Chapter – VIII

Summary of Findings, Conclusion and Recommendations

Banks need a bigger global presence with the size of the economy increasing. There are several gaps which exist in providing credit and there is an urgent need to fill those gaps. It is also observed that there is also a requirement for the existence of more specialized banking entities to provide more specific services to the customer of India. This chapter displays the findings related to various parameters of this research work like growth of e-banking services in India, efficiency of banks in India, performance of Indian banks, relationship between e-banking and performance of banks in India, impact of e-banking services on performance of banks in India, customers’ perspectives on e-banking services in India, proposed research model for measuring the reason behind the attitude of customers for using/non-using e-banking services, employees’ perspectives on e-banking services in India. This chapter also comprises direction of future research, recommendations and limitations of this research work.

8.1 SUMMARY ON FINDINGS

It is obvious that e-banking is increasing nowadays. The need is to enhance the role of e-banking in India as this is less costly as well as effective. In the light of the objectives of the present study, study analyses various issues for e-banking services for different banks and compare to find which bank or banks group has greater efficiency and
productivity among all banks and also suggest different strategies to public and private banks for improving their efficiency, productivity and services. Customers’ opinion to adopt e-banking services is also analyzed for public & private sector banks and separate models are framed for the customers of the two sector banks. Employees’ opinion is also taken under consideration to know the bigger picture of technological development.

Summary of the findings of this research work is as follows:

8.1.1 Findings on Growth of E-Banking Services in India:

The first chapter addressed the first objective in which various e-banking services are analysed. This chapter comprises growth of e-banking services in India. The growth is explained under various technology oriented banking services provided by Indian banks. Under this chapter transformation of the Indian banking industry with the upcoming trend in e-banking in India has been highlighted and discussed. This section of the study analyzes the annual growth and compound annual growth of electronic banking services till date and presents the conceptual framework of growth of e-banking in India and progress of various electronic banking services. The growth of electronic clearing services justify, the steps taken by RBI are implemented successfully during the time period of 2003-04 to 2012-13. The discussion demonstrates the transformation in Indian banking industry. The main findings of this section of the study are summarized as follows:

- E-banking services under this study highlights that information technology has developed innovative products of banking and e-banking services has also increased the speed of providing banking services. This can be demonstrated with the number of banking transactions occurred in India. Payments through cards
also display the picture of highly adopting e-banking by the users in India. 2007-08 is the year in which annual growth rate of total electronic payment in terms of number and amount is highest which is 41% and 342% respectively. From this year, Indian banking industry has not looked back and hence stunning role of e-banking is observed in India. In fact 2012-13 is the year in which electronic payments are higher. In this year total electronic payments are 1559.20 million in number which is around 9 times of transaction in 2003-04 and an amount of Rs. 33,839 billion are under electronic payments which is around 65 times more of electronic payments in 2003-04. Electronic transactions show that the share of electronic transactions to total transactions has increased over the period of time.

- Private sector banks are frontier for bringing information technology oriented services in banks. Public sector banks adopted it later. Public sector banks incurred a huge amount on computerization and development of communication networks. From the year 2004-05 to 2009-10, public sector banks incurred a sufficiently high amount on computerization. Upto end-march, 2010 public sector banks aggregate expended Rs. 19888 crore in which Rs. 13122 crore was expended by nationalised banks and Rs. 6766 crore was invested by State bank group. As a result of the effort of public sector banks, 100% SBI branches are fully computerized in 2009-10. 96.90% branches of nationalised banks are fully computerized and 85.90% branches are under core banking solution. Overall, 97.80% branches under public sector banks are fully computerized and 90% branches are under core banking solution.
• Growth in various e-banking services measured with CAGR and it is noticeable that ECS (debit) gained comparatively high growth in number as well as in amount than ECS (credit). The number of ECS (debit) is almost double than ECS (credit) during 2003-04 to 2012-13. The highest growth in ECS (credit) in 2004-05 and ECS (debit) is found in the year of 2005-06, after the enactment of IT Act. A profound growth has been found in electronic clearing services in India. RBI has been actively involved in harnessing technology for the development of the Indian banking industry over the years.

