



“CUSTOMER TRUST IN DIGITAL BANKING SERVICES IN INDIA: A CONCEPTUAL FRAMEWORK FOR DIGITAL BANKING ADOPTION”**Mr. Sachin Kachrual Bassaiye****Assistant Professor,****Dr. Babasaheb Ambedkar Marathwada University,
Department of Management Science, Sub-Campus, Osmanabad.****ABSTRACT:**

The banking sector in India saw many changes with the increased use of digital technology in banking services. Digital banking like internet banking, mobile banking, digital payments and other related technology-based services witnessed tremendous growth in 2017-18 to 2021-22. The COVID-19 pandemic has further accelerated the transition towards digital banking and made customers rely on digital platforms for their routine banking needs. But the mere availability of the services has not been enough because of the customer's trust in such services and concerns with regard to cybersecurity, privacy, online fraud, transaction failures, and misuse of personal and financial details, amongst others.



The present paper attempts to develop a conceptual framework to understand and appreciate the role of customer trust in digital banking services in India. This study is purely conceptual in nature and looks at the developments in the digital banking sector in a span of 5 years (2017-18 to 2021-22) through existing literature, reports, and studies. The proposed framework considers perceived usefulness, perceived ease of use, security and privacy, service quality, customer awareness and perceived risk as some of the key areas in influencing customer trust and intention to use digital banking services. The study tries to establish the association of these variables with the customer trust, using Technology Acceptance Model (TAM), UTAUT, trust and perceived risk theory, amongst others. The paper argues that customer trust may have a positive impact on the intention to adopt digital banking, but perceived risk may cause hesitation in the process. The study offers one of the few conceptual understandings of the impact of technology related and customer related variables, in digital banking space. The proposed framework may be used by the banks and policymakers in formulating secure and effective digital banking services and may act as a springboard for further empirical studies in the said area.

KEYWORDS: Digital Banking, Customer Trust, Digital Banking Adoption, Perceived Risk, Perceived Usefulness, Security and Privacy, Financial Inclusion, FinTech, India. Technology Acceptance Model.

1. INTRODUCTION

Indian banking has witnessed a paradigm shift with the advent of internet banking, mobile banking, ATMs, wallets and the Unified Payments Interface. The period 2017-18 to 2021-22 was momentous for India as it registered a stupendous rise in digital payments and transactions enabled through technology. As per the Reserve Bank of India's (RBI) Digital Payments Index, the index value jumped from 100 in March 2018 to 349.30 in March 2022, signifying an increase in the number of

digital payment methods and transaction values. The COVID-19 pandemic further propelled the need and demand for contactless and cashless banking.

However, the digitization of the banking sector also brought in its wake issues pertaining to cyber security, privacy, transaction failures and fraud. In this scenario, customer trust has emerged as a critical success factor in digital banking. Customers are inclined to use digital banking services if they perceive them as useful and convenient and are convinced of the security and reliability of such services. On the contrary, distrust undermines customer confidence and discourages them from using digital media to effect financial transactions. This is particularly pertinent in the case of customers with lesser levels of digital literacy.

During the period under review, RBI took several steps to promote digital payments and bolster confidence in the same. UPI123Pay and DigiSaathi were launched in India in 2021-22 to take digital payments to the common man and help him navigate the digital payment ecosystem. Besides, a FinTech Department was set up by the RBI in January 2022, highlighting the importance it attaches to digital banking.

This paper attempts to present a conceptual framework that explains the role of customer trust in digital banking in India. Perceived usefulness, perceived ease of use, security and privacy, service quality, customer awareness, perceived risk, and customer trust are some of the variables that have been postulated to have an impact on customers' inclination towards digital banking. Technology Acceptance Model, Unified Theory of Acceptance and Use of Technology, trust and perceived-risk viewpoints have been integrated for this purpose. This paper is a conceptual one based on a review of secondary sources. It paves the way for further research and provides certain suggestions that could be considered by banks for offering digital services that are convenient, secure, transparent, and trustworthy.

