Minnesota Journal of Business Law and Entrepreneurship

Volume 2026, No. 2

ISSN: 1540-3270

An Analysis of the Key Enablers in the Adoption and Recommendation of Mobile Wallet Services

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Abstract

Purpose

The study develops a conceptual model to identify the most significant enabler that affects users' intentions, subsequently influencing perceived satisfaction, which in turn impacts the recommendation to utilize mobile wallets. To identify enablers, two constructs from the Technology Acceptance Model (TAM), namely perceived ease of use and perceived usefulness are utilized, alongside an additional variable, perceived security, derived from the existing body of literature. All these three variables are categorized as "Enablers". Using convenience sampling, the data has been gathered from 220 mobile wallet users in NCR region through a structured questionnaire (5-point Likert scale). The proposed model is empirically tested using the Structural equation modelling (SEM) technique. The study's findings revealed that the most significant enabler is perceived security followed by perceived usefulness. The perceived ease of use does not positively influence the user's intention. The users' intentions favourably affect perceived satisfaction; nonetheless, being satisfaction is not enough, resulting in users refraining from recommending the services to others. The findings of the research would be beneficial for marketers, service providers and researchers in managerial decision making, formulating policies, customizing the services as per user's preferences and future research direction.

Keywords: Mobile wallet, Perceived ease of use, Perceived usefulness, Perceived security, Perceived satisfaction, Intention, Recommendation

1. Introduction

Today's modern culture is driven by escalating technological advancements and mobility in terms of smartphone use, which has been advantageous for both industries and consumers (Oliveira *et al.,* 2016; Omol, 2024). Due to this advancement, mobile technology is a blessing to society. With a vivid and successful transformation, mobile devices have become a vital to day-to-day life (Sunny and George, 2018). As per the (TRAI, 2024), India had approximately 1205.17 billion mobile phone subscribers. This rapid growth in mobile technology have prompted service providers to seek innovative ways to connect with their customers.

As per the Reserve Bank of India (RBI) report, 2024, online payment transactions are increasing in India over 14,726 crores in 2023-24 as compared to 4,370 crore transactions in 2020-21. For extending the usage of online payment, India launched the goal of making every citizen- a digital user "Har Payment Digital". It is imperative to study the variables that affect user's intention to adopt mobile wallet for making online transactions and determining which one has the greatest impact on user's intention.

Mobile wallet is an attractive application that is used for diverse financial transactions, substituting the conventional wallet method, which has been ascribed to the multiplicity of problems faced by customers while making payments. Mobile Wallet is a key innovation of the twenty-first century that has gained recognition and become the primary method of payment worldwide (Chawla and Joshi, 2020). Mobile Wallet enhances the

functionality of smartphones, transforming them into virtual debit cards for cashless transaction (George and Sunny, 2021). Mobile wallet applications offer a range of services for users for performing digital transactions including money transfers, ticket reservations, bill payment and shopping. The mobile wallet market is experiencing significant success due to the heightened utilization of digital transactions for multiple purposes. This type of payment has become widespread since it is used in every industry, such as banking, mobile commerce, e-commerce, and marketing etc

There has been relatively little research into the mobile wallet enablers that influence users' intentions to adopt them. In the current study, our main objective is to identify the variables which significantly influence the intention of mobile wallet users and categorized them as enablers. Also, find out the most significant enabler that affect the user's intention to use a mobile wallet. Furthermore, enablers will explain the user's perceived satisfaction and in turn, willingness to recommend it to others. The outcome of the research would help marketers, service providers, and other researchers to understand user's adoption of mobile wallets and identifying the most significant enabler influencing their intention to utilize such wallets, thereby enabling the personalization of services and determine the satisfaction level of the consumers.

The article is organized as follows. Section 2 provides a theoretical foundation for the factors affecting mobile wallet adoption, followed by developing the empirical framework and research hypotheses in Section 3. Section 4 describe the research methodology. Section 5 and 6 presents the results and discussion of these results. Finally, Section 7 provides a conclusion and implications followed by future research directions in Section 8.

2. Theoretical Background

2.1 Mobile Wallet

A mobile wallet is a digital service or platform enabling users to use mobile devices to carry out financial transactions electronically. It is an application that is downloaded to a user's mobile phone that stores payment card information in it (Sunny and George, 2018). Users require an internet connection, a smartphone, and an application installed on a smartphone, to access the mobile wallet service. Mobile wallets may also be referred to as M-wallet, virtual wallets, and digital wallets. It is termed as a leather wallet owing to the increasing prevalence of smartphones.

Mobile wallet applications available on a handheld device in India include Amazon Pay, Free charge, Paytm, PhonePe and Google Pay. However, customers frequently transition between various m-wallet alternatives. Mobile wallet applications provide a safe means for storing funds and other credentials such as credit card information, bank account details, and even driving permits. A mobile wallet is a wide concept that encompasses all payment services.

