

# The Influence of Perceived Ease of Use on Behavioral Intention Through Perceived Usefulness as an Intervening Medium in Digital Payment DANA

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## ABSTRACT

*The purpose of this study is to examine how behavioral intention to use the digital payment service DANA is influenced by perceived ease of use and how perceived usefulness functions as an intervening medium in this connection. The issue addressed is the poor acceptance rate of digital payment services, despite their excellent usability. A population survey of DANA users in Makassar is the methodology employed. Purposive sampling is the method utilized, and 150 respondents who have used DANA for at least six months were included in the sample. A questionnaire addressing the factors of perceived ease of use, perceived usefulness, and behavioral intention was used to gather data. The results of the linear regression analysis show that perceived ease of use has a positive and significant effect on perceived usefulness, which in turn positively affects behavioral intention. These results imply that improving the DANA application's usability can raise users' opinions of its value and, in turn, their desire to keep using the service. In order to design better user-friendly features and promote wider adoption, app developers can benefit greatly from the insights this research offers.*

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## INTRODUCTION

In Indonesia, the use of e-wallets has been increasing in line with the growth of the digital economy and the rapid adoption of smartphones. A report from the Indonesian Internet Service Providers Association (APJII) indicates that the number of internet users in Indonesia has surpassed 200 million, and the number of smartphone users continues to rise. This provides FinTech companies with an opportunity to offer more practical and efficient payment methods. DANA is one of the leading e-wallet applications that facilitates various transactions, such as bill payments, money transfers, and online shopping. Users can conduct transactions without carrying cash or credit cards by simply tapping their smartphone screens. Although the service is easy to use, users still utilize it in different ways. In this study, we found cases where users faced difficulties in integrating and using the DANA service, despite the platform being designed to simplify transactions. To gain a better understanding of user behavior in adopting new technologies, particularly in digital payments, an analysis is necessary.

Previous studies have shown that two key concepts—perceived ease of use and perceived usefulness—affect users' intention to adopt digital services. According to Davis (1989), perceived ease of use refers to how easy users feel it is to use a technology, while perceived usefulness refers to the extent to which users believe that the technology enhances their convenience and efficiency. A study conducted by Venkatesh and Bala (2012) found that these two factors interact with each other and can influence users' decisions to adopt technology. Digital wallets, also known as e-wallets, are an innovation in the payment system that enables electronic transactions. E-wallets allow users to conduct transactions, store payment information, and manage their finances more effectively. E-wallets such as DANA, OVO, and

GoPay have become an essential part of daily life for Indonesians, offering convenience in transactions without the need for cash. According to Arifin et al. (2022), the use of e-wallets continues to grow, particularly among younger generations who prioritize ease and speed in transactions.

Perceived ease of use is a concept that reflects how easy an individual feels when using a specific technology. In the context of e-wallets, ease of use includes factors such as an intuitive interface, a simple registration process, and the ease of conducting transactions. Research by Ghasemaghaei and Jafarzadeh (2021) shows that the ease of using digital payment services can encourage customers to use them more frequently. Easy navigation, quick interactions, and the application's responsiveness to user input are some aspects of perceived ease of use. The extent to which an individual believes that using a particular system will enhance their performance is referred to as **perceived usefulness**. In the context of e-wallets, this means that users believe the application helps them manage their finances, speeds up payment processes, and adds value to their shopping experience. Research by Alalwan et al. (2017) indicates that a positive user experience with e-wallets can strengthen their perception of the service's usefulness. The dimensions of perceived usefulness include efficiency, effectiveness, and ease of conducting transactions. Additionally, the benefits perceived by IT users can influence their behavior, enabling them to complete tasks more quickly, leading to increased performance and productivity (Moslehpour et al., 2018).

Behavioral intention refers to an individual's willingness to perform a specific action, such as using an e-wallet service. This intention can be influenced by various factors, including ease of use and perceived usefulness. The dimensions of behavioral intention include the desire to use the service in the future and the intention to recommend it to others. A study by Kahn et al. (2020) found that individuals with a strong intention to use e-wallets tend to be more active in conducting transactions and utilizing its features. Additionally, Tsai et al. (2021) found that positive user experiences can enhance their willingness to continue using e-wallet services. Perceived usefulness has a greater impact on behavioral intention than perceived ease of use (Wu & Chen, 2017). A study by Bing Wu and Chen, which focused on online learning, found that perceived usefulness acts as a mediating variable for perceived ease of use, highlighting its importance in determining how long users will continue utilizing online learning platforms.