2. LITERATURE REVIEW:

Rathod (2019) investigated the role played by mobile and internet banking in promoting financial inclusion in India. The work uncovered accessibility, affordability, ease of use, digital literacy, and trust as key factors predicting the adoption of online financial services, while cybersecurity and digital inequality emerged as significant barriers towards adoption. [1]

Goudarzi et al. (2015) explored factors influencing customer trust in internet banking. Results indicated that security, privacy, and accessibility jointly with ease of use, service quality, and user knowledge significantly predicted customer trust and adoption of internet banking. The work provides a solid rationale for this paper by illustrating how trust, security, privacy, and digital literacy influence customer adoption of AI-enabled services. [2]

Tater et al. (2011) researched customer adoption of banking technology in Indian private banks. Convenience, security, privacy, ease of use, accessibility, and awareness were found to significantly influence customer adoption of the technologies, whereas fraud, technical difficulties, and inadequate security measures were major hindrances to wider adoption. The factors identified in the work apply to the adoption of AI-enabled home loan services since fraud, privacy, convenience, and accessibility are essential considerations in the customer decision-making process. [3]

Krisnanto (2018) conducted a study on the influence of TAM and UTAUT on the perception of digital banking by customers. In his work, he identified perceived usefulness, ease of use, trust, security, perceived risk, and social influence as key factors that determine customer adoption intentions towards digital banking. The findings apply to the understanding of customer acceptance of AI-enabled home loan services because most of these factors play a role in the process [4]. In particular, trust, security, perceived risk, and social influence could predict the likelihoods of potential customers adopting artificial intelligence-based home loan options.

Kaur and Singh (2017) explored the role of privacy and trust in the adoption of e-banking by Indian customers. They found that trust, perceived risk, security, and privacy significantly predicted customer adoption intentions of e-banking. Similarly, the findings apply to the prediction of customer acceptance of AI-enabled home loan services because the processes involve the collection of personal information and the adoption of new technology [5].

Hassan et al. (2020) analyzed 131 articles on electronic payments and found that customer concerns with security dominate over benefits in the decision to adopt the technology [6]. Electronic payments

have been found to require confidentiality, authentication, integrity, and authorization, which are key security factors that determine customer adoption. Similarly, the concerns might be applied to understand the likelihoods of customers adopting AI-enabled home loan services.

Masihuddin et al. (2017) analyzed electronic payment systems and found that convenience and faster payments were among the benefits of the technology [7]. Nevertheless, security, privacy, trust, and lack of awareness were found to be major hindrances to the adoption of electronic payment systems. Specifically, convenience and faster payments are likely to benefit AI-enabled home loan services. Similarly, security, privacy, trust, and lack of awareness could hinder the adoption of AI-enabled home loan services.

Research Gap:- In their research, scholars have identified several factors that influence the adoption of digital banking, including trust, security, privacy, perceived risks, usefulness, ease of use, and digital literacy. At the same time, the focus of the previous studies was on the relationship between trust and individual services, such as mobile, Internet banking, or electronic payment systems. Moreover, the factors that shape customer confidence in the context of digital banking adoption in India have not been thoroughly explored. For this reason, the current research endeavors to formulate an integrated conceptual framework that would incorporate the factors influencing digital banking adoption through customer trust during the period 2017-18 and 2021-22.

3. OBJECTIVES OF THE STUDY :

The current conceptual paper aims to:

1. Explore the growth and development of digital banking in India during the period 2017-18 and 2021-22.
2. Determine the factors that influence customer trust in digital banking services.
3. Assess the impact of perceived usefulness, perceived ease of use, security, and privacy, service quality, and customer awareness on customer trust in digital banking.
4. Evaluate the effect of the perceived risks on customer trust in digital banking and their impact on the adoption of these services.
5. Identify the connection between customer trust and their intention to adopt digital banking services.
6. Create an integrated conceptual framework that would illustrate the factors that influence digital banking adoption through customer trust in India.
7. Outlining the recommendations for banks and policymakers in order to increase customer confidence and promote sustainable banking services.

