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Perception of Rural customers towards digital banking services in Rajasthan

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ABSTRACT:

The present research aims to explore the pertinent literature to determine the perception of banking customers from rural areas of India with a special focus on the digital services offered by the banking industry. The research also seeks to determine the reasons for the rural customers' acceptance and rejection of utilizing banking practices offered in digital mode by Indian Banks. The researchers have utilized the qualitative research method through extensive empirical literature relevant to digital banking in India and other educational database during 2000-2020 year to analyze customers' facts and perception of customers. The study suggests that rural people are keen to understand the services of banks offered in digital mode and are also accepting the same in their daily lives, which assists them in the convenient and smooth handling of their banking transactions.

Keywords: Digitalization, Digital Banking, Financial inclusion, Indian Banking Sector, Rural Customers, Rural banking

INTRODUCTION:

India is one of the fastest-growing economies in the world, with a population of over 1.3 billion people. In 2018, the worldwide mobile banking market had a valuation of \$715.3 million, and has projected to reach \$1,824.7 million by 2026, exhibiting a compound annual growth rate (CAGR) of 12.2% during the period from 2019 to 2026 (Snehal & Onkar, 2020). The country's financial sector is undergoing a significant transformation, driven by the digital revolution through boosting the country's economy and GDP (Kaur et al., 2021; Ozili, 2018; Demirguc-Kunt et al., 2018; Toader et al., 2018). The Indian government has launched several initiatives to promote digitalization in the country, such as Digital India, which aims to provide digital infrastructure to every citizen in the country (Venkataganesh & Sivaramakrishanan, 2018). Digitalization of banking in developing countries like India is an emerging trend that has revolutionized the banking sector (Sloboda et al., 2018; Malini & Menon, 2017). In recent years, with the rise of digitalization, there has been a significant increase in the use of digital platforms for banking services or branchless banking (Authority, 2023; Kumar et al., 2020). The emergence of digital banking in India can be attributed to the increasing penetration of the internet and smartphones in the country (Ananda et al., 2020). According to a report by the "Internet and Mobile Association of India" (IAMAI), the number of internet users in India is expected to reach 900 million by year 2025 (Press Trust of India, 2021). This has created a huge market for digital banking services. Rajasthan, known for its predominantly rural landscape, presents unique challenges and opportunities for the digitalization of banking services. Rural areas in the state often face limited access to physical bank branches, inadequate financial infrastructure, and lower levels of digital literacy among the population. However, the expansion of mobile networks and the government's initiatives to promote digital inclusion have the potential to bridge these gaps and transform the banking experience for rural customers. The study aims to investigate and understand the behavior of rural customers in response to the digitalization of banking services in Rajasthan, India. It also targets to explore the factors that influence rural customers' adoption, utilization, and attitudes towards digital banking services. By examining the behavior of rural customers, the study intends to provide valuable insights to banking institutions and policymakers for effectively implementing and promoting digital banking services in rural areas of Rajasthan.

Digitalization of Banking in India:

In today's era of digitalization, where the nation and economy are moving ahead with the highest level of technology in the Country especially to the financial sector (*Gai et al.*, 2018), the use of the internet or mobile applications for smooth banking activities is one of the most prominent and growing sectors (*Sloboda et al.*, 2018; *Chawla & Joshi*, 2017;). According to a report by the "Reserve Bank of India" (RBI), the number of mobile banking transactions in India increased by more than 188% between 2015 and 2022 (*Press Information Bureau Delhi*, 2023). This can be attributed to the increasing use of smartphones in the country, which has made it easier for people to access digital banking services (*Jebarajakirthy & Shankar*, 2021; *Alalwan et al.*, 2018). The Indian Banking sector is recognized as a backbone of economic development. For this, the Government of India is also working with different partners or banks to provide a solid platform for banks and customers (*Haralayya & Aithal*, 2021). The Digitalization of banking

refers to a practice where all the banks provide internet or mobile-based banking services to the account holders to smooth and quick accessibility of accounts with just a single click (*Bhimrajka*, 2020; Vial, 2019). For every nation, the banking system within the Country is crucial.

