CHAPTER – VII

Summary of Findings, Conclusion and Recommendations

7.1 Introduction
In response to reforms, Indian banking sector has undergone radical transformation which has altered the organizational structure, ownership pattern, system and procedures of operations, made human resource management more important and infused competition in the banking sector. The competition has forced the institutions to restructure to adopt global environment. In India, while the banking sector continues to play a predominant role, the transformation has further increased the importance of financial sector. Therefore, the government and RBI have taken several initiatives to facilitate the banks to compete in transformation environment. As a regulator and supervisor, the RBI has made considerable progress in facilitating the development of electronic system and in upgrading technology with a view to establishing an efficient and secure system functioning in a changing environment which has further helped the development of electronic banking in India. The government of India enacted the IT Act, 2000 with effect from October 17, 2000, which provides legal recognition to electronic transactions and e-commerce.

The recent transformation is changing the face of banking sector all over the world where IT plays crucial role to manage all corners of banking business. The customers feel comfortable with ebanking because of convenient, prompt and cost effective services while banks also gain plunge in superior efficiency, reduced costs and more satisfied customers. Information technology has also infused the banks with more competitiveness in global market. These effects of transformation on banking sector prompts to review banking system because the banks are operating in state of global environment. Issue of efficiency and customer satisfaction is always at the centre stage of discussion in the recent instance of transformation where banking system is the most triggered area. Banking sector is always a centre of attention because it plays dominant role in economic development.

This approach justifies the need of this study which is structured to analyze the efficiency of the banking sector in India. The study examines the comparative efficiency, customer satisfaction, service quality and employees’ state of mind towards IT in partially and fully IT-oriented banks. The study highlights the IT contribution towards banking efficiency with the
help of correlation and regression analysis. To achieve the set objectives of the study, 16 banks, 4 from each were selected on the basis of their share in business and net profits of Indian banking industry in 2003-04. The whole study period of 11 years is divided into 2 parts pre-ebanking (1996-97 -2000-01) and post-ebanking (2001-02 to 2006-07). The study is descriptive and empirical in nature because secondary and primary data is analyzed to test the hypothesis.

The study also analyzes the perceptions of bank customers and employees with respect to ebanking. It also embraces service quality analysis to know the customers’ satisfaction level. This analysis is based on primary data collected through questionnaire from urban Punjab based customers and bank employees.

7.2 Summary of the Findings

First chapter comprises introduction about Indian banking industry, its development, transformation, technology more particularly e-channels. The development of Indian banking industry is explained under various phases where process of transformation gains more attention. Chapter highlights various e-channels along with benefits to customers and banks. The discussion demonstrates greater transformation in Indian banking industry where IT is the most influencing aspect, which explore the need to evaluate the efficiency of the banks in recent transformation era.

Second chapter reviews the literature about all the aspects of study. But in India, there is no comprehensive study related to transformation effects, only few articles and research papers have been published on some aspects in various journals. No doubt, it is not a new concept in foreign countries and hence, studies have been conducted but in India, there is need to add in present literature related to this aspect because that will be helpful to explore opportunities in the global markets. This chapter also explains the research methodology, objectives and hypothesis of the study.

7.2.1 Productivity

Third chapter addresses the first objective in which all the parameters of productivity and information technology are analyzed. The productivity is divided into two parts, employee and branch productivity and then the impact of e-channels and IT as a whole is studied through correlation and regression analysis. The major findings of this chapter are summarized as follows:
7.2.1.1 Employee Productivity

It is a collective upshot of deposits, credits, business, total expenditure, total earnings, establishment expenditure and spread per employee. Average employee productivity improves marginally in the post-ebanking period where fully IT-oriented banks have nearly 10 scores more average employee productivity than partially IT-oriented banks though these also witness around 4 points boost in their average employee productivity. Among diverse productivity indicators, deposits, credits and business per employee enlarge over two folds in Indian banks but only G-III shows Rs.1.22 crores average increase because of nearly Rs.0.02 crore cut of per employee deposits, even though it has over three folds greater average business per employee than partially IT-oriented banks. Post-ebanking period enables the banks to be steadier where G-IV draws our attention with the highest average business. Total expenditure and earnings per employee also validates rising pattern during post-ebanking period in Indian banks where G-IV witnesses the largest average expenditure and earnings though its earnings are increasing with Rs.0.10 crores more than expenditure. This bank group gains Rs.0.13 crores rise in spread per employee where industry as a whole witnesses Rs.0.05 crores growth in post-ebanking period over pre-ebanking period. Although, G-III shows Rs.0.03 crores turn down in average earnings and expenditures per employee even then it is at second position with Rs.0.03 crores rise in spread per employee. But partially IT-oriented banks are far behind in real terms though achieve Rs.0.04 crores rise in average spread per employee. Although, average expenditures of fully IT-oriented banks augment by two folds, but their earnings bear out more than two folds rise. Establishment expenditure per employee is also the highest in G-IV though it is increased at marginal pace in all the Indian banks in post-ebanking period.