4. RESEARCH METHODOLOGY :

4.1 Nature of the Study : The nature of the study is purely conceptual and descriptive in nature as it is based on secondary data. The study is based on the published literature, reports, and other reliable sources to identify the major factors affecting the customer's trust, and their adoption of digital banking services. This paper develops a conceptual framework that establishes a relationship between customer trust, perceived risk, and intention to adopt digital banking services.

4.2 Study Period : The study period includes five financial years from 2017-18 to 2021-22. During this period, there has been a significant rise in the use of mobile, internet banking, UPI, and other digital modes of payments in India. It also includes the COVID-19 pandemic period wherein digital channels witnessed a significant increase in their usage.

4.3 Sources of Data : The study uses the secondary data and published literature for the study. The major sources considered for the study includes:

- Reserve Bank of India (RBI) reports and publications
- Government of India reports
- Annual reports of banks and financial institutions
- Reports of financial and research institutions
- Research papers published in academic journals
- Books and edited books related to banking and FinTech
- Reports related to digital payments and financial technology
- Relevant websites and academic databases

4.3 Sources of Data : The research has relied solely on secondary data gathered from RBI reports, government publications, research articles, journals, and other trustworthy sources. Particular attention has been paid to the reports issued by the Reserve Bank of India (RBI), which is the major regulator of banking and payment systems in India.

4.4 Approach to Literature Review: The existing theoretical and empirical literature was thoroughly analyzed to find out what factors drive the application of digital banking technologies. In particular, the emphasis was on such variables as customer trust, perceived risk, perceived usefulness and ease of use of innovative technologies, security, privacy, service quality, and customer awareness. Moreover, the central theories of TAM, UTAUT, Trust Theory, and Perceived Risk Theory have been taken into account.

4.5 Conceptual Approach : This research aims to investigate the development of digital banking in India and define the key factors that influence customer trust and adoption of technologies. It has been hypothesized that factors such as perceived usefulness and ease of use, security, and reliability of technologies contribute to the emergence of customer trust. At the same time, such risks as fraud, privacy, and losses have been found to affect customers' perceptions and impact the decision-making process.

4.6 Scope of the Study : The current research has been focused on the trends of digital banking adoption by Indian customers and has analyzed the key factors of the process, such as customer trust and perceived risk. At that, the emphasis has been made on the influence of these variables on the intention to adopt digital banking technologies, not the performance of banking companies themselves.

4.7 Limitations of the Study: The current research has several limitations, the main of which is the reliance on secondary data, not primary statistics. Moreover, as digital banking technologies are constantly evolving, the study cannot account for all innovations and trends beyond 2021–2022.

5. EVOLUTION OF DIGITAL BANKING IN INDIA (2017-18 TO 2021-22)

5.1 Introduction to Digital Banking : Digital banking refers to provision of banking and financial services to the customers virtually. Such services do not require the physical presence of the customer like in the case of online and mobile banking, automated teller machines, electronic funds transfer, debit and credit cards, mobile wallets and UPI. Easy availability and accessibility through internet services has resulted into a paradigm shift in Indian banking sector.

5.2 Growth of Digital Banking in India : The growth rate of digital banking in India (UPI, IMPS, mobile and internet banking) during the period 2017-18 to 2021-22 was significant. As per the Reserve Bank of India's (RBI) Digital Payment Index (DPI), it moved up from 100 in March 2018 to 349.30 in March 2022, indicating a healthy increase in digital payments transaction in the country during the period under review. Though digital banking services have improved the ease of doing business and brought in more customers to the banking system, a few factors such as digital literacy, cyber security, and customer awareness about digital transactions also play an important role in influencing the choice of mode of payment amongst the customers.