• The growth of NEFT/EFT clearly explores the development of electronic banking services in India. The huge amount is transferred by NEFT/EFT. In the year 2003-04, the value of Rs. 171.25 billion is transferred while the amount is Rs. 29,022 billion in 2012-13 which has a CAGR of 77% and 99% compound growth has been measured for transaction through NEFT. This upward trend of transferring the fund through electronic medium clearly mentions the positive picture of the growth of NEFT/EFT. The annual growth rate in terms of amount of RTGS is highest in 2005-06, i.e. 184%. An excellent growth of 87% in the number of RTGS and growth of 60% in amount of RTGS clearly mentioned the picture of the adoption of e-banking operations in India.

• Information technology is the prominent factor for the survival of banks in the juncture of transformation. Card payments also confirm the growth of e-banking in India. Scheduled commercial banks monitored 31% growth in outstanding debit card and 35% growth observed in the amount of payments through debit cards, whereas the growth (CAGR) in credit card is poor as only 2% growth is
measured in outstanding number of credit card and 24% in amount of credit card. Moreover, debit cards are used for an average transaction of Rs. 2.24 billion on per debit card for the year 2012-13 while credit cards are used for an average transaction of Rs. 63.08 billion on per credit card for the same year. In most of the banks of the public sector bank have recently started to offer e-banking services, so there is scope for these banks to expand their operations. The research further provided that debit card payments have increased in public sector banks, followed by private sector banks whereas credit card payment has reduced in public sector banks and shows a little amount of growth (1%) in private sector banks. Overall industry shows upward trend in e-banking services which is a major support for better performance of banks in India. In a nutshell card payments in Indian banks have offered a variety of e-banking services and achieved an admirable growth.

- Today, ATM service is offered by all types of banks under the study in India and it is the most famous service of banks out of various services provided under e-banking. ATM service is offered both on-site and off-site. Analysis reveals that public sector banks have the maximum number of ATM on-site and ATM off-site. The research further carries out that public sector banks have more ATM on-site in comparison with ATM off-site. It got a remarkable increase and achieved the CAGR of 31%. On the other hand, private sector banks offered more ATM off-site in comparison with ATM on-site and CAGR of total ATM is 26% during the 9 years for private sector banks. Moreover, the annual growth rate of ATM is highest in 2009-10 for public sector banks and in 2011-12 for private sector
banks. It shows both sector banks are focusing on offering ATM service to customers as continuously its number is increasing in both sector banks.

- On the basis of international comparison, it is observed that India has achieved second position in terms of growth of POS terminals in 2013 while China got first position with the annual growth rate of 49%. Although the number of ATM terminals per inhabitants and number of POS terminals per inhabitants grew from 2009 to 2013 but it is not enough, while comparison with developed nations. So, RBI needs to take relevant steps for improving these statistics.

- Current statistics of electronic payments for 2013-14 show that electronic payments are increasing continuously which fulfills the aim of RBI and now the paperless payment is growing quickly, which reduced the burden over the bank branches and it is also effective and less cost is involved in electronic payments. As per the latest data available for August 2014, 19.78 million credit cards are available and on the other hand 423.95 million debit cards are available. Number of outstanding debit card is almost 21 times more to that of outstanding credit card available in India. On the basis of extent of e-banking services in the month of June, July and August, 2014, continuous increase has observed in mobile banking, usage of debit card at ATMs and at POS, usage of credit cards at ATMs and at POS, RTGS, NEFT, and ECS etc. There are 11.54 million mobile banking, 655 million debit cards, 67.62 million usage of debit cards at POS, 587.3 million of usage of debit cards at ATMs, 50.85 million credit cards and their usage is 0.32 million at ATMs and 50.53 million usage of credit cards at POS as in the month of August, 2014. In total 705.8 million cards are available on this date.
EFT/NEFT is 66.98 million out of total retail electronic clearing which is 110.6 million and RTGS is 6.97 million. All the statistics also displays a sound role of electronic banking in India.

