A Study on Innovation in Banking and its Impact on Customer Satisfaction

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Abstract: *Innovation through information technology (IT) has made inroads everywhere and banking is no exception to it. Whether it is private or public sector bank, everywhere innovation is the buzzword and technological breakthrough is witnessing new avenues of success. Competition is compelling everyone to move ahead and faster. Now, the working in public sector banks has been changing and customers are sensing the wave of innovation. These banks, which were working traditionally are now coming out and reaching to audience through billboards; FM radio and all possible media. Celebrity endorsements are now common in public sector banks as well. Core banking has added fuel to the fire of innovation. The ultimate results can be seen in terms of enhanced customer satisfaction in public sector as well as private sector banks. The research is an attempt to study the impact of innovative technology on customer satisfaction vis-à-vis public sector and private sector banks in Bhopal city. Primary data was collected from customers of these banks and analyzed, which has given significant results on the subject. It was found that private sector banks were having an edge in terms of success in innovation.*

Keywords: *Customers, innovation, private sector banks, public sector banks satisfaction*
JEL Code: Q 55

I. Introduction

Bank is a financial institution which accepts deposits and channels the money into lending for customers. Post-liberalization, India has seen exceptional growth in the banking sector backed by rising charts of public sector and private sector banks. Since Indian economy is moving on development pathway, banking sector is at a turning point. Entry of private players in banking has encouraged the application of marketing principles to business enterprises in the services (Apte, 2006). As per industry reports, Indian banking industry has been growing faster than the real economy resulting in GDP increasing to higher levels. In the current century, banking reforms have changed the way banking is done. Banking reforms have made transformational changes in India. Bank nationalization process has witnessed spectacular achievement in banking system through the expansion of bank branches (Kaul and Ahmed, 2005). Government of India declared nationalization for limiting the ownership and control of banks by few big business houses. Government wanted to prevent the concentration of wealth and economic power, thereby mobilizing the savings from common people. Banking industry can be classified as retail banking, commercial banking, corporate banking, investment banking NRI banking, etc. With years, banks are also adding value-added services for their customers (Pahuja and Kaur, 2007). Customers now have more options in choosing their banking operations. With advancement of technology coupled with high technology, banking services now have become more user-friendly than ever.

Banks have played a fundamental role in economy and the continued strength and stability of the banking system is a matter of general public interest and concern both in regard to its linkages with the real sector and for providing a payment and settlement system (Kapila and Kapila, 2001). Now, the banks are into consumer banking, corporate banking, finance and insurance, investment banking, mortgage loans, private equity, savings, securities, asset management, wealth management, credit cards etc. In India, modern marketing techniques adopted by nationalized banks and private banks include Internet banking as a major tool. Now, customers don't have to come to the bank; he/she can perform almost all the operations through his computer and even on mobile phone. These activities include opening of accounts, balance checking, transactions, tax filing, billing, loan applications and many more activities done online. Innovative service providers are interested in knowing how they can use new technological developments to automate and speed up processes, reduce costs, facilitate service delivery and relate more closely to their customers (Lovelock, 2004). Core banking has led to win-win situation for the banks as well as for the customers. Among all the banks, State Bank of India (SBI) group was the pioneer in computerization of banking operations in India. This is the largest and oldest bank in terms of revenue, assets and market capitalization. As of March 2016, SBI had revenues worth US$41 billion with over 14,000 branches including 191 overseas branches. The Government of India nationalized it in 1955, where Reserve Bank of India took 60% stake and named it State Bank of India. It has

been ranked 285th in the Fortune Global 500 rankings of the world's biggest corporations for the year 2012. Forbes has ranked it as 29th most reputed company in the world. Among private sector banks, ICICI Bank (Industrial Credit and Investment Corporation of India) is the largest in India. Founded in 1995, it is the second largest bank in India by assets and third largest by market capitalization. It offers extensive banking and financial services to retail as well as corporate customers through variety of channels. It has specialized subsidiaries in investment banking, life and non-life insurance, venture capital and asset management. The Bank has a network of 4,450 branches and nearly 14,000 ATM's in India and has a presence in 18 foreign countries. Its branches are in United States, Hong Kong, Singapore, Sri Lanka, Bahrain, Qatar and Dubai along with representative offices in UAE, China, Thailand, Malaysia, South Africa, Bangladesh and Indonesia.

