

Demographic Inequalities in Using E-Banking Services : A Study of Chandigarh

* *Rajiv Khosla*
***Parul Munjal*

ABSTRACT

The Indian banking system has undergone a sea change since liberalization. Conservative-banking in the past has given way to a highly progressive system of modern banking. Besides providing basic banking services, today's banks provide a plethora of services like ATM/Debit cards, Credit cards, Internet banking, M - banking, etc. Such radical changes are brought on to the surface by Internet banking commonly known as e-banking. Despite this, many customers are hesitant to use e-banking in India. This study is an attempt to understand the importance of various determinants that act as stimulants in guiding different segment of customers to use e-banking services.

Keywords : Conservative, Progressive, E-Banking, Rural Consumers, Urban Consumers

JEL Classification : G21, G28, R12

INTRODUCTION

Primitively, banks played the role of intermediaries between savers and the borrowers and facilitated the transfer of resources from those who have excess to those who have the resource crunch. In the transfer process, residual interest after deducting interest paid to the depositors from the interest received from the lenders fell into the banks' pockets. However, the conventional nature of banking has changed drastically in the past one and a half decade or so. Banks have diversified, and have redefined their services. Role of banks as middlemen in the transfer of resources' process has been minimized by the development of the electronic banking (e-banking) system. E-banking, also known as Internet banking, is the banking of the new era. E-banking is an automated delivery of new and traditional banking products and services to the customers through electronic channels. It facilitates an easy access to accounts, business transactions, receiving prompt information on financial products and services, including receiving information on mobile handsets. Tremendous progress in the field of information technology has rendered *glocalisation* of products and services in the banking industry. Modern banking, besides getting timeless, has gone beyond all geographical barriers. Use of technology in the banking sector has revamped the banking scenario around the world. Few of the existing studies reviewed (in the next section) have given different rationale for the development of e-banking services.

REVIEW OF LITERATURE

Sathye (1999) found that lack of awareness and security concerns were the main problems owing to which the customers adopted internet banking in Australia. Further, use of e-banking in the banking sector in South Africa is primarily due to the increasing number of internet users, affordability of high-performance technologies and paucity of time, etc. (Masocha et al., 2011). A study conducted in Finland highlighted that branch banking that used to be highly time-consuming and involved considerable efforts has now been substituted by banking at the click of a mouse (Karjaluoto, 2002). Except for cash withdrawals, Internet banking gives customers access to almost every type of banking transaction at the click of a mouse. E-banking services range from bill payment to making investments (Pikkarainen et al., 2004). It offers an excellent solution to the problems attributed to the inefficiency in services, thereby creating a trusting relationship between customers and bank employees (Tomiuk and Pinsoneault, 2001). The pervasiveness of e-banking has increased owing to the threat of losing customers to other banks. Awamleh and Fernandes (2006) in their study carried out in UAE found that relative usefulness, perceived risk, computer efficacy and image played an important role in the continuous usage of Internet banking for internet users. E-bank proffering by

* *Head*, University School of Business, Chandigarh University, Gharuan, Mohali, Punjab. E-mail: rajivkhosla78@gmail.com

** *Assistant Professor*, University School of Business, Chandigarh University, Gharuan, Mohali, Punjab.

E-mail: munjal.cgc@gmail.com

the competitor banks made many banks rethink their IT strategies in competitive markets in Nigeria (Rafiu, 2007). Mattila (2004) in his study conducted in Finland found that people who used e-banking services generally belonged to the higher strata of the society and were young in age. The reviewed studies clearly underline the significance of e-banking services across the world. Though, e-banking is a key mover for faster transactions in the contemporary world, yet many people continue to have a conservative approach and shun the use of e-banking. Major apprehensions for the 'non adoption' of e-banking lies in security concerns and lack of awareness of online banking (Flavián, Torresand Guinaliú, 2004; Gan Clemes, Limsombunchai, and Weng, 2006). Not only this, e-banking is also blamed for diminishing the belongingness client had with their bank(s). Theoretically, it is suggested that by offering proper counselling to customers by the trained staff personnel regarding lower service charges and the potential threats at ATMs, e-banking can be made more effective (Masocha et al., 2011). The present study attempts to find out the perception of the customers towards banking services being offered in general and e-banking services in particular. Unambiguously, it tries to map out the factors that act as stimulants for availing e-banking services among different groups of people.

