

PREDICTING USER ADOPTION OF DIGITAL PAYMENT PLATFORMS: A QUANTITATIVE ANALYSIS BASED ON UTAUT

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Abstract: This study investigates the influence of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition on Behavioral Intention to use the OVO digital payment system in Indonesia. Utilizing a quantitative approach with regression and T-test analysis, data were collected from 150 respondents representing various age groups and genders. The analysis reveals that all four independent variables significantly and positively affect users' behavioral intention to adopt and continue using OVO. Performance Expectancy has the strongest influence, followed by Facilitating Condition, Social Influence, and Effort Expectancy. These findings confirm that users are more likely to adopt OVO when they perceive it as useful, easy to use, socially supported, and adequately facilitated by infrastructure. The study provides important implications for fintech developers, policymakers, and marketers to enhance user adoption through targeted strategies tailored to these key determinants.

Keywords: Behavioral Intention, Digital Payment System, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition

Introduction

The rapid advancement of digital technology has significantly reshaped financial services worldwide, particularly in developing countries such as Indonesia. One of the most prominent innovations in this sector is the digital payment system, which offers users convenience, speed, and efficiency in conducting financial transactions. In Indonesia, OVO has emerged as one of the leading digital payment platforms, widely used for both online and offline transactions. As digital payment systems become increasingly integrated into everyday life, understanding the key determinants that influence users' behavioral intentions to adopt and continue using such platforms is essential.

The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003), provides a comprehensive framework for analyzing technology acceptance. The model highlights four main constructs of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions as significant

predictors of users' behavioral intention and actual usage behavior. These constructs have been widely tested in various technological contexts, including mobile banking, e-commerce, and digital payment systems.

Performance Expectancy is defined as the degree to which an individual believes that using a technology will provide benefits in task performance (Venkatesh et al., 2003). In the context of digital payment systems, this could involve perceived convenience, speed, and efficiency in making transactions. Therefore, this study hypothesizes that performance expectancy positively influences users' behavioral intention to use the OVO digital payment system.

Effort Expectancy refers to the degree of ease associated with the use of technology (Venkatesh et al., 2003). If users perceive that a digital payment system is easy to use, they are more likely to adopt it. Based on this reasoning, this study assumes that effort expectancy has a significant positive effect on behavioral intention to use OVO.

Social Influence represents the extent to which individuals perceive that people important to them believe they should use a particular system (Venkatesh et al., 2003). In a collectivist society like Indonesia, where interpersonal relationships play a crucial role in decision-making, social influence may strongly affect technology adoption. Hence, this research proposes that social influence positively affects users' intention to use OVO.

Facilitating Conditions refer to the degree to which individuals believe that technical and organizational infrastructure exists to support the use of a system (Venkatesh et al., 2003). When users feel they have the necessary resources, such as internet access and device compatibility, they are more inclined to use digital platforms. Accordingly, this study posits that facilitating conditions significantly influence users' behavioral intention toward using the OVO system.

By examining the influence of these four constructs on the behavioral intention to use OVO, this study contributes to a deeper understanding of digital payment adoption in the Indonesian context. The findings are expected to provide valuable insights for technology developers, policymakers, and financial service providers in designing strategies to increase the adoption and usage of digital payment systems.

Literature Review

2.1 Performance Expectancy

Performance Expectancy refers to the degree to which an individual believes that using a particular technology will help them achieve gains in task performance. In the context of digital payments, this construct relates to perceptions of increased efficiency, transaction speed, reliability, and convenience when using the system. According to Venkatesh et al. (2003), performance expectancy is consistently found to be the strongest predictor of behavioral intention in the UTAUT model. Similarly, Davis (1989), through the Technology Acceptance Model (TAM), identified perceived usefulness—closely

aligned with performance expectancy—as a significant factor influencing technology adoption. In Indonesia's rapidly growing fintech ecosystem, systems that demonstrate clear functional benefits and meet user expectations are more likely to be accepted and integrated into daily financial behavior.

H1: Performance Expectancy has a significant positive effect on Behavioral Intention.

2.2 Effort Expectancy

Effort Expectancy is defined as the degree of ease associated with the use of technology. This includes the clarity of instructions, simplicity of the interface, and minimal cognitive effort required to perform tasks. According to Venkatesh et al. (2003), this factor plays a more substantial role during the early stages of adoption when users are still unfamiliar with the system. Park et al. (2007) further emphasized that ease of use significantly affects users' willingness to engage with digital applications. In a diverse market like Indonesia, where digital literacy can vary significantly across regions and demographics, minimizing technical complexity is critical to encouraging adoption and habitual usage.

