

Examining Challenges In Mobile Banking: Insights From The Consumer's Perspective

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Abstract

Mobile banking is a contemporary and convenient banking service that has transformed the financial industry, offering customers easy access to their bank accounts and a wide array of banking services via their mobile devices. Despite its numerous advantages, the widespread acceptance of mobile banking still faces several challenges. This paper delves into the obstacles encountered in the realm of mobile banking and the perspectives of consumers on its adoption. In Pakistan, customers have displayed a favorable disposition towards mobile banking, largely due to its user-friendly interface, aesthetically pleasing design, swift and efficient account management, robust security measures, and the availability of various features and services. Notably, while customers generally hold a positive view of mobile banking, they have expressed dissatisfaction with the quality of customer service. The rise of mobile technology has revolutionized the banking industry, with mobile banking services offering convenience and real-time access to finances. However, widespread adoption is hindered by challenges from the consumer's perspective. This study explores these challenges, focusing on security concerns, lack of personal interaction, digital literacy barriers, and limited functionalities within mobile banking applications. The research investigates how these factors, along with reliability issues and hidden fees, can discourage user adoption. The data for this study was collected using a mixed-methods approach, combining both quantitative and qualitative research methods. The positive coefficients for both accessibility and customer opinions indicate that they contribute positively to mobile banking customer satisfaction. The T-values suggest that both predictors are statistically significant ($p < 0.05$). The study suggests that improving accessibility and addressing customer opinions can enhance mobile banking satisfaction.

Keywords: Mobile banking, Consumer, Challenges, Accessibility, Mobile application

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Introduction

Mobile banking has become an integral part of the financial landscape, revolutionizing the way consumers interact with their banks and manage their finances. As smartphones have become ubiquitous, the convenience and accessibility of mobile banking have gained widespread adoption. This shift in banking practices offers numerous benefits, such as real-time account access, fund transfers, and convenient bill payments. However, it is essential to recognize that this digital transformation also brings forth challenges that impact the user experience and raise concerns among consumers. This exploration delves into the challenges faced by consumers in the realm of mobile banking, offering insights into their perspectives and experiences. Understanding these challenges is crucial for financial institutions, technology developers, and policymakers to address concerns, enhance security measures, and improve the overall mobile banking experience.

In an era defined by technological advancements and an increasingly digital world, mobile banking has emerged as a transformative force in the financial industry. With the ubiquitous presence of smartphones and the convenience they offer, consumers have welcomed the ability to manage their finances from the palm of their hands. Mobile banking apps have become an integral part of everyday life for many, allowing users to conduct a wide range of transactions, from checking account balances to making investments, all without the need for a physical visit to a bank. While mobile banking offers unprecedented convenience, it is not without its challenges, especially from the consumer's perspective. These challenges can significantly impact the overall experience and trust that users place in this digital financial realm. In this comprehensive examination, we will delve into the various challenges that consumers encounter when using mobile banking, considering factors such as security and privacy concerns, technical glitches, user interface complexities, and the need for financial literacy. By exploring these issues, we aim to shed light on the areas in which mobile banking can improve, offering solutions and insights that can enhance the consumer's experience and empower them to navigate the world of mobile banking with confidence. By addressing these challenges, financial institutions and consumers can collaborate to make mobile banking safer, more user-friendly, and an indispensable tool for personal finance management. In this article, we will traverse the landscape of mobile banking, offering a comprehensive view of the difficulties consumers face and the potential pathways towards a more seamless and secure mobile banking experience. Mobile banking has made significant inroads in Pakistan, offering a range of financial services to the population, particularly in areas with limited access to traditional banking infrastructure. The advent of mobile banking in Pakistan has not only brought convenience but has also addressed financial inclusion challenges. Mobile banking has proven to be a game-changer in Pakistan's quest for financial inclusion. The country's diverse population, including remote rural areas, now has access to banking services through their mobile phones. This accessibility has empowered many who previously had limited or no access to formal banking, allowing them to save, transact, and access credit services more easily. Several financial institutions and mobile network operators have pioneered mobile banking in Pakistan. Services typically include balance inquiries, funds transfers, bill payments, and mobile top-ups. In addition, some platforms offer more advanced features like mobile wallets and investment opportunities, catering to a wide range of financial needs. While the convenience of mobile banking is undeniable, security concerns persist. Consumers, especially in Pakistan, are cautious about the safety of their financial transactions. Therefore, building trust in the security of these platforms remains a significant challenge for service providers.

Khan (2017), it is highlighted that E-Banking has significantly transformed the banking industry, providing extensive opportunities to customers with the flexibility to conduct

banking activities anytime and anywhere. However, this convenience also introduces risks associated with traditional banking methods. Despite the potential risks, the majority of customers now widely accept and approve online banking transactions due to its numerous benefits. The study underscores a strong correlation between E-Banking and customer satisfaction, indicating a commitment from users and the ability of banks to retain their customers' attention.

Khrais (2013), the focus is on identifying key determinants that facilitate the ease of using E-Banking services. The research employs a survey method, involving online banking users in Poland, to explore the relationship between independent and dependent variables. Data collection involves questionnaires with assurances of respondent confidentiality. Utilizing statistical tools, the study employs both descriptive and quantitative methods to test hypotheses and achieve its objectives and contributes insights into the factors that enhance the user experience in E-Banking, adding valuable knowledge to the understanding of electronic banking services.

