

A Comparative Study of Mobile Banking Application of Public and Private Sector Bank

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Abstract

Banking Sector is one of the prime financial institutions exploring the opportunity of providing better services, experience, and convenience with the help of mobile phones. The statistic shows the number of mobile phone users in India is 730.7 million in 2017 out of which approximately 50% of mobile users are using mobile banking. There have various reasons for the growth in mobile banking applications such as cost, awareness, collaborations etc. Banks need to promote the benefits of mobile banking and its effectiveness. The present paper aims to do the comparative analysis of mobile banking applications of public and private sector banks for customer perception and efficiency of the mobile banking services. The paper studies six factors like; Security, Convenience, App Compatibility, Trust, Cost saving, and Time-Saving. The primary data has been obtained through a structured questionnaire. The data has been interpreted using descriptive analysis and ANOVA analysis.

Keywords: Mobile Banking Application, Public and Private Sector bank.

I. INTRODUCTION

Mobile banking is one of the innovations which have evolved the banking sector. Mobile banking has always been known for its services like funds transfer, mini statement, monitoring account balance, bill payments, etc. Mobile banking typically operates across all major mobile providers through SMS messaging, applications, or mobile web either it's from iPhone, Android Phone or Computer Phone / Internet Phone. All the banks that are certified and have a local office in India are authorized to offer mobile banking services to their customers. These facilities benefit the customer's to do banking smoothly and efficiently without going to their bank's branch. The statistic shows the number of mobile phone users in India is 730.7 million in 2017 out of which approximately 50% of mobile users are using mobile banking application. Across all banks this number allows banking customers to access banking services with a single number– irrespective of the telecom service provider, the mobile handset makes, or the region. As per the reports of 2017, 18% of the respondents use their primary bank's cards and 30% of payments are done with mobile applications compared to cash, cheque or credit/debit cards. The report concludes that in the year 2017, 60% of respondents used mobile devices for account balance inquiry, fund transfer, bills payment or other banking activities. This figure shows that the growth of mobile applications has been increased from 2016 to 2015 by 39% to 34%. Data shows that in India many users are increasing day by day as mobile banking application has brought a new evolution towards Indian society as many users have started using these services which have made a digitalized economy.

1.1 Mobile Banking Applications of Public and Private sector banks in India

The annual growth rate of the banking sector is 23 percent, contributing nearly 6 percent of GDP. The sector has given employment to 7.4 million people in 2017-18. Its total returns to shareholders are highest in the world (36.76 percent) which has outperformed in the banking sector. SMS Banking is the primary banking service, with the introduction of smartphones. According to the latest report by the government, the new applications launched by Banks in 2018 are as follow:

Table: 1
List of Mobile Banking Applications
(2017-2018)

| Public Banks | | Private Banks | |
|--------------------------------|------------------|---------------------------|--------------------|
| Name of the Bank | Name of the App | Name of the Bank | Name of the App |
| UCO Suvidha prepaid Card | UCO Bank | HDFC Bank | Humanoid Robot IRA |
| Voice Biometric Authentication | Citi Bank | Oriental Bank of Commerce | Batuaa |
| SBi Exclusif | SBI | HDFC Bank | Chatbot Eva |
| Mission FinFit | Laxmi Vilas Bank | HDFC Bank | Aadhar Pay |
| CitiBank Online (CBOL) | Citi Bank | Karur Vyasya bank | Fastag Service |
| Unnati Credit Card | SBI | ICICI Bank | Mera IMobile |
| | | ICICI And truecaller | Truecaller Pay |

As per the reports of 2016, in India the most popular mobile banking applications are:

Table:2
Popular Mobile Banking Applications: India

| # | App Name | Current Installs | Active App Users | Usage Time |
|----|---|------------------|------------------|------------|
| 1 | Axis Mobile | 2.19% | 14.18% | 00:03:51 |
| 2 | ICICI Mobile Banking - iMobile | 2.59% | 12.08% | 00:03:41 |
| 3 | HDFC Bank MobileBanking | 3.45% | 10.33% | 00:03:25 |
| 4 | State Bank Anywhere | 3.10% | 10.15% | 00:03:25 |
| 5 | Kotak Bank | 0.55% | 15.91% | 00:03:48 |
| 6 | State Bank Freedom | 0.88% | 8.75% | 00:04:13 |
| 7 | Bank of Baroda M-Connect | 0.34% | 12.47% | 00:03:14 |
| 8 | Pockets - Wallet with card & UPI (by ICICI) | 0.39% | 10.71% | 00:23:30 |
| 9 | Federal Bank - FedBook Selfie | 0.22% | 13.14% | 00:02:16 |
| 10 | State Bank Buddy | 1.00% | 5.86% | 00:06:04 |