In India, automation started off with State Bank of India in initial phase in 1995, where manual entry process was converted into computerized system in phases. Passbook entry, demand draft making, fixed deposit making and other operations were computerized to increase the speed of operations and productivity. All the banks were provided with computers connected with local area network. This facilitated the linkage and automation of operations within the branch. All these efforts were aimed to enhance the productivity of bank along with customer satisfaction, which the banks have achieved to a large extent.

II.   Literature Review

A brief review of the existing research in this field has been presented. The findings of research are as follows: Prabhakaran and Satya (2003) identified the attributes related to banking sector and studied the weightage given to each of the attributes in assessing the service quality. In an exploratory study of respondents in a metro city, they found that service quality is the major parameter in a highly competitive environment where product differentiation is not much. Reliability, tangibility, responsiveness, assurance and empathy were found to be the major attributes to service quality. Gaur and Waheed (2003) studied the factors influencing the usage of interactive technologies in services business to determine the implications for developing these technologies to suit the users. For banking, selling the core product was most important motivation for using interactive technologies. Service sector businesses emphasize the use of interactive technologies to build and maintain relations with the customers in long run.Bhat (2005) conducted a study on performance of public and private banks with reference to service quality perception. Public and private sector banks were compared in various dimensions of service quality in North India. In terms of up-to-date equipments and physical facilities, private banks were ahead of public sector banks; in reliability, public sector banks were leading. Malhotra and Singh (2007) studied the factors affecting a bank's decision to adopt Internet banking in India. Results show that larger banks, banks with younger age, private ownership, higher expenses for fixed assets, higher deposits and lower branch intensity evidence a higher probability of adoption of technology. Adoption of Internet banking by other banks increases the probability that a decision to adopt will be made.

Gupta and Dev (2012) studied the factors impacting customer satisfaction in Indian banks and their effects on customer satisfaction. A questionnaire was given to 400 customers of 13 retail banks in India. Five factors were suggested driving customer satisfaction in banks namely: service quality, ambience, client participation, accessibility and financials. Sharma and Govindaluri (2014) studied the factors influencing adoption of Internet banking in urban India. The factors of perceived usefulness, perceived ease of use, social influence, awareness, quality of internet connection and computer self-efficacy are primary determinants of the attitude toward the use of internet banking in urban India. The attitude toward the use of internet banking can be used to predict the intention to use of internet banking systems by users.Vyas and Raitani (2014) studied the drivers that lead a customer switch from one service provider to another in banking industry. The impacts of the influencing factors have been studied and tested empirically using exploratory factor analysis. Questionnaire was collected from banking customers and it was found that price, reputation, responses to service failure, customer satisfaction, service quality, service products, competition, customer commitment and involuntary switching have their significant effect on customers' switching behaviour.Kaushik and Rahman (2015) analyzed various antecedent beliefs predicting customers' attitudes toward and adoption of self-service technologies available in the banking industry. Results showed that antecedent beliefs affecting adopters' attitude vary across different self-service technologies. It extends and tests the technology acceptance model by including two additional antecedents from the theories of adoption behavior. Bapat and Mazumdar (2015) explored the business strategy and its strategic orientation in context of Indian banking sector. Based on responses received from 330 banking officials working in various functional areas of banks in India, four major factors- competition, cost, innovation and customer need were found dominant.Srivastava and Dey (2016) delved into perceived differences in brand analysis dimensions, such as brand-specific association, brand impressions and brand credibility for young consumers in context of banking services in India. Three types of banks- state-owned banks, private (Indian) banks and global (foreign) banks were compared. A questionnaire was used for data collection. Authors report significant differences in

perceptions among young consumers among the three types of banks for all the dimensions of brand-specific associations: perceived quality, perceived price, perceived brand social value and perceived brand emotional value.

