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Impact of AI-enabled e-banking services on customer satisfaction: A comparative study of selected public and private sector banks

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***Abstract*---**This study examines the impact of AI-enabled e-banking services on customer satisfaction with a comparative analysis of selected public and private sector banks. The research focuses on how service quality dimensions and AI-technology acceptance factors influence customer satisfaction and loyalty. Primary data were collected from 70 respondents using a structured questionnaire, supported by secondary data from existing literature. The study adopts a descriptive and comparative research design, along with regression analysis to evaluate the influence of security, reliability, convenience, and AI-driven services. The findings reveal that private sector banks perform better in terms of technological efficiency, responsiveness, and AI adoption, while public sector banks maintain stronger customer trust and reliability. AI-enabled services such as chatbots, personalization, and fraud detection significantly enhance customer experience and satisfaction. The study concludes that integrating AI with service quality is essential for improving customer satisfaction and achieving competitive advantage in the evolving digital banking environment.

***Keywords*---**E-Banking, Artificial Intelligence, Customer Satisfaction, Service Quality, Consumer Loyalty, Digital Banking, AI Adoption.

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INTRODUCTION

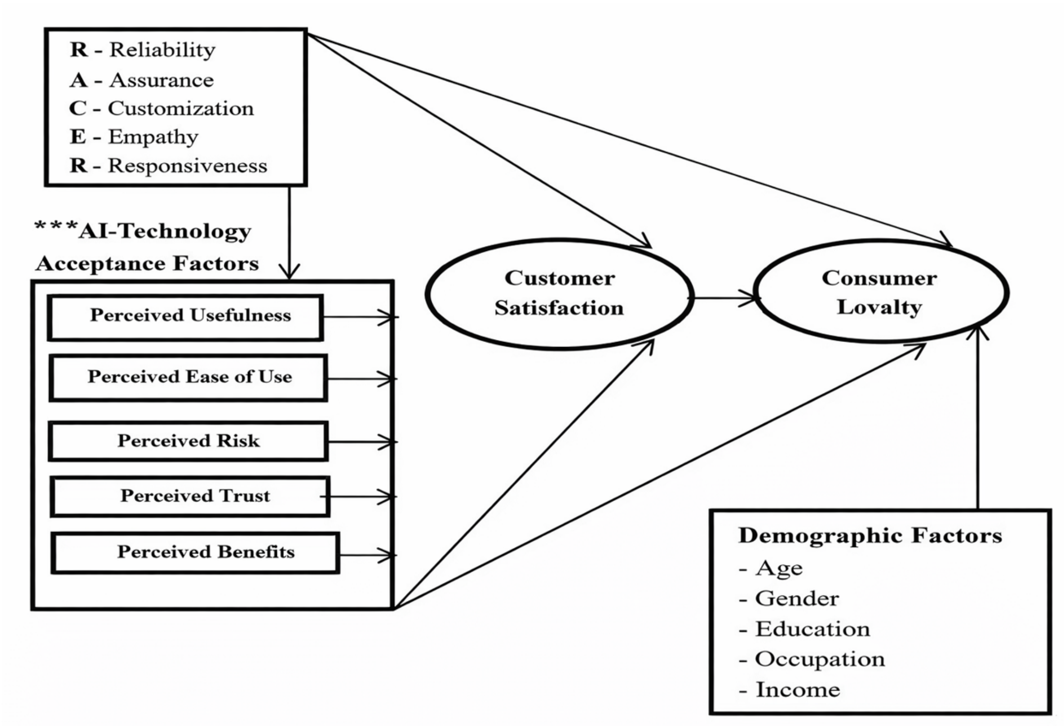
The banking sector plays a crucial role in economic development by mobilizing savings and providing credit to various sectors of the economy. With the rapid advancement of information technology, banks have increasingly adopted electronic banking (e-banking) services such as internet banking, mobile banking, ATM services, and digital payment systems.

Artificial Intelligence (AI) is transforming the banking sector by enhancing customer experience through personalized services, chatbots, fraud detection systems, and predictive analytics. AI-enabled banking platforms provide faster responses, improved accuracy, and customized financial solutions. In the context of e-banking, AI plays a crucial role in improving service quality, reducing operational errors, and increasing customer satisfaction. Therefore, integrating AI into e-banking services has become a key competitive factor for both public and private sector banks.

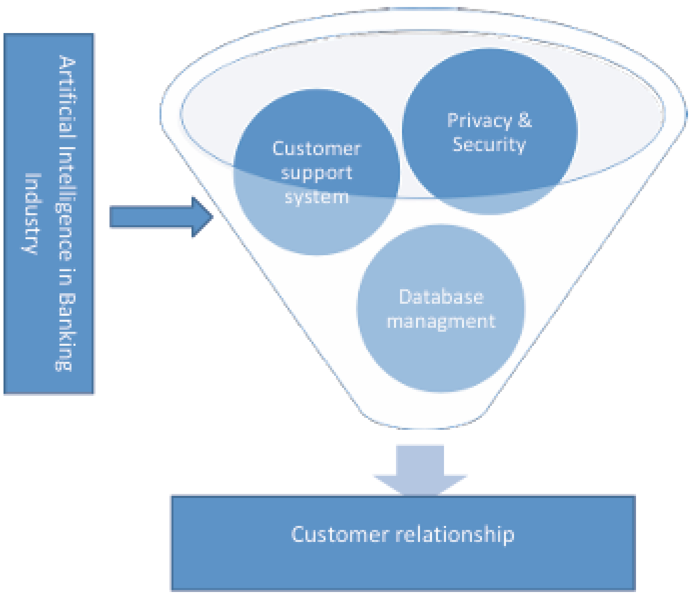
E-banking allows customers to perform financial transactions through electronic channels without visiting bank branches. It provides several advantages including time savings, convenience, cost efficiency, and 24-hour access to banking services. In India, both public and private sector banks have implemented digital banking platforms. However, the adoption and customer satisfaction levels vary depending on service quality, security, accessibility, and technological advancement. Therefore, a comparative study between public and private sector banks is essential to understand customer perception towards e-banking services. The banking sector plays a vital role in economic development by mobilizing savings and providing credit facilities to different sectors of the economy. With rapid technological advancement, banks have increasingly adopted electronic banking (e-banking) services such as internet banking, mobile banking, ATM services, and digital payment systems.