The proposed research approach involves analyzing the relationship between perceived ease of use and behavioral intention through perceived usefulness as an intervening variable. This method aims to identify factors that can enhance the adoption of DANA services. This study focuses on how users perceive the ease of using the DANA application, which ultimately influences their intention to continue using it. The objective of this research is to evaluate the impact of perceived ease of use on behavioral intention to use DANA and the role of perceived usefulness as an intervening variable. This study is expected to assist DANA application developers in creating more user-friendly and efficient features to encourage a higher adoption rate of digital payments. Several key concepts are emphasized in this study. Firstly, the Technology Acceptance Model (TAM) developed by Davis (1989) states that two primary factors influence technology adoption: perceived ease of use and perceived usefulness. A recent study by Ghasemaghaei and Jafarzadeh (2021) found that when people use digital payment applications, their perception of ease of use significantly affects their willingness to continue using them. Additionally, Alalwan et al. (2017) emphasize the importance of understanding how these two variables interact in increasing users' intention to adopt electronic services. By referring to previous studies, this research aims to assist in developing and implementing better marketing strategies and application designs. The findings will help DANA application developers better understand customer behavior and optimize their services. Moreover, this study can provide valuable insights for other FinTech companies seeking to understand user behavior and improve their digital payment services.

## RESEARCH METHODOLOGY

This quantitative study examines the impact of perceived ease of use on behavioral intention to use the DANA digital payment service, with perceived usefulness serving as an intervening variable in this relationship. This method was chosen because it allows researchers to collect numerical data that can be statistically analyzed, leading to valid and reliable conclusions. The study was conducted in Makassar, one of Indonesia's major cities with many digital payment users. This location was selected to ensure the collection of relevant data from active DANA users in Makassar. The research population consists of individuals who have used DANA for at least the past six months, as they are considered active users. Purposive sampling was employed, where respondents were selected based on the study's objectives. The targeted sample size consists of 150 respondents, ensuring that the data collected is representative and sufficient for statistical analysis.

The primary variables examined in this study are perceived ease of use, perceived usefulness, and behavioral intention. Data was collected through a structured questionnaire distributed to respondents. Using a five-point Likert scale, participants were asked to indicate their level of agreement with various statements. To ensure the validity and reliability of the research instrument, the questionnaire was pre-tested on a small group of respondents in Makassar before wider distribution. Once the data was collected, multiple linear regression analysis was conducted to examine the direct relationship between perceived ease of use and perceived usefulness and their impact on behavioral intention. Before applying this technique, classical assumption tests such as normality, multicollinearity, and heteroskedasticity were performed to confirm that the data met the required statistical criteria for analysis. These tests helped improve the understanding of how the variables interact with each other.

This study aims to produce meaningful insights regarding the influence of perceived ease of use on behavioral intention to adopt DANA digital payment services in Makassar. The findings are expected to assist application developers in designing more user-friendly features and provide recommendations to increase the adoption of digital payment services. Furthermore, this study is expected to contribute to the development of more effective marketing strategies and product innovation in the FinTech industry in Makassar by providing a deeper understanding of the key factors influencing user behavior.

## RESULTS AND DISCUSSION

### Results

The objective of this study is to examine how perceived ease of use influences the intention to use the DANA digital payment service and how perceived usefulness functions as an intervening variable. Data collected from 150 respondents in Makassar was analyzed to determine the relationships among the studied variables.

### Respondent Description

**Table 1. Presents the Demographic Characteristics of the Respondents**

Demographics	Category	Number of Respondents	Percentage (%)
Gender	Male	70	46.7
	Female	80	53.3
Age	18-25 years	45	30.0
	26-35 years	60	40.0
	36-45 years	30	20.0
	46 years and above	15	10.0

*Source: Data Processing Data, 2024*

The table above indicates that the majority of respondents were female (53.3%) and fell within the age range of 26-35 years (40%). This suggests that women participated more actively in this study, which may reflect greater interest in or usage of digital services, particularly e-wallets. The fact that most respondents were aged 26-35 years (40.0%) reinforces the idea that this age group represents the primary users of the service being studied. This age range is often associated with a faster adaptation to new technologies and digital services.