- On the basis of international comparison, it is also found that India is in the last position in almost every year for POS transactions at terminals located in the country with card issued outside the country and POS transactions at terminals located in the country with card issued in the country. RBI should take initiatives to increase POS transactions for reducing the load of bank branches. India has also second rank for number of ATMs in the country after China in 2013 and India is lacking in terms of number of POS terminals in country as these are one tenth of China and lacking behind by many more countries under the study. Even in terms of ATMs per inhabitants and POS terminals per inhabitants India is at the last position which determines the lack of availability of electronic terminals in India. So, there is a scope for India to enhance the electronic terminals to offer better services.

8.1.2 Findings on Efficiency of Banks in India:

To achieve the desired objective related to efficiency of banks, data envelopment analysis was applied based on four input and three output variables which were taken under consideration. The study measured the relative efficiency of public and private sector banks operating in India by using CCR and BCC model to check the efficiency. The summary of the findings is as follows:

- Analysis computed OTE, PTE and SE scores and it is found that the mean overall technical inefficiency of the Indian banking industry has decreased by 2.32 %
from 2004-05 to 2012-13. This was mainly contributed by private sector banks as this sector has decreased more its overall technical inefficiency than public sector banks. Findings indicate that the mean PTIE of Indian banking industry has decreased by 1.24% from 2004-05 to 2012-13. It is also explained that 0.66% points of 1.24% of OTIE identified above in Indian banking industry is due to inefficiency of management. The remaining part of OTIE is because of banks are not operating up to the mark of scale size. Based on the results, more dominant source in OTIE is PTIE and SIE is relatively less dominant in Indian banking industry. This increase in PTE was contributed by both the sector but increase in PTE was mainly contributed by relatively good performance of private sector banks. The results indicate that the mean SIE of Indian banking industry has decreased by (1.38% - 0.59%) 0.79% from 2004-05 to 2012-13. This increase in SE was contributed by both the sectors but increase in calculated value of SE was mainly contributed by relatively good performance of public sector banks group.

- The results of the study reveals while analyzing the inefficiency of banks that the high extent of overall technical inefficiency is due to inappropriate management practices remaining part of inefficiency is due to sub optimal scale size.

- On the basis of the analysis of mean efficiency scores of public and private sector banks, it can be concluded that mean overall technical score and mean pure technical efficiency score are found to be more in public sector banks. Also the numbers of efficient banks are more in public sector banks in the recent years of study which shows public sector banks are relatively more efficient in comparison to private sector banks in recent years. As a result of the adoption of electronic
services in banks, public sector banks are becoming efficient, but prior to 2009-10, private sector banks were dominated the formation of efficient frontier of the Indian banking industry.

- Moreover, the difference in overall technical efficiency (OTE) of public and private sector banks is also analysed and checked by using non-parametric Mann-Whitney U test and it is found that the difference in OTE is not due to the difference in scale efficiency, which means this difference is due to pure technical efficiency (PTE). It is also recorded that there is significant difference only in the managerial efficiency between public and private sector banks.

8.1.3 Findings on E-Banking and Performance of Indian Banks:

The performance of the banks is analyzed by using the bank performance index. Seven bank performance indicators are taken to frame the bank performance index and e-banking service index is prepared by taking four indicators of e-banking under consideration. The summary of the performance of banks is as follows.

- As a result of the analysis on the basis of the bank performance index of banks, it can be concluded that bank performance has been increased of all bank groups over the study period. The CAGR of bank performance index is higher in the private sector banks group in comparison with public sector banks group and shows the indication of better improvement in the performance of private sector banks group from 2004-05 to 2012-13. While comparing with the private sector banks group, the important result of the study is obtained that the growth in performance of the private sector banks group is mainly contributed by new
private sector banks group in comparison with old private sector banks group. This reveals new private sector banks are leading to perform better.

- Result shows that CAGR of bank performance index (BPIX) is lowest in old private sector banks group and highest in new private sector banks group among all bank groups. New private sector banks group enjoyed a prominent position in BPIX among all groups. It is also observed that 2011-12 is the year in which highest annual growth is observed for public and private sector banks.

