



Customer Adoption of Technology Based Banking Services

KEYWORDS

Customer adoption, Technology Banking, Preference

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ABSTRACT *In today's world the emerging technology has made an exponential growth of the Internet which has changed the pattern of almost all the organizations in performing their business. The Indian banking industry is not an exception of it. From the year 1990s privatization of banks, proliferation and emergence of so many foreign and private sector banks like ICICI, HDFC, CANARA banks etc have emerged in the Banking Industry of India. Both private and public sector Banks in India have been trying to give out their best service to their customers in terms of Banking Hall Transactions, Internet Banking, Automated Teller Machine (ATM) Banking, Mobile banking, Credit Card Transactions etc. This study provides insightful understanding of customer's adoption in their banking transactions through technology channels.*

1. Introduction

Technology based banking is one of the emerging trends in the Indian banking and is playing a unique role in strengthening the banking sector and improving service quality. The banking sector in India has introduced technology based banking in a phased manner. Foreign banks are the pioneers in technology banking, private banks introduced it in a big way and public sector banks are in the process of transformation from traditional banking to technology based banking. It impinges on operations of banking in a number of different ways. It has enabled the banks to handle the payments electronically and inter-bank settlement faster and in large volumes. There is increase in customer satisfaction level, reduction in cost of banking operations, increased productivity and as such there is a tremendous scope for Indian banks to enlarge their technology based banking services which could enhance their competitiveness. Further, new technology has rapidly altered the traditional ways of doing banking business. Customers can view the accounts, get account statements, transfer funds, purchase drafts by just making a few key punches. Availability of ATMs and plastic cards, EFT, electronic clearing services, internet banking, mobile banking and phone banking to a large extent avoid customers going to branch premises and has provided a wider range of services to the customers. Despite the increasing importance of Technology based banking services, the research pertaining to Technology based banking in Indian context has been limited. So, the present study is a modest attempt to ascertain the changes taking place after technology based banking services, and know about customers' perceptions regarding preferring technology based Channels.

2. Objective of the Study

The present study is primarily intended to unearth the Customer Adoption of Technology based Banking Services. The study is conducted with the specific objective to understand the socio-economic profile of the respondents and study the adoption and use of Technology based services by individuals.

3. Research Methodology

The present study is based on the primary survey method

and the data has been collected by giving a structured printed questionnaire to bank customers. 5 % of the bank branches (30 branches) was chosen for the study, out of which 20 (68%) are Public sector banks and 10 (32%) are Private Sector Banks. Finally, (using Convenient Non-Random Sampling Method) 25 samples from each 30 branches i.e., 750 samples were used for data collection for the study.

4. Review of Literature

ATM vendor NCR Corporation and market research agency AcNielsen ORG MARG (2006), Customers clearly use the alternative banking channels for specific set of transactions. Phone banking extensively used for making balance enquires [81%] and branches for depositing cash [35%] and other transactions. Kamakodi N. & M Basheer Ahmed Khan (2008) conducted a study on e-banking channel acceptance by Indian customers. The results indicate that the majority of the customers are very comfortable and willing to use e-banking channels. At the same time, over 80% feel that 'human contact is necessary' and the technology alone cannot give a sustainable competitive advantage for the banks. S. Anitha (2010), the endeavor of this paper is to throw more light on the study, methodology, modus operandi and its results banks have introduced a new lucrative technology called mobile banking which is using mobile phones as a medium for extending banking services to target a large number of customers.

Rahmath Safeena et.al, (2011) in their work Internet Banking Adoption in an Emerging Economy: Indian Consumer's Perspective analysed the factors influencing the consumer's adoption of internet banking in India and hence investigates the influence of perceived usefulness, perceived ease of use and perceived risk on use of Internet Banking. Tavishi and Santosh Kumar, (2013) in their study An Empirical Study on Technology Adoption by Indian Banks studied the factors influencing the customers for the adoption of internet banking and mobile banking in India and hence investigates the influence of perceived usefulness, perceived ease of use and perceived risk on use of internet banking and mobile banking. Sabita Paul, (2013) in his work The Adoption of Electronic Banking (E-Banking) in Odisha, India described the current and prompt techno-

logical revolution altering the whole world which has crucial impact on the banking sector based on data, collected from customers of different commercial banks of Odisha.

