Analysis of acceptance factors and market potential of digital wallets of college students

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Abstract

One of the fintech products is a digital wallet, an electronic money service in the form of a mobile application that can use for payment transactions. This study aims to determine the acceptance factor and potential of the digital wallet market by university students. The theory used in this study is the UTAUT2 model, with performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), habit (HA) as the independent variables. Meanwhile, behavioural intention (BI) and use behaviour (UB) are dependent variables. The population in this study were all university students, while the sample was 400 people. This study collected data by distributing online questionnaires. The sampling technique used is random sampling, and the data analysis technique used is PLS-SEM with the help of SmartPLS 3.2.9 software. This study proves that the influence of the independent variables on the dependent variables is significant. In contrast, the variable effort expectancy (EE), social influence (SI), facilitating conditions (FC), and hedonic motivation (HM) were weak predictors of behavioural intention (BI). The results of this study are supposed to be useful for government and digital wallet companies to improve the market potential level of digital wallets by optimising the function of the factors that affect the use of the digital wallet. In contrast to other studies, this study investigates all the many kinds of digital wallets that operated in Indonesia, which becomes the novelty of this research.

Keywords:
college student; digital wallet; financial technology; technology adoption; UTAUT2.

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Introduction

Industrial development has entered the digital revolution 4.0, which makes all aspects of the industry always related to technological developments. This technological development has pushed the country into the new digital economy era, marked by the presence of mobile technology among the people (Agustina et al., 2019). The use of digital technology in Indonesia has great potential, followed by the continued development of the penetration rate of internet users in the country. In 2021, internet users in Indonesia had reached 210 million people, or 77.02% of the total population (APJII, 2022). By entering the new digital economy era, the financial sector has become one of the topics influenced by technological developments, so the term (fintech) arose. A digital wallet is one of the fintech products used as a payment medium in digital transactions (LinovHR, 2020). In 2020, the number of digital wallet users in Indonesia has reached 63.6 million, with a transaction value of $28 billion and is expected to increase to $107 billion in 2025 (Boku, 2021).

Marketing research stated that digital wallet users are dominated by the millennial generation, as much as 68% (Shofihara, 2020). Currently, students are closely related to an up-to-date lifestyle and are one of the consumer groups making many market transactions. In addition, students belong to the millennial generation who have known and enjoyed the development of fintech, which is easily accessed via the internet (Nawawi, 2020). Digitalisation of the economy and digital finance has been implemented in Bengkulu City. This is driven by the Bengkulu government movement, which formed the team for the acceleration and expansion of digitalization (TP2DD). With the formation of this TP2DD, it is hoped that there will be an optimisation of regional expenditure and income transactions, as well as increased non-cash payment activities by the community (Tobari, 2021).

Indah & Agustin (2019) researched the same topic: the intentions and behaviour of digital wallet users. Still, this study only examined one digital wallet type, Gopay. Meanwhile, this study examines all types of digital wallets in Indonesia which becomes novelty of this research. According to Boku (2021), Indonesia is one of the countries with the most significant opportunity to accept digital payments and has succeeded in having millions of new consumers adopt digital wallets. According to Octaviano (2021), one type of digital wallet cooperates with the Bengkulu city government in developing digital financial services in Bengkulu, which is considered to require improvement still to expand the development of the digital ecosystem. The movement carried out by the Bengkulu government implies that the Bengkulu people have not maximised digital technology in daily transaction activities.

Based on this trend, this research focuses on the factors of using digital wallets among university students in Bengkulu city, as well as analysing the market potential of the digital wallet. This study employs the unified theory of acceptance and use of technology 2 (UTAUT2) by comparing UTAUT and UTAUT2. It was

found that the extension in UTAUT2 substantially increased from 56% to 74% in behaviour intention and a substantial increase from 40% to 52% in use behaviour (Chang, 2012). Furthermore, performance expectancy, effort expectancy, social influence, and facilitating conditions are direct determinants of user acceptance behaviour (Venkatesh et al., 2003). Meanwhile, hedonic motivation, price value, and habits are added to suit the context of technology use (Venkatesh et al., 2012).

Literature review
Digital wallet

A digital wallet is a system that allows users to make payments for goods and services with mobile devices as intermediary media. The use of digital wallets by users is based on cost, convenience, context, suitability, ease of use, mobility, network externalities, privacy, risk, security, social influence, transaction speed, system quality, trial, trust, and usability (Grover & Kar, 2020). The internet continues to grow, making the internet the most important thing in communication and information. Digital wallets connected to the internet make transactions easier in this technological era (Handayani & Novitasari, 2020). Most previous studies agree that digital wallets have many benefits and advantages in terms of usability, convenience, promotions, and security. Although it has many advantages, digital wallets also come with several issues and challenges, such as challenges in terms of security and confidentiality related to the security of the user's bank account or funds and the security of data information if the mobile phone is lost or stolen (Abdullah et al., 2020).

Unified theory of acceptance and use of technology 2 (UTAUT2)

The UTAUT model is derived from the combination and refinement of eight technology acceptance theories (Venkatesh et al., 2003; Indah & Agustin, 2019). The independent variables in the UTAUT model are performance expectancy, effort expectancy, social influence, and facilitating conditions. In addition, the UTAUT model was re-developed in the context of consumers who emphasized the hedonic value (intrinsic motivation) of technology users by adding new constructs: hedonic motivation, price value, behavioural intention, and use behaviour, which became known as the UTAUT2 model (Tamilmani et al., 2021). According to Venkatesh et al. (2012), the complementary construct is intended to help broaden the scope and generalization of earlier UTAUT.