2.2 Prior research on mobile wallet

The primary objective of the literature review is to comprehend ideas and establish the theoretical framework for the present study. A review of pertinent literature reveals that several studies have attempted to explore the various factors that affect mobile wallet services, those studies also used various theories and models in the area of technology adoption. But only a few studies have classified factors affecting mobile wallets as Enablers. Technology Acceptance Model (TAM) (Davis, 1989; Davis *et al.,* 1989) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh *et al.,* 2003) are two popular theories that attempt to explain why people adopt modern technologies. Both theories majorly focused on the enablers and influence of factors of technology adoption (Sharma and Mishra, 2022). The TAM model explained intention to use technology has two major constructs – perceived ease of use and perceived usefulness (Davis, 1989). (Arora *et al.,* 2020) in his study revealed that perceived ease of use emerged as a more important antecedent than perceived usefulness as it had a significant impact on perceived usefulness. In fact, these two constructs were employed to study the patterns of user's adoption in mobile commerce (Huang *et al.,* 2019), mobile banking (Prastiawan *et al.,* 2021; Elhajjar and Ouaida, 2020), information technology (Pitafi *et al.,* 2020), internet banking (Albort Morant *et al.,* 2022; HA

Alnemer, 2022) finally mobile wallets (Banerji and Singh 2022). In order to examine user behavior intentions with regard to adopting a mobile wallet, PU and PEOU can be utilized to develop a theoretical framework. According to the UTAUT model proposed by Venkatesh *et al.,* 2003, four crucial constructs are effort expectancy, performance expectancy, facilitating conditions, and social influence. Perceived usefulness and perceived ease of use are analogous to performance expectancy and effort expectancy, respectively.

Several researchers used perceived ease of use and perceived usefulness in their studies and found that it has a significant positive effect on the user's intention to adopt mobile wallet services and perceived satisfaction (Chawla and Joshi, 2023; Banerji and Singh, 2022). Alswaigh and Aloud (2021) studied perceived ease of use, and perceived usefulness in addition to other constructs such as trust, security, facilitating conditions and lifestyle found a positive impact on consumer's attitudes towards m-wallet and the primary indicator of user intent to use mobile wallets found to be perceived usefulness.

As existing theories like TAM & UTAUT and prior studies provide insights regarding these variables, these two are incorporated in the current study with the addition of a construct, perceived security as it is also an important predictor when users intend to use technology.

Previous studies (Revathy et al. 2020) found that perceived security substantially impacts customer satisfaction in the adoption of mobile wallets. (Saha and Kiran, 2022) studied the mediating effect of perceived security on consumer satisfaction towards mobile payment. (Siagian *et al.,* 2022; Rahayu, 2022) studied these three constructs (perceived ease of use, perceived usefulness, and perceived security) in their study. Denaputri and Usman (2019) found that perceived ease of use, perceived usefulness, and perceived security significantly influenced users' intention to use technology with the path coefficient values of 0.057, 0.423, and 0.125 respectively. In terms of mobile wallets, the extant literature related to all these three variables has focused on factors that enable the adoption and its influence on user intention to use the technology. The researcher categorized the constructs as enablers in this study. The term 'Enablers' commonly refers to the variables or factors that support the utilization and implementation of mobile wallet services. These factors enable the occurrence of a particular thing (Sharma and Mishra, 2022; Talwar *et al.,* 2021). We find relatively less research on enablers of mobile wallet adoption. Therefore, it is imperative to examine the enablers (perceived ease of use, perceived usefulness, and perceived security) in determining mobile wallet adoption and their positive effect on customer satisfaction. However, the two constructs: perceived ease of use and perceived usefulness are insufficient to fully explain a person's adoption of technology. So, the researcher added perceived security with the two TAM constructs to predict the perceived satisfaction of mobile wallet users and categorized them as Enablers.

2.3. Hypothesis Development

2.3.1 Perceived ease of use (PEOU)

Perceived ease of use (PEOU) is a fundamental factor of user attitude and behavioral intention to adopt and employ technology. David (1989) defines it as "the extent to which an individual believes that using a particular system will be effort-free". Later on, the UTAUT theory formulated by Venkatesh et al. (2003) incorporated a similar construct in their study and named it effort expectancy which refers to "the degree of ease related to the use of technology". In light of mobile wallets, we define PEOU as the user's belief that the effort necessary to learn and utilize mobile wallets will be minimal. Several researchers have found that perceived ease of use influences the user intention to adopt technology (Ariffin *et al.,* 2021; Singh *et al.,* 2020; Chawla and Joshi 2019).

H1: PEOU has a positive effect on intentions to use mobile wallet services.

2.3.2 Perceived usefulness (PU)

Perceived usefulness is a significant factor influencing mobile wallet services introduced by the Technology Acceptance Model. Davis (1989) defined it as "the degree to which a person believes that using a particular system would improve his or her job performance." It is defined as the notion that employing mobile wallets will improve user performance. Previous studies have indicated that perceived usefulness has a key role in influencing users' intentions to adopt technology and attitudes towards that technology (George and Sunny, 2021: Chawla and Joshi,

2020; Banerji and Singh, 2022). Shankar and Dutta, 2018 asserted that perceived usefulness is identical to relative advantage in their study. Alswaigh and Aloud (2021) confirm that perceived usefulness has a positive impact on mobile wallet adoption and key predictor of user intention to adopt a technology.

H2: PU has a positive effect on intentions to use mobile wallet services.

2.3.3 Perceived Security (PS)

According to Kapoor *et al.,*2023 perceived security is defined as the level of confidence of the users that their personal data and login credentials will not be disclosed to unauthorized users while making payments through mobile wallets. It is defined as the degree to which a user believes the transaction channel or platform will be secure. Users are worried about the possibility of losing confidential information, resulting in financial damages (Hidayat *et al.,*2022). Various studies have illustrated the relationship between perceived security and users' intention to adopt (Chawla and Joshi,2019). (Hidayat *et al.,* 2022) shows that perceived security is the most crucial antecedent that influences users' behavioral intention to adopt mobile wallets. That's why it is necessary to include this variable in the study.