Out of all the applications, the two top banking applications in India are **ICICI's iMobile** with 2.59% of India's Android devices and **Axis Mobile** with 2.19%. on the bases of active application users, **Kotak** has the highest percentage with 15.91%, while **State Bank's Buddy** has its active users spending the highest time period on the application with six minutes and four seconds.

1.2 Customer's Perception of Mobile Banking Application

Data has been analyzed on various factors to know the perception of customers and which factors will highly impact their decision. Below are some factors that will impact customer's perception towards mobile banking application.

Security- Security is being considered as the primary concern in a mobile banking application. This factor examines the errors as well as issues in mobile banking applications. Under this factor, analyses of viruses or hacking or frauds are performed to secure applications.

Convenience- This factor determines the ease of application. It will tell us the usefulness of mobile banking application as this is a very important feature for a mobile banking application.

App Compatibility- This factor is significant in terms of a mobile banking application. This factor estimates the usefulness, efficiency, and compatibility of a mobile banking application.

Trust- It is a very crucial factor among all the factors, as without trust factor no banking application can use by customers or operate in the market.

Cost Saving- Cost Saving factor is visible towards the reduction in expenses, especially in terms of new offers, schemes, policies or discounts towards customers by their banks. This factor includes benefits provided by the mobile banking application.

Time-Saving- Another important factor is time-saving in terms of a mobile banking application. This factor shows the role of banks in helping their customer's by reducing their precious time towards banking operations.

II. REVIEW OF RESEARCH

Shendge, M. P. A., Shelar, B. G., & Kapase, A. P. S. S. (2017) in their study examined the impact of Cashless Transaction in India basically, this study is restricted to secondary data as India is gradually transitioning from a cash-centric to cashless economy as it has been seen from the RBI reports that e-wallets has formed a huge impact towards cashless transaction in India on this basis; it has finds that E-wallet payment method is more preferred by customers than any other payment methods. ¹

Mathangi R, Latasri O.T.V and Isaiiah Onsarigo Miencha (2017) highlights the service quality improvement through digital banking mainly, described the new era of India where a lot of resources and efforts are put for a smooth transition towards the digital payment. This can be done by reducing the issue and challenges and by providing a secure and save digital banking system towards the society. ²

Brid Sagar, Agrahari Kajal, Chandra Mrs.Priya. (2017) the research mainly focuses on the study of various mobile banking applications which is used by different sectors of society as it described well the usage of mobile banking applications. The results display maximum users of Paytm in comparison to Freecharge. Hence it can be observed that digital wallets and mobile banking are the future. ³

D Amutha. (2016) depicts that in this study, it is useful in understanding the consumer awareness of e-banking system and what types of risk involved in the e-banking system. On the other hand, major respondents are likely to operate through e-banking for their transaction. ⁴

Sharma Nisha and Kaur Rupinder deep. (2016) as per this paper have extensive analysis of the M-services in India under which the awareness towards technology will show positive results for the new innovations in mobile banking and their application towards users in India. As mobile banking websites are more preferable rather than traditional banking method by the customers in today's environment. ⁵

DV shreE V, N Yamuna, G Shree N. (2015) studied new dynamics in new digital payment systems and there problems with special reference to Pay tm and Pay U Money with all the perceptive ways towards customers payment system through easy online payments, solving customers problems while making payments, upgraded security safeguard, easy return money, cashback facility, less documentation, automatic refunds, transfer of money and many more. People basically using this application in higher percentage because Pay tm and Pay u Money is giving 2 level security authentications to safeguard their payment details, both these are providing easy payment structures compared to Digital payment system¹⁶

Bhatnagar Dr. Harshita. (2015) depict the level of the customer's awareness as well as adoption of banking services by the rural customers since this paper's preliminary findings is based on investigation of the level of the customer's awareness as well as adoption of banking services by the rural customers based on demographics, bank type, and familiarity with Computer/internet facilities provided by banking sector.⁷