Rise of digital banking facilities in India:

The banking industry has undergone significant transformations in recent years, driven by the emergence of digital technologies and changing customer expectations along with an occurance of demonetization in India (*Popova*, 2021; *Chawla & Joshi*, 2019). Banks in India has traditionally been characterized by high transaction costs, limited accessibility, and a lack of convenience for customers (*Lee & Kim*, 2020; *Diener & Špaček*, 2021). However, they are now offering a range of services to enhance accessibility, convenience, and safety for their customers while reducing the cost of banking transactions with the rise of digital technologies (*Shankar & Rishi*, 2020; *Fathima*, 2020). They are offering a range of digital channels, including online banking, mobile banking, and social media, to allow customers to access their accounts and conduct transactions from anywhere and at any time (*Venkataganesh & Sivaramakrishanan*, 2018; *Dootson et al.*, 2016). Along with this the Banks are also leveraging technology to improve the convenience of banking services for customers (*Kang*, 2018). They are using data analytics and artificial intelligence to personalize the customer experience, offering customized product recommendations and real-time support (*Kaur & Ali*, 2021). The banking industry is experiencing a flying development with digital services, which act as a crucial integral element in the lives of banking customers. Digital banking offers financial transaction services to its customers and digital facilities to business houses and other vendors (*TRAN*, 2021). This helps banks increase their customer ratio and improve technological services and customer experience (*Aji et al.*, 2020; *PwC*, 2018). Private and governmental banks offer digital services to their customers in every region. The services of digital banking provide continuous support to enhance their competition level and attract more money to the circular flow within the economy for its overall growth (*Lachhwani & Kanwar*, 2020; *Zhao et al.*

Security measures in digital banking:

With the rise of cybercrime and identity theft, banks are investing heavily in security measures to ensure the safety of customer data and transactions as there are high chances of breaching the security through viruses, trojan infections, hacking or worms (Banna et al., 2021; Wang et al., 2020). Banks are implementing advanced authentication and encryption technologies to protect customer accounts and transactions (Rodrigues et al., 2022). Moreover, banks are also leveraging technology to reduce the cost of banking transactions. They are offering lower-cost digital channels, such as online and mobile banking, in reducing or eliminating fees for routine transactions, such as bill payments and transfers (Saroy et al., 2023; Mew & Millan, 2021; Al-Abdallah et al., 2021; Kapoor et al., 2020; Giovanis et al., 2019). Although, manual banking has been the traditional way of conducting banking transactions for several decade which requires for a large workforce as well as high maintenance of the banking systems (BTPN, 2021). Then, with the rise of digital technologies, the banking industry has undergone a significant transformation by emerging as a popular alternative to manual banking, offering customers greater convenience and accessibility (Rangaswamy et al., 2022; Chauhan, 2018; Mbama & Ezepue, 2018; A. Asongu & Nwachukwu, 2018).

Impact of Covid-19 Pandemic on digital banking

However, the occurrence of COVID-19 pandemic has disrupted business operations and customer behavior worldwide, with the banking industry being no exception (*Rukasha et al.*, 2021; *Turner & Morrison*, 2020; *Ting et al.*, 2020). But the pandemic has resulted in significant changes in the banking industry with a shift towards more use of digitalization as a measure of social distancing and the closure of physical bank branches (*Thapar et al.*, 2022; *Durr*, 2020). Branch closures have made it difficult for customers to access traditional banking services. Banks have invested in digital technologies to improve their digital banking services and offer customers a better experience (*Agarwal et al.*, 2022; *Giatsidis et al.*, 2019). AI, blockchain and machine learning have been used to develop Chabot's and virtual assistants, which can handle customer inquiries and provide assistance during the time of pandemics (*Kumari & Devi, 2022; Königstorfer & Thalmann, 2020*). While the shift towards digital banking has brought many benefits, it has also presented challenges for banks. The increased demand for digital services has put pressure on banks to ensure their systems are reliable and secure (*Hossain et al., 2021*). Cybersecurity threats have increased as a result of the pandemic, with hackers taking advantage of the increased use of digital banking services (*Marchiani et al., 2022*). Banks have had to invest in cybersecurity measures to protect their systems and customer data.

