

Omnichannel Banking: How Digital Wallets and Credit Cards Can Coexist

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Abstract: Omnichannel banking is challenged with the integration of digital wallets and credit cards in terms of security issues, user adoption, and interoperability. Literature emphasizes how technological innovation supports improved financial transactions, security, and customer experience. This study employs an explanatory research design supported by secondary qualitative and quantitative data. Results highlight the growing adoption of digital payment platforms, enhancing financial inclusion and operational effectiveness. Financial institutions and banks need to invest in cybersecurity infrastructure, intuitive payment systems, and regulatory adherence to facilitate a harmonious coexistence of credit cards and digital wallets. Successful integration is vital to creating innovation and providing a safe, efficient, and customer-focused banking experience.

Key-words: Omnichannel banking, digital wallets, credit cards, financial integration, cybersecurity, customer experience

I. INTRODUCTION

A. Background to the Study

The rapid digital transformation of banking has led to the growth of digital wallets

alongside traditional credit cards. The digital wallets mainly provide convenience and greater security to the consumers and credit cards are a choice of many because of their extensive acceptance and different kind of rewards [1]. This duality creates uncertainty regarding consumer attitudes, financial safety, and omnichannel integration issues in banking. It is necessary for financial institutions to know how these payment systems not substitute each other so that they can enhance customer experience [2]. This study explores the complementarity between credit cards and digital wallets and their role in modern banking. It examines how institutions can enhance their coexistence for hassle-free financial transactions.

B. Overview

The study examines the coexistence of credit cards and digital wallets in omnichannel banking as focus on their integration and potential in the future. Digital wallets contactless payment and enhanced security as it becoming more popular, but credit cards are still in command due to their credit facilities, global acceptance, and reward points [2]. This study actually identifies ways in which banks can balance these payment methods to enhance security and ease of transactions. The study reviews industry

drivers and technologies in an attempt to shed light on how these payment systems can be employed to enable uninterrupted financial services in the era of greater digitisation of economies.

C. Problem Statement

The rapid adoption of digital wallets and continued reliance on credit cards present a challenge to banks in providing a seamless omnichannel banking experience. While digital wallets offer convenience, security, and instant transactions, credit cards remain resilient due to their established infrastructure, credit benefit, and customer reward programs. Payment channel integration that lacks connectivity between different channels produces fragmented consumer experience together with reduced operational effectiveness in financial institutions [3]. The research aims to demonstrate proper approaches that financial institutions should use to harmonise payment systems.

D. Objectives

The objectives are: 1. To examine how consumers embrace credit cards and digital wallets for omnichannel banking operations. 2. To discuss potential challenges and opportunities that exist regarding the combination of credit cards with digital wallets for unified banking services. 3. To assess how omnichannel banking affects customer satisfaction levels alongside the accessibility of financial services. 4. To provide strategic recommendations to financial institutions to enhance the synergy between credit cards and digital wallets.

E. Scope and Significance

This research emphasises the existence of credit cards and digital wallets in omnichannel banking. It evaluates payment channels to find optimisation points that increase transaction speed and enhance customer experience. The analysis explores

recent industry developments together with regulatory requirements along with digital payment technology advancements. The significance of this research lies in its capacity to provide recommendations to the financial institutions. It gives better understanding of how to attain an integrated payment system [4]. These payment methods actually enable banks to build customer trust by understanding how their operations support in loyalty value and security measures.

II. LITERATURE REVIEW

A. The Trends of Adoption of Credit Cards and Digital Wallets

The adoption of credit cards and e-wallets in omnichannel banking is driven by evolving consumer behavior, technology, and financial sector innovations. Users continue to choose credit cards because of their wide acceptance and credit benefits along with rewards programs and users choose digital wallets for their user-friendly nature and quick transactions and increased security functions [5]. The adoption of payment methods within omnichannel banking facilitates banking customers to make payments through both their online platforms and physical locations seamlessly. There are some security concerns and digital infrastructure is considered as an essential parameter as defining the adoption trends [6]. Financial service providers need to recognise emerging payment trends because this understanding helps them improve customer interactions with digital finance market competition.

B. The Opportunities and Challenges in Integrating Digital Wallets and Credit Cards

The inclusion of digital wallets and credit cards in omnichannel banking is both a challenge and an opportunity for banks. The biggest challenge is the facilitation of seamless interoperability across different

payment systems since banks and payment providers must design secure and compatible platforms [7]. There are some of security concerns as fraud risk and data breaches present big challenges and involve advanced encryption and authentication techniques. Regulatory compliance also varies geographically, and thus standardisation is difficult for international financial institutions [8]. Consumer confidence and rate of adoption are also intervening factors as some users are likely to resist going digital because of security fears or a penchant for the traditional credit card.