Overall, post-ebanking period is steadier which shows outstanding improvement in employee productivity with extreme effect on G-IV, which is obsessed by technological enhancement and proficient management of innovations. Though, post-ebanking period substantiates enrichment of employee productivity of all banks but partially IT-oriented banks are at bigger diversity which is mainly because of over employment base and poor IT infrastructure. IT with other facets is a decisive artifact of transformation, where ebanks’ productivity is a little evidence.
7.2.1.2 Branch Productivity

Branch productivity of Indian banks also record concomitant improvements in post-ebanking period, but G-IV expands more with 8.54 points increase followed by G-III with 2.93 scores growth. Whole banking industry and partially IT-oriented banks have lesser average branch productivity but still enhanced nearly by one score. From the indicators of branch productivity, deposits, credits and business per branch give an idea about excellent growth in post-ebanking period over pre-ebanking period where fully IT-oriented banks gain momentum and G-IV has about 20 times more average branch business as compare to partially IT-oriented banks. It is worth mentioning that G-IV has Rs.677.42 crores average business per branch followed by G-III with Rs.179.50 crores average but, partially IT-oriented banks even industry as a whole have not even Rs.40 crores average.

Total expenditure and establishment expenditure per branch also validate stunning rise during post-ebanking period where G-IV extract attention by means of over 30 times more average branch total expenditure and 15 times more branch establishment expenditure. Overall, industry has average Rs.2.63 crores total branch expenditure and Rs.0.42 crores establishment expenditure. It is worth mentioning that branch earnings of industry as a whole increased by Rs.1.64 crores where partially IT-oriented banks also witness similar rise but G-III shows Rs.5.34 crores growth which is good enough but far less than growth of G-IV.

Overall, branch productivity indicates excellent growth in Indian banks where G-IV fetches top position with excellent improvements. Though, partially IT-oriented banks are at bigger diversity from ebanks, still comeback in rise to post-ebanking period. The key agenda for lesser productivity of these banks is larger branch network and the worst factor is more emphasis on branch banking rather electronic banking. Technological improvement in ebanks is evidence of better management of transformation where partially IT-oriented banks must equally adopt and manage IT for gaining fruits of transformation.

7.2.1.3 Information Technology

Information technology is the survival factor for Indian banking at the present juncture of transformation. The fully IT-oriented banks gain improvement in their productivity, as last part is a little evidence but partially IT-oriented banks are laggards. This section clarifies the adoption of IT in Indian banks. The major findings are summarized as follows:

Industry witnesses 33.43 pc growth in computerized branches where partially IT-oriented banks validate excellent amount of growth more particularly, public sector banks are the most
beneficiary with 57.68 pc growth whereas fully IT-oriented banks have fully computerized branches by birth. At the end of study period, public sector banks have nearly 56 pc branches computerized but old private sector banks have only 35 pc computerized branches.

Post-ebanking period witness growth in ATMs per branch where G-IV shows the highest growth (1.10 ATMs per branch) and established almost two ATMs per branch but other banks unable to establish even a single ATM for each branch.

Credit cards per branch also confirm increase in post-ebanking period where only G-III witnesses decrease of 141.36 cards per branch. But, G-IV again fetches top position with average of around 3023 cards per branch. Industry explain average issue of 27 credit cards per branch whereas G-I has average 16 cards and G-II has only 8 cards per branch though these bank groups monitor nearly 13 pc growth in average at the end of the study period.

Share of internet banking branches from total branches also demonstrates excellent growth in post-ebanking period. But, G-III leads by initiating maximum online branches whereas partially IT-oriented banks record around five folds lesser average of online branches.

Mobile banking branches are almost 7 times more in G-III (52.82 pc) followed by G-IV though the average enlarges in all Indian banks in post-ebanking period where partially IT-oriented banks also witness around 13 pc rise.

Post-ebanking period witnesses increase in tele-banking branches in Indian banks but not as much as in other e-channels. Fully IT-oriented banks have nearly 39 pc average tele banking branches while partially IT-oriented banks even industry have not more than 10 pc branches with mobile banking services.

Overall, IT index shows upward trend as industry records 3.88 scores growth, G-I testimony poor growth (6.78) as compare to other groups though average is almost equal among partially IT-oriented banks and industry. Consequently, G-IV shows larger IT index (57.43 score) followed by G-III with 56.04 scores average which is a major support for their excellent productivity. Though, post-ebanking period witness growth in IT index but 50 average score demonstrates that Indian banks have not adopted IT in totality.

7.2.1.4 IT and Change in Productivity

The next part of this chapter justifies the impact of IT on productivity with the help of correlation and regression analysis. The major findings are as follows:

All e-channels have positive correlation with business per employee in both study periods but it is negative in case of ATMs and Mobile banking of G-III in post-ebanking period though it
is insignificant. Partially IT-oriented banks and industry witness significant correlation in post-ebanking period but, it is insignificant in case of fully IT-oriented banks mainly because these banks have already utilized the IT to the maximum extent. Among all e-channels, mobile banking has more dominance on business per employee where G-I gains the most. Overall, e-channels positively contribute towards business of Indian banks with utmost effect on G-I indicating future scope for development of IT in these banks.

In pre-ebanking period, e-channels enhance the establishment expenditure per employee though effect is insignificant in G-II & III. But in post-ebanking period, e-channels have negative correlation though insignificant where only G-II shows positive and significant correlation. It means, e-channels help better control over establishment expenditure but, G-II demands greater concentration to better adopt and manage IT.

Post-ebanking period substantiate higher positive impact on business per branch of Indian banks with utmost effect on partially IT-oriented banks but it is insignificant in case of G-III. Mobile banking and tele-banking has greater impact on branch business of Indian banking industry.

