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# CUSTOMER PERCEPTIONS OF E-BANKING SERVICES IN PUBLIC AND PRIVATE SECTOR BANKS: AN EMPIRICAL STUDY

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## *Abstract*

*This research explores how consumers perceive the e-banking services which are provided by both public and commercial banks; it will specifically examine the demographics of the customers such as age and gender. The descriptive and comparative form of research design was adhered to and primary data was collected via a structured questionnaire on 155 respondents. Chi-square test, t-test, percentage analysis and Variance Analysis (ANOVA) were the statistical techniques applied in the analysis of the data. The results show that the perceptions of the customers towards age and gender have little difference. Other respondents (except those aged above 45 years) did not show any significant differences in the satisfaction level between the public and the private sector banks, but respondents in the age group above 45 years showed statistically significant differences. The findings suggest that similar e-banking services are offered by the two banking sectors and the aspects of service quality play a bigger role in shaping the perceptions of the customers than the demographic characteristics. The research offers practical information to financial institutions and policy makers to improve customer satisfaction and service delivery and encourage efficient utilization of e-banking services.*

***Keywords:*** *Online Banking, Consumer Perception, Satisfaction, Public Banks, Private Banks, Service Quality*

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## INTRODUCTION

**Banking in the Indian Economy**

The Indian banking system has been experiencing tremendous change, which has made a considerable contribution to the economic growth of the country. After gaining independence, the Government of India placed emphasis on the financial system that would facilitate the economic growth and this was evident in the Industrial Policy Resolution of 1948 which promoted the mixed economy. In order to achieve good regulation and stability in the sector, the act of Banking regulation came in which the Reserve Bank of India was to regulate and monitor the banking institutions. This was followed by the nationalization of major banks in 1969 and 1980 to extend the reach of banks and increase financial inclusion and government intervention in financial services.

The liberalization reforms of the early 1990s allowed the entry of the banks in the Indian banking market, which had a dramatic transformation in the sector. These institutions brought about technological developments, improved service delivery and heightened competition in the industry. Consequently, there are currently three types of banks in the Indian banking system, namely, public banks, private banks, and foreign banks, all of them contributing differently towards the economic support. The further development of the information and communication technology has enhanced the banking services as it boosted the speed of digital transformation. Electronic banking (e-banking) has come out as a more convenient substitute to the conventional services offered by banks which have branches, enabling consumers to be able to access any pecuniary service at any time and place. Internet banking, mobile banking and electronic fund transfers are some of the services that have enhanced speed, efficiency and convenience of financial transactions. The liberalization reforms of the early 1990s allowed the entry of the banks in the Indian banking market, which had a dramatic transformation in the sector. These institutions brought about technological developments, improved service delivery and heightened competition in the industry. Consequently, there are currently three types of banks in the Indian banking system, namely, public sector banks, the private sector banks, and foreign banks, all of them contributing differently towards the economic support. The further development of the information and communication technology has enhanced the banking services as it boosted the speed of digital transformation. Electronic banking (e-banking) has come out as a more convenient substitute to the conventional services offered by banks which have branches, enabling customers to be able to access any financial service at any time and place. Internet banking, mobile banking and electronic fund transfers are some of the services that have enhanced speed, efficiency and convenience of financial transactions.