Shet, A. R. (2015) examines different technology innovations in the Indian banking sector which have contributed to the development of the Indian banking system with references towards facts and figures which would help in analyzing the economic growth. Basically, t has improved manifolds in terms of Technology, Deregulation, Product & Services, and Information Systems. Banks have to adopt a holistic approach to fulfill the ever-changing needs of customers and to grab a better market share.⁸

Dauda, S. Y., & Lee, J. (2015) aims to construct the understanding of banking customer's behavior and future online services on the basis of conjoint analysis to know the different aspects of consumer behavior towards technology adoption. Firstly it focused on consumer's preferences on future online services after that it leads to acceptance and adoption of future online services and lastly the impact on consumer's perception to adopt the future online services, the study addresses the conjoint analysis of various factors towards online banking services.⁹

Malik, S. (2014) concludes that banks have to adopt a holistic approach to technological innovations for the growth of the banking sector. Primary factors of growth are mobility and customer convenience and banks are continuously exploring new technology, with terms such as mobile solutions and cloud computing is being used with greater regularity.¹⁰

Kumar, B. (2013) in this paper author have describes different trends have been described which has direct impact on online payment industry it includes: shifting consumer preference towards debit card usage, growing social networking, application and online game, technological innovation, e-banking transaction, online shopping roles etc will leads towards new era of payment system.¹¹

Bamoriya, D., & Singh, P. (2013) in this paper titled "mobile banking in India: barriers in adoption and preferences" mentioned that, mobile banking is considered a new era of banking sector but still due to some security reasons these services have not been used by customers hence they are avoiding mobile banking hence they are avoiding mobile banking

III. OBJECTIVES

- To study the effectiveness of the mobile banking application of public and private sector banks.
- To compare the effectiveness of the mobile banking application of public and private sector banks.
- To study various factors relating to the use of a mobile banking application.

IV. HYPOTHESIS

H0: There is no significant difference between the effectiveness of the mobile banking application of the public and private sector banks.

H1: There is a significant difference between the effectiveness of the mobile banking application of the public and private sector bank.

V. RESEARCH METHODOLOGY

5.1 Theoretical Framework: - The model investigates the relationship among independent variables towards dependent variables which will further reveal the effectiveness of mobile banking application towards the public and private bank.

