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ADOPTION OF MOBILE PAYMENT SYSTEM: A STUDY ON MOBILE WALLETS

Rana Nikita, Balospura Bakarali

Student, Shri Jairambhai Patel Institute of Business management, Gandhinagar, Gujarat, India.

Student, Shri Jairambhai Patel Institute of Business management, Gandhinagar, Gujarat, India.

Abstract

This study explores the factors influencing the adoption of mobile payment systems. Utilizing a comprehensive framework that examines Perceived usefulness, Perceived ease of use, Perceived security, social influence, attitude, reward, personal innovativeness and compatibility. The research employs quantitative methods to analyse user perceptions and behavioural intentions. The study used quantitative research methodology and using non-probability sampling technique 277 samples were collected from users of mobile payment in Ahmedabad and Gandhinagar. The findings reveal that Perceived usefulness, Perceived ease of use, Perceived security, social influence, attitude, personal innovativeness significantly positively impact users' willingness to adopt mobile payments, while rewards and compatibility do not show significant effects. The model demonstrates a strong explanatory power, accounting for 83.3% of the variance in users' intentions to use or continue using mobile payment systems. These insights highlight the critical role of practical and social factors in fostering digital payment adoption and provide valuable guidance for businesses and policymakers aiming to promote contactless transactions.

Keywords: *Perceived usefulness, Perceived ease of use, Perceived security, social influence, attitude, personal innovativeness, Mobile payment system*

INTRODUCTION

The high spread of digital technology has made a tremendous impact on financial transactions across the globe and as a result more people have resorted to Mobile Payment System (MPS) like e-wallets (Ramayanti et al., 2024) . The new platforms provide recipients with easy, fast, and safe ways of executing financial transactions that do not require the use of conventional cash-based payments. Most recent studies allude to a few variables that take central stage with regards to the intention of user adoption and continuation of using mobile wallet, including Perceived Usefulness (PU), Perceived ease of use (PEOU), Perceived security (PS), Social Influence (SI), and Personal Innovativeness (PI) (Prasad & Arivazhagan, 2024).

The studies that were performed in the Indian environment single out the idea that users positively perceive all these aspects and the acceptance of MPSs is at a reasonable level. The Attitude (ATT) to mobile wallets is rather positive, and majority of the consumers do admit its profits and are ready to use it quite often (Zhang et al., 2022). Moreover, SI is an important variable of adoption with the support of friends, family, and influential persons having a significant influence on positive intentions towards the use of mobile wallets (Ryan et al., 2011). Substantial support has been earned through empirical evidence that PU and PEOU have a substantial impact on the intention to adopt (IA) mobile payments and statistical analysis shows a strong dissimilarity amid PU, PEU, and behavioural intentions (Lady et al., 2024). Though security is an issue to some, service providers are putting more emphasis on this so as to generate trust among consumers. Altogether, the knowledge of these determinants is vital to the businesses and policymakers eager to improve the digital financial inclusion and the popularization of mobile payment products (Liébana-Cabanillas et al., 2024).

This research paper emphasizes the need to adopt a holistic approach where the technological factors, individual factors, and social factors should be taken into consideration to enable future expansion of the mobile wallet use. With the dynamism in the terrain of digital payments, it is important to discover and counter the perception and concerns of the consumers to continue with their usage. The main variables that will be considered are the variables of PU that measures the perception that users desire mobile wallets in conducting transactions and saving time. PEU indicating the ease of using mobile payment applications and PS, but the ease of mobile wallets is perceived to be safe and secure. Further, SI evaluates the degree of influence of friends, family, and social networks in having or not having an effect on users' willingness to mobile payments. Other variables are Compatibility (C) which looks at the C of the technology real to the day-to-day routines to which the users are used to, Rewards (R) which looks at the incentives offered in using the technology and the PI in IT which looks at the personal inclinations of the individuals to adopt new technologies. As dependent variables, the ATT towards the system and general behavioural intentions to use or reuse mobile wallets are used. The comprehensive study will reveal the subtle analysis of the combined effect of these wide arrays of factors, in comprehending the user behaviour with regard to mobile payment application

LITERATURE REVIEW

2.1 Theories

Technology Acceptance Model (TAM) is used in this study as it focuses more on the two fundamental constructs of PU and PEU as criteria that determine the intentions and ATTs of the users in adopting technology (Rogers, 2001). The model suggests that the usefulness and ease of operation of a system increases the willingness of the user to accept and extensively use it. In the present project, the beneficial role of PU and PEU on system adoption according to the principles of TAM supports the findings of the previous research on the acceptance of mobile payments (Kaur, Dhir, Singh, et al., 2020). Additional constructs have also been embedded in this current study such as:

2.2 PU

A key construct in TAM is PU, which refers to whether a person thinks that the use of a certain technology would improve his or her performance or would make the accomplishment of a task easier. it is one of the significant variables in the algorithm of TAM (Enu-Kwesi & Opoku, 2020). PU in respect to MPS is the feeling among the users that the mobile wallets simplify, speed up and streamline the process of transacting money, which saves on time and energy in the end (Kaur, Dhir, Singh, et al., 2020). As per O' Connor et al. (2016), the use of PU, in this case, affects the intention of users to adopt new technology in a significant way. When the user can see direct utility as in the case of convenience and efficiency a user will be likely to accept and be willing to use it. Investigations included in the project indicate that the mean ratings of PU are high and the user agrees that mobile payments are useful in making purchases, which confirms earlier studies that focused on PU being an important predictor variable in adoption of technology.

Bajwa et al. (2025), carried out a cross-national study to investigate the variables affecting online payment platforms' (AOPP) uptake and satisfaction in Bangladesh and India, particularly with regard to e-wallets and UPI systems. The study concentrated on three important constructs Perceived Trust (PT), PEOU, and PU using an expanded TAM. Information was gathered from 199 users who transacted digitally in both nations. To examine the proposed correlations, the researchers used Structural Equation Modelling (SEM). The results show that AOPP adoption is strongly impacted by PT, PEU, and PU, which in turn has a beneficial impact on customer satisfaction (CS). In order to improve digital payment systems in the South Asian setting, service providers and governments can benefit greatly from the insights this study provides.

H1: There is a positive impact of PU on Adoption of MPS

2.3 PEOU

The concept of PEOU is one of the core elements in the study of technology adoptions that emerged as a subordinate of the TAM created by Davis (1989) (Xue et al., 2024). It can be called how confident an individual is that the employment of this or that system or technology will not be associated with any efforts. PEOU in the case of MPSs reflects the perception of the users on the complexity as well as ease of use and the activity involved during the usability of MPSs (Hameed et al., 2024). The significance of the PEOU has been highlighted by many researchers in terms of the impact of that construct on the behavioural intentions of users when considering the adoption of new information technologies. The first confirmatory aspect on PEOU was witnessed in the work of Davis (1989) that saw this practice as having a direct influence on PU and behavioural intention making it one of the important determiners of technology acceptance (Singh et al., 2020). Studies done have always shown that perceived ease of use has positive effect on the intention towards MPSs. Pham et al. (2023) identified that the user preferences increased the possibility of using mobile wallets when being provided with an impression that they are convenient to learn and use. On the same note, PEOU was March found important in influencing the perceived utility of users and the intention to use the system in smartphone commerce. PEOU is normally measured in accordance with user perceptions about the interface, navigation of the system, transaction processes as well as convenience. Items usually contain such statements as it is easy to use system, interaction with system is comprehensible, easy to know how to operate the system and they measure the perceived effort of the user (Menon & Shilpa, 2023). Perceived ease of use can be affected by several factors which could be included as quality of system design, clarity of user interface, C with previous knowledge and experience of the user. An increase in usability and ease of use in the system as well as interface is revealed to have remarkable improvements on PEOU, hence boosting adoption (Sadiq et al., 2025).

H2: There has a positive impact of PEOU on Adoption of MPS

2.4 PS

The perception of mobile wallets with respect to security is hardly of less influence on acceptance as the literature review supports that the concept of security is a major determinant in adoption of digital payment modes. When users believe that a certain system is secure, they are ready to use it (Sahi et al., 2021). Almogren et al. (2024), carried out a study to investigate Mumbai consumers' behavioural intentions about the adoption of digital wallets. The study concentrated on two main concepts: perceived risk and PU. Perceived danger was determined by users' concerns about losing money during digital transactions and the possibility of installing fraudulent apps or links, whereas PU was sub-factored by simplicity and convenience, time savings, and round-the-clock availability. Structured questionnaires were used to gather information from 297 respondents in Mumbai who represented a range of demographic groups. The results of the study, which used chi-square and percentage analysis, showed that users' behavioural intentions to embrace digital wallets are significantly influenced by PU, especially ease and convenience. On the other hand, it was discovered that users' adoption levels were adversely impacted by perceived danger. The psychological and

practical variables impacting the adoption of digital wallets in an urban Indian context are better understood, which also provides insightful information for policymakers and digital payment providers.