Effect of Covid-19 Pandemic on digital banking

The COVID-19 pandemic has compelled people to adopt digital payment applications, leading to an unprecedented surge in usage (Fung et al., 2020). However, not all individuals are comfortable or willing to use e-Wallets; they are driven to do so due to the outbreak of the coronavirus. They furthermore added that that female users express greater concern about e-Wallet security than male users. Regardless of the forced adoption, security concerns are prevalent and, on the rise, which serves as a warning to developers and service providers. Although the use of e-Wallets has exponentially increased during the COVID-19 pandemic, it is important to recognize that this adoption is compelled rather than voluntary (Undale et al., 2020). On the contrary, the pandemic has influenced the preference for e-banking, leading to notable changes in the usage of traditional banking services (Sarmah et al., 2021). Specifically, factors such as trust, safety and security, reliability, website design, and customer support have become crucial considerations by the customers for the digital banking (Kapoor et al., 2022; Istijanto & Handoko, 2022; Liébana-Cabanillas et al., 2020; Ul Haq & Awan, 2020; Baicu et al., 2020; Sinha et al., 2019). In addition, the customers also consider other factors, including the technological expertise, service quality, pricing, timeliness, payment options, administrative processes, and psychological factors when choosing banks during the COVID-19 pandemic (Harun, 2022). Besides this, the usage of mobile banking applications during pandemic have played a crucial role in promoting social distancing and

ensuring the safety of individuals by enabling them to conduct financial transactions from the comfort of their homes which indirectly resulted into positive behavior of customers towards the adoption of mobile banking (Nair et al., 2021). Despite social restrictions, the personal innovativeness of users for digital payments, especially those in the Zen Z age range, becomes significant as they tend to embrace new technology. As they prioritize their primary needs over social sentiments, resulted by the lack of a significant impact between social influence and the intention to use digital banking (Musyaffi et al., 2021). Conversely, from the perspective of retailers or shopkeepers, the main challenges include customers' lack of familiarity with mobile payment systems, employees' insufficient knowledge of such systems, poor management orientation, and customers' limited computer literacy which acts as a road block to the smooth usage of digital system (Jayarathne et al., 2022; Sharma, 2019). In conclusion, the researchers have observed a noteworthy increase in the value of mobile banking transactions, the number of mobile banking agents, and the opening of mobile banking accounts during the pandemic. Additionally, there has been a decline in interbank fund transfers through the RTGS and ACH systems. In various countries, mobile banking has emerged as the primary payment method during the COVID-19 pandemic (Tut, 2023; Boonsiritomachai & Sud-On, 2022)

Role of Government in digitalization of banking services

Government in the series of Digitalization has launched a new policy towards digital banking system that is the 75 different districts of India will have 75 units of digital banking with a motive to provide easy banking access to the citizens of villages and towns with more security in the banking structure (*Ministry of Finance*, 2022). Another step by Indian Government in the promotion of digital banking facilities was the launch of "DigiDhan Mission" in year 2017 with an aim of developing the easy digital payment channels along with a campaign of spreading awareness, education and training for using more digital payment methods (*Ministry of Electronics & Information Technology*, 2021). The concept of digitalization inside the banking area is frequently found in India since the foundation of ATMs. Also, improvements like Electronic Compensation Service, MICR, Telebanking, RTGS (Real-Time Gross Settlement), Electronic Funds Transfer system, point of sale terminal, and so on are generally seen within the banking industry (*Haralayya*, 2021). Digital banking has brought about reducing the various expenses radically and has generated its income from the different sources. Different advances and drives had been embraced by the National Payment Corporation of India (NPCI) as well as the Reserve Bank of India (RBI) in reinforcing the settlement and payment structure in banks very much like the send-off of Bharat Interface and United Payments Interface (UPI) for Cash. It is because of such drives and stages, bank account holders presently don't need to keep cash close by them any longer, they will currently apply exchanges anyplace whenever (*Garg & Panchal*, 2017).

Factors affecting customer behavior and acceptance:

Various theoretical frameworks can help explain the behavior of rural customers in adopting digital banking services. The Technology Acceptance Model (TAM) suggests that customers' behavioral intentions are influenced by their perceptions of the usefulness and ease of use of a technology which has a positive and direct impact upon the acceptance of digital banking services by the customers (Alnemer, 2022; Lara-Rubio et al., 2020; C.C. & Prathap, 2020; Singh et al., 2020; de Luna et al., 2019; Al-Maroof & Al-Emran, 2018). However, from the perspective of bank clients, the COVID-19 pandemic did not have an impact on digital banking effectiveness (Ghani et al., 2022; Singh & Sharma, 2022; Alnemer, 2022). Also, some previous studies on technology-driven banking services indicates that the satisfaction of customers relies on various factors, including the quality of service and functionality, the perceived value, the engagement between employees and customers, the perceived ease of use, as well as the perceived level of risk (Mbama et al., 2018). The Unified Theory of Acceptance and Use of Technology (UTAUT) extends this by incorporating additional factors like social influence and facilitating conditions personal innovativeness, anxiety, and trust were identified as significant indirect factors influencing consumer use behavior through attitude and behavioral intention (Abu-Taieh et al., 2022; Akinnuwesi et al., 2022; Jadil et al., 2021; Patil et al., 2020). In addition, the newly introduced aspect of grievance redressal was found to directly impact Indian consumer use behavior in mobile payment, along with performance expectancy and behavioral intention (Jena, 2022; Daka & Phiri, 2019). These models can be used to analyze the factors that shape rural customers' intentions and actual usage of digital banking services in Rajasthan.