The Pakistani government has recognized the potential of mobile banking in advancing financial inclusion and has introduced various initiatives to support its growth. These include regulations and guidelines to ensure safe and reliable mobile banking services. Mobile banking in Pakistan faces several challenges, including low digital literacy, limited smartphone penetration in some areas, and the need for improved cyber security. However, these challenges also present opportunities for further growth and innovation.

Sundararaj, J. (2022) one of the primary concerns for consumers is security. Studies have shown that consumers are apprehensive about trusting mobile banking applications with their sensitive financial data. While most mobile banking apps offer basic functionalities like checking balances and transferring funds, some consumers may find them lacking in more advanced features. The inability to perform complex transactions, such as applying for loans or managing investments, through the mobile app can lead to dissatisfaction and a need to resort to traditional banking methods.

Chawla Deepak, and Himanshu Joshi (2007) examines user segments based on their perception of security and privacy. This research highlights how fear of fraud and data breaches can deter individuals from using mobile banking. Prerna Sharma Bamoriya et al. (2011) explores customer concerns regarding security vulnerabilities in mobile banking applications and the potential for unauthorized access to financial information. Carolina Afonso and João Duarte Teixeira (2022) investigates challenges related to user-friendliness and interface design, suggesting that complex or confusing app interfaces can discourage mobile banking adoption, particularly among older demographics. Technical glitches, slow loading times, and dependence on a stable internet connection can disrupt the mobile banking experience. Fear of fraud, data breaches, and unauthorized access can be significant deterrents, especially for those new to mobile banking. Additionally, confusing navigation and unclear instructions within the mobile app can lead to frustration and discourage continued use. Mehmood Ali et al. (2021) provides a broader perspective on online banking challenges, including the potential lack of awareness about available features and functionalities, impacting customer adoption and utilization of mobile banking services.

Problem Statement

The adoption of mobile banking services faces challenges related to perceived risk, user experience, and trust. Consumers often perceive mobile banking as risky due to security concerns. Additionally, poor user experience can deter adoption. Building trust through

reliable and secure systems is crucial. Enhancing flow experience ensuring ease of use and intuitive interfaces also impacts adoption. Understanding these factors is essential for encouraging effective mobile banking adoption.

The use of Mobile Banking

As of the end of June 2022, the number of mobile phone banking users reached 12.3 million, marking a significant increase from the 10.9 million registered users in FY21. During FY22, registered users conducted a total of 387.5 million transactions, a substantial rise compared to the 193.4 million transactions in FY21. The value of these transactions more than doubled, reaching Rs11.9 trillion by June 30, 2022. On a year-on-year basis, there was an impressive growth of 100.4% in transaction volume, while the transaction value experienced a remarkable surge of 141.1%. In the fiscal year 2022, the processing of internet transactions saw a substantial increase, reaching a total of 141.7 million with a value of Rs10.2 trillion—nearly double the amount from the previous fiscal year (Rs5.7 trillion). Year-on-year, internet banking users witnessed a growth of 59.8%, adding 3.1 million new users. Concurrently, the volume and value of transactions experienced impressive growth rates of 51.7% and 81.1%, respectively. As part of ongoing efforts to promote digital payments, the State Bank of Pakistan (SBP) introduced Raast Person-to-Person (P2P), facilitating real-time transactions among individuals, businesses, and other entities. As of June 2022, the registered P2P Raast users reached 15 million, conducting 7.9 million transactions totaling Rs102.1 billion. In the same fiscal year, the deployment of Point-of-Sale (POS) machines in the country reached a total of 32,958, contributing to a network expansion of 45.8% to 104,865.

In the fiscal year 2022-23, the State Bank of Pakistan's Annual Payment Systems Review revealed a 15.1 percent surge in Internet banking users, reaching 9.6 million, and a 30.2 percent increase in mobile phone banking users, totaling 16.1 million in Pakistan. The report attributes this growth to the efficiency and immediacy of e-banking's payment solutions, leading to a steady rise in transactions.

Shaikh and Karjaluoto (2015) study emphasize the significance of mobile banking within the evolving electronic commerce landscape. They highlight a notable volume of research on mobile banking adoption but identify a gap in the form of a clear roadmap or agenda. Their findings underscore the importance of factors like compatibility with lifestyle and device, perceived usefulness, and attitude in influencing intentions to adopt mobile banking services across developed and developing nations. However, the study also critiques the existing literature for its narrow focus on SMS banking in developing countries, neglecting smartphone and tablet applications. As such, the authors recommend further research to address these limitations and provide comprehensive insights into the field of mobile banking.

Carlos Tam and Tiago Oliveira (2017) highlights the significance of individual performance and the adoption of mobile banking (m-banking) in academic and practical fields. It also points out that most research in this area focuses on m-banking adoption and behavioral intention, with limited attention to post-adoption studies. Perceived ease of use and perceived usefulness are identified as the primary drivers for individuals' intentions to adopt m-banking. Furthermore, the authors propose a broader definition of m-banking that encompasses the evolving technological landscape, defining it as a service or product offered by financial institutions that leverages portable technologies. This review provides valuable insights into the state of research in the field of m-banking.

