The Impact of Service Quality on Customer Loyalty in the Banking Industry: A Study of Customer Satisfaction

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Abstract: *Banking is a crucial component of a country's economic development and has become an integral part of our daily lives. The impact of technology on banking services and practices is very significant. The frequency and speed of transactions and applications of banking in different spheres of activities have increased enormously. In this study, an attempt has been made to examine the effect of customer satisfaction on service quality and customer loyalty at the Bank of India in Nagpur. Therefore customers using the various services of banks from Bank of India in Nagpur are the universe of the study. Out of these, a sample of size 500 respondents from the Bank of India in Nagpur would be selected due to cost and time constraints. In selecting the 500 respondents, a Stratified random sampling technique was used to select the respondents from the Bank of India in Nagpur. The data collected were analyzed using Statistical Packages SPSS, version 20, and Microsoft Excel. The various data analysis techniques used in this research are reliability tests, factor analysis, Pearson correlation, multiple regression, and one-way ANOVA.*

Keywords: Bank Satisfaction, Factor Analysis, Reliability

1. Introduction

An essential element of a nation's economic growth is banking. Three presidential banks were established in the early 19th century, laying the groundwork for modern banking. Afterwards, The Imperial Bank of India [1] was created by the combination of these banks. Numerous banking sector reforms were advocated by the Narasimham Committee.

Mumbai is home to the public sector bank Bank of India. It provides corporate, NRI, agribusiness, personal, and business clients with internet banking services. The bank offers a wide range of goods and services, including mutual funds, insurance, cards, loans, and much more.

Technology has a huge impact on banking services and procedures. Numerous innovative methods have emerged to satisfy client demands and enhance the quality of financial services. It's critical to comprehend client loyalty and happiness with these offerings in relation to their caliber.

This study aims to investigate how customer happiness at the Bank of India in Nagpur affects customer loyalty and service excellence. Customers who use the different services offered by Bank of India in Nagpur are hence the study's universe. Due to financial and scheduling restrictions, a sample of 500 respondents from the Bank of India in Nagpur will be chosen from among them. A stratified random sampling technique was employed to choose 500 respondents, all of whom were employees of the Bank of India located in Nagpur.

2. Review of Literature

Customer loyalty, components analysis, multiple logistic regression, and Cronbach's alpha have all been the subject of numerous research. In today's fiercely competitive business environment, maintaining a loyal client base is crucial for success, and a TV's brand value is directly impacted by customer satisfaction. "Customer satisfaction is the key to customer retention," claims Kotler. Maintaining the most valuable consumers can be facilitated by customer loyalty for the firm. The term "customer satisfaction" describes how customers feel about goods and services generally. As long as the product performs as promised, customers will be happy.

In his study article, Ramaseshan (2013) [2] defined customer loyalty as the extent to which consumers promote the business and its goods and services to friends and family, exhibit exceptional price sensitivity, and completely disregard the competitor's advertising efforts. Loyalty, according to its definition, is a psychological trait that results from a customer's continuous contentment and the emotional bond they develop with a service provider. It ultimately leads to a situation in which they voluntarily and continuously maintain a relationship with preference.

Devi RosanaLeonata (2015) [3] investigated the connection between customer loyalty and satisfaction in an online setting and found that there is a positive and statistically significant association between the two. They investigated how advertisements affected consumers' brand loyalty and came to the conclusion that consumers are influenced by quality, image, and brand indirectly through mediator variables, as well as directly by criteria like brand satisfaction and trust.

In their research work, Taherdoost, Sahibuddin, and Jalaliyoon (2020) [4] examined exploratory factor analysis (EFA). Their study aimed to offer basic knowledge about EFA in the form of a clear, step-by-step instruction manual. The article provides a five-step implementation guide for exploratory factor analysis, which consists of the following steps: (1) assessing the suitability of the sample size through the use of correlation matrix, Kaiser-Meyer-Olkin (KMO),

and Bartlett's Test procedures, (2) selecting factor extraction techniques such as canonical factoring, unweighted least squares, generalized least squares, maximum likelihood, picture factoring, principal components analysis, principal axis factoring, and alpha factoring. (3) choosing factor retention techniques through parallel analysis, minimal average partial approaches, K1 - Kaiser's, Scree Test, and cumulative percentage of variation (4) selection of rotational method, whether orthogonal rotations or Oblique rotation and finally, (5) interpretation and labeling of factors.

