

Digital Wallet Adoption and Financial Inclusion: A Behavioral Analysis of User Perception & Financial Access

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Abstract:

The rapid advancement of Financial Technology (FinTech) has transformed the financial services sector, with digital wallets emerging as one of the most widely used digital payment solutions. In India, the increasing use of smartphones, affordable internet connectivity, and government initiatives such as Digital India, demonetization, and the Unified Payments Interface (UPI) have accelerated the adoption of digital wallets and promoted digital financial transactions. Despite this growth, the factors influencing users' continued adoption and their contribution to financial inclusion require further investigation.

Existing studies have primarily focused on technology adoption, while limited attention has been given to behavioral factors such as trust, perceived risk, user habits, satisfaction, and post-adoption challenges that influence continued digital wallet usage. This study aims to examine the level of trust among users, analyse the influence of perceived risk, habits, and satisfaction on digital wallet usage behavior, compare adoption patterns across different demographic groups, identify post-adoption challenges, and evaluate the impact of security concerns and fraud experiences on continued digital wallet usage and financial inclusion. The data will be analysed using correlation analysis, regression analysis, and ANOVA.

The findings are expected to demonstrate that trust, positive user behavior, and satisfaction encourage digital wallet adoption, whereas perceived risk, security concerns, and fraud experiences hinder continued usage. The study is also expected to show that increased digital wallet adoption improves financial access and contributes to greater financial inclusion. The findings are expected to provide useful insights for policymakers, financial institutions, and FinTech service providers in developing secure, user-friendly, and inclusive digital payment systems.

Keywords: Digital Wallet Adoption, Financial Inclusion, User Perception, Financial Access, Trust, User Behavior, Security Concerns.

Introduction:

Technological advancements have transformed the financial sector, making financial transactions faster,

easier, and more convenient. Digital wallets have emerged as an important innovation, enabling users to make payments, recharge mobile phones, pay bills, shop online, and transfer money through smartphones (Arner et al., 2016; Dahlberg et al., 2015).

In India, digital wallet adoption has increased due to initiatives such as demonetization, the introduction of UPI, growing smartphone usage, affordable internet access, and the COVID-19 pandemic (Government of India, 2017; NPCI, 2024; RBI, 2024). Digital payments have expanded beyond urban users to include students, small retailers, street vendors, and rural customers, improving the accessibility and convenience of financial services.

Digital wallets also contribute to financial inclusion by providing convenient and affordable access to digital financial services. However, factors such as limited digital literacy, lack of smartphones and internet access, security concerns, online fraud, and lack of trust may restrict their adoption (World Bank, 2022; Demirgüç-Kunt et al., 2022). User behavior, including convenience, ease of use, trust, security, satisfaction, and habits, plays an important role in determining digital wallet adoption (Venkatesh et al., 2003; Oliveira et al., 2016).

Therefore, this study examines the behavioral factors influencing digital wallet adoption, users' perceptions and concerns, and the role of digital wallets in promoting financial inclusion. The findings can help banks, digital payment providers, and policymakers develop safer, more accessible, and user-friendly digital financial services.

Research Objectives

- To study the level of trust among users towards digital wallet services.
- To examine the influence of perceived risk, user habits and satisfaction on digital wallet usage behavior.

Review of literature:

- Sun (2018) chapter illustrates how the provision of digital financial services can promote financial inclusion but simultaneously address associated risks. Through the use of the Ant Financial case study, it is evident that technologies like mobile payment solutions and big data make financial services available to people from underserved regions. In addition, the study demonstrates that although innovations increase efficiency and convenience for users, they pose certain risks, especially concerning data protection and regulation.
- (Agarwal, 2020) This research examines the effect of FinTech on the evolution of the traditional financial system. Through the finance sector's digitization by such tools as mobile phones and internet technology, finance become affordable and easily accessible. According to the study, technologies play a important role in reducing transactions costs and increasing the effectiveness of transactions. Nevertheless several challenges hinder the process, including mistrust and technological limitations.
- (Bala, 2022) This research focuses on how digital transformation is changing the field of financial services by means of technologies such as e-wallets and digital payment solutions. It emphasizes the

fact that such technologies bring improvements in terms of efficiency, costs savings, and increased accessibility. What is more, the research identifies customer experience and trust as the major aspects affecting adoption. Moreover, challenges associated with cybersecurity threats and regulation problems have been identified.

- The research conducted by Morgan (2022) assesses how FinTech has contributed to increased financial inclusion in India and Southeast Asia using the use of technologies such as e-banking and online platforms. It is noted that the adoption of digital finance makes people have greater access to such services as saving, borrowing, and insurance products. It is important to note that the contribution of FinTech varies from country to country depending on certain factors.
- (Gupta, 2023) In this study, the significance of digital payments in terms of financial inclusion is being discussed. Digital payment options such as e-wallets increase accessibility to financial services for people who do not have bank accounts or access to any other type of financial services. This study explains that digital payments provide increased speed and safety in financial transactions and enhance economic involvement as well.
- (Shrestha, 2023) Nepali folklore is a tradition that has gone through many transformations. The reason behind this is modernization and development in technology. Some old traditions have started disappearing, while some others have been able to survive in newer forms. In spite of all this, Nepali folklore continues to play a very crucial role in maintaining our cultural identity and bringing generations together.
- (Nutjamrat, 2024). The paper considers the influence of digital wallets on the financial world of today and public policy. Digital wallets allow people to do fast, easy, and convenient transactions. It is important to understand that the adoption of digital wallets requires strong governmental support and a good infrastructure system. Digital wallets allow improving financial inclusion and stimulating economic development.
- (Sille, 2024) This paper is focused on exploring the impact of fintech and blockchain technologies on the financial industry. Specifically, it should be noted that they allow to perform financial operations and comfortable. The study also shows that the use of blockchain makes transaction more transparent and reliable. At the same time, this technology allows getting information about various problems associated with this process.

