ABSTRACT

Banking industry in India has undergone tremendous changes since LPG (Liberalization, Privatization, Globalization) has taken place in India (Uppal, R. K. 2008), i.e. post 1991 economic reforms. Introduction of information technology in banking sector has led to imperative changes which boost banking industry in India in general and also aid in further development of branches of the bank. In recent years, banking industry in India is introducing information technology that has innovative methods for performing their various day to day business operations. The banks appear to be on fast track for IT based products and services. Customers are becoming more demanding and it is the extensive use of technology that enables banks to satisfy adequately the requirement of customers. IT is no longer considered as mere transaction processing or confined to management information system (MIS). The effect of liberalization, globalization and privatization has opened new vistas in the banking industry in an intensely competitive environment.

Total dependence on Information Technology for delivering its services in a cost effective manner has made Information Technology an integral part of banking operations. Speed and efficiency of banking operations has enormously increased due to Information Technology
particularly in routine transactions. Flexibility provided by IT has helped the banking industry's new services to further enhance quality of the current services provided by them to their respective customers. IT also facilitates the introduction of new delivery channels like Automated Teller Machines (ATM), Net banking, Mobile banking, Phone banking etc.

Reforms in banking sector and introduction of e-banking has made structural changes in service quality, managerial decisions, operational performance, profitability and productivity of the banks. E-banking is now one of the emerging trends in the Indian banking scenario and is playing very important role in strengthening the banking sector and improving service quality. It has enabled the banks to handle the payments electronically and inter-bank settlements faster and in large volumes. There is increase in customer satisfaction level, reduction in cost of banking operations, increased productivity. Customers can view the accounts, get account statements, transfer funds, can order drafts by using electronic channel. Because of availability of ATMs and plastic cards, EFT, electronic clearing services, internet banking, mobile banking and phone banking to a large extent, customers avoid going to branch premises and have provided a wider range of services to the customers.
However, it must be noted that Information Technology has not been totally good to the banking industry. Entry of foreign and private players has increased the competition for public sector banks to invest in information technology equipments. Further, Information Technology growth in banking industry has created tension for technically skilled staff and led to cyber frauds/crimes, online thefts etc.

State Bank of India is one of the oldest banks of India. Roots of State bank of India can be found from the first decade of 19th century, with establishment of Bank of Calcutta in Calcutta on June 2nd, 1806. Three years later, this bank was renamed as Bank of Bengal on January 2nd, 1809. British India established this bank as their first ever joint stock bank under the sponsorship of Government of Bengal.

With the launch of first five year plan, an important turning point emerged for State Bank of India with primary focus on development of rural sector. Till the first five year plan, the commercial banks of the country, including the Imperial Bank of India restricted their products and services to the urban sector. Therefore, in order to reduce this limitation and serve the economy as a whole and rural sector in particular, the All India Rural Credit Survey Committee recommended the formation of a state-partnered and state-sponsored bank by taking
over the Imperial Bank of India and incorporated with it the former state-owned or state-associate banks.

Now, State Bank of India with its latest information technology equipments is competing with best foreign and private banks in India. Customers of SBI are getting the latest e-banking services delivered to them that are being provided by the foreign and private banks.

Objectives of the Study

In the present study, an endeavor has been made to assess and evaluate the role of information technology in banking industry with special reference to employees and customers of State Bank of India in Aligarh city. The objectives of the study were therefore set as follows:

1. To study the role played by Information Technology in banking industry in India

2. To study the role played by Information Technology in development of State Bank of India.

3. To highlight the prominent Information Technology related services being offered by State Bank of India in the country.

4. To study the challenges posed during the implementation of Information Technology at State Bank of India in the country.
5. To assess the impact of Information Technology on different age group of customers of State Bank of India, Aligarh city.

6. To offer valuable suggestions for effective and widest possible implementation of information technology at State Bank of India countrywide.

**Hypotheses**

In the light of the research gap, objectives of the study and to judge the role of information technology in banking industry, the following hypotheses were formulated:

1. **H1** Significance difference is observed between the approaches of the two sample groups of customers (below forty years, above forty years) regarding security concern as the basic hindrance in using information technology related services of State Bank of India at Aligarh city.

2. **H2** Significance difference is observed between the approaches of the two sample groups of customers (below forty years, above forty years) regarding using online financial transactions of State Bank of India at Aligarh city.

3. **H3** Significance difference is observed between the approaches of the two sample groups of customers (below forty years, above
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forty years) regarding using e-banking services as status symbol by not visiting the branches of State Bank of India at Aligarh city.

4. H4 Significance difference is observed between the approaches of the two sample groups of employees (below forty years, above forty years) regarding finding their work easier and more interesting due to introduction of information technology at State Bank of India at Aligarh city.

Research Methodology

An endeavour has been made in the present study to cull up relevant data and statistics from primary and secondary sources both. The study is concerned with banking industry in India. To achieve the noted objectives the study is based on primary and secondary data. This study is primarily based on employees and customer satisfaction of State Bank of India with the introduction of information technology equipments. Therefore, primary data have been collected through questionnaires and interviews.