H3: PS has a positive effect on intentions to use mobile wallet services.

2.3.4 Intention to use

According to Venkatesh *et al.,* (2003), user intention to use reflects the willingness of the user to use the product or service. It is the willingness to engage in a specified behavior or not (Ajmera and Bhatt, 2020). The study makes an effort to comprehend the key enablers that influence the intention of adopting mobile wallets. Intention is the critical factor of technology acceptance and success of any system (Ofosu-Ampong *et al*., 2023). The research has derived three enablers: perceived ease of use, perceived usefulness, and perceived security. The consumer's intention to adopt is directly influenced by these three variables. Based on the comprehensive literature review, three independent variables have been identified to assess in relation to the dependent variable of the user's intention to utilize mobile wallets. The research findings of (Phan *et al.,* 2020) concluded that "The higher the intention the user is likely to have, the higher the actual behavior and vice versa".

H4: Intention to use has a positive effect on perceived satisfaction.

2.3.5 Perceived Satisfaction and Recommendation to Use

Perceived satisfaction is the most crucial antecedent in the mobile payment system. Few studies used and analysed the perceived satisfaction relationship with users' intention to use a mobile wallet. Researchers found that perceived satisfaction is positively connected with the intention to use mobile wallets (Sinha and Singh, 2019; Ajmera and Bhatt, 2020). Xu and Du (2018) confirmed that the user's intention directly influences the user's perceived satisfaction and the intention to continue using technology. Singh *et al.,* 2020 discovered that customers satisfaction with service attributes increases the likelihood of recommendations and repeat usage. Accordingly, the following hypothesis has been proposed.

H5: Perceived Satisfaction has a positive effect on a recommendation to use mobile wallet service.

Technology recommendation is a post-usage behaviour that demonstrates a user's willingness and perceived happiness to support the use of technology by others (Singh *et al.,* 2020). Nowadays, social platform is popular for users to communicate or give feedback about the technology (Wang and Yu, 2017). Such platforms provide users an opportunity to interact and check reviews from past users, family, and friends (Tajvidi *et al.,* 2017). According to Oliveira et al. (2016), user intention and perceived satisfaction exert a favourable influence on recommendations to others. The researcher hasn't talked much about the goal to recommend technology or its determinants. Researchers in India have looked into a variety of aspects that affect intents, but they haven't fully examined how satisfied users feel, which eventually results in recommendations to utilize technology (Madan and Yadav 2018; Ajmera and Bhatt, 2020). The current study highlights this gap and shows how user intention, perceived satisfaction, and recommendations to use an m-wallet service relate to one another.

Minnesota Journal of Business Law and Entrepreneurship

Volume 2026, No. 2

ISSN: 1540-3270

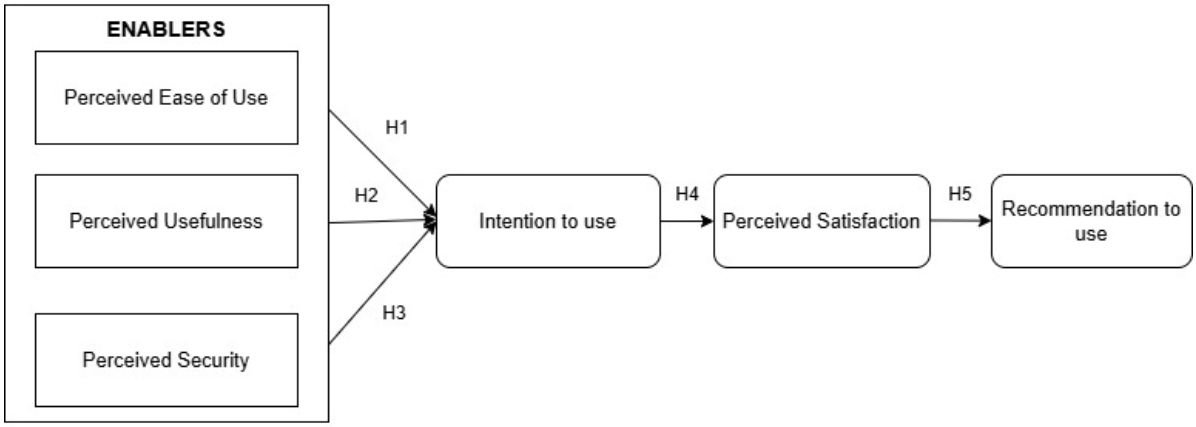

Figure 1. Conceptual Model.

3. Research Methodology

3.1 Measurement Development

The data is collected through a structured questionnaire. The questionnaire contains demographic profile of the respondent and usage of mobile wallet measured using nominal scales of measurement. The research comprised six constructs: enablers (perceived ease of use, perceived usefulness, perceived security) intention to use, perceived satisfaction, and recommendation to use. We employed a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree)* to measure the construct items. Scales for ease of use, usefulness, perceived security and intention to use were adapted from Venkatesh et al. (2012). The perceived satisfaction scale was modified from Madan and Yadav (2016), while the recommendation to use scale was derived from Oliveria et al. (2016).