Performance expectancy

Based on Venkatesh et al. (2003), performance expectancy relates directly to the job performance of any individual and his/her belief about the extent to which the usage of a particular system will help gain performance criteria intention. Performance expectancy shows that using the system can increase user knowledge about applications, increase productivity levels, and help carry out transaction activities quickly (Gupta & Arora, 2020). Furthermore, previous research explains

that performance expectancy positively and significantly influences behavioural intention (Venkatesh et al., 2003; Gupta & Arora, 2020; Sung et. al., 2015). However, Palas et. al. (2022) show that performance expectancy cannot affect behavioural intention. Thus, this study formulates the following hypothesis.

H1: Performance expectancy (PE) significantly influences behavioural intention (BI) in using digital wallets among college students.

Effort expectancy

Effort expectancy is a variable based on three constructs of the perceived ease-of-use (TAM/TAM2), complexity (MPCU), and ease of use (IDT) model (Abrahão et al., 2016). This construct refers to the ease of use of a technology or technology product, thus making effort expectancy an essential determinant for analysing use behaviour and behavioural intention (Huang & Kao, 2015). Furthermore, Catherine et al. (2017) stated that effort expectancy is a factor that has a high significance in influencing usage intentions. Furthermore, previous research explains that effort expectancy positively and significantly influences behavioural intention (Venkatesh et al., 2003; Gupta & Arora, 2020; Wu et al., 2022). However, Palas et. al. (2022) show that effort expectancy cannot affect behavioural intention. Thus, this study formulates the following hypothesis.

H2: Effort expectancy (EE) has a significant influence on behavioural intention (BI) in the use of digital wallets among college students.

Social influence

Social influence is the degree to which others recognize the importance of using new technology. The social influence variable directly determines usage intention as a subjective norm in TRA, TAM2, TPB/DTPB, and C-TAM-TPB, social factors in MPCU, and image in IDT (Abrahão et al., 2016). Word of mouth also affects reference groups, including friends and information technology experts who play a significant role in technology adoption (Catherine et al., 2017). If users observe other users getting pleasure or satisfaction from using an innovation, then the probability of the distribution of the innovation among customers is high (Eneizan et al., 2019). Previous research stated that social influence has a significant effect on behavioural intention (Venkatesh et al., 2003; Abrahão et al., 2016; Damayanti et al., 2021; Wu et al., 2022; Palas et al., 2022). Thus, this study formulates the following hypothesis.

H3: Social influence (SI) significantly influences behavioural intention (BI) in using digital wallets among college students.

Facilitating conditions

The facilitating conditions construct is defined as the level that measures the extent to which individuals believe that the organization and technical infrastructure owned by the system can support the use of the system (Huang & Kao, 2015). Facilitating conditions also act as factors that effectively influence behavioural

intentions to adopt mobile payment systems (Gupta & Arora, 2020). Venkatesh et al. (2003) stated that facilitating conditions do not significantly affect behavioural intention but rather use behaviour. Similarly, Palas et. al. (2022) show that facilitating condition cannot affect behavioural intention. However, Catherine et al. (2017) stated that there is a positive and significant relationship between facilitating conditions and behavioural intention to use fingerprint biometrics-based authentication for ATMS in Uganda. Thus, this study formulates the following hypothesis.

H4: Facilitating conditions (FC) significantly influence behavioural intention (BI) in the use of digital wallets among college students.

Hedonic motivation

Hedonic motivation is a feeling of joy or pleasure obtained by individuals who use technology and is an important factor in the acceptance and use of technology (Venkatesh et al., 2012). Pleasure and enjoyment are the two main factors that can encourage an individual to accept and use new technology (Chang et al., 2019). However, hedonic motivation is a driving factor in the use of technology. Gupta & Arora (2020) state that hedonic motivation is a weak construct in influencing behavioural intention to adopt mobile payment systems. Previous research stated that hedonic motivation significantly affects behavioural intention (Venkatesh et al., 2012; Palau-Saumell et al., 2019; Palas et al., 2022). Thus, this study formulates the following hypothesis.

H5: Hedonic motivation (HM) significantly influences behavioural intention (BI) in using digital wallets among college students.

Price value

The price value is a consumer's cognitive exchange between the benefits obtained and the costs incurred using the application (Venkatesh et al., 2012). In determining the value of a product or service, the price and cost factors are related to the quality of the product and service (Owusu et al., 2019). Based on previous research, there is a significant influence between price value on behavioural intention (Venkatesh et al., 2012; Owusu et al., 2019; Palas et al., 2022). Thus, this study formulates the following hypothesis.

H6: Price value (PV) significantly influences behavioural intention (BI) in using digital wallets among college students.

Habit

Habit is the degree to which users tend to use a technology or behaviour of users of technology products that automatically arise based on learning about the technology (Huang & Kao, 2015). It refers to the perception of repetitive behaviour patterns that arise automatically outside the individual's awareness (Huang & Kao, 2015; Palau-Saumell et al., 2019). Previous research stated that habit significantly influences behavioural intention (Venkatesh et al., 2012; Gupta & Arora, 2020;

Owusu et al., 2019; Palas et al., 2022). Thus, this study formulates the following hypothesis.

H7:   Habit (HA) significantly influences behavioural intention (BI) in using digital wallets among college students.

Behavioural intention and use behaviour

Behavioural intention is the level of trust that users have in technology and behavioural tendencies to continue using the technology in the future (Rachmawati et al., 2020). Intentions are considered the extent to which users perceive their willingness to use technology. Usage behaviours are considered the ongoing and everyday post-acceptance use of technology (Wu et al., 2022). Gupta & Arora (2020) also state that the behavioural intention construct has a reasonably effective influence on the use behaviour for mobile payment systems. This statement is also supported by several previous studies stated that behavioural intention significantly influences use behaviour (Owusu et al., 2019; Wu et al., 2022; Palas et al., 2022). Thus, this study formulates the following hypothesis.

H8:   Behavioural intention (BI) significantly influences use behaviour (UB) in using digital wallets among college students.

