



NEW TECHNOLOGY SERVICES BY BANKS

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Abstract

The role of banking industry is essential to speed up the social economic development. The industry in recent times has recognized the importance of private and foreign players in a competitive scenario and has moved towards greater liberalization from traditional banking practices during the British rule to reforms period, nationalization to privatization and to the present trend of increasing number of foreign banks. Indian banking sector has undergone significant transformation. The rate of transformation was particularly high in the 1990s and 2000s, when a number of innovations changed the way banking was perceived and it was the result of autonomous and induced necessities of the environment.

Key words : *New technology, ATM, EFT, RTGS.*

Introduction

Indian banking industry has witnessed a remarkable development in the Informational Technology (IT) in last few years. Banking transactions have become easier and customer friendly due to the technological improvements. To play a supportive and key role, banks are providing lots of services with the combination of electronics and information technology like Computerization and networking, Core banking, Automatic Teller Machines (ATMs), Plastic money i.e. credit card, debit card and smart cards, Phone banking, Mobile banking, e- banking or net-banking, EFT, NEFT, RTGS etc. ATMs have emerged as the most favored channel for offering banking services to the customers in the world. Reserve Bank of India has also adopted IT in endorsing the payment system's functionality and modernization on an ongoing basis to improve the efficiency of banking sector. There is a noticeable improvement in the performance of financial institutions and the service sector by incorporating IT into their functionality. It shows an increasing share, enhanced competitiveness at the global surface because of adopting IT culture. The banks are poised to use technology that will gradually give new dimensions to the banking products, services and delivery systems. Computers are getting more sophisticated. The changes that new technologies have brought to banking are enormous with the impact on officers, employees and customers of banks.

Statement of the Problem

The banking industry has been facing many challenges during last decades. One of the challenges is the technology transmission in its overall processes. It is clear that the technology is changing the banking industry forever. The banks have to learn the technology to cater to the needs of the customers and should begin to use technology to provide better quality of services at greater speed. Technology has made it convenient for customers to do their banking from geographically diverse places which earlier remain uncovered. Through the adoption of new technology customers and banks are benefited and they feel comfortable to use/operate. Banks are using new tools and techniques to offer them a tailor made lots of products and services combined with technology to make it convenient because they are of great use today. The study has been undertaken to know the various services provided by banks through new technology.

Scope of the Study

Now-a-days banks are not following the traditional or conventional banking with manual operations. Banks have moved from disbursed to a centralized environment, which shows the effectiveness of technology in banks. The use of ATM, credit cards, telebanking, internet banking etc, highlights the effective use of technology in the banking industry. To know the effectiveness of technology in private and public sector banks the study has been undertaken within Tirupur which is known for knitting industry.

Objectives of the Study

1. To know the factors that facilitates and impedes new technology in the banking industry.
2. To analyze the agreeability level towards the adoption of technology in the banks and various services provided by the banks.
3. To evaluate the benefits obtained by the bank and its employee by using new technology.

Research Methodology

The study is conducted in analytical research method, which is considered to be most suitable. Sample size taken for this study is 100. Ten respondents were taken from each bank (five private and five public sector banks) located in Tirupur corporation limit as per random sampling method.

The study has used both primary data and secondary. Primary data has collected by using questionnaire. Secondary data has collected through various journals, magazines, reports and newspaper. Information has also been drawn from various literature available pertaining to the field of knowledge.

Tools used for analysis are Simple percentage analysis, Ranking analysis, Point analysis, Chi-square and ANOVA.