- It is found from e-banking service index that e-banking services of public and private sector banks are growing almost with the same pace and become the reason of the growth of e-banking in the Indian banking industry. Results show that growth of improving e-banking services is in a better position for SBI group and nationalized banks group than new private sector banks as new private sector banks came in the banking industry with e-banking services from the very beginning whereas public sector banks started to adopt technology in banking services later. This shows that both sector banks showed highest annual growth in the year 2006-07 and a remarkable CAGR in e-banking services,

8.1.4 Findings on Relationship of E-Banking Services with the Performance of Banks in India:
There is a pertinent role of e-banking for the performance of banks in India. This section of the study explores the relationship of different electronic banking services with the indicators of bank performance. The brief discussions of the results are as follows:

- As a result of the relationship of e-banking services and performance of banks, it is recorded that there is a high and positive correlation between e-banking service index (EBSIX) and banks performance index (BPIX) in all bank groups which
indicates the worth fullness of e-banking services for the operational performance of banks in all bank groups. The comparative less relation is found between e-banking service index (EBSIX) and bank performance index (BPIX) for private sector bank groups and in private sector, new private sector banks has comparatively least relation between e-banking services and bank performance. The study depicts the highest relation of e-banking services with bank performance in the nationalized banks group.

- All e-banking services are found positively correlated with all variables of bank performance except operating expenses as percentage of total assets (OETA) and burden as a percentage of total assets (BTA) in all bank groups. But it is in favour of bank performance because if e-banking facilities are increasing then it is playing role to reduce operating expenses of banks (OETA). The study displays the impressive role of ATM and debit card for enhancing bank performance in all bank groups.

- E-banking services show highest positive correlation with total income per employee (TIE) in public sector banks group and with spread per branch (SB) for and private sector banks group. Only new private sector banks group shows the highest relation of e-banking service index with interest income to total asset (IITA). Strong relationship is found between all e-banking services and performance of banks in India except new private sector banks group.

- As a result, all e-banking services are found more effective for strengthening the performance of banks except credit cards. The relationship of credit cards per branch (CCB) with most of bank performance variables is recorded comparatively
low and positive which indicates credit card per branch (CCB) has played minor role to strengthen the performance of banks in all groups. On the basis of this finding, it is determined that credit card is less preferred e-banking service which does not show impressive role for the growth of banks and literature also support for the less important role of credit cards in India. In spite of this, most of bank performance variables are positively and significantly correlated with e-banking services and e-banking service index.

8.1.5 Findings on Impact of E-Banking Services on Performance of Banks in India:

To achieve the said objective of the impact of e-banking services on the performance of banks, regression analysis is applied by considering indices of e-banking services and bank performance. The summary of the results obtained is as follows:

- Results show that bank performance index is affected by e-banking service index in all bank groups. The selected e-banking services show the remarkable impact on both sector banks but performance of the public sector banks group has found more affected by e-banking services. The impact of e-banking services is comparative high in the nationalized banks group under public sector banks and the impact of e-banking services is comparative high in the old private sector banks group under private sector banks. New private sector banks group and SBI group show comparatively low effect of e-banking services on their performance.

- The model is significant predictor of how e-banking services affect bank performance in all bank groups as almost 50% variation in bank performance is explained by selected e-banking services which is a remarkable amount of impact. The model also confirms significant impact under the study for each bank group.
Therefore, e-banking services have significant impact on the performance of public and private sector banks in India.

- Analysis revealed that debit card is most effective e-banking service in case of SBI group. Although ATM on-site and ATM off-site services have also shown an impressive impact on the growth of performance of SBI group. But credit cards showed negligible effect and due to this a very less amount of change occurred in the performance of SBI group. While analyzing the impact of e-banking on the performance of public sector banks, it is found that out of all selected e-banking services, highest impact is shown by ATM off-site in the nationalized banks group. Moreover, all e-banking services showed stunning positive impact. Overall, ATM off-site shows the highest effect on the performance of public sector banks group.