Figure 1

Research Framework
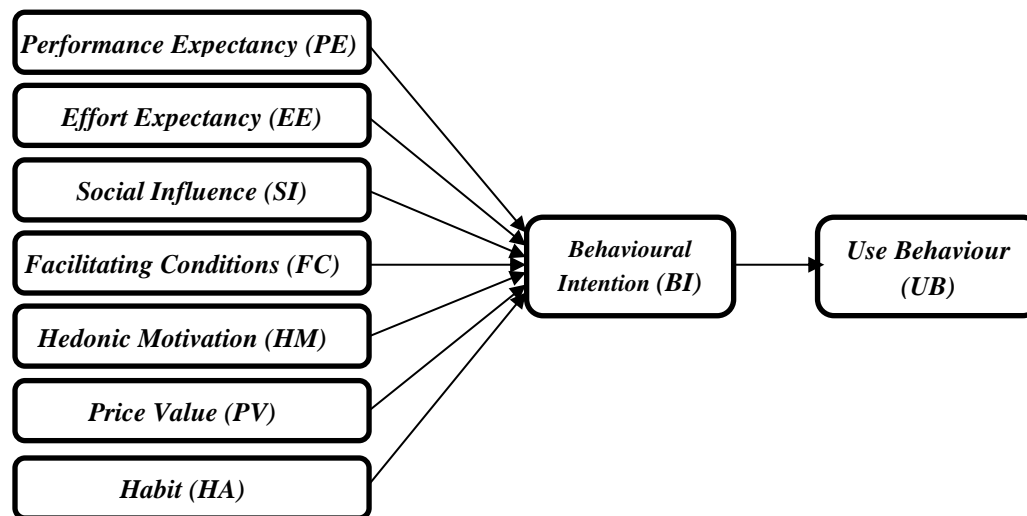
The relationship between variables of all variables is shown in Figure 1. As shown in Figure 1, this study also formulates a simultaneous hypothesis to test whether the variables of performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit simultaneously affect behavioural intention. Thus, this study formulates the following hypothesis.

H9:   Performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), and

habit (HA) simultaneously affect behavioural intention (BI) in the use of digital wallets among college students.

Market potential

Market potential is an opportunity possessed by a product, goods, and services in maximum sales based on a predetermined period (Sumarsono & Supardi, 2019). Analysing market opportunities is a strategy for estimating a business opportunity's attractiveness level (Raqib et al., 2020). Besides several benefits, there are also possible risks that should be taken into calculation, therefore it is important to estimate the market potential (Vučinić, 2020). The formula used to measure market potential is shown in Equation (1). In Equation (1), MP is the market potential, P is the average digital wallet usage expenditure per month (Rp), N is the number of respondents using digital wallets (%), and Total Population is the total number of university students in Bengkulu city.

$$MP = P \; x \; N \; x \; \text{Total Population} \tag{1}$$

Research method

This study uses purposive sampling technique. The population in this study are all university students in Bengkulu city, which amounted to 68.386 students. The number of samples is determined based on the Slovin formula with an error rate of 5% as shown in Equation (2).

$$n = \frac{N}{1+Ne^2} \tag{2}$$
$$n = \frac{68.386}{(1 + 68.386 \; x \; (0{,}05^2))}$$
$$n = 397{,}7 \sim 400 \text{ students}$$

Data was collected by a survey through a Google Form questionnaire that distributed to respondents through social media such as Whatsapp, Line, Instagram, and Telegram. Based on the measurement method, this study uses a 5-points Likert scale: strongly agree, agree, neutral, disagree, and strongly disagree. The Likert scale measures an individual or group's perceptions, opinions, and attitudes regarding a problem or phenomenon (Pranatawijaya et al., 2019). The research instrument has been validity and reliability tested using 30 respondents (Riyanto & Hatmawan, 2020; Pakpahan et al., 2021) The results obtained that all research instruments are valid and reliable.

This research uses the Partial Least Square-Structural Equation Modelling (PLS-SEM) analysis technique. The PLS-SEM method analyses indicators used as measuring instruments for research variables and confirms theories, concepts, and models that show the relationship between variables (Hardisman, 2021). PLS-SEM is better than CB-SEM because it is superior in exploratory research and theory development. In addition, PLS-SEM is used to reveal predictive causal

relationships between numerous variables in the research model (Gupta & Arora, 2020). The PLS-SEM analysis method can be divided into two groups. The outer model is an analysis that tests the validity and reliability of the questionnaire statements based on research variables. In contrast, the inner model (structural model) is an analysis used to test research hypotheses (Hardisman, 2021).

Data analysis and results
Outer model analysis

There are 347 (86.75%) digital wallet users as respondents, while 53 respondents are not digital wallet users. Based on gender, 121 (34.87%) were male, and 226 (65.13%) were female. Based on age category, 242 respondents are 20-22 years old, 56 respondents are 23-25 years old, and 49 are 17-19 years old. The respondent's characteristics indicate that the potential for digital wallet users among university students is dominated by women and students aged between 20 and 22.

There are several digital wallets used by respondents: 219 (63.11%) respondents use DANA; 215 (61.96%) respondents use Shopeepay; 166 (47.84%) respondents use OVO; 63 (18.16%) respondents use Gopay; 48 (13.83%) respondents use LinkAja; 39 (11.24%) respondents use Jenius; 9 (2.59%) respondents use Sakuku; 4 (1.44%) respondents use Doku Paypal; 9 (1.44%) respondents use isaku. In this study, the five digital wallets with the most users were DANA, Shopeepay, OVO, Gopay, and LinkAja. This result is in line with the data from a survey conducted by Boku (2021), which stated that OVO, Shopeepay, LinkAja, Gopay, and DANA were the digital wallets with the highest market share. Figure 2 shows the PLS-SEM model. This model provides clear direction regarding the independent and dependent variables used in this study