5.3 Year-wise Development of Digital Banking

Financial Year	Major Digital Banking Developments
2017-18	Increase in use of internet banking, mobile banking, electronic fund transfer and digital payment services.
2018-19	Continued growth of UPI and other electronic payment systems with increasing customer acceptance of digital transactions.
2019-20	Expansion of FinTech services, mobile-based banking and digital payment infrastructure.
2020-21	COVID-19 pandemic accelerated the use of contactless payments, mobile banking and internet banking services.
2021-22	Further expansion of digital payments, UPI, financial inclusion initiatives and customer-oriented digital banking services. UPI123Pay and DigiSaathi were introduced during this period.

Thus, the trends described above indicate that digital banking in India has started to transition from an optional banking channel into a critical element of the banking sector. The situation in India was especially influenced by the COVID-19 pandemic, which made people turn to contactless and remote methods of banking.

5.4 Impact of COVID-19 on Digital Banking: The COVID-19 pandemic has had a major impact on the growth of digital banking in India. Physical restrictions have encouraged customers to turn to mobile, internet, and UPI banking. The banks' strategic response to the pandemic also impacted the growth of digital banking, as financial institutions focused on providing more digital services to meet the needs of the customers. At the same time, obstacles such as digital literacy, fraud, privacy, and security issues affected the level of customer confidence and interest in digital banking.

5.5 Emerging Issues of Trust and Security : Trust and security concerns are some of the main aspects of digital banking that need to be taken into consideration. Fraud, hacking, phishing, authorized transactions, and privacy issues are the key concerns that can limit the banking industry's transition toward a fully digital system. One should also consider the issue of digital literacy, as only educated and informed customers will be able to use online and mobile services safely and to their advantage. Thus, it is necessary to ensure that the banking system is safe and that the clients are not at risk of being exposed to fraud or identity theft.

5.6 Digital Banking and Customer Trust : The growth of digital banking from 14.7% (in 2017-18) to 95.2% (in 2021-22) indicates the increasing significance of technology-enabled services in India's banking system; however, its adoption is conditional upon the level of customer trust. Several variables, including perceived usefulness, ease of use, security, privacy, service quality, customer awareness, and perceived risk, are likely to determine customer confidence in digital transactions.

UPI's rapid rise and the overall growth of mobile and internet banking, especially during the COVID-19 pandemic, have made security, privacy, and digital literacy even more important. Thus, merely possessing and promoting technological capabilities is not sufficient to drive adoption and usage; rather, customer trust must be earned to increase their inclination toward digital services. This provides a theoretical basis for the development of a conceptual framework.

6. THEORETICAL FOUNDATION OF THE STUDY :

The existing research assumes that acceptance of digital banking is influenced by its usefulness, ease of use, security, perceived risk and customer trust. Thus, different theories have been considered to develop the conceptual framework.

6.1 Technology Acceptance Model (TAM): Davis (1989) developed TAM to explain the factors influencing the adoption of new technology based on its perceived usefulness and ease of use. In the case of digital banking, customers are more likely to adopt it if they find it useful, convenient and easy to operate. Therefore, the study incorporates these factors in the proposed conceptual framework.

6.2 Unified Theory of Acceptance and Use of Technology (UTAUT) : Venkatesh et al. (2003) developed UTAUT based on performance expectancy, effort expectancy, social influence and facilitating conditions to explain variance in technology adoption. In the case of digital banking, performance expectancy includes the expected benefits that the customers would derive by adopting the new technology, effort expectancy implies ease of use and reduces perceived difficulty of adoption. On the other hand, social influence and availability of digital infrastructure would affect the customers' intention to adopt digital banking.

6.3 Trust Theory : Trust plays a critical role in digital banking because the financial institution deals with sensitive and personal information about the customers online. Thus, factors such as security, privacy, reliability and service quality can influence customer trust. A high level of trust can increase the likelihood of customers using digital banking.