The PS is critical towards acceptance and adoption of MPSs. It is the feeling of the users about the safety and security of the system in which they can send and receive the transactions without misusing the personal and financial information and also without fraud. The PS plays a crucial role in alleviating the apprehensions of the users, developing trust, and promoting unswerving use of the mobile wallets (Handoyo, 2024). When it comes to service providers, their focus should not only be on introducing strong security features but also letting users know how safe it is to use their services, which will promote adoption (Kaur, Dhir, Bodhi, et al. 2020).

H3: There has a positive impact of PS on Adoption of MPS

2.5 SI

The impact of peer and social environment are considered, since this has been proved as significant results, that confirm the Theory of planned behaviour and SI theories which discussed the concerns of societal norms and the behaviour of other peers in technology adoption. The usage and adoption of MPSs is important depending on SI (Holden & Karsh, 2010). It can be defined as the influences of peers, family, friends and the social network in getting the individual to embrace the new technology. It is especially when people note that persons who mean a lot to them use and recommend the use of mobile wallets that people tend to have a more positive view about using the system themselves. Empirical research provides evidence that SI has a major impact on the behavioural intention of the users (Prasetyo et al., 2025). As an example, people are most likely motivated by the positive ATT and behaviour of the people around them which increases their confidence and perceived validity of the technology. The impact in this effect is exceptionally strong in cultures, which believe in communal validation and social acceptance.

Unified Theory of Acceptance and Use of Technology (UTAUT) is one of the theoretical frameworks that highlights SI as one of the most important factors in influencing the intentions towards the use of technology (Xue et al., 2024). The integration of SI in the process of adoption implies that the tools of promoting the use of mobile payments using the effect of the social proof and peer recommendations should be effective. Overall, SI is an important construct that occurs during diffusion of mobile payment technologies by influencing the perceptions and intentions of users by social validation and peer support. Knowing how it works can assist the developers and marketers to make interventions more socially appealing so that adoption is improved (Kabir et al., 2022).

H4: There has a positive impact of SI on Adoption of MPS

2.6 ATT

Another factor is user ATT towards mobile wallets that power the theory that positive ATT will enable greater adoption rate. ATT has been a critical concept in determining the intention to adopt MPSs. It indicates the general assessment taken by an individual about the usage of the technology as a positive or negative experience. Positive ATT towards mobile wallets means that a user perceives this system as useful, convenient, safe, and compatible with his/her values, which highly determines his/her readiness to adopt(Gupta et al., 2024). The conclusions based on Prastiawan et al. (2021), indicate that a positive and significant impact of the ATT is present on mobile payment acceptance. The more convinced the users that mobile payments have certain benefits and that they are convenient, the more they tend to incorporate this system in their everyday lives. This positive ATT does not only drive initial adoption but also support continuous usage. Many determinants of technology acceptance are interdependent such as the relationship between PU, ease of use, security, and social factors which often are instrumental in the formation of ATT. Positive ATT can be achieved by through user education, ensuring security confidently as well as by mentioning the benefits to the users which will make service providers be able to improve user engagement as well as ensure more people use them commonly (Enu-Kwesi & Opoku, 2020). ATT is a central mediator between perception and behavioural intentions of users and thus, a key area of interest of both researchers and practitioners who need to focus on how to make mobile payments more popular (Sharma et al., 2024).

H5: There has a positive impact of ATT on Adoption of MPS

2.7 PI

Insignificance of PI is in line with literature, which may indicate that more innovative and early adopters' users may adopt new technologies early, but the meaning of PI depends on the context (R.Sinthiya,2023). Individual innovativeness is a considerable factor in determining the receptiveness of new technologies such as the MPS by people. It is a desire by an individual to be an early adaptor or explorer of new information technology based on their ambit to test new innovative solutions and their interest on how to remain up to date in the sphere of technological innovations(Wang et al., 2023). It has been empirically proved that PI of IT influences the adoption of mobile payment positively. Customers who exhibit great PI are more likely to test new ways of payment and see less risk or less hurdle on accepting changes associated with technology and this increases their probability of adopting them. Success in PI tends to depend on determination to know more about emerging technologies, innovative behaviour among peers, as well as being keen in exploring new products. Promoting innovativeness among individuals via specific marketing strategies and educational activities can therefore hasten the adoption and spread of mobile payment mechanisms to wider groups of people(Truc, 2024). In general, individual innovativeness plays a significant role as a personal characteristic that helps to be an

early adopter and contribute to long-term interest in new digital payment solutions (Kulothungan, 2023).
H6: There has a positive impact of PI on Adoption of MPS

2.8 C (compatibility)

One of the eminent factors that have impacted into the adoption of MPS is C. It can be defined as the extent of how a new technology fits in with the current lifestyles, routines and shopping habits of an individual. When mobile payment method is understood to fit with the daily habits, interests and ideals, a user is likely to employ it. Findings in research have revealed that C positively influences mobile payment uptake (Iqbal et al., 2018). The users will like their systems which are used with ease to incorporate in their daily lives, like visiting restaurants, retail stores or cafes that they use all the time and need to use to pay. Ability to match with other systems lowers the perceived costs and resistance due to changing to new ways of payment thereby promoting the adoption (Hilale & Chakor, 2024).

