

## PosPay Application Services as an Alternative Digital Wallet (E-Wallet) (Case Study at PT Kantor Pos Wonosari Branch)

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### ARTICLE INFO

#### Article history:

Received

Received in revised form

Accepted

Available online

PosPay Application, effectiveness,  
efficiency, service quality, e-wallet

### ABSTRACT

This study aims to examine the influences of (1) efficiency on the service quality of PosPay application, (2) increase in effectiveness on the service quality of PosPay application, and (3) efficiency and effectiveness on the service quality of PosPay application. PosPay application is an innovation from Indonesian Post Company/PT Pos Indonesia which provides digital financial transaction services. This study used a quantitative correlational method. Data were collected by distributing questionnaires to 357 respondents who used the PosPay application at the Wonosari branch Post Office. The results of the questionnaire were then processed to obtain data on the influence of efficiency and effectiveness on service quality. Then, multiple linear regression analysis techniques was used in hypothesis testing. The results of the study show that efficiency has a positive and significant influence on service quality with a t-value of 8.249 and a significance level of 0,000. Then, effectiveness has a positive and significant influence on service quality with a t-value of 4.563 and a significance of 0,000. At last, (3) efficiency and effectiveness simultaneously affect service quality by 41% with F count 123.118 > F table 3,02. Based on the result, it is concluded that the lack of system efficiency and effectiveness will affect the service quality of the PosPay application service.

## 1. Introduction

Technological advances have brought about major changes in various aspects of life, including in the field of financial technology. One significant innovation in this field is the digital wallet (E-Wallet), which offers convenience, speed, and security in transactions. According to Fadhillah et al. (2021), a digital wallet is a platform that allows users to make financial transactions online using cards or electronic money as a payment method. This technology continues to develop along with the increasing need for people to interact practically and safely.

E-Wallet is the main choice for many modern people because of its efficiency in facilitating the transaction process without time and place constraints. Services such as Mobile Banking has been designed to make it easier for users to access banking services, allowing them to make transactions

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<https://doi.org/10.37934/jvars.XX.X.XX>

at any time without having to visit the bank in person (Prihatiningrum & Zuraidah, 2022). One of e-Wallet innovations, PosPay which is developed by PT Pos Indonesia (Persero), has an important role in supporting digital transformation in the financial sector.

PT Pos Indonesia (Persero) is a state-owned company that focuses on courier, logistics, and financial transaction services in Indonesia. As part of its strategic move, the company launched the PosPay application to provide access to digital financial services based on Giro Pos accounts. This application is designed to allow users to carry out various financial transactions, including bill payments, credit purchases, and fund transfers (Salsabilla, 2022). Sarmini (2023) in Kusdardjanto & Khoirotunnisa's (2023) explains PosPay's advantages is its ability to be accessed anytime and anywhere, offering features that are useful for users.

However, despite offering many benefits, the PosPay application faces significant challenges. Based on the researchers' observation on Google Play Store, this application has the lowest rating compared to other E-Wallet applications with an average rating of 3.5. The table below shows the rate of some e-wallet apps commonly used in Indonesia.

**Table 1. The Number of Downloads and Rate of E-Wallet Applications in 2024**

No	App Name	Number of Downloads	Rate
1	DANA	100 M+	4,6
2	OVO	50 M+	3,9
3	ShopeePay	10 M+	4,8
4	GoPay	10 M+	4,6
5	PosPay	5 M+	3,5

Source: <https://play.google.com>

This shows that although PosPay has the potential to develop as a prominent e-wallet, various technical and non-technical issues make it difficult to compete with other more popular applications. This challenge is not only reflected in the low ratings and number of downloads nationally but is also seen in performance at the branch level.

Wonosari Post Office Branch is one of the branches under Regional 4 of PT Pos Indonesia. It is currently facing problems in terms of PosPay users. The table below shows the rank of the number of PosPay users in Regional 4.

**Table 2 . PosPay Users in Regional 4**

No	Branch	Office Name	Total
1.	55000	Kp . Yogyakarta	10,556
2.	55700	Bantul Village	9,057
3.	55600	Kp. Wates	4.256
4.	55800	Kp. Wonosari	3.354

**(Source: The Web of Dashboard Fintech SBU Digital Platform POS, 2024)**

Problems faced by the Wonosari Branch Post Office are related to the low number of users and the high number of complaints about PosPay. These are reflected in in management the

system that should support the need users optimally. Therefore, the efficiency and effectiveness aspects of the system are key factors in determining the success of this application in the digital financial services market. Application efficiency can be measured from how well the system utilizes hardware and software resources to provide optimal performance (Syam, 2020) . Meanwhile, effectiveness is the ability of a system to achieve desired goals by minimizing obstacles (Dua & Rumerung, 2022).