This study examines customer satisfaction toward e-banking services and provides a comparative analysis between public and private sector banks. The research focuses on Private and Public sector banks. The study uses a descriptive and comparative research design with primary data collected from 70 respondents using a structured questionnaire with a focus on demographic influence and the growing dominance of private sector banks. Secondary data collected from other references.

The findings reveal that private sector banks perform better in responsiveness, technological efficiency, and problem resolution, while public sector banks show stronger reliability and customer trust in compensation policies.



- The model explains the relationship between service quality, AI factors, customer satisfaction, and consumer loyalty.
- Service Quality factors positively influence customer satisfaction and Loyalty.
- AI-Technology Acceptance factors determine how customers accept and use AI-based banking services.
- Customer satisfaction act as a mediating variable: Influenced by service quality and AI factors. Leads to better customer experience
- Consumer Loyalty is the final outcome: Satisfied customers show repaeat usage and incresed recommendations and retention.
- Demographic factor includes Age, Gender, Eduaction, Occupation and Income. These influence customer perception and adoption of e-banking services.
- The model shows that better service quality + effective AI usage = higher satisfaction and loyalty.



Comparative Analysis of AI-Enabled E-Banking Services in Public and Private Sector Banks

Particulares	Public Sector Banks	Private Sector Banks
AI Adoption Level	Moderate and gradually increasing	High and rapidly evolving
Investment in AI Technology	Limited due to budgetary and regulatory constraints	Significant investment in advanced AI technologies
AI-Powered Chatbots	Available but with limited functionalities	Highly advanced, multilingual, and 24/7 support
Customer Query Resolution	Slower response time due to hybrid processes	Faster and automated resolution through AI systems
Predictive Analytics Usage	Limited application in customer behavior analysis	Extensive use for customer retention and cross-selling
Mobile Banking Experience	Functional but less personalized	Highly interactive and AI-driven user experience
Digital Loan Processing	Semi-automated approval process	Fully automated and instant approval systems
Customer Satisfaction Level	Moderate to High	High to Very High
Customer Retention	Relatively stable	Strong customer retention through personalized services

LITERATURE REVIEWS

Several researchers have examined the relationship between e-banking services and customer satisfaction. Studies show that service quality, security, reliability, and ease of use are significant determinants of customer satisfaction in digital banking environments. Research on internet banking adoption indicates that perceived usefulness and trust strongly influence customer acceptance of e-banking services. Previous comparative studies between public and private sector banks indicate that private banks often perform better in terms of technology adoption and service delivery, whereas public sector banks are preferred due to reliability and government backing.

Accordingly, the RBI Report (2024) stated that the private sector banks were the first adopters of AI technology including chatbots, machine learning and advanced analytics. Additionally, the survey pointed out that larger banks with relatively higher capital adequacy ratios were more inclined to invest in new AI-based innovative solutions. Further A study by Bhambhani et al. (2025) illustrated that the application of AI made services much better, faster and more enjoyable for customers. Additionally, the researchers found that automation decreased the involvement of humans in the process and increased the accuracy of banking operations.

Despite the growing importance of digital banking, there is limited research focusing on customer satisfaction towards e-banking services in the city of Ahmedabad. Therefore, this study attempts to fill this research gap. "A study on electronic banking and customer satisfaction" BismarckAmiya and Eric Ashley (2015) :E-banking encompasses the provision of banking services and products by banks to their customers through electronic medium. E-banking covers both computer and telephone banking. For many banks, inclination to e-banking services improves customers to the bank. The adoption of e-banking is also seen as a new method of expanding customer base and to also counteract the aggressive effort made by traditional banking institution. E- banking allows customers to inquire information and carry out most banking services such as account balance inquiry , bill-payments and inter-account transfers through the internet. E-banking therefore, includes systems that enable financial institutions customers , individuals and business to access accounts , transact business and obtain information on financial products and services through public or private networks.

K Madavan (2020) :E-banking uses electronic technologies to facilitate interactions between banks and customers, improving efficiency and service quality. This study analyzes customer satisfaction with e-banking in public and private banks in Puducherry. Data from 478 respondents show private banks deliver better e-service quality, highlighting the need for technological improvements in public sector banks.