Figure 2
PLS-SEM Model
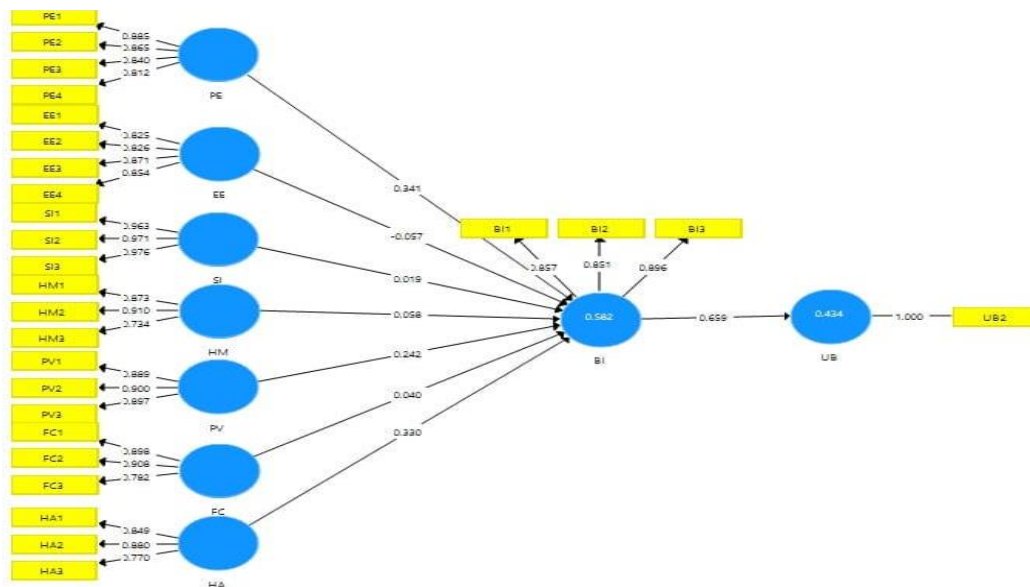
The outer model tests the validity and reliability to obtain an accurate calculation with measuring tools such as convergent validity, composite reliability, and discriminant validity. Convergent validity indicates the relationship between assessment actions and other measurement measures using factor loading and average variance extracted (AVE) value criteria (Gupta & Arora, 2020). According to Indrawati (2015), stating the factor loading value is >0.5 so that it is validated, and the AVE value is >0.5, the variable can be declared validated in the convergent validity test. The results showed that the factor loading value for all research indicators was more than 0.5, so it was validated. The AVE value for all research indicators was also more than 0.5, so it was declared to meet the convergent validity criteria. According to the proposed value for composite reliability and Cronbach's alpha must be >0.7 to declare the indicator reliable. The results showed that all research constructs had composite reliability and Cronbach's alpha values of more than 0.7, so they were declared to meet the reliability test criteria (Gupta & Arora, 2020).

Table 1

Output for Composite Reliability and Convergent Validity

Construct	Item	Factor loading	AVE	Composite reliability	Cronbach's alpha
Performance expectancy	PE1	0.885	0.724	0.913	0.873
	PE2	0.865			
	PE3	0.840			
	PE4	0.812			
Effort expectancy	EE1	0.825	0.713	0.909	0.867
	EE2	0.826			
	EE3	0.871			
	EE4	0.854			
Social influence	SI1	0.963	0.941	0.980	0.969
	SI2	0.971			
	SI3	0.976			
Hedonic motivation	HM1	0.873	0.710	0.879	0.794
	HM2	0.910			
	HM3	0.734			
Price value	PV1	0.889	0.801	0.924	0.876
	PV2	0.900			
	PV3	0.897			
Facilitating condition	FC1	0.898	0.747	0.898	0.831
	FC2	0.908			
	FC3	0.782			
Habit	HA1	0.849	0.697	0.873	0.789
	HA2	0.880			
	HA3	0.770			
Behavioural intention	BI1	0.857	0.754	0.902	0.837
	BI2	0.851			
	BI3	0.896			
Use behaviour	UB2	1.000	1.000	1.000	1.000

Syahrir et al. (2020) state that discriminant validity intends to determine whether the research indicator is a good measurer and has a high correlation with

the construct based on the cross-loading value and compares the correlation between the square root values of the AVE of each research variable. The results show that the cross-loading value of the indicator was higher than that of the other indicators. The result of the AVE square root value of each variable on the variable itself is greater than the AVE square root value of the other variables as shown in Appendix 1. Therefore, it was declared to meet discriminant reliability criteria shows in Table 1. Table 1 shows the consistency of the overall respondent's answers at more than 0.8. This has confirmed that the answers of all respondents have good consistency (above 0.7).

Table 2

Output for R-square and Q-square

Test	Result	Description
Adj R-quare →BI	0.582	PE, EE, SI, FC, HM, PV, and HA variables affect BI by 58.2% and 41.8% influenced by other factors.
Adj R-square BI → UB	0.434	BI variable affects UB by 43.4% and 56.6% influenced by other factors.
Predictive relevance Q-square → BI	0.423	PE, EE, SI, FC, HM, PV, and HA variables predict BI at 42.3%.
Predictive relevance Q-square → UB	0.425	BI variable predicts UB by 42.5%.

Inner model analysis

An inner model is an analysis used to test research hypotheses (Hardisman, 2021). The inner model tests by looking at the R-square and Q-square values. The R-square value tests the relationship between the independent and dependent variables (Ambarwati et al., 2020). The results of this test indicate that the R-square value of this research model is considered a good model. Meanwhile, the results of the Q-square value show a predictive assessment of the relevance of the independent latent variable to the dependent variable (Owusu et al., 2019). Output for R-square and Q-square in this study shows in Table 2. The model in this study has a Q-square value >0, which has predictive relevance.

This study emphasizes the influence on behavioural intention and uses behaviour in using digital wallets. Based on the results of the UTAUT2 construct research, it states that the independent variables of performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price value, and habit have a value of R²=0.582. It shows that the independent variables are quite effective in influencing behavioural intention. Furthermore, behavioural intention is also considered sufficient to influence use behaviour in digital wallets with an R²=0.434.

