



## "ENHANCING RURAL FINANCIAL INCLUSION: A STUDY ON DIGITAL BANKING SERVICES AND CUSTOMER SATISFACTION IN UNIVERSITY OF MUMBAI REGION"

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### **Abstract:**

The relationship between banks and their customers has undergone a significant transformation, shifting from a focus on operational aspects to a customer-centric approach, driven by continuous advancements in the banking industry. This transformation has witnessed the shift from traditional brick-and-mortar banking to branchless alternatives, such as ATMs, POS systems, internet banking, mobile banking, and kiosk banking. Banks are embracing these new technologies, recognizing the pivotal role of mobility and customer convenience in driving growth. One contemporary approach to extending financial services to underdeveloped regions is through digital banking. While Digital banking services have experienced substantial growth in India, with ATMs, computers, and smartphones becoming the primary channels for daily banking, the traditional branch network is expected to remain relevant for the foreseeable future.

The researcher employed primary data collection methods to gain a comprehensive understanding of customer awareness and satisfaction. This research paper focuses on examining the role of digital banking in rural areas. The study was conducted with the primary objective of elucidating the impact and significance of Digital Banking on customer awareness and satisfaction, particularly in specific geographic areas.

**Key words:** Digital Banking, Customer, Satisfaction, Internet.

### **Objectives of the Study:**

- To understand and analyze the concept of Branchless Banking.
- To understand and study the extent of awareness & use of Digital Banking in contemporary banking environment.
- To critically examine the penetration of banking correspondents along with various services offered by them.
- To research and analyze the different digital banking services offered by the private and public sector banks.
- To investigate the use of digital banking services by customers.

## **Introduction:**

The Indian banking system is a cornerstone of the country's economic growth and development. Over the years, this vital sector has undergone substantial transformations. Prior to 1990, private participation in India's banking system was restricted, with public sector banks holding a dominant position in the economy. However, since 1991, the liberalization and globalization of the Indian economy have ushered in significant changes, including heightened competition, technological advancements, shifts in the business environment, and evolving strategies aimed at meeting the increasing demand for diverse and high-quality banking services (Gupta, Mishra & Rahman, 2013).

Following the process of nationalization, banks were categorized into two types: public sector banks and private sector banks, intensifying the competition between them in the race to attract more customers. The integration of technology into the banking sector brought forth the concept of service quality as a means to fully and effectively satisfy customers. It is well-documented that high-quality service not only boosts customer satisfaction but also fosters a deep sense of commitment and loyalty among customers (Shanka, 2012).

The emergence of new-generation private sector banks post-1991 injected fresh competition into the Indian banking landscape. This spirit of competition prompted a shift towards cost efficiency, improved credit management, the effective utilization of resources, profitability, and overall efficiency, all aimed at ensuring the survival and growth of the banking industry. This competitive spirit, coupled with a focus on profitability, compelled public sector banks to depart from their decades-old socialist approach. The monopoly once held by public sector banks has gradually eroded with the entry of new private sector banks.

The introduction of innovative products and services in the banking sector has underscored the importance of service quality, with a customer-centric approach taking precedence. Simultaneously, the advent of digitization and the adoption of new technologies have transformed the way banks conduct their business. Information technology has played a pivotal role in shaping India's banking landscape. Banks are now expected to lead in technology, ensuring accessibility to customers at all times and in all places, while remaining at the forefront of competitive dynamics.

Crucially, these factors collectively form the foundation for emerging trends in the banking industry. Today, customers are often described as the kings of the market, and they are not just knowledgeable but also vocal about their preferences and expectations.

## **Digital Banking:**

The significance of Digital banking and its associated technologies has emerged as a means to enhance the convenience of banking services, particularly for individuals who lack access to traditional bank branches. Additionally, it serves to reduce the operational costs incurred by banks when establishing physical branches in unbanked regions. India, in particular, boasts a high level

of technological infrastructure compared to many other developing nations. The use of various technological devices, such as mobile phones and Automated Teller Machines (ATMs), is prevalent in the daily lives of individuals belonging to low and middle-income groups.