Carlos Tam and Tiago Oliveira (2017) emphasize the crucial connection between individual performance and the adoption of mobile banking (m-banking) within both academic and practical realms. The article highlights a predominant focus on m-banking

adoption and behavioral intention in existing research, revealing a notable gap in post-adoption studies. The primary drivers influencing individuals' intentions to adopt m-banking, as identified by the authors, include perceived ease of use and perceived usefulness. They articulate m-banking as a service or product provided by financial institutions leveraging portable technologies. This comprehensive perspective enriches our understanding of the current state of research in the field of mobile banking.

Security Concerns

Security remains a top concern for mobile banking users, as highlighted by [Irfan et al., 2021] and [Sundararajan, 2022]. Fear of data breaches, unauthorized access, and fraudulent transactions can deter consumers, particularly those new to digital banking [Akhter A, 2020]. Incidents of cybercrime can exacerbate these anxieties, making robust security measures a crucial factor in building trust. While convenience is a major advantage, some consumers value the human touch offered by traditional bank branches. Studies by [Yiga et al., 2016] and [Shareef et al., 2018] suggest that the absence of face-to-face interaction can lead to feelings of detachment and a lack of confidence when dealing with complex financial issues. Mobile banking needs to offer alternative solutions, such as secure in-app chat functionalities with customer service representatives, to address this concern.

Digital literacy plays a significant role in mobile banking adoption. Research by [Geebren et al., 2021] indicates that a lack of familiarity with technology can be a barrier, especially for older demographics. Complex interfaces and unclear instructions within mobile banking apps can further discourage users, as noted by [Tran & Corner, 2016]. Focusing on user-friendly interfaces, intuitive navigation, and educational resources to improve digital literacy can overcome this challenge. While most mobile banking apps offer basic functionalities, some consumers may find them lacking in advanced features. Studies by [Alkhaldi, Ayman N 2017] suggest that the inability to perform complex transactions, such as loan applications or investment management, through mobile platforms can lead to frustration and a continued reliance on traditional banking methods. Expanding functionalities to encompass a wider range of financial activities can enhance user experience and satisfaction.

Technical glitches, slow loading times, and dependence on a stable internet connection can disrupt the mobile banking experience [Shareef et al., 2018]. Mobile banking apps can be resource-intensive, leading to faster battery drain on smartphones, which can be a concern for some users. Unexpected charges associated with mobile banking transactions can erode trust and discourage user adoption [Tran & Corner, 2016].

Challenges of Mobile Banking

Mobile banking has brought about a lot of convenience, but it's not without its challenges. One significant issue is security. With sensitive financial information being accessed through mobile devices, the risk of unauthorized access and data breaches increases. Ensuring robust security measures, like two-factor authentication, is crucial to address this concern. Another challenge is the varying levels of internet connectivity and smartphone penetration in different regions. In areas with poor network coverage or limited access to smartphones, the adoption of mobile banking may be hindered. Customer education is also a hurdle. Some users may not be fully aware of the features and potential risks associated with mobile banking, leading to misunderstandings or misuse. Providing clear and accessible information to users is essential for a smooth transition to mobile banking. Lastly, the rapid pace of technological advancements means that mobile banking apps need to constantly evolve to meet user expectations and security standards. Keeping up with

these changes while maintaining a user-friendly experience poses an ongoing challenge for banks and financial institutions.

While convenience is a major advantage, some consumers value the human touch and miss the personalized service offered by traditional bank branches. Research suggests that the absence of face-to-face interaction can lead to a feeling of detachment and a lack of trust in resolving complex issues (Pankomera, et al. 2018).

Sujeet Kumar Sharma & Saeed Al-Muharrami (2018), discusses the dynamic landscape of mobile banking in the banking industry, emphasizing its relationship with traditional banking systems. It outlines the benefits and challenges associated with mobile banking adoption and explores the integration of emerging technologies such as big data and cloud computing and offers valuable insights for researchers and decision-makers, with a focus on the perspective of developing countries, providing theoretical and practical implications for understanding and harnessing the potential of mobile banking in an ever-evolving technological environment.

Sujeet Kumar Sharma & Saeed Al-Muharrami (2018) delve into the evolving landscape of mobile banking within the banking industry, particularly highlighting its interplay with traditional banking systems. They provide an overview of the advantages and obstacles linked with the adoption of mobile banking, while also exploring the incorporation of emerging technologies like big data and cloud computing. Their work offers valuable insights tailored to researchers and decision-makers, with a specific focus on the perspective of developing countries. The study not only discusses theoretical frameworks but also presents practical implications for comprehending and leveraging the potential of mobile banking in an ever-changing technological milieu. By bridging theoretical concepts with real-world applications, Sharma and Al-Muharrami contribute significantly to the understanding and implementation of mobile banking strategies, especially in regions undergoing rapid technological advancements.