The purpose of this study was to investigate Ahmedabad consumers' opinions about e-wallet use. Usage frequency, safety concerns, service quality, simplicity of use, preferred devices for transactions, average monthly spending, most-used applications, and types of transactions made via e-wallets were among the many criteria that were the focus of the study. The report also emphasizes how well-informed consumers are regarding e-wallets and how they are being adopted (Sinthiya, 2024). The study's conclusions help e-wallet businesses better understand consumer behaviour and market penetration. It also highlights how e-wallets are thought to be safer than cash because only the rightful owner may access them using a password. E-wallets are software that can be downloaded to computers or smartphones with the goal of facilitating cashless transactions and encouraging paperless payments (Belmonte et al., 2024).

Moreover, the C factor emphasizes the point that the more well-adjusted a MPS is to the lifestyle of a user, the greater are the chances that a user is going to use it in the long run. The more motivated customers are to use the system, the more they realize that it is a logical continuation of their shopping and purchasing habits, the stronger the long-term adoption of the system (Omarini, 2018). In a nutshell, the C of the MPSs with the routines and lifestyles of the users is another crucial step towards accepting and maintaining the use of the mobile payments systems (Rahman et al., 2024).
H7: There has a positive impact of C on Adoption of MPS

2.9 R (Reward)

Many studies failed to bring R to play largely but other literatures attribute it as a motivational aspect although it may be specific or weak in comparison to its fellow important aspects namely PU and security. Rs play a significant role in the decision of consumers on whether to embrace and use the MPSs or not. The common Rs are discounts, cashback promotions, or any other good or service that makes the use of mobile wallet add value (Liébana-Cabanillas et al., 2024). The users get more motivated to use the system when they get tangible Rs as they sense a benefit of using the system. The data shows that Rs positively but comparatively little influence the adoption of mobile payments. As an example, benefits such as promotions have high preference amongst users and the survey score based on the interest of the user towards promotions offered by mobile wallets was an average of about 4.07 out of 5. Further, a relevant percentage of respondent's state that they are much more willing to use a mobile wallet in case of promotions, which confirms the idea that Rs can be one of the most important driving factors towards adoption (Sinthiya & Kulothungan, 2021). Nevertheless, statistical analysis indicates that Rs do not exert any direct significant influence on the utilization of systems since the values of beta and p-values were very low and p-value extraordinarily elevated in some studies. This means that although Rs are powerful, they could just form part of secondary incentives when it comes to predicting mobile payment usages, as opposed to being a foremost determinant of such (Sinthiya, 2023). All in all, the use of attractive Rs has a potential to raise the number of involved consumers and promote initial and continued utilization of the MPSs through raising perceived utility and provision other advantages, thus, resulting in a higher adoption rate (Gnana, 2024).
H8: There has a positive impact of R on Adoption of MPS

