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A study of digital wallet with respect to digital banking services

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Abstract
The rapid expansion of online banking has profoundly influenced customers' relations with their banks. Digital wallets and digital banking services should synergistically enhance user experience, increase productivity, and broaden access to financial services. This research takes an analytical approach to digital wallets by examining user preferences, adoption trends, security perceptions, and interoperability with traditional banking interfaces. The findings illuminate emerging patterns that will influence the future of digital banking in India and provide valuable insights into client behavior.

Keywords: Digital wallet, digital banking, financial inclusion, user adoption, online transactions, Fintech, mobile payments, digital finance, banking technology

1. Introduction
Online banking and digital wallets have become integral components of modern financial ecosystems due to the significant impact of financial technology on the banking sector. Individuals in both urban and rural locales may now more readily access banking services, facilitating client financial transactions. Digital banking provides supplementary functionalities such as account administration, cash transfers, and online lending services, whilst digital wallets provide the storage of funds and the execution of payments. The purpose of this research is to analyze digital wallets and financial services in India from several angles, including user behavior, advantages and disadvantages, adoption, and use trends.

Objective of the study
- To ascertain the number of individuals acquainted with digital wallets and the frequency of their online banking use
- To identify the reasons behind the preference for digital wallets over traditional payment methods.
- To assess the compatibility between online banking and digital wallets.
- To ascertain the public's perception of the security and dependability of online financial transactions.
- To investigate the impact of digital banking services on consumer satisfaction and expenditure.

Literature Review
In 2025, V. V. Devi Prasad Kotni examined the impact of digital wallets on consumers' digital banking experiences. To address the inquiry, "How does digital wallet utilization correlate with financial service satisfaction and engagement?" the researchers examined the relationships between the elements of the e-wallet literacy scale and digital banking experiences. Three hundred bank consumers using digital wallets offered by the bank or other entities participated in the research. The researchers used structural equation modeling to identify patterns in the interactions among the variables. The research suggests that investment and purchasing are two critical elements of an enhanced digital banking experience. The Method of Payment (MOP) and Fund Transfer Transactions (FTP) exerted a substantial influence, but Credit Payment Transactions (CPT) and Bill Payment Transactions

(BPT) had a little impact. The nature of digital wallet transactions and the underlying reasons significantly impact overall consumer satisfaction with digital banking.

Papers from the 12th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2024), compiled by Vikrant Bhateja, include many topics related to artificial intelligence and its industrial applications. The collection encompasses more than only digital wallets and digital banking. It provides invaluable insights into data-intensive computing, decision sciences, and information management for creators and optimizers of financial solutions. Data mining, evolutionary computing, and intelligent networks are often referenced in discussions on the integration of digital wallet platforms with digital banking systems to improve security, user experience, and operational efficiency. This research underscores the need of solid computational frameworks, hence supporting the notion that digital financial services are more significant.

Aris Abdillah (2024) [6] examines the transformation of banking processes and consumer interactions due to digitization, beginning with automated teller machines (ATMs) and advancing to online and mobile banking, digital wallets, and fintech apps. The poll indicates that Indonesia's technologically adept Generation Z often utilizes online banking in diverse ways. The findings validate the prevailing notion that Generation Z is ill-equipped for long-term investments and insurance due to insufficient financial knowledge and a tendency towards imprudent expenditure. The study elucidates how digital banking services might enhance the long-term sustainability of the economy by examining their functions in transactions, savings, investments, and financial protection. This study examines the possible impact of digital wallet integration with banking services on customer financial behavior, particularly among younger demographics.