Dr.Poonam Sawant, Dr. R.V Kulkarni (2013): Customer satisfaction is one of the major factors to measure the performance of banks. They presents the impact of e-services on customer satisfaction. A comparative study of customer satisfaction level in three major public sector banks (State Bank of India, Bank of

Maharashtra and Bank of Baroda) and three major private sector banks (ICICI Bank, HDFC Bank and Federal Bank) is done, with special reference to the problems faced by customers using online services. The paper also examines the relationship between various online facilities, factors affecting the choice of Internet banking and its interplay with customer satisfaction.

K. Sreenivasa Murthy, M. Subramanyam (2021): Internet banking is rapidly expanding in India due to its secure and efficient services. This study examines the impact of e-banking strategies on customer satisfaction in public and private sector banks, using primary and secondary data from 1,000 respondents (570 from SBI and 430 from Kotak Mahindra Bank). Statistical tools like mean, standard deviation, and coefficient of variation were applied. The findings reveal that customer satisfaction levels for e-banking services in both banks are nearly similar. However, as a leading public sector bank, SBI must strengthen customer relationship management and enhance service quality to retain its competitive position against private sector banks.

Gurjeet Kaur,Ashima Thakur (2025): This study examines customer satisfaction with online banking services in Punjab, comparing public sector (SBI) and private sector (HDFC) banks. Based on data from 200 respondents, five key factors were identified: ease of use, security, prompt service, technical aspects, and problems. Results show higher satisfaction among private bank customers, with ease of use ranked highest. The study highlights the need for public banks to improve service quality for better customer satisfaction.

Kashyap et al. (2024): This Study identified four critical dimensions of service quality in internet banking: efficiency, reliability, security and privacy, and issue/problem handling. Among these, reliability, and security and privacy were found to have the most significant impact on customer satisfaction, while efficiency and problem handling had a lesser effect. Digital literacy plays a pivotal role in shaping customer satisfaction in online banking. Several studies highlight its significance in enhancing trust, ease of use, and overall engagement with digital banking services

Bhandari, R., Kumar, A., & Saini, M. (2023): This Study suggests that consumers with higher digital literacy levels are more likely to adopt and efficiently use online banking, leading to increased satisfaction. Conversely, individuals with limited digital skills face challenges in accessing and utilizing these services, negatively impacting their experience.

Dr. Navleen Kaur and Dr. Monika Sharma (2020)- In their study title " Banking 4.0-The influence of Artificial Intelligence on the banking industry and how AI is changing the face of modern day banks" tried to understand the possibilities of witnessing revolutionary changes in banking industry and also its impact on human power. They tried to evaluate the challenges faced by banks and also the benefits which customers can obtain with the application of AI in banking sector. The study concluded that effective use of AI has positive effect on customer attraction which ensures growth and development of banks.

Khan, Singh, and Kumar (2022): This study provides a comprehensive review of recent literature on service quality in the banking sector, focusing on various models and their applicability across different cultural contexts. The authors critically analyze multiple service quality frameworks, including the widely utilized SERVQUAL model, to assess their effectiveness in measuring customer satisfaction within banks. Their findings suggest that while certain dimensions of service quality, such as reliability and responsiveness, are universally valued, the importance of specific service quality dimensions can vary significantly across different cultural and national settings. This variability underscores the necessity for banks to customize their service quality assessment tools to align with the cultural contexts of their target markets.
Kumar and Verma (2022): Their findings indicate that private sector banks generally outperform public sector banks in service quality, particularly in responsiveness and assurance. However, public sector banks excel in reliability, attributed to their established reputation and trustworthiness. The study concludes that while private banks offer more efficient and customer-centric services, public banks maintain customer satisfaction through consistent and dependable service delivery. The authors recommend that public sector banks focus on enhancing responsiveness and assurance to improve overall customer satisfaction.

Singh, Jain, and Sharma (2021): This Study investigates the impact of user experience (UX) design on customer satisfaction within online banking interfaces. The authors emphasize that intuitive and user-friendly interface designs are crucial for enhancing customer satisfaction. They identify key UX elements—such as ease of navigation, aesthetic appeal, and responsive design—that significantly influence users' perceptions and satisfaction levels. The research concludes that banks prioritizing effective UX design can achieve higher customer satisfaction, increased loyalty, and a competitive advantage in the digital banking sector.

Dr. Ashok Kumar (2018): This study was undertaken on comparative study between the private sector banks and public sector banks in electronic banking in different cities. E –banking is the provision of banking service through electronic channels and the customer can access the data without any time and geographical limitation..This paper identified the how much electronic banking adoption in different Banks in Korba City.

Fozia (2022) : As discussed a study on internet banking: an empirical study of customers perception in NCR, India. She consider for cathe study convenience sampling technique was used to recruit 320 customers through a well designed questionnaire from three Public Banks i.e. SBI, Punjab National Bank and Bank of Baroda and three Private Banks such as, ICICI, HDFC and Axis Bank of NCR, India. Finally this study results the accuracy, cost effectiveness, efficiency, accessibility and easy to use indicate significant difference between selected banks in India.

Bonnie G. Buchanan (2019): His study related innovations that incorporate AI (ML) and profound learning (DL), AI can upset and refine the current money related administrations industry. ML strategies are about calculations, instead of asymptotic factual procedures. In this exploration paper, the creator investigates profound data about AI.

Bhatia et al. (2020) : His Study explored how AI and machine learning models are improving the accuracy of credit scoring, particularly for unbanked populations. By utilizing alternative data sources such as social media activity, mobile usage patterns, and transaction histories, AI models can provide more inclusive and accurate credit assessments. This has opened the door for more personalized loan offerings in India.