5. Analysis

The Table 1.1 describes the results of Average score anal-

ysis for each personal and banking classifications of respondents on the level of preference in Technology Based Banking Services in terms of personal and various factors relating to the customer preference considered at banking sectors.

Table 1.1: Average Sum - Personal & related factors on the customer preference

Personal factors		ATM banking	Telephone banking	Debit/ Credit Cards	Mobile banking	Internet Banking	Electronic Transfers
Gender	Male	4.46	3.58	4.25	3.86	4.04	3.88
	Female	4.44	3.38	4.12	3.76	3.85	3.73
Age	Less than 20 Years	4.53	3.23	4.06	3.57	3.85	3.61
	21 – 40 Years	4.50	3.61	4.31	4.02	4.14	4.01
	41 – 60 Years	4.11	3.32	3.84	3.34	3.38	3.32
	Above 60 Years	4.80	3.90	4.40	3.30	3.40	3.30
Education	School	4.36	3.49	4.09	3.61	3.70	3.78
	Graduate	4.46	3.42	4.23	3.83	4.04	3.84
	Post Graduate	4.48	3.58	4.25	3.97	4.06	3.86
	Others	4.48	3.55	3.87	3.55	3.52	3.35
Marital Status	Married	4.36	3.61	3.97	3.59	3.63	3.57
	Unmarried	4.45	3.41	4.22	3.89	4.02	3.80
	Widow	4.64	3.53	4.61	4.07	4.48	4.46
	Divorced	4.78	3.33	4.67	3.89	4.44	4.56
Profession/Occupation	Salaried	4.51	3.56	4.28	3.94	4.05	3.94
	Business	4.47	3.60	4.21	3.75	3.90	3.81
	Retired	3.63	3.17	3.58	3.21	3.13	3.29
	Others	4.42	3.36	4.09	3.70	3.91	3.68
Monthly Income	Less than Rs.10,000	4.42	3.43	4.12	3.82	3.85	3.66
	Rs.10,001 – Rs.30,000	4.42	3.42	4.18	3.84	3.97	3.84
	Rs.30,001 – Rs. 50,000	4.53	3.75	4.25	3.69	3.91	3.91
	Rs.50,001 and above	4.57	3.64	4.43	3.84	4.36	4.09
Name of Bank	Andhra bank	4.68	3.48	4.28	3.92	3.96	3.96
	Bank of Baroda	4.52	3.48	4.00	3.36	3.60	3.48
	Bank of India	4.16	3.24	3.64	3.40	3.60	3.80
	Canara bank	4.54	3.26	4.16	3.88	3.94	3.70
	Central bank of India	4.56	3.32	4.00	3.40	3.96	3.84
	Corporation bank	4.52	3.32	4.00	3.64	3.96	3.96
	Indian bank	4.60	3.48	4.16	3.82	4.24	3.64
	Indian overseas bank	4.28	3.01	4.11	3.63	3.69	3.56
	State bank of India	4.41	3.57	4.23	3.77	4.04	3.93
	State bank of Travancore	4.60	3.60	4.56	3.72	4.12	3.92
	Syndicate bank	4.30	3.40	4.18	3.96	3.82	3.70
	Union bank of India	4.40	3.76	4.24	3.68	3.80	3.68
	Vijaya bank	4.60	3.60	4.24	3.76	3.92	3.52
	Axis bank ltd.	4.56	4.20	4.44	4.32	4.60	4.32
	Catholic Syrian bank ltd.	4.36	3.88	4.16	3.92	3.48	3.76
	City union bank Ltd.	4.40	3.24	4.08	3.84	3.92	4.00
	Federal bank Ltd.	4.56	3.64	4.32	4.04	4.08	3.96
	HDFC bank Ltd.	4.56	4.04	4.48	4.20	4.36	4.20
	ICICI bank Ltd.	4.88	3.84	4.52	4.32	4.44	4.28
	Karur Vysya bank Ltd.	4.12	4.08	3.88	3.80	3.56	3.60
Lakshmi Vilas bank Ltd.	3.96	3.00	4.32	3.80	4.04	4.00	
South Indian bank Ltd.	4.68	3.72	4.28	4.08	4.00	3.64	
Name of Bank	TamilNadu mercantile bank Ltd.	4.32	3.20	4.24	3.68	4.00	3.92
Branch/ Location of the Bank	Urban	4.41	3.51	4.17	3.78	3.92	3.82
	Semi-Urban	4.55	3.40	4.26	3.94	4.00	3.80
Type of the Bank	Rural	4.56	3.51	4.23	3.82	4.11	3.82
	Public Sector	4.46	3.38	4.15	3.72	3.91	3.74
Type of Account	Private Sector	4.42	3.69	4.26	3.98	4.03	3.95
	Savings	4.47	3.48	4.21	3.80	3.97	3.82
	Current	4.45	4.18	3.82	3.91	3.82	4.00
	NRI	4.31	3.51	4.01	3.90	3.75	3.72
	Others	3.33	2.67	4.00	4.33	4.33	3.67
No. of years customer in bank	Lessthan 1 Year	4.27	3.26	4.20	3.73	3.86	3.69
	1 -3 Years	4.53	3.59	4.22	3.89	3.99	3.87
	3 - 5 Years	4.33	3.48	4.16	3.82	3.97	3.79
	Above 5 Years	4.52	3.43	4.17	3.70	3.91	3.81
Reason(s) for prefer bank	Service Quality	4.49	3.48	4.27	3.87	4.07	3.84
	Technology	4.32	3.75	4.18	3.79	3.98	3.89
	Reputation of the Bank	4.51	3.70	4.26	3.91	4.06	3.96
	Location	4.45	3.36	4.13	3.76	3.81	3.77
Reason(s) for prefer bank	Reasonable Charges	4.35	3.25	3.96	3.67	3.85	3.42