Research Gap

- Limited research on user trust towards digital wallet services.
- The impact of perceived risk and security concerns on wallet usage is underexplored.
- User habits and satisfaction influencing continued usage need more attention.
- Existing studies focus more on adoption than actual usage behavior.

Hypothesis

H₀₁: There is no association between trust, perceived risk, user habits, satisfaction, and digital wallet usage

behavior.

H₁₁: There is an association between trust, perceived risk, user habits, satisfaction, and digital wallet usage behavior

Research Methodology:

Research Design: Convenience Sampling Design

Nature of data: Primary

Sample size: 182 respondents

For analysing the influence of trust, perceived risk, user habits, and satisfaction on digital wallet usage behavior, Regression Analysis was used to determine the extent to which these factors predict users' digital wallet usage. Pearson's Correlation Coefficient was used to examine the strength and direction of the relationships between trust, perceived risk, user habits, satisfaction, and digital wallet usage behavior.

Data Analysis and Interpretation for correlation

		15.I trust digital wallets for financial transactions.	16.I feel my personal information is safe in digital wallets.	17.I believe digital wallets provide secure payment services.
15.I trust digital wallets for financial transactions.	Pearson Correlation	1	.450***	.442***
	Sig. (1-tailed)		0.000	0.000
	N	182	182	182
16.I feel my personal info. Is safe in digital wallets.	Pearson Correlation	.450***	1	.316***
	Sig. (1-tailed)	0.000		0.000
	N	182	182	182
17.I believe digital wallets provide secure payment services.	Pearson Correlation	.442***	.316***	1
	Sig. (1-tailed)	0.000	0.000	
	N	182	182	182

***. Correlation is significant at the 0.001 level (1-tailed).

Interpretation:

Pearson correlation analysis showed positive and significant relationships among trust and security-related perceptions. Trust in digital wallets was moderately correlated with the safety of personal information ($r = 0.450$) and secure payment services ($r = 0.442$), while safety of personal information was positively

correlated with secure payment services ($r = 0.316$), with $p < 0.001$ for all relationships. This indicates that higher trust is associated with stronger perceptions of security.

Analysis and Interpretation for Regression

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.345 ^a	0.119	0.104	0.845	0.119	8.015	3	178	0.000
a. Predictors: (Constant), 20. Using digital wallets has become a daily habit for me., 19.I hesitate to make large payments using digital wallets.18.I am worried about the misuse of my financial data.									
ANOVA ^a									

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.172	3	5.724	8.015	<.001 ^b
	Residual	127.114	178	0.714		
	Total	144.286	181			

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.159	0.269		11.75	0.00	2.628	3.69
	I am worried about the misuse of my financial data.	-0.065	0.063	-0.081	-1.03	0.305	-0.190	0.06
	19.I hesitate to make large payments using digital wallets.	-0.023	0.060	-0.028	-0.38	0.703	-0.141	0.095

20.Using digital wallets has become a daily habit for me.	0.294	0.061	0.367	4.844	0.000	0.174	0.413
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a. Dependent Variable:11. Digital wallets are easy to use.

Interpretation:

The multiple regression analysis showed that security concerns, hesitation in making payments, and daily usage collectively influence users' perception of digital wallet convenience. The model was statistically significant ($F = 8.015$, $p < 0.001$), indicating that the selected factors contribute to explaining convenience perception. The R^2 value of 0.119 shows that these factors explain 11.9% of the variation in users' perception of convenience, while the remaining 88.1% may be explained by other factors not included in the model.

Overall Findings

Trust and Security

- Trust-related variables showed positive and significant correlations.
- Trust was positively related to perceived information security ($r = 0.450$) and secure payment services ($r = 0.442$).
- Information security was also positively related to secure payment services ($r = 0.316$, $p < 0.001$).
- Overall, higher trust is associated with stronger perceptions of security.

Perceived Risk and User Habits

- The regression model was statistically significant ($F = 8.015$, $p < 0.001$) and explained 11.9% of the variation in ease-of-use perception.
- Daily use positively influenced ease-of-use perception ($\beta = 0.367$, $p < 0.001$).
- Concerns about financial data misuse ($p = 0.305$) and hesitation in large payments ($p = 0.703$) did not have a meaningful influence.
- Overall, regular usage had a stronger influence than perceived risk factors.

Conclusion:

Digital wallets have become an important part of modern financial transactions due to their convenience, speed, and accessibility. Trust and security perception play an important role in encouraging users to adopt and continue using digital wallets. Regular usage habits positively influence digital wallet usage behavior. Perceived risks such as data misuse and security concerns can create barriers to usage, although their

influence was limited in this study. Overall, improving security, user trust, and digital awareness can encourage wider digital wallet usage and support financial inclusion.

Limitations of the Study

- The study was based on a limited sample, which may not represent all digital wallet users.
- The use of convenience sampling may limit the generalizability of the findings.
- The study mainly focused on trust, perceived risk, user habits, and satisfaction, while other factors were not examined.
- The findings are based on self-reported responses, which may involve personal bias.
- The study provides a cross-sectional view and does not examine changes in user behavior over time.

Suggestions

- Strengthen security: Digital wallet providers should improve fraud detection, data protection, and transaction security.
- Build user trust: Provide clear information about privacy, security, and complaint-resolution procedures.
- Promote digital awareness: Conduct awareness programmes to improve users' knowledge of safe digital payment practices.
- Encourage regular usage: Introduce simple and useful features that encourage users to continue using digital wallets.
- Improve accessibility: Make digital wallet services easier to use for people with limited digital literacy.

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