

# AI in Service Quality of Management in Private Sector Banks

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## Abstract

*Artificial Intelligence (AI) has increasingly become a pivotal force in enhancing service quality within private sector banks. The implementation of AI technologies in banking operations has significantly improved customer experience through personalized services, fraud detection and prevention, process automation, predictive analytics, decision-making, risk management, operational efficiency, and compliance with regulatory standards. The primary objectives of this study are to analyze the socio-economic background of customers in private sector banks, examine customer switching intentions influenced by AI, and explore the relationship between service quality dimensions and the satisfaction. The study employs analytical tools such as percentage analysis, ranking, the Weighted Average Method, and chi-square analysis. The findings reveal a significant association between the duration of customer relationships and overall satisfaction with service quality in private sector banks. While customer satisfaction levels are deemed satisfactory, the study indicates that banks have not yet fully harnessed the potential of AI. There is a need for improvement in service quality by adopting advanced technologies to enhance efficiency and customer experience.*

## Introduction

The banking sector has become intensely competitive, with retaining existing customers and attracting new ones being among the most challenging tasks. In this scenario, superior service quality is the key differentiator that provides banks with a competitive edge. The rationale is simple: satisfied customers lead to increased profitability. Banks with higher customer satisfaction levels tend to be more successful and profitable. Therefore, measuring service quality is crucial. This study aims to identify the aspects of service quality that are performing well, assess customer satisfaction with these aspects, and understand customer switching intentions. The researcher will investigate how key factors—such as tangibles, empathy, assurance, responsiveness, and overall customer satisfaction—influence customer behavior and their likelihood to switch banks. By focusing on these dimensions, the study seeks to provide insights into improving service quality and leveraging AI to its full potential in the banking sector.

## Tools for Measuring Service Quality

Different researchers and marketing consultancy organizations developed multiple tools which measure service quality through their measurement instruments. The tools and measurement instruments for service quality originate from different research institutions together

with marketing consultancy groups such as Servqual, Servperf, Sitqual, Webqual, Sitequal, Giqua, Bankserv, The usage of Software Quality together with PERceived Quality and Servqual and SERVPERF and Sitqual and Webqual and SITEQUAL constitutes the primary measurements for perceived service quality. The assessment of service quality occurs through two main tools known as Servqual (Parasuraman, Zeithml and BERRY 1998) and SERVPERF(Cronin and Taylor 1992). The research products originate from US research institutions. school of quality

## Review of Literature

- The study “Service Quality and Customer Satisfaction in Private Sector Banks: An Empirical Study” was carried out by Dr. Kingshuk Adhikari and Dipankar Das in 2016. Assessing the service quality of the private sector banks operating in Karimganj, Assam, and investigating the connection among service quality and customer satisfaction of these banks were the goals of the study carried out by the author. For this particular study, the sample size consists of 120 consumers, 40 from each of the three private sector banks. Customer answers to nineteen different aspects of service quality have been used to evaluate service quality. This study has employed a structured timetable that includes a Likert scale.
- Shruti Agrawal, (2016): A study on “Service quality in private and public sector banks of India” was carried out. The study’s goal is to investigate bank customers’ expectations for service quality. to compare the gap among consumer expectations and satisfaction with banking services provided by public and private sector banks, as well as to look at the degree of happiness that customers have with the services that banks provide. The researcher collected data using the Likert Scale and ANOVA. The current study made an effort to look at the aspects of banking institutions’ service quality as well as the differences between the expectations and satisfaction of clients in the two primary banking sectors—public and private. According to the report, responsiveness and empathy are the two most crucial service quality practices for customer happiness.
- Keshav Raj Bhatta (2016): The research objective centers around understanding “banks customers’ perceptions regarding service quality and customer satisfaction as well as to find out how these two factors are related.” This research study obtained 300 customer samples across six banking institutions. The SERVQUAL tool determined the quality standards of provided services. The research used a questionnaire that contained twenty-seven survey questions about the five service quality dimensions including reliability, assurance, tangibility, empathy and responsiveness. One rating system was used consistently to assess customer satisfaction. The analysis of this study demonstrated that customer satisfaction tightly linked with the multiple elements that make up service quality. Analysis through regression indicated reliability, tangibility, empathy, and responsiveness as three statistical factors improving customer satisfaction.
- Chidambaram (2018) Through research he presents a review of multiple papers exploring “customer satisfaction towards the services of the bank from five different perspectives namely, service encounters and waiting time of the customer to obtain service. the function of middlemen, the caliber of services rendered, and client complaints against banks. According to the survey, attracting, retaining, and enhancing customer relationships are essential for maintaining satisfied and loyal clients, who form the foundation for the bank’s competitive edge. To identify gaps between customer expectations and perceptions, an organization must evaluate factors such as service interactions, waiting times, service quality customer complaints and the role of intermediaries.

### Objectives of the Study

- To analyses the socio-economic background of customers in the private sector banks using AI
- To study switching intention of the customers in the private sector banks.
- To analyze the significance between the dimensions of service quality and customer satisfaction using artificial intelligence.