Statistical tools used

The researcher has made an analytical study through the use of significant statistical tools. For measuring the role of information technology in banking industry with special reference to State Bank of
India in Aligarh city, various statistical tools have been used according to the requirement and suitability. The statistical tools are Mean, Standard Deviation, Reliability and t-test.

**Layout of the Chapters**

The thesis consists of five chapters along with a comprehensive bibliography and annexure. First chapter gives an introductory background and framework of the study. It also provides review of literature on the subject matter besides statement of problems, objectives of the study, research methodology, significance and limitations of the study. The second chapter throws light on the inter-relationship between information technology and banking industry. It gives an overview about the e-banking services and the different facilities that are being provided by banks to the customers.

Third chapter presents the history of State Bank of India and implementation of information technology related services and their various e-banking products and services.

The fourth chapter analyses the role of information technology in banking industry with special reference to State Bank of India in Aligarh city by testing of hypotheses based on percentage analysis and application of relevant and pertinent statistical tools such as mean, standard deviation and t-test to arrive at the findings of the study.
Fifth and the final chapter of thesis gives a summary of findings, conclusions and suitable suggestions to evolve meaningful, relevant and effective implementation method of information technology related services in State Bank Of India in order to provide efficient e-banking services to their valuable customers.

The study makes it evident that from the results of independent t-test that the alternative hypothesis (Hₐ1) is accepted. Therefore, it is discernible that significance difference is observed between the approaches of the two sample groups of customers (below forty years, above forty years) regarding security concern as the basic hindrance using information technology related services of State Bank of India at Aligarh city. Statistical analysis has provided evidence that significance difference is observed among the selected sample groups i.e. customers below 40 years of age and customers above 40 years of age in using IT related services due to security issue.

Null hypothesis (H₀₂) is accepted. It is concluded that there is no significance difference in using online financial transaction of State Bank of India at Aligarh city between the approaches of the two group of customers (below forty years, above forty years) regarding.

Statistical evidence has provided information that differences among the responses of the two group of customers of State Bank of
India was found on payment via mobile banking, using e-banking service, only checking balance and underutilisation of e-banking service due to technical knowhow in operating these services.

Independent t-test has been used to test the significance difference among the selected sample groups i.e. below 40 years and above 40 years in using online mode of payment over traditional branch payment. The null hypothesis is accepted at 5% level of significance as the calculated value is higher than the table value.

Null hypothesis \( (H_{03}) \) is accepted at 5 % level of significance . Therefore, it can be concluded that there is no significance difference between the approaches of the two sample group of customers (below forty years, above forty years) regarding using e-banking services as status symbol by not visiting the branches of State Bank of India at Aligarh city.

Statistical analysis has provided evidence that customers of State Bank of India falling in the category of below 40 years of age use e-banking services because it is a status symbol by not visiting the branch as compared to above 40 years of customers shown in descriptive analysis (percentage analysis).

The null hypothesis \( (H_{04}) \) is accepted. Therefore it can be concluded that statistically there is no significance difference between
the approaches of the two sample groups of employees i.e. below 40 years and above 40 years, regarding the statement that induction of information technology by State Bank of India at Aligarh city made their work easy and interesting.

For enhancement of the performance of Indian banking industry, the researcher has given some suggestions which are given below:

- Bank should consider to train many employees to tackle critical information technology related jobs. Employees should be considered for cross training in critical functions and document operating procedures.

- Banks need to follow a planned process to develop awareness programs through the stages of planning and design, execution and management evaluation and course correction. These programs should be customised for the particular audience like banks' customer, employees, law enforcement personnel, fraud risk professional, media partners, etc.

- In case of shared ATM network scenario, when the card of another bank is used to do fraud, there is lack of clarity regarding report of such a theft/fraud. There should be proper guidelines to avoid such type of confusion that whether it has to be reported to the central bank RBI.
If any new feature or function specially related to security, integrity and authentication are being introduced by the banks, the customers should ensure that they are well aware about the procedure and steps need to be taken to properly utilise the service.

Name and contact number of the complaint redressal authority officer who is dealing with e-banking frauds should be made known and widely publicized. Assigned officer should ensure that genuine grievances of customers are redressed without involving any undue delay.

All the customers should register their mobile numbers with the banks to receive any transaction alert. If the mobile number is changed then customer should update it with the bank.

Customer should adopt various security precautions and practices in protecting their devices and computers and they should avoid conducting financial transactions from public or internet cafe.

Due to various limitations like paucity of data, time and other resources, the researcher feels that a more in-depth study can be made by taking into account private bank or foreign bank. Research can be
taken further with a larger number of sample size to identify the expectations of the customers. Categorisation of sample was on the basis of age. Categorisation can further be done on the basis of income level, marital status, educational qualification and other demographic differences. The impact of information technology on banks “profitability” has been ignored which can give a good platform for future research. Research can also be done to study the human values in the times of electronic banking system in Indian banking industry. A comparative study on Indian and foreign customer’s perspective towards e-banking services is also open for future research. These spheres remain open to the other researchers which if taken up would prove to be a milestone in the history of Indian banking industry.