Review of Literature

1. **Ravindra Sontakke, Ashish V. Gajbhiye (2013)**¹ their study “**A critical study on recent advantage of technology in banking industries**” examined that the banking industry provides a wealth of information about technological progress in their study. Banks intensively use modern technologies and the detailed data allow for investigations of the effects of advances in both IT and financial technologies and in both “front-office” and “back-office” technologies. Banking industry data gives opportunities to investigate examples in which individual technological changes can be observed and some of their effects can be measured. The detailed data also allows to link technological progress to productivity and other indicators of performance using multiproduct cost and profit functions and other methods.
2. **Seema Malik (2014)**² his study “**Technology innovations in Indian banking sector: changed face of banking**” examined that Indian banking industry is facing the numerous challenges such as increasing competition, pressure on spreads and systemic changes to align with international standards have necessitated a re-evaluation of strategies and processes in order to remain competitive in the dynamic environment. Banks have to adopt a holistic approach to fulfill the ever changing needs of customers and to grab a better market share. Development of sophisticated products with low cost technology is the key. Strategizing organizational effectiveness and operational efficiency will govern the survival and growth of profits; besides bringing changes in the mindset of the employees, which is imperative with the changing times.
3. **Minakshi Dattatraya Bhosale (2015)**³ his study “**Role of technology in the banking sector**” suggested that the role of banks is not only important for the economic development of a country, but also it is enormously needful in the precise conduct of the programs projected by the government in his study. So that it may revolutionize in the provision of loans from time to time along with their views and behavior, also to the people of weaker sections of the society. In order to change the social and economic structure of the country, the banks have to adopt the advanced technologies with innovative services to increase the customers of the bank.

References

1. Ravindra Sontakke, Ashish V. Gajbhiye, “A critical study on recent advantages of technology in banking industries”, 2013.
2. Seema Malik, “Technology innovations in Indian banking sector : changed face of banking. “International journal of advanced research in computer science and management studies”, 2014.
3. Minakshi Dattatraya Bhosale, “Role of technology in the banking sector”, “International research journal of engineering and technology, vol 2, issue 1, April 2015.

Analysis

Table 1 : Demographic Classification of the Respondents

S.no	Particulars	No. of respondents	Percentage
1	Gender	Male	62
		Female	38
2	Age group	Below 30 years	27
		30 – 40 years	32
		41 – 50 years	24
		Above 50 years	17
3	Marital status	Married	64
		Unmarried	34
		Divorce/Widow	02
4	Educational qualification	Under Graduate	57
		Post Graduate	35
		Diploma	08
	Designation	Manager	05
		Assistant Manager	24
		Clerk	27

5		Special Officer	12	12
		Cashier	17	17
		Others	15	15
6	Work experience	Below 5 years	17	17
		5 – 7 years	32	32
		8 – 10 years	23	23
		Above 10 years	28	28
7	Monthly income (Rs)	Below 20,000	08	08
		20,000 – 30,000	37	37
		30,001 – 40,000	42	42
		Above 40,000	13	13

The table 1 depicts the demographic factors of the respondents. 62% of the respondents were male. 32% of the respondents were in the age group of 30 years – 40 years. 64% of the respondents were married. 57% of the respondents have completed under graduation. 27% of the respondents were working in the destination of clerk. 32% of the respondents have 5 – 7 years of working experience in the bank. 37% of the respondents monthly income ranges from Rs 20,000 to Rs 30,000.

Table 2 : Awareness of New Technology

S.no	Particulars		No. of respondents	Percentage
1	Factors induce to adopt new technology	Connectivity with banks	17	17
		Customer relationship	24	24
		Competition	31	31
		Business growth	28	28
2	Method of communication	Advertisement	12	12
		Official website	27	27
		E-mail	22	22
		Officials/Employees	39	39
3	Encouragement to use new technology	Demonstration	42	42
		Awareness	39	39
		Seminars	02	02
		Gifts and Awards	17	17
4	Benefits of new technology to the banks	Expanding branch networks	29	29
		Pitching into mergers and acquisitions	08	08
		Enhances the collaborative culture	13	13
		Minimizes the risk of carrying cash	36	36
		Enhances the capacity to contribute to research and development activities	14	14
5	Factors impede to adopt new technology	Innovation/Implementation cost	42	42
		Lack of qualified staff	23	23
		Lack of infrastructure	27	27
		Lack of privacy	08	08

The table 2 reveals the awareness of new technology. 31% of the respondents said that the competition induce to adopt new technology in the banking industry. 42% of the respondents are encouraged to use new technology through demonstration. 39% of the respondents said that the customers are informed about new technology through officials/employees by the banks. 36% of the respondents opine that new technology has minimizes the risk of carrying cash to the banks. 42% of the respondents said that innovation/implementation cost impede to adopt new technology.