3.2 Data Collection and Analysis

Using an online survey, the non-probability convenience sample technique was used to collect primary respondents from Mobile wallet users in NCR region during August-October 2024. With a wide range of technological services, the NCR region is recognized as a technological hub. So, the sample collected from NCR region may be considered as the representative of the country. A total of 300 questionnaire were distributed to the targeting individuals who used mobile wallet services. After removing responses that were not suitable for empirical inquiry, the sample size of 220 was determined.

Table 1 shows the basic descriptive statistics of the respondents. Out of 220 respondents; 78.6% were males and 21.4% were females. The majority of the respondents were in two age groups: 40– 49 (37.7%) and 30-39 years (27.7%)

Moreover, 34.5% who used mobile wallet services were graduates. In addition, the majority of the respondents are from Faridabad (33.6%) followed by Noida (26.4%). Out of the respondents, 94.1% knew that they can use mobile phones to make payments and only 90% of the respondents use mobile wallet services for making payment. The average amount spent on online transactions was between Rs.10k-20k (58.2%) followed by Rs.21k-30k (31.8%).

Table 1. Descriptive statistics of respondents.

Demographic Profile		Frequency	Percentage (%)
Gender	Male	173	78.6
	Female	47	21.4
Age (in years)	20-29	13	5.9
	30-39	61	27.7
	40-49	83	37.7
	50-59	52	23.6
	Above 60	11	5.0
Education level	Graduate	76	34.5
	Postgraduate	52	23.6
	PHD	34	15.5
	Others	58	26.4
City	Faridabad	74	33.6
	Gurugram	43	19.5
	Noida	58	26.4
	New Delhi	45	20.5
Do you know that you can use mobile phones to make payment	Yes	207	94.1
	No	13	5.9
Average Value spent	Rs. >50K	4	1.8
	Rs. 10K-20K	128	58.2
	Rs. 21K-30K	70	31.8
	Rs. 31K-40K	15	6.8
	Rs. 41K-50K	3	1.4
Do you currently use mobile wallet services	Yes	199	90.5
	No	21	9.5

Source(s): Author's own

4. Results and Findings

We employed IBM SPSS Statistics, Version 23, for basic data analysis and AMOS 20 was used in this study for testing measurement model for assessing reliability and validity of constructs and structural model for empirically testing the proposed hypothesis in the study.

According to Churchill (1979), the validation of measuring scales begins with conducting confirmatory factor analysis (CFA). Subsequently, we utilized structural equation modeling to assess the measurement model. The

methodology adopted in this paper aligns with other studies (Singh *et al.,* 2020).

4.1 Measurement Model Assessment

The model-fit indices were used to evaluate the model's overall goodness of fit (x^2/df, GFI, CFI, TLI, RMSEA and SRMR) with all values falling below their respective common acceptance thresholds (Bentler, 1990). The overall model demonstrated an acceptable fit for the data: x^2/df = 1.535, GFI =0.865, CFI =0.936, TLI =0.927, SRMR = 0.05, and RMSEA=0.49 as shown in (Table 2).

Table 2: Goodness-of-fit indicators.

Model fit Indices	Structural Model	Recommended value	References
X^2 /df	1.535	<2 to 5	Less than 2 (Ullman and Bentler, 2012) to 5 (Schumacker & Lomax, 2004)
GFI	0.865	>.80	Doll, Xia, and Torkzadeh (1994)
CFI	0.936	>.90	Bentler (1982)
TLI	0.927	>.90	Bentler (1990)
RMSEA	0.49	<.08	Hu and Bentler (1998)
SRMR	0.057	<.08	Hu and Bentler (1998)

Source(s): Author's own

4.2 Reliability and Validity

The data was assessed using techniques like composite reliability, convergent and discriminant validity check and SEM with AMOS. First, the factor loadings of every item were examined in order to evaluate the construct reliability.

The factor loadings presented in Table 3 for all the items were above 0.70, thus satisfying the criteria for convergent validity (Hair et al. 2019) are considered in the study and remaining were dropped due to low factor loadings (less than .70). The Kaiser Meyer-Oklin value was .797, exceeding the threshold value of .70. Bartlett's sphericity test findings (Bartlett, 1954) showed a very modest value (0.000).

Harman's single-factor test analysis was used to determine whether common method biasness was present (Podsakoff et al. 2003). Findings showed that a single factor accounted for 15.640% of the variation, well below the recommended threshold of 50%, indicating that the data set is free of CMV issues.

The measurement model was tested by measuring each factor's Cronbach's alpha coefficient, which ranged from .79 to .86. They all exceeded the cut-off point of .70, thus providing support for internal consistency (Nunnally, 1978). Table 2 and 3 confirms the results of confirmatory factor analysis (CFA).

The composite reliability values ought to exceed .70, as per the findings of Hair et al. (2012) and Fornell and Larcker (1981). This study revealed CR scores ranged from .79 and .86, indicating strong internal consistency for the construct. Furthermore, as seen in Table 3, the AVE (Average variance extracted) of the constructs ranged from .53 to .59, all exceeding the suggested value of .50 (Hair *et al.,* 2012; Fornell & Larcker, 1981).

Table 3. Reliability and Convergent Validity of the constructs.