By understanding the demographics of the respondents, researchers can better analyze the collected data and contextualize the study’s findings. The predominance of female respondents aged 26-35 suggests that digital services like e-wallets, particularly DANA, may be more appealing and relevant to this demographic. These findings could also help guide marketing strategy development and service improvements tailored to this group’s needs and preferences.

**Data Analysis Results**

**1. Validity and Reliability Test**

The results of the validity and reliability test show that each questionnaire item had a significant correlation value and a Cronbach’s alpha coefficient above 0.7, indicating that the research instrument is reliable.

**2. Multiple Linear Regression Analysis**

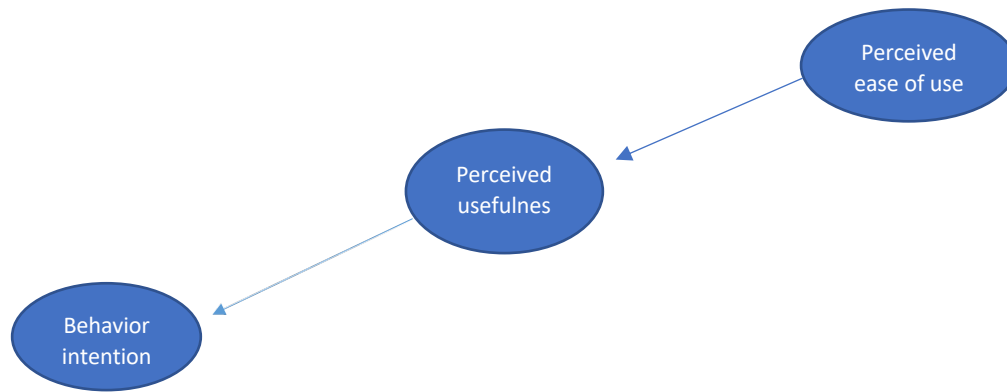
**Table 2. The influence of perceived ease of use on perceived usefulness and behavioral intention**

Variable	Coefficient	t-Statistic	p-Value
Constant	1.250	-	-
Perceived Ease of Use	0.475	5.678	0.000
Perceived Usefulness	0.325	4.125	0.000

*Source: Data Processing Data, 2024*

The table above presents the constant value, indicating that the behavioral intention score will be 1.250 if all independent variables—perceived ease of use and perceived usefulness—are zero. This serves as the baseline for the regression model. A coefficient of 0.475 suggests that, assuming other variables remain constant, each one-unit increase in perceived ease of use will enhance perceived usefulness by 0.475 units. The impact of perceived ease of use on perceived usefulness is significant, as demonstrated by the high t-statistic (5.678) and the extremely low p-value (0.000). This finding confirms that ease of using the DANA application enhances users’ perception of its usefulness.

A coefficient of 0.325 implies that a one-unit increase in perceived usefulness leads to a 0.325-unit rise in behavioral intention. The effect of perceived usefulness on behavioral intention is also significant, as indicated by the t-statistic (4.125) and p-value (0.000). This suggests that when users perceive the DANA application as beneficial, they are more likely to use it frequently. Thus, it can be concluded that both perceived ease of use and perceived usefulness have a positive and significant impact on behavioral intention. This underscores the importance of improving the usability of the DANA application to enhance users’ perception of its usefulness, ultimately fostering greater adoption and sustained usage. These findings provide valuable insights for application developers in designing more intuitive features and optimizing user experiences, ensuring broader adoption of digital payment services in the future.



**Picture 1. Relationship Between Variables**

The relationship between perceived ease of use, perceived usefulness, and behavioral intention is shown in the diagram above. The analysis results indicate that making the DANA app easier to use can make users more interested in making transactions.

### **Hypothesis Testing**

Based on the analysis results, the following hypotheses were tested:

1. Hypothesis 1: There is a positive correlation between perceived ease of use and perceived usefulness.
2. Hypothesis 2: There is a positive correlation between perceived ease of use and behavioral intention.
3. Hypothesis 3: Perceived usefulness functions as an intervening variable in the relationship between perceived ease of use and behavioral intention.