Industry level establishment expenditure per branch shows negative impact of e-channels except ATMs and credit cards but the effect is weaker. G-II witnesses enlarged impact as establishment expenditure upstairs significantly in post-ebanking period. Fully IT-oriented banks also witness positive but insignificant impact of e-channels. Hence, establishment expenditure depicts marginal increase with more usage of e-channels where internet banking does not mount expenditure to such extent. G-I records good command over establishment expenditure in post-ebanking period.

IT demonstrates superior contribution in employee and branch productivity during post-ebanking period with utmost effect on G-I but G-IV negates the impact of IT on employee productivity due to the usage of IT to maximum extent. Overall, correlation is significant in all Indian banks except in case of fully IT-oriented banks. As compare to earlier period, IT witness inflated contribution in productivity during post-ebanking period.

7.2.1.5 Overall Impact of E-Channels on Productivity

Among all e-channels, credit cards show higher improvement in its effect on productivity while internet and mobile banking are in succession but ATMs and tele banking prove downturn. Among all e-channels, mobile banking has strong effect on productivity followed by internet banking where productivity of partially IT-oriented banks affect at the most by
internet banking, of G-II by mobile banking, of G-III by ATMs and of industry by telebanking. Almost all e-channels have superior contribution in productivity of all bank groups except G-II shows increased establishment expenditure whereas G-I and overall industry gain the most fruitful results.

H₀: The null hypothesis is rejected in case of partially IT-oriented banks and industry because these banks have positive significant impact of technology on their productivity while it is accepted in case of fully IT-oriented banks.

As a result, productivity shows improvement in post-ebanking period in Indian banks where productivity of G-IV is the highest but G-I even industry gain more from IT usage with most fruitful results of mobile banking. G-II is at loss due to inappropriate even lesser usage of IT which results in increase in expenditure and poor earnings. Hence, partially IT-oriented banks especially old private sector banks should adopt IT in appropriate manner to gain benefits of IT.

7.2.2 Efficiency

Fourth chapter addresses second objective to analyze the comparative profitability of partially and fully IT-oriented banks and evaluate contribution of IT in profitability. The findings are as follows:

7.2.2.1 Trends in Profitability

1. Interest earned as a percentage of working funds has been declined in post-ebanking period where partially IT-oriented banks earn more from interest as average is the highest in G-II i.e. 8.68 pc whereas G-III shows the least average (7.43 pc).

2. Interest expenditure as a percentage of working funds has also declined in Indian banks with utmost turn down in G-IV but overall, average interest paid is the highest in G-II (6.88 cp) but G-IV witnesses the least average i.e. 4.79 pc.

3. Spread as a percentage of working funds is the highest in G-IV (3.40 pc) followed by G-I (2.85 pc) though fully IT-oriented banks even industry show marginal decline due to decline in interest bearing business.

4. Non-interest expenditure as a percentage of working funds shows marginal increase in G-II & III while the rest witness minor decline. Among all, G-IV witnesses the highest decline even though it has the largest average (4.97 pc).
5. Non-interest income as a percentage of working funds witness marginal increase whereas G-IV shows almost two folds more average non-interest income (2.61 pc) as compare to others and G-I demonstrates the least average i.e. 1.33 pc with just 0.13 pc growth.

6. Burden as a percentage of working funds explain decrease in G-I & IV and industry mainly because of decline in non-interest expenditure while G-II shows 0.12 pc increase in burden which is a key concern but G-III demonstrate no change and have the least average of burden.

7. Net Profits as a percentage of working funds also report improvement in all Indian banks except G-III which shows 0.27 pc turn down mainly because of poor spread. Comparatively, G-IV has five folds more profitability because of excellent increase in non-interest income and decline in interest expenditure. Overall, industry shows just 0.77 pc average profitability where lower profit of partially IT-oriented banks even new private sector banks is a big reason for low profitability, though these banks show improvement, still they are not harmonized with foreign banks who have average 4.03 pc profitability. Another major factor is fee-based business, that is strength of foreign banks but, our partially IT-oriented banks depend more on deposits rather to gain from non-banking activities.

8. Net profits as a percentage of total deposits show marginal improvement in Indian banks while only G-III witnesses 0.16 pc decline, still have a good average (1.50 pc) corresponding to foreign banks (1.77 pc). Overall, fully IT-oriented banks gain almost two folds more share of profits from total deposits as compare to the rest.

9. Net profits gain excellent share in total income in case of all bank groups where G-IV shows the highest increase (8.62 pc). But, G-III has the highest average (11.29 pc) though record only 0.15 pc growth. G-I witnesses 4.87 pc growth though has 7.93 pc average whereas G-II shows only 2.3 pc growth.

Consequently, post-ebanking period is testimony for improvement in financial productivity where G-I shows the highest financial productivity (51.92 score). Though all others match almost similar average but, G-II shows the highest increase (1.90 points) where Industry witnesses marginal decline of 0.09 points but has 50.92 average score of financial productivity.
7.2.2.2 Total Productivity
It is a combined upshot of employee, branch and financial productivity. Total productivity evidence excellent improvement in post-ebanking period where G-IV shows the highest average (55.53 score) followed by G-III (50.05 score) even though G-II records higher rate of growth i.e. 6.48 points. Partially IT-oriented banks and industry grow at almost 2 points having nearly 46 average score of productivity. Overall, post-ebanking period witnesses the positive contribution of IT towards increasing productivity where fully IT-oriented banks are the most benefited though partially IT-oriented banks also follow with successive efforts.