Construct	Indicators	Loadings	Cronbach's alpha	CR	AVE
Perceived Ease of Use	PEOU1	0.769	0.852	0.852	0.535
	PEOU2	0.735			
	PEOU3	0.717			
	PEOU4	0.712			
	PEOU5	0.726			
Perceived Usefulness	PU1	0.773	0.863	0.865	0.561
	PU2	0.753			
	PU3	0.737			
	PU4	0.774			
	PU5	0.709			
Perceived Security	PS1	0.715	0.865	0.866	0.564
	PS3	0.707			
	PS4	0.772			
	PS5	0.776			
	PS6	0.783			
Intention to use	ITU1	0.768	0.796	0.796	0.565
	ITU2	0.747			
	ITU3	0.741			
Perceived Satisfaction	PSA1	0.706	0.854	0.858	0.548
	PSA2	0.771			
	PSA3	0.746			
	PSA4	0.748			
	PSA5	0.731			
Recommendation to Use	RT1	0.825	0.859	0.861	0.599
	RT2	0.801			
	RT3	0.787			
	RT4	0.703			

Source(s): Author's own

We used the method proposed by Fornell and Larcker (1981) to examine discriminant validity in our research. The squared root of each variables AVE and associated correlations are compared to analyse it. Table 4 shows that the squared root of each variable's AVEs is greater than the inter-construct correlations, indicating that the

results support discriminant validity.

The measurement model indicated good model fit, reliability, convergent and discriminant validity.

Table 4. Discriminant Validity.

Variable	PEOU	PU	PS	PSA	ITU	RT
PEOU	***0.731***					
PU	0.199	***0.748***				
PS	0.027	-0.286	***0.75***			
PSA	-0.155	-0.115	0.131	***0.741***		
ITU	-0.094	-0.235	0.253	0.1	***0.751***	
RT	0.04	0.268	-0.09	-0.128	-0.041	***0.773***

Note(s). 1. PEOU = Perceived ease of use; PU = Perceived usefulness; PS = Perceived security; ITU = Intention to use; PSA = Perceived satisfaction; RT = Recommendation to use.

2. Diagonal values represent the square root of AVE, while off-diagonal values represent the correlation.

Source(s): Author's own

4.3 Structural Model

The study's proposed hypotheses (refer to Figures 2 and 4) were tested using maximum likelihood estimation in AMOS. The structural model demonstrated a satisfactory fit of the model to the data, as all the fit indices above their recommended thresholds: $\chi 2$ /df = 1.607, CFI = 0.925, GFI = 0.855, TLI = 0.917, and RMSEA = 0.053 (Hair *et al.,* 2012) as shown in Table 5. The R^2 for intention to use, perceived satisfaction and recommendation to use were .082, .012 and .017, respectively based on the recommend cutoff value of 0.10 for social science studies (Falk, 1992).

Table 5. Results of Hypothesis Testing.

Number	Hypothesis	Path	T-value	p-value	Remark
H1	PEOU---> ITU	-.138	-1.184	.236	NO
H2	PU---> ITU	-.204	-2.625	.009**	NO
H3	PS---> ITU	.218	3.567	***	YES
H4	ITU---> PSA	.092	1.766	.077**	YES
H5	PSA---> RT	-.148	-2.184	.029**	NO

Note(s). 1. PEOU = Perceived ease of use; PU = Perceived usefulness; PS = Perceived security; ITU = Intention to use; PSA = Perceived satisfaction; RT = Recommendation to use.

2. *, **, *** means significant at 10%, 5% and 1% level of significance respectively.

4.4 Analysis of the structural model

After determining that the model fit the data adequately, the estimated path coefficients and t-statistics of the structural model were scrutinized with the intent to evaluate the proposed hypothesis. Initially, with regard to the factors of the intention to use, we have determined that perceived usefulness and perceived security significantly influence the intention to use mobile wallet services. In this case, hypothesis 1 which proposes that perceived ease of use has a positive and direct impact on intention to use, was not supported in the context of this research (β = -

0.138; p-value <0.386). In contrast, we have similar studies accessible where positive and significant relation between perceived ease of use and intention to use was confirmed (Singh *et al.,* 2020). Hypothesis 2- perceived usefulness has a significant but negative relationship with intention to use (β = -0.204; p-value <0.009), thus rejecting the hypothesis. The results are different from the proposed hypothesis and available literature. The path analysis Hypothesis 3 is related to perceived security and intention to use mobile wallet. It is discovered that they have a positive and significant relationship (β = 0.218; p-value <0.001), thus accepting the hypothesis where users believe that mobile wallet services are safe and secure. Similar significant results are shared by Hidayat et al. (2022). Ultimately, Hypothesis 4, which posits that intention to use exerts a positive and significant effect on perceived satisfaction is empirically validated (β = 0.092; p-value <0.077) in line with the literature analysed by Singh *et al.,* (2020). Thus, accepting the hypothesis. Findings of this research show that perceived satisfaction has a significant but negative impact (β = -0.148; p-value<0.029) on recommendation to use mobile wallet services. Thus, rejecting the hypothesis. In contrast, we have literature available which showed that perceived satisfaction has a positive and direct impact on user's recommendation to use mobile wallet (Singh *et al.,* 2020).