3. Research Methodology

Through the use of in-person interviews and a questionnaire, the study gathered primary data. There were three sections on the questionnaire. The first part collected demographic information. The second segment focused on how customers felt about the bank's loyalty, competitive prices, image, and quality of service. Data about client satisfaction with the bank's goods and services was gathered in the third segment. Microsoft Excel and the Statistical Packages SPSS, version 20, were used to analyze the data. Reliability tests, factor analysis, Pearson correlation, multiple regression, and one-way ANOVA were among the data analysis methods employed.

4. Results and Discussions

4.1 Response Rate

In all 500 questionnaires were sent to study the customer satisfaction and customer loyalty of bank and 300 questionnaires were returned, representing a 60% response rate.

4.2 Respondents Demographics

Information about the respondents' gender, age, level of education, and frequency of bank visits was gathered. This profile was created in order to visualize how the bank clients answered the survey.

Among the 300 responders, 61% of them are men and 39% are women. The age group of 21 to 40 years old accounted for 30% of all comments, with 54 percent of the 300 respondents falling into this age range. The age group between 20 and under made up 15% of the responses, while the age group between 60 and over made up the fewest percentage of replies (1% of all respondents). Graduates make up the greatest percentage of responders (62%). Post-graduate respondents make up the second-largest group of respondents (29%), followed by secondary certificate holders (7%). The remainder put in 2%.

34.3% of the respondents, or the majority, visit the bank two to four times a month on average for services. While 30.7% of respondents said they visited banks five to eight times, 19.3% said they transacted nine times or more. 15.7% of those surveyed said they used to visit the bank once a month on average or less. The majority of respondents (37%) make between Rs. 45001 and Rs. 60000 per month, which is closely followed by the income groups of Rs. 60001 and above (31%) and Rs. 30001 to Rs. 45000 (24%). The two

income groups with the lowest percentages among the respondents are those earning between Rs. 15001 and Rs. 30000 (02%) and Rs. 15000 and less (06%). Regarding marital status, of the 300 respondents, 97, or 32%, are single, while the remaining 203, or 68%, are married.

4.3 Internal Consistency Reliability:

Every survey variable underwent a reliability analysis. Cronbach's alpha coefficients were computed in order to assess the measures' reliability. According to Hair et al. [5], the Cronbach's alpha coefficient of the construct should be 0.6 for scale acceptability. When a category receives a score of 0.6, it indicates that the majority of respondents comprehend the questions within that category. Conversely, if the results deviate significantly from the predicted value of 0.6, this may be due to respondents' varying opinions about each category question. The following information can represent the stance in the context of the current investigation.

Table 1: Internal Consistency Reliability

S. No	Name of Category	Cronbach's alpha coefficients
1	Service Quality	0.984
2	Customer Satisfaction	0.937
3	Customer Loyalty	0.962

The Cronbach's alpha values for all the variables considered are greater than 0.6 and this indicates the questions in each of the categories are well understood by the respondents. The questions have measured what they were designed to measure.

4.4 Factor Analysis

A number of metrics are available to assess if a set of data is suitable for factor analysis. The most often used metric for assessing sampling adequacy is the Kaiser-Meyer-Olkin (KMO) measure. It examines whether there are minimal partial correlations between the variables. Put differently, KMO offers a way to evaluate how much an indicator of a construct belongs with its other indicators. It is a measurement of the variable's homogeneity. If the KMO is 0.4 or greater, the measure is considered appropriate (Sharma, 1996).[6].

Table 2: Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy

S.No	Name of Category	Kaiser-Meyer-Olkin (KMO)
1	Service Quality	0.815
2	Customer Satisfaction	0.737
3	Customer Loyalty	0.767

Since the KMO for every variable is over the cut-off point, it can be concluded that questions in each category belong together. The Kaiser-Meyer-Olkin measure of sampling adequacy is larger than 0.4 for all categories from the KMO test. Furthermore, it clarifies whether the data are sufficient for factor analysis. The goals of factor analysis were to ascertain whether items were measuring the same construct and tapping into the same domain now that the domain of the measurements had been established (Coakes, 2005)[7]. Items were categorized into three groups—Service Quality, Customer Satisfaction, and Customer Loyalty—prior to

factor analysis. Principle component analysis was used to do factor analysis and varimax rotation based on the elements in each category. The purpose of this analysis was to determine whether the items in each domain tap into the category itself, therefore the extracted variables were employed and their explanation based on item factor loading was made. The correlation between a variable and a factor that has been taken out of the data is known as a factor loading. Based on the output of the component matrix, the study determined the variables. Each variable was regarded as tapping and measuring the category if it provided an appropriate factor loading (minimum of.4) towards a factor (Hinton et al., 2004) [8].