The hypothesis is a statement about the parameter values of a population to test a theory, where the population parameters are taken based on information from previous studies (Sugiarto & Setio, 2021). All hypotheses are developed based on supporting theories, tested, evaluated, and connected with facts and logic (Anshori

& Iswati, 2017). The PLS-SEM bootstrapping approach intends to test the hypothesis by testing the hypothesis that had been formulated based on the t-statistic value obtained. According to Gupta & Arora (2020), the standard value of t-statistics to state a validated hypothesis is more than or equal to 1.96 (≥1.96). Therefore, Table 3 shows that four hypotheses in this study were accepted (H1, H6, H7, and H8), while the other four hypotheses were rejected (H2, H3, H4, and H5).

The results of this study indicate that performance expectancy (PE) has a positive and significant effect on behavioural intention (BI). The t-value of 7.540>1.96 can prove this. These results also show that Bengkulu city university students feel that using a digital wallet as a transaction tool can improve work performance and is very useful in completing transactions faster. These support Venkatesh et al. (2003) who state that performance expectancy strongly predicts behavioural intention in using information technology. It also supports Gupta & Arora (2020), who stated that performance expectancy effectively predicts behavioural intention to mobile payment systems. The results of this study are also in line with the results of research by Catherine et al. (2017), Rachmawati et al. (2020), and Sabri Alrawi et al. (2020).

Table 3

Path Analysis Output

Path diagram	Path coefficient	t-Value	p-Value	Description
PE → BI	0.341	7.540	0.000	H1 accepted
EE → BI	-0.057	1.239	0.216	H2 rejected
SI → BI	0.019	0.403	0.687	H3 rejected
FC → BI	0.040	0.814	0.416	H4 rejected
HM → BI	0.058	1.251	0.212	H5 rejected
PV → BI	0.242	5.487	0.000	H6 accepted
HA → BI	0.330	6.192	0.000	H7 accepted
BI → UB	0.659	16.615	0.000	H8 accepted

Based on the study's results. effort expectancy (EE) negatively affects behavioural intention (BI) with t-value of 7.540<1.96. H1 is accepted. Effort expectancy (EE) negatively affects behavioural intention (BI) with t-value of 1.239<1.96. H2 is rejected. Social influence (SI) has a positive but insignificant effect on behavioural intention (BI) with t-value of 0.403<1.96. H3 is rejected. Facilitating condition (FC) has a positive but insignificant effect on behavioural intention (BI) with t-value of 0.814 <1.96. H4 is rejected. Hedonic motivation (HM) has a positive but insignificant effect on behavioural intention (BI) with t-value of 1.251 <1.96. H5 is rejected. Price value (PV) positively and significantly influences behavioural intention (BI) with t-value of 5.487>1.96. H6 is accepted. Habit (HA) positively and significantly influences behavioural intention (BI) with t-value of 6.192>1.96. H7 is accepted. Behavioural intention (BI) positively and significantly influences use behaviour (UB) with t-value of 16.615>1.96. H8 is accepted.

In this study. the f-value was 64.408, more significant than the f-table of 3.243. Thus, the independent variables jointly affect the dependent variable significantly. So, the variables performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), and habit (HA) simultaneously affect behavioural intention (BI). H9 is accepted.

Market potential calculation

In this study, the market potential analysis aims to identify and estimate the attractiveness of digital wallet services among university students in Bengkulu city. The market potential analysis is based on the highest estimate obtained from the average monthly money spent by Bengkulu city university students through the digital wallet service. The type of digital wallet used by users can be more than one digital wallet, and in this study, as many as 232 respondents used more than one digital wallet.

Based on the assessment of 347 digital wallet user respondents regarding the amount of money spent per month using digital wallet services (in rupiah), a total of Rp163,625,000 was obtained. Its average value (mean) is Rp400,000, and the value with the most significant frequency (mode) is Rp500,000. Based on the results, the potential for the digital wallet market for university students are Rp27,974,148,318.19.

Discussion

H1 is supported. This result confirms Venkatesh et al. (2003), Gupta & Arora (2020), and Sung et. al. (2015). Performance expectancy became the strongest predictor of behavioural intention. The positive effect of performance expectancy shows that by using a digital wallet, users feel that digital wallets are helpful in everyday life, can complete transactions faster, and can increase productivity. Government must consider expanding the benefit factor, such as growing transaction services in various SMEs through digital wallets.

A digital wallet is a digitalization concept in the financial sector in the form of an application that can be downloaded using smartphones for free. The high level of digital wallet usage can tremendously impact the Bengkulu city government, where the government has created a program to increase financial digitization activities for developing a digital ecosystem.

H2 is not supported. The level of ease does not affect college students' behavioural intentions to use digital wallet. It differs from Venkatesh et al. (2003) who state that effort expectancy strongly predicts behavioural intention in using information technology. This difference can occur because there are differences in the research object where Venkatesh et al. (2003) focused on new technology in general. Moreover, Gupta & Arora (2020) state that effort expectancy has an effective relationship with behavioural intention to mobile payment systems.

H3 is not supported. Social influences such as family, friends, and work colleagues, does not affect college students' behavioural intentions to use digital wallet. According to Gupta & Arora (2020), social influence is not a mandatory action but a voluntary action and the degree to which a user is likely affected by another user's suggestion if that user receives a reward for their efforts. It is supported by previous research which shows that social influence does not significantly influence behavioural intention (Gupta & Arora, 2020). Abrahão et al. (2016) state that social influence significantly affects behavioural intention. This difference occurs because there are differences in consumer characteristics in research respondents where Abrahão et al. (2016) surveyed Brazilian mobile payment users. However, there are previous studies that state that social influence has a significant effect on behavioural intention, such as Venkatesh et al. (2003), Abrahão et al. (2016), Damayanti et al. (2021), and Fauziah & Ashfiasari (2021).