5. Discussion

This research paper successfully tested a model to measure user's intention and recommendation to use mobile wallet services in the NCR region using two variables (Perceived ease of use and perceived usefulness) from TAM theory along with one extended variable perceived security, categorized them as Enablers. The study's main aim is to identify the most significant enabler that will enhance user's intention to use mobile wallets. However, the impact of intention to use on perceived satisfaction and further on the recommendation to use mobile wallets is studied. Based on our analysis, First, concerning the enablers of the intention to use, our study posited the correlation between perceived ease of use, perceived usefulness, and perceived security, with the intention to employ a mobile wallet. This study observed that perceived ease of use has an insignificant and inverse relationship with intention to use mobile wallets, contradicting the previous studies (Singh *et al.,* 2020). Liébana-Cabanillas et al (2021) established that perceived ease of use is not a determining factor for the intention to use, owing to the relative simplicity elements in the research and also no longer motivation as users are well versed capable of utilizing the technologies, the results are in align with our study also. Furthermore, the results shows that perceived usefulness have a significant but negative relationship with intention to use mobile wallets. Traditionally, perceived usefulness is considered as the strong predictor of the technology adoption but its negative effect could be from several complex factors such as risk, cultural factors, ease of use concerns and situational factors that can reduce utility for the users (Featherman, 2003). Unlike previous studies, which proposed an indirect relationship between perceived security and intention to use (Aprilia and Amalia, 2023), it is important to highlight its positive and significant influence on intention to use mobile wallets. The results of this study prove that users believe that the payment by using such a system is secure from scams and other issues. This frequently occurs in digital transactions where the service provider's ability to ensure that the system is safe and functional is crucial (Mohd *et al.,* 2023). Users also have confidence in conducting transactions as their transactions are safeguarded, and they are eligible for reimbursement in the event of any unauthorized transaction, provided they have a valid justification. However, perceived security is presented as the most significant enabler that affects user's intention to use mobile wallet services followed by perceived usefulness.

In addition, we found that intention to use have a significant and positive relation with the perceived satisfaction which is consistent with the previous findings (Madan and Yadav, 2018; Singh *et al.,* 2020). The results of these proves that perceived satisfaction will increase as the intention to use a mobile wallet increases. Contrary with the existing literature and most surprisingly, study found that perceived satisfaction shows significant but negative relationship with recommendation to use mobile wallets. This outcome will be supported by the theory of reasoned action, developed by Fishbein and Ajzen (1977), which asserts that individual behaviour is influenced by its intention. In the context of mobile wallets, users might have satisfied with the services but insufficient for advocacy behaviour i.e. recommending it to others. Because satisfaction reflect expectations, users recommend service when satisfaction exceeds expectation (Reichheld, 2003). Our findings indicate that perceived security is

the primary enabler for users adopting mobile wallet services, followed by perceived utility and perceived simplicity of use. Moreover, the intention to use correlates with increased satisfaction; nevertheless, perceived satisfaction does not inherently result in recommending mobile wallet services to others. These findings have substantial implications for managerial decision-making. Moreover, since these variables have not been previously analysed collectively concerning m-wallets, the results provide a foundation for future theoretical advancement in this field.

6. Conclusion and Implications

The study aims to identify the most significant enabler influencing the intention to use mobile wallet in NCR region, which subsequently impacts perceived satisfaction and, in turn, affects the recommendation to use mobile wallets. Our study adopted two variables from the TAM theory and extend it with a variable namely, perceived security to analyse the enablers affecting the adoption of mobile wallet services and recommendation. Using a sample of NCR mobile wallet users, our study uncovered that perceived security plays a crucial role for the users in adopting mobile wallet services followed by perceived usefulness. This is one of the major findings of our research where we observed that Perceived Security emerged as the most important factor that affect user's intention to use mobile wallet instead of literature which suggested that perceived usefulness is the most important factor for mobile wallet adoption (Chawla & Joshi,2020; Alswaigh & Aloud, 2021). The study also unveils that perceived ease of use is now no longer help users in adopting mobile wallet services. Perceived satisfaction is also found to be affected by users' intention to use mobile wallet services. The primary and unexpected outcome of the study is that perceived satisfaction adversely influences the likelihood of recommending mobile wallet services to others. This study's findings will assist marketers, service providers, and researchers in comprehending user adoption of mobile wallets and the enablers that influence their intention to utilize such wallets, enabling them to customize their services and assess consumer satisfaction levels.

The findings enhance the understanding of users, researchers and mobile wallet service providers regarding the aspects that must be addressed to increase the mobile wallet adoption.

Furthermore, the model can undergo empirical testing to establish a foundation for guiding subsequent research in mobile wallet adoption. This approach enables the derivation of significant management implications for the more successful marketing of mobile wallet services, leading to increased customer acceptability and usage. The significance of this matter is paramount, as the number of companies currently providing or expressing interest in mobile wallet services has consistently risen. Guidance is required for managers on effectively augmenting the number of customers opting for this payment method as an alternative to conventional payment services.

Based on this framework, mobile wallet service providers must prioritize the security features of mobile wallets, as this is the primary factor influencing user adoption of the service. They must emphasize application design and provide compatible, beneficial technology to cultivate user trust and improve perception. The general public should be introduced and educate about the usage and features of mobile wallet services specially the age group of (20-29) and above 50 years via training, campaign and so on. The study's findings indicate that service providers must offer features aligned with customer preferences to ensure satisfaction, prompting customers to recommend the services to others because merely satisfaction does not lead to recommendation of the service. In addition, the study adds to the existing literature by stating the perceived security as the most significant enabler which encourage users to adopt mobile wallet services.

In summary, we can say that this study provides valuable insights about intentions of users for mobile wallet usage, and determine most significant enabler affecting intention to use, satisfaction and recommendation of mobile wallets. Service providers must increase awareness among users about mobile wallets advantages like, time saving, usefulness, security, self-efficacy and enjoyment. Marketers ought to leverage the functionalities of mobile wallets to promote digital payment systems in NCR region.