Figure 1: The Advantages of Digital Wallets

[8]

Digital wallets together with credit cards establish substantial business opportunities. A unified payment system developed by banks provides customers with enhanced convenience through multiple transaction options. Artificial intelligence as well as machine learning technology enables banks to deliver customised financial solutions thus improving both customer loyalty and interaction [8]. The integration of payment channels enables banks to make better financial decisions through the employment of data analysis. Mobile and contactless payments continue with increasing popularity that offers opportunities for financial institutions to increase service provisions especially in developing

economies [9]. The integration of security advancements will enable banks to build a seamless customer-centric banking system that combines classic financing services and innovative digital platforms.

C. The Effect of Omnichannel Banking on Customer Satisfaction

Omnichannel banking greatly improves customer satisfaction and access to financial services with convenient, smooth, and flexible banking experiences. Customers can look at accounts, pay bills, and conduct transactions through various channels like mobile banking apps, online banking, ATMs, and bank branches [10]. The integrated service model provides uninterrupted functions and full accessibility particularly to people outside major urban areas or with limited banking access. Moreover, omnichannel banking increases customer satisfaction through personalised services, real-time transaction processing, and safe payment channels such as digital wallets and credit cards. However, cybersecurity attacks, technical integration issues, and inconsistent service quality among channels could influence user experience [11]. Banks with seamless integration of digital and traditional banking services can improve customer engagement, build trust, and expand financial inclusion. A successful omnichannel strategy enhances convenience, security, and efficiency, leading to increased customer satisfaction and improved access to financial services.

III. METHODOLOGY

A. Research Design

The study uses an explanatory research design in examining the complementarity of credit cards and digital wallets in omnichannel banking. Explanatory research ensures that the researcher understands the determining factors behind the adoption, alignment, and contribution of these methods

of payment [12]. This approach enables the detection of patterns, relationships, and issues in omnichannel banking. The research will assist financial institutions in maximising their payment systems, improving customer experience, and formulating strategies for smooth integration in the dynamic digital finance era.

B. Data Collection

This research is based on secondary qualitative and quantitative data to investigate the coexistence of digital wallets and credit cards in omnichannel banking. Secondary data are utilised since they facilitate access to vast amounts of existing research, industry reports, and statistical information at a low cost and reduced time compared to primary data collection [13]. Qualitative information from scholarly articles, journals and case studies provides insights on consumer behavior and technology trends. This is useful in analysing the drivers of digital payment adoption. Quantitative information from graphs, market research, and statistical data supplies quantifiable proof of adoption patterns, usage, and industry growth [14]. The utilisation of secondary data produces a broad insight through its incorporation of dependable sources together with extensive databases. This approach increases study reliability as enabling complete analysis results in proper recommendations for institutions and policy makers.

C. Case Studies/Examples

Case Study 1: An emphasis of digital wallets for E-commerce transactions

The case study analyses the quick development of mobile-based electronic payment systems, which have substituted traditional smart cards with digital wallets and mobile wallets. These payment systems offer users convenient, real-time transactions, ease, and flexibility [11]. Their

extensive use also poses security threats, making them an attractive target for cybercriminals. The success of digital wallets relies on their security, functionality, usability, and dependability [11]. Banks and non-banking organisations are proactively innovating to make these functions more attractive while maintaining consumer confidence. There need to enhance the system quality, service, and information protection as digital wallets can coexist with credit cards.

Case Study 2: Integrating offline and online platforms for seamless banking experience

The case study examines how IT innovation and globalisation are transforming banking, compelling customers to insist on smooth, digitalised services. Conventional banks are under pressure to reform themselves when going up against nimble fintech players [14]. Even with the development of online banking, offline channels are still critical, necessitating banks to blend both for an effortless omnichannel experience. It highlights that some recommendations to banks for grow away from transaction processing, providing digital services that conform to contemporary lifestyles of consumers [14]. In order to stay competitive, banks need to upgrade mobile and internet banking as well as connect with the wider digital economy.

D. Evaluation Metrics

Metric	Description	Evaluation Criteria
Adoption Rate	Measures the percentage of users adopting digital wallets and credit cards [4].	Growth in user base, market penetration rates.