Digital payment apps are fundamentally transforming the methods of monetary management and transmission, asserts Asmitha M. (2025) [8]. The integration of blockchain technology with digital wallets and financial institutions offers advantages such as global accessibility, enhanced security, decentralization, and reduced transaction costs. The report emphasizes these benefits. Smart contracts and the immutable architecture of blockchain, supported by cryptographic hashing using the SHA-256 algorithm, provide safe and transparent data management. Due to technology improvements, individuals may now handle their finances at their convenience, rather than being restricted to traditional banking hours. The analysis indicates that digital wallets and financial services might operate more efficiently in conjunction if blockchain-based digital payment solutions enhance the effectiveness and dependability of services in areas such as banking.

Pooja Jain's,(2024) case study on digital wallet service innovation and change management from 2024 examines a leading private sector bank in India. The narrative asserts that Mr. Puri, the managing director of the bank, had a pivotal role in the introduction of "PayZapp," its digital wallet, which signified the bank's transition from a cash-centric to a digital-first strategy. Our primary goal was to augment the bank's digital currency and improve service delivery by capitalizing on the expanding mobile wallet industry. Notwithstanding the advancements in technology, the bank continued to grapple with regaining customer confidence and guaranteeing the user-friendliness of its digital platforms. This research indicates that customer-centricity and innovative service design are essential for integrating digital wallets with fundamental digital banking services.

Faraz Ahmed (2025) examines the importance of client security in the dynamic landscape of digital banking, focusing on digital financial services in Pakistan. Digital wallets and banks facilitate access to financial services, although they can disrupt traditional processes and introduce new hazards. Information security is the paramount aspect among the five identified by the study as positively influencing consumer protection. The results indicate that to preserve consumer confidence and sustain competitiveness, financial institutions must enforce robust security protocols. This study indicates that digital wallets and financial services must emphasize transaction security and customer data to succeed, particularly in impoverished nations.

Chitra Laksmi Rithmaya (2025) [7] investigates the adoption of digital banking services by Indonesian Generation Z, focusing on user behavior via a modified UTAUT2 framework. The research investigates how online banks might improve customer service by integrating new functionalities into existing mobile apps. The study, using PLS-SEM analysis and data from Generation Z respondents, revealed that performance anticipation had the greatest impact on users' behavioral intentions and actual use. Additional significant influences were habit, confidence in the service provider, and facilitating circumstances. The factors of price value, social influence, hedonic motivation, effort anticipation, and internet confidence did not substantially impact the outcomes, suggesting an evolution in how digital native customers perceive and use banking technology. The literature on user-centric digital banking design, improvements in online banking, and the integration of digital wallets provides an abundance of valuable information.

Research gap

Although current research thoroughly investigates multiple dimensions of digital wallets and digital banking-including technology adoption (Rithmaya, 2025) [7], customer protection and security issues (Ahmed, 2025), service innovation and change management (Jain, 2024) [2], the influence of blockchain technology (Asmitha, 2025) [8], and user behavior among Generation Z (Abdillah, 2024) [6], a significant gap exists in comprehensive studies that concurrently analyze the interaction between While addressing demographic aspects such as financial knowledge and behavioral objectives, little consideration has been given to the influence of different transaction types inside digital wallets on the entire digital banking experience. Furthermore, retaining client trust in the face of fast fintech innovations requires careful thought, particularly in developing countries where digital money use is still expanding. By closing this gap, one may get a comprehensive understanding of how to enhance digital wallet integration with banking services in order to increase consumer satisfaction and promote financial inclusion.

Research Methodology

Research question and significance of the Study

What influence do different digital wallet transactions exert on the overall digital banking experience of customers in India, considering factors such as customer trust, financial

literacy, and security perceptions?
This research is crucial as it addresses the growing reliance on digital wallets and banking services, which is becoming more prominent in India's rapidly evolving financial landscape. Financial institutions and fintech companies may enhance customer satisfaction, foster trust, and bolster security by comprehending the effects of various transaction kinds on consumers' digital banking experiences. Research considering user behavior and financial literacy might significantly aid marginalized people in reducing adoption obstacles and enhancing access to financial services. Streamlining normal financial transactions to be easier, more efficient, and more secure would facilitate the development of user-centric digital financial systems.

