based *financial technology applications* play a role in improving digital financial literacy and expanding SME access to formal financial services. However, the difference lies in the focus of previous research, which largely focused on aspects of technology adoption behavior, financial literacy, or on specific business types and regions. Therefore, it has not specifically explored the variable of SME financial management efficiency in the Umbulharjo District in depth. Thus, the research to be conducted is expected to provide an original contribution by examining the influence of E-Wallet applications in a more focused manner on the effectiveness of SME cash management in the region, broadening insights from previous research results, while also completing the literature map related to digital financial transformation in the SME sector.

This research aims to comprehensively investigate the adoption and implementation of *e-wallets* among Small and Medium Enterprises (SMEs) in the Umbulharjo District. Essentially, this study aims to examine the level of e-wallet utilization and identify factors driving adoption (such as interface convenience, transaction security, and administrative costs). The primary focus is to analyze the contribution of e-wallets to the efficiency of SME financial governance, particularly in recording and cash flow, and to conduct a comparative

analysis of efficiency between users and non-users. Furthermore, this study also uncovers various operational barriers faced by SMEs, ranging from limited digital literacy to data security issues.

This research employed a quantitative method with a survey approach. Primary data were collected through questionnaires distributed to Small and Medium Enterprises (SMEs). The specific location of this study was the Umbulharjo District, Yogyakarta City. This area was chosen because it is a hub for creative economic growth and micro-businesses, demonstrating high levels of digital technology adoption among SMEs. This factor makes Umbulharjo a representative and highly relevant location for examining the phenomenon of e-wallet usage.

The study population included all SMEs operating in the Umbulharjo District. The sample was specifically drawn from SMEs actively integrating e-wallet applications into their transactions and financial management. This focused sample selection, focusing on active users, aimed to capture and represent the real impact of digital technology integration. This location and sample selection strategy are believed to strengthen the validity of the findings and enable the formulation of targeted and applicable recommendations for the development of a technology-based business ecosystem at the local level.

RESEARCH METHODS

This research used a quantitative method with a survey approach, distributing questionnaires to all MSMEs in the Umbulharjo District. The questionnaires were compiled based on indicators of financial management efficiency, such as transaction speed, ease of recording, transaction security, and ease of access to financial reports.

The object of this study was the use of e-wallet applications in the financial management of SMEs in the Umbulharjo District. The sampling technique used was purposive sampling, with the criteria being that SMEs had used e-wallet applications for at least the past six months and were still active. A sample of 100 respondents was selected according to the Slovin formula. The subjects of this study were SME owners or managers who used e-wallet applications as a means of financial transactions in the Umbulharjo area.

The collected data were systematically processed using SPSS 27 software, and the results were presented in tabular format to map the characteristics of the predetermined respondents. The data collection and validation process was carried out from June to July 2025, with the study centered in the Umbulharjo District, Yogyakarta City. This area was chosen because it is known as one of the centers with significant growth dynamics of Small and Medium Enterprises (SMEs) in the Special Region of Yogyakarta.

RESULTS AND DISCUSSION

Respondent Characteristics

1. Respondent characteristics based on gender

In this study, respondents were divided into two groups: men and women. These characteristics can be seen in the table below:

Table 1.
Gender

Gender	Amount	Total
Man	55	100
Woman	45	

Source: Processed results of 2025 questionnaire data

2. Characteristics based on last education

Based on the results of the research questionnaire, respondents' highest educational attainment can be divided into four categories: high school/vocational school, diploma 3, bachelor's degree, and other. These characteristics can be seen in the table below:

Table 2.
Last Education

Last education	Amount	Total
High School/Vocational School	47	100
D3	10	
S1	30	
Etc	13	

Source: Processed results of 2025 questionnaire data

3. Characteristics based on business type

In the results of the research questionnaire that was distributed to all small and medium business owners, the types of businesses they own are construction, culinary and trade.

Table 3.
Types of Business

Type of business	Type of business	Total
Construction	5	100
Culinary	37	
Trade	53	

Source: Processed results of 2025 questionnaire data

4. Characteristics based on the application used

Based on the research conducted, respondents used several types of apps, including GoPay, OVO, Dana, LinkAja, and ShopeePay. These characteristics can be seen in the following table:

Table 4.
Types of E-Wallet Applications

Types of E-Wallet Applications	Amount	Total
Go Pay	25	100
OVO	10	
Funds	30	
Just Link	17	
ShopeePay	18	

Source: Processed results of 2025 questionnaire data

a. Research Instrument Testing

Instrument testing was conducted to ensure that the measuring instruments used in this study were valid and reliable.