Transaction Volume	Assesses the total number and value of transactions processed.	Increase in transaction frequency and value.
User Satisfaction	Evaluates customer experience and preferences.	Surveys, feedback, and Net Promoter Score (NPS).
Security & Fraud Prevention	Analyses cybersecurity measures and fraud incidents.	Data breaches, fraud cases, and security compliance [7].
Service Efficiency	Measures transaction speed and service reliability.	Response time, downtime, and processing speed.
Integration Success	Examines how well digital wallets and credit cards function together [9].	Seamless interoperability and cross-platform support.
Cost-effectiveness	Evaluates the cost savings for banks and consumers.	Reduced transaction fees, operational cost savings.
Regulatory Compliance	Assesses adherence to financial regulation	Compliance with national and international

	s and policies.	banking laws.
Market Competitiveness	Measures the positioning of banks offering both payment options.	Market share, competitive advantage, and innovation [11].

Table 1: Evaluation Metrics

(Source: Self-developed)

The table summarises major evaluation criteria for measuring the coexistence of credit cards and digital wallets based on adoption, security, cost-effectiveness and market competitiveness in omnichannel banking.

IV. RESULTS

A. Data Presentation

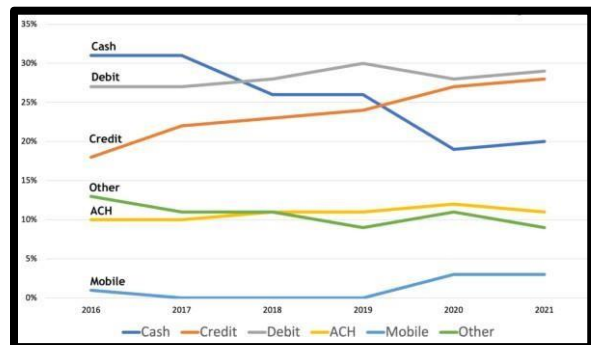


Figure 2: The Growth of the Credit Card Industry

[16]

The chart shows the shifting trends of the methods of payments between 2016 and 2021. The use of cash, in blue, has drastically fallen from more than 30% in 2016 to less than 20% in 2021. At the same time, credit card use has risen steadily, overtaking cash somewhere around 2019 [16]. Debit card payments also rose and became the most used method by 2019. Mobile payments have been

growing but are still a minor proportion. ACH and other payments have moved slightly. The figures point to the growing use of digital and card payments over cash payments.

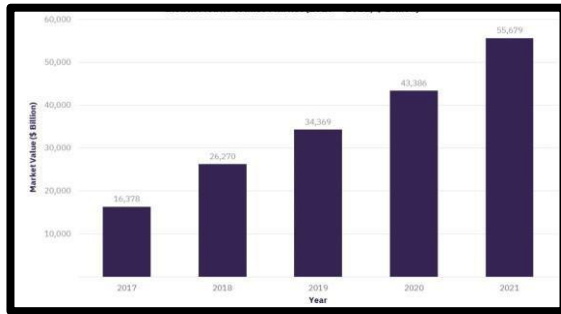


Figure 3: Digital Wallets Growth

[16]

The graph represents the tremendous expansion of the international mobile wallet market from 2017 to 2021. In 2017, the market was worth \$16,378 billion, whereas in 2021 it reached \$55,679 billion, depicting a significant rising trend [17]. The market grew every year with remarkable growth, with significant increments in 2018 (\$26,270 billion), 2019 (\$34,369 billion), and 2020 (\$43,386 billion) [17]. This steady growth is indicative of the growing usage of mobile payment solutions through the increased dependence on digital payments, penetration of smartphones, and growth in contactless payment technologies. The trend indicates a shift toward a cashless society, with mobile wallets becoming part of fundamental global financial transactions.

B. Findings

The findings reflect a dramatic change in payment preferences over the years, with the growing predominance of card-based and digital payments. The reduction in the use of cash reflects the increasing consumer demand for more convenient, secure, and efficient payment options [16]. Credit and debit cards have become more popular, with

debit cards being the most widely used payment option. Meanwhile, mobile payment systems have consistently grown, reflecting improvements in financial technology and mass smartphone penetration. The growth of mobile wallets signifies the global shift toward electronic financial transactions. The consistent growth of the mobile wallet market indicates customers increasingly using contactless and app-based payment systems for day-to-day transactions [17]. This is a result of the increased use of digital solutions in business, the drive to have cashless economies, and the increased security in online transactions. These developments strengthen the continued revolution of financial ecosystems where traditional forms of cash payments are giving way to smarter, more technology-based payment systems, building a future around digital financial exchange.