The hypothesis test results indicate that each hypothesis is accepted. This demonstrates that perceived ease of use significantly affects perceived usefulness, and perceived usefulness significantly influences behavioral intention. Additionally, perceived usefulness serves as an intervening variable in this relationship, showing that making the DANA application easier to use will enhance user engagement.

The results of the hypothesis tests indicate that each hypothesis can be accepted. This suggests that perceived ease of use has a significant influence on perceived usefulness, and perceived usefulness also has a significant influence on desired behavior. In addition, perceived usefulness functions as an intervening variable in this relationship, indicating that the DANA app can become easier to use, making users more interested in using it.

### **DISCUSSION**

The results of the study show that the perceived usefulness of the DANA app and user intention are significantly influenced by ease of use. This finding is in line with the Technology Acceptance Model (TAM), which states that factors influencing users' decisions to adopt new technology are ease of use and perceived usefulness. As a result, to encourage more people to use digital payments, DANA app developers should focus on improving the user experience and user interface.

**Perceived Ease of Use and Behavioral Intention** The study shows that the ease of use of the DANA digital payment service has a positive and significant effect on the intention to use DANA services. This finding is in line with the Technology Acceptance Model (TAM) proposed by Davis (1989), which considers ease of use as a key factor influencing people's decisions to use new technology. If an app appears easy to use, users tend to adopt and use it more frequently. A study conducted by Venkatesh and Bala (2012) supports this.

In the context of DANA, ease of use can be understood as a positive user experience when conducting transactions. Features like an intuitive interface and fast process contribute to the perception that the app is easy to understand and use. A study by Wang et al. (2021) shows that users who find it easy to interact with an app are more likely to have the intention to use the app in the future.

**Perceived Ease of Use and Perceived Usefulness** Additionally, this study found that if the DANA app is easier to use, users are more likely to perform DANA transactions. In other words, the easier it is to use, the more useful the app becomes. A study by Alalwan et al. (2017) suggests that ease of use directly contributes to enhancing the perception of an app's usefulness. When users can perform transactions without obstacles, they are more likely to perceive the app as a useful tool in daily life.

**The study by Ghasemaghahi and Jafarzadeh (2021)** also supports the improvement of perceived usefulness, finding that beneficial experiences in using an app affect how users assess the usefulness of the app. In the context of e-wallets like DANA, if users feel that the app helps them manage their finances and accelerates payment processes, they will consider it an effective solution for their needs. This suggests that app developers should focus on ease of use aspects to improve user satisfaction.

**Perceived Usefulness and Behavioral Intention** The study shows that perceived usefulness has a positive and significant effect on behavioral intention. Users who feel that DANA is useful and enhances transaction efficiency will have a stronger intention to continue using the service. Research by Kahn et al. (2020) emphasizes the importance of perceived usefulness in determining users' intentions to transact using digital apps. When users feel that an app adds value and makes their lives easier, their intention to use the app will increase.

The importance of perceived usefulness is further supported by a study by Tsai et al. (2021), which found that users with a positive perception of the usefulness of e-wallets tend to be more active in making transactions and utilizing the features offered. In the context of DANA, features such as ease of payment, integration with other services, and transparency of costs can enhance users' perceptions of the app's usefulness, which in turn contributes to users' intention to continue using DANA.

A study by Nikou & Economides (2017) found that perceived usefulness influences individuals' behavioral intentions. Overall, this research shows that in the case of DANA's digital payment service, there is a significant relationship between perceived ease of use, perceived usefulness, and behavioral intention. Ensuring the app's ease of use should be a primary focus for developers to enhance perceived usefulness and user intention. By improving user experience through intuitive interface design and efficient transaction processes, DANA can strengthen its position in the digital payment industry and encourage more users to adopt the service.

## CONCLUSION

This study successfully investigates the effect of perceived ease of use on the behavioral intention to use DANA's digital payment services. Additionally, the study also examines the role of perceived usefulness as an intervening variable. One of the key conclusions from the data analysis conducted on 150 respondents in Makassar is as follows: Ease of Use is seen to significantly and positively increase Perceived Usefulness. This indicates that the easier it is for users to use the DANA app, the better their perception of its usefulness. This aligns with the Technology Acceptance Model (TAM), which emphasizes that ease of use is crucial in creating a perception of usefulness. Perceived Usefulness also proves to have a positive and significant impact on Behavioral Intention. Users who find DANA to facilitate transactions and manage finances tend to be more inclined to use the service again. This shows that perceived usefulness is essential in encouraging consumers to continue transacting.