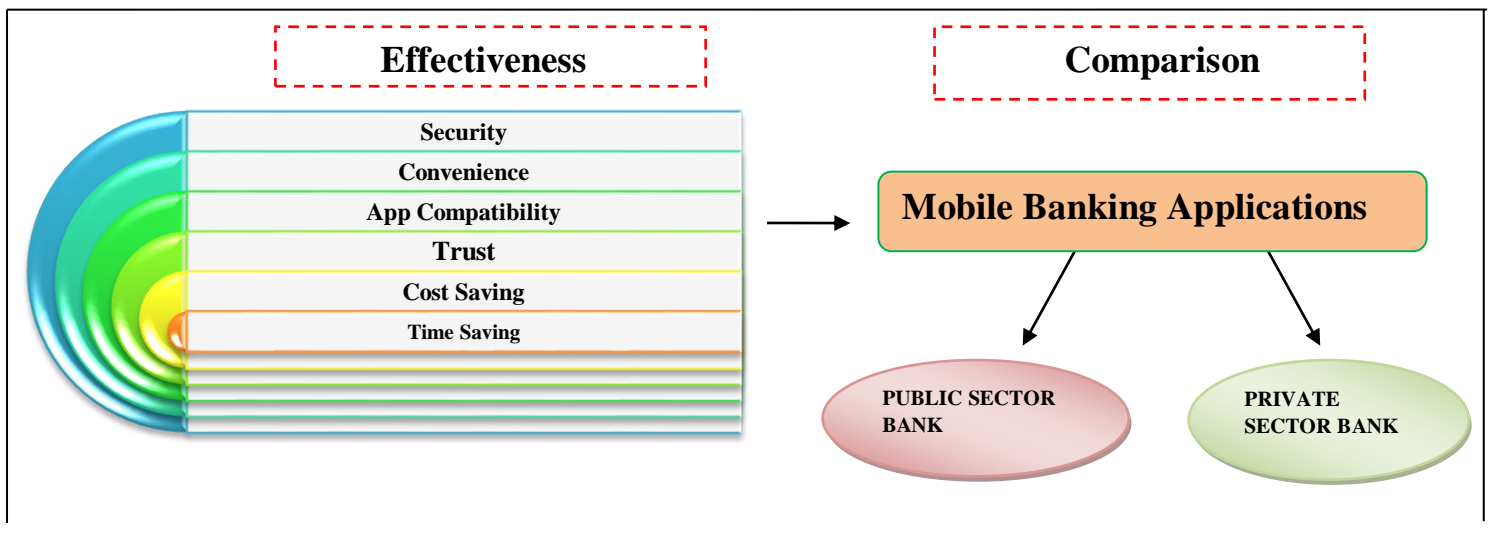


Figure 1: Research Model

5.2 Sample Selection & Measures- The study was conducted at Jaipur, the capital of the Rajasthan State in India. The aim of the study was to find out the comparative analysis of the mobile banking application to public and private sector banks. The sample was selected based on the convenience of the researcher and the approachability of the respondents. The study being micro investigated which examines only 70 respondents out of which 51 respondents were found to be valid. Data is collected personally by visiting and through Google form. The responses were measured on the 5-Point Likert Scale like Strongly Agree, Agree, Neutral, Strongly Disagree, and Disagree.

5.3 Data Collection: In the present study, the primary data is collected through a structured questionnaire consisting of 25 items. 7 items measured mobile banking usage, 12 items measured on factors and 6 items took information related to a mobile banking application. Secondary data is available in the published form, which includes data from a textbook, journals, management reports, seminar papers, reference books, business magazines, and journals & Web sources.etc. The electronic data and results of the survey conducted by an organization are also important data sources for the report.

5.4 Statistical tools:

5.4.1 Descriptive Analysis- This research will accomplish essentially through a qualitative approach that is based on a descriptive study method where the universe is infinite in nature. Demographic description of the respondents is as given below:

Table: 3
Demographic Profile

| Items | Description | Percent(%) |
|-----------|---------------|-------------|
| Age | 21-30 | 62.75% |
| | 31-40 | 21.6% |
| | 41-50 | 11.8% |
| | 51-60 | 2.0% |
| | 60 above | 2.0% |
| | Total | 100% |
| Gender | Male | 52.9 |
| | Female | 47.1 |
| | Total | 100 |
| Education | Intermediate | 7.8% |
| | Graduation | 22.5% |
| | Diploma | 2.0% |
| | Master Degree | 67.7% |
| | Total | 100% |

| | | |
|----------------------|---------------------|-------------|
| Profession | Student | 9.8% |
| | Government Employee | 11.8% |
| | Unemployed | 3.9% |
| | Private Employee | 45.1% |
| | Business | 17.6% |
| | Other | 11.8% |
| | Total | 100% |
| Annual Income | Up to 50,000 | 9.8% |
| | 51,000-1 Lakh | 15.7% |
| | 1Lakh- 2 Lakh | 15.7% |
| | Above 2 Lakh | 58.8% |
| | Total | 100% |

(Source: Author’s survey)

From (Table 3), the demographic profile of respondents shows that the size of the respondents belongs to the age group 21 to 30 years (62.75%). 52.9 % of the participants were the male and they majorly belong to the private sector (45.1%). The respondents were having an income level between Above 2 lakh (58.8%).

5.4.2 List of Banks

Table: 4
List of Banks Selected for Research Study

| Type of Bank | Frequency | Percent |
|----------------------------|-----------|--------------|
| Public Sector Bank | 27 | 52.9 |
| SBI | 15 | 28.5 |
| PNB | 14 | 26.5 |
| Private Sector Bank | 24 | 47.1 |
| ICICI | 10 | 19.6 |
| HDFC | 12 | 25.6 |
| Total | 51 | 100.0 |

(Source: Author’s survey *others include SBI Bank, Punjab National Bank, ICICI Bank, HDFC Bank)

The above table shows that the Public Sector Bank has 52.9% respondents as compared to Private Sector Bank which has 47.1% respondents.