Digital transformation does not only focus on operations, but also includes strategies and continuous innovation to improve the company's competitiveness (Nugroho & Kusuma, 2023) . Digital infrastructure, including data management, hardware, software, and security, are the main foundation that allows applications such as PosPay to function optimally. Without an efficient and effective system, financial applications will not be able to compete in an increasingly competitive market.

Based on the various challenges faced, this study aims to determine the effect of system efficiency and effectiveness on the quality of PosPay application services. By focusing on the problems that occur at the Wonosari Branch Post Office, this study is expected to provide relevant recommendatio for PT Pos Indonesia to improve user experience, application performance, and competitiveness in the digital wallet market.

## **2. Method**

This study uses a quantitative correlational approach. According to Sahir (2022) quantitative research uses statistics in processing its data. While correlation analysis is a statistical technique used to identify the relationship between two quantitative variables in a population or sample (Pratama et al., 2023) . Quantitative research focuses on objective results obtained through questionnaires, which are then tested for validity and reliability.

### **2.1. Research Setting**

This research was conducted at the Wonosari Branch Post Office 55800 which is located in Jl. Brigjen Katamso No.12, Wonosari, Gunungkidul, DI Yogyakarta. It was conducted from August 2024 to September 2024.

### **2.2. Population and Sample**

The population in this study includedall PosPay application users at the Wonosari Branch Post Office, amounting of 3,354 users during the period 2021 to 2024, with a sample of 357 respondents. The sampling technique used was purposive sampling. The criterion of the respondents was, PosPay application users who used it at least once a year.

### **2.3. Data Analysis Techniques**

This study employed descriptive analysis to describe the characteristics of the data, and classical assumption tests including normality tests, multicollinearity tests, heteroscedasticity tests, and linearity tests to ensure the feasibility of multiple linear regression. This regression technique was used in analyzing the effect of efficiency and effectiveness on service quality, supported by hypothesis tests in the form of partial tests (t-tests), simultaneous tests (F-tests), and coefficients of determination ( $R^2$ ). This approach provides a comprehensive understanding of the relationship between variables in the study.

## **3. Results and Discussion**

### **3.1. Results**

Of the total 357 respondents, the PosPay application users in the branch were 51% females and 49% males. Based on age, most users 52% were over 25 years old, 35% of them were 23-25 years old, and 13% were 17-22 years old. It indicates that PosPay application users tend to come from

the adult group. Then in terms of work, the majority of respondents were private company employees with a total of 50%, self-employed 22%, students 15%, and civil servants 13%. It can be inferred that PosPay application is more widely used by private employees. Regarding the frequency of visiting the PosPay application, 59% of respondents accessed PosPay less than 3 times, 25% visit 3-5 times, 10% visit 6-10 times, and 6% visit 10 times in the past year. This shows that most respondents rarely access the PosPay application, with a few using it intensively. Overall, PosPay application users are dominated by women, aged over 25 years, and private employees. Most of them have rarely used the PosPay application in the past year.

### **3.1.1. Classical Assumption Test**

#### **a. Normality Test**

The results obtained in the normality test shows that the Kolmogorov-Smirnov value is 0.596 with an Asymp. Sig value of 0.870. The Asymp. Sig value obtained is greater than 0.05. Based on these results, the data is considered normally distributed. These results are in line with the criteria that indicate that if the significant value exceeds 0.05, the data is considered normally distributed.

#### **b. Multicollinearity Test**

From the results of multicollinearity testing, it can be concluded that both variables, namely efficiency and effectiveness, have a tolerance value of 0.534, and a VIF value of 1.874. The tolerance value is close to 1 and the VIF is below 10 indicating that there is no multicollinearity between the two variables. Thus, these two variables can be used in regression analysis without causing multicollinearity problems.

#### **c. Heteroscedasticity Test**

The test results show that the efficiency and effectiveness variables do not reveal any heteroscedasticity problems. This shows that there is a significance value (Sig.) greater than 0.05 since the value obtained is 0.482. Then, because the effectiveness variable obtained is 0.495, it can be concluded that the data for these variables have met the classical assumptions of regression, so that the regression model can be considered valid without any heteroscedasticity interference.

#### **d. Linearity Test**

Based on the linearity test, there is a relationship between the efficiency and effectiveness variables on the service quality variable which is linear. The Sig. Deviation from Linearity value for efficiency is 0.645 and effectiveness is 0.571. Both of these values have values exceeding the significance level of 0.05. Through this, it can be interpreted that there is no significant error from linearity, so that the conclusion obtained from the relationship between these variables is linear, without any significant interfering factors that affect the relationship.