C. Case Study Outcomes

Case Study	Key Outcomes
<p>Case Study 1: <i>An emphasis of digital wallets for E-commerce transactions</i></p>	<ul style="list-style-type: none"> • Electronic wallets have transformed e-commerce transactions through the provision of real-time, convenient, and flexible payment options [11]. • Security risks continue to be a serious threat, calling for ongoing innovation around fraud prevention and data security. • Banks and fintech companies need to improve

	system quality and user experience to sustain consumer trust and promote broader adoption [11].
Case Study 2: Integrating offline and online platforms for seamless banking experience.	<ul style="list-style-type: none"> • Banks have to combine physical and digital banking channels to give an integrated, seamless, omnichannel experience. • Conventional banks are exposed to competition from fintech companies and must update their online services [14]. • It is crucial to upgrade mobile and online banking to remain competitive in the changing financial environment [14].

Table 2: Case Studies Key Outcomes

(Source: Self-developed)

The table summarises some of the most important findings from two case studies on seamless banking integration and digital wallets. It emphasises the necessity for secure, easy-to-use digital payments and the need to upgrade banking services in order to remain competitive.

D. Comparative Analysis of Literature Review

Author	Focus	Key Findings	Literature Gap	Proposed Solution
[5]	Digitalisation in Spanish banking	Examines the evolution of digital banking in Spain and its impact on financial services.	Limited focus on customer adoption challenges [5].	Suggests enhancing digital literacy and user experience.
[6]	Omnichannel retailing	Highlights the effect of channel integration on customer satisfaction and behavior.	Lacks a focus on financial services and banking.	Recommends seamless integration across digital and physical channels [6].
[7]	Omnichannel banking behavior	Investigates how bank branch network	Does not consider the role of emerging	Advocates for a hybrid model balancing

		rks influence customer omnichannel behavior [7].	digital payment methods.	digital and physical banking.
[8]	Omnichannel banking economy	Analyses risks and economic factors in omnichannel banking.	Limited exploration of cybersecurity threats in digital banking.	Proposes robust risk management frameworks for secure transactions.
[9]	Developments in German omnichannel banking	Reviews trends and upcoming innovations in omnichannel banking in Germany.	Lacks empirical data on customer adoption rates [9].	Suggests conducting customer-centric studies to refine banking strategies.
[10]	Physical vs. digital payments	Compares traditional and digital payment methods and	Insufficient discussion on regulatory frameworks governing	Calls for enhanced regulatory clarity to boost digital

		their adoption [10].	digital payments.	transaction security [10].
[11]	Digital wallets in e-commerce	Assesses the role of digital wallets in e-commerce transactions [11].	Does not address interoperability between different payment platforms.	Recommends standardised protocols for seamless digital payment integration.

Table 3: Comparative Analysis of Literature

(Source: Self-developed)

The table summarises major research studies on digital banking, omnichannel approaches, and payment systems, noting findings, gaps in literature, and suggested solutions. It focuses on digital adoption barriers, security threats, and regulation requirements in the financial sector.

V. DISCUSSION

A. Interpretation of Results

The findings reflect a clear transition from cash transactions to card and electronic payments. The growing use of debit and credit cards, and the consistent growth of mobile payments, indicate changing consumer behavior prompted by convenience, security, and technology [16]. Mobile wallets continue their rapid expansion which demonstrates how payments are transitioning to contactless app-based systems. The rise of mobile wallets occurs because smartphones rapidly extend their reach alongside financial digitalisation

processes [17]. A cashless economy model continues to spread across the world because both consumers and businesses benefit from quicker and safer purchasing options that offer enhanced convenience. Continuous innovation within digital payment systems remains vital for supporting current changes within the financial industry.

B. Practical Implications

The shift towards card-based and electronic payment has high real-world implications on consumers and companies. Companies must install secure and user-friendly electronic payment systems to meet customers' demands and compete. Banks must enhance cyberprotection to balance the threat of fraud with expanded electronic banking services. Consumers benefit from faster, easier transactions but must also continue to be vigilant for digital security threats [16]. Governments and regulators will also have to formulate policies to foster secure, inclusive digital financial ecosystems with accessibility and trust in the future cashless economy.

C. Challenges and Limitations

The study is challenged by a number of issues and limitations, among them the fast-changing nature of electronic payment technologies, which could make findings obsolete within a short time. The availability and reliability of data also pose a problem, as people's financial habits differ by geography and demographics. Cybersecurity attacks and fraud are also still a major hindrance to mass uptake. Levels of consumer trust and digital literacy also affect the efficiency of electronic payment systems.