7. Limitations and Future research Directions

As with all research work, this study and its conclusion are not free from limitations. Firstly, the study included a limited sample of mobile wallet users from the NCR region, which constrains the generalizability of the findings. Consequently, future research may enhance the findings of this study by adopting a comparable research paradigm with a larger size of sample or by replicating the proposed research model utilizing various mobile computing technologies (mobile banking, mobile advertising, and online travel services). Secondly, our research has examined a robust but restricted array of enablers. Numerous more variables may serve as enablers to mobile wallet usage. The study's insights may be constrained as a result. However, future researchers can expand the list of enablers such as trust, social influence. At last, this study does not include any mediating and moderating variable, it is possible that future research could also look for this insight as well to gain more understanding and knowledge about the mobile wallet adoption.

References

[1] Ajmera, H., & Bhatt, V. (2020). Factors affecting the consumer's adoption of E-wallets in India: An empirical study. *Alochana Chakra J*, *9*(6), 1081-1093.

[2] Albort-Morant, G., Sanchís-Pedregosa, C., & Paredes Paredes, J. R. (2022). Online banking adoption in Spanish cities and towns. Finding differences through TAM application. *Economic Research-Ekonomska Istraživanja*, *35*(1), 854-872.

[3] Alnemer, H. A. (2022). Determinants of digital banking adoption in the Kingdom of Saudi Arabia: A technology acceptance model approach. *Digital Business*, *2*(2), 1-8.

[4] Alswaigh, N. Y., & Aloud, M. E. (2021). Factors affecting user adoption of e-payment services available in mobile wallets in Saudi Arabia. *International Journal of Computer Science & Network Security*, *21*(6), 222-230.

[5] Aprilia, C., & Amalia, R. (2023). Perceived security and technology continuance theory: An analysis of mobile wallet users' continuance intention. *Global Business Review*, *24*(1), 1-18.

[6] Ariffin, S. K., Abd Rahman, M. F. R., Muhammad, A. M., & Zhang, Q. (2021). Understanding the consumer's intention to use the e-wallet services. *Spanish Journal of Marketing-ESIC*, *25*(3), 446-461.

[7] Arora, N., Malik, G., & Chawla, D. (2020). Factors Affecting Consumer Adoption of Mobile Apps in NCR: A Qualitative Study. Global Business Review, 21(1), 176–196.

[8] Banerji, R., & Singh, A. (2022). An empirical study on consumer attitude and behavioural intention to adopt mobile wallet in India. *International Journal of Electronic Banking*, *3*(2), 83-99.

[9] Bartlett, M. S. (1954). A note on the multiplying factors for various χ 2 approximations. *Journal of the Royal Statistical Society. Series B (Methodological)*, 296-298.

[10] Bentler, P. M. (1982). Confirmatory factor analysis via noniterative estimation: A fast, inexpensive method. *Journal of Marketing Research*, *19*(4), 417-424.

[11] Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, *107*(2), 238.

[12] Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India–An empirical study. *International Journal of Bank Marketing*, *37*(7), 1590-1618.

[13] Chawla, D., & Joshi, H. (2020). The moderating role of gender and age in the adoption of mobile wallet. *foresight*, *22*(4), 483-504.

[14] Chawla, D., & Joshi, H. (2023). Role of mediator in examining the influence of antecedents of mobile wallet adoption on attitude and intention. *Global Business Review*, *24*(4), 609-625.

[15] Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of marketing research*, *16*(1), 64-73.

[16] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

[17] Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, *35*(8), 982-1003.

[18] Denaputri, A., & Usman, O. (2019). Effect of perceived trust, perceived security, perceived usefulness and perceived ease of use on customers' intention to use mobile payment. *Perceived Security, Perceived Usefulness and Perceived Ease of Use on Customers' Intention to Use Mobile Payment (December 16, 2019)*.

[19] Doll, W. J., Xia, W., & Torkzadeh, G. (1994). A confirmatory factor analysis of the end-user computing satisfaction instrument. *MIS quarterly*, 453-461.

[20] Elhajjar, S., & Ouaida, F. (2020). An analysis of factors affecting mobile banking adoption. *International Journal of Bank Marketing*, *38*(2), 352-367.

[21] Falk, R. F. (1992). A primer for soft modeling. *Ohio University of AkronPress*.

[22] Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: a perceived risk facets perspective. *International journal of human-computer studies*, *59*(4), 451-474.

[23] Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.

[24] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

[25] George, A., & Sunny, P. (2021). Developing a research model for mobile wallet adoption and usage. *IIM Kozhikode Society & Management Review*, *10*(1), 82-98.

[26] Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*, *40*, 414-433.

[27] Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. European business review, 31(1), 2-24.

[28] Hidayat-ur-Rehman, I., Ahmad, A., Akhter, F., & Ziaur Rehman, M. (2022). Examining consumers' adoption of smart wearable payments. *Sage Open*, *12*(3), 1-15.

[29] Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological methods*, *3*(4), 424-453.

[30] Huang, Y. C., Chang, L. L., Yu, C. P., & Chen, J. (2019). Examining an extended technology acceptance model with experience construct on hotel consumers' adoption of mobile applications. *Journal of Hospitality Marketing & Management*, *28*(8), 957-980.