OBJECTIVES OF THE STUDY

The study aims to fulfil the following objectives:

- 1) To examine the perception of people (in Chandigarh) towards various banking services offered in India.
- 2) To determine the rationale for using e-banking by different segment of customers.
- 3) To find out the uses of e-banking for different segment of customers.
- 4) To determine if non - adopters get ready to use e-banking whilst convinced properly.

SCOPE OF THE STUDY

The present study deals with the issue of inequalities in the use of e-banking services. It supplements our understanding with respect to the use of e-banking services by the respondents from rural areas falling in the periphery of one of the most literate cities (Chandigarh) in our country. Secondly, it gives an insight about the most favoured banks among the people, particularly after the recent culmination of the euro crisis followed by US crisis. Nevertheless, the study is a modest attempt to find out if the rural consumers have bank accounts to make successful the much propagated scheme of the central government, i.e. 'direct cash transfer of subsidies'.

LIMITATIONS OF THE STUDY

The study suffers from the following limitations:

- 1) The study was conducted in Chandigarh city. Therefore, the derived results are limited to Chandigarh area only.
- 2) Primary Data was mainly based on the selected responses of the rural and urban population under the assumption that information supplied by them is unbiased.
- 3) The study was conducted with a sample size of 240 respondents and that too by using convenience sampling.

DATABASE AND METHODOLOGY

In order to fulfil the objectives mentioned above, deliberately, Chandigarh region was chosen owing to its excellent quality of life and high literacy rate. As per the 2011 census, literacy rate in Chandigarh stood at 86.4 percent, of which literacy in urban areas was 86.56 percent vis-a-vis 81.69 percent in the rural areas (Population Census India, 2011). For the purpose of this study; Chandigarh was divided into three zones - one comprising of Sectors 1 to 12 (left of Madhya Marg) where people belonging to the higher income segment reside, followed by Sectors 14 to 56 (right of Madhya Marg) which more or less accommodates middle and upper-middle class further followed by the people residing in adjoining villages. For meaningful comparisons, five villages namely Hallo Majra, Kajheri, Palsora, Dadu Majra and Maloya (out of 24 villages surrounding Chandigarh) were selected. These villages have been notified to be within the Municipal Corporation limit. 80 respondents were selected from each of the three zones. Thus, on the whole, 240 respondents were surveyed with the help of a structured questionnaire after conducting the pilot survey.

RESULTS AND DISCUSSION

❖ **Perception of the Respondents towards Banking Services in India :** In this section, the researchers primarily endeavored to present the general perception of the customers towards banking services being offered in the country. The very basis of this discussion depends upon the faith reposed by the people in the banking sector in India. Results of the survey conducted (Table 1) highlight that by and large, customers belonging to the elite class (respondents residing in Sectors 1 to 12) followed by the middle class customers (97.5 percent) showed considerable confidence in the banking sector. As far as customers in the rural areas were concerned, it was astonishing that know that even after 65 years of India's independence and the nationalization of banks starting as early as in the year 1969, 37 percent of the respondents did not have a bank account. It may be attributed either to the lack of confidence in the banking sector or to the feeble saving power of the rural customers.

Bank Account	Sector 1 to 12	Sector 14 to 56	Rural Areas
Yes	80 (100)	78 (98)	50 (63)
No	Nil	2 (2)	30 (37)
Note: Figures in parentheses indicate percentage			
Source: Primary Data			

Further, the study tried to explore the nature of banks in which people were interested to have their account(s). Results have clearly shown that despite two decades of opening up of the Indian economy, public sector banks were the most preferred banks (Table 2). However, interest in the private banks was shown by urban customers who were financially well off. Results revealed a low preference among the Indian public for cooperative as well as foreign banks.