Source: Primary Data

It is found from the above Table 1.1 that the respondents irrespective of their personal and banking classifications have given high level of opinion towards 'ATM banking' (A1) followed by 'Debit/ Credit Cards' (A3) when compared to the other factors in customer preference of banking sector analysis considered.

It is concluded that the majority of the respondents have high level of opinion towards "ATM banking" as an important factor in preference in Technology Based Banking Services Analysis.

Personal and banking factors & the Level of Preference in Technology Based Banking Services

Hypothesis: The personal related factors have no significant influence on the opinion of the respondents about the Technology Based Banking Services

The Tables 1.2 and Table 1.3 describe overall scores and the results of chi-square analysis in terms of coping ability factors, chi-square values, p values and their significance on the Level of Preference in Technology Based Banking Services.

Table 1.2: Overall Scores - Personal related factors on the Technology Based Banking Services

Personal factors		Overall Scores – Attitude scale			Total
		Low	Medium	High	
Gender	Male	22	140	246	408
	Female	27	156	159	342
Total		49	296	405	750
Age	Less than 20 Years	7	82	61	150
	21 – 40 Years	15	156	302	473
	41 – 60 Years	26	52	39	117
	Above 60 Years	1	6	3	10
Total		49	296	405	750
Education	School	16	65	77	158
	Graduate	14	138	189	341
	Post Graduate	14	80	126	220
	Others	5	13	13	31
Total		49	296	405	750
Marital Status	Married	30	111	106	247
	Unmarried	16	167	219	402
	Widow	3	15	74	92
	Divorced	0	3	6	9
Total		49	296	405	750
Profession/ Occupation	Salaried	16	138	216	370
	Business	6	46	66	118
	Retired	10	8	6	24
	Others	17	104	117	238
Total		49	296	405	750
Monthly Income	Less than Rs.10,000	20	91	121	232
	Rs.10,001 – Rs.30,000	21	140	189	350
	Rs.30,001 – Rs.50,000	8	45	57	110
	Rs.50,001 and above	0	20	38	58
Total		49	296	405	750