6.4 Perceived Risk Theory : Perceived risk in digital banking refers to the apprehension concerning financial loss, cyber fraud, privacy, unauthorized transactions and technical failures experienced by the customers using the online platform. Thus, elevated levels of perceived risk would reduce customer trust and their intention to adopt digital banking. However, factors such as security and awareness would reduce customer perceived risks.

6.5 Relevance of Theories to the Present Study : The above-mentioned theories offer an adequate basis for exploring digital banking adoption. TAM unveiled the influential role of perceived usefulness

and ease of use, whereas UTAUT emphasized the effectiveness of perceived value and effort. Moreover, Trust Theory and Perceived Risk Theory highlighted the significance of customer confidence and fears. These theories were integrated into the proposed conceptual model of digital banking adoption.

7. FACTORS AFFECTING CUSTOMER TRUST IN DIGITAL BANKING :

Following the review of the literature, it is evident that the key factors affecting customer trust in digital banking are as follows:

7.1 Perceived Usefulness : According to the reviewed literature, the perceived usefulness of digital banking appears to be critical in the process of its adoption. It should be noted that digital banks offer numerous advantages over traditional modes of banking, including saving time, providing convenience, and increasing access to financial services. Therefore, the perceived usefulness of the application of digital banking services can exert a positive influence on customer trust (Tater et al., 2011; Krisnanto, 2018).

7.2 Perceived Ease of Use : Perceived ease of use refers to the extent to which potential customers view utilizing a certain technology as a convenient and simple activity (Wang et al., 2018). According to the reviewed articles, the provision of digital banking services that can be used conveniently and simply attracts customers and increases their trust (Tater et al., 2011; Krisnanto, 2018). Meanwhile, the complexity of the process of using such services can have the opposite effect.

7.3 Security and Privacy : The level of security and privacy offered by digital banks is another factor affecting customer trust. It should be noted that customers entrust banks with their confidential data and money, making security and privacy attractive factors influencing customer trust (Goudarzi et al., 2015; Kaur & Singh, 2017). Conversely, the fear of being deceived and have personal information misused can deteriorate customer trust in digital banking.

7.4 Service Quality : The quality of service provided by a bank plays a significant role in establishing customer trust as well. Quick processing of transactions, effective grievance resolution, and reliable performance contribute to the overall satisfaction of customers, increasing their confidence and trust. On the contrary, transaction errors, problems, and failures can have a negative effect on customer trust (Goudarzi et al., 2015; Tater et al., 2011).

7.5 Customer Awareness and Digital Literacy : An adequate level of digital knowledge contributes to customer confidence in using digital banking services (Rathod, 2019; Masihuddin et al., 2017). In addition, it reduces the likelihood of misunderstanding and mistrust (Krisnanto, 2018). Therefore, digital awareness and literacy can be regarded as the driving forces of customer trust in the case of digital banking.

7.6 Perceived Risk : Perceived risk is defined as customers' fear of cyber-crime, financial loss, and privacy and transaction breaches, which can lead to a reduction in customer trust and their overall intention to use digital banking services (Krisnanto, 2018; Kaur & Singh, 2017). Thus, it can be concluded that customer perception of risk is a moderating variable in the relationship between trust and digital banking adoption.

7.7 Customer Trust : Customer trust is the key concept in the framework, as customer trust was found to be the driving force behind the intention to adopt digital banking services. Customers are more likely to use digital platforms to manage their financial operations if they believe that those services are safe and reliable and will keep their personal data secure. Therefore, usefulness, ease of use, security, and service quality, as well as customer awareness and digital literacy, can be regarded as the driving forces of trust, whereas perceived risk is a moderating factor.

8. PROPOSED CONCEPTUAL FRAMEWORK :

With regard to the framework, the current study proposed that perceived usefulness, ease of use, security, and service quality, as well as digital literacy, have a positive impact on customer trust, while perceived risk has a negative impact. Furthermore, customer trust positively affects the intention to adopt digital banking services.