**Structure of India's Banking System**

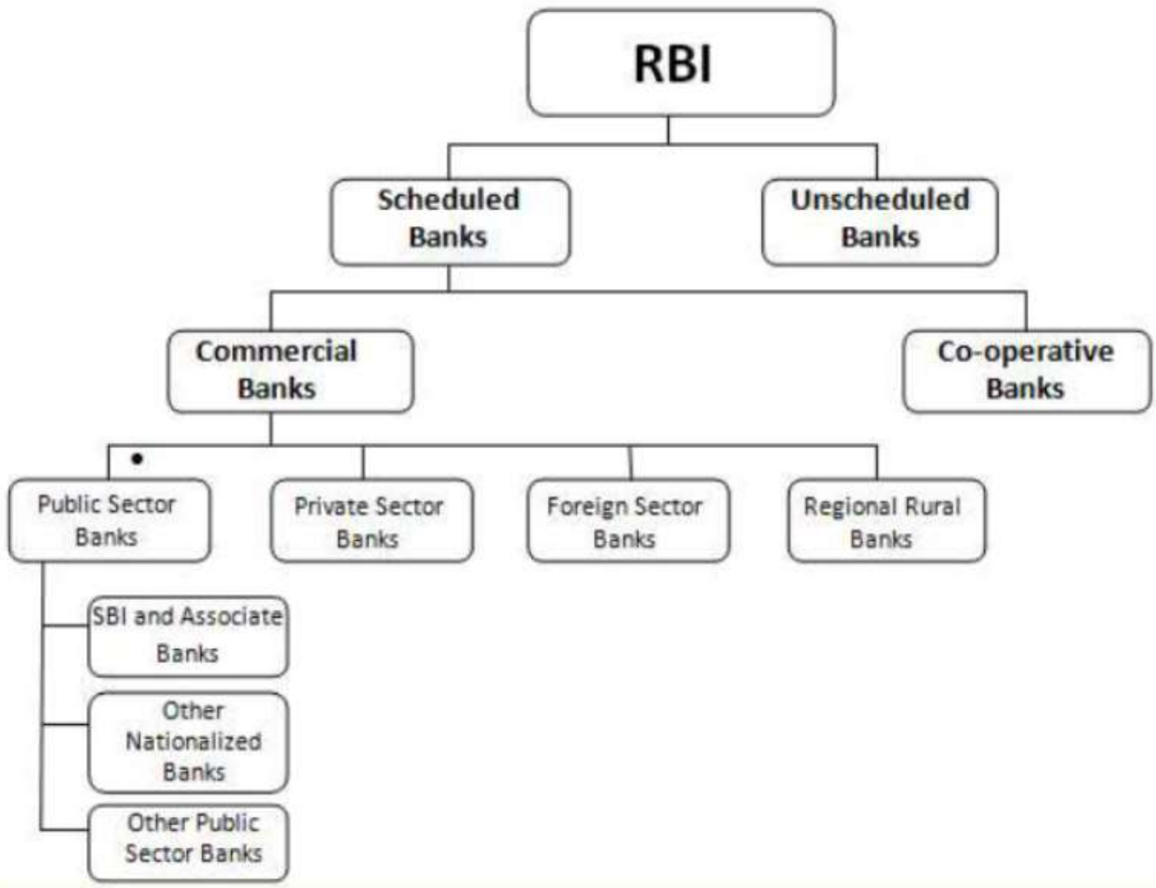


**Figure 2: India Banking Structure**
**Source: Banking Structure in India by IMS (Trusted for success)**

## E-BANKING

The new banking scenario has reduced the necessity of utilizing traditional services and practices of the bank due to rising demands of the customers of rapid, convenient and technological banking services. In response to these changes, electronic banking (e-banking) has emerged as a complex service delivery model, in which banks have the ability to provide financial services through the digital platforms. E-banking facilitates the provision of banking services electronically, and therefore allows the customer to do business offsite (at home or work) and therefore avoids the time and physicality limitations of banking services. The increasing popularity of e-banking services emphasizes the significance of these services as a strategic resource to increase efficiency of the operations and obtain a competitive edge in the banking industry. It helps to enhance retention of customers, service delivery efficiency, generate more revenues, and minimize operational expenses. E-banking systems operate in such a way that it is affected by several areas which are very critical which includes technological infrastructure, system security, organizational flexibility, resource availability, brand reputation and customer services. In addition, there is also a need to integrate multiple service delivery channels and effective managerial support to ensure the success of e-banking efforts. To remain competitive in an ever-growing globalized industry, banks are getting diversified in terms of reaching customers electronically via ATMs, payment cards, and tele-banking. The need to sustain these digital services is both to state-owned and to private institutions, which act out of increased international competition. Any failure to provide efficient and secure e-banking facilities in due time can impact negatively on customer satisfaction and lead to a possible market share loss. E-banking has made the banking process more convenient, flexible, confidential, and accessible on the part of the customer, thereby improving the banking process. The customers can make financial transactions at their convenience without necessarily having to move to the banks. The differences in reliability, safety and excellence of services offered by government-operating banks and commercial banks may lead to different levels of consumer satisfaction and perception. These discrepancies and their overall implications can only be accessed through a comparative analysis of the digital banking capabilities (Sharma, 2013).