H4 is not supported. This result shows that a high level of comfort in operating a digital wallet based on technical infrastructure does not significantly affect college students' behavioural intentions to use digital wallet. According to Ambarwati et al. (2020), facilitating conditions are related to resources that support users in using technology, where encouragement, timely support, and complete information can help accept web-based technology. There is a tendency for older users to have more difficulty and require a long time to adopt new technology when compared to younger users, or in this study are students aged 17-25 years. Users with little technology experience will rely more on facilitating conditions (Suryanto et al., 2016). Respondents are familiar with using smartphones and laptops anytime and anywhere. Thus, most of them have sufficient experience using digital wallets, so they are less dependent on facilitating conditions. These results are supported by previous research conducted by Venkatesh et al. (2003) but different from the research conducted by Gupta & Arora (2020) and Rachmawati et al. (2020).

H5 is not supported. The feeling of joy or pleasure in using a digital wallet has no effect on college students' behavioural intentions to use digital wallet. The study's results indicate that although digital wallets are attractive, users do not feel entertained by using digital wallets. These results are supported by previous research which stated that hedonic motivation was not proven to be a substantial predictor of behavioural intention (Gupta & Arora, 2020). However, there are differences with previous research which states that hedonic motivation has a significant effect on behavioural intention (Venkatesh et al., 2012; Palau-Saumell et al., 2019).

H6 is supported. University students who use digital wallets assume that digital wallet services cost is very cheap. It is supported by previous research which state that there is a significant influence between price value on behavioural intention (Venkatesh et al., 2012; Owusu et al., 2019). Price value positively influences behavioural intention, indicating that service usage's price or cost factor affects use intention. The more expensive the fees charged, the more reluctant

customers to use a digital wallet and the increased possibility of users looking for other payment alternatives. The cheaper the fees will undoubtedly increase the user's desire to use a digital wallet, and vice versa.

H7 is supported. University students have a habit of using digital wallets and tend to continue to use digital wallets in the future. It is supported by previous studies which state that habit has a significant influence on behavioural intention (Venkatesh et al., 2012; Gupta & Arora, 2020; Owusu et al., 2019). Habit became the second strongest predictor in influencing behavioural intention. This result shows respondents use digital wallets consistently. Therefore, the positive influence of habits can benefit the company by increasing the value of habits through customer loyalty programs by giving points and offering rewards.

H8 is supported. Behavioural intention influences with the highest level of significance on use behaviour. Thus, all independent variables must continue to increase the positive influence on behavioural intention to ensure positive use behaviour. These results are supported by previous research which states that behavioural intention significantly influences use behaviour (Gupta & Arora, 2020; Sabri Alrawi et al., 2020; Owusu et al., 2019). The results also state that behavioural intention strongly predicts use behaviour. Therefore, digital wallet companies and the Bengkulu city government can focus on increasing the positive behavioural intention value based on the factors that influence it (PE, HA, and PV). Thus, performance expectancy, habit, and price value are important factors in increasing behavioural intention, positively impacting use behaviour. Furthermore, these factors will affect the target market for the number of digital wallet users. Therefore, the higher number of users, the higher market potential value will be obtained.

Conclusion

The results show that the variables of performance expectancy (PE), price value (PV), and habit (HA) had a significant effect on behavioural intention (BI). In contrast, effort expectancy (EE), social influence (SI), facilitating condition (FC), and hedonic motivation (HM) do not affect behavioural intention (BI). The results also show that behavioural intention (BI) significantly affects use behaviour (UB). This result states that digital wallet users agree that using a digital wallet can make transactions faster.

This research adds the contribution of knowledge in the field of use and analysis of the market potential of digital wallets. Therefore, the further study can compare the result analysis based on gender and age to create effective marketing/promotion strategy. Further research may involve several countries or adding marketing strategies variables such as advertisement, sales promotion, and buzz marketing.

Furthermore, this research is expected to provide knowledge to the public about digital wallet services that can be used as cashless transaction media, along with other advantages. Increasing the potential of the digital wallet market in

Bengkulu city can be done by increasing the target market, namely the number of digital wallet users. The more users who make transactions through digital wallets, the higher the market potential value will be obtained. Thus, the Bengkulu city government and digital wallet companies can increase the marketing of digital wallet services to cover all circles of society so that more and more people are interested in becoming new users of digital wallet services. Digital wallet companies can increase their target market by collaborating with business partners such as SMEs (Small and Medium Enterprises). In addition, digital wallet companies can also cooperate with the Bengkulu city government in tourism.

Author contribution

Adilla Meitri Rama: Conceptualization, Data curation, Methodology, Writing – original draft. **Dadan Rahadian:** Validation, Writing – review & editing.

Declaration of interest

The authors affirm that they have no known financial or interpersonal conflicts that would have appeared to have an impact on the research presented in this study.

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References

Abdullah, N., Redzuan, F., & Daud, N. A. (2020). E-wallet: factors influencing user acceptance towards cashless society in Malaysia among public universities. *Indonesian Journal of Electrical Engineering and Computer Science*, *20*(1), 67–74. https://doi.org/10.11591/ijeecs.v20.i1.pp67-74.

Abrahão, R. de S., Moriguchi, S. N., & Andrade, D. F. (2016). Intention of adoption of mobile payment: An analysis in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT). *RAI Revista de Administração e Inovação*, *13*(3), 221–230. https://doi.org/10.1016/j.rai.2016.06.003.

Agustina, L., Mahmudah, D., Setiawan, A. B., Mustika, R., Dunan, A., & Ratnawati, A. (2019). *Perkembangan Ekonomi Digital di Indonesia: Strategi dan Sektor Potensial* (Y. Sukma (ed.)). Puslitbang Aptika dan IKP.