III. Research Objectives

Technological advancements have been highly productive towards customer satisfaction. It caters to the needs of the customers in all possible ways. Banks have also reached the peak of automation leading to faster processes. This study has been undertaken with the objective of finding the extent of customer satisfaction after computerization of operations in a branch of State Bank of India (SBI) and ICICI Bank in Bhopal city.

IV. Methodology

Sampling: Among the population of customers of SBI and ICICI Bank, a sample size of 200 was selected for study, which included 100 customers each of largest branches of SBI and ICICI Bank in Bhopal. These banks were considered as representative banks since these were largest in their own segment (i.e. public sector and private sector). The respondents included current and savings account holders as well as other customers who apply for loan, demand drafts etc. These were the customers who have been visiting banks for at least five years. First-time visitors and pensioners were not included in the sample. It was a simple, non-probability sampling that comprised of businessmen, salaried people and students irrespective of age or gender; but most of the customers were in the age group of 26 to 42 years. Their point of view was recorded through primary data collection instrument and efficiency of public and private sector banks after automation was determined.

Tools for data collection and analysis: Secondary data were collected from sources like- journals, books, Internet, newspapers, business magazines etc. For primary data collection, a questionnaire containing 28 closed ended statements on Likert five point scale was used; where factors causing customer satisfaction specially with reference to Service Quality were enlisted and the respondents were asked to mark their opinion in terms of agreement. Pilot testing was done before actual data collection. After making minor syntax correction, it was finalized. The questionnaire was given to 206 respondents; but due to delayed and incomplete response six questionnaires were excluded. The collected data was tabulated in Excel sheet and analyzed by applying z-test for testing hypothesis.

Z-test: For applying z-test, we work out the value of test statistic and then compare with the table value of z (based on 'z' distribution) at certain level of significance for given degrees of freedom (i.e. .05). If the calculated value of 'z' is either equal to or exceeds the table value, we infer that the difference is significant, but if calculated value of z is less than the concerning table value of z, the difference is not treated as significant.

Hypotheses: Hypotheses were formulated and tested for significance to prove the objectives in scientific manner. The null hypotheses were as follows:

H_{01} – There is no significant difference in reliability of private and public sector banks after computerization of operations.

H_{02} – There is no significant difference in speed of transactions in private and public sector banks.

H_{03} – There is no significant difference in promptness and cooperativeness of clerical staff in private and public sector banks.

H_{04} – There is no significant difference in empathy of staff in private and public sector banks.

H_{05} – There is no significant difference in overall performance of private and public sector banks.

The above hypotheses were tested and results were drawn.

V. Analysis And Interpretations

Reliability Analysis: Reliability is the property of a measurement instrument, which causes it to give similar results for similar inputs. It allows studying the properties of measurement scales and the items that compose the scales. It calculates the number of commonly used measures of scale reliability and provides information about relationships between individual items in the scale.

Table 1: Reliability Analysis

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.0.78	.80	28

Cronbach alpha is a measure of reliability. Reliability is the proportion of variability in the responses to the survey which is the result of differences in respondents. Alpha is lower bound for true reliability of survey. The calculation of Cronbach alpha is based on number of items on the survey and the ratio of the average inter-item covariance to the average item variance. Under the assumption that the item variances are all equal, this ratio simplifies to the average inter-item correlation, and the result is known as the Standardized item alpha. In the above table, all values are above the standard of 0.70, showing that the instrument is reliable and one can apply statistical tests and interpret the results.

Results of z-test: On applying z-test, hypotheses H_{01}, H_{02} H_{04} and H_{05} were rejected and H_{03} was found to be accepted at 0.05 level of significance. It can be inferred that there is a significant difference in terms of reliability, speed of transactions, empathy and overall performance between private and public sector banks before and after computerization of operations. However, in terms of promptness and cooperativeness of staff, there is no significant difference when it comes to pre and post automation. Automation has been an advantage to all the banks and everyone has felt its benefits. However, in terms of speedy transactions and empathy from staff members, private bank got an edge as stated by the respondents. In terms of overall comparison between SBI and ICICI bank, performance of private bank seems to be better. However, it is not the financial performance, but performance in day-to-day customer processes. See the following tables:

Table 2: Results of z-test at 0.05 level of significance

Null Hypothesis	Statement	Calculated value	Results of z-test
H_{01}	No significant difference in reliability of private and public sector banks.	2.612	H_{01} Rejected
H_{02}	No significant difference in speed of transactions in private and public sector banks.	2.012	H_{02} Rejected
H_{03}	No significant difference in promptness and cooperativeness of clerical staff.	1.147	H_{03} Not Rejected (accepted)
H_{04}	No significant difference in empathy of staff in private and public sector banks.	2.208	H_{04} Rejected
H_{05}	No significant difference in overall performance of private and public sector banks.	2.411	H_{05} Rejected

Table 3: Statistics related to variables:

Variable	Type of respondents	Mean	Std. deviation	Std. error mean
Reliability	Private bank	3.19	.981	.091
	Public bank	3.12	.1215	.054
Speed of transactions	Private bank	3.52	.916	.094
	Public bank	3.47	1.181	.052
Promptness	Private bank	3.36	.942	.087
	Public bank	3.27	.986	.052
Empathy	Private bank	3.45	.927	.081
	Public bank	3.71	.973	.054
Overall performance	Private bank	3.61	.923	.093
	Public bank	3.54	.97	.051

Automation of systems has led to higher speed of processes in banks; private bank is leading. Likewise, when it comes to empathy of staff, private bank has got an edge. However, public sector bank has an edge in reliability. Reliability has direct relation towards customer loyalty in banking (Vyas and Raitani, 2014) When it comes to trust of common people on bank in India, public sector banks are preferred. In spite of issues like slow speed and lack of empathy, many people in India still prefer public sector banks. When it comes to promptness and staff cooperation, much difference is not seen in terms of private as well as public sector bank. The customers have always welcomed the user-friendly processes and lay-out after automation. They acknowledge that due to automation, transactions are now more accurate. However, public sector banks have to travel an extra mile when it comes to swiftness of transactions along with customer care. Many respondents reported that in public sector bank, some clerks are not smart even after automation. Their non-cooperativeness is known to all. They do not bother to solve the customers' issues. People accept that automation has helped all; but it could not make any substantial change in the style of working among clerks in the particular branch of SBI. Few account holders due to this reason have shifted to other branches and other banks and some were planning for it.

VI.   Discussions

It can be inferred that except for reliability, private bank has been performing better than public sector bank. Customer trust is major ingredient of success for commercial bank (Gronroos, 1984). When it comes to reliability, some account holders yet prefer public sector banks due to trust. However, banking is now an area of tough competition. Due to cut-throat competition, private sector banks have to work on toes. With entry of more private players, the ground is set to benefit the customers. Private sector banks try to work in professional way since they have direct focus on revenues. Though public sector banks are also focusing more on creating better marketing mix, but there is more to achieve. Public sector banks have now resorted to celebrity endorsements and many other tools of advertising. Offering better service quality on specific parameters increases overall customer satisfaction (Srivastava and Dey, 2016). Apart from net banking sites, app has been a common tool for customer convenience. All the efforts are in the direction of retaining the loyal customer base and getting new customers. Banking sector represents the pulse of economy (Kaushik and Rahman, 2015). The policy-makers in public sector banks must take proactive steps towards improving upon promptness and empathy towards customers. Private sector banks have been gaining on the ground of account holders; so is the story with public sector banks. But, when more players would enter the field of banking, only the best service quality provider would win the game. Everyone agrees that automation in banking processes has unquestionably improved the way banking is done. Gone are the days of long queues in banks; now people operate bank through their mobile phones on 24x7 mode. Public sector banks have done commendable progress towards advancing their monetary graph; cutting cost and expansion in various activities. However, these banks need to work upon seriously towards improving the working of employees. If this aspect is taken care of, public sector banks can reach farther avenues of success.

Limitation and Scope: The study was confined to particular branches of State Bank of India and ICICI Bank in Bhopal city. The findings of study should not be generalized for all the branches of banks and all the cities. The results may differ in other branches. Further study can be done on a large sample size and comparison across various parameters can be done. Demographic variables of customers can also be delved into. The study has wide implications for public sector banks in particular. Much work can be done towards strengthening customer satisfaction in this regard.

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