Issue involved: Investigations into digital wallets that simultaneously serve as online banking services present many pertinent issues. Due to the susceptibility of online financial transactions to fraud and hackers, it is essential to consistently protect clients' personal information. The varying levels of financial literacy among users must be considered, since this may influence their ability to understand the risks associated with digital wallets and use them effectively. This is especially applicable to younger or less technologically adept generations. Considering the rapid advancement of technology and the intermittent failures of these systems, regaining clients' faith in digital platforms may be challenging. Distributing digital wallet applications to a broad audience, particularly to those circumventing traditional financial channels, presents a significant usability barrier. In developing countries, attaining comprehensive financial inclusion may be hindered by infrastructural and legal constraints. The adoption and incorporation of these services are affected by these factors.

Data collection method: 60 individuals who often use digital wallets alongside digital banking services were surveyed using a standardized questionnaire to collect primary data for this study. The sample included people with diverse educational backgrounds and life experiences to provide a diversity of opinions. The survey aimed to collect data on digital banking habits, types of transactions, levels of trust, perceptions of security, and overall experiences. To get the broadest reach and the most precise replies, a mix of online surveys and face-to-face meetings was used to collect data. The last phase in achieving the study's goals included identifying relevant patterns and connections in the collected responses.

Data analysis method
The data collected from sixty individuals was analyzed using linear multivariate regression, analysis of variance (ANOVA), and Excel's graphical capabilities. The relationship between the dependent variable, the total digital banking experience, and many characteristics, including user trust, financial literacy, and diverse digital wallet transactions, was analyzed by linear multivariate regression. To get deeper insights into the influence of various user demographics and transaction categories on user experience, we used ANOVA to identify significant differences. The analysis of data patterns, trends, and insights was facilitated by Excel visualizations such as graphs and charts. We conducted a comprehensive evaluation of the impact of digital wallets on online banking services via the integration of these methodologies.

Reliability of the study
A comprehensive questionnaire was developed with current material in digital wallets and financial services to ensure the reliability and quality of responses. A reduced number of participants were used in a pilot test to attain clarity and identify any ambiguities. The Cronbach's Alpha assessment of the questionnaire's internal consistency yielded a rating of 0.81, suggesting a high level of reliability. We used industry-standard statistical techniques such as ANOVA and Linear Multivariate Regression to analyse data collected from sixty respondents with diverse backgrounds. Collectively, these aspects enhance the validity and authenticity of the study.

Limitation of the study
Consider the many limitations of this research while assessing the data. Although the perspectives of the 60 respondents are valuable, it is important to acknowledge that the findings may not be representative of the whole Indian population using digital wallets or online banking. Moreover, the research is vulnerable to response biases, including social desirability and recall inaccuracies, due to its reliance on self-reported data. Individuals without digital wallets or possessing inadequate digital literacy may have their perspectives overlooked if the emphasis is placed on those already proficient in these technologies. Moreover, due to the fast pace of technology progress and evolving legislative frameworks in the fintech sector, the results may become obsolete without ongoing study and updates.

Data Analysis

Table 1: Showing Linear Multivariate Regression Analysis

Independent Variables	Unstandardized Coefficients (B)	Standard Error	Standardized Coefficients (Beta)	t-value	Significance (p-value)
Purchase Transactions (PT)	0.312	0.078	0.415	4	0
Investment Transactions (IT)	0.284	0.081	0.362	3.51	0.001
Fund Transfer Transactions (FTT)	0.198	0.065	0.289	3.05	0.003
Method of Payment (MOP)	0.143	0.062	0.215	2.31	0.024
Credit Payment Transactions (CPT)	0.072	0.059	0.108	1.22	0.227
Bill Payment Transactions (BPT)	0.058	0.061	0.091	0.95	0.345