- ATM off-site has a major impact on the growth in the performance of old private sector banks group. Debit card shows a valuable service for nationalized banks group. Although, ATMs as a whole is a prominent service for this group. It can be presented that ATM off-site has the highest effect on the performance of the private sector banks group.

- It is found that credit card is the least impacting e-banking service among all selected e-banking services to affect the performance of all bank groups. Although, ATM off-site is the most important service to impact the performance of public and private sector banks in India. Moreover, all e-banking services have remarkable impact on bank performance of all groups. It can be concluded that e-
banking services are playing a massive role in the growth of the Indian banking industry. ICT is a driving force for performance of Indian banks.

8.1.6 Findings on Customer’s Attitude for e-banking services in India: Various issues are analysed towards using e-banking services to find out and compare various factors which affect the attitude and acceptance of customers towards e-banking services in public and private sector banks. The summary of findings is as follows:

- Analysis of the attitude of customers towards e-banking services indicate that ATM is ranked first by the customers of public and private sector banks and ATM is most important e-banking service for both bank groups. The customers also accepted that bill payment facility and mobile banking are better services of public sector banks and private sector banks respectively. But customers of both sector banks are not satisfied with the EFT and credit card facility. Three electronic banking services out of eight are significantly different in public and private sector bank groups and those services are mobile banking, internet banking and debit card.

- The majority of respondents have been using e-banking service for up to 3 years and mobile banking, internet banking, tele-banking & debit card are better in private sector banks. It is important for public sector banks to improve it for the present competitive era. Comfort level of the customers is significantly different for both sector banks while using five e-banking services i.e. internet banking, bill payment facility, debit card, EFT and ATM facility. Mean values of internet banking, bill payment facility and debit card are higher in case of private sector
banks while mean values of ATM and EFT are higher for public sector banks. However, customers of both sector banks are found satisfactory for these services.

- While analyzing the satisfaction level of the respondents regarding the grievance settlement system of banks, it is found that the grievance settlement system for debit card is better in both sector banks. Although, it is found comparatively better of public sector banks. There is a significant difference in the grievance settlement system of mobile banking, internet banking, ATM and credit card between two groups. Internet banking, ATM and credit card are comparatively better of private sector banks whereas the grievance settlement system of mobile banking is better of public sector banks.

- Public and private sector bank customers accepted that e-banking has transformed the banks. Although, there is a significant difference in the opinion of the respondents of both sector banks. Public sector bank customers are more agree with the statement. It is also found that the majority of public sector bank customers prefer new private sector banks and private sector bank customers prefer nationalized banks in the present era of competition.

- Loss of personal information is the main problem faced by public sector bank customers, and this is also the main problem of private sector bank customers too. So both bank groups should resolve this problem. Banks should protect the personal information of customers so that customers may believe in their banks for future banking activities. Private sector banks should increase the number of ATM as it is one of the best e-banking services which are used by customers frequently. Connectivity problem is the main problem of public sector banks.
• ‘Conducting demo-fare regarding e-banking services’ is the main suggestion given by customers of public sector banks, whereas customers of private sector banks suggested ‘to aware customers more about the new products and services through email’. ‘More transparency is required’ is also suggested by the customers of both the bank groups. Only one statement of suggestion, i.e. to aware more about the new products and services through e-mail shows no difference between the respondents of two bank groups and customers of the two sector banks suggested banks to follow this. However, all other statements of the suggestions are significantly different in both sector banks.

• As far as payment and clearing system of public and private sector banks is concerned, It is found that customers of public sector banks have accepted that the fees charged for electronic payment system are easily affordable in their transactions and given first rank to this statement while customers of private sector banks accepted that e-banking services has low hidden costs in their transactions and given first ranked to this statement.

8.1.7 Findings on Proposed Research Model for Customers: Models have been framed for obtaining the most important construct which affect the attitude and acceptance of customers towards e-banking services by using structural equation modeling for public and private sector banks. The summary of the findings is as follows:

• Findings indicate that explanatory powers of perceived ease of use, perceived usefulness, attitude and behavioural intention to use e-banking services are 66.9%, 41.6 %, 38.7 % and 60.4 % respectively for private sector banks and explanatory powers of perceived ease of use, perceived usefulness, attitude and
behavioural Intention to use e-banking services are 8.5%, 32.8%, 28.5% and 46.9% respectively for public sector banks.

