

MOBILE PAYMENT USEFULNESS AND ADOPTION INTENTION: EVIDENCE FROM BUSINESS EDUCATION STUDENTS AT UPI

Robbi Al Khoeri¹, Puspo Dewi Dirgantari²

¹Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, Jalan Dr. Setiabudi No.229

E-mail: robbialkhr@upi.edu; puspodewi@upi.edu

ABSTRACT

This study aims to examine the influence of Mobile Payment Usefulness on Adoption Intention among Business Education students at Universitas Pendidikan Indonesia. The research employed a quantitative approach using a cross-sectional survey design. The population consisted of undergraduate students in Business Education, and data were collected through an online questionnaire distributed using simple random sampling, resulting in 36 valid responses. The instrument consisted of two constructs: Mobile Payment Usefulness (5 items) and Adoption Intention (4 items), measured using a five-point Likert scale. Data were analyzed using descriptive statistics, reliability testing, and simple linear regression with SPSS. The findings revealed that Mobile Payment Usefulness had a significant and positive effect on Adoption Intention ($\beta = 0.716$, $p < 0.001$), explaining 51.2% of the variance. This indicates that students' intention to adopt mobile payment systems increases when they perceive them as useful and efficient. The study supports the Technology Acceptance Model (TAM) and highlights the importance of enhancing mobile payment functionality and reliability to encourage greater adoption among students. Future studies are recommended to include additional variables such as perceived ease of use, trust, or social influence to deepen the understanding of technology adoption behavior in educational contexts.

Key words: Mobile Payment; Adoption Intention; Technology Acceptance Model; Mobile Marketing; Digital Marketing

INTRODUCTION

The rapid advancement of internet technology and mobile connectivity has profoundly transformed global payment systems. According to the Global Digital Report 2024, more than 5.35 billion people worldwide (66.2% of the population) are active internet users, while unique mobile phone users reached 5.61 billion (69.4% of the population) in early 2024 (We Are Social & Meltwater, 2024). In Indonesia, internet penetration has also grown significantly, with 78.19% of the population (approximately 215 million people) connected to the internet in 2023 (APJII, 2023). This digitalization trend has fostered a shift toward cashless transactions. A recent Visa survey (2023) revealed that two out of three Indonesians are ready to abandon cash, with convenience and security cited as the primary drivers of adoption. Young people, especially university students, are recognized as early adopters of new technologies, given their digital-native characteristics and strong orientation toward efficiency and innovation (Subbarao et al., 2025). Considering that the Indonesian higher education sector comprises over 9.32 million students (BPS, 2023), the potential of mobile payment adoption among this demographic is highly significant.

Mobile payment, broadly defined as a cashless transaction system using mobile devices such as smartphones to pay for goods, services, or bills (Sembiring et al., 2022), has witnessed exponential growth in Indonesia. Data from Bank Indonesia reported that the total value of digital payment transactions reached IDR 59,410.73 trillion in 2023—equivalent to three times the national GDP and an increase of 116.6% compared to 2019 (Bank Indonesia, 2024). This surge demonstrates the crucial role of mobile payment in shaping the digital economy. Previous research highlights several advantages of mobile payment, including faster transaction processes, reduced reliance on physical money, enhanced security through authentication mechanisms, and the flexibility of anytime-anywhere accessibility (Sembiring et al., 2022; Ansori et al., 2024). However, concerns related to transaction fees, data privacy, fraud risk, and system reliability remain barriers to widespread adoption (Al-Qudah et al., 2024). In response, the Indonesian government and regulators have developed supporting policies, such as Bank Indonesia Regulation No. 22/23 of 2020 on Payment Systems, to strengthen digital financial ecosystems (Bank Indonesia, 2020).

From a theoretical perspective, many studies examining mobile payment adoption have employed the Technology Acceptance Model (TAM), which posits that perceived usefulness and perceived ease of use are critical determinants of users' behavioral intention (Davis, 1989). In the Indonesian context, Susiloadi et al. (2023) integrated TAM with psychological factors and confirmed that both usefulness and ease of use significantly affect adoption intention. Similarly, Subbarao et al. (2025) found that social influence, perceived trust, and facilitating conditions contribute to mobile payment intention among Generation Z student respondents. Other research further indicates that while factors such as trust, social norms, and perceived risk play a role, perceived usefulness remains the most consistent predictor of digital payment adoption (Al-Qudah et al., 2024).