Riquelme et al., (2010) set out to examine the factors influencing the adoption of mobile banking within the existing user base of internet banking in Singapore, with a specific focus on gender as a moderating variable. The study utilizes a sample exceeding 600 current users of electronic banking, employing structural equation modeling to scrutinize the collected data. The key findings of the research indicate that factors such as usefulness, social norms, and social risk significantly impact the intention to adopt mobile banking services among the sampled population. Additionally, the study reveals that gender plays a moderating role in influencing the effects of ease of use, relative advantage, and social norms on the adoption of mobile banking. This nuanced understanding contributes to a more comprehensive comprehension of the dynamics influencing the adoption of mobile banking, particularly within the context of Singapore's internet banking users.

Shareef et al. (2018) contributes to the existing literature on mobile banking adoption by providing a comprehensive and stage-specific analysis of the adoption factors. The paper also extends the GAM model by incorporating gender as a moderating variable and testing it in a developing country context. The paper is relevant to the research stream of mobile banking adoption, which has been growing rapidly in recent years due to the increasing popularity and availability of mobile banking services worldwide.

Chakiso, C. B. (2019), In the world of technological evolution, understanding the dynamics of user attitudes toward adoption becomes a fascinating exploration. Despite its cost-effectiveness and speed, mobile banking surprisingly lags behind other electronic banking forms like ATMs. The results unveiled strong correlations between trust, perceived ease of use, relative advantage, and compatibility with the adoption of mobile banking for both users and non-users. Interestingly, perceived risk showed no significant relationship with

either group's attitude toward mobile banking adoption. Furthermore, a noteworthy difference in attitude emerged between users and non-users of mobile banking.

MH Al Khasawneh (2015), consumers perceive and engage with m-banking services has been limited, leaving a gap in our understanding of the factors that drive adoption. To address this gap, this study aims to contribute to the existing knowledge by developing a model that incorporates the Technology Acceptance Model (TAM) with other key variables such as perceived trust and credibility. By examining consumers' attitudes and intentions toward m-banking, this research seeks to enhance our understanding of the adoption process. The study not only adds theoretical value by creating a model of factors influencing consumers in Jordan but also offers practical insights for marketers looking to attract and convince customers to embrace m-banking services.

The paper by Srivastava and Fernandes (2022) aims to measure the consumer adoption of mobile banking in a developing economy, using the diffusion of innovation theory as a theoretical framework. The paper uses a sample of 400 current users of electronic banking in India and applies confirmatory factor analysis to test the measurement model. The paper also examines the impact of demographic characteristics on consumer adoption of mobile banking using ANOVA. The paper finds that compatibility, relative advantage, complexity, trial ability, and observability are the main factors that affect the consumer adoption of mobile banking services. Zhou et al. (2010) who proposed a model based on the unified theory of acceptance and use of technology and the perceived risk theory to examine the adoption of mobile banking in China. Baptista and Oliveira (2015) who applied the decomposed theory of planned behavior to investigate the adoption of mobile banking in Portugal. Alalwan et al. (2016) who conducted a meta-analysis of 53 studies on mobile banking adoption and identified the most influential factors and moderators across different contexts. Baabdullah et al. (2019), who developed a framework based on the service quality, trust, and value perspectives to examine the adoption of mobile banking in Saudi Arabia. This study delves into the factors influencing mobile banking adoption in Saudi Arabia, aiming to understand its impact on customer satisfaction. Drawing on UTAUT2 and the D&M IS Success Model, the conceptual model explores dimensions like performance expectancy, price value, facilitating conditions, hedonic motivation, habit, system quality, and service quality. The findings from a questionnaire survey on Saudi bank customers reveal significant influences on actual usage behavior. However, the study acknowledges limitations such as its cross-sectional nature and the use of convenience sampling, suggesting the need for future longitudinal studies and broader population representation. The proposed comprehensive conceptual model aims to fill gaps in Saudi M-Banking literature, emphasizing the potential for generalization to the entire population through inferential analysis.

Laukkanen et al., (2008). The study focuses on discerning the distinct characteristics of early adopters and innovators in mobile banking compared to users of other online banking services. Through an internet survey involving 2,675 respondents from a prominent Scandinavian bank in Finland, the research employs logistic regression to pinpoint variables that set mobile banking users apart. Contrary to previous findings, age ($p < 0.0005$) and gender ($p = 0.010$) emerge as the primary differentiators, while education ($p = 0.957$), income ($p = 0.624$), occupation ($p = 0.596$), and household size ($p = 0.151$) prove insignificant. These results provide valuable insights for service providers, offering a nuanced understanding of the typical mobile banking user and enhancing the effectiveness of marketing strategies in the realm of electronic banking.

Significance of the study

Mobile banking has revolutionized financial services, offering convenience and accessibility. This study holds immense importance for several reasons: By focusing on the consumer's viewpoint, the study sheds light on challenges faced by users during mobile banking interactions. Understanding these pain points is crucial for improving service quality. The findings can directly impact banking institutions, app developers, and policymakers. Addressing identified challenges can enhance user experience, trust, and adoption rates. Identifying security, privacy, and usability challenges helps mitigate risks associated with mobile banking. Recommendations can bolster cybersecurity measures and protect consumers. As mobile banking continues to evolve, this study contributes to the industry's growth. It informs strategies, innovation, and adaptation to changing consumer needs. This research bridges the gap between technology and user experience, making it a significant contribution to the field of mobile banking.