H2: Effort Expectancy has a significant positive effect on Behavioral Intention.

2.3 Social Influence

Social Influence refers to the extent to which individuals perceive that important others believe they should use a particular technology. This construct is particularly relevant in collectivist cultures such as Indonesia, where group norms, peer influence, and social acceptance strongly shape behavioral decisions. Venkatesh et al. (2003) argue that social influence is a significant determinant of behavioral intention, especially in environments where the opinions of family, friends, or colleagues carry weight. Supporting this, Lu, Yao, and Yu (2005) found that individuals are more likely to adopt new technologies when they perceive strong

social endorsement. In the context of digital payments, the perception that others are using and benefiting from a particular platform can enhance the intention to adopt and regularly use it.

H3: Social Influence has a significant positive effect on Behavioral Intention.

2.4 Facilitating Conditions

Facilitating Conditions refer to the degree to which individuals believe that organizational and technical infrastructure exists to support the use of the technology. These include access to smartphones, stable internet connections, customer service availability, and compatibility with other applications. Venkatesh et al. (2003) suggest that facilitating conditions may influence behavioral intention indirectly, but in contexts where infrastructure can be a barrier, the effect can be direct and substantial. In emerging markets such as Indonesia, where digital infrastructure development is uneven, the presence of supportive resources plays a crucial role in enabling adoption. Tan et al. (2010) further emphasize that sufficient support mechanisms are critical for increasing confidence and perceived ease of use.

H4: Facilitating Conditions have a significant positive effect on Behavioral Intention.

2.5 Behavioral Intention

Behavioral Intention reflects the degree to which a person has formulated conscious plans to use a technology in the future. Within UTAUT, behavioral intention serves as a precursor to actual system usage. Ajzen (1991), through the Theory of Planned Behavior (TPB), highlights intention as a key predictor of behavior, influenced by attitudes, perceived norms, and perceived control. In the case of digital payment systems, behavioral intention is shaped by expectations regarding the technology's usefulness, ease of use, and external support structures. A strong intention indicates a higher likelihood of consistent and repeated system usage. Studies by Zhou (2012) and Oliveira et al. (2016) confirm that

behavioral intention strongly predicts actual usage behavior in digital financial services. In the competitive and fast-evolving digital payment landscape of Indonesia, understanding and enhancing behavioral intention is vital for sustainable user engagement and adoption.

Research Methodology

This study uses a quantitative research methodology to examine the influence of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition on Behavioral Intention to use the OVO digital payment system in Indonesia. The quantitative approach was chosen to enable objective measurement and statistical analysis of the relationships among variables. This approach is suitable for studies aiming to test hypotheses and generate empirical evidence from numerical data.

The data for this research were collected using a structured questionnaire that was distributed online to individuals who have used the OVO platform. The questionnaire applied a five-point Likert scale ranging from 1 for strongly disagree to 5 for strongly agree. Each construct in the study was measured using several validated statements adopted from previous research within the framework of the Unified Theory of Acceptance and Use of Technology. This ensured the reliability and validity of the measurement instrument.

The research population consists of OVO users across Indonesia. Since the total population is not clearly defined, purposive sampling was used as the sampling technique. This method was selected to ensure that all respondents had actual experience using OVO for digital payments. A total of 150 respondents were included in the study. This sample size is considered adequate to conduct multiple regression analysis and obtain valid results in a quantitative study.

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). Descriptive statistical analysis was performed to summarize respondent characteristics and their

responses to each variable. To test the hypotheses, inferential statistical analysis using multiple linear regression was applied. This method allowed the researcher to evaluate the extent to which Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition influence Behavioral Intention.

The use of a quantitative method in this research is based on a positivist perspective, which focuses on identifying measurable relationships among variables and producing generalizable conclusions. This approach provides a structured and replicable framework for understanding the behavioral intention of users toward the adoption of digital payment systems like OVO in Indonesia.

Finding and Discussion

Characteristics of Respondents

Understanding the demographic characteristics of respondents is essential in behavioral studies involving digital technology adoption. In this study, gender and age are considered as key demographic variables that may influence perceptions related to performance expectancy, effort expectancy, social influence, and facilitating conditions each of which contributes to behavioral intention toward the use of the digital payment system OVO. By identifying patterns within these demographic factors, the research seeks to provide more nuanced insights into digital payment behavior in Indonesia.