- All estimates are positive and nine hypotheses out of twelve for checking impact are accepted for customers of public sector banks and ten hypotheses are accepted for the customers of private sector banks. The result of statistical analysis shows that social influence does not have a significant impact on perceived usefulness. Similarly, social influence does not have a significant impact on the attitude of the customers of the private sector banks. The result shows that facilitating conditions do not have a significant impact on perceived ease of use, system quality does not have a significant impact on perceived usefulness and perceived usefulness does not have a significant impact on behavioural intention to use e-banking services for the customers of public sector banks. All other hypotheses are found significantly accepted except these hypotheses.

- Trust is the most important construct to affect behavioural intention to use e-banking services for the customers of public and private sector banks.

- The findings of this study for the customers of private sector banks reveal that social influence of elders, friends do not affect the attitude and perceived usefulness of customers of private sector banks while social influence is found effective construct to affect perceived usefulness and attitude of the customers of public sector banks.

- Social influence is the most important construct on the perceived usefulness of e-banking services for customers of public sector banks while, perceived ease of use is the most important construct on perceived usefulness in private sector banks.
which shows customers of private sector banks consider an easier approach to use a particular service for becoming skilful but it is only possible with the help of clear and understandable e-banking services.

- Self efficacy strongly affects perceived ease of use for the customers of public sector banks. So, banks should increase the comfort level of customers while using electronic services of banks for becoming self efficient and facilitating conditions strongly affects perceived ease of use for the customers of private sector banks and bank should guide to the customer in any new electronic facility with the help of expert staff.

- It is found that perceived usefulness is a strong construct to affect the attitude of customers in public sector banks. Now, the responsibility of banks is enabling customers to complete his/her tasks more quickly while perceived ease of use is a strong construct to affect the attitude of customers in private sector banks. So, private sector banks should always emphasis for this construct for affecting customers positively for using e-banking services.

- It is finally observed that seven hypotheses of relationships out of twelve for checking the group difference in the impact of one construct on another are accepted and convey the message that these impacts have significantly different in public and private sector bank groups because of moderation affect of ownership of banks, whereas five hypotheses of relationships for group difference of impact are rejected hence shows almost the same impact of these five constructs on customers of public and private sector bank groups.
• As a result of moderation effect of the customers of public and private sector banks, it is observed that customers have different opinions because of which seven relationships found significantly different in both sector banks, that are: effect of facilitating conditions on perceived ease of use, effect of social influence on perceived usefulness, effect of perceived ease of use on perceived usefulness, effect of social influence on attitude, effect of perceived ease of use on attitude, effect of attitude on behavioural intention to use e-banking services and effect of perceived usefulness on behavioural intention to use e-banking services.

8.1.7 Findings on Employee’s Perceptions for E-Banking Services in India:

The study also highlights the difference in the perception of public and private sector bank employees regarding various e-banking services and ascertains the challenges for the improvement of e-banking services in India. The summary of the findings is as follows:

• Results explored that employees of both sector banks agreed that velocity of the bank customers switching from traditional to e-banking is very high for public and private sector banks and employees of both sector banks are very satisfied with the retention rate of e-banking users.

• Analysis revealed that employees of both sector banks agreed that number of customers using e-banking services is increasing day by day and age group of less than 20 and 20-35 are the two age groups which prefer e-banking services more in public and private sector banks.

• Occupation wise, service class is on the top for using electronic banking services while, professional is on the top in comparison to other occupations for using
different e-banking services of private sector banks in this study except credit cards which is used more by business class.

- It is found that efficiency of public and private sector banks has increased with the use of e-banking services and the statement ‘e-banking services helped in reducing inconvenience to customer’ gets first rank for public sector banks and ‘e-banking services help in up gradation of knowledge’ gets first rank for private sector banks. According to the employees of public and private sector banks, mostly customers are shifting to new private sector banks because new private sector banks are the main e-banking service provider.