### Research Methodology

Research methodology comprises the structured methods and procedures used in the research process to collect, organize, and analyze data. It defines the tools and techniques applied to obtain applicable information for a specific study, ensuring the research is conducted efficiently and stays associated with its objectives. Commonly employed tools in research include surveys, questionnaires, and other data-gathering instruments Research design, on the other hand, represents the overall framework of methods and techniques chosen by the researcher. In this study, a descriptive research design is utilized, which focuses on describing the characteristics of the population or phenomenon being examined.

The research focuses on customers of private sector banks in Kerala as its target population, although the exact size of this population remains unspecified. The unknown population 100 respondents are selected. The research was carried out over one year. Convenience sampling method was used to select the respondents from the population

The study includes the use of both primary and secondary data, Primary data is gathered directly from private bank customers through the use of a questionnaire, while secondary data is sourced from journals, magazines, earlier research studies, and websites.

In this study percentage analysis, weighted average method and ranking are used for the analysis and chi-square test is used for testing the dependence.

### Analysis and Interpretation

#### Socio Economic Profile

Out of 100 respondents, 77 percentage of them lies below age group of 18 years - 28 years, 16 % of them under the age group of 29-39, 4 percentages of them below the age group of 40-50, 3 percentage of them under the age group of above 50years. 54 % of the sample respondents are male, and 46% of the sample respondents are female. 21 percentages of the respondents are up to plus two, 35 percentage of the respondents are undergraduate, 40 percentage of the respondents post graduate, and 4 percentage of the respondents are others. 43 percentage of the sample respondents have below ₹ 15000, 27 percentage of the respondents have ₹15001 to ₹ 30000, 20% of the respondents have ₹ 30001 to ₹ 45000, 10 percentage of the respondents have above ₹45000. 79 percentage of the respondents are single and 21 percentage of them are married. 45 percentage of the customers are salaried, 2 percentage of the respondents are retired, 25 percentage of them students and 9 percentage of respondents are business, 19 percentage of the respondents are housewife. 40 percentage of respondents has more than 5 years' experience with their bank, 29 percentage of respondents having account for 1-3 years, 18 years of respondents having account for 3-5 years, and 13 percentage of respondents having their accounts for less than one year. 13 percentage of respondents are highly satisfied, 43 percentage are satisfied, 40 percentage of them are neutral, and 2 percentage of respondents are dissatisfied and highly dissatisfied in the satisfaction of interest rate. 41 percentage of respondents are not ready to switch the bank and 3 percentage of respondents are often to switch the bank. 26 percentage of respondents are strongly agreed and 1 percentage of respondent is strongly disagreed in the well- equipped technology of in AI.

Reason behind the switching intention is found through weighted average method. Misbehavior of staff was the main reason for switching intention of the customer in bank and followed by Inefficient online service, Bad responses, Absences of depositary machine, Rate conversion fees, Lack of responses from enquiry, Technical issue in ATM, high Paper work, Time consuming and High interest rate are the reason of the provided by responses that affect them the most.

Dimensions of service quality are responsiveness, tangibility, assurance, reliability, and empathy. The respondents agree that assurance is the dimension that performing well because it has the highest grand mean of 10.47, the tangibility dimension have to improve because it has the lowest grand mean that is 10.04

### Chi Square Test

- H0: there is no association among Income and frequency of overall satisfaction service quality of the banks through AI
- H1: there is association among Income and frequency of overall satisfaction service quality of the banks through AI

#### Income and Frequency of Overall Satisfaction Service Quality of Banks Through AI

	When is needed	Monthly	Weekly	Daily	Totals
Below Rs15000	29 (22.56)	5 (9.60)	7 (8.16)	7 (7.68)	48
Rs 15001- Rs 30000	10 (12.69)	8 (5.40)	6 (4.59)	3 (4.32)	27
Rs 30001- Rs 45000	2 (2.82)	1 (1.20)	1 (1.02)	2 (0.96)	6
Above Rs 45000	6 (8.93)	6 (3.80)	3 (3.23)	4 (3.04)	19
<b>Totals</b>	<b>47</b>	<b>20</b>	<b>17</b>	<b>16</b>	<b>100</b>

The chi-square statistics is 10.8796 The p- value is 0.0010. Significant at  $p < 0.05$ .

Table value 16.92, therefore accept null hypothesis. Hence there is no significant association between customer duration and overall satisfaction on overall service quality of banks.

### Conclusion

Service quality ought to be restrained from time to time so that bank can progress the quality of the service provides. Managing customer's relation competently is an added advantage to the bank to win the situation. It is required that the private sector banks associate more with the pioneering technology to provide timely and reliable service to customers. Bank can concentrate more on deposits armament through improved customer service. Emphasize should be given by the banks on responsiveness and empathy while providing service to their customers. Bank can increase the net profit by increasing the total income and falling total expenditure. The present study show there is no difference between the customer duration and satisfaction on service quality of the private sector banks. The study exposes that satisfaction level is good but the banks are not reached to its full potential. They have to progress in terms of service eminence through AI.