Prashant Debnath, P. Chellasamy (2022): Digital banking has transformed traditional banking by enabling customers to perform financial transactions online without visiting bank branches. This study examines the impact of new digital banking services on customer satisfaction. Using purposive sampling and SPSS analysis, findings reveal that services like chatbots, digital wallets, and payment applications significantly enhance customer satisfaction and banking convenience.

Dr. Srinivas Barla, Dr. Gaddam Naresh Reddy(2025): Artificial Intelligence (AI) has transformed banking by improving customer experience and operational efficiency through technologies like chatbots, fraud detection, and automated services. This study evaluates AI-driven banking services and customer satisfaction in Indian banks. Findings indicate AI enhances service quality, but reliability, customer awareness, and user-friendly systems are essential for long-term success.

Dr. Aashka Thakkar, Khushi Patel, Khushi Mittal (2025): This study examines customer satisfaction and perception towards commercial banks in Vadodara, focusing on digital banking, service quality, interest rates, and personalized services. Findings reveal that AI-driven banking services, efficient customer support, and fintech innovations significantly influence customer satisfaction, while service delays and inconsistent support negatively affect customer perception and loyalty.

IMPORTANCE OF THE STUDY

- This study is important as it evaluates customer satisfaction with e-banking services in public and private sector banks.
- This study evaluates the impact of AI-enabled e-banking services on customer satisfaction in both public and private sector banks.
- This study is useful for improving customer loyalty and competitive advantage in the evolving banking sector.
- The study supports banks in improving digital banking services, enhancing customer retention, and gaining a competitive edge. It also provides valuable insights for researchers and policymakers to understand trends in the evolving digital banking environment in India.

OBJECTIVES OF THE STUDY

1. To examine the adoption and usage of AI-enabled e-banking services among customers of selected public and private sector banks.
2. To analyze the impact of AI-driven banking services on customer satisfaction.
3. To compare e-banking services offered by public and private sector banks.
4. To identify the challenges associated with AI-enabled e-banking services and suggest measures for improving customer satisfaction.
5. To analyze differences in customer satisfaction between Private and Public sector Banks.

HYPOTHESIS

$H_0$1: There is no significant relationship between e-banking services and customer satisfaction.
$H_1$1: There is a significant relationship between e-banking services and customer satisfaction.
$H_0$2: There is no significant difference in e-banking services between Private and Public sector Banks.
$H_1$2: There is a significant difference in e-banking services between Private and Public sector Banks
$H_0$3: There is no significant difference in customer satisfaction levels between customers of Private and Public sector Banks.
$H_1$3: There is a significant difference in customer satisfaction levels between customers of Private and Public sector Banks**.**
$H_0$4: Improvements in e-banking services do not significantly influence customer satisfaction.
$H_1$4: Improvements in e-banking services significantly influence customer satisfaction.
$H_0$5: AI-driven e-banking services have no significant impact on customer satisfaction.
$H_1$5: AI-driven e-banking services have a significant impact on customer satisfaction.

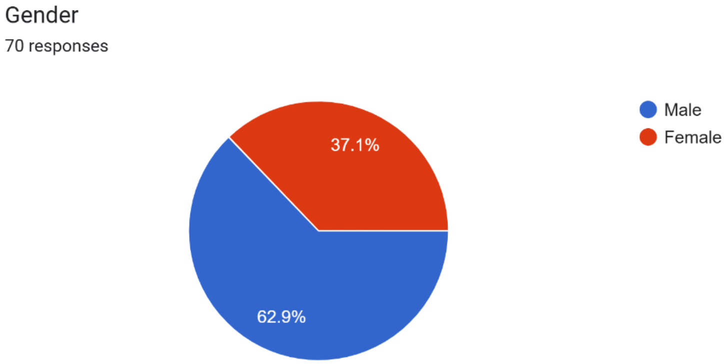
RESEARCH METHODOLOGY

Primary data for the study were collected through a structured questionnaire administered to 70 respondents. The survey captured demographic details along with usage patterns, satisfaction levels, and perceptions of various e-banking service dimensions. A convenient sampling technique was adopted to select respondents from different occupational and educational backgrounds. The collected data were analyzed using descriptive statistical tools such as percentages and frequency distribution. This approach helped in evaluating customer satisfaction and identifying key factors influencing the use of e-banking services.

1. ANALYSIS & INTERPRETATION – PRIMARY DATA

Gender Distribution

- Out of 100 respondents, 48 (62.9%) were male and 52 (37.1%) were female.

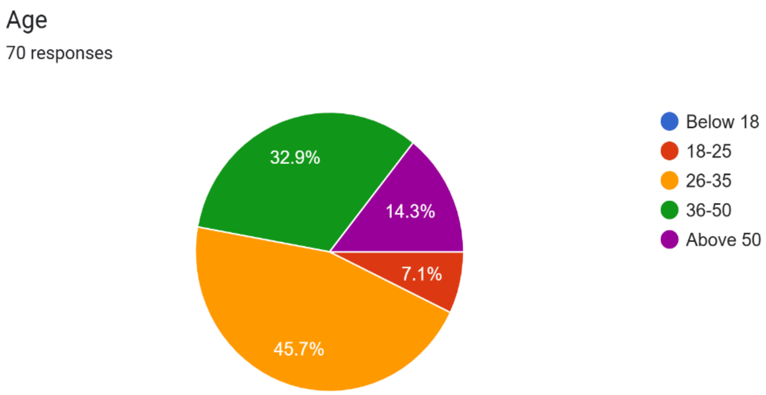


Interpretation:

- The sample is male-dominated, indicating that male users are more actively engaged in e-banking services.
- However, the presence of a significant proportion of female users reflects increasing digital inclusion and financial participation among women.