7.2.2.3 IT and Change in Profitability
Among all 16 selected banks, only SBI, FB, ICICI, Indusind, Axis and HSBC show positive and enlarged impact of IT on their profitability during post-ebanking period over pre-ebanking period though the correlation is insignificant. The rest have negative impact of e-channels on their profitability where HDFC turn the effect from positive to negative in lateral period and J&K witnesses the highest negative effect followed by BOB, CB & KVB.
Bank group based regression analysis shows that G-I witnesses marginal improvement in profitability during post-ebanking period where computerized branches, internet banking turn to positive effect though others have negative but insignificant effect. G-II shows poor response because e-channels have negative even higher impact on profitability in post-ebanking period. Fully IT-oriented banks even industry demonstrate good outcome where G-III turns negative to positive impact of e-channels even though internet and mobile banking has negative impact but it is insignificant. On other side, G-IV and industry turn negative to positive impact of all e-channels though insignificant. Hence, post-banking period witnesses good amount of contribution of IT towards profitability, where G-IV is the most beneficiary and partially it-oriented banks shows worst impact of IT because of its inappropriate use.

7.2.2.4 IT and Financial Productivity
Overall, IT has positive and significant correlation with financial productivity of Indian banks except fully IT-oriented banks that have insignificant correlation. Noteworthy, G-IV gains the most as is evident from impact of IT which turns from significantly negative in pre-ebanking to positive in post-ebanking period though it is insignificant. Consequently, more and appropriate use of IT definitely contributes to development in efficiency of the banks.
7.2.2.5 IT and Total Productivity
Total productivity is significantly affected by IT and confirms impressive growth during post-
ebanking period. G-IV is the only group with insignificant impact, rest all have significant
even increased effect in later period where G-I gains a large amount.
Total productivity of all banks except HDFC, Axis, ABN, Citibank, SCB and G-IV as a
whole is significantly correlated with IT but Axis Bank is the only bank that reports negative
correlation even though it is decreased in later period and the banks having positive
significant correlation, witness more than 90 pc variations in productivity with 1 pc change in
IT index.
Overall, IT has marginal impact on banks’ productivity where private sector banks show low
level of impact while G-I & IV witness good contribution. Consequently, IT amounts
immense contribution in all Indian banks except G-IV because majority foreign banks start
decline in IT usage though its productivity is the highest among all bank groups. G-III shows
insignificant impact mainly because of decrease in some e-channels’ usage and a major turn
down in HDFC bank’s efficiency. G-II is poor because of inappropriate use of IT. If the banks
utilize IT in efficient way, they can also gain fruits of transformation through IT.
7.2.2.6 Overall Impact of IT on Profitability
Among all e-channels, credit cards are the most effective while internet banking has poor
effect on profitability. Overall, IT-index has larger contribution in profitability during post-
ebanking period. Hence, the need is to explore poor e-channels to take maximum fruits of IT.
Among all, FB is the only bank with positive impact of all e-channels during both study
periods though SBI and HSBC banks also witness remarkable contribution of IT in
productivity. Partially IT-oriented banks show poor results with negative impact of few e-
channels except computerized branches and internet banking. The ebanks and industry as a
whole have succeeded to perk up the e-channels’ contribution.
H0: The null hypothesis is rejected in case of partially IT-oriented banks and industry because
these banks have positive significant impact of technology on their profitability and total
productivity while it is accepted in case of fully IT-oriented banks.
As a result, partially IT-oriented banks except SBI and FB witness poor management of IT
while fully IT-oriented banks except HDFC get success. Industry as a whole shows
impressive improvement in profitability with greater contribution of G-IV, a best one to
manage transformation. Even though, old private sector banks and public sector banks except
few must improve IT management along with other factors because poor management is worst even than not to adopt.

**7.2.3 Customer Perceptions**

It has been hypothesized that ebanks must have better quality of ebanking services than of traditional banks and sixth chapter addresses similar objective to evaluate ebanking status in Indian banks from customers’ perspective, which help to gain better understanding of different aspects of technological innovations in banking services. A survey of 384 customers was conducted to know their perceptions. Those customers were selected who utilize e-channels and attached with the banks from last 3 and more years. Based on the customers’ perception, following findings have been summarized in this chapter:

1. The survey addresses the young, rich, male, post-graduates and service class respondents in majority. Most of these customers are more aware of ATMs, credit cards and internet banking and the same channels are preferred by them in availing ebanking services due to cost effectiveness and convenient access. They select the banks for e-channels because of convenient location, ease of access and security.

2. ATM is of more use for cash withdrawal while tele banking, mobile banking and internet banking are used more for balance enquiry. Internet banking is also suitable for fund transfer and credit cards are admired for shopping. Customers are more satisfied with ATMs services followed by credit cards.

3. In perspective of transformation, 44.27 pc respondents determine IT as the most dominating component for the same and 95.05 pc respondents also state e-system a major cause for transforming Indian banking system. Among e-channels, though all suppose to be valuable but ATM is the most effective one.

4. In the view of 89.84 pc respondents, transformation has positive impact on our banking system where some caution for dominance of private sector over public sector banks. With the coming of electronic system, almost half of the respondents are anxious about poor banker customer relationship.

5. Majority customers’ point of view is that e-banking is providing customer services in lesser time as compare to partially IT-oriented banks. The majority customers presume that private banks are providing innovative ebanking services.