Research Objectives

1. To examine the effect of reliability of mobile banking on customer satisfaction
2. Assessing the Impact of Mobile Banking on Service Quality and Its Implications for Customer Satisfaction.

Methodology

Mobile banking is a convenient and fast way of accessing financial services through digital channels. However, mobile banking also faces various challenges from the consumer point of view, such as security, reliability, accessibility, personalization, and customer service. This study aims to explore these challenges and their impact on customer satisfaction. The study uses a mixed-methods approach, combining surveys and interviews with 120 mobile banking users from different banks and regions. The study hopes to provide insights and recommendations for improving mobile banking services and enhancing customer value. The data was collected from (December 2022 – March 2023) using convenience sampling technique. In total, 120 questionnaires were administered. To analyze the gathered data and utilized the statistical software SPSS V22. This approach ensures a comprehensive evaluation of the online banking service quality based on customer opinions. It's a well-structured study with a clear methodology to gain insights into customer perceptions, motivations, and potential challenges in using online banking services in the specified region.

Sampling

The sample for my research was drawn from a pool of users, and the sampling method employed was simple random sampling. This technique ensures that every unit within the population has an equal likelihood of being included in the sample, contributing to a fair and unbiased representation in the research study.

Reliability

The assessment of the instrument's reliability and validity was conducted, revealing a Cronbach's alpha coefficient of approximately 0.860. This outcome establishes the internal consistency of the tool, indicating a high degree of reliability in its measurements.

Results and Discussions

Table 1: Gender of the respondents

Variable	Frequency	Percentage
Male	69	57.5
Female	51	42.5
Total	120	100

The survey data indicates a relatively even distribution between male and female respondents, with women comprising 41.7% and men 58.3% of the total participants.

Table 2: age of respondents

Variable	Frequency	Percentage
18- 26	20	16.6
27-36	32	26.7
37-46	35	29.2
47-56	18	15.0
More than 56	15	12.5
Total	120	100

The results indicate that the age group between 37 and 46 years old is the most represented among the respondents, with 29.2% of the participants falling into this category. This indicates that a significant portion of the surveyed population belongs to this age range. Following closely is the age group of 27-36 years old, representing 26.7% of the respondents. On the other hand, the age group labeled "More than 56" had the lowest response rate, with only 12.5% of participants falling into this category. This implies that fewer respondents were from the older age group, possibly indicating either a lower prevalence of individuals in this age range within the surveyed population or a potential reluctance among individuals in this category to participate in the survey.

Table 3: Number of respondents by education

Variable	Frequency	Percent
Matric or below	9	7.5
Intermediate	17	14.2
Bachelor	81	67.5
Other	13	10.8
Total	120	100

This data likely represents the distribution of educational qualifications among a sample population. For instance, 67.5% of the sample holds a Bachelor's degree, while only 7.5% have education up to the Matric level or below.

Table 4: The use of the bank account: individual/professional

Variable	Frequency	Percentage
personal purposes	77	64.2
professional	43	35.8
Total	120	100

The results indicate that the majority of the surveyed population, specifically 64.2%, use their bank account for personal purposes. On the other hand, a smaller percentage, 35.8%, utilize their bank account for professional purposes.

The reality of mobile banking in Pakistan, from a customer's point of view

Table 5: customer awareness of the existence of mobile banks

Variable	Frequency	Percentage
Yes	112	93.3
No	08	6.7
Total	120	100

The data indicates that the majority of customers surveyed, specifically 93.3%, are aware of the existence of mobile banking services. Only a small percentage, 6.7%, reported not being aware of such services. This high level of awareness suggests that mobile banking services are relatively well-known among the surveyed population. However, it's still essential for banks to continue efforts to educate and inform customers about the benefits and functionalities of mobile banking to ensure widespread adoption and usage.

Table 6: the use of mobile banking

Variable	Frequency	Percentage
Yes	95	79.2
No	25	20.8
Total	120	100

The data shows that 79.2% of the surveyed population uses mobile banking, while 20.8% do not. This indicates a significant adoption of mobile banking services within the surveyed group, reflecting a prevalent trend of utilizing mobile devices for banking activities. The 20.8% who do not use mobile banking might include individuals who prefer traditional

banking methods or those who may not have access to smartphones or reliable internet connections.

Table 7: Different uses of mobile banking

Variable	Frequency	Percentage
Transfer between accounts,	55	45.8
bill payment	30	25.0
mobile phone recharge	12	10.0
balance consultation, and transaction history	15	12.5
Other	08	6.7
Total	120	100

The data reveals various uses of mobile banking among the surveyed population. The most prevalent use is for transferring funds between accounts, with 45.8% of respondents engaging in this activity. Bill payments constitute another significant application, accounting for 25.0%. Additionally, 10.0% use mobile banking for mobile phone recharge. A smaller percentage, 12.5%, utilizes the service for balance consultation and transaction history checking. The category labeled as "Other" represents 6.7% of respondents who engage in different, unspecified uses of mobile banking. Overall, the results showcase the diverse functionalities of mobile banking, ranging from financial transactions to account management and other personalized applications.