1. Validity Test

Validity testing aims to determine the extent to which an instrument is able to measure what it should measure.

Table 5.
Validity Test Results

Statement	r-Count	r-Table	P (Sig)	Information
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P1	0.924	0.361	< 0.001	Valid
P2	0.928	0.361	< 0.001	Valid
P3	0.739	0.361	< 0.001	Valid
P4	0.916	0.361	< 0.001	Valid
P5	0.871	0.361	< 0.001	Valid
P6	0.915	0.361	< 0.001	Valid
P7	0.848	0.361	< 0.001	Valid
P8	0.889	0.361	< 0.001	Valid
P9	0.768	0.361	< 0.001	Valid
P10	0.914	0.361	< 0.001	Valid
P11	0.912	0.361	< 0.001	Valid
P12	0.89	0.361	< 0.001	Valid
P13	0.925	0.361	< 0.001	Valid
P14	0.915	0.361	< 0.001	Valid
P15	0.917	0.361	< 0.001	Valid
P16	0.89	0.361	< 0.001	Valid
P17	0.899	0.361	< 0.001	Valid
P18	0.846	0.361	< 0.001	Valid
P19	0.848	0.361	< 0.001	Valid
P20	0.942	0.361	< 0.001	Valid

Source: Results of processing SPSS 27 data

Based on the table above, it can be concluded that the variables of E-Wallet application usage and financial management efficiency in small and medium enterprises in Umbulharjo District can be declared valid because the calculated r-value is greater than the r-table value.

2. Reliability Test

Reliability testing is conducted to evaluate the internal consistency and reliability of a research instrument (questionnaire). This testing ensures that the measuring instrument can produce stable data when re-administered to the same subjects. To measure the consistency of each question item, the Cronbach's alpha coefficient is used. A Cronbach's alpha value of ≥ 0.7 indicates sufficient reliability, while a Cronbach's alpha value of ≥ 0.80 indicates that all items are reliable and the entire test is consistent due to strong reliability.

Table 6.
Reliability Test Results

Number of Statements	Cronbach's Alpha	Minimum Cronbach's Value	Information
20	0.985	0.8	Reliable

Source: Results of processing SPSS 27 data

From the analysis results as shown in the table above, the Crohn's Alpha value is greater than 0.80. It can be concluded that the instrument used in this study has a good level of reliability.

b. Classical Assumption Test

The classical assumption test was conducted to ensure that the regression model used was feasible and met the requirements of *the Ordinary Least Squares* (OLS) method. The test results are presented below.

1. Normality Test

This test aims to test whether the confounding variables or residuals in a regression model have a normal distribution. A good regression model is considered to have a normal or near-normal distribution. In this test, the regression residuals are considered normally distributed if their significance value is greater than 0.05.

Table 7.
Normality Test Results

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			100
Normal Parameters ^{a,b}	Mean		.0000000
	Standard Deviation		2.17581672
Most Extreme Differences	Absolute		.093
	Positive		.093
	Negative		-.086
Test Statistics			.093
Asymp. Sig. (2-tailed) ^c			.033
Monte Carlo Sig. (2-tailed) ^d	Sig.		.034
	99% Confidence Interval	Lower Bound	.029
		Upper Bound	.038
a. Test distribution is Normal.			
b. Calculated from data.			
c. Lilliefors Significance Correction.			
d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.			

Source: Results of processing SPSS 27 data

Based on the results of the Kolmogorov-Smirnov Test, the Asymp. Sig. (2-tailed) value is 0.033. Referring to the criteria that normality is met if Sig. > 0.05, then the value of 0.033 indicates that the residuals of the regression model are normally distributed.

2. Heteroscedasticity Test

The heteroscedasticity test aims to determine whether the regression model experiences non-constant residual variance. The Glejser method is carried out by using the absolute value of the residual (ABS_RES) as the dependent variable, analyzing the significance value (Sig.) of each independent variable against ABS_RES. Glejser Test Conditions:

Table 8.
Heteroscedasticity Test Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	3,864	.848		4,559	.000
	x	-.051	.020	-.252	-2,577	.011
a. Dependent Variable: Abs_RES						

Source: Results of processing SPSS 27 data

Since all significance values are greater than 0.05, it can be concluded that this regression model does not experience heteroscedasticity. This means that the residuals have equal variance (homoscedasticity), and the model is suitable for further analysis.