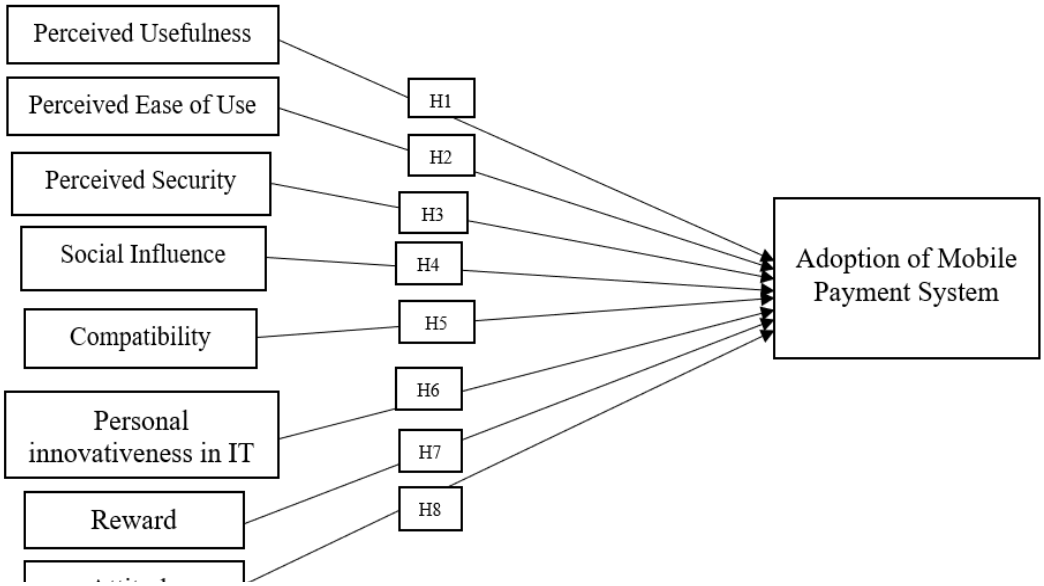

Fig:1-Conceptual Framework

RESEARCH METHODOLOGY

This paper uses quantitative methodology of research in examining the determinants of the adoption of MPS. It is designed in such a way that the association between different independent variables such as PU, PEOU, PS, SI, ATT, C, Rs and PI with the dependent variable that is, the intention to use or continue using mobile payments will be analysed systematically. The primary data was obtained using structured questionnaires that will be distributed to the respondents to gather their perceptions, ATTs and intentions of behaving in certain ways in relation to MPSs. The study collected data from a total of 217 respondents. The original number of respondents was 250, however the researcher removed some responses that contained inappropriate or not enough details in order to preserve only the pertinent data. Following data cleansing, 217 replies remained for examination.

The sample size provides a substantial basis for statistical analysis and validity of the findings. The sample was collected from areas with significant usage and acceptance of MPSs, most notably urban regions such as Ahmedabad and Gandhinagar. These locations are known for their technological adoption and financial activities, making them suitable for studying mobile payment adoption behaviours.

The questionnaire contains the statements based on the Likert, which are used to quantify the constructs such as PU, PEOU, PS, SI, ATT, C, R and PI. The study used the non-probability approach to sampling such as convenience or judgmental sampling to obtain the relevant responses, since the population already aware of mobile payments.

The statistical tools include regression analysis, ANOVA and hypothesis testing to interpret the correlation and magnitude of the different factors that affect adoption using SPSS software. The goodness of-fit of the model is evaluated to be about 83 percent, which is quite high, meaning that the independent variables account effectively in the variance observed in behavioural intentions of users. The variables such as PI, Rs, and ATT are identified, and hypotheses are developed to identify how they would affect adoption. These factors play an important role as indicated by the significant levels (p-values below 0.05).

Model validation methods are used in the study and ANOVA is used to check whether the regression model is highly significant and it was found that the relation between the variables and the dependent variable is highly significant. The methodology uses the combination of inferential statistics and descriptive statistics in a structured set-up, which enables the researchers to obtain the main determinants of mobile payment adoption, test their theoretical sensor and generate practical recommendations.

DATA ANALYSIS

Analysis data involves looking at, categorizing, and summarizing information in order to find relevant information and aid in decision-making. The process of explaining or making sense of data analysis results in order to determine their meaning and possible uses is known as data interpretation (Preacher & Hayes, 2004).

Demographic Variables

Table 4.1

Age	Frequency	%
Under 18	19	8.8
18-24	118	54.4
25-44	79	36.4
45 Or Older	1	0.4
Gender		
Male	115	53
Female	102	47
Other	0	0
Monthly Income		
Less than ₹20,000	46	21.2
₹20,000 - ₹49,999	101	46.5
₹50,000 - ₹99,999	57	26.3
₹1,00,000 or more	13	6
Occupation		
Student	44	20.3
Employed full-time	91	41.9
Self-employed	73	33.6
Other	9	4.2

(Source: Authors Calculation)

Table -4.2 Variables Enterssed/Removed

Model	Variables Entered	Variables Removed	Method
1	A, R, PI, PS, PEU, PU, C, SI[b]	-	Enter

(Source: SPSS output)

a. Dependent Variable: Intention to use/continued use intention

b. All requested variables entered

In order to determine what factors, influence people's intention to use or continue utilizing mobile payments, a number of elements were examined, according to the paper. Perceived security, perceived ease of use, PU, Rs, SI, C, ATT, and PIin IT are some of these aspects. All of these factors were incorporated into the model to observe their impact on users' choices. This implies that the study examined both technological and personal aspects to provide a comprehensive understanding of the elements that influence the adoption of mobile payments.