Customer feedback on their preference for mobile banking

Table 8: customers believe that mobile banking is better than traditional banking

Variable	Frequency	Percentage
Yes	103	85.8
No	17	14.2
Total	120	100

The data indicates a strong positive sentiment towards mobile banking among the surveyed customers, with 85.8% expressing the belief that mobile banking is better than traditional banking. In contrast, a minority of 14.2% do not share this belief. This overwhelming majority in favor of mobile banking suggests a high level of satisfaction or perceived advantages associated with the convenience and features offered by mobile banking services compared to traditional banking methods.

Table 9: Risk related to internet banking

Variables	Frequency	Percentage
Transactional Risk	13	10.8
Password Risk	21	17.52
Network Issues	34	28.3
Hacking	23	19.2
Unauthorized Access	29	24.2
Total	120	100

Network Issues (28.3%) emerge as the most substantial concern, emphasizing the critical role of a stable and secure network infrastructure in internet banking. Password Risk (17.5%) and Unauthorized Access (24.2%) highlight the significance of robust authentication measures to prevent unauthorized entry and protect user accounts. Hacking (19.2%) signals the persistent threat of external attacks, necessitating robust cyber security measures. Transactional Risk (10.8%) underscores the importance of ensuring the accuracy and efficiency of financial transactions conducted through internet banking. These risks requires a comprehensive approach involving technology upgrades, cyber security measures, user education, and continuous monitoring to fortify the security and reliability of internet banking services.

Effect of Accessibility of Mobile Banking on Customer Satisfaction:

Table 10: Accessibility of Mobile Banking on Customer Satisfaction

Variables	Strongly Disagree	Disagree	Neutral	Agree	Extremely Strongly
The mobile banking registration process is simple	0%	1%	3%	39%	57%
It is easy to navigate i.e. get anywhere on the mobile banking site	0%	5%	6%	43%	46%
Mobile banking is available all the time	2%	7%	4%	47%	40%
Using mobile banking does not require a lot of effort	1%	3%	5%	37%	54%

A significant 39% of users find the mobile banking registration process simple, with 57% expressing extremely strong agreement. This indicates a smooth onboarding experience, contributing to positive user impressions.

A substantial 43% of users perceive the mobile banking site as easy to navigate. Nearly half (46%) strongly agree, reflecting a user-friendly interface that facilitates seamless navigation.

A noteworthy 47% of users agree that mobile banking is available consistently. The 40% expressing extremely strong agreement highlights users' confidence in the platform's accessibility at all times.

The majority (37%) of users believe that using mobile banking does not require a lot of effort, with 54% expressing extremely strong agreement. This suggests a positive user experience and an interface that aligns with user expectations.

Customer assessment of m-banking and challenges

Table 11: Customer opinions on mobile banking

Variables	Strongly Disagree	Disagree	Neutral	Agree	Extremely Strongly
The mobile banking app has simple and easy to use.	1%	4.5%	2.7%	45.8%	36%
How confident are you in the security measures of the mobile banking app.	1%	12%	13%	28.9%	45.6%
How convenient do you perceive mobile banking compared to traditional banking methods.	2.6%	4%	9%	45%	39.4%
How satisfied are you with your overall experience using mobile banking.	1%	8%	18%	23%	50%
How likely are you to recommend mobile banking to friends or family?	7.3%	12.7%	14%	35.9%	30.1%
How accessible do you find mobile banking, considering factors like device compatibility and internet connectivity?	6%	8.4%	15.4%	35.7%	34.5%

Would you be open to using additional mobile banking services or features in the future?	4%	6.9%	13.3%	39.8%	36%
Indicate your level of comfort with the idea of relying solely on mobile banking for all your financial needs.	2%	4.5%	12.4%	35.5%	45.6%

The evaluation item gauges customer opinions on the simplicity and usability of the app. Results indicate that a majority of customers, 45.8%, agree that the app is simple and easy to use, while 36% express an extremely strong agreement. On the other hand, only a small percentage, 1%, strongly disagree, and 4.5% disagree. A notable portion, 12.7%, neither agrees nor disagrees. These findings suggest that a substantial portion of customers finds the app user-friendly, with a significant number expressing high satisfaction with its simplicity and ease of use. However, there is a small proportion with dissenting opinions and some who remain neutral on this aspect.

The survey reveals nuanced perspectives on various aspects of mobile banking. In terms of security, a substantial 45.6% of respondents express an extremely strong confidence in the app's security measures, with an additional 28.9% holding a positive view. However, 13% remain neutral, and 12% express some level of skepticism, with 1% strongly disagreeing. These results suggest a predominant trust in the security measures, though efforts may be needed to address concerns and enhance communication.

In terms of convenience, a majority of 39.4% perceive mobile banking as highly convenient, and 45% agree with its convenience. However, 9% are neutral, and 6.6% express some level of disagreement, with 2.6% strongly disagreeing. These findings indicate a favorable view of mobile banking's convenience, though a segment of users may have reservations.

Satisfaction with the overall mobile banking experience is notably high, with 50% expressing an extremely strong satisfaction, and 23% agreeing. Nevertheless, 18% remain neutral, and 9% have some level of dissatisfaction, with 1% strongly disagreeing. These results underscore a predominantly positive experience with room for improvement.