Table 3 : Level Of Agreeability Towards The Factors Induce To Adopt New Technology

S.no	Factors	Point value	Mean value
1	Faster than traditional banking	369	3.69
2	More profitable	356	3.56

3	Low transaction cost	242	2.42
4	More prestigious	298	2.98
5	Helps in retaining customers	276	2.76
6	Reduce sequence of people	361	3.61
7	Avoidance of risk	214	2.14
8	Service beyond working hours	411	4.11

The table 3 reveals the level of agreeability towards the factors that induce to adopt new technology in the banking industry. The mean value of the factors that induce to adopt new technology is greater than the normal value 3. Hence the respondents agree with new technology is faster than traditional banking, more profitable, reduce sequence of people and service beyond working hours.

The mean value of the factors that induce to adopt new technology is lesser than the normal value 3. Hence the respondents disagree with new technology helps in retaining customers, low transaction cost, avoidance of risk and more prestigious.

Table 4 : Benefits in Working With Advanced Technology

S.no	Benefits	I	II	III	IV	V	VI	VII	VIII	Total Points	Rank
1	Reduce work burden and stress	11	03	08	09	14	10	27	18	567	5
2	Convenient and saves time	21	06	13	08	17	10	12	13	530	8
3	Enhance technical skill	09	16	04	02	14	07	22	26	595	1
4	Reduce confusions/error	14	03	09	18	27	04	16	09	582	3
5	Job satisfaction	28	11	02	10	06	14	08	21	588	2
6	Flexible for making adjustments	13	21	10	19	05	07	17	08	551	6
7	Better quality service	16	6	17	12	09	05	22	13	548	7
8	User friendly	15	7	04	19	23	08	04	20	578	4

The table 4 depicts the benefits in working with advanced technology, the factor enhance technical skill has ranked as first, job satisfaction has ranked as second, reduce confusions/error has ranked as third, user friendly has ranked as fourth, reduce work burden and stress has ranked as fifth, flexible for making adjustments has ranked as sixth, better quality service has ranked as seventh and convenient and saves time has assigned eighth rank.

Table 5 : Difficulties Faced by the respondents after technological upgradation

S.no	Difficulty	I	II	III	IV	V	VI	Total Points	Rank
1	Decreased autonomy	23	05	27	15	12	18	423	2
2	Change of tasks	09	17	24	18	10	22	406	5
3	Requires high profile	17	21	13	15	22	12	388	6
4	Lack of human contact	13	27	14	07	20	19	413	3
5	Constant learning	19	08	22	05	26	20	424	1
6	Work load	21	10	16	27	14	12	407	4

The table 5 shows the difficulties faced after technological upgradation in the banks. The factor constant learning has ranked as first, decreased autonomy has ranked as second, lack of human contact has ranked as third, work load has ranked as fourth, change of tasks has ranked as fifth and requires high profile has ranked as sixth.

Table 6 : level of agreeability towards services provided by the banks through new technology to the customers

S.no	Services	Point value	Mean value
1	Provide up-to date information	334	3.34
2	Facilitates quick responses	318	3.18
3	Quick transfer of funds between accounts and banks	319	3.19
4	Less time to carry out transactions	289	2.89

5	Prompt clearance of cheque	348	3.48
6	Security and privacy	297	2.97
7	Mutual relationship between banks	314	3.14
8	Additional income	365	3.65
9	Transaction alert.	317	3.17
10	Prompt delivery of cards	298	2.98
11	Reduction of tax evasion	311	3.11
12	Controls counterfeit money	347	3.47
13	Service to large number of customers	358	3.58
14	Decreases counter transactions	272	2.72
15	Quick settlement of issues	290	2.90
16	Tie up with e-filing	371	3.71
17	Additional service	285	2.85

The table 6 depicts the level of agreeability towards the services provided by the banks through new technology to the customers.

The mean value of the services provided through new technology is greater than the normal value 3. New technology enables to provide up-to date information, facilitates quick responses, quick transfer of funds, prompt clearance of cheques, mutual relationship between banks, additional income, transaction alert, reduction of tax evasion, controls counterfeit money, service to large number of customers and tie up with e-filing. Hence the respondents agree with these services.