Type of banks	Sector 1 to 12	Sector 14 to 56	Rural Areas
Public sector banks	45 (51)	52 (63)	34 (63)
Private sector banks	38 (43)	22 (27)	16 (30)
Cooperative banks	5 (6)	8 (10)	4 (7)
Foreign banks	Nil	Nil	Nil
Note: 1. Since some respondents had more than one account, the total may vary vis-a- vis number of respondents.			
2. Figures in parentheses indicate percentage			
Source: Primary Data			

The study also tried to highlight if there was any change in the mindset of the customers towards maintaining a private sector bank account (Table 3) in the recent past. Outcome of the survey revealed that none of the respondents in the rural areas had a bank account in any private or co-operative banks which were more than 10 years old. Moreover, the

Type of Bank	Sector 1 to 12				Sector 14 to 56				RURAL AREAS			
	< 1 year	1 - 5 years	6 - 10 years	> 10 years	< 1 year	1 - 5 years	6 - 10 years	> 10 years	< 1 year	1 - 5 years	6 - 10 years	> 10 years
Public sector banks	4	12	14	8	4	26	12	10	4	8	8	14
Private sector banks	10	11	17	6	2	8	6	6	4	8	4	0
Co-operative banks	0	2	2	2	0	2	4	2	0	4	0	0
Total	14	25	33	16	6	36	22	18	8	20	12	14
Source: Primary Data												

trend points towards their inclination towards the public sector banks. As far as banking for the middle class was concerned, they showed a lukewarm response towards private sector banks in particular in the last 5 years' time period. The most plausible reason for this may be the loss of confidence in private sector banking owing to the recession. It was the privileged class of customers that showed a considerable interest in the private sector banks vis-à-vis other banks. With reference to the usage of value-added services, the Table 4 shows that on the whole, ATM services were the most popular amongst the customers in all categories. Further, wide disparities were found to exist in case of internet banking as well as mobile banking among the rural customers. Infact, mobile banking was found to be in its infant stage even in other areas (surveyed). Hence, potential customers in all areas offered a wide opportunity for the banks to roost in the market.

SERVICES	Sector 1 to 12	Sector 14 to 56	RURAL AREAS
ATM holders	66 (83)	66 (85)	28 (56)
Credit card holders	52 (65)	41 (51)	12 (24)
M- banking users	41 (50)	42 (54)	4 (8)
Internet banking users	68 (85)	52 (67)	6 (12)
Note: 1. Based on the actual number of users of a particular service in each zone 2. Figures in parentheses indicate percentage			
Source: Primary Data			

The above discussion clearly sheds light on the fact that there is still a class of people who is not covered under the ambit of banking in India. A lot needs to be done to arouse confidence among the people for all other types of banks apart from the public sector banks. Rigorous efforts are required to popularize the value added services in rural areas in particular and tap the vast potential therein to fulfil the financial inclusion objective of the eleventh five year plan. In the following section, the researchers have discussed about the purpose for which the customers utilize e-banking services.

❖ **Rationale For Using E-banking Services By Different Segment of Customers :** It is quite obvious that customers belonging to different sections use e-banking services for fulfilling different objectives. For the purpose of this study, a total of fifteen objectives were laid down and the customers belonging to different groups (as shown in the methodology) indicated their preferences for the rationale for which they use e-banking services. In order to find out the raison d'être for which different customers used e-banking services, factor analysis test had been applied. Only a few users were found to be using e-banking services in rural areas, henceforth, factor analysis test could not be applied on their responses. However, their responses were included in the overall computation of factor analysis. Adequacy of applying the factor analysis test has been proved by the results of the Kaiser-Meyser-Olkin (KMO) and Bartlett's test in Table 5.