5.4.3 Data Analysis and Interpretation: - The collected data was presented by ANOVA via SPSS software.

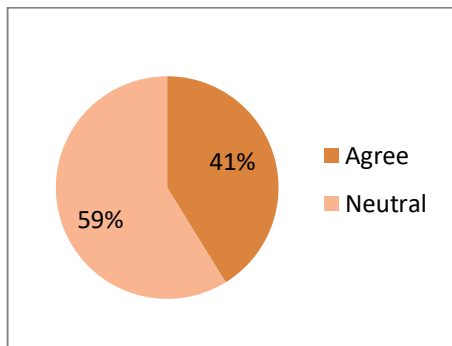


Figure 2: Security

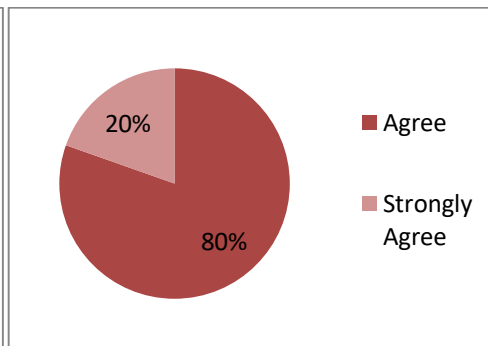


Figure 3: Convenience

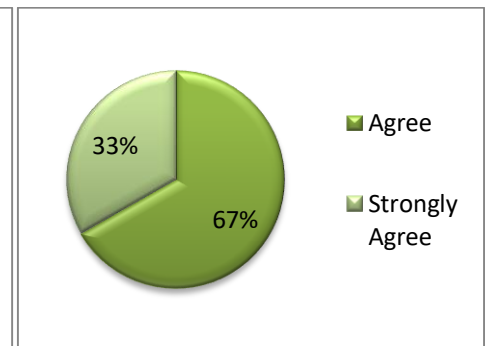


Figure 4: App-Compatibility

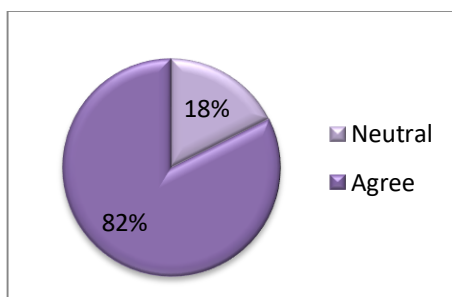


Figure 5: Trust

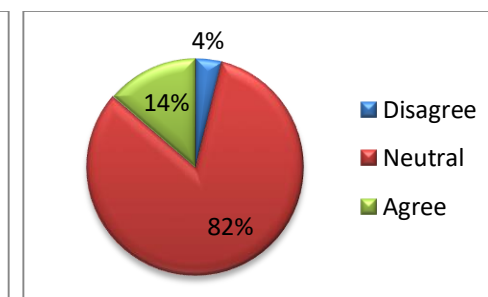


Figure 6: Cost-Saving

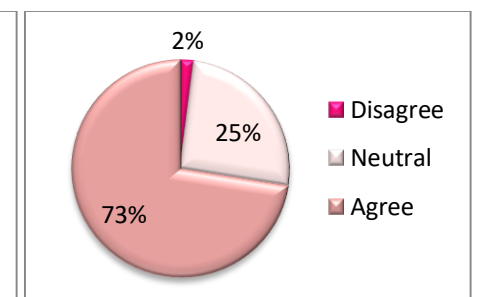


Figure 7: Time-Saving

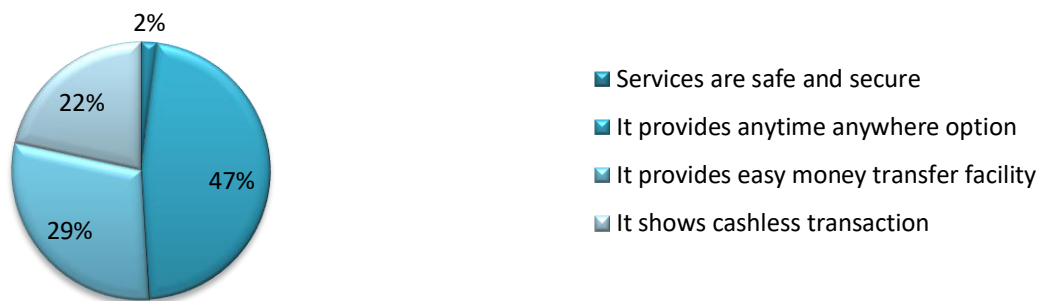


Figure 8: Reasons for using Mobile Banking Application

Interpretation: - The above figure 2 shows that 41 percent respondents consider mobile banking applications to be secure whereas 59 percent of the respondents are not sure about its security, moreover figure 3 reveals that all the respondents considered being convenient to use mobile banking application whereas 80 percent respondents agree while 20 percent strongly agree about its effectiveness. Likewise, figure 4 express that 67 percent of respondents consider mobile banking application to be compatible while 33 percent of respondents strongly agree towards its feasibility for applications whereas figure 5 shows about trust factor under which 18 percent are in the neutral stage while 82 percent of respondents agree that mobile banking application was truthful and reliable for future transaction. Although figure 6 and 7 demonstrate about cost-saving and time-saving factor, 4% respondents feel disagree, 14% agree and 82% are not sure in terms of cost saving transaction towards mobile banking application on the other hand 73% respondents consider that time-saving factor has very much reliable for the future transaction and also provide instant services whereas only 26% are not sure and 2% of respondents do agree to this term. Lastly, figure 8 illustrates reasons for using mobile banking application where 2% respondents feel that safety and security is the reason for using mobile banking application and almost 47% respondents feel using mobile banking application for its anywhere banking facility.

VI. RESULT AND DISCUSSION

6.1 Hypothesis Testing

Table: 5
ANOVA Test

| Factors | | Sum of Squares | df | Mean Square | F | Sig. |
|-------------------|----------------|----------------|----|-------------|-------|------|
| Security | Between Groups | .001 | 1 | .001 | .004 | .948 |
| | Within Groups | 12.352 | 49 | .252 | | |
| Convenience | Between Groups | .229 | 1 | .229 | 1.437 | .236 |
| | Within Groups | 7.810 | 49 | .159 | | |
| App-Compatibility | Between Groups | .315 | 1 | .315 | 1.400 | .242 |
| | Within Groups | 11.019 | 49 | .225 | | |
| Trust | Between Groups | .245 | 1 | .245 | 1.676 | .202 |
| | Within Groups | 7.167 | 49 | .146 | | |
| Cost Saving | Between Groups | .010 | 1 | .010 | .057 | .813 |
| | Within Groups | 8.500 | 49 | .173 | | |
| Time Saving | Between Groups | .070 | 1 | .070 | .273 | .604 |
| | Within Groups | 12.519 | 49 | .255 | | |