## REVIEW OF LITERATURE

An extensive review of existing scholarship was conducted to examine how consumers view digital banking, specifically contrasting the experiences offered by state-owned and private financial institutions. Current research highlights that user attitudes are significantly influenced by the type of banking sector involved. The current literature emphasizes the fact that the customer perception depends on the complex of the demographic, technological and quality of service factors and also reveals the observed differences within the banking sectors.

Research indicates that perceptions of e-banking excellence are not universal; instead, they are significantly impacted by individual demographic traits such as income levels, occupation, and age (Ayub et al., 2014). This study also highlights gender and marital status as key determinants in how users evaluate service quality. The research also established that security and reliability are the important determinants, and trust is important in influencing customer perception in the banking industries. Fozia (2013) in a related research study has shown that perceptions of customer towards electronic banking do not cut across the board but instead differ depending on demographic indicators. With the help of statistical analysis, the author discovered that age and occupation, in the first place, are crucial factors influencing these perceptions. The findings suggest that consumer perception varies among various demographic groups and is not uniform. In their analysis of customer perception and satisfaction of e-banking services, Agarwal, Rastogi, and Mehrotra (2009) found that the type of account, age and occupation also influence the usage. The research also found that the speed of the transaction is unfavorable on customer experience but security and trust are other pertinent factors that determine satisfaction. The preferences towards banking were also examined by Uppal and Chawla (2009) and the researchers observed that although more and more people are moving towards electronic services, there are still a number of challenges that one can face, including the lack of knowledge, connectivity, and security threats. These obstacles affect the perception by consumers of the private and the public financial institutions based on the discrepancies in their infrastructure and mode of operation. Saibaba and Murthy (2013) focused on behavioural determinants of e-banking adoption and concluded that awareness, computer literacy, perceived benefits, system complexity and trust were significant factors that influenced the customer perception, as well as the behaviour of usage. These factors also determine the difference in rates of adoption of banks in the public and the private sector. On the other hand, Sowmya Praveen K and Hebbar (2021) have observed that digital banking provided by the private sector is sometimes more efficient than the more costly services of the public institutions. This implies that there is a direct relationship between the quality of performance and price. This aligns with findings from Dhandayuthapani and Manivannan (2020), who observed that private banks tend to outperform their public counterparts regarding client fulfilment, transparency, and the overall standard of service. Nevertheless, Irudayararaj (2019) indicated that there is need to educate and create awareness among customers since ignorance is one of the significant barriers to effective utilization of e-banking services, particularly among consumers of state banks. Furthermore, e-banking services in India have been thoroughly covered by Narayanan and Arivalalagan (2018) in terms of awareness, usage, satisfaction, and problems. Their results also show the importance of improving the quality of services and making sure that when customer complaints are received, they are responded to so that to improve the total consumer perception in terms of comparing services of banks in the public and the private sector.

## RESEARCH OBJECTIVES

1. To examine the current state of Indian online banking practices
2. To study the demographic profile of the online bank customers of select public and private sector banks at Delhi/NCR.
3. To investigate the relationship between the quality of services provided by banks in the public and private sectors and customer satisfaction levels.

## RESEARCH HYPOTHESES

**$H_{01}$:** There is no significant' difference between the perceptions of the respondents about online banking in public and private sector banks according to gender

**$H_{02}$:** There is no significant difference between the perceptions of the respondents about online banking in public and private sector banks according to age
**$H_{03}$:** There is no significant difference between the level of satisfaction and the quality of the services provided by public and private sector banks.

## RESEARCH METHODOLOGY

In an attempt to compare the views of customers towards electronic banking in both the public and the private sector, this study uses a descriptive-comparative design. The researcher collected primary data with 155 respondents through a structured questionnaire where he chose the respondents through a convenience technique. As independent variables in the analysis, the type of bank was taken and the dependent variables were customer perception and satisfaction. Classification variables like gender and age were taken to compare demographic variables. The gathered data was methodically examined using the proper statistical methods. Cross-tabulation and percentage analysis were two descriptive techniques used to display the respondents' distribution. This study utilized the Chi-square test to identify potential associations among various categories. Furthermore, the researcher employed ANOVA and independent sample t-tests to evaluate how levels of customer fulfilment differed across the identified demographic groups.

## ANALYSIS AND INTERPRETATION OF DATA

Analysis of data refers to the organized appliance of statistical or logical frameworks to evaluate, represent, and interpret information. This phase of research is vital for organizing raw data into a structured format from which meaningful patterns can be identified. Inductive inferences can be drawn from the data by using various analytical approaches to extract the phenomenon of interest from the statistical variances contained in the data.