Despite these advancements, existing studies on mobile payment adoption in Indonesia have predominantly focused on general consumers or students across various fields (Susiloadi et al., 2023). There is still limited empirical evidence targeting business education students, particularly those enrolled in Business Education Programs. This group represents a unique context, as they are not only digital natives but also future educators and entrepreneurs who will play a critical role in integrating financial technology knowledge into educational and business practices (Subbarao et al., 2025). Therefore, this study aims to address this research gap by investigating the influence of mobile payment usefulness on adoption intention among Business Education students at Universitas Pendidikan Indonesia (UPI). Employing a quantitative approach, this research contributes to both academic and practical discourse by providing evidence on how perceived usefulness drives digital financial adoption within a specialized educational context.

METHOD

This study employed a quantitative cross-sectional survey design to examine the effect of Mobile Payment Usefulness on Adoption Intention among undergraduate students of Business Education at Universitas Pendidikan Indonesia (UPI). The population comprised students enrolled in the Business Education program, and a total of 36 respondents participated in the study. Participants were selected using convenience sampling based on accessibility and willingness to respond. Data were collected through a structured questionnaire consisting of demographic information (age, gender, study year, and mobile payment experience), a 5-item Mobile Payment Usefulness scale adapted from Davis (1989), and a 4-item Adoption Intention scale adapted from Venkatesh et al. (2003). All items were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Reliability was assessed using Cronbach's Alpha and Composite Reliability (≥ 0.70), while construct validity was examined through Exploratory Factor Analysis (EFA) and Partial Least Squares Structural Equation Modeling (PLS-SEM), following the sample adequacy guideline proposed by Hair et al. (2018). Data analysis included descriptive statistics, measurement model evaluation (convergent and discriminant validity), and structural model testing to evaluate the hypothesized relationship. Ethical procedures were followed by obtaining informed consent, ensuring respondent anonymity, and adhering to institutional research ethics standards. It was hypothesized that Mobile Payment Usefulness positively influences Adoption Intention among undergraduate students.

RESULTS AND DISCUSSION

This section presents the results of data analysis and discusses the findings in relation to the research objectives and proposed hypothesis. The analysis includes descriptive statistics, measurement model evaluation, and hypothesis testing, followed by a scientific discussion comparing the findings with relevant theories and previous studies.

A total of 36 undergraduate students from the Business Education Study Program at Universitas Pendidikan Indonesia participated in this study. As shown in Table 1, the respondents were equally distributed by gender, with 50% male and 50% female students. Most respondents were from the 2023 cohort (88.9%), followed by the 2024 cohort (8.3%) and the 2022 cohort (2.8%). In terms of age, the majority of students were 20 years old (58.3%), followed by 21 years (16.7%), 19 years (13.9%), and 22 years (11.1%). All participants confirmed that they use mobile payment applications and are enrolled as Business Education students, indicating that they represent active users of digital financial services within the educational environment.

Table 1. Demographic Profile of Respondents

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	18	50.0
	Female	18	50.0
Cohort Year	2022	1	2.8
	2023	32	88.9
	2024	3	8.3
Age	19 Years	5	13.9
	20 Years	21	58.3
	21 Years	6	16.7
	22 Years	4	11.1
Use of Mobile Payments	Yes	36	100.0
Study Program (Business Education)	Yes	36	100.0

The following section presents the descriptive analysis of the main research variables, including Mobile Payment Usefulness and Adoption Intention.

Descriptive analysis was conducted to summarize the respondents' perceptions of mobile payment usefulness and adoption intention. As presented in Table 2, the mean score for Mobile Payment Usefulness was 4.42 (SD = 0.47), ranging from 3.11 to 5.00, while the mean score for Adoption Intention was 4.46 (SD = 0.55), ranging from 3.00 to 5.00. These results indicate that respondents generally perceived mobile payment systems as highly useful and demonstrated a strong intention to adopt such technology in their daily transactions.

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Mobile Payment Usefulness	36	3.11	5.00	4.4167	.47392
Adoption Intention	36	3.00	5.00	4.4568	.55319
Valid N (listwise)	36				

Reliability and validity tests were conducted to ensure that the measurement model met the psychometric standards required for further analysis. As shown in Table 3, both constructs demonstrated strong internal consistency and acceptable convergent validity.