6. More than 80 pc customers would like to shift from public to private banks mainly because of speedy services, free flow of information and easy way of transactions in
ebanks and hence, majority customers demand ebanks, though a few insist that all type of banks are necessary in the e-age.

7. Along with the benefits, e-system also cause some problems for customers where card blockage, machine out of cash and time consuming are the major problems of ATM customers but time consuming is severe in public and foreign banks because of lesser number of ATMs. High service charges is a key concern for other e-channels’ customers where high interest rate of credit cards, network problem of internet banking, slow transmission of data through mobile banking and tele banking as unpractical device are another substantial harms that origin less usage of e-channels.

8. Although, ATMs and credit cards cause more problems but tele banking and mobile banking customers cite more complaints which is also a key concern for less popularity of these channels but, only few customers are those who go to complain while majority remain silent.

9. Future of e-banking is also expected to be bright because it will help the banks to improve efficiency.

10. The respondents also suggest installing more ATMs at convenient locations, providing security, fast network services and issue inexpensive e-channels in lesser time for further perfection in ebanking services.

Hₐ: The null hypothesis is rejected because customers from different bank groups and occupation have significantly different opinion with respect to almost all the aspects except few like time taken by the banks for various services and suggestions while age and income has significant influence on customer perception regarding suggestions only. In case of shifting of customers towards ebanks, they have significantly different opinion with respect to their bank groups, age and occupation. Consequently, bank groups and occupation have strong impact on customer opinion.

7.2.4 Service Quality

Second part of this chapter evaluates service quality of partially IT-oriented banks and ebanks. Based on literature review, five major factors of service quality viz. tangibility, assurance, reliability, responsiveness and empathy were considered to evaluate the service quality. For better understanding, a gap index is prepared from mean perception and mean expectation of the customers and then the gap is tested through t-test at 1 pc and 5 pc level of significance. The important findings are as follows:
1. Indian banking industry explains a larger gap between perception and expectation of customers, which is also significant (t value is significant at 5 pc level of significance) and partially IT-oriented banks, especially G-II, show the highest gap.

2. T-test is also applied, taking the responses of respondents classified as per annual income, age, and occupation, where young customers, those having income below Rs.1 lakh, and business class differ from other classes in their perception about service quality as they have higher expectations from banks while others are more satisfied from banking services.

3. From all factors, assurance is better in all banks but responsiveness is poorer at all, though gap is significant in case of all the factors.

4. Among all dimensions, written material is easy to understand confirms more dissatisfaction among the customers where responsiveness dimensions like employees' willingness to help the customers and solve their problems at priority are the next dimensions of poor service quality. It means banks do not provide material that is easy to understand for customers and secondly, employee behaviour towards customers is not much satisfactory among the customers. Overall, all factors of service quality show significant dissatisfaction among the customers with higher gap in partially IT-oriented banks. Today, customer especially young, lower income group and businessmen expect more from the banks. Hence, the banks should improve to serve the customers as per their needs. The only way to survive is to provide services according to customer needs.

8.2.5 Employee Perceptions

It is not enough to conclude ebanking services on the basis of customers’ perception; employees’ perception have also been evaluated to better understand the status of ebanking, because employees are directly engaged in serving the customers. Chapter seventh justifies employees’ contribution towards evaluation of ebanking status. Overall, 132 employees were surveyed through questionnaire. The major findings are summarized as follows:

1. From the survey results, it is observed that cost, speed, convenient accessibility and quality services attract the banks to venture into ebanking. Among all e-channels, ATMs is the most preferred one because of cost-effectiveness.
2. Collaborative culture, knowledge management is not much developed in almost all the banks. Efficiency improves in terms of speedy delivery, less paper work, easier work, database management etc.

3. In the view of 78.79 pc respondents IT helps to increase productivity though result in downsizing of employees.

4. Among all, 87.88 pc employees are satisfied with working through e-channels but still more than 70 pc seek sophisticated training to improve work efficiency even training during service is expected to be more effective for development.

5. While dealing with e-channel customers, employees face problems of lack of knowledge, fear of insecurity and unawareness among the customers. Sometimes, e-channels create confusion and job stress among the employees. Hence, they suggest creating awareness along with service variety to make the customers familiar with e-channels.

6. More than 80 pc employees believe that not more than 70 pc customers utilize e-channels though e-channel customers are increasing at greater extent.

7. E-channels are more popular among young and middle age customers but still 40 pc transactions are requested through e-channels. They bring up that customers ignore e-channels mainly because of lack of knowledge and improper demonstration while insecurity and high service charges also a key concern.

8. The majority employee respondents observe shifting of customers towards ebanks. 65.91 pc employees favour on-line banking to have more loyal customers because these customers are more profitable.

9. Almost all the employees expected that IT has a bright future because it will enable the banks to be more competitive, generate further opportunities and trim down per transaction cost. They suggested placing ATMs at opportune places, serve the customers as per their requirements, and provide knowledge and security to attract potential e-channel customers.