The significance value is >0.05 which shows that there exists no significant difference between the two samples. Hence the null hypothesis is accepted. This means that there is no difference in the effectiveness of the mobile banking application of the Public and Private sector banks.

Table 6
Hypothesis Testing

| Hypothesis | Statements | Outcome |
|------------|--|----------|
| H0 | There is no significant difference between the effectiveness of the mobile banking application of public and private sector banks. | Accepted |

Based on the outcomes, the following hypothesis was accepted or rejected. Thus, the significant difference between the effectiveness of the mobile banking application of public and private sector banks are established.

6.2 Findings of the study: - From the review, it can be observed that the mobile banking application can be an alternate choice for online payments where there are three major factors- Security, Time and Cost which illustrate the high ratings towards the effectiveness of the mobile banking application of public and private sector banks. Users are satisfied with the services and the most favourable feature of mobile banking application is that it is a time saving and convenient mode of payment whereas security and safety are the most challenging factors for both public and private sector banks.

6.3 Conclusion: - From the study, it can be concluded that mobile banking applications of public and private sector banks vary with each other. Among 6 factors, Security and Time Saving has been given high importance by respondents which mean they are more concern

towards the safety and their time duration. The result shows that the significance level of Security, Cost Saving and Time-Saving factors are high whereas Convenience, App-Compatibility, and Trust factors have low significance level which means that there is no difference in the effectiveness of the mobile banking application of the public and private sector banks. Therefore, both public sector banks and private sector banks should ensure that user must be aware as well as they will be assured of the safety measures so that they can use mobile banking application without any fear and choose this e-banking not for convenience purpose but also for safety and security benefits.

6.4 Limitation of the study: - This paper examined the comparative study of the mobile banking application of the public and private sector bank. Criteria for analyzing were solely based on convenience sampling and responses are also limited to selected banks. As such the study will suffer from the specific limitations of the non-inclusion of rural and non-user respondents. So, this study is limited to a small geographical area where customer's perception also changes from time to time with the advancement of technology.

6.5 Recommendations

- Marketing and promotion programmes should be conducted to create awareness among non-users.
- Discount offers and rewards points to making payment through mobile banking can increase its more popularity.
- High-level skilled safety measures should be taken so that it wills benefits to both the banks for making trust and bond with their customers.

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