Ambarwati, R., Harja, Y., & Thamrin, S. (2020). The Role of Facilitating Conditions and User Habits: A Case of Indonesian Online Learning Platform. *Journal of Asian Finance, Economics and Business*, *7*(10), 481–489. https://doi.org/10.13106/jafeb.2020.vol7.no10.481.

Anshori, M., & Iswati, S. (2017). *Metode Penelitian Kuantitatif*. Airlangga University Press.

APJII. 2022. Survey Profil Internet Indonesia Retrieved July 13, 2020, from https://apjii.or.id/survei.

Boku. (2021). *Mobile Wallets Report*. Retrieved June 13, 2022, from https://boku.mobilewallet.report/.

Catherine, B. N., Geofrey, K. M., Moya, M. B., & Aballo, G. (2017). Effort expectancy, performance expectancy, social influence and facilitating conditions as predictors of Behavioural Intentions to use ATMS with fingerprint authentication in Ugandan banks. *Global Journal of Computer Science and Technology: E Network, Web & Security*, *17*(5), 5–23. https://globaljournals.org/GJCST_Volume17/2-Effort-Expectancy-Performance.pdf.

Chang, A. (2012). UTAUT and UTAUT 2: A Review and Agenda for Future Research. *The Winners*, *13*(2), 106–114. https://doi.org/10.21512/tw.v13i2.656.

Chang, C.-M., Liu, L.-W., Huang, H.-C., & Hsieh, H.-H. (2019). Factors Influencing Online Hotel Booking: Extending UTAUT2 with Age, Gender, and Experience as Moderators. *Information. Vol. 10*(9), 1–18. https://doi.org/10.3390/INFO10090281.

Damayanti, S., Yani, Y., Asnaini, & Afrianty, N. (2021). Minat Menggunakan E-Wallet pada Generasi Milenial dengan Pendekatan UTAUT (Unified Theory of Acceptance Use of Technology). *Jurnal Baabu Al-Ilmi Ekonomi Dan Perbankan Syariah*, *6*(1), 63–73. https://doi.org/10.29300/ba.v6i1.3988.

Eneizan, B., Ghabash Mohammed, A., Alnoor, A., Salman Alabboodi, A., & Enaizan, O. (2019). Customer acceptance of mobile marketing in Jordan: An extended UTAUT2 model with trust and risk factors. *International Journal of Engineering Business Management*, *11*, 1–10. https://doi.org/10.1177/1847979019889484.

Fauziah, S. A., & Ashfiasari, S. (2021). Pengaruh Social Influence dan Self-efficacy Terhadap Intention to Use Mobile Payment System Pada Pengguna E-wallet. *Jurnal Ekonomi, Manajemen, Bisnis dan Sosial (EMBISS). 1*(4), 307–317. https://embiss.com/index.php/embiss/article/view/39.

Grover, P., & Kar, A. K. (2020). User engagement for mobile payment service providers – introducing the social media engagement model. *Journal of Retailing and Consumer Services*, *53*, 1–13. https://doi.org/10.1016/j.jretconser.2018.12.002.

Gupta, K., & Arora, N. (2020). Investigating consumer intention to accept mobile payment systems through unified theory of acceptance model: An Indian perspective. *South Asian Journal of Business Studies*, *9*(1), 88–114. https://doi.org/10.1108/SAJBS-03-2019-0037.

Handayani, T., & Novitasari, A. (2020). Digital Wallet as a Transaction Media in the Community. *Proceedings of the Materials Science and Engineering*, *879*(1), 1–6. https://doi.org/10.1088/1757-899X/879/1/012001.

Hardisman. (2021). *Analisis Partial Least Square Structurral Equation Modelling (PLS-SEM)*. Bintang Pustaka Madani.

Huang, C.-Y., & Kao, Y.-S. (2015). UTAUT2 Based Predictions of Factors Influencing the Technology Acceptance of Phablets by DNP. *Mathematical Problems in Engineering,* 1–24. http://dx.doi.org/10.1155/2015/603747.

Indah, M., & Agustin, H. (2019). Penerapan Model Utaut (Unified Theory Of Acceptance And Use Of Technology) Untuk Memahami Niat Dan Perilaku Aktual Pengguna Go-Pay Di Kota Padang. *Jurnal Eksplorasi Akuntansi*, *1*(4), 1949–1967. https://doi.org/10.24036/jea.v1i4.188.

Indrawati. (2015). *Metode Penelitian Manajemen dan Bisnis Konvergensi Teknologi Komunikasi dan Informasi*. Refika Aditama.

LinovHR. (2020). *Perkembangan Fintech di Indonesia Beserta Manfaatnya - LinovHR Blog*. Retrieved May 20, 2022, from https://www.linovhr.com/fintech-di-indonesia/.

Nawawi, H. H. (2020). Penggunaan E-wallet di Kalangan Mahasiswa. *Emik*, *3*(2), 189–205. https://doi.org/10.46918/emik.v3i2.697.

Octaviano, A. (2021). *Maksimalkan transaksi digital, LinkAja gandeng Pemprov Bengkulu*. Retrieved June 20, 2022, from https://keuangan.kontan.co.id/news/maksimalkan-transaksi-digital-linkaja-gandeng-pemprov-bengkulu.

Owusu Owusu, K., Osei Atiemo, K. A., & Appiah, C. (2019). Acceptance and use of mobile banking: an application of UTAUT2. *Journal of Enterprise Information Management*, *32*(1), 118–151. https://doi.org/10.1108/JEIM-03-2018-0055.

Pakpahan, A., Prasetio, A., Gurning, E. S., Situmorang, R., Sipayung, T., Sesilia, A., Purba, P., Chaerul, M., Siagian, I., & Rantung, G. (2021). *Metodologi Penelitian Ilmiah* (A. Karim & J. Simamarta (eds.)). Yayasan Kita Menulis.

Palas, J.U., Sorwar, G, Hoque, M.R., & Sivabalan, A. (2022). Factors influencing the elderly's adoption of mHealth: an empirical study using extended UTAUT2 model. BMC Medical Informatics and Decision Making, 22, 1-21. https://doi.org/10.1186/s12911-022-01917-3.