**Table 1: Cross - Tabulation Type of Bank and Gender**

| Gender | Public Sector Bank | Private Sector Bank | Total |
|---|---|---|---|
| Male | 59 (60.8) | 38 (39.2) | 97 (100.0) |
| Female | 36 (62.1) | 22 (37.9) | 58 (100.0) |
| **Total** | **95 (61.3)** | **60 (38.7)** | **155 (100.0)** |

**Source:** Primary Data

Table 1 show that, 38.7% of respondents are connected to private sector banks, whilst 61.3% are associated with public sector banks. 68.8 percent of male and, 39.2 percent of female respondents prefer public and private sector banks respectively. The results show that gender does not influence bank selection substantially since male and female respondents prefer more to the banks of the public sector with a slight difference between them.

**Table 2: Analysis the Relationship between types of Bank Gender ($\chi^2$-test)**

| Test | Value | df | Asymptotic Significance (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 0.024[a] | 1 | 0.878 |
| Likelihood Ratio | 0.024 | 1 | 0.878 |
| N of Valid Cases | 155 | — | — |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 22.45.
b. Computed only for a 2x2 table

The outcome of Pearson $\chi^2$-test was carried out to measure the association between the variables and the non-significant value was obtained, ($\chi^2 = 0.024$, $p = 0.878$). The P-value is significantly bigger than 0.05, hence, the null hypothesis accepted and we conclude that the variables are not statistically significantly related. All the prerequisites to the Chi-Square application such as minimum cell frequencies were met.

**Table 3: Cross - Tabulation Type of Bank and Age**

| Age | Public Sector Bank | Private Sector Bank | Total |
|---|---|---|---|
| 18-25 years | 34 (51.5) | 32 (48.5) | 66 (100.0) |
| 26-35 years | 13 (72.2) | 5 (27.8) | 18 (100.0) |
| 36-45 years | 28 (68.3) | 13 (31.7) | 41 (100.0) |
| Above 45 years | 20 (66.7) | 10 (33.3) | 30 (100.0) |
| **Total** | **95 (61.3)** | **60 (38.7)** | **155 (100.0)** |

**Source:** Primary Data

Table 3, indicates the association between the age of respondents and the nature of banking sector they use. Although the total sample is more oriented towards the state-owned banks (61.3) in comparison with the private ones, the 18-25 age groups is relatively balanced in terms of representation in the two sectors. This means that the general population tends towards public banks, but the youngest groups of respondents are nearly balanced in their decision. However, older age groups (26 -35, 36-45 and over 45 years) tend to have more of public sector banks. In general, the results indicate that the preference towards the public sector banks grows with age, and younger respondents have a more balanced preference.

**Table 4: $\chi^2$-test of Independence between Type of Bank and Age**

| Test | Value | df | Asymptotic Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 4.778[a] | 3 | 0.189 |
| Likelihood Ratio | 4.787 | 3 | 0.188 |
| N of Valid Cases | 155 | — | — |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.97.

From the above table it shows that, the age is not significantly correlated with the bank selected to open a primary account ($p > 0.05$). Thus, the null-hypothesis is accepted. Although there are certain descriptive patterns such as a comparatively more interest in Private Sector Banks among respondents within the age group of 26-35 years, the overall distribution of bank preferences by age group is statistically homogenous.

**Table 5: Association determination between Gender and Satisfaction levels**

| Online Banking Practices | Gender | Type of Bank | Mean | N | S.D | T-value | P-value |
|---|---|---|---|---|---|---|---|
| Level of Satisfaction | Male | Public Sector | 1.795 | 59 | 0.531 | -0.298 | 0.766 |
| | | Private Sector | 1.825 | 38 | 0.398 | | |
| | Female | Public Sector | 1.844 | 36 | 0.321 | -1.154 | 0.254 |
| | | Private Sector | 1.968 | 22 | 0.500 | | |

**Source:** Primary Data

Table 5 shows, the comparative analysis of scores of internet banking satisfaction result, in no significant differences of the groups under study ($p > 0.05$). Whilst the mean scores of both genders were slightly higher in the private sector banks than in the public banks, the difference in the mean scores was not significantly different. Seeing that the null hypothesis was not rejected, it can be concluded that gender and institutional type do not essentially change the level of customer satisfaction in the e-banking services.