To fully harness the potential of these technologies, optimal utilization is essential, not only to maximize the benefits of digital banking services but also to minimize costs and time for both banks and customers. This study is conducted among individuals holding bank accounts in the Thane, Raigad, and Palghar districts of Maharashtra, India. The rationale for focusing on bank customers is rooted in their inclusion in the financial landscape, particularly after the initiation of the Pradhan Mantri Jan Dhan Yojana (PMJDY) in 2014. The central variables explored in this study are the key technologies associated with branchless banking, which encompass internet banking, ATMs, point-of-sale (POS) systems, mobile banking, and kiosk banking.

Although digital banking has witnessed remarkable growth, financial inclusion remains in its initial phase, primarily centered on the act of opening bank accounts. Notably, statistics reveal that only 23% of the accounts opened under the PMJDY are active, with the majority remaining dormant. This study sheds light on the extent of utilization of branchless banking technologies within the study area.

"Branchless Banking and Digital Transformation in the Service Supply Chain:

The internet has ushered in a monumental revolution in the way banking has been conducted for centuries. Numerous banks are actively pursuing the digitalization of their services and have set their sights on a branchless future. This digitalization goes beyond mere internet usage; it is deeply rooted in the SMAC model (Social, Mobile, Analytics, and Cloud), which places customers at the forefront while simultaneously reducing the costs associated with traditional banking. Following the demonetization measures enacted in early 2017, the significance of digital transformation in the delivery and service supply chain of the banking sector has gained tremendous prominence."

### **Review of Literature:**

**Anand and Sreenivas (2013)** In their research paper, it was noted that the emergence of Digital banking is a direct result of the ongoing technological advancements within the banking and financial services industry (BFSI). As the industry continually evolves, it has significantly transformed the interaction between banks and their customers. The focus has shifted from being operation-centric to providing efficient client services. During this transformation, there has been a notable shift away from traditional brick-and-mortar branches towards more branchless alternatives such as ATMs, Internet banking, and mobile banking. Customers, both individuals and businesses, now expect their financial institutions to provide user-friendly services, allowing for instant access to account information and a comprehensive range of self-service banking options. This shift has placed a strong emphasis on mobility and customer convenience, prompting banks to actively explore and adopt new technologies. Digital banking has emerged as a modern mechanism for delivering financial services, particularly in developing regions. Despite the significant growth of Digital banking services in India, traditional physical branches are unlikely

to disappear entirely. Even with the proliferation of ATMs, laptops, and smartphones as primary platforms for daily banking, physical branches are expected to persist, especially as these new modes of banking expand into rural areas.

**Sharma (2013)** The research centered on conducting a comparative analysis of electronic banking (e-banking) services offered by public and private sector banks, involving a sample of 500 respondents. This sample was evenly divided, with 250 respondents from each sector of banks. The study's findings indicated that women tended to use e-banking services less frequently compared to men. Additionally, it was observed that respondents from younger and middle-aged groups found it more convenient to utilize e-banking services when compared to those in the older age group. Among different occupational categories, individuals in the business and professional sectors exhibited a higher degree of ease in using these services as opposed to those in the service sector and students.

**Elavarasi and Surulivel (2014)** A study was conducted to investigate customer awareness and preferences regarding E-banking services offered by the State Bank of India. The research involved a sample of 200 respondents. The study's findings revealed that younger respondents showed a greater inclination to use electronic banking services compared to their older counterparts, mainly due to concerns related to the perceived risks associated with E-banking services. Additionally, it was observed that women tended to use E-banking services less frequently in comparison to men. Furthermore, the research concluded that private sector banks outperformed public sector banks in terms of service quality. However, when it came to secure transactions, respondents displayed a preference for public sector banks.