Palau-Saumell, R., Forgas-Coll, S., Sánchez-García, J., & Robres, E. (2019). User Acceptance of Mobile Apps for Restaurants: An Expanded and Extended UTAUT-2. *Sustainability, 11*(4), 1–24. https://doi.org/10.3390/SU11041210.

Pranatawijaya, V. H., Widiatry, W., Priskila, R., & Putra, P. B. A. A. (2019).

Pengembangan Aplikasi Kuesioner Survey Berbasis Web Menggunakan Skala Likert dan Guttman. *Jurnal Sains Dan Informatika*, *5*(2), 128–137. https://doi.org/10.34128/jsi.v5i2.185.

Rachmawati, I. K., Bukhori, M., Majidah, Y., Hidayatullah, S., & Waris, A. (2020). Analysis Of Use Of Mobile Banking With Acceptance And Use Of Technology (UTAUT). *International Journal of Scientific & Technology Research*, *9*(8), 534–540. http://www.ijstr.org/final-print/aug2020/Analysis-Of-Use-Of-Mobile-Banking-With-Acceptance-And-Use-Of-Technology-utaut.pdf.

Raqib, M., Rosnizam, A. Bin, Mui, D., Kee, H., Ekmal, M., Bin, H., Akhir, M., Shahqira, M., Amril, M., Bin, H., Yusoff, M., Budiman, R. S., & Alajmi, A. M. (2020). Market Opportunities and Challenges: A Case Study of Tesco. *Journal of the Community Development in Asia*, *3*(2), 18–27. https://doi.org/10.32535/jcda.v3i2.807.

Riyanto, S., & Hatmawan, A. A. (2020). *Metode Riset Penelitian Kuantitatif Penelitian Di Bidang Manajemen, Teknik, Pendidikan Dan Eksperimen*. Deepublish Publisher.

Sabri Alrawi, M. A., Samy, G. N., Yusoff, R. C. M., Shanmugam, B., Lakshmiganthan, R., Maarop, N., & Kamaruddin, N. (2020). Examining factors that effect on the acceptance of mobile commerce in Malaysia based on revised UTAUT. *Indonesian Journal of Electrical Engineering and Computer Science*, *20*(3), 1173–1184. https://doi.org/10.11591/ijeecs.v20.i3.pp1173-1184.

Shofihara, I. J. (2020). *Jadi Favorit Milenial, Dompet Digital Tawarkan Promo dan Kemudahan Transaksi Halaman all - Kompas.com*. Retrieved June 20, 2022, from https://money.kompas.com/read/2020/05/13/142320526/jadi-favorit-milenial-dompet-digital-tawarkan-promo-dan-kemudahan-transaksi?page=all

Sugiarto, & Setio, H. (2021). *Statistika Terapan untuk Bisnis dan Ekonomi* (E. Risanto (ed.)). CV. Andi Offset.

Sumarsono, T. G., & Supardi. (2019). *Kewirausahaan Teori & Praktik* (1st ed.). Media Nusa Creative.

Sung, H. N., Jeong, D. Y., Jeong, Y. S., & Shin, J. I. (2015). The relationship among self-efficacy, social influence, performance expectancy, effort expectancy, and behavioral intention in mobile learning service. International Journal of u-and e-Service, Science and Technology, 8(9), 197–206. https://doi.org/10.14257/ijunesst.2015.8.9.21.

Suryanto, T. L. M., Setyohadi, D. B., & Faroqi, A. (2016). Analysis of the effect of IS quality to intention to reuse of employee management IS (Simpeg) based on ISS model. *MATEC Web of Conferences*, *58*.

https://doi.org/10.1051/matecconf/20165803001.

Syahrir, Danial, Yulinda, E., & Yusuf, M. (2020). *Aplikasi Metode SEM-PLS dalam Pengelolaan* (L. Daris & A. D. Riana (eds.)). PT Penerbit IPB Press.

Tamilmani, K., Rana, N. P., & Dwivedi, Y. K. (2021). The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation. *Information Systems Frontiers*, *23*(4), 987–1005. https://doi.org/10.1007/s10796-020-10007-6.

Tobari. (2021). *Dukung Transaksi Digital, Kota Bengkulu Raih Penghargaan dari Bank Indonesia*. InfoPublik. https://infopublik.id/kategori/nusantara/525720/dukung-transaksi-digital-kota-bengkulu-raih-penghargaan-dari-bank-indonesia.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly: Management Information Systems*, *27*(3), 425–478. https://doi.org/10.2307/30036540.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly: Management Information Systems*, *36*(1), 157–178. https://doi.org/10.2307/41410412.

Vučinić, M. (2020). Fintech and Financial Stability Potential Influence of FinTech on Financial Stability, Risks and Benefits. *Journal of Central Banking Theory and Practice*, *9*(2), 43–66. https://doi.org/10.2478/jcbtp-2020-0013.

Wu, P., Zhang, R., & Luan, J., Zhu, M. Factors affecting physicians using mobile health applications: an empirical study. *BMC Health Servises Res*earch, *22*. https://doi.org/10.1186/s12913-021-07339-7.

Appendix 1
AVE Square Root Output

	BI	EE	FC	HA	HM	PE	PV	SI	UB
BI	0,868								
EE	0.379	0.844							
FC	0.462	0.397	0.864						
HA	0.596	0.356	0.398	0.835					
HM	0.445	0.340	0.455	0.426	0.842				
PE	0.635	0.506	0.417	0.444	0.390	0.851			
PV	0.572	0.440	0.575	0.350	0.438	0.543	0.895		
SI	0.365	0.218	0.259	0.462	0.416	0.293	0.294	0.970	
UB	0.659	0.390	0.378	0.534	0.375	0.523	0.428	0.279	1.000