**Table 6: Association determination between Age and Satisfaction levels**

| Online Banking Practices | Age | Type of Bank | Mean | N | S.D | F-value | P-value |
|---|---|---|---|---|---|---|---|
| Level of Satisfaction | 18-25 Years | Public Sector | 1.893 | 34 | 0.614 | 0.712 | 0.402 |
| | | Private Sector | 1.934 | 32 | 0.459 | | |
| | 26-35 Years | Public Sector | 1.826 | 13 | 0.229 | 0.020 | 0.889 |
| | | Private Sector | 1.547 | 5 | 0.243 | | |
| | 36-45 Years | Public Sector | 1.701 | 28 | 0.416 | 0.212 | 0.648 |
| | | Private Sector | 1.869 | 13 | 0.343 | | |
| | Above 45 Years | Public Sector | 1.828 | 20 | 0.295 | 15.873 | 0.000 |
| | | Private Sector | 1.874 | 10 | 0.534 | | |

**Source:** Primary Data

Table 6 shows the results of the One-Way ANOVA when it comes to differences in the user satisfaction with the digital banking services based on their age. In the analysis of respondents in the age group of 18-45, the results were not significant at all, resulting in the null hypothesis being retained in these age groups. Conversely, their statistically significant difference was found between the participants who were above 45 years of age ($p < 0.05$), which led to the rejection of the null hypothesis in the particular segment. These data points indicate that though age does not play a fundamental role in determining satisfaction among younger users, it comes out as a critical factor among the older group.

## DISCUSSION AND TESTING OF HYPOTHESIS

The results indicate that gender is not a major factor that influences consumer decision of whether to use a state-owned or a privately owned banking institution to meet their digital requirements. Instead, the data suggests that preferences for online services remain relatively consistent regardless of the respondent's gender. Male and female respondents similar in preferences, which means that even the choice of a bank is probably determined by other factors, not by gender, but by convenience, access, or the trust of an institution. The null hypothesis (H01) according to which there is no distinguishable effect of gender on bank preference is accepted. Although descriptive statistics indicate that various age brackets are different in terms of their preference of banks, the difference is not significant. This implies that age does not have a great impact on the selection of a bank. The comparatively level preference among the younger respondents could be a sign of the growing acceptance of banks in the private sector whereas older respondents could still be inclined to use the banks in the public sector being familiar and trusting them. Nevertheless, these differences are not high enough to form a significant association. The null hypothesis (H02) that age does not exert any discernible effect on bank preference is accepted. Findings indicate that no significant difference between genders of online banking services can be detected in consumer contentment with online banking services of banks in the public and private sector. Though the mean scores of satisfactions with the banks in the private sector are marginally greater, the differences are not significant. This means that, irrespective of the gender, both types of banks are performing at the same rate in regards to client satisfaction. The null hypothesis (H03) is accepted that means that gender has no identifiable effect on the level of satisfaction. Moreover, the findings suggest that, except the elderly age group, age does not have any apparent impact on customer satisfaction with online banking services. The large variation of the responds above 45 years could be as a result of the difference in expectations, technological adaptability, or perception of services between the public and the private sector banks. Seniors might be more sensitive to the differences in service quality than younger users.

## CONCLUSION

The study's generalizations show that consumers' opinions and levels of satisfaction with online banking services in public and private sector banks are generally comparable, with most instances showing no statistically significant differences depending on age and gender. Both categories of banks appear to offer comparable levels of service quality, resulting in a generally consistent level of customer satisfaction. Although minor variations in preferences and satisfaction levels are evident across demographic groups, these differences are not statistically significant, except among respondents above 45 years of age, where a significant difference in satisfaction is observed. This indicates that while demographic factors have limited influence on overall customer perception, age may play a role for older customers. Overall, the survey finds that banks in the public and private sectors are doing just as well when it comes to providing online banking services, with just minor differences among certain demographic groups.

## IMPLICATIONS OF THE ANALYSIS

The result indicate that public and private sector banks offer comparable levels of e-banking services, as no statistically significant differences were observed across gender and most age groups. This suggests that banks should emphasize enhancing overall service quality rather than focusing exclusively on specific demographic segments. Nevertheless, a large disparity observed between customers over 45 years underscores the necessity of banks to make their digital solutions easier to use and offer more support systems to enhance satisfaction rates among the older users.

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