- Employees of both the bank groups agree that ‘relation between employees and customers is improved after the inception of e-banking services’. However, the employees of private sector banks strongly agree over this statement. Employees of both sector banks are found satisfied with the way of working through e-banking facilities.

- Based on the experience of employees, internet banking service of public sector banks gets the first rank. On the other hand, first rank is obtained by electronic fund transfer service of private sector banks. It is observed that ATM is one of the finest preferences in all payment systems for most stable and fastest way of payment system.

- ATM and RTGS facility of public sector banks found to be highly stable and fastest way of payment as perceived by the employees of public sector banks whereas electronic clearing system and ATM are found to be highly stable and fastest way of payment in private sector banks.
The results show that there are two limitations of e-banking in the case of public sector banks i.e. ‘internet facility’ and ‘lack of security’ which must be resolved.

Public sector bank employees strongly agree over the statement that banks should update employees on a daily basis and this statement scores first rank. On the other hand, private sector bank employees strongly agree with 52.5% of responses that more incentive schemes should come into play and this statement gets first rank related to maintain the interests of employees regarding his/her job.

‘Simplification of rules and procedures’ and ‘need to conduct surveys on customers’ are the suggestions provided by public sector bank employees whereas ‘conduct demo-fare regarding e-banking services for customers’ and ‘creating more variety of services to customers’ are the suggestions provided by private sector bank employees.

8.2 LIMITATIONS OF THE STUDY

This section specifies the limitations of the present study. Limitations are inherent in all research studies and it is important for a researcher to report these limitations because it provides idea to develop new research work for another researcher. Although, this research work has too some limitations, but provides a comprehensive approach regarding e-banking. Some of the limitations of this research work are as follows:

1. Some objectives of this study are based on secondary data. So, it may carry some error based on allocation and measurement of data provided by the data sources.

2. A survey has been conducted in total eight selected banks in the four major cities of North India, which is limited to generalize the consequences for the whole country, so it can be extended further.
3. Seven parameters of bank performance and four parameters of e-banking services were taken into consideration for measuring the impact of e-banking services on bank performance, which can be further extended to generalize the consequences for overall public and private sector bank groups in India.

4. Limited input and output variables were used to generalize the results of efficiency for public and private sector banks in India.

5. This research work investigates total thirty four observed variables under nine constructs based on technology acceptance model to obtain the attitude and acceptance of customers towards e-banking services in public and private sector banks in India. Hence, there may be a chance of missing some other constructs influencing the attitude of customers.

8.3 SCOPE FOR FUTURE RESEARCH

The present study has analysed various issues of electronic banking and has given a clear picture of the bright future of electronic banking services. However, still remains a viable picture for future research which has been identified during the course of research:

1. Impact of e-banking services on branch productivity and employee productivity can also be the source of future research.

2. Adoption of e-banking services by the customers of rural and semi-urban branches can also be explored.

3. The study of e-banking of public and private sector banks in India has been assessed only in North India, which can be studied for all other parts of India.

4. Other combinations of input and output variables may also give some other picture of efficiency of public and private sector banks in India.
5. Seven parameters of bank performance and four parameters of e-banking services were taken in this study. The number of bank performance and e-banking service parameters can be increased to get deeper result of the impact of e-banking, on the performance of overall public and private sector bank groups in India.

6. Comparison of public & private sector banks with foreign banks can be the source of future research.

8.4 CONCLUSION

The study concluded the fact of the massive impact of e-banking services for the public sector banks group while comparing with the private sector banks group. The bank performance and growth of e-banking services are significantly higher in the case of public sector banks. However, private sector banks are creating tough competition for all bank groups. This study comprises the contribution of trust for increasing the interest of users regarding electronic services. Trust is found the most important factor to maintain the interest of public and private sector bank customers for using e-banking services in their banking operations.