The mean value of the services provided through new technology is lesser than the normal value 3. New technology needs less time to carry out transactions, security and privacy, prompt delivery of cards, decrease counter transactions, quick settlement of issues and additional services. Hence the respondents disagree with these services.

Chi-Square : 1

H₀ = There is no significant relationship between method of training and knowledge gained through training

Method of training \ Knowledge	Seminars/ Workshop	E-learning	Diploma Course	Book materials	TOTAL
Better access of information	12	06	04	11	33
Control overwork	01	10	08	09	28
Empower to solve problems	04	09	03	08	24
Enhance creativity	05	07	02	01	15
Total	22	32	17	29	100

The calculated value (17.995) is lesser than the table value (23.6). Hence the hypothesis is accepted and there is no significant relationship between method of training and knowledge gained through training.

CHI-SQUARE : 2

H₀ = There is no significant relationship between method of communication and encouragement of the customers to use new technology

Encouragement \ Method of communication	Demonstration	Awareness	Seminars	Gifts and Awards	TOTAL
Advertisement	06	03	00	03	12
Official website	15	06	01	05	27
E-mail	11	05	00	06	22
Officials/Employee	10	25	01	03	39
Total	42	39	02	17	100

The calculated value (19.51) is lesser than the table value (23.6). Hence the hypothesis is accepted and there is no significant relationship between method of communication and encouragement of the customers to use new technology.

Chi-Square : 3

H₀ = There is no significant relationship between the type of bank and the factors facilitates new technology.

Type of bank \ Factors	Private	Public	TOTAL
Connectivity with banks	11	06	17
Customer relationship	06	18	24
Competition	09	22	31
Business growth	24	04	28
TOTAL	50	50	100

The calculated value (27.2) is greater than the table value (12.8). Hence the hypothesis is rejected and there is a significant relationship between the type of bank and the factors facilitates new technology.

Chi-Square : 4

H₀ = There is no significant relationship between working experience and the factors impede to adopt new technology.

Working experience \ Factors	Below 5 yrs	5-7 yrs	8-10 yrs	Above 10 yrs	TOTAL
Innovation/Implementation cost	05	11	07	19	42
Lack of qualified staff	05	09	04	05	23
Lack of infrastructure	04	10	11	02	27
Lack of privacy	03	02	01	02	08
TOTAL	17	32	23	28	100

The calculated value (18.19) is lesser than the table value (23.6). Hence the hypothesis is accepted and there is no significant relationship between working experience and the factors impede to adopt new technology.

ANOVA : 1

H₀ = There is no significant difference between level of agreeability and the factors induce to adopt new of technology.

Level of agreeability \ Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Faster than traditional banking	27	42	12	11	8	100
More profitable	23	38	16	18	05	100
Low transaction cost	12	15	08	33	32	100
More prestigious	14	32	9	28	17	100
Helps in retaining customers	19	10	17	36	18	100
Reduce sequence of people	13	56	19	03	09	100
Avoidance of risk	04	08	13	48	27	100
Service beyond working hours	49	24	18	07	02	100
Total	161	225	112	184	118	800

Anova Table

Source of variation	Sum of squares	Degrees of freedom	Mean square	F
Between samples	1108	4	277	1.623
Within samples	5974	35	170.69	
TOTAL	7082	39		

The calculated value (1.623) is less than the table value (2.64). Hence the hypothesis is accepted and there is no significant difference between level of agreeability and the factors induce to adopt new technology.

ANOVA : 2

H₀ = There is no significant difference between level of agreeability and the services provided by the banks through new technology to the customers.