Table 4.3-Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.913[a]	.833	.826	1.09491

(Source: SPSS output)

According to the model summary, there is a strong correlation between the dependent variable, the intention to use or continue using mobile payments and the independent variables, which include ATT, Rs, PI in IT, perceived security, perceived ease of use, PU, C, and SI. A significant correlation is indicated by the R value of 0.913, and the R Square value of 0.833 indicates that these factors account for 83.3% of the variation in users' intentions. Even after adjusting for the number of variables, the model's strength is confirmed by the adjusted R Square of 0.826. This shows that the model does a great job of explaining the factors that affect the uptake of mobile payments.

Table 4.4-ANOVA[a]

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1241.336	8	155.167	129.433	.000[b]
Residual	249.356	208	1.199		
Total	1490.691	216			

(Source: SPSS output)

As demonstrated by the findings of the ANOVA, the overall model used to forecast the intention to use or continue utilizing mobile payments is statistically significant. Indicating that the association between the independent and dependent variables is not random, the significance value (Sig.) is.000, which is less than 0.05. Additionally, the model's good fit is demonstrated by its F-value of 129.433. Put simply, this indicates that the study's components such as ATT, incentives, and usability—collectively have a significant and significant influence on people's decisions to utilize mobile payments.

Table 4.5-Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients	t	Sig./P value
	B	Std. Error	Beta		
	-1.912	.685		-2.793	.006
PU	.200	.040	.298	5.020	.000
perceived ease of use	.178	.061	.163	2.911	.004
perceived security	.156	.052	.148	3.021	.003
SI	.178	.062	.178	2.858	.005
C	.005	.074	.004	.067	.947
personal innovativeness	.090	.046	.103	1.951	.052
Rs	.007	.037	.006	.178	.859
ATT	.126	.057	.127	2.206	.028

(Source: SPSS output)

The coefficients table shows which factors have a significant impact on the intention to use or continue using mobile payments. PU, Perceived Ease of Use, Perceived Security, SI, and ATT all have a significant positive effect, as their p-values are less than 0.05. This means users are more likely to adopt mobile payments if they find them useful, easy to use, secure, socially supported, and if they have a positive ATT toward them. C and Rs do not show a significant effect $p > 0.05$, and PIis borderline $p = 0.052$, suggesting it might have a weak influence. Overall, practical and social factors play the biggest role in mobile payment adoption.

DISCUSSION

This research investigates the factors influencing the adoption and continued use of MPSs, specifically focusing on mobile wallets in Ahmedabad and Gandhinagar. The hypotheses formulated focus on key determinants such as C, PI in IT (PI), R, ATT, PU, perceived ease of use, perceived security, and SI. The analytical results provide valuable insights into which factors significantly impact user behaviour and intention. The study reveals that C does not significantly influence the adoption of mobile payments ($\beta = 0.09$, $p > 0.05$), leading to the rejection of H1. This suggests that concerns about whether mobile wallets align with users' lifestyles or existing usage patterns are less critical in their decision-making process. Conversely, PI in IT also does not significantly impact adoption ($\beta = 0.052$, $p > 0.05$), indicating that a user's proclivity to adopt new IT-related products does not necessarily drive mobile payment usage in this context (H2). These findings suggest that other factors, such as perceived utility and security, overshadow the roles of C and innovativeness in this demographic. This could be due to widespread mobile device usage regardless of individual innovativeness or C perceptions. Rs do not have a significant impact on mobile payment adoption ($\beta = 0.007$, $p > 0.05$), indicating that extrinsic incentives are not primary motivators. However, ATT shows a significant positive effect ($\beta = 0.128$, $p < 0.05$), supporting H4. Users with favourable ATTs towards mobile wallets are more likely to adopt and continue using these services. The positive ATT reflects user's overall perceptions and acceptance of mobile wallets, driving adoption more strongly than tangible Rs. Therefore, marketing strategies should focus on shaping favourable perceptions rather than offering incentives alone. The analysis confirms that PU ($\beta = 0.236$, $p < 0.01$), perceived ease of use ($\beta = 0.265$, $p < 0.01$), perceived security ($\beta = 0.213$, $p < 0.01$), and SI ($\beta = 0.215$, $p < 0.01$) significantly impact the adoption of MPSs. These results underpin the importance of ensuring that users perceive the system as beneficial, straightforward, safe, and socially endorsed. Enhancing perceived benefits and security features, simplifying the user experience, and leveraging social networks can promote wider