### **3.1.2 Multiple Linear Regression Analysis**

Based on the results of multiple linear regression tests, the regression equation obtained is  $Y = 23.146 + 0.571 X_1 + 0.440 X_2 + e$ , where Y is service quality, X1 is efficiency, and X2 is effectiveness. The constant coefficient (a) is 23.146 with a positive constant value indicating a positive influence from the efficiency and effectiveness variables. It can be interpreted that if efficiency and effectiveness are 0, then the service quality of the PosPay application is 23.1%. The efficiency coefficient is 0.571, showing that the efficiency variable positively affects service quality. This also means that every 1 unit increase in the efficiency variable will increase the service quality variable by 0.57% in this study, thus indicating that other variables are not considered. The effectiveness coefficient is 0.440. This value shows that the effectiveness variable has a positive effect on service quality. The resulting value also indicates that every 1 unit increase in the

effectiveness variable can increase the service quality variable by 0.44% in this study, so other variables are not considered. It also shows that effectiveness has a greater influence than the efficiency variable on service quality.

### **3.1.3 Hypothesis Testing**

#### **a. Persian Statistical Test (T)**

Based on the results of the t-test, there are two variables tested, namely efficiency and effectiveness. The probability value used is 0.05 or 5% while the t table obtained for the t-test is 1.967. The significant value (Sig.) of efficiency is 0.000 <probability 0.05 and the calculated t value is 8.249> t table 1.967, so it can be interpreted that there is an effect of efficiency on service quality. Effectiveness has a significant value (Sig.) of 0.000 <probability 0.05 and a calculated t of 4.563> t table 1.967. It can be concluded that effectiveness affects service quality. In other words, there should be efficiency and effectiveness on service quality or the hypothesis H1 is accepted.

#### **b. Simultaneous Statistical Test (F)**

The F test in the regression analysis in Table 25 is processed to show the relationship between the three variables studied. There are decision-making criteria using a significance level of 0.05 (5%). From the table above, it can be seen that the calculated F is 123.118, which is greater than F table of 3.02 and the significance level is 0.000 <0.05, so the H0 is rejected. Based on the results obtained, the conclusion is that efficiency and effectiveness have a significant influence on the quality of PosPay application service.

#### **c. Coefficient of Determination (R<sup>2</sup>)**

The results of the coefficient of determination, (R<sup>2</sup>) value shows that there is a relationship between efficiency and effectiveness and service quality in this study. The Adjusted R Square value is 0.407 which indicates that there is a fairly strong relationship between the dependent and independent variables. The R<sup>2</sup> value is 0.410 which means that 41% of changes in the service quality variable can be explained by the efficiency and effectiveness variables while the remaining 59% may be influenced by other independent variables not included in this study.

### **3.2. Research Limitations**

One of the limitations of this study is that it only focuses on Wonosari Branch Post Office. Therefore, the results of this study may not be generally conclusive for all PosPay application users in Indonesia, because geographic and demographic factors can affect user perceptions of the application. The time period of the study is also limited to certain years, so it may not be able to capture changes in user experience in the long term. This can affect the external validity of the research results, if user conditions or needs change over time. Then, this study only considers efficiency and effectiveness as independent variables that affect the quality of PosPay application services. It is possible that other variables, such as security and ease of use also affect service quality but are not included in this study. At last, in this study, data were collected using a questionnaire, which may not fully reflect the actual user experience due to subjective bias in filling out the questionnaire.

### **4. Conclusions**

- 1) Efficiency has positive and significant effects on PosPay service quality. This is shown from the t count (8.249) which is greater than t table 1.967 and Sig. 0.000 <0.05. Based on the results of multiple linear regression, it indicates that every 1 unit increase in the efficiency variable will increase the service quality variable by 0.57% in this study, assuming other variables are not considered.

- 2) Effectiveness has positive and significant effects on PosPay service quality. It is shown by the results of t count 4.563 which is greater than t table 1.967 and Sig. 0.000 <0.05. Based on the multiple linear regression test, the value obtained by each increase of 1 unit in the effectiveness variable can increase the service quality variable by 0.44% in this study, thus showing that other variables are not considered.
- 3) This study also proves that there is a relationship among efficiency, effectiveness, and the quality of PosPay application services, which is shown by the coefficient of determination ( $R^2$ ) value of 0.410, meaning that 41% of changes in service quality can be explained by the variables of efficiency and effectiveness. While the other 59% of changes may be influenced by other independent variables in this study. This conclusion is also supported by the results of the F test which concluded that efficiency and effectiveness simultaneously have a significant effect on the quality of PosPay application services, as evidenced by the calculated F value of 123.118 > F table 3.02 with a significance level of 0.000 <0.05. Thus, the null hypothesis ( $H_0$ ) is rejected. This clearly shows that efficiency and effectiveness affect the quality services of PosPay app.

### Conflict of Interest

The authors) declare that there is no conflict of interest over the company being researchers regarding the publication of this article. No financial, professional, or personal relationships have influenced the research, analysis, or conclusions presented.

### Financing

“This research did not receive any external funding.”

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