The relationship between the variables is explained below:8.1 Proposed Framework :



The framework suggests that when customers find digital banking useful, easy to use, secure and reliable, their confidence in digital banking may increase. Similarly, proper awareness and digital literacy can help customers to use digital services with more confidence. In contrast, concerns about financial loss, cyber fraud, privacy and transaction failure may increase perceived risk and reduce trust. 8.2 Explanation of the Framework: The factors used in the proposed framework, namely, perceived usefulness and ease of use, perceived risk, security and privacy, service quality, and digital literacy, affect customer trust in digital banking. The customers are expected to develop trust in the service based on the perceived usefulness and ease of use of the service, level of security and privacy, service quality, and awareness and literacy.

Similarly, the level of perceived risk associated with fraud, financial loss, privacy, and technical difficulties may have a negative influence on customer trust. Thus, the customer trust will be the key factor influencing the digital banking adoption intention.

9. RESEARCH PROPOSITIONS:

Based on the framework, several research propositions can be developed.

- P1: Perceived usefulness has a positive influence on customer trust.
- P2: Perceived ease of use has a positive influence on customer trust.
- P3: Security and privacy have a positive influence on customer trust.
- P4: Service quality has a positive influence on customer trust.
- P5: Customer awareness and digital literacy have a positive influence on customer trust.
- P6: Perceived risk has a negative influence on customer trust.
- P7: Customer trust has a positive influence on digital banking adoption intention.

From this, it can be concluded that the positive perceptions of customers about digital banking might increase customer trust and satisfaction, while the negative perceptions might have a negative influence.

10. DISCUSSION OF THE PROPOSED FRAMEWORK :

The proposed framework implies that the adoption of digital banking is determined by technology and the customer's perception and attitude towards such services. The factors of usefulness, ease of use, security, privacy, service quality, and digital literacy may increase customers' confidence in using such services, whereas the perceived risk might lower their perception.

Meanwhile, customer trust plays the role of a moderator between all of the mentioned determinants and the intention to adopt. Thus, the customers that have a positive attitude towards perceived usefulness and security of digital services are more likely to use them. As a result, the banking system should improve its service quality, ensure security and trust, and raise customers' awareness and digital literacy to increase the level of adoption.

11. MANAGERIAL IMPLICATIONS :

Banks should create awareness among customers about digital literacy and cyber fraud, OTPs, passwords and privacy protection. Quick customer support and grievance redressal mechanisms must be available for failed or unauthorized transactions. In addition, effective communication about security measures, privacy policies, and customer protection will help reduce the perceived risk and boost confidence and trust in digital banks.

12. FUTURE RESEARCH DIRECTIONS :

Since the current study is conceptual, future researchers can test the model using primary data. The study can be conducted to compare the differences in the perspectives of public and private banks, customers in urban and rural areas, and various socio-cultural demographics. Future studies can also explore the role of financial literacy and cybersecurity awareness, social influence, techno-economic variables such as anxiety, and the image of the bank. The framework can also be tested separately for mobile, UPI, internet banking, and digital wallets.

CONCLUSION:

Digital banking in India has grown significantly from 2017-18 to 2021-22, with the number of mobile, internet banking, and UPI customers soaring. However, such services require more than just technological advancement; they need customer confidence and trust to increase adoption rates. The current study shows that perceived usefulness, ease of use, privacy and security, service quality, and awareness have a positive influence on customer trust, whereas the perception of risk has a negative effect, thus enhancing the likelihood that an individual will adopt digital banks. Therefore, customer trust is a critical construct that influences the relationship between various factors and the intention to adopt digital payment methods. The proposed framework provides a comprehensive theoretical background for future studies to understand customer trust in digital banking, emphasizing privacy, security, and transparency in dealing with customers, quick customer support services, and building awareness about cybercrime. However, since the current study is conceptual, future researchers can conduct an empirical study to establish a firm connection between the mentioned variables.

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