$H_0$: The null hypothesis is accepted in majority cases which mean that perception seems to be similar among all the employees regarding various aspects of e-services whereas work experience has significant influence in many cases especially training requirement, customer excuses and future prospects of IT. Even in case of reasons to prefer e-channels and problems regarding opinions, bank groups also have significant influence on employee perceptions.
Accordingly, IT makes the services cost effective and time saving which attracts the banks to venture into ebanking. In current era of transformation, IT become necessity to survive and not an option, but it is equally important to execute it in precise approach and then the banks can enjoy fruitful results of transformation. Generally, customers prefer e-channels to transact with the banks where ATMs is the most favourable among them rather the awareness about all e-channels is not up to desirable level while cost analysis prove mobile, tele and internet banking the most cost effective for customers as well as banks. The ebanks are necessary banks because these banks provide more innovative and prompt services and therefore more than 80 pc customers of survey want to shift towards ebanks. The major problems of poor awareness, lack of knowledge, insecurity and inappropriate material cause ignorance among the customers to use e-channels, as not more then 40 pc transactions are performed through e-channels and not more than 70 pc of the customers have accepted e-channels for bank transactions. They suggested spreading awareness, providing adequate knowledge especially in regional language, security and more convenient accessibility to enhance ebanking services among the customers. As IT has improved the banking efficiency in many terms, customers and employees are also favouring technology, the time is opportune now to explore the opportunities entailed by ebanking to gain more competitiveness.

7.3 Recommendations

Financial sector reforms assisted impressive development of Indian banking industry. But in the recent global competitive environment, where IT is facilitating tremendous advancements with efficiency improvements banking sector reforms in India are by no means complete. Plans are afoot to modernize the financial system to make it compatible with best international practices. Though, ebanks are gaining momentum but partially IT-oriented banks need further development by fully adopting new technologies. As the study evaluates poor productivity of these banks even customers are less satisfied, the following recommendations are given for the examined problems:

7.3.1 Problem: Structural Rigidities

It is a major problem for government owned commercial banks because they can’t get the benefits of timely opportunities by taking independent decision.

Issues

1. Excess of government control
2. Dependent decisions
3. Time consuming process of decision making

**Solution**

Liberalization unleashes competitive forces and enables the banks to take new decisions or alter their product mix along with technological advancements, which help to increase productivity and profitability as private banks’ efficiency is adequate evidence otherwise, government must take immediate decisions before the opportunity elapsed.

**Challenges**

1. Opposition from employees
2. Government resistance

**Prospects**

1. Win the employee’s confidence by enabling them to understand the benefits of deregulation.
2. Provide them some job security benefits.
3. There should not be total liberalization because government participation to some extent can solve the problem.

7.3.2 Problem: Poor Technology Base

The study validates the facts that our banks are not sound in technological innovations. Public sector banks have just 56.28 pc computerized branches and old private banks have 34.70 pc, not even a single ATM is established for a single branch and mobile and tele banking also do not much favour by the customers though these are much cost effective. The ebanks with better technology confirm enhanced productivity while partially IT-oriented banks have worst effect due to poor base and inappropriate management.

**Issues**

1. Less computerization
2. Less popularity of e-channels especially mobile and tele banking
3. Poor management
4. Poor knowledge among customers

**Solution: Upgrade Technological Base**

All the banks must fully computerize their branches within limited period. Spread awareness among customers through different approachable channels. Mobile and tele banking should be introduced with new schemes and services because these are much cost effective for the banks. The most important aspect is management of IT. The banks should make efforts to
proper manage IT with the support of successors. Because, better and enhanced IT usage help to improve efficiency and enable the banks to compete around the globe.

**Challenges**

1. Heavy cost
2. Resistance by employees
3. Poor technical knowledge among employees
4. Customers’ problems of insecurity, network problem, lack of sufficient number of ATMs etc.

**Prospects**

1. RBI & government should provide easy finance either at concessional rates or provide subsidies to enrich IT infrastructure.
2. Employees resist changing because of illiteracy about technology. Therefore, special drives of training should be started to upgrade their technical skills. Secondly, appoint senior employee to train the staff so that they can easily intimate to solve their queries even the retired personnel can also be appointed to learn their experiences.
3. Insecurity is a key concern because the customers ignore electronic system due to fear of hacking of accounts, wrong transfers of funds, and fraudulent entries in case of theft or otherwise. The banks must employ latest technological systems for providing security and privacy to the customers. Because technology is progressing at a fast pace, timely upgradation by the bankers can check these crimes at a great extent.
4. Network problem is a serious problem in the view of majority customers. Therefore, the banks should provide fast network facilities.
5. Install more number of ATMs at least one ATM for each branch, it will solve the problem of time wastage as cited by the customers. Foreign banks have around two ATMs per branch then Indian banks can gain customers, if they serve the customers as per their requirements.

**7.3.3 Problems: Less Concentration towards Non-Banking Business**

Today, banking has become commercial platform for universal trading where every transaction can be performed at a click of mouse and our e-banks especially foreign banks witness the state very well. But, public and old private sector banks still depend more on interest-bearing business that is deposits and credits rather to explore changing environment opportunities.
Issues

1. More dependency on interest-bearing business
2. Poor command in non-banking business

Solution: Explore Maximum Non-Banking Business Activities

We do not need to go anywhere for depositing bills of electricity, water, phone, hotel, school fee etc. because it is very easy through e-channels which provide unlimited facilities by sitting at home. The ebanks provide all such facilities and hence, gain momentum with more than two folds profitability than partially IT-oriented banks. Then how partially IT-oriented banks can stand behind, they should also explore every new opportunity to gain fruits of transforming environment.