E-banking is one of the major steps in improving the efficiency of banks. The new private sector banks and most of the foreign banks, which started their operations in the mid nineties followed by liberalization, were the front runners in adopting technology but public sector banks are coping well with this era of information technology in the recent years. This study proves that public sector banks have enhanced their efficiency of operations during the recent years to tackle the cut-throat competition. The results of the study explored that public sector banks have improved their managerial and scale efficiency in the recent years which reveals the robustness of public sector banks. Indian
banks have made considerable good efforts with the help of technology to improve the efficiency and accessibility of banks.

The electronic payment systems such as ECS credit and debit, NEFT for retail transactions and RTGS for large value transaction, have improved the speed of financial transactions, across the country for public & private sector banks and given a stunning remarkable picture for the growth of e-banking in Indian banking industry. Even though, multiple electronic means of payment being available, cash is still the preferred and the dominant mode of payment in large parts of the country. Against this backdrop, payment vision document 2012-15 of RBI aims to promote a less cash/less paper society, with increased emphasis on the use of electronic payment products and services, especially by the populace which is still not covered by these products. Cash less society may become an example to illuminate the problem of black money from India. Reserve Bank of India has asked banks to make all possible efforts to enable customers to use more mobile banking services to improve efficiency of banks and to bring down their operational costs. Reserve Bank of India has also asked banks to promote mobile banking through different channels. A significant load of bank branches will be reduced, if customers use mobile banking for their daily banking operations. Hence, mobile banking is most preferred electronic banking service nowadays and bankers highlighted the valuable contribution of this service during the field study of this research work.

The Indian banking industry has been completely transformed due to the adoption of technology. This transformation has changed the way of banking in India. The major reason for the adoption of e-banking is the mindset of users. E-banking provides the background to maximize the profits and minimize the costs for the bankers and it also
facilitates convenient services to customers. Wide spread technology deployment in the banking business has also brought some challenges. Major challenges for banks are to adjust the increasing costs due to increasing expenditure on IT deployment and to reduce the risks while working with e-banking. It is very important for the banks to carry out the vulnerability assessment and penetration tests periodically to avoid any cyber attacks.

8.5 RECOMMENDATIONS

E-banking has brought tremendous advancement in providing banking services which have improved the efficiency of Indian banks. So, this research work also provides some suggestions to improve the performance of banks. The summary of the recommendations is as follows:

- This study finds the least improvement in number of outstanding credit cards and customers are not satisfied by the credit card service of banks. Both sector banks must increase the role of credit cards as it has been not favorable for the growth of banks till date.

- The study validates the fact that the ATM service has increased over the period of time, but ATM off-site of public sector bank has less improved in comparison to ATM on-site. Public sector banks must enhance ATM offsite for increasing the satisfaction of customers as ATM is one of the popular services among customers. Private sector banks must increase the number of ATMs on-site and off-site because private sector banks have less ATMs in comparison with public sector banks.

- There is stiff competition today and public sector banks should resolve the problem of network/connectivity as customers are unsatisfied with the internet
banking service of public sector banks to attract more and more customers towards e-banking.

- The study reveals that the loss of personal information is the main problem faced by public and private sector bank customers. Banks should protect the personal information of customers. So that customers may believe in e-banking.

- Mobile banking, and internet banking are better services in private sector banks and public sector banks are lacking in providing these services in a more effective way. So, public sector banks should emphasize to improve these services.

- It is also recommended that private sector banks should aware more their customers about the new products and services through e-mail and public sector banks should conduct demo-fare regarding e-channels because the customers of both sector banks have suggested this to improve e-banking.

- Trust is the most important construct to affect behavioral intention to use e-banking services for customers of both sector banks in India. So, banks should focus to maintain the trust of customers regarding various e-banking services.

- This study has explained stunning results with the help of technology acceptance model for bank managers to follow and create a path of glory. On the basis of this, facilitating conditions strongly affect perceived ease of use and banks should guide the customer about any new electronic facility with the help of expert staff and always try to resolve the grievance of the customer because grievance is a factor which always discourages to use e-banking services of a particular bank. So, it is recommended to take care of all the mentioned important constructs for increasing the market of both sector banks.