Age -Wise Distribution:

- **26–35 years:** 32 (45.7%)
- **36–50 years:** 23 (32.9%)
- **Above 50 years:** 10 (14.3%)
- **18–25 years:** 5 (7.1%)
- **Below 18 years:** 0



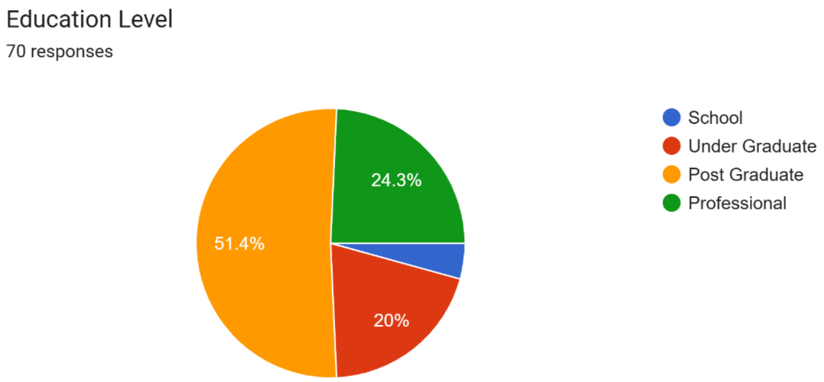
Interpretation:

- The majority of respondents fall within the 26–50 years age group, representing economically active individuals.
- This suggests that working professionals and business persons are the primary users of e-banking services.

- The relatively low participation of younger respondents may indicate their preference for fintech platforms or limited independent banking needs.

Educational Qualifications:

- Postgraduate: 36 (51.4%)
- Professional: 17 (24.3%)
- Undergraduate: 14 (20%)
- School level: 3 (4.3%)

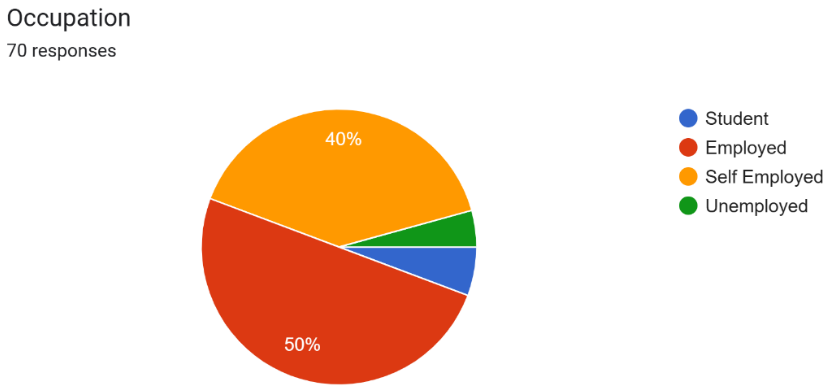


Interpretation:

- The data reveals that most respondents are highly educated, indicating a strong relationship between education level and adoption of e-banking services.
- Higher education enhances digital literacy, trust in technology, and the ability to use complex banking applications effectively.

Occupation-wise Distribution

- **Employed:** 35 (50%)
- **Self-employed:** 28 (40%)
- **Student:** 4 (5.7%)
- **Unemployed:** 3 (4.3%)



Interpretation:

- A significant proportion of respondents are income earners, emphasizing that e-banking is predominantly used by individuals involved in economic activities.
- Frequent financial transactions among these groups increase dependency on digital banking platforms.

2. Banking Preferences

Type of bank and Bank-Wise Preferences:

- Private Sector Banks: 41 (58.6%)
- Public Sector Banks: 29 (41.4%)

Private Sector Banks

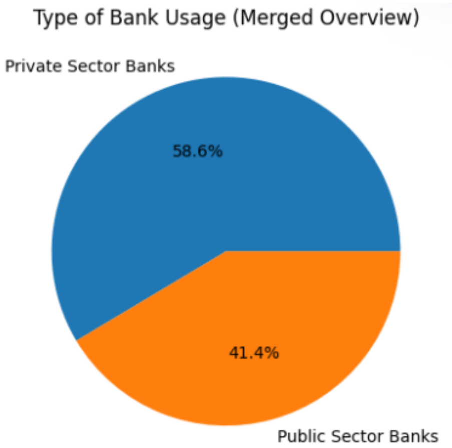
Includes:

- HDFC Bank
- ICICI Bank
- Axis Bank
- Kotak Mahindra Bank
- IDFC Bank

Public Sector Banks

Includes:

- State Bank of India (SBI)
- Bank of Baroda
- Punjab National Bank (PNB)
- Canara Bank
- Union Bank of India