When considering the likelihood of recommending mobile banking, 30.1% express an extremely strong likelihood, and 35.9% agree. However, 14% remain neutral, and 20% have reservations, with 7.3% strongly disagreeing. These results highlight positive advocacy tempered by some reservations.

Accessibility considerations reveal that 34.5% strongly agree that mobile banking is accessible, and 35.7% agree. Nonetheless, 15.4% remain neutral, and 14.4% express concerns, with 6% strongly disagreeing. This suggests a generally positive perception with a notable segment expressing reservations.

Concerning future adoption, a significant 36% express an extremely strong openness to using additional services, while 39.8% agree. Still, 13.3% remain neutral, and 11% express some level of reluctance, with 4% strongly disagreeing. These findings suggest a willingness to embrace new features, but some users may require further convincing.

In terms of relying solely on mobile banking for all financial needs, 45.6% are extremely comfortable, and 35.5% agree. However, 12.4% remain neutral, and 6.5% express some

level of discomfort, with 2% strongly disagreeing. These results indicate a generally high comfort level, though addressing the concerns of the remaining segment is crucial for broader acceptance. Overall, the survey reflects a positive attitude toward mobile banking, highlighting its strengths while signaling areas for improvement and communication enhancement.

Table 12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826 ^a	.882	.815	.425

a. Predictors: (Constant), Customer opinions and Accessibility

Table 13: Regression coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	T-value	Sig.
	B	Std. Error	Beta		
(Constant)	1.475	.173		19.868	.000
Accessibility	0.859	.049	.151	11.186	0.00
Customer opinions	.932	.056	.004	2.878	.000
a. Dependent Variable: mobile banking, customer satisfaction					

The combined effects of reliability, responsiveness, and accessibility explain 88% ($R^2 = 0.881$) of the variability in mobile banking customer satisfaction, as shown in the table 12. R Square value, 0.881, is likely the correlation coefficient between the predicted and actual values of customer satisfaction. A higher value indicates a stronger correlation. Overall, the model suggests that Customer opinions and Accessibility are important factors influencing customer satisfaction, and together they explain a significant portion of the variation in satisfaction scores. As indicated in Table 13, the influence of Customer Opinions on mobile banking customer satisfaction is positive, with a coefficient of 0.932. Similarly, Accessibility also has a positive effect on mobile banking customer satisfaction, reflected by its coefficient of 0.859. These results are consistent with the positive impact outlined in the regression model presented above. The hypothesis stating "Reliability of mobile banking has no significant effect on customer satisfaction" was tested using the results presented in Table 13. The coefficient of Reliability ($\beta = 0.859$, $t = 11.186.402$) indicated a positive relationship with mobile banking customer satisfaction. Based on the statistical result ($P > 0.05$) derived from the regression output, it was determined that there

exists a significant relationship between reliability and mobile banking customer satisfaction. Consequently, the null hypothesis (H01) was rejected.

Table 14 : ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.754	2	3.135	34.856	.000 ^b
	Residual	3.864	118	.595		
	Total	49.757	120			
a. Dependent Variable: mobile banking						
b. Predictors: (Constant), Customer opinions and Accessibility						

The researcher employed a regression model to assess the impact of reliability and accessibility on mobile banking customer satisfaction. The regression model was utilized to determine the extent to which the independent variables (reliability and accessibility) explained variations in mobile banking customer satisfaction (dependent variable). The results, with a p-value of 0.000 (less than 0.05), indicated a statistically significant model, demonstrating the influence of the independent variables on mobile banking customer satisfaction. The calculated F-statistic ($F = 34.856$), exceeding the 5% level of significance, further affirmed the model's significance in predicting the dependent variable based on the independent variables. Overall, Table 14 suggests that the model that considers Customer opinions and Accessibility has a statistically significant effect on mobile banking customer satisfaction. It explains a substantial portion of the variation in satisfaction scores.

Conclusion

The research investigated how internet and mobile banking impact customer satisfaction in Pakistan. Results indicate a substantial positive correlation between both internet and mobile banking with customer satisfaction at mobile Banking. Notably, internet banking emerges as the primary driver of customer satisfaction, providing customers with convenient access to their accounts beyond regular working hours for transactions such as payments and withdrawals. This accessibility through internet and mobile banking has consequently led to heightened customer satisfaction levels. Mobile banking in Pakistan has made substantial progress in extending financial services to previously underserved populations. While challenges remain, the potential for growth and development in this sector is significant. As more Pakistanis embrace mobile banking, it can continue to play a pivotal role in expanding financial access and deepening financial inclusion across the country.

