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# Intention to Use Digital Wallets Mediated by Attitude Toward Use with Perceived Usefulness, Perceived Ease of Use, and Perceived Security and Privacy as Predictors in Aceh Province

**Della Fertiwi [1]*, Jasman J. [2], Sorayanti Utami [3]**

[1-3] Department of Management, Faculty of Economics and Business, Universitas Syiah Kuala, Indonesia
* Corresponding Author: dellafertiwi@usk.ac.id

**Abstract:** This study aims to examine: 1) the effect of perceived usefulness, perceived ease of use, and perceived security and privacy on attitude toward using; 2) the effect of perceived usefulness, perceived ease of use, and perceived security and privacy on the intention to use digital wallets in Aceh Province; and 3) the mediating effect of attitude toward using in the relationship between perceived usefulness, perceived ease of use, and perceived security and privacy on the intention to use digital wallets in Aceh Province. The data collection method employed non-probability sampling with a total of 275 respondents. Data analysis was conducted using Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) via SmartPLS 4.0. The findings show that perceived usefulness, perceived ease of use, and perceived security and privacy positively influence attitude toward using, which subsequently affects the behavioral intention to use. These results indicate that individuals in Aceh are more likely to adopt digital wallets when they perceive them as beneficial, user-friendly, and secure. Furthermore, the mediating role of attitude emphasizes its importance in strengthening the relationship between user perception and the intention to use digital wallet technology (t-value = 5.717, p-value = 0.000).

**Keywords:** Attitude toward using; Behavioral intention to use; Digital wallet; TAM; TPB.

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## 1. Introduction

Information systems and digital technologies significantly influence the progress of societies and organizations by enhancing human effectiveness and productivity. These advancements have transformed traditional trading methods into modern internet-based transactions and cashless payment systems, simplifying business operations through mobile devices, reducing operational costs, and saving transaction time. Attitude is a positive or negative disposition perceived when an individual decides to act. A more favorable attitude toward new technologies correlates with stronger behavioral intentions (Jogiyanto, 2008). In the commerce industry, merchants increasingly observe shifts in customer behavior, with a growing reliance on mobile phones, tablets, and applications used in daily activities such as work, education, entertainment, shopping, and socializing (Puschel et al., 2010).

## 2. Literature Review

This chapter provides a theoretical framework by reviewing relevant literature and prior research to support the research hypotheses. The foundation of this study is the Technology Acceptance Model (TAM), as well as other theories and concepts related to digital wallet usage.

### The Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theory widely used to explain and predict user acceptance of technology. Developed by Davis (1989), TAM posits that two primary factors influence a person's intention to use a new technology: Perceived Usefulness and Perceived Ease of Use.

**Perceived Usefulness** is defined as the extent to which a person believes that using a particular system will enhance their job performance. Research by Putra & Hidayat (2019) confirms that perceived usefulness has a significant influence on the intention to use digital wallets.
**Perceived Ease of Use** refers to the degree to which a person believes that using a particular system would be free of effort. The easier a technology is to use, the greater the likelihood of its adoption. Both Perceived Usefulness and Perceived Ease of Use directly affect the user's Attitude Toward Use, which in turn influences their Behavioral Intention to Use.

**Theory of Reasoned Action (TRA)**

The Theory of Reasoned Action (TRA), developed by Ajzen and Fishbein in 1975, is a behavioral theory that links an individual's attitudes and beliefs to their actions. According to TRA, a person's behavioral intention is the most significant predictor of their actual behavior. This intention is determined by two main factors:
**Attitude Towards the Behavior** and **Subjective Norms**. Attitude refers to an individual's positive or negative feelings towards performing a particular behavior, while subjective norms are a person's belief about whether important others think they should or should not perform a behavior. Research by Davis et al. (1989) integrated TAM with TRA, positing that Perceived Usefulness and Perceived Ease of Use predict Attitude, which then predicts behavioral intention.

**Perceived Usefulness**

Perceived Usefulness is a key factor in the adoption of digital wallets, as users are more likely to use technology that provides practical benefits. This includes the ability to conduct transactions quickly and efficiently without cash, as well as the convenience of promotional benefits. Prior studies have shown a positive and significant relationship between perceived usefulness and the intention to use digital wallets. For example, research by Suryani and Santoso (2019) found that perceived usefulness significantly influences user intention.

**Perceived Ease of Use**

Perceived Ease of Use is crucial because users are more likely to adopt technology that they perceive as easy to learn and operate. This is supported by the TAM, which identifies ease of use as a determinant of both perceived usefulness and behavioral intention. Studies by Putra & Hidayat (2019) and Rahmawati & Nugroho (2020) found that perceived ease of use has a positive and significant effect on the intention to use digital wallets. The easier and more effortless the transaction process, the more likely users are to adopt the technology for everyday use.