3. Multicollinearity Test

The multicollinearity test aims to determine whether the relationship between independent variables exhibits multicollinearity. Multicorrelation is a very high correlation between independent variables. Multicollinearity testing can be performed by observing whether multicorrelation exists if the VIF value is 10 or the tolerance value is 0.10. However, if the VIF value is 10 or the tolerance value is <0.10 , multicorrelation is not present. The test results are as follows:

Table 9.
Test Results Multicollinearity

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4,248	1,423		2,986	.004		
	X	.886	.033	.937	26,609	.000	1,000	1,000
a. Dependent Variable: Y								

Source: Results of processing SPSS 27 data

Based on the results of the regression analysis, it is known that the independent variable Tolerance Value is close to 1 and the VIF value is equal to 1, indicating that there is no multicollinearity problem in variable X. In other words, variable X does not have a high correlation with other independent variables (or because there is only one independent variable), so there is no information redundancy that causes multicollinearity problems.

This regression model is free from multicollinearity issues, as the Tolerance and VIF values indicate no high correlation between the independent variables. Therefore, the obtained regression coefficients can be considered valid and unbiased by multicollinearity.

d. Data Analysis Techniques

1. Multiple Linear Regression

Multiple linear regression is a statistical analysis technique used to determine the effect of more than one independent variable on a dependent variable simultaneously and partially. The results of the linear regression test are as follows:

Table 10.
Multiple Linear Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,248	1,423		2,986	.004
	X	.886	.033	.937	26,609	<.001

a. Dependent Variable: Y

Source: Results of processing SPSS 27 data

Based on the table above

$$Y = \alpha + b_1 X$$

$$Y = 4.248 + 0.886 X$$

The explanation is as follows:

- Constant Value (α) = 4.248)

It is the predicted value of Y when the variable X is zero. This indicates the average of the basic Y value or starting point without the influence of X. In interpretation, if $X = 0$, then Y is estimated to be 4.248.

- Coefficient b1 (0.886):

Each unit increase in X causes an increase in Y of 0.886. Since the number is positive, the relationship between X and Y is direct — the greater X, the greater Y.

2. Coefficient of Determination Test (R²)

The determination coefficient test aims to determine how much contribution or ability the independent variable (X) has in explaining the variation of the dependent variable (Y) in a regression model.

Table 11.
Coefficient of Determination Test

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.937 ^a	.878	.877	2.18689
a. Predictors: (Constant), X				

Source: Processed data from SPSS 27

The coefficient of determination (R Square) in the regression test results above is 0.878. Based on the table above, the explanation is as follows:

- The R Square value of 0.878 means that the regression model is able to explain 87.8% of the variation that occurs in the dependent variable (Y) can be explained by the independent variable (X) used in the model.
- The remaining 12.2% is explained by other factors outside the model, including other variables not included in the model and error factors or estimation errors.

e. Hypothesis Testing

1. Partial Significance Test (T-Test)

The t-test is used to determine the extent of influence of each variable. The results of the t-test are as follows:

Table 12.
Results of Partial Significance Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,248	1,423		2,986	.004
	X	.886	.033	.937	26,609	<,001
a. Dependent Variable: Y						

Source: Results of processing SPSS 27 data

The t-test results show that the calculated t-value for the E-Wallet application user variable is 26,609, greater than the t-table value of 1.984, with a significance value of $<0.001 < 0.05$. The significance value is far below 0.05, indicating that the effect of E-Wallet application use on financial management efficiency is very statistically significant. In accordance with the decision-making criteria, if $t_{count} > t_{table}$ or $Sig. < 0.05$, then H_0 is rejected. Thus, it can be concluded that the use of E-Wallet applications partially has a significant effect on financial management efficiency in small and medium enterprises in the Umbulharjo District.

2. Simultaneous Significance Test (F Test)

The F-test is used to determine the simultaneous influence of internal and external factors on learning motivation. The test results are as follows:

Table 13.
Simultaneous Significance Test (F Test)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3386.066	1	3386.066	708,014	.000 ^b
	Residual	468,684	98	4,782		
	Total	3854.750	99			
a. Dependent Variable: Y						
b. Predictors: (Constant), X						

Source: Results of processing SPSS 27 data

Based on the table above, it is known that the total number of respondents (n) is 100, so: $df_{total} = n - 1 = 100 - 1 = 99$. The regression model uses two independent variables, namely E-Wallet application users, so: $df_{regression} = k = 1$. To calculate the residual degrees of freedom, the formula is used: $df_{residual} = n - k - 1 = 100 - 2 - 1 = 97$. From the table, the F-count value is 708.014, while the F-table value is $F_{table} = 3.94$ ($df_1 = 1, df_2 = 98, \alpha = 0.05$). Because $F_{count} (708.014) > F_{table} (3.94)$, the regression results are very significant.