Through Perceived Usefulness as an intervening variable, there is a significant relationship between Perceived Ease of Use and Behavioral Intention. This indicates that user intention and the perceived usefulness of the app are influenced by the ease of use of the app.

The results of this study will help DANA app developers improve the user interface and user experience. By enhancing the ease of use of the app, it is expected that more people will adopt this digital payment service. Through a better understanding of the factors influencing user behavior, this study can contribute to the development of more effective marketing strategies and app features in the fintech industry, as well as encourage the growth of digital payment service usage in Indonesia. By gaining a deeper understanding of the factors that influence user behavior, this study can assist the fintech industry in developing better marketing strategies and app features, as well as fostering an increase in the number of people using digital payment services in Indonesia.

## REFERENCE

- Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Digital Marketing: A Framework for the Future. *Journal of Business Research*, 79, 493-497.
- Arifin, M., Saputra, A. H., & Handayani, R. (2022). Adoption of E-wallet in Indonesia: A Study on Factors Influencing the Usage of Digital Payment. *International Journal of Information Management*, 62, 102428.
- As'ad, A., Brasit, N., Muis, M., & Umar, F. (2023, May). How Leadership Style, Commitment, Work Climate, and Work Motivation Affect on Satisfaction and Performance. In *7th International Conference on Accounting, Management and Economics (ICAME-7 2022)* (pp. 546-563). Atlantis Press.
- Ashoer, M., Murdifi, I., Basalamah, J., As'ad, A., & Pramukti, A. (2021, February). Integrating social commerce constructs into mobile application service; a structural equation model. In *Journal of Physics: Conference Series* (Vol. 1783, No. 1, p. 012043). IOP Publishing.
- Dahliah, D. (2020). Moving Out Of Poverty Model Through Community Empowerment (Study Of Littoral Communities In Makassar). *Jurnal Administrasi Publik (DIA)*, 18(1), 199-209.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340.
- Ghasemaghahi, M., & Jafarzadeh, H. (2021). The Impact of Perceived Ease of Use on Behavioral Intention to Use Mobile Payment Services: A Meta-Analysis. *Journal of Retailing and Consumer Services*, 59, 102395.
- Kahn, J. R., et al. (2020). Financial Literacy and Financial Behavior: A Review of the Literature. *Journal of Consumer Affairs*, 54(3), 657-686.
- Moslehpour, M., Pham, V. K., Wong, W. K., & Bilgiçli, I. (2018). e-purchase intention of Tai-wanese consumers: Sustainable mediation of perceived usefulness and perceived ease of use. *Sustainability (Switzerland)*, 10(1). <https://doi.org/10.3390/su10010234>.
- Nikou, S. A., & Economides, A. A. (2017). Mobile-Based Assessment: Integrating acceptance and motivational factors into a combined model of Self-Determination Theory and Technology Acceptance. *Computers in Human Behavior*, 68, 83-95. <https://doi.org/10.1016/j.chb.2016.11.020>
- Serang, S., & As'ad, A. MOVING OUT OF POVERTY MODEL THROUGH COMMUNITY EMPOWERMENT.
- Sukmawati, S., Asmaliani, I., & As'ad, A. (2024). Peningkatan Produksi dan Perbaikan Pemasaran dari Produk Abon Cakalang Pedas Kedai Shafa di Kelurahan Pandang, Panakkukang, Makassar. *I-Com: Indonesian Community Journal*, 4(4), 2928-2940.
- Tsai, C. H., et al. (2021). The Relationship between Perceived Usefulness, Perceived Ease of Use, and Intention to Use: A Study of Mobile Payment Apps in Taiwan. *Journal of Business Research*, 131, 155-166.
- Venkatesh, V., & Bala, H. (2012). Adoption of Information Technology in Households: A Technology Acceptance Model Perspective. *International Journal of Information Management*, 32(3), 237-250.
- Wu, B., & Chen, X. (2017). Continuance intention to use MOOCs: Integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, 67, 221-232. <https://doi.org/10.1016/j.chb.2016.10.028>