**Perceived Security and Privacy**

Perceived security and privacy are considered critical external variables that influence user acceptance of digital wallets. Security and privacy concerns are a significant barrier to the adoption of new financial technologies. Users' beliefs about the safety of their personal and financial data directly affect their trust and willingness to use a digital wallet. Previous research by Setiawan and Wulandari (2021) confirms that a high perception of security and privacy positively and significantly influences the intention to use digital wallets. This factor is so important that it can serve as a predictor of both attitude and behavioral intention in a modified TAM model.

**Attitude Towards Use**

Attitude Towards Use is a key mediator in the process of technology adoption, bridging the gap between an individual's perceptions and their behavioral intention. A positive attitude towards a technology, driven by beliefs about its usefulness, ease of use, and security, is a strong predictor of the intention to use it. Research by Prasetyo and Hidayat (2021) and Iskandar and Sari (2021) demonstrates the significant role of attitude as a mediating variable that influences the relationship between external factors and the intention to use.

**Intention to Use**

Intention to Use is a measure of an individual's readiness and willingness to use a specific technology. This concept is a central construct in both TAM and TRA. Studies show that behavioral intention is a strong predictor of actual technology use. As users' perceptions of usefulness, ease of use, and security improve, their attitude becomes more positive, leading to a greater intention to use digital wallets. Prior research consistently finds that perceived usefulness, perceived ease of use, and perceived security all have a significant impact on an individual's intention to adopt digital wallets.

Digital wallets, accessible via mobile phones, serve as alternative payment systems, offering functions such as online transactions, bill payments, mobile top-ups, internet packages, cable TV subscriptions, and investment options. They enable users to store and transfer money or withdraw cash, providing convenience, security, and ease in cashless transactions. Bank Indonesia reported in December 2022 that electronic money transactions reached IDR 142.97 trillion, up 7.98% from the previous month and 79.14% year-on-year. This included IDR 37.62 trillion in retail spending, IDR 23.69 trillion in peer-to-peer transfers, and IDR 705 billion in initial top-ups. Additionally, IDR 76.90 trillion in top-up transactions, IDR 3.16 trillion in cash withdrawals, and IDR 893 billion in redemptions were recorded, totaling 1.39 billion transactions that month—a 3.73% increase from November.

According to Bank Indonesia Regulation No. 11/12/PBI/2009, electronic money systems must operate within Indonesia under a limited liability company legal entity. Digital wallets, a form of financial technology leveraging the internet, now rival traditional wallets by offering convenience and security for monetary transactions via smartphone applications. The top five digital wallets in Indonesia are Gopay (88%), Dana (83%), Ovo (79%), Shopeepay (76%), and Link Aja (30%). Despite the benefits of digital wallets, user adoption remains relatively low due to behavioral intention barriers (Mada & Yadav, 2016). Behavioral intention to use refers to an individual's subjective likelihood to perform a specific behavior (Ajzen, 1985).

Therefore, this study seeks to investigate the mediating role of attitude toward use between perceived usefulness, perceived ease of use, and perceived security and privacy on the intention to adopt digital wallets in Aceh Province.

## 3. Method

This study used non-probability sampling, collecting data from 275 respondents residing in various districts/cities across Aceh Province. Data were analyzed using SmartPLS 4.0 software, employing PLS-based Structural Equation Modeling (SEM).

This study employed a quantitative research approach with a descriptive-associative design. The objective was to analyze the causal relationships among variables based on the research hypotheses. The research model is a modification of the Technology Acceptance Model (TAM), augmented with the variables of Perceived Security and Privacy. Data analysis was performed using a Structural Equation Model (SEM) with Partial Least Squares (PLS) to evaluate both the measurement model (outer model) and the structural model (inner model).

### Population and Sampling

The population for this study was all digital wallet users in Aceh Province, Indonesia, who used a digital wallet during 2023. Given the large population, a sampling method was used. This study used a

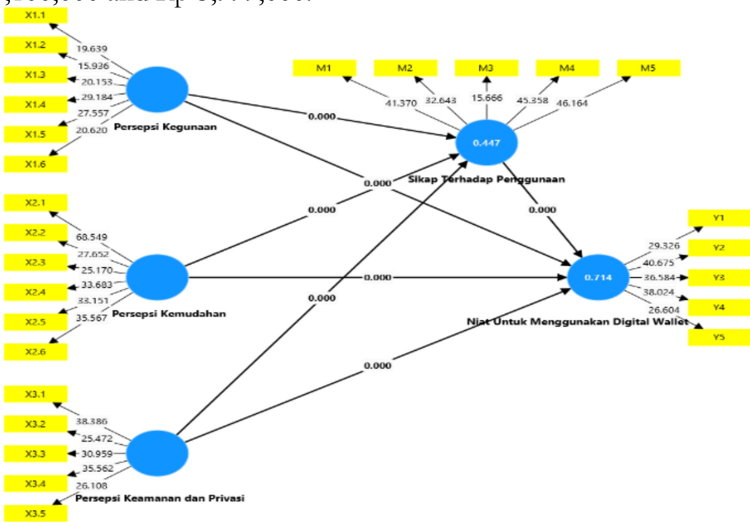
**non-probability sampling** technique, specifically **purposive sampling**. This technique selects respondents who meet specific criteria set by the researcher. The criteria for selecting respondents were:

- Digital wallet users in Aceh Province.
- Users who have an active digital wallet application and use it for transactions like transfers, payments, and product or service purchases.
- Users who actively used their digital wallet in 2024.

The minimum sample size was determined based on the recommendation by Hair et al. (2010), which suggests a sample size of 5 to 10 times the number of indicators. With a total of 44 indicators, the minimum sample size was calculated as (5 x 44) = 220, or (10 x 27, as mentioned in the source ) = 270. Based on these calculations, a minimum of 270 respondents were needed for the study.

## 4. Results and Discussion

This study surveyed 275 digital wallet users residing in Aceh Province, Indonesia. The majority of respondents were female (56.4%), with males making up 43.6%. The largest age group was 18-24 years old (53.8%), followed by those aged 25-34 (35.3%). A significant portion of the respondents held a Bachelor's degree (45.8%) or had a high school education (38.5%). The dominant occupations were students (53.8%) and private employees (16.4%). In terms of monthly income, 60% of respondents earned ≤ Rp 3,000,000, while 25.1% earned between Rp 3,100,000 and Rp 5,999,000.




### Direct Effect Hypothesis

Hypothesis testing was conducted using the bootstrapping procedure with a 5% significance level. A path is considered significant if its t-statistic is greater than 1.96 and its p-value is less than 0.05. The results (Table 4.14) show that all hypothesized direct effects are significant.

- **Perceived Usefulness** has a significant positive effect on "Intention to Use Digital Wallet" (t=6.291, p=0.000).
- **Perceived Ease of Use** has a significant positive effect on "Intention to Use Digital Wallet" (t=5.288, p=0.000).
- **Perceived Security and Privacy** has a significant positive effect on "Intention to Use Digital Wallet" (t=7.631, p=0.000).
- **Perceived Usefulness** has a significant positive effect on "Attitude Towards Use" (t=6.299, p=0.000).
- **Perceived Ease of Use** has a significant positive effect on "Attitude Towards Use" (t=5.717, p=0.000).
- **Perceived Security and Privacy** has a significant positive effect on "Attitude Towards Use" (t=7.728, p=0.000).
- **Attitude Towards Use** has a significant positive effect on "Intention to Use Digital Wallet" (t=8.234, p=0.000).

### Indirect Effect Hypothesis

The study also tested for indirect effects mediated by "Attitude Towards Use". The results (Table 4.15) confirm that all indirect effects are significant, as their t-statistics are greater than 1.96 and p-values are less than 0.05.

- **Perceived Security and Privacy** indirectly influences "Intention to Use Digital Wallet" through "Attitude Towards Use" (t=5.382, p=0.000).
- **Perceived Usefulness** indirectly influences "Intention to Use Digital Wallet" through "Attitude Towards Use" (t=5.036, p=0.000).
- **Perceived Ease of Use** indirectly influences "Intention to Use Digital Wallet" through "Attitude Towards Use" (t=4.638, p=0.000).

All ten hypotheses in the study were accepted, as summarized. The findings show that all variables—Perceived Usefulness, Perceived Ease of Use, and Perceived Security and Privacy—have a significant influence on both Attitude Towards Use and Intention to Use Digital Wallet. The results also confirmed that Attitude Towards Use significantly mediates the relationship between the three perceived variables and the intention to use.

## 5. Conclusion

These findings affirm the critical role of user perception and attitude in the adoption of digital wallet technology in Aceh Province.

Direct Influence of Independent Variables Security and privacy have been proven to have a strong direct influence on users' attitudes towards digital wallets. Users who feel that their data and transactions are secure tend to be more confident and interested in using this technology. Security and privacy have been shown to have a strong direct influence on the intention to use digital wallets. Security and privacy indirectly influence the intention to use digital wallets through attitudes towards usage.

Digital Wallet Service Providers :Improve Security and Privacy: Given that security is an important factor, service providers must continue to innovate in security technologies, such as data encryption or two-factor authentication.

Future Researcher : Expand the scope of research to other areas to compare results and gain broader insights.

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