Table 1. Characteristics of Respondents Based on Gender

No	Description	Qty	Percentage
1	Male	66	44%
2	Female	84	56%
Total Qty		150	100%

Source: Questionnaire respondents, 2025

According to Table 1, out of 150 total respondents, 44% identify as male and 56% as female. This gender distribution indicates a slightly higher female participation in the use of digital payment systems. The data reflects the broader digital adoption trend in Indonesia, where women particularly from

younger and tech-savvy demographics are increasingly engaging in cashless transactions through mobile applications. Their growing involvement in online marketplaces, personal finance management, and digital entrepreneurship may explain this pattern of adoption. The participation of both genders ensures balanced perspectives in evaluating behavioral intention toward the OVO platform.

Table 2. Characteristics of Respondents Based on Age

No	Description	Qty	Percentage
1	18 – 25 years	48	32%
2	26 – 35 years	60	40%
3	36 – 45 years	24	16%
4	46 – 55 years	12	8%
5	>55 years	6	4%
Total Qty		150	100%

Source: Questionnaire respondents, 2025

Based on Table 2, the largest group of respondents falls within the 26–35 age range, comprising 40% of the total. This is followed by the 18–25 age bracket at 32%, indicating a dominant presence of younger adults who are typically more open to digital innovations and mobile-based financial tools. Respondents aged 36–45 account for 16%, while those in the 46–55 age group make up 8%, and only 4% are above 55 years old.

This distribution highlights a clear skew toward younger, digitally literate individuals who are likely to have higher exposure to mobile applications, fintech services, and digital ecosystems. These groups represent the most active users of digital payment systems in Indonesia and are instrumental in driving the country's shift toward a cashless society. However, the inclusion of older age groups provides a broader understanding of cross-generational attitudes toward digital payment systems, reflecting diverse levels of experience, technology adoption rates, and usage motivations.

T-Test and Coefficient Regression**Table 5. T-Test**

Variable	Sig.	Coefficient Regression	Information
Performance Expectancy → Behavioral Intention (PE → BI)	.000	0.401	Hypothesis accepted
Effort Expectancy → Behavioral Intention (EE → BI)	.003	0.278	Hypothesis accepted
Social Influence → Behavioral Intention (SI → BI)	.002	0.326	Hypothesis accepted
Facilitating Condition → Behavioral Intention (FC → BI)	.000	0.389	Hypothesis accepted

Source: Researcher, 2025

The results of the significance tests, as presented in Table 5, show that all proposed hypotheses are accepted. Each variable has a significance value (p-value) below the standard threshold of 0.05, confirming that Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition each have a statistically significant influence on Behavioral Intention to use OVO.

In terms of regression coefficients, Performance Expectancy (PE → BI) has the highest influence with a coefficient value of 0.401. This indicates that users are more likely to use OVO when they believe it enhances their transaction performance and efficiency. Facilitating Condition (FC → BI) follows closely with a coefficient of 0.389, suggesting that adequate resources, infrastructure, and support significantly affect users' behavioral intention.

Social Influence (SI → BI) also demonstrates a meaningful effect, with a coefficient of 0.326, which highlights the importance of peer pressure, recommendations, and social trends in shaping individuals' intention to use digital

payment systems. Lastly, Effort Expectancy (EE → BI) has a positive influence with a coefficient of 0.278, showing that perceived ease of use still plays a significant, although slightly lower, role in encouraging users to adopt OVO.

In conclusion, the findings confirm that all four independent variables—Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition—significantly influence Behavioral Intention to use the OVO digital payment system among the 150 respondents surveyed. These results provide empirical support for the UTAUT model in the context of digital financial services in Indonesia.

Discussion

This study aimed to examine the influence of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition on Behavioral Intention in the context of OVO, a digital payment system widely used in Indonesia. The analysis was conducted on a sample of 150 respondents and revealed significant positive relationships for all four independent variables, supporting the proposed hypotheses (H1–H4).