D. Recommendations

Financial institutions need to invest in effective cybersecurity features to reduce risks of fraud. Ongoing education for users in terms of digital literacy and financial safety is critical for building consumer confidence.

Governments need to institute standardised regulations to promote end-to-end cross-border transactions [8]. Fintech firms and banks also need to innovate in accessibility, user experience, and offline and online platform integration for a seamless financial infrastructure.

VI. CONCLUSION AND FUTURE WORK

The research points towards the tremendous shift towards digital and card-based payments from cash, facilitated by the technological revolution and consumer preference for convenience and security. The rise of mobile wallets has pointed to the increased adoption of contactless and app-based payment mediums. As fast as the adoption has taken place, there are concerns related to cybersecurity threats, regulatory hurdles, and financial inclusion.

Future research needs to concentrate on strengthening security architectures to combat fraud and data privacy issues. Research on how to better facilitate access among underserved populations can help achieve mass adoption. Additional studies can also investigate integrating new technologies such as blockchain and artificial intelligence to facilitate more secure and efficient transactions.

VII. REFERENCES

- [1] Turban, E., Outland, J., King, D., Lee, J.K., Liang, T.P., Turban, D.C., Turban, E., Outland, J., King, D., Lee, J.K. and Liang, T.P., 2018. Electronic commerce payment systems. *Electronic Commerce 2018: A Managerial and Social Networks Perspective*, pp.457-499.
- [2] Scardovi, C., 2017. Digital transformation in financial services (Vol. 236). Cham: Springer International Publishing.

- [3] Zalan, T. and Toufaily, E., 2017. The promise of fintech in emerging markets: Not as disruptive. *Contemporary Economics*, 11(4), p.415.
- [4] Botta, A., Nadeau, M.C., Bruno, P., Tayar, G. and Chaudhuri, R., 2020. Global Banking Practice.
- [5] Valero, S., Climent, F. and Esteban, R., 2020. Future banking scenarios. Evolution of digitalisation in Spanish banking. *Journal of Business Accounting and Finance Perspectives*, 2(2), p.13.
- [6] Gasparin, I., 2020. Effects of perceived channel integration on customer response in omnichannel retailing.
- [7] Zhou, M., Geng, D., Abhishek, V. and Li, B., 2020. When the Bank comes to you: Branch network and customer Omnichannel banking behavior. *Information systems research*, 31(1), pp.176-197.
- [8] Vasiliev, S.A. and Serov, E.R., 2019. Omnichannel banking economy. *Risks*, 7(4), p.115.
- [9] Menrad, M., 2020. Systematic review of omni-channel banking and preview of upcoming developments in Germany. *Innovative Marketing*, 16(2), pp.104-125.
- [10] ANDERSSON, A. and ESSUNGER, K., 2018. Physical or Digital Payments: Towards a Dominant Design?.
- [11] Raghavendra, R., Niranjnamurthy, M., Nachappa, M.N. and Shalini, K.B., 2019. An emphasis of digital wallets for E-commerce transactions. *Journal of Computational and Theoretical Nanoscience*, 16(9), pp.3748-3753.
- [12] Bowen, P.W., Rose, R. and Pilkington, A., 2017. Mixed methods-theory and practice. Sequential, explanatory approach. *International Journal of Quantitative and Qualitative Research Methods*, 5(2), p.10.
- [13] Ruggiano, N. and Perry, T.E., 2019. Conducting secondary analysis of qualitative data: Should we, can we, and how?. *Qualitative social work*, 18(1), pp.81- 97.
- [14] Dufour, I.F. and Richard, M.C., 2019. Theorizing from secondary qualitative data: A comparison of two data analysis methods. *Cogent Education*, 6(1), p.1690265.
- [15] Chintale, P. (2020). Designing a secure self-onboarding system for internet customers using Google cloud SaaS framework. *IJAR*, 6(5), 482-487.
- [16] Nohumba, I., Nyambuya, C. and Nyambuya, G., 2020. Integrating offline and online platforms for seamless banking experience. *Journal of Management & Administration*, 2020(1), pp.45-72.
- [17] Chintale, P., Korada, L., Ranjan, P., Malviya, R. K., & Perumal, A. P. (2021). The Impact of Covid-19 on Cloud Service Demand and Pricing in the Fintech Industry. *Journal of Harbin Engineering University*, 42(7).