Thus, it can be concluded that the variable of simultaneous use of E-Wallet applications has a significant effect on the efficiency of financial management in small and medium enterprises in the Umbulharjo District.

CONCLUSION

Based on the analysis and findings obtained from research regarding the impact of *E-Wallet implementation* on the efficiency of financial management of Small and Medium Enterprises (SMEs) in Umbulharjo District, several main conclusions can be drawn as follows:

1. The partial effect of using E-Wallet applications on the efficiency of financial management.

Based on the results of the t-test, the calculated t-value for the E-Wallet application usage variable is 26.609. This value is much greater than the t-table of 1.984 at a significance level of 0.05 with 98 degrees of freedom. In addition, the significance value (Sig.) of <0.001 (<0.05), indicates that the E-Wallet application usage variable partially has a very significant influence on the efficiency of financial management in SMEs in Umbulharjo District. Thus, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted, meaning that the higher the use of the E-Wallet application, the higher the efficiency of financial management in SMEs.

2. The effect of simultaneous use of E-Wallet applications on the efficiency of financial management.

Based on the F-test results, the calculated F-value was 708.014, significantly higher than the F-table of 3.94 (at $\alpha = 0.05$, $df_1 = 1$, $df_2 = 98$). This indicates that the simultaneous use of e-wallet applications significantly impacts the efficiency of financial management in SMEs in Umbulharjo District. Therefore, it can be concluded that the existence and use of e-wallets together significantly contribute to improving the efficiency of financial management.

3. Strength of Relationship and Model Ability in Explaining Variations in Financial Management Efficiency.

The coefficient of determination (R Square) analysis showed a value of 0.878. This figure means that 87.8% of the variation in financial management efficiency in SMEs in Umbulharjo District can be explained by the use of e-wallet applications, while the remaining 12.2% is explained by other factors outside this research model. The R value of 0.937 also indicates a very strong relationship between e-wallet application use and financial management efficiency.

4. Practical Implications

Based on the results of this study, it can be concluded that the existence and use of e-wallet applications play a significant role in improving the efficiency of financial management for SMEs in Umbulharjo District. This demonstrates the importance of utilizing digital financial technology in helping SMEs manage their finances more effectively and efficiently.

- a. **Suggestion**

In line with the conclusions drawn from this study, the following applicable and futuristic suggestions are intended to provide real contributions to SMEs, regulators (government), and serve as a reference for future research:

1. For MSMEs in Umbulharjo District

MSMEs are encouraged to optimize the use of *e-wallet applications* more intensively in various aspects of financial management, including digitizing transaction recording, implementing non-cash payments, and monitoring cash flow. *E-wallet adoption* is crucial for improving operational efficiency, strengthening transaction security, and achieving greater transparency in daily financial management.

2. For Government Agencies/Stakeholders

Relevant agencies and local governments are advised to facilitate regular capacity-building programs (training and outreach) regarding the adoption of digital financial technology. This proactive step is essential to expanding digital literacy among SMEs, enabling them to maximize digital solutions for improved and efficient financial management.

3. For Further Researchers

Future research is recommended to enrich the analytical model by integrating additional variables not covered in this study. Potential variables include digital financial literacy, the maturity level of technology adoption, or other external factors thought to influence the efficiency of SME financial management. Furthermore, expanding the geographic scope of the study to other sub-districts or regions could improve the generalizability and representativeness of the findings.

- b. **Research Limitations**

In an effort to ensure scientific transparency, this study identified several methodological constraints and limitations. These points serve as crucial input for improving future study designs:

1. Variable Limitations

The main limitation of this study lies in its focus on a single variable, e-wallet app usage, to assess its impact on financial management efficiency. Consequently, other potentially significant factors have not been integrated into the analysis model.

2. Scope of

the Study Area The study was conducted only on SMEs in Umbulharjo District, so the results of this study cannot necessarily be generalized to all SMEs in other areas.

3. Method of collecting data

The research data was obtained through a self-reported questionnaire, so there is still the possibility of bias in respondents' perception or understanding regarding the questions asked.

4. Research Time

The conditions or results of this research are a reflection of the time and situation of data collection so they can change along with technological developments or government policies in the future.

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