The first hypothesis (H1) proposed that Performance Expectancy has a significant effect on behavioral intention. The results confirmed this relationship, with a regression coefficient of 0.401 and a significance value of .000. This indicates that users who perceive OVO as a system that enhances efficiency, convenience, and effectiveness are more inclined to use it. These findings align with Venkatesh et al. (2003), who identified performance expectancy as the strongest predictor of behavioral intention in the UTAUT model. In the Indonesian context, where mobile payments are increasingly integrated into daily life, the perceived usefulness of the platform is a crucial determinant of continued usage.

Hypothesis 2 (H2) suggested that Effort Expectancy positively influences behavioral intention. The regression coefficient of 0.278 and a significance value

of .003 support this claim. These results highlight the importance of usability in digital payment adoption. When users perceive the system as easy to use, with minimal learning effort, their intention to adopt and continue using the application increases. This finding is consistent with research by Park et al. (2007), which emphasized that simplicity and user-friendly design enhance the likelihood of technology acceptance.

The third hypothesis (H3) posited that Social Influence significantly affects behavioral intention. This hypothesis was also supported, with a regression coefficient of 0.326 and a significance value of .002. These results demonstrate that social pressure or encouragement from peers, family, or community plays an important role in shaping user decisions. In collectivist societies like Indonesia, the behavior and opinions of others have a substantial impact on individual choices. This is in line with the findings of Lu, Yao, and Yu (2005), who noted that individuals are more likely to adopt technology if people around them endorse its use.

The fourth hypothesis (H4) tested the relationship between Facilitating Conditions and behavioral intention. The results showed a significant effect, with a coefficient of 0.389 and a significance value of .000. This underscores the role of supporting infrastructure such as access to mobile devices, internet availability, technical assistance, and system compatibility in enabling adoption. These findings corroborate the work of Tan et al. (2010), who emphasized that the availability of resources significantly influences the decision to use digital services, especially in developing countries where infrastructure gaps can be a barrier to adoption.

In summary, all four hypotheses in this study were accepted, demonstrating that performance expectancy, effort expectancy, social influence, and facilitating conditions each have a significant positive impact on behavioral intention toward the use of digital payment

systems. The demographic characteristics of the respondents primarily young adults aged 26–35 and a majority of female users also reflect the growing trend of digital adoption among younger and tech-savvy populations in Indonesia.

These findings offer valuable insights for fintech companies, policymakers, and digital service designers. To increase adoption and retention, stakeholders should focus on enhancing the perceived usefulness of their platforms, simplifying user interfaces, leveraging social networks for promotion, and ensuring robust technical and infrastructural support. By addressing these key factors, digital payment providers like OVO can accelerate their integration into everyday financial activities and support the national agenda of expanding financial inclusion through digital transformation.

Conclusion

This study examined the influence of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition on Behavioral Intention in the context of OVO, a leading digital payment system in Indonesia. Utilizing data from 150 respondents and supported by T-test and regression analysis, the findings confirm that all proposed hypotheses are statistically significant and positively influence behavioral intention toward the use of OVO.

Among the four variables studied, Performance Expectancy demonstrated the strongest influence (coefficient = 0.401), indicating that users are more likely to adopt OVO when they believe it enhances their financial transactions' efficiency and productivity. This highlights the importance of perceived usefulness in driving technology acceptance, in line with the Unified Theory of Acceptance and Use of Technology (UTAUT).

Facilitating Condition was also found to be a significant predictor (coefficient = 0.389), emphasizing the role of supporting infrastructure, such as internet access, device compatibility, and technical assistance, in encouraging continued use of

the OVO platform. This suggests that service providers must ensure a robust and accessible digital ecosystem to sustain user engagement.

Social Influence (coefficient = 0.326) emerged as another crucial factor, reflecting how peer recommendations, family, and societal norms can impact individual decisions to adopt digital payment systems. This finding supports the notion that social endorsement and trust within communities play a pivotal role in technology adoption, especially in collectivist cultures such as Indonesia.

Lastly, Effort Expectancy (coefficient = 0.278) also significantly influenced behavioral intention, implying that users value ease of use, simple navigation, and intuitive interface design in choosing a digital payment platform. Reducing complexity in user experience can thus enhance the acceptance and retention of OVO users.

In conclusion, the study affirms that users' behavioral intention to adopt OVO is shaped by a combination of perceived performance benefits, ease of use, social context, and available support infrastructure. These findings provide valuable implications for fintech developers, policymakers, and marketers aiming to increase digital payment adoption across Indonesia. To foster sustained engagement, stakeholders must strategically address these key drivers and continuously improve the overall user experience of digital financial services.

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