Every item in the classified variables has a factor loading that is higher than the minimal threshold of 0.4. It is possible to deduce that the items measure the variables they were intended to explain and tap into the components.

4.5 Correlation between Service Quality, Customer Satisfaction, and Service Loyalty

Pearson's Correlation Coefficient is used to test the hypothesis that the five dimensions of service quality—employees, branch facilities, reliability, response, and empathy of the bank—vary in the extent to which they influence customer satisfaction and service loyalty. The correlation data unmistakably reveal that the overall service quality and the five service quality dimensions have distinct correlation coefficients. It is discovered that while all of these correlations indicate generally strong links, the relationships' intensities differ. The degree to which each of the five service quality factors influences customer satisfaction and loyalty varies.

4.6 Multiple Regression

The associations between the independent factors (bank employees, branch facilities, reliability, response, and empathy) and dependent variables (customer satisfaction and customer loyalty) were investigated using multiple regression approaches.

4.6.1 Relationships between the independent variables and dependent variable customer satisfaction:
The research suggests that the independent variables included in the regression model contributed 91.60% (R square) of the explanation for the dependent variable. It is seen that the F value in the ANOVA test is significant at the 0.000 level. Consequently, based on the data, it can be said that independent variables accounted for 91% of the variation in customer satisfaction. Positive indicators can be seen in the coefficients of the customer satisfaction predictors. These show that every one of the five variables has a beneficial impact on customer satisfaction. It's intriguing to learn that contentment is not significantly impacted by reliability. One could argue that dependability by itself does not ensure the bank's success.

4.6.2 Relationships between the independent variables and dependent variable customer loyalty:
The research suggests that the independent variables included in the regression model contributed 90.00% (R square) of the explanation for the dependent variable. It is seen that the F value in the ANOVA test is significant at the 0.000 level. Consequently, based on the outcome, it can be said that 90% of the variance in customer loyalty was explained by independent variables. Positive indicators can be seen in the coefficients of the customer loyalty predictors. These show that all five factors have a favorable impact on consumer loyalty.

4.6.3 Relationship between the Customer Satisfaction and dependent variable customer loyalty:
The research suggests that the independent variable, customer happiness, which was included in the regression model, explained 67.60% (R square) of the dependent variable, customer loyalty. It is seen that the F value in the ANOVA test is significant at the 0.000 level. Thus, it may be inferred from the results that 68% of the variance in customer loyalty was explained by customer satisfaction, with the remaining 38% possibly being explained by other characteristics of service loyalty. Positive indicators can be seen in the coefficients of the customer loyalty predictors. These suggest that customer pleasure has a beneficial impact on customer loyalty.

4.7 Relationship between dissatisfied Customers and intention of switching bank:

The researcher asked respondents to rate their level of satisfaction with the overall service they receive from the bank in order to test the hypothesis that disgruntled clients move to other banks in quest of better service quality elsewhere. Those who expressed dissatisfaction were asked to indicate whether or not they would think about switching banks and to provide an explanation for their answers. Out of the 300 participants, 279 expressed satisfaction with the services provided by the bank, while 21 expressed dissatisfaction. Three of the unhappy customers planned to stick with the bank, while the other eighteen planned to move to another service provider. At the 5% level of significance, the chi square ($\chi 2$) analysis reveals that the $\chi 2$ value (p value = 0.000) is significant. Thus it shows that switching intentions and customers' satisfaction are statically related.

4.8 Impact of Demographic variables on Customer Satisfaction and Customer Loyalty:

The One-Way ANOVA test was used to examine the effects of demographic characteristics, such as gender, age, income group, level of education, frequency of visits, and marital status, on customer satisfaction and loyalty. The results of the ANOVA test indicate that the following factors are significant in determining customer satisfaction and service loyalty: gender, age, income, frequency of visitation, and education level.

4.9 Relationship between Type of Account and Customer Satisfaction:

The chi square ($\chi 2$) test was used to examine the relationship between Type of Account and Customer Satisfaction. At the 5% level of significance, the chi square ($\chi 2$) analysis reveals that the $\chi 2$ result (p value = 0.225) is non-significant. Thus,

it demonstrates that there is no correlation between customer satisfaction and account type.