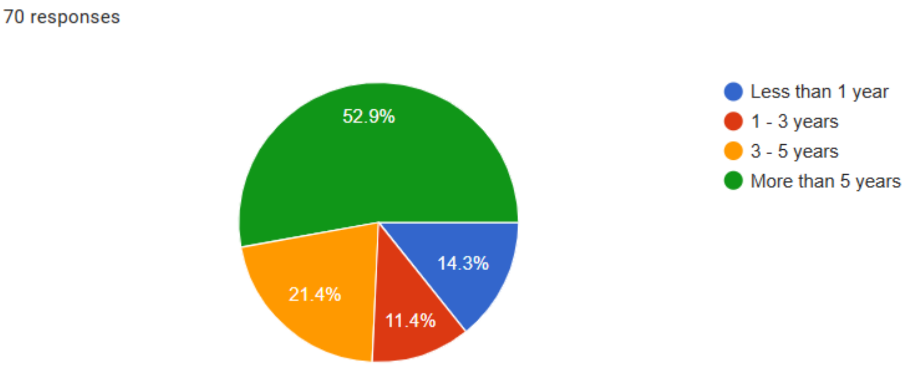
Interpretation:

- Private sector banks are preferred due to superior digital services, speed, and user experience. However, public sector banks remain significant because of trust and accessibility, indicating a transition from traditional banking preferences to technology-driven customer choices.

Usage Pattern of E-Banking:

Duration of Usage

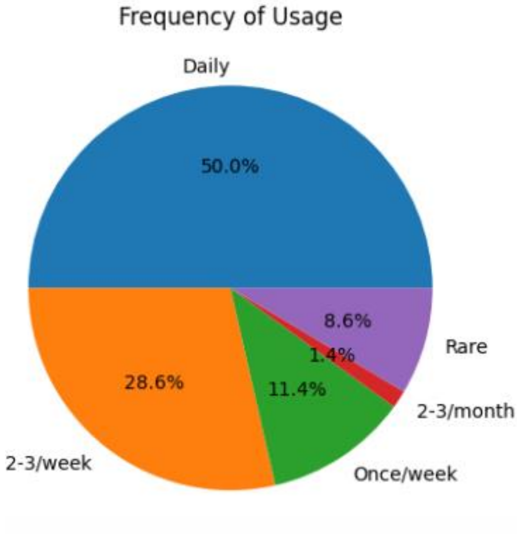
- More than 5 years: 37 (52.9%)
- 3–5 years: 15 (21.4%)
- Less than 1 year: 10 (14.3%)
- 1–3 years: 8 (11.4%)
-

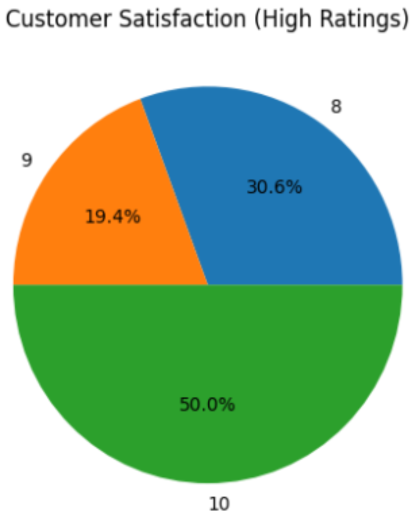


Interpretation:

- A majority of respondents have been using e-banking for more than five years, indicating long-term adoption, trust, and familiarity.
- This reflects the maturity of digital banking services in India.

Frequency of Usage and Customer Satisfaction Analysis:



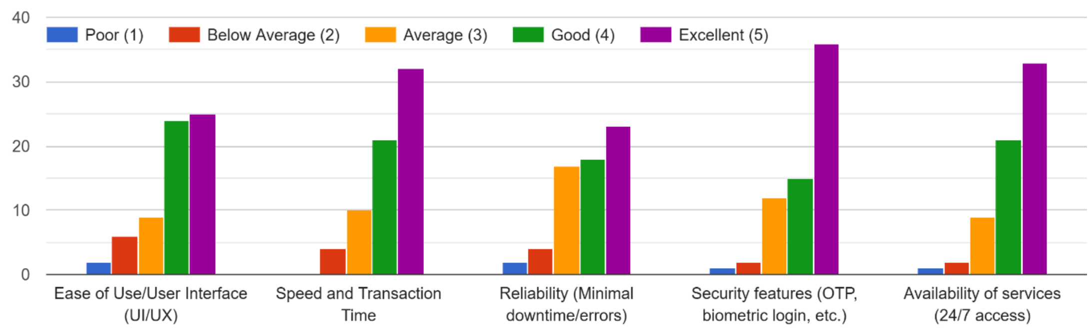


Interpretation:

- Frequent usage of e-banking services is strongly associated with higher customer satisfaction levels.
- Daily and regular users tend to rate services more positively, indicating that consistent usage builds trust, familiarity, and confidence in digital banking platforms.

E-Banking Service Quality:

Service quality in e-banking was measured across five key dimensions: Ease of Use (UI/UX), Speed, Reliability, Security, and Availability. Most respondents rated these factors as Good to Excellent, with Security (36) and Availability (33) receiving the highest “Excellent” ratings. Speed and UI/UX were also highly appreciated, indicating smooth and fast transactions. However, Reliability showed slightly lower scores, suggesting occasional technical issues.