**Iswarya (2015)** The research focused on examining consumer awareness regarding contemporary banking practices in Tamil Nadu and revealed that customers have limited knowledge and trust in modern banking concepts. The analytical tool employed for this investigation was one-way ANOVA. The study's results indicated that customers utilizing banking services tend to avoid internet banking due to concerns about its reliability in managing financial transactions. Additionally, those customers who refrain from using cards for shopping express reservations about the safety and security of the modern banking system.

**Zeithaml et al. (1996)** The study investigated the connection between service quality and customer behavioral responses. It was determined that service quality exerts a noteworthy influence on customer behavior. The researchers constructed a conceptual model that delineates how service quality affects specific behaviors, and the results indicated whether customers choose to stay with a bank or switch to another. By utilizing this proposed model, they successfully established the relationship between customer behavioral intentions and their profound impact on service quality.

**Mishra (2007)** An assessment was conducted to evaluate and contrast service quality between older and newer banks, utilizing a sample size of 480 respondents. The results indicated that the dimension of assurance held the highest significance in terms of service quality, followed by reliability, responsiveness, and tangibles. The study further unveiled that the gaps between

customer expectations and perceptions were smaller in newer banks (private sector banks) as opposed to older banks (public sector banks) when considering various parameters.

### **Hypothesis of the Study**

- **H1:** There is strong association between the educational qualification of customers and use of digital banking services.
- **H0:** There is no association between the educational qualification of customers and use of digital banking services.
- **H1:** There is exists significant awareness of digital banking services among bank customers.
- **H0:** There is no significant awareness of digital banking services amongst bank customers.
- **H1:** There is strong association between parameters of banking services and its usages by customers.
- **H0:** There is no strong association between parameters of banking services and its usages by customers.

### **Research Design and Methodology:**

**Methods of Research:** In the realm of research, three primary methods are commonly employed: I) Survey II) Observation III) Experiment For this particular study, the researcher opted for the survey research method, which is widely used for data collection. Within the survey method, two essential features come into play:

- **Questionnaires:** These structured sets of questions are utilized to gather information.
- **Sampling:** The process of selecting a subgroup of the population to respond to the questions, with the aim of generalizing the collected information to the entire population of interest.

In the context of this descriptive cross-sectional study, the researcher engaged in a one-time interaction with a specific group of individuals. During this interaction, the researcher actively participated in surveys and interviews to collect the requisite information.

**Research Instrument:** The research instrument employed in the current study was the questionnaire method. To assess the theoretical model, a survey was conducted.

**Questionnaire Design:** To collect the essential information, a questionnaire was devised. The questionnaire was crafted with a focus on the review of literature pertaining to e-governance services, specifically targeting citizens in the Thane, Raigad, and Palghar districts. The questionnaire was thoughtfully designed to facilitate swift responses from the respondents. The objective of the current research study is to explore the transition of both private sector and public sector banks from the traditional brick-and-mortar service delivery structure to a more branchless banking mechanism.

### **Statistical Analysis Techniques**

The primary data, gathered through questionnaires, were organized and subjected to analysis using SPSS (Statistical Package for Social Sciences) version 12.0. The resulting data was then examined and interpreted employing a range of statistical techniques commonly utilized in social science research, including the Chi-square test.

### **Sources and Methods of Data Collection: -**

Type of data collected – 1) Primary Data 2) Secondary Data

#### 1. Primary Data: Survey Method

Instruments of Data collection: Structured Questionnaire

Structured Questionnaire method has been used to collect primary data. As stated earlier about 150 respondents has selected for the said surveys, who are the individual Account holders of Indian Public (SBI) and Private Sectors (HDFC) Banks in selected areas.

#### 2. Secondary data:

All relevant secondary data were collected from various sources like-Internet, Books; National & International referred journals, Conference Proceedings, Magazines, newspapers, Annual Reports of Private & Public sectors Banks, Government Publications, and Websites etc.