Personal factors		Overall Scores – Attitude scale			Total	
		Low	Medium	High		
Name of Bank	Andhra bank	1	10	14	25	
	Bank of Baroda	2	13	10	25	
	Bank of India	5	10	10	25	
	Canara bank	1	24	25	50	
	Central bank of India	2	12	11	25	
	Corporation bank	1	11	13	25	
	Indian bank	4	14	32	50	
	Indian overseas bank	3	48	24	75	
	State bank of India	2	33	40	75	
	State bank of Travancore	1	7	17	25	
	Syndicate bank	3	23	24	50	
	Union bank of India	1	13	11	25	
	Vijaya bank	2	11	12	25	
	Axis bank Ltd.	1	2	22	25	
	Catholic Syrian bank Ltd.	4	9	12	25	
	City union bank Ltd.	2	9	14	25	
	Federal bank Ltd.	1	6	18	25	
	HDFC bank Ltd.	1	3	21	25	
	ICICI bank Ltd.	0	7	18	25	
	Karur Vysya bank Ltd.	3	8	14	25	
	Lakshmi Vilas bank Ltd.	4	6	15	25	
	South Indian bank Ltd.	1	9	15	25	
	TamilNadu mercantile bank Ltd.	4	8	13	25	
	Total		49	296	405	750
	Branch/ Location of the Bank	Urban	39	218	290	547
Semi-Urban		7	52	73	132	
Rural		3	26	42	71	
Total		49	296	405	750	
Type of the Bank	Public Sector	26	220	234	480	
	Private Sector	23	76	171	270	
Total		49	296	405	750	
Type of Account	Savings	38	270	360	668	
	Current	0	3	8	11	
	NRI	11	20	37	68	
	Others	0	3	0	3	
Total		49	296	405	750	
No. of years customer in bank	Less than 1 Year	9	36	46	91	
	1 - 3 Years	19	107	187	313	
	3 - 5 Years	10	79	98	187	
Total		49	296	405	750	

Personal factors		Overall Scores – Attitude scale			Total
		Low	Medium	High	
Reason(s) for prefer bank	Service Quality	10	95	132	237
	Technology	3	45	58	106
	Reputation of the Bank	8	31	61	100
	Location	21	105	133	259
	Reasonable Charges	7	20	21	48
Total		49	296	405	750
Customer awareness requirements in Technology Banking	Conduct more training programmes	12	82	119	213
	Demo-fares on Technology usage	24	107	166	297
	Information/demo at the counter	5	38	50	93
	More advertisements	1	26	20	47
	Personal contact programmes	3	17	20	40
	All are necessary	4	26	30	60
Total		49	296	405	750

Source: primary data

Table 1.3: Chi Square values - Personal related factors on the Technology Based Banking Services

Personal factors	Chi-square Value	p values	Significant/ Not Significant
Gender	14.367	0.001	S
Age	92.626	0.000	S
Education	13.572	0.035	S
Marital Status	50.731	0.000	S
Profession/Occupation	56.543	0.000	S
Monthly Income	7.701	0.261	NS
Name of Bank	85.927	0.000	S
Branch/Location of the Bank	1.838	0.765	NS
Type of the Bank	23.044	0.000	S
Type of Account	18.756	0.005	S
No. of years customer in bank	10.545	0.104	NS
Reason(s) for prefer bank	14.768	0.064	NS
Customer awareness requirements in Technology Banking	9.071	0.525	NS

S – Significant at 5% level (p value<= 0.05); NS – Not Significant at 5% level (p value>0.05)

It is found from the Table 1.3 that the hypothesis is rejected (Significant) in eight cases and in other five cases the hypothesis is accepted (Not Significant).

It is concluded that the personal related factors Gender, Age, Education, Marital status, Occupation, Name of bank, Type of bank and Type of account have significant influence on the level of preference in Technology Based Banking Services analysis.

6. Findings and Conclusion:

Customers of Public sector and private sector banks agree that there exist relationship between factors such as Gender, Age, Education, Marital status, Occupation, Name of bank, Type of bank and Type of account and adoption of banking technology by customers. It is reflected from the survey that ATM banking remains the most popular banking service among customers followed by Debit and Credit Cards, mobile banking and internet banking respectively as they provide convenience, privacy, security, ease of use, real time accessibility, and accurate record of various transaction. Technology based banking has become important phenomenon in the banking industry and it will continue as more progress is made in information technology. The financial industry thus is gradually experiencing transformation from cash based system to a “paperless” system, which is more convenient and reliable.

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