The Cronbach's Alpha value for Mobile Payment Usefulness was 0.848, with corrected item-total correlations ranging from 0.488 to 0.759, indicating that all items were positively correlated with the total score and met the minimum threshold of 0.30. Similarly, the Adoption Intention construct yielded an excellent reliability value ($\alpha = 0.930$), with corrected item-total correlations between 0.652 and 0.825. These results confirm that the measurement items consistently represent their respective constructs.

Table 3. Reliability and Validity of the Constructs

Construct	Cronbach's α	Corrected Item-Total Correlation Range	Interpretation
Mobile Payment Usefulness	0.848	0.488 – 0.759	Reliable and valid
Adoption Intention	0.930	0.652 – 0.825	Highly reliable and valid

The results indicate that all measurement indicators met the reliability requirement ($\alpha > 0.70$) and validity criterion (corrected item-total correlation > 0.30), suggesting that the measurement model was robust and appropriate for further hypothesis testing.

A simple linear regression analysis was performed to examine the effect of Mobile Payment Usefulness on Adoption Intention among undergraduate students of Business Education. The results of the regression analysis are summarized in Table 4.

The model was found to be statistically significant, $F(1,34) = 35.720$, $p < 0.001$, with an R^2 value of 0.512. This indicates that approximately 51.2% of the variance in Adoption Intention can be explained by Mobile Payment Usefulness. The standardized regression coefficient ($\beta = 0.716$, $t = 5.977$, $p < 0.001$) demonstrates a strong and positive effect of Mobile Payment Usefulness on Adoption Intention. This means that the higher the students perceive the usefulness of mobile payment, the greater their intention to adopt it in daily financial transactions.

Table 4. Results of Simple Linear Regression Analysis

Predictor	B	β	t	Sig.	R^2	F	p
Mobile Payment Usefulness → Adoption Intention	0.835	0.716	5.977	0.000	0.512	35.720	0.000

The findings support the proposed hypothesis (H1), confirming that Mobile Payment Usefulness has a positive and statistically significant influence on Adoption Intention among Business Education students at Universitas Pendidikan Indonesia.

The results of this study confirm that Mobile Payment Usefulness has a positive and significant effect on Adoption Intention among undergraduate students of Business Education. This finding supports the assumption derived from the Technology Acceptance Model (TAM) proposed by Davis (1989), which emphasizes that perceived usefulness is a key determinant of behavioral intention to adopt new technology. When users perceive that mobile payment systems enhance their efficiency, convenience, and transaction speed, they are more inclined to continue using and adopting such systems in their daily financial activities.

The strong positive relationship ($\beta = 0.716$, $p < 0.001$) obtained in this study indicates that the students' perception of the practical benefits of mobile payment significantly influences their willingness to adopt the technology. This aligns with previous research by Venkatesh et al. (2003) and Hosmani et al. (2025), who found that perceived usefulness consistently plays a major role in shaping adoption decisions across various technology contexts, including mobile banking and e-payment platforms.

Furthermore, this finding provides both theoretical and practical implications. Theoretically, it reinforces the relevance of TAM in explaining technology adoption behavior within educational and digital finance settings. Practically, it suggests that developers and service providers should focus on enhancing the perceived usefulness of mobile payment applications—such as by improving transaction reliability, integrating academic-related payment features, and ensuring user-friendly interfaces—to increase adoption rates among students.

Overall, the results demonstrate that emphasizing the functional value of digital payment systems can effectively strengthen users' adoption intention, contributing to the broader digital transformation within the financial ecosystem of higher education.

CONCLUSION

The findings of this study confirm that Mobile Payment Usefulness has a significant and positive influence on Adoption Intention among Business Education students at Universitas Pendidikan Indonesia. This result provides an empirical answer to the research objective and supports the theoretical foundation of the Technology Acceptance Model (TAM), emphasizing that perceived usefulness is a critical determinant of behavioral intention to adopt technology. The study contributes to the understanding of digital financial adoption within the higher education context by showing that students' adoption decisions are strongly shaped by their perception of the functional value and efficiency of mobile payment systems. These findings highlight the importance of improving mobile payment reliability, integration, and user experience to encourage greater adoption among students. Future research may extend this study by incorporating additional variables such as perceived ease of use, trust, or social influence to develop a more comprehensive model of technology adoption in educational settings.

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