[31] Kapoor, A., Sindwani, R., & Goel, M. (2023). Evaluating mobile wallet acceptance factors using best worst method. *International Journal of Process Management and Benchmarking*, *13*(4), 449-469.

[32] Liébana-Cabanillas, F., Molinillo, S., & Japutra, A. (2021). Exploring the determinants of intention to use P2P mobile payment in Spain. *Information Systems Management*, *38*(2), 165-180.

[33] Madan, K., & Yadav, R. (2016). Behavioural intention to adopt mobile wallet: a developing country perspective. *Journal of Indian Business Research*, *8*(3), 227-244.

[34] Madan, K., & Yadav, R. (2018). Understanding and predicting antecedents of mobile shopping adoption: A developing country perspective. *Asia Pacific Journal of Marketing and Logistics*, *30*(1), 139-162.

[35] Mohd Thas Thaker, H., Subramaniam, N. R., Qoyum, A., & Iqbal Hussain, H. (2023). Cashless society, e-wallets and continuous adoption. *International Journal of Finance & Economics*, *28*(3), 3349-3369.

[36] Nunnally, J. C. (1978). An overview of psychological measurement. Clinical diagnosis of mental disorders: A handbook, 97-146.

[37] Oliveira, T., Thomas, M., Baptista, G., & Campos, F. (2016). Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. *Computers in Human Behavior, 61*(1), 404–414.

[38] Ofosu-Ampong, K., Asmah, A., Kani, J. A., & Bibi, D. (2023). Determinants of digital technologies adoption in government census data operations. *Digital Transformation and Society*, *2*(3), 293-315.

[39] Omol, E. J. (2024). Organizational digital transformation: from evolution to future trends. *Digital Transformation and Society*, *3*(3), 240-256.

[40] Phan, H., Tran, M., Hoang, V., & Dang, T. (2020). Determinants influencing customers' decision to use mobile payment services: The case of Vietnam. *Management Science Letters*, *10*(11), 2635-2646.

[41] Pitafi, A. H., Rasheed, M. I., Kanwal, S., & Ren, M. (2020). Employee agility and enterprise social media: The Role of IT proficiency and work expertise. *Technology in Society*, *63*, 101333.

[42] Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, *88*(5), 879-903.

[43] Prastiawan, D. I., Aisjah, S., & Rofiaty, R. (2021). The effect of perceived usefulness, perceived ease of use, and social influence on the use of mobile banking through the mediation of attitude toward use. *APMBA (Asia Pacific Management and Business Application)*, *9*(3), 243-260.

[44] Rahayu, R. (2022). Factors That Influence the Behavioural Intention to Use E-Payments in Indonesia. *Ekonomis: Journal of Economics and Business*, *6*(1), 116-125.

[45] Reichheld, F. F. (2003). The one number you need to grow. *Harvard business review*, *81*(12), 46-55.

[46] Revathy, C., & Balaji, P. (2020). Determinants of behavioural intention on e-wallet usage: an empirical examination in amid of covid-19 lockdown period. *International Journal of Management (IJM)*, *11*(6), 92-104.

[47] Saha, P., & Kiran, K. B. (2022). What insisted baby boomers adopt unified payment interface as a payment mechanism?: an exploration of drivers of behavioral intention. *Journal of Advances in Management Research*, *19*(5), 792-809.

[48] Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. psychology press.

[49] Shankar, A., & Datta, B. (2018). Factors affecting mobile payment adoption intention: An Indian perspective. *Global Business Review*, *19*(3), S72-S89.

[50] Sharma, S. K., & Mishra, A. (2022). Enablers and Inhibitors of Mobile Payments in Rural India: a Dual-Factor Theory Perspective. *Information Systems Frontiers*, 1-17.

[51] Siagian, H., Tarigan, Z. J. H., Basana, S. R., & Basuki, R. (2022). The effect of perceived security, perceived ease of use, and perceived usefulness on consumer behavioral intention through trust in digital payment platform (Doctoral dissertation, Petra Christian University).

[52] Singh, N., & Sinha, N. (2020). How perceived trust mediates merchant's intention to use a mobile wallet technology. *Journal of retailing and consumer services*, *52*, 1-13.

[53] Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*, *50*, 191-205.

[54] Sunny, P., & George, A. (2018). Determinants of behavioral intention to use mobile wallets--a conceptual model. *Journal of Management (JOM)*, *5*(5), 52-62.

[55] Tajvidi, M., Richard, M. O., Wang, Y., & Hajli, N. (2020). Brand co-creation through social commerce information sharing: The role of social media. *Journal of Business Research*, *121*, 476-486.

[56] Talwar, S., Talwar, M., Kaur, P., Singh, G., & Dhir, A. (2021). Why have consumers opposed, postponed, and rejected innovations during a pandemic? A study of mobile payment innovations. *Australasian Journal of Information Systems*, *25*(1), 1-27.

[57] Ullman, J. B., & Bentler, P. M. (2012). Structural equation modeling. *Handbook of Psychology, Second Edition*, *2*.

[58] Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS quarterly, 425-478.

[59] Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178.

[60] Wang, Y., & Yu, C. (2017). Social interaction-based consumer decision-making model in social commerce: The role of word of mouth and observational learning. *International Journal of Information Management*, *37*(3), 179-189.

[61] Xu, F., & Du, J. T. (2018). Factors influencing users' satisfaction and loyalty to digital libraries in Chinese universities. *Computers in Human Behavior*, *83*, 64-72.