adoption. For instance, recommendations from peer groups and visible usage by friends and family act as catalysts for new users. The ATT shows a significant positive relationship with behavioural intention, with high mean scores indicating most respondents hold favourable views. The strong correlation ($R = 0.913$, $R^2 = 0.833$) between the factors and intention suggests that ATTs strongly predict future usage and continued use. Interventions aimed at improving user perceptions can significantly increase the likelihood of ongoing usage, emphasizing the importance of positive user experience and trust-building measures. The regression model demonstrates high explanatory power with an adjusted R^2 of 0.826, indicating that approximately 83% of the variance in users' intention to use or continue using mobile payments can be explained by these factors. The ANOVA results confirm the overall significance of the model. The findings confirm that users' perceptions of usefulness, ease of use, security, and SI play pivotal roles in the adoption of MPSs. ATT towards the system further reinforces this behaviour. Interestingly, constructs like C, personal innovativeness, and R do not exhibit significant impacts within this context.

5.1 Theoretical Implications

This study contributes to theoretical model of technology adoption; more precisely in the field of MPSs, since it has empirically confirmed and extended the already proven model like the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Suali et al., 2024). The analysis shows that the core constructs such as the PU and the perceived ease of use are central determinants of the intentions to behave with respect to mobile payment adoption which stands in line of the original assertions of TAM (Yousef, 2024).

The study has made a significant input, in that perceived security as a relevant factor affecting users' acceptance has been incorporated and validated. The substantial beneficial role that the perception of security has clarifies previous studies that highlight the importance of trust and safety perceptions, particularly in digital financial services, which entail security perceptions about them that may inhibit their usage (Shah & Rathod, 2022). This highlights the adding of security to the TAM as a vital construct, which is consistent with the current research proposals to adopt security-sensitive technology acceptance model. Moreover, the aspect of SI proved to be a major forecaster, focusing on the overall influence of the social setting on ATT formation and behavioural intents. That is in line with the UTAUT model that emphasized social factors like peer and social networks influence as decisive factors. The results describe that the process of SI, peer recommendations, and user experiences discussed in the social networks may produce a significant effect on the process of decision-making (Wang et al., 2023).

Interestingly, the research demonstrates that C and Rs have irrelevant effects regarding mobile payment adoption in such scenario. Such a deviation in the proposition creates a hypothesis where in some environments or demographic, criteria such as alignment with current habits, or external gratification, can be of lesser importance rather than inner feelings of security and utility(Belmonte et al., 2024). This lesson teaches that it is necessary to contextualize theoretical models; not all assumptions about determinants can be considered to be of general validity across different settings, which creates a purported necessity to hone and customize them to particular user groups(Suali et al., 2024).

The minimal impact of PI in IT on adoption behaviour indicates that individual openness to new technology may not be as critical in this context, possibly due to the pervasive familiarity with digital technology or a focus on safety concerns. This challenges traditional views and suggests that in certain markets, the emphasis should be on improving perceived security and utility rather than solely targeting early adopters or tech-savvy users (Truc, 2024).

Methodologically, this research underscores the importance of using robust statistical tools such as regression analysis, Beta-coefficients, and p-values to validate the significance of determinants. It enriches the theoretical discourse by demonstrating that factors influencing mobile payment acceptance are multifaceted and that their significance can vary based on contextual variables such as user demographics, technological maturity, and cultural factors (Rahman et al., 2024). The non-significance of the influence of PI in IT on adoption behavior shows that the individual readiness to using new technology is not such an important factor in this case and it is perhaps because everyone is so accustomed to using digital technology or because there is a feeling of priority given to safety issue. This disrupts conventional opinion and the reason towards having the focus on enhancing the perceived security and utility where the focus should not be on the early adopters or the tech-savvy consumer but focusing it on specific markets(Kaur, Dhir, Bodhi, et al., 2020).

5.2 Practical Implications

This research will be very helpful to the practitioners who include financial institutions, mobile service providers, policymakers and technology developers in their quest to promote the usage of MPSs. The irresistible factor of felt security emphasizes the necessity of integration of such high-level features like encryption, biometric signature, and fraud prevention and direct communication on these security mechanisms on the provider side (O' Connor et al., 2016). The most important thing is to build the trust. this allows users to be certain that the security of their financial data and transactions is provided. Open communication regarding security measures can foster trust and even eliminate needless fears, which has direct impact in terms of the adoption rate. The high level of the PEOU implies that mobile payment apps really need to be simplistic. This entails simple interfaces, good guidelines and available customer services. Onboarding is easy, there are simple steps of making transactions and navigation is very fast which helps in creating positive experiences to the users thus, resulting in continued usage and referral of others