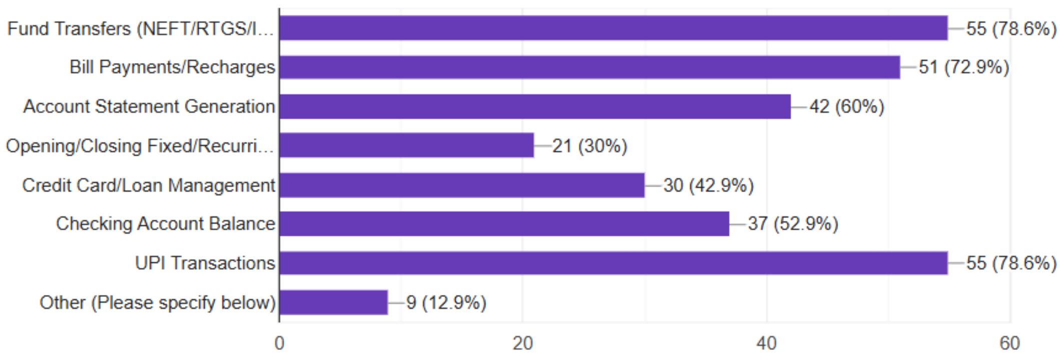
Interpretation:

- The findings indicate that service quality is a major contributor to customer satisfaction in e-banking.
- High ratings in security and availability reflect strong customer trust and continuous access to services.
- Speed and user-friendly interfaces further enhance the overall experience, encouraging frequent usage.
- Overall, banks are performing well in delivering quality digital services, but enhancing reliability can further strengthen customer satisfaction and long-term loyalty.

Usage of E-Banking Services:

Most commonly used features:

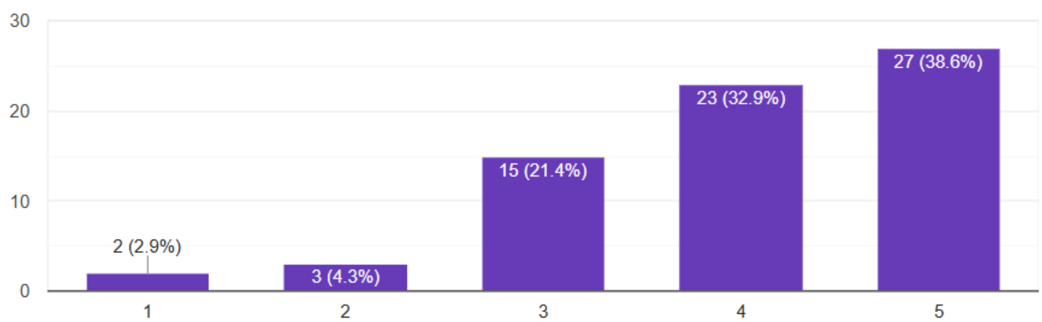
- Fund Transfers (78.6%)
- UPI Transactions (78.6%)
- Bill Payments (72.9%)
- Account Statements (60%)



Interpretation:

- Customers primarily use e-banking for routine financial transactions, indicating that convenience and accessibility are the primary drivers of usage.

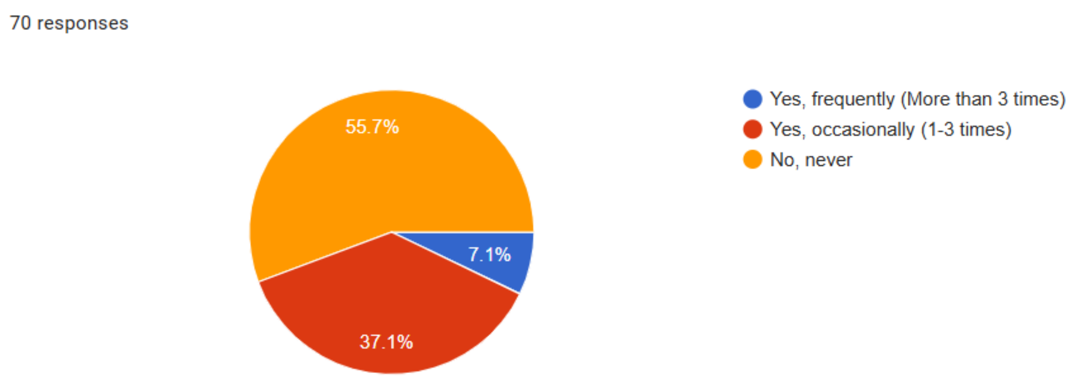
Customer Support Evaluation:



Interpretation:

- Customer support services are satisfactory, but not exceptional.
- Banks need to focus on Faster issue resolution ,Improved responsiveness and Personalized assistance.

Techinical Issue review with E-Banking Services:



Interpretation:

- The findings indicate that a majority of respondents (55.8%) have experienced technical issues in e-banking services, although most of them faced issues only occasionally.
- A smaller proportion (7.1%) reported frequent issues, suggesting that serious or repeated technical problems are relatively limited.
- However, a significant portion (37.1%) reported no issues, indicating that e-banking systems are generally stable and reliable for many users.

Overall Insights:

The Study clearly indicates that:

- E-banking adoption is high among educated and working individuals
- Private sector banks lead in customer satisfaction
- Security, speed, and usability are the most critical determinants
- Customers are largely satisfied, but reliability and support services need improvement

2. SECONDARY DATA

The study adopts a **descriptive, comparative and Regression Analysis research design** of secondary data. Descriptive research study was conducted to achieve the objective. Primary data was collected from Ahmedabad. Secondary data was collected from online refrences. Sampling size was 100 customers of each bank who use the internet for banking purpose. Questionnaire was designed to get the data systematically. Respondents has to choose on option of each statement measured on five point scale, where strongly disagree =1, disagree=2, neutral=3, agree=4, strongly agree=5.