Level of agreeability Services	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
Provide up-to date information	24	37	02	23	14	100
Facilitates quick responses	23	31	03	27	16	100
Quick transfer of funds	20	32	07	29	12	100
Less time to carry out transactions	19	24	04	33	20	100
Prompt clearance of cheque	35	21	14	17	13	100
Transaction alert	10	39	17	26	08	100
Security and privacy	13	27	16	32	12	100
Mutual relationship	18	32	02	27	21	100
Additional income	37	25	16	10	12	100
Prompt delivery of cards	18	24	09	36	13	100
Reduction of tax evasion	22	31	03	24	20	100
Controls counterfeit money	32	15	28	18	07	100
Service to large number of customers	27	36	11	20	06	100
Decreases counter transactions	09	26	13	32	20	100
Quick settlement of issues	18	23	15	19	25	100
Tie up with e-filing	13	42	06	27	12	100
Additional service	08	32	14	29	17	100
Total	346	497	180	429	248	1700

ANOVA TABLE

Source of Variation	Sum of squares	Degrees of freedom	Mean square	F
Between samples	3922	4	980.5	19.72
Within samples	3978	80	49.725	
TOTAL	7900	84		

The calculated value (19.72) is greater than the table value (2.49). Hence the hypothesis is rejected and there is a significant difference between level of agreeability and the service provided by the banks through new technology to the customers.

Findings

The analysis shows that 62% of the respondents were male. 32% of the respondents were in the age group of 30 years – 40 years. 64% of the respondents were married. 57% of the respondents have completed under graduation. 27% of the respondents were working in the destination of clerk. 32% of the respondents have 5 – 7 years of working experience in the bank. 37% of the respondents monthly income ranges from Rs 20,000 to Rs 30,000.

The analysis depicts that 31% of the respondents said that the competition induce to adopt new technology in the banking industry. 42% of the respondents are encouraged to use new technology through demonstration. 39% of the respondents said that the customers are informed about new technology through officials/employees by the banks. 36% of the respondents opine that new technology has minimizes the risk of carrying cash to the banks. 42% of the respondents said that innovation/implementation cost impede to adopt new technology.

The analysis explains that constant learning is ranked as first in the difficulty faced by the employees after technology upgradation. The respondents agree with the factors that induce to adopt new technology such as faster than traditional banking, more profitable, reduce sequence of people and service beyond working hours. Enhance technical skill is ranked as first in the benefit of using new technology. New technology enables to provide up-to date information, facilitates quick responses, quick transfer of funds, prompt clearance of cheques, mutual relationship between banks, additional income,



transaction alert, reduction of tax evasion, controls counterfeit money, service to large number of customers and tie up with e-filing. Hence the respondents agree with these services.

Suggestions

- Employees are working in computers for the whole day. They may get eye stress, back pain etc. The employees can be educated on health topics through yoga classes, medical camp etc.
- Technology is changing the overall process of banking every day. The management can encourage the employees to learn new skill through motivation, promotion and increment etc.
- To avoid the crowd in the bank premises, the customers can be encouraged to use advanced technology by conducting awareness programs and by providing gifts and awards etc.
- Services like deposit of cash and updating pass book is available only in the main branch. Hence the infrastructure of all bank branches can be strengthened to provide quality service.
- Electronic crimes like ATM frauds, denial of services, credit card frauds and phishing etc are increasing with the development of new innovations. To provide security and to safeguard the personal details of the customers. Electronic crimes may be brought under control.
- Applications for opening new account, ATM cards, credit cards etc are done through papers and it requires frequent visit to the bank. It is suggested to provide online applications through the official websites to reduce paper work.
- Qualified staffs are transferred frequently between the branches due to lack of qualified staffs in some branches. It can be brought under control for the welfare of the employees and their family.
- Bank is an area where people of different states are working together. The chances of raising conflict among the employees are more. It is suggested to develop the collaborative culture by celebrating festivals, arranging tours etc.

Conclusion

Indian banks have been working in a very comfortable and protected environment. However, since they have been pushed into intense competition due to changed economic policies. The technology is lifting the competition in the banking industry. Traditionally, banks have been using technology to improve their products and efficiency. Today, technology is not only changing the environment but also the relationship with customers and employees. Technology has not broken many barriers but has also brought about superior products and channels. This has brought customer and employee relationship into greater focus. It is an instrument of cost reduction and effective communication with people and institutions associated with the banking business. With the advanced technology banks are able to provide service beyond the working hours to large number of customers every day. The banking today is redefined and re-engineered with the use of technology and it is sure that the future of banking will offer more sophisticated services to customers with the continuous product and process innovation.