(Yousef, 2024). SI is a big factor that can result in adoption, it is therefore advisable to incorporate social factors, referral programs, testimonies as well as social sharing through the social media. When pleased customers are convinced to tell their stories, they become the source of organic growth through the power of inspiration and doubt-related trust among the individuals within their social networks. This can be also enhanced with the connecting with the community leaders or influencers. The insignificance of Rs suggests that non-intrinsic offerings might not hold water as sufficient motivation in the case in point. A perhaps more effective way is to focus on the innate advantages, like the ones caused by convenience, speed, and security (Sadiq et al., 2025). Such inherent benefits would be more convincing to entice users to embrace and continue using mobile payments through educational campaigns. As ATTs have great effects on behavioral intentions, this should be aimed at creating good perceptions. It may be done with the help of demonstrations, success stories, and creating specific awareness campaigns that will redefine the ATT to mobile payments as staying safe and useful. Interventions, such as tips about how to use insecurely; promises about data safety, and alerts in real time might prove that exercises are secure, basing confidence, lesser perceived risks, and adoption on demographic groups that seem particularly fearful of security(Lady et al., 2024). It can benefit by gathering regular feedback of a user, understanding trends of transactions and track perceptions to adjust the service offering. Incorporation of new issues or desires will keep the services at the expected level, hence stable use. One of the ways to encourage adoption is to have policymakers to facilitate adoption through establishing interoperable standards, encouraging digital financial literacy and regulatory frameworks that safeguard consumers and encourage innovation. Such initiatives have made such a climate of trust and security which is instrumental to mass acceptance (Handoyo, 2024).

CONCLUSION

The theoretical contribution obtained by the study explains vital determinants such as the extent of PU, perceived ease of use, perceived security, and SI that motivates adoption of mobile payments. The comparison of external influences such as Rs and C with a minor impact on long-term behaviour stresses the importance of position-specific approaches. In practice, service providers can divert their attention to the improvement of security, simplification of user interfaces, utilization of SI, and support of positive ATTs to make adoption faster. These factors should be carefully understood to enable the stakeholders develop effective interventions that would result in the sustainable development of the mobile payment ecosystems and thus reshaping the digital financial inclusion and the consumer behaviour.

6.1 Limitations and future scope

Firstly, the research is carried out on a rather small group of 217 respondents, all of whom belong to a given geographical area. Such a small and local sample is not likely to be a representative of the experiences of diverse people, their views, and their exploits, in particular, in terms of regions, cultures, and social backgrounds. Consequently, the results could not be applied outside the region of study. Secondly, the study is cross-sectional that takes the measurements at one point in time. The method only limits the possibility to see the development of the perceptions, ATTs, and usage intentions in a certain time frame that is vital considering the fast pace of technological improvement and market dynamics. It might be interesting to trace the popularity and long-term adoption of mobile payments using a longitudinal study. Thirdly, despite the study taking into consideration a full list of variables, including usefulness of perception, ease of usage, security, and SI, there are other important variables, such as digital literacy, cultural impact, economic status and access to technology, which were not reviewed. These elements can also restrict the comprehensiveness of the model and ability to explain it. Also, information gathering via surveys can be biased in response, i.e. the respondent may tend to present themselves in a more desirable way, thus distorting the accuracy level of the findings. Finally, the results are less durable over time, given that mobile payment technologies and the market change rapidly; thus, it will be necessary to conduct research about the topic regularly to adjust to the changes in the field of technology and behavioural patterns. In the future, the study can be further extended by surveying greater and more heterogeneity of people in various regions or countries so that the findings may have a wider generalization. The inclusion of different cultural, socioeconomic factors will make the process of adopting mobile payment in the global arena much deeper. It is also important to conduct longitudinal studies in order to monitor how the perceptions and the behaviour of the users will modify themselves over the time, which is to be ultimately used to develop some ideas to promote long-lasting use. In addition, new research needs to incorporate more factors like digital literacy, financial institution trust, regulation, and technology infrastructure so as to gain more information concerning the barriers and driver regarding adoption. The investigation of external influences, such as governmental policies, security issues, technologies (blockchain and biometric authentication), and so forth can bring some insight into how these factors affect the behaviour of the consumers. A comparison of various mobile payment platforms to determine the strengths and the weaknesses of various platforms could also be undertaken by researchers and offer a good advice to the providers. The user decision-making process can be enhanced with incorporation of behavioural and psychological aspects, including the risk perception and habitual behaviour. Also, it may be beneficial to determine the impact of both educational campaigning and awareness programs to develop more effective methods to encourage adoption. All in all, the broadening of future studies in these areas will aid in the more comprehensive explanation of mobile payment adoption and the easing of solutions to expanding digital financial inclusion.

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