Regression analysis may be used to examine the impact of a digital wallet transaction on the entire digital banking experience. Buy Transactions (PT) had the highest standardised coefficient (Beta = 0.415, p = 0.000) of any independent variable, demonstrating that it has a substantial and meaningful influence on the satisfaction of digital banking. With beta values of 0.362 and 0.289, respectively, Investment Transactions (IT) and Fund Transfer

Transactions (FTT) also demonstrate a strong favourable impact (p<0.05). While Credit Payment Transactions (CPT) and Bill Payment Transactions (BPT) have a tiny and statistically negligible influence (p>0.05), the Method of Payment (MOP) considerably enhances the overall experience (Beta = 0.215, p = 0.024). Customer's rate digital banking services mostly on transactional variables linked to purchases, investments, and cash transfers rather than features that allow them pay bills or develop credit.

Table 2: Showing Analysis of Variance

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-value	Significance (p-value)
Between Groups	15.472	5	3.094	5.76	0
Within Groups	29.804	54	0.552		
Total	45.276	59			

The kinds of digital wallet transactions have a major effect on the total digital banking experience (p-value 0.000, F-value 5.76, ANOVA findings). This removes the probability that the changes in reported variability across distinct transaction types are purely coincidence. Because the between-group variance (SS = 15.472) is substantially bigger than the within-group variation (SS = 29.804), users' opinions and experiences with digital banking are affected by the sorts of transactions they conduct. These results support the regression findings and add to the increasing body of research suggesting that varied transactions improve the customer experience.

Respondents Analysis

Table 3: Demographic Analysis

Demographic variables		Number of representations	Percentage
Gender	Male	28	46.67
	Female	32	53.33
Age group	18 to 24	25	41.67
	24 to 34	15	25.00
	34 to 44	11	18.33
	44 & above	9	15.00

The sample looks to have a reasonably balanced gender distribution, with 53.33% of the participants being female and 46.67% being male. Of all users, 41.67 percent are teenagers and young adults, with 26 percent being between the ages of 24 and 34. Only 15% of individuals aged 44 and older are customers. Younger individuals, namely those aged 18 to 34, are the most inclined to use digital wallets and financial services. The larger sample size of this group reflects the trend of online banking innovation and development being driven by younger, tech-savvy customers.

How often do you utilise digital wallets for conducting transactions?

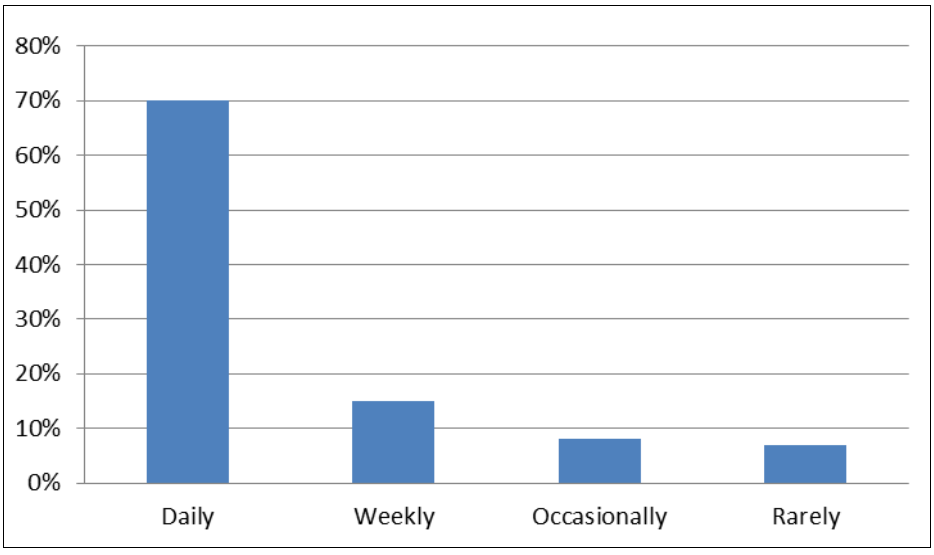

Chart 1: User Adoption and Behavior

The survey indicates that 70 percent of users use digital wallets every day, thereby obviously dependent on digital payment systems for daily financial transactions. Given their broad appeal, digital wallets seem to be steadily assuming the role of physical money in everyday life. Just 15% of the population under inquiry are infrequent or non-users, which shows consistency and broad usage.