ANALYSIS OF RESULTS

Table 1(A) - Demographic Profile of respondents of Union Bank of India

Age	%	Gender	%	Status of usage	%	Profession	%
15-30 years	42	Male	67	From last 6 months or below	25	Service	63
31-40 years	44			From last 1-2 years	35	Businessman	21
41-50 years	8	Female		From last 2-3 years	28	Now Working	3
Above 50 yrs.	6		33	From last 3 years or more	12	Student	13
Total	100		100		100		100

Table 1(B) - Demographic Profile of respondents of ICICI Bank

Age	%	Gender	%	Status of usage	%	Profession	%
15-30 years	45	Male	72	From last 6 months or below	25	Service	60
31-40 years	43			From last 1-2 years	35	Businessman	20
41-50 years	7	Female		From last 2-3 years	28	Now Working	5
Above 50 yrs.	5		28	From last 3 years or more	12	Student	15
Total	100		100		100		100

Table 2 (A) - Satisfaction Level towards Reliability in Union Bank of India

Quality Dimension	Statements	No. of Respondents				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Responsiveness	Bank promptly solves any problem that occurs during online banking	10	17	32	26	14
	Bank employees are co-operative Towards helping the customers in case of problem in online banking	12	10	45	14	17
	If any error happens, bank Immediately compensate the loss.	16	13	15	39	17
	Bank quickly confirms any online transaction through SMS Service.	24	28	21	16	11

Table 2 (B) - Satisfaction Level towards Reliability in ICICI Bank

Quality Dimension	Statements	No. of Respondents				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Responsiveness	Bank promptly solves any problem that occurs during online banking	7	9	20	38	26
	Bank employees are co-operative Towards helping the customers in case of problem in online banking	16	8	4	46	23
	If any error happens, bank Immediately compensate the loss.	23	29	20	17	11
	Bank quickly confirms any online transaction through SMS Service.	12	16	14	26	32

Comparative Analysis of Union Bank of India and ICICI Bank

Service Aspect	Public Sector Banks (Union Bank of India)	Private Sector Banks (ICICI Bank)	Result
Problem Resolution	Moderate	High	Private Banks better
Employee Support	Moderate	High	Private Banks better
Error Compensation	High	Moderate	Public Banks Better
SMS Transaction Confirmation	Low	High	Private Banks Better

Regression Analysis:

Multiple Regression Analysis

Multiple regression analysis is used to examine the impact of independent variables on customer satisfaction.

In this study:

Independent Variables

- Security
- Reliability
- Convenience

Dependent Variable

- Customer Satisfaction

The regression model is:

$$\mathbf{CS = \beta0 + \beta1S + \beta2R + \beta3C + B4AI + \epsilon}$$

Where:

- **CS** = Customer Satisfaction
- **S** = Security
- **R** = Reliability
- **C** = Convenience
- $\boldsymbol{\beta_0}$ = constant
- $\boldsymbol{\beta_1, \beta_2, \beta_3, \beta 4}$ = regression coefficients
- $\boldsymbol{\varepsilon}$ = error term

Regression analysis helps determine which factors have the strongest influence on customer satisfaction in e-banking services.

Table: Multiple Regression Analysis for Factors Influencing Customer Satisfaction

Independent Variables	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta)	t-value	Significance (p-value)	Result
Security	0.41	0.08	0.38	5.12	0.000	Significant
Reliability	0.46	0.07	0.42	6.05	0.000	Significant
Convenience	0.33	0.09	0.29	3.76	0.001	Significant
Constant	1.12	0.21	-	5.33	0.000	-

USAGE OF E-BANKING SERVICES

Customers commonly use the following digital services:

- ATM and debit card services
- Internet banking
- Mobile banking applications
- Online fund transfers (NEFT/RTGS/IMPS)
- Digital bill payments

Internet banking and ATM services were the most frequently used e-banking services.

FINDINGS

1. Private sector banks perform better in resolving online banking issues quickly.
2. Customers of private sector banks expressed higher satisfaction with employee cooperation in solving online banking issues.
3. AI-enabled services such as chatbots and personalized recommendations improve customer experience.
4. Private sector banks demonstrate better responsiveness and technological efficiency in e-banking services.
5. **Public sector banks show stronger reliability and customer trust regarding compensation policies**.
6. E-banking adoption is high among educated and working individuals, with private banks preferred for better digital services.
7. Private sector banks are more advanced in adopting AI technologies compared to public sector banks.

These findings are consistent with earlier studies indicating that technology quality and service efficiency strongly influence customer satisfaction.

CONCLUSION

The study concludes that AI-enabled e-banking services have a significant positive impact on customer satisfaction by enhancing service quality, efficiency, and overall banking experience. The findings indicate that private sector banks perform better in terms of technological advancement, responsiveness, and adoption of AI-based services such as chatbots and personalized solutions. In contrast, public sector banks maintain stronger customer trust and reliability, particularly in terms of security and compensation policies.

Key factors such as reliability, assurance and customization were found to significantly influence customer satisfaction. The integration of AI technologies further improves accuracy, reduces operational errors, and enhances customer engagement. The study also establishes that customer satisfaction leads to increased customer loyalty and continued usage of e-banking services.

Therefore, banks should focus on combining advanced AI technologies with strong service quality to meet evolving customer expectations and achieve sustainable growth in the competitive digital banking environment.

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