Conflicts of Interest

There are no conflicts of interest

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References

1. Akhter, A., Hossain, M. U., & Karim, M. M. (2020). Exploring customer intentions to adopt mobile banking services: Evidence from a developing country. *Banks and Bank Systems*, 15(2), 105.
2. Alkhalidi, A. N. (2017). An empirical examination of customers' mobile phone experience and awareness of mobile banking services in mobile banking in Saudi Arabia. *Interdisciplinary Journal of Information, Knowledge, and Management*, 12, 283.
3. Ali, M., Khan, M. A., & Kalwar, M. A. (2021). Challenges for online banking in customer's perspective: a review. *Int. J. Bus. Educ. Manag. Stud*, 5(1), 37-57.
4. Afonso, C., & Teixeira, J. D. (2022). Challenges in Adapting to Mobile Banking From the Perspective of the Customers. In *Implementing Automation Initiatives in Companies to Create Better-Connected Experiences* (pp. 91-109). IGI Global.
5. Arguedas, R., Pra, I., & Reina, M. D. (2014). Mobile banking: challenges and opportunities for the financial sector. *Electronic payment systems for competitive advantage in e-commerce*, 164-185.
6. Al Khasawneh, M. H. (2015). An empirical examination of consumer adoption of mobile banking (M-banking) in Jordan. *Journal of Internet Commerce*, 14(3), 341-362.
7. Bamoriya, P. S., & Singh, P. (2011). Issues & challenges in mobile banking In India: A customers' perspective. *Research Journal of finance and accounting*, 2(2), 112-120.
8. Chakiso, C. B. (2019). Factors affecting attitudes towards adoption of mobile banking: Users and non-users perspectives. *EMAJ: Emerging Markets Journal*, 9(1), 54-62.
9. Chaimaa, B., Najib, E., & Rachid, H. (2021). E-banking overview: concepts, challenges and solutions. *Wireless Personal Communications*, 117, 1059-1078.
10. Dewan, S. M. (2010, December). Issues in M-banking: Challenges and opportunities. In *2010 13th International Conference on Computer and Information Technology (ICCIT)* (pp. 364-369). IEEE.
11. Ellahi, A., Jillani, H., & Zahid, H. (2023). Customer awareness on Green banking practices. *Journal of Sustainable Finance & Investment*, 13(3), 1377-1393.
12. Geebren, A., Jabbar, A., & Luo, M. (2021). Examining the role of consumer satisfaction within mobile eco-systems: Evidence from mobile banking services. *Computers in Human Behavior*, 114, 106584.
13. Haq, S., & Khan, M. (2013). E-banking challenges and opportunities in the Indian banking sector. *Innovative Journal of Business and Management*, 2(4), 56-59.
- Laukkanen, T., & Pasanen, M. (2008). Mobile banking innovators and early adopters: How they differ from other online users?. *Journal of Financial Services Marketing*, 13, 86-94.

14. Irfan, M., Zhao, Z. Y., Rehman, A., Ozturk, I., & Li, H. (2021). Consumers' intention-based influence factors of renewable energy adoption in Pakistan: a structural equation modeling approach. *Environmental Science and Pollution Research*, 28, 432-445.
15. Jamaluddin, N. (2013, November). E-Banking: Challenges and opportunities in India. In *Proceedings of 23rd International Business Research Conference* (Vol. 18, p. 20).
16. Khan, D. H. (2017). E-Banking: Benefits and Issues. *American Research Journal of Business and Management*, 1-7.
17. Khrais, L. T. (2013). THE EFFECTIVENESS OF E- BANKING ENVIRONMENT IN CUSTOMER LIFE SERVICE AN EMPIRICAL STUDY (POLAND). *POLISH JOURNAL OF MANAGEMENT STUDIES*, 110-120.
18. Mobile phone banking transactions surge 100%, People increasingly prefer phone banking with rising use of smartphones. <https://tribune.com.pk/story/2392601/mobile-phone-banking-transactions-surge-100>. December 24th, 2022.
19. Sharma, S. K., & Al-Muharrami, S. (2018). Mobile banking adoption: Key challenges and opportunities and implications for a developing country. *Emerging Markets from a Multidisciplinary Perspective: Challenges, Opportunities and Research Agenda*, 75-86.
20. Shaikh, A. A., & Karjaluo, H. (2015). Mobile banking adoption: A literature review. *Telematics and informatics*, 32(1), 129-142.
21. Sarma, P., & Roy, A. (2021). A Scientometric analysis of literature on Green Banking (1995-March 2019). *Journal of Sustainable Finance & Investment*, 11(2), 143-162.
22. Shareef, M. A., Baabdullah, A., Dutta, S., Kumar, V., & Dwivedi, Y. K. (2018). Consumer adoption of mobile banking services: An empirical examination of factors according to adoption stages. *Journal of Retailing and Consumer Services*, 43, 54-67.
23. Sundararaj, J. (2022). Opportunities and Challenges on the Adoption of Mobile Banking Services. *Journal of Positive School Psychology*, 6(8), 1951-1958.
24. Tam, C., & Oliveira, T. (2017). Literature review of mobile banking and individual performance. *International Journal of Bank Marketing*, 35(7), 1044-1067.
25. TESHOME, F. (2016). *mobile banking in Ethiopia: practices, challenges and opportunities* (Doctoral dissertation, St. Mary's University).
26. Riquelme, H. E., & Rios, R. E. (2010). The moderating effect of gender in the adoption of mobile banking. *International Journal of bank marketing*, 28(5), 328-341.
27. Pankomera, R., & Van Greunen, D. (2018). Challenges, benefits, and adoption dynamics of mobile banking at the base of the pyramid (BOP) in Africa: A systematic review. *The African Journal of Information and Communication*, 21, 21-49.
28. Yiga, C., & Cha, K. J. (2016). Toward understanding the importance of trust in influencing Internet banking adoption in Uganda. *Information Development*, 32(3), 622-636.