Challenges

1. Laziness
2. Lack of young creative staff
3. Customers’ mindset because they think public sector banks are meant for secure deposits only

Prospects

1. Banks especially public sector banks and old private sector banks should be active to explore new opportunities otherwise they will be out of gear.
2. Appoint young creative staff that is well versed in technological innovations and known about new non-banking business requirement in the market.
3. Motivate the customers through more advertisements for fee-based transactions also like SBI, ICICI etc.

7.3.4 Problem: Poor Knowledge Management Development

Knowledge base of employees make them responsive towards customers, if it is not up to date then definitely they will drop customers. As per employees’ perspective, knowledge management is not much developed especially in public sector banks.

Issues

1. Poor knowledge about innovations
2. Poor level of creative thinking
3. Lack of contribution in research and development activities
4. Lesser involvement in decision making
Solution: Knowledge Management Development

The banks with strong knowledge based employees always gain momentum in customer market while the others loose. The banks must develop knowledge management system to update the employees’ knowledge. The banks should give the required information to the employees at first instant and train them through role plays to gain creative and researchable thinking. There are some tricks of training for the banks to apply like versatile training, role play, group discussions and conversation between same level employees. The banks can enhance the employee knowledge through video’s and other channels also, which will definitely help to gain loyal customers.

Challenges

1. Lack of innovative and efficient staff
2. Laziness among employees/less interest in learning
3. Time constraint

Prospects

1. It is a major problem for banks to get all active employees but they can make them active through some effective strategies. The banks can introduce performance evaluation system either be a written test or discussion to judge their innovative creativeness and reward the employees with better knowledge base.
2. Appoint a person with creative thinking and establish knowledge management cell for timely actions and fix a time for learning in shifts.
3. It can also be considered as mandatory by the RBI to get global exposure.

7.3.5 Problem: Poor Work Culture

Poor work culture adversely affects the efficiency of employees and ultimately banks’ efficiency also suffers. It is also not much satisfactory as per employee’s perspective which is a major problem for the banks.

Issues

1. More emphasis on daily banking business.
2. Less importance to group cohesiveness and teamwork.

Solution: Learning Work Culture

The banks should create learning work culture like ebanks by concentrating more on group cohesiveness through target distribution in teams independently. A learning work culture can
be created by introducing innovative technologies for operations and developing the knowledge base of employees through interest creation.

**Challenges**
1. Shortage of time.
2. Target concentration.

**Prospects**
1. Banks should establish fully electronic system that will solve the problem of time because a person can relax from the routine banking activities and can utilize the same time for other activities.
2. Due to cut throat competition, banks want to gain maximum profits and therefore, they give lesser time for such important aspects. But once they create such a learning culture, they definitely gain fruits throughout the business life.

### 7.3.6 Problem: Customers’ Shift towards ebanks
It is a serious problem because once customer drops confidence it is very difficult to gain loyal customers.

**Issue**
1. Less innovative services / products
2. Slow service delivery
3. Poor quality services
4. Branch banking is more costly

**Solution: E-banking Services**
The partially IT- oriented banks can only gain the loyal customers by providing all ebanking services because it is the best differentiating strategy to meet the competition. They should introduce all innovative products/services with improved quality and quick response to customers. Customers always prefer a bank with prompt, cost effective and convenient services and who serve as per their requirements. Time is opportune for the banks to accept the changes and compete in global market.

**Challenges**
1. Poor electronic service base
2. Increasing customer expectations
3. Expensive market research
4. Lack of technically sound staff
Prospects

1. Online/ebanking enhance their ebanking services base. For this purpose, the banks must get expert services and provide training to old ones.

2. It is very difficult to satisfy customer needs because these are of continues increasing nature. But, the banks have to know their needs through market survey. Though, it is costly and time consuming process, but internet has made it very easy and fast, we just need to have strong technology base.

3. An employee with strong technical experience can definitely help to upgrade and manage technological innovations.

7.3.7 Problem: Less Awareness among Customers

Awareness is key concern for the banks to spread all over but it is the best and only way to work and gain success in electronic age.

Issues

1. Less knowledge about techniques
2. Less knowledge about usage
3. Poor coverage

Solution: Spread Awareness

The banks must aware every customer about each and every aspect of banking services especially electronic system. They must approach to customers for providing information about innovations. Without customer awareness, the banks can never add to profits because maximum services will remain unutilized or underutilized. The demo at the counter is best channel for spreading knowledge though seminars, exhibitions, pamphlets also serve the purpose. Among 70 pc rural population not more than 10 pc are aware of e-channels. Hence, the banks must approach them through a channel that is most favourable in those areas.

Challenges

1. Difficult to select the most accessible channel
2. Multi-lingual information material
3. Time and cost

Prospects

1. Select channel as per its coverage in that area. Majority people prefer face to face communication. Hence, employ a person of that area to deliver information as per the understanding level of customers.
2. Provide material in regional languages because present material is in English that cannot be implicit to every person. He has to approach others to know what is written in that document and there is no privacy and they normally avoid visiting banks.

3. Appoint efficient person who can best manage time and cost especially a person from concerned region because local person can better understand his people.

4. Provide knowledge about usage of e-channels through demo, possibly at the counter.

**7.3.8 Problem: Poor Service Quality**

Overall, service quality of all the banks is not satisfactory which adversely affects the profitability. Quality is a key issue and only survival factor in competitive environment.