In comparison to traditional banking, how sure are you that transfers made with a digital wallet are safe?

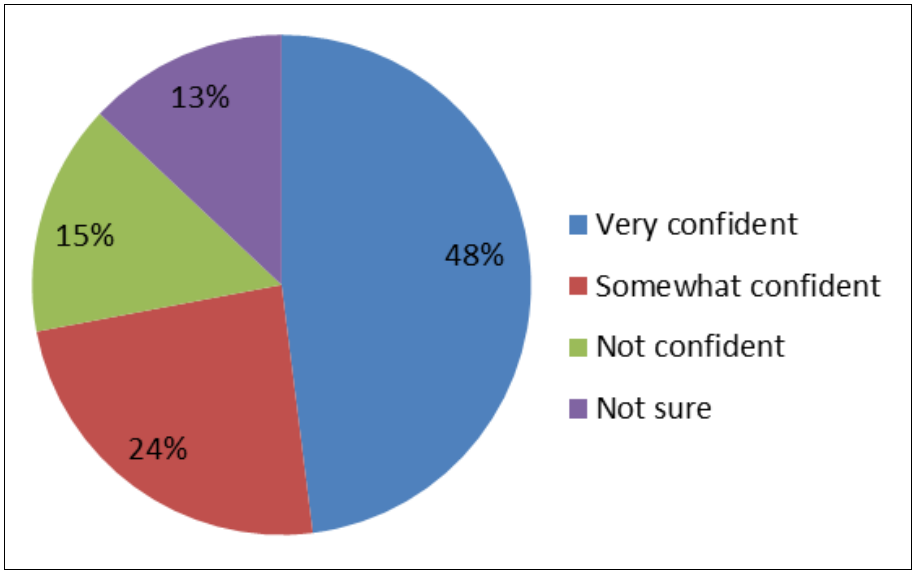

Chart 2: Security and Trust

While a quarter of respondents are just marginally convinced, over half of respondents are totally certain that transactions completed using digital wallets are safer than those made using traditional banks. Still over 24% of clients have concerns or misgivings regarding cybersecurity and their personal data. Financial tech businesses have to so educate their clients to accept additional safety procedures and to be more confident of digital platforms.

Do you think digital wallets work well with your online payments and are easy to connect?