Milestones and initiatives in digital banking

On the basis of Reserve Bank of India (RBI) of 2016-2017 outline, nearly 2, 22,475 ATMs are established across the nation and the number of POS system (Point of Sale) was recoded to 25, 29,141. Execution of Electronic Clearing Service (ECS), National Electronic Fund Transfer (NEFT), Check Truncation System, Real Time Gross Settlement (RTGS), Mobile banking industry, Credit, Debit as well as Prepaid Cards, have all acquired wide acknowledgment in Indian banking (Shaikh & Anwar, 2022). These are astounding milestones inside the digital transformation in the banking area. Internet based banking transactions has transformed the essence of banking and has accomplished a significant modification in banking systems (Alagh, 2020). Likewise, the banks take specific initiatives or bring some services to their customers, which can ease their practices and adopt more banking services into their daily lives. ICICI bank in India was the first private bank to launch digital banking for its customer, which later on was promoted by Government and adopted by various other banks in the Country (Invest, 2020). The primary aim of establishing banking units by government in India is to lend and receive money from its citizens for a smooth circular flow of money in the economy. The banks not only provide their services to ordinary people but also helps Government to buy or deposit their treasury in a safe place (Jingar et al., 2022). In an economically developing nation like India, where most of the citizens belong to rural or semi-urban area, it is very much essential to have a banking facility in such areas so that people from the rural area can also avail of banking services and have safety for their money (Kaur et al., 2021).

Growth in digital payment usage in India

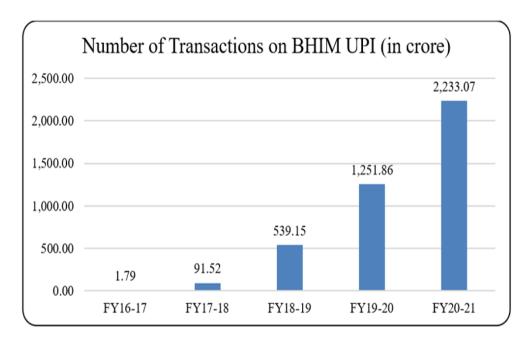


Figure 1: UPI transactions (FY2016-17 to FY2020-21)

Source: Ministry of Electronics & Information Technology

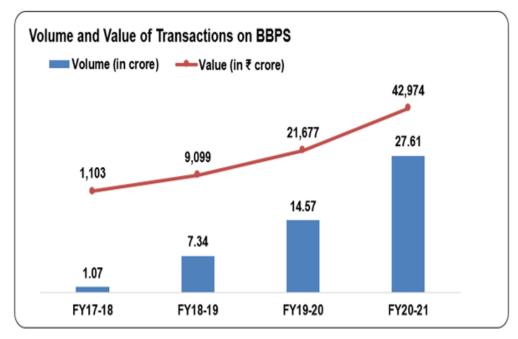
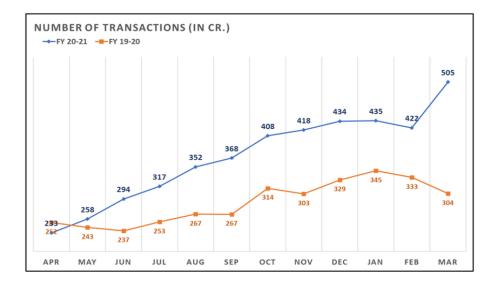


Figure 2: Bharat Bill Payment System (BBPS) (FY 2017-18 to FY 2020-21)

Source: Ministry of Electronics & Information Technology



Modes considered: NACH, IMPS, BHIM-UPI, NETC, Debit cards, Credit Card, NEFT, PPI.