*Issues*

1. Inadequate material for customers
2. Job dissatisfaction among employees
3. Confusion and stress due to technical complexity
4. Poor response to customers for problem solving
5. Unwillingness to help the customers
6. Ignorance of customer needs
7. Problems with e-channels

*Solution: Improvement in Service Quality*

Quality is a survival factor so there is no option but must improve.

1. Quality excellence can best be achieved by preventing problems rather detecting and then correcting after the problems occur.

2. The material provided by the banks is not of universal indulgent. Therefore, it should be in regional language of the regions the banks cover to serve the customers. Because every person can not understand/read by himself what is send to him through letters or pamphlets.

3. Confusion and stress is mainly because of poor knowledge about job work and complexity of number of e-channels. But, appropriate training during job and timely discussions with experts can easily solve these problems.

4. Employees should be trained through role play or case studies to solve customer problems. They must prepare to serve the customer at first instant in polite manner.
There should be check on employee behaviour towards customers because once lose customer, it is difficult to win the confidence again.

5. All the employees must empower for participative, cooperative and creative manner which will help to extract better performance from employees.

6. Quality is determined by the customers, the customers want products/services that place throughout their life, meet their needs and expectations at a cost that represents value. Their needs can be explored through market surveys.

7. The banks must take continuous customer feedback by conducting transaction based surveys.

8. Develop customer focus groups to make strong relationships with the customers. It will help to maintain and gain loyal customers.

9. ATMs problem of card blockage and machine out of cash is quoted by number of customers. Hence, the banks should always care about these concerns because these problems lose the confidence of the customers. New technology like warning bells should be with ATMs and one at branch so that banks can early get alarm for the problem.

10. A facility of pension withdrawal through ATMs or internet banking is highly at demand among the public especially the retired ones. They demand direct deposit of their pension to their ebank accounts.

11. Introduce special credit cards for low income groups at lesser interest rate.

12. Mobile and tele banking services should be in new, fast and easy services form. These e-channels are not much popular rather having the least cost most usage of mobiles and telephones. Hence, modified form will be welcome by the customers.

Challenges

1. Diversity of language

2. Unwillingness of employees to learn about innovative ideas

3. Less time for training

Prospects

1. Material publication can be authorized at zonal branch office or at branch level because, the branch will be responsible for its own region and the head office will be free for another important jobs. Because, at head office it is difficult to handle all
corners, but individual branch will provide material in its regional language where it serve the customers.

2. Employees should be motivated by explaining competitor’s strategies because they also will gain from good repute of the banks.

3. Training can be given in slots with no effect on routine work but it is also possible during job hours because learning through working is always enjoyed by the employees.

4. Overall, employees should be motivated to best serve the customers at first instant in pleased manner.

Never the least, the banks must create customer friendly environment to make things easy for customers because this system adds value and builds customer loyalty. Complaints must be handled in time and in a courteous and efficient manner. More particularly, the frontline employees must be competent and mature in social skills for gaining loyal customers because the success lies in satisfied customers.

7.4 Limitations of the Study

A number of factors have limited the analysis of this study. Accordingly, all measures have been taken within the study to restrict any cause that may result in bias due to the limiting factors. The following limitations of this research work are worth mentioning:

1. This study is based on secondary data, which was collected from banks annual reports and IBA’s performance highlights. Hence, it may be subject to measurement and allocation errors which are common to traditional accounting reports.

2. For analyzing the impact of IT on profitability and productivity, data related to number of e-channels was collected directly from IT departments of concerned banks and through IBA, Mumbai which is subject to minimum disclosure.

3. Although, survey has been carried out with statistically significant response rate in 12 selected banks in Punjab (urban) only but it is not enough to generalize the results in big country like India.

4. For analyzing perceptions, sample size of 132 employees was taken because of poor response. Large number of employees can be considered for obtaining deep perceptive of the aspect.
7.5 Future Areas of Comprehensive Research
On the basis of this empirical study, the researcher visualized the following areas of further comprehensive research:
1. Relationship between efficiency and perception of customers can also be carried out to best judge the performance of the banks.
2. A large sample of customers and employees may be surveyed to have deep perceptive of ebanking services.
3. Per transaction costs of the banks working in India.
4. E-services and transformation of banks in the rural and semi-urban areas.
5. A comprehensive study on job satisfaction of employees in the electronic working environment will help to better develop the human resources.
6. A research is also required to study the human values in the times of electronic banking system.

7.6 Conclusion
Increasing competition has become a challenge for Indian banks but it also provides thoughtful opportunities to develop the banking business as per international standards. Though, IT leads improvement in all banks however ebanks are gaining the momentum. It is important to recognize that banks in India are not large enough to function efficiently under the emerging environment to undertake sufficient investment in skill formation and to come up and experiment with innovative ways to exploiting the opportunities and meeting the challenges thrown up under a rapidly changing economic scenario. If ebanking serves with better efficiency and reduced costs with more satisfied customers and employees, then why not all the banks must exploit this opportunity as differentiating strategy to gain more competitiveness. The technology holds the key to future success of Indian banks as India could leap-frog into internet banking quicker than the United States provided Indian banks grab the opportunity. Therefore, ebanking is need of the hour, which can’t be lost sight of except at the cost of elimination from the competition. The lack of penetration of computers in the country is not a stumbling block in this case but it can happen without wiring up the entire country. The real bottleneck is mind set, unawareness and security concerns. If we overcome these factors, we can enjoy the much superior cost structure the ebanking provides.