4.10 Level of Customer Satisfaction amongst Loan Account Holder:

Respondents were asked to score the bank's services on a scale of 1 to 5, with the goal of determining the degree of customer satisfaction with regard to the various services given by the bank.

It demonstrates that none of the customers are extremely happy or unhappy with the loan services the bank provides. The Bank's Auto Loan services have the highest degree of customer satisfaction; out of 42 customers, 34 are happy with the bank's services, while the remaining customers are neutral.

It also demonstrates that not a single consumer is extremely happy with the bank's credit card services. More Debit Card customers (57%) than Credit Card customers (12%), are either Very Satisfied or Satisfied. It is observed that Debit Card Service offers high level of Customer Satisfaction as compared to Credit Card Service.

It also shows that consumers are largely happy with the Bank's new technology-based services.

Customer satisfaction with the Bank's General and Life Insurance services is generally high, whereas customer satisfaction with the Bank's Mutual Fund and New Pension System services is lower. A sizable portion of respondents express no satisfaction at all with the bank's services.

Additionally, the majority of clients (80) are happy with the bank's Public Provident Fund services. Additionally, data shows that 37 clients are neither extremely happy nor extremely unhappy with the Public Provident Fund services that the Bank provides.

5. Conclusions

1) In all 500 questionnaires were sent to study the customer satisfaction and customer loyalty of the Bank, 300 questionnaires were returned, representing 60% response rate.
2) Out of 300 respondents, 61% are males and 39% are females. The largest segment of the respondents, which accounts for 62%, is Graduates. The majority of the respondents (34.3%) come to the bank for a service 2 to 4 times on average in a month. The largest number of respondents (37%) earn a monthly income of Rs. 45001 to Rs. 60000. As far as marital status is concerned, out of 300 respondents, 97 respondents i.e. 32% are unmarried while the rest 203 i.e. 68% are married.
3) The Croanbach's alpha values for all the variables considered are greater than 0.6 and this indicates the questions in each of the 6 categories are well understood by the respondents. The questions have measured what they were designed to measure.
4) The Kaiser-Meyer-Olkin measure of sampling adequacy is greater than 0.4 for all categories From the KMO test, it is inferred that questions in each of the category

belong together as the KMO for all the variables is above the cut-off point. Besides, it also explains the adequacy of the data to run factor analysis.

5) The factor loading for each of the items in the categorized variables is greater than the minimum requirement 0.4. It could be inferred that the items tap the factors and can measure the variables which they were designed to explain.
6) Five dimensions of service quality as well as overall service quality shows different correlation coefficients. Although, all these correlations show relatively strong relationships it is found out that the strengths of the relationships vary.
7) On the basis of analysis, it can be concluded that independent variables explained 90% variance in customer loyalty. The coefficients of the predictors of customer loyalty have positive sign. These indicate that all the five variables influence customer loyalty positively.
8) On the basis of analysis, it can be concluded that customer satisfaction explained 68% variance in customer loyalty and the rest could by other attributes of service loyalty. The coefficients of the predictors of customer loyalty have positive sign. These indicate that the customer satisfaction influence customer loyalty positively.
9) On the basis of Chi-Square test, it shows that switching intentions and customers' satisfaction are statically related
10) On the basis of ANOVA test, it can be concluded that Gender, Age, Level of Education, Frequency of Visit and Income plays an important role in measuring the level of customer satisfaction and service loyalty.
11) The chi-square ($\chi 2$) analysis shows that the $\chi 2$ value (p-value = 0.225) is non-significant at a 5% level of significance. Thus it shows that there is no association between Type of Account and Customer Satisfaction.
12) It reveals that no customer is very satisfied or dissatisfied with the Loan services offered by the Bank. Further It reveals that no customer is very satisfied with the Credit Card services offered by the Bank. The proportion of Satisfied or Very Satisfied Debit card Customers are more than Credit Card Customers. It is observed that Debit Card Service offers high level of Customer Satisfaction as compared to Credit Card Service. It also reveals that customers are generally satisfied with the new technology-based services offered by the Bank.
13) In case of General and Life Insurance services offered by the Bank, it reveals that customers are generally satisfied whereas customers are not very satisfied with the Mutual Fund and New Pension System services offered by the Bank. Also generally customers are satisfied with the with Public Provident Fund services offered by the bank.

6. Scope and Limitations of the Study

The study provides valuable direction for developing effective marketing services of the bank in general and in the banking sector in Nagpur in particular. A restricted sample can be considered as a limitation for the generalization of findings.

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