Figure 3: Growth in Digital Payments during COVID-19

Source: Ministry of Electronics & Information Technology

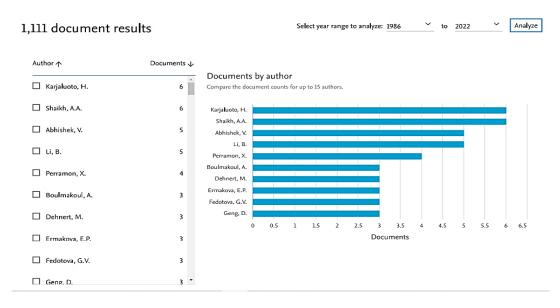
Payments through digital mode have consistently been expanding since most recent couple of years. The complete exchange volume has expanded from 1,004 crore in Financial Year 2016-2017 to 5,554 crore in Financial Year 2020-21. The number of dealings through BHIM UPI was 1.79 crore in year 2016-17 which rose to 2,233.07 crore in financial year 2020-21. Bharat Bill Payment System (BBPS) comes up with an extensible and effectively open repeating and bill payment facilities to customers through numerous platforms like Mobile banking, Internet banking, UPI, Mobile applications, and so on. As of now, billers from 18 different categories across India are being embarked on BBPS having a value of ₹1,103 crore in financial year 2017-18 which records to ₹42,974 crore by the year end 2020-21. The Coronavirus pandemic has shown us another advantage of digitalized way of payments, its job in empowering medical care. Furnished with digital payment methods like through Quick response code (QR code), Near Field Communication (NFC) empowered cards online payments is praising the "new normal" of social-distancing. During the Covid-19 emergency, online payments have been keeping economy running and assisting individuals with diminishing contact with infection". As compared to year 2019 there is a huge increase in the adoption of digital payment methods in year 2020 by the customers' for making payments of different purposes.

RESEARCH GAP

It would be suitable to discuss the research gap, and after thoroughly studying the above-discussed literature review, the researchers analyzed a deep gap within the practices of digital banking activities. Though there is ample literature but there are significantly fewer, or few studies focused on the behavior of rural customers, especially from Rajasthan, where more than 75.13% of the total population comprises from the rural or remote areas and the number of bank branches available is nearly to 5,867 comprising of only 11,734 ATMs and 23,468 POS machines.

Rural customers in Rajasthan may be hesitant to adopt digital banking services due to lack of awareness and knowledge about the services. Moreover, trust and security concerns can be a significant factor in the rejection of digital banking services by the customers (Sharma, & Sharma, 2019). Also, access to technology, such as smartphones and the internet, has also an influence towards the acceptance or rejection of digital banking services in rural areas of Rajasthan. Although, the perceived benefits of digital banking services can influence their acceptance of digital banking services by the customers in Rajasthan. Hence, it was decided to analyze the behavior of rural customers for the digitalization of banking activities especially from Rajasthan.

Figure 4: Scopus Database



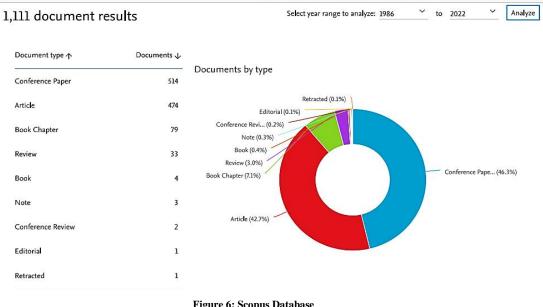


Figure 6: Scopus Database

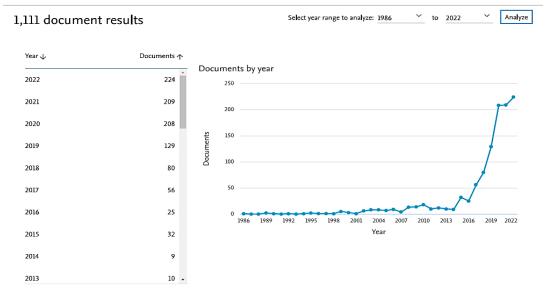


Figure 6: Scopus Database

From the above statistics, it seems that little research has been carried to analyze the behavior of rural customers concerning the digital practices adopted by Indian Banks in Rajasthan. Similarly, not much research has been reported to determine the acceptance and rejection of utilizing baking practices offered digitally by Indian Banks to rural customers'

From the above graphical analysis, it can also be determined that initially there were very few researches has been conducted related to digital banking in India, but with the time researchers are understanding the need of hour and are tapping the area with their extensive research. Most of the researches has been presented in different conferences and very less are being published in reputed Journals which is being referred by banks, managers and other researchers. Also, there are only few authors who has contributed their work towards the digital banking which shows a huge gap among the researchers towards their interest in studying the concept of acceptance and rejection of digital baking specifically for the rural areas of India. Hence, in order to study the untapped area of digital banking the researchers have decided to work upon the acceptance and rejection of using digital services by rural customers in India.

OBJECTIVES OF THE STUDY

The study aims to provide insights into the preferences, attitudes, and behaviors of rural customers towards digital banking. The main objectives of the study are:

- To understand the level of awareness among rural customers in Rajasthan about digital banking services.
- To examine the factors influencing the adoption of digital banking services by rural customers in Rajasthan.
- To investigate the challenges faced and benefits perceived by rural customers in using digital banking services in Rajasthan.

· To provide recommendations for enhancing the adoption and usage of digital banking services by rural customers in Rajasthan.

RESEARCH METHODOLOGY

The present research is based upon the study of literature available previously and hence involves a qualitative study. In order to make the research better, the researcher has utilized several sources relevant to practices of Indian banks in the field of Digitalization like previously published Journals, Articles, Web-based material and others that can contribute to a clear understanding of the research objectives. Articles which are not supportive to the present research has not been considered for in-depth analysis of the study, hence articles relevant to the behavior of rural customers for digital banking services has only been included in the study.

LIMITATIONS AND FUTURE RESEACH DIRECTION

The present study is limited to only one State of India that is Rajasthan, and we concur that the future research could add more states or different regions of the Country. Secondly, our study focuses only on rural customers, though population from urban or Semi-Urban areas also perceives different behavior towards the banking services. Furthermore, the study is limited to a qualitative understanding, leaving scope for quantitative analysis of prospects which could bring disruptive results in the field of digitization of banking services. Also, our study revolves around determining the behavior of rural customers for digital banking services which can be expanded through making comparisons among rural and urban customers or with different banks by adding some more variables to it.

Constructing to the research outcomes, future research can be extended to a degree of its findings by using more data or reviews from prominent sources of academic research. Some more Bibliometric analysis could be considered for the study which carries relevant sources equally in the study. The use of language was restricted to English only while doing the review however, future studies can cover non-English language articles, conference papers or book chapters to get into more results about digitalization of banking services. Also, we proclaim that there are there are several areas of digital banking services which could be directly related to the topic therefore, we expect that the present study will be able to encourage the researchers who conducts their study on digital banking to devote more time and efforts to this growing field of research and to stay up to date with this in vogue field of digital banking research.

CONCLUSION

Theoretical Implications

In conclusion, digitalization of banking in developing countries like India is an emerging trend that is transforming the banking sector. The increasing penetration of the internet and smartphones in the country has created a huge market for digital banking services. The impact of digitalization on banking in India has been significant, making banking services more accessible, convenient, and affordable for customers. As the digital revolution continues to grow, it is likely that digital banking will become even more popular in India in the coming years. Banks are leveraging technology to offer accessibility, convenience, and safety to customers while reducing the cost of banking transactions. By continuing to innovate and invest in technology, banks can further enhance the accessibility, convenience, and safety of banking services while reducing transaction costs for customers. However, the personalized experience offered by manual banking may be preferred by some customers, which can impact their satisfaction levels. Banks must strike a balance between offering digital services and maintaining a personalized experience for their customers.

The study also found that access to technology and internet connectivity were two critical factors that influenced the adoption of digital banking services. Customers who had access to reliable internet and digital devices were more likely to adopt digital banking services compared to those who did not. Moreover, the research suggests that factors such as trust and security concerns, lack of awareness and understanding of digital banking services, and inadequate customer support and assistance were also important factors that influenced the adoption of digital banking services in rural areas. Thus, it is relevant for bankers to comprehend and address their customer's requirements to improve their different digital banking services.

Overall, the findings of this study highlight the urgent need for increased awareness and education about digital banking services among rural customers in Rajasthan, in order to promote financial inclusion and improve access to banking services in these areas.

Practical Implications for Banking Institutions and Policymakers:

Understanding the behavior of rural customers over the digitalization of banking services in Rajasthan has significant implications for banking institutions and policymakers. Insights derived from this research can assist banks in designing tailored products, services, and digital platforms that align with the needs, preferences, and constraints of rural customers. Policymakers can utilize these findings to develop initiatives aimed at enhancing digital literacy, improving financial infrastructure, and promoting digital inclusion in rural areas.

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