		Sector 1 to 12	Sector 14 to 56	Overall
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.621	.585	.807
Bartlett's Test of Sphericity	Approx. Chi-Square	299.564	224.691	509.613
	Df	105.000	105.000	105.000
	Sig.	.000	.000	.000
Source: Primary Data				

Since values of KMO measure of sampling adequacy are greater than 0.5 in all the three cases being discussed and also since the values of Bartlett's test of sphericity are less than 0.05, it permits the application of factor analysis to the data. The Table 6 shows the results of the descriptive statistics . Communalities indicate the amount of variance in each variable that is accounted for. Initial communalities are estimates of the variance in each variable accounted for by all

	Results for the responses from Sectors 1 to 12		Results for the responses from Sector 14 to 56		Overall results	
	Initial	Extraction	Initial	Extraction	Initial	Extraction
Balance and transaction history	1.000	.874	1.000	.747	1.000	.676
Mini statements	1.000	.869	1.000	.720	1.000	.783
Transfer of funds online	1.000	.677	1.000	.761	1.000	.502
Check due date of payments	1.000	.714	1.000	.679	1.000	.559
Debit card/ ATM	1.000	.790	1.000	.784	1.000	.622
Cheque status	1.000	.754	1.000	.742	1.000	.777
Stop payment	1.000	.792	1.000	.797	1.000	.727
Book rail ticket	1.000	.800	1.000	.857	1.000	.746
Shopping	1.000	.423	1.000	.888	1.000	.504
Tax filing	1.000	.745	1.000	.773	1.000	.696
Apply for consumer loan	1.000	.890	1.000	.849	1.000	.859
Calculate loan payment	1.000	.922	1.000	.893	1.000	.893
Download loan application	1.000	.850	1.000	.816	1.000	.852
Personal bank activities	1.000	.758	1.000	.728	1.000	.317
Check balance online	1.000	.765	1.000	.792	1.000	.642

Note: Extraction Method: Principal Component Analysis
Source: Primary Data

components. For principal component's extraction, this is always equal to 1.0 for correlation analysis. Extraction communalities are estimates of the variance in each variable accounted for by the components. Variance explained by the initial solution and extracted components for different segments of customers using e-banking services are displayed in the Table 7. For simple understanding, the table can be divided into three sections, i.e. customers residing in Sectors 1 to 12, customers residing in Sectors 14 to 56 and total response of all the customers taken together. In each section, the first segment (total) indicates the initial eigen values or the amount of variance in the original variables accounted for by each component. The percent of variance column gives the ratio of the variance accounted for by each component to the total variance in all of the variables. Cumulative percentage column gives the percentage of variance accounted for by the first n components. Eigen values greater than 1 are extracted so that the first five principal components (in case of Section one and Section two) and first four (in case of the overall rationale) form the extracted solution. Comprehensive examination of the results indicated that five factors (in case of the results of Sector 1 to 12) that were decisive in using the e-banking services by the elite class of customers constituted the following : Payment of loans , Applying for consumer loan, Balance enquiry, Carrying out mini transactions and Downloading and filing loan applications.

These factors explain 77 percent of the variability in the original 15 variables. Thus, with a 23 percent loss of information in this case, we can considerably reduce the complexity of the data. Similarly, the customers belonging to Sectors 14 to 56 were using e-banking services for to the Payment of loans followed by Applying for consumer loan, Loan application, Mini statements and to Check the cheque status respectively. These factors explain 79 percent of the variability. On the whole, e-banking services were being extensively used by the customers for making loan payments, applying for consumer loans, filing the loan applications and for checking the cheque status. Overall, three out of four variables i.e. making loan payments, applying for the consumer loans and filing the loan applications are common to all the three lists. Thus, it may be interpreted that more or less, to avoid frequenting respective offices and banks for matters related to loans, the respondents preferred to use the e-banking services. It is pertinent to mention here that credit disbursement by scheduled commercial banks in India increased by more than 600 times (researchers' calculations from the data obtained from RBI (at current prices)) between March 2001 to March 2012. In order to avoid standing in big queues outside respective offices or banks for obtaining or depositing the loan forms or for