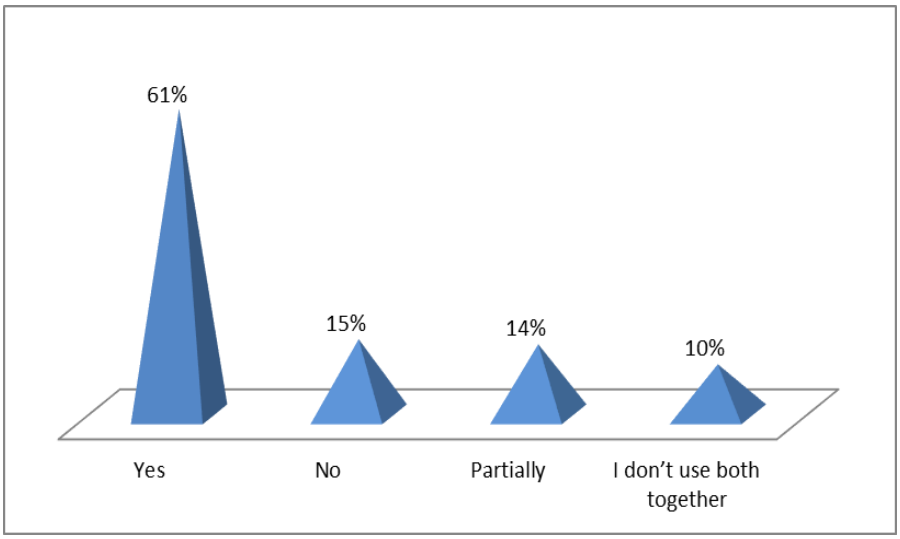

Chart 3: Integration with Banking Services

More and more financial technologies are becoming interoperable as 61% of users say digital wallets are conveniently linked with online payment and banking systems. Still, over one-third of respondents claim this integration has either impeded or damaged their experience (10% disagree and 14% marginally). This illustrates that there is still potential for progress in terms of offering faultless user experiences across platforms even if the digital ecosystem is increasing.

Approx. 41 percent of the respondents said they had a comprehensive understanding of digital financial goods, whilst 28 percent indicated a moderate level of comprehension. This means that most persons can manage their money even when making online purchases. Given 24% of participants indicated their knowledge was fair and 7% said it was bad, a digital divide could be the reason some persons are unable to make appropriate use of technology. Beyond this obstacle and encourage greater use, rigorous training and a simple app design are necessary.

In what way do you think you understand how to use digital money tools like accounts and banking apps?

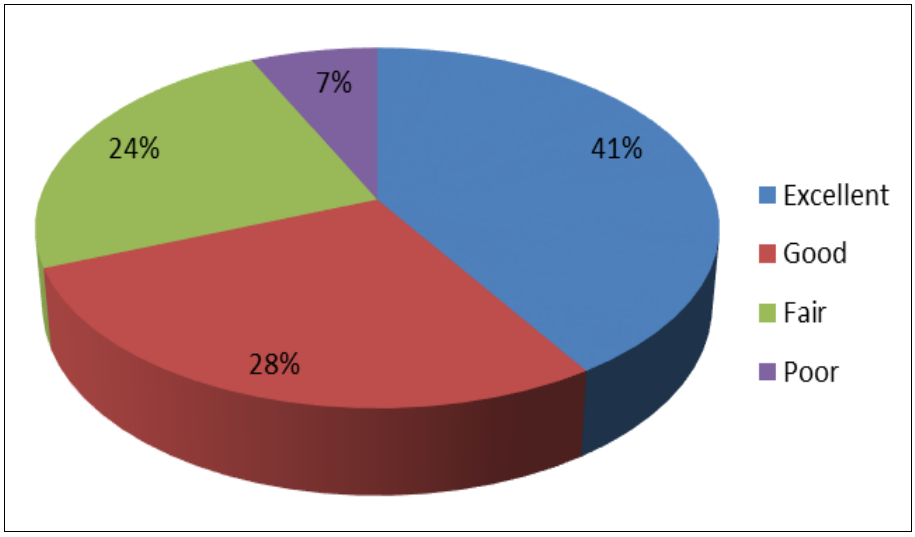

Chart 4: Financial Literacy and Accessibility

Conclusion

This study emphasizes how digital wallets are becoming more vital and how they have considerably benefited the digital banking experience in India. While credit and bill payments may have an effect, the most significant forms of transactions on customer satisfaction are investments, money transfers, purchases, and other associated activities. The majority of users use digital wallets on a regular basis, and many think they are safe and simple to connect with online banking systems. A minor number of persons continue to encounter difficulties with usability and security, underscoring the need of consistently strengthening system stability and educating users. According to demographic statistics, there appears to be a generational change in banking preferences driven by convenience and technology adoption, with younger generations, mainly those aged 18 to 34, dominating the usage of digital financial instruments. Despite generally favorable opinions, the study indicates that a significant number of consumers possess either a moderate or inadequate comprehension of financial technology. Financing inclusion, trust, and wide and effective utilization of digital banking services may all benefit from tailored initiatives to overcome this gap.

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