### **Data Analysis, Interpretation & Hypothesis Testing:**

This research pertains to digital banking services in the state of Maharashtra, with a specific focus on Thane, Raigad, and Palghar districts. In this chapter, the researcher presents an analysis of the data collected, employing various statistical tools and techniques. After obtaining primary data through a structured questionnaire, the raw data was organized through tabulation to facilitate the application of suitable statistical methods to derive results. The researcher successfully validated the hypotheses of this research study using the primary data. For the purpose of this study, the sample was stratified into three distinct districts, with 50 samples each from Thane, Raigad, and Palghar districts, resulting in a total sample size of 150 individuals, selected using statistical techniques to ensure robust data gathering.

### **HYPOTHESIS TESTING:**

#### **HYPOTHESIS 1:**

**H<sub>1</sub>:** There is strong association between the educational qualification of customers and use of digital banking services.

#### **Against**

**H<sub>0</sub>:** There is no association between the educational qualification of customers and use of digital banking services.

**Table No. 1. P-Value Table of relationship between the educational qualification of customers & use of digital banking services.**

Sr. No.	Chi Square Test Statistics	Chi-square	df	Asymp. Sig.
1	Internet Banking	46.408	12	.000
2	ATM Service using Debit card	32.374	12	.001
3	Online buying using Debit/Credit card	51.544	12	.000
4	POS Machines for transaction purpose	39.941	12	.000
5	POS Machines for integration of Aadhar based account opening services etc.	20.757	3	.000
6	Mobile Banking Services	28.551	12	.005
7	Banking correspondent network & service provided, especially in the rural markets	13.972	6	.030

(Source: Researcher's Own Contribution)

**Interpretation:** In the above table researcher interpreted that all the use of banking services parameters shows the Asymp. Sig. value is less than 0.05. So, researcher may reject the null hypothesis i.e., **H0** and **may accept the alternative hypothesis i.e., H1** at 5% level of significance.

It means that There is strong association between the educational qualification of customers and use of digital banking services.

**HYPOTHESIS 2:**

**H1:** There is exists significant awareness of digital banking services among bank customers.

**Against**

**H0:** There is no significant awareness of digital banking services amongst bank customers.

**Table No. 2. P-Value of Table of significant awareness of digital banking services among bank customers**

Sr. No.	Chi Square Test Statistics	Chi-square	df	Asymp. Sig.
1	I am fully aware of branchless banking and services therein	24.000	1	.000
2	I am using of branchless banking and services therein	24.000	1	.000

3	Overall, I am satisfied with the branchless banking and related services that I am using now.	79.600	3	.000
4	I will recommend others to use branchless banking services.	79.600	3	.000

**Interpretation:** In the above table researcher interpreted that awareness of digital banking services among the customers shows the Asymp. Sig. value is less than 0.05. So, researcher may reject the null hypothesis i.e., H<sub>0</sub> and **may accept the alternative hypothesis i.e., H<sub>1</sub>** at 5% level of significance.

It means that there is exists significant awareness of digital banking services among bank customers.

### HYPOTHESIS 3:

**H<sub>1</sub>:** There is strong association between parameters of banking services and its usages by customers.

#### Against

**H<sub>0</sub>:** There is no strong association between parameters of banking services and its usages by customers.

**Table No. 3. P-Value of Table of association between parameters of banking services and its usages by customers.**

	Chi Square Test Statistics
Chi-square	24.000
df	1
Asymp. Sig.	.000

(Source: Researcher's Own Contribution)

**Interpretation:** In the above table researcher interpreted that there is strong association between parameters of banking services & its usage by customers shows the Asymp. Sig. value is less than 0.05. So, researcher may reject the null hypothesis i.e., H<sub>0</sub> and **may accept the alternative hypothesis i.e., H<sub>1</sub>** at 5% level of significance.

It means that There is strong association between parameters of banking services and its usages by customers.

### Findings:

Most respondents fell within the age group of 18-30 years (32%), followed by those aged 60 years and above (28%), 31-45 years (22%), with the fewest respondents in the 46-60 age group (18%). This indicates that individuals in the 18-30 and 60 years and above exhibited greater awareness of branchless banking services.



Regarding gender distribution, 66% of the respondents were male, while 34% were female, indicating a higher participation of males in branchless banking transactions. Out of the total respondents, 33% belonged to Raigad district, 33% to Palghar district, and 34% to Thane district, demonstrating an even geographical distribution among the surveyed areas.

In terms of education, among the 150 respondents, 30% held post-graduate degrees, 28% had graduate degrees, 26% possessed post-graduate and above qualifications, and 16% were undergraduates. The analysis shows that a greater proportion of respondents held post-graduate and graduate degrees compared to undergraduate and post-graduate & above qualifications. Regarding marital status, the majority of respondents (64%) were married, followed by singles (33%), with a smaller percentage identifying as divorced or having another marital status (21%). Income-wise, 32% of respondents had an annual income between Rs. 2.5 lakh and Rs. 5 lakh, 30% had an income below Rs. 2.5 lakh, 18% fell in the Rs. 5 lakh to Rs. 7.5 lakh range, and 10% had incomes between Rs. 7.5 lakh and Rs. 10 lakh, as well as more than Rs. 10 lakh. The research findings indicate that all the parameters related to the use of banking services exhibited an Asymp. Sig. value less than 0.05. Consequently, the researcher rejected the null hypothesis (H0) and accepted the alternative hypothesis (H1) at the 5% level of significance. This suggests a strong association between customers' educational qualifications and the use of digital banking services.

Similarly, the awareness of digital banking services among customers also showed an Asymp. Sig. value less than 0.05. This led to the rejection of the null hypothesis (H0) and acceptance of the alternative hypothesis (H1) at the 5% level of significance, indicating significant awareness of digital banking services among bank customers. Furthermore, the analysis revealed a strong association between various parameters of banking services and their usage by customers, as indicated by an Asymp. Sig. value less than 0.05. Thus, the null hypothesis (H0) was rejected in favor of the alternative hypothesis (H1) at the 5% level of significance. This highlights a robust connection between parameters of banking services and their utilization by customers.

The study distinguished between general banking services, which are common services used by all customers, and specific services, which involve technology and include the use of internet and mobile banking, electronic fund transfers, and electronic clearing services (RTGS), among others.

The research findings also provided insights into the ranking of select services offered by banks based on the level of awareness, frequency of usage, customer comfort, recommendations, satisfaction levels, and issues faced while using banking services. These factors encompassed aspects like the quality of services, timeliness, knowledge, service charges, and customer awareness.

## **Conclusion**

In India, the realm of digital banking is still in its early stages. While Indian banks are earnestly striving to embrace advanced technology and implement electronic delivery channels, there remains a prevalent wariness among the masses regarding this concept.

Banks are making dedicated efforts to promote digital banking services and products. The younger generation is gradually recognizing the convenience and advantages of digital banking. In the years to come, digital banking is not only expected to become an accepted mode of banking but also the preferred one. Recognizing the significant role of the banking sector in the Indian economy, this study aims to assess customers' awareness and satisfaction levels with e-banking services in selected banks in Thane, Raigad, and Palghar Districts.

The current study scrutinizes the progress of e-banking services, the level of preference for banking services, customer usage of e-banking services, awareness levels, satisfaction levels regarding e-banking services, and the expectations and challenges faced by customers in utilizing branchless banking services. Every aspect has been thoroughly examined based on collected data and analyzed using various statistical tools.

The findings of this study indicate that the progress of e-banking services falls short of expectations. Customers with specific demographic attributes exhibit a lower preference for traditional banking services and encounter challenges when using e-banking services. Demographic variables, such as education, age, income levels, occupation, and location, play a significant role in influencing awareness and satisfaction levels among users. Consequently, bank managers should consider these demographic factors when designing their products, services, and awareness campaigns to cater to the preferences and needs of innovative banking users.

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