Component	Sector 1 to 12			Sector 14 to 56			Overall Rationale		
	Initial Eigenvalues			Initial Eigenvalues			Initial Eigenvalues		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.012	33.412	33.412	5.657	37.714	37.714	6.095	40.633	40.633
2	2.239	14.928	48.340	1.833	12.223	49.938	1.675	11.169	51.802
3	1.804	12.028	60.368	1.679	11.191	61.128	1.277	8.512	60.314
4	1.388	9.251	69.620	1.539	10.257	71.385	1.107	7.380	67.694
5	1.181	7.876	77.495	1.118	7.452	78.837	.942	6.283	73.977
6	.836	5.575	83.070	.795	5.303	84.140	.821	5.475	79.452
7	.661	4.406	87.477	.594	3.961	88.101	.725	4.836	84.288
8	.546	3.639	91.116	.505	3.366	91.467	.584	3.892	88.179
9	.410	2.735	93.851	.360	2.402	93.869	.512	3.411	91.590
10	.268	1.789	95.639	.340	2.266	96.135	.337	2.248	93.838
11	.251	1.671	97.311	.194	1.292	97.427	.327	2.182	96.020
12	.170	1.130	98.441	.147	.978	98.405	.214	1.429	97.449
13	.116	.771	99.212	.130	.866	99.271	.166	1.106	98.555
14	.081	.542	99.754	.077	.511	99.782	.147	.980	99.536
15	.037	.246	100.000	.033	.218	100.000	.070	.464	100.000

Extraction Method: Principal Component Analysis
Source: Primary Data

paying the loan instalments or to avoid falling prey to middlemen for loan purposes, the computer literate class in general is using e-banking services. Further, e-banking also helps to keep an electronic record of the transactions besides facilitating speedy transactions. There are many other reasons as to why the respondents opted for e-banking. These are discussed in detail in the following section.

❖ **Exposition For Using E-banking Services** : There were varied reasons as to why the respondents were using the e-banking services. Some customers perceived that e-banking is an economical source of carrying out transactions, while others felt that updated information is available to them without incurring many expenses. Yet another group of customers opined that they could make or receive payments at any point of time, and that too by sitting in the comfort of their home/office, and not taking the pain of going out to any financial institution. In this section, the researchers have tried to find out the most realistic reasons for using e-banking services by different group of customers. For that cause, 12 factors were identified and presented in the questionnaire. Results of the factor analysis are discussed in the following tables. The use of factor analysis on the above data is validated through the Table 8. The results of the KMO test shows different values ranging from 0.53 to 0.74 for different categories of customers. Since values of KMO measure of sampling adequacy are greater than 0.5 in all the three cases being discussed, and also the values of Bartlett's test of sphericity are less than 0.05, accordingly, the factor analysis test was conducted.

		Sector 1 to 12	Sector 14 to 56	Overall reasons
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.537	.743	.675
Bartlett's Test of Sphericity	Approx. Chi-Square	152.767	143.121	236.358
	Df	66.000	66.000	66.000
	Sig.	.000	.000	.000

Source: Primary Data

	Sector 1 to 12		Sector 14 to 56		OVERALL EXPOSITION	
	Initial	Extraction	Initial	Extraction	Initial	Extraction
1) Highly effective	1.000	.645	1.000	.696	1.000	.595
2) Simple	1.000	.883	1.000	.727	1.000	.847
3) Speedy transactions	1.000	.724	1.000	.455	1.000	.698
4) Time saving	1.000	.756	1.000	.624	1.000	.673
5) Convenience of banking anytime	1.000	.671	1.000	.706	1.000	.785
6) Economical	1.000	.815	1.000	.608	1.000	.642
7) Convenient to use	1.000	.767	1.000	.595	1.000	.732
8) Avail updated information	1.000	.803	1.000	.658	1.000	.834
9) Less botheration	1.000	.734	1.000	.698	1.000	.735
10) Timely payment of bills	1.000	.837	1.000	.684	1.000	.781
11) Reminder for bill payment	1.000	.855	1.000	.854	1.000	.857
12) Electronic record keeping	1.000	.844	1.000	.694	1.000	.699
Extraction Method: Principal Component Analysis						
Source: Primary Data						

It is clear from the Table 9, which relates to the communalities that out of twelve variables (taken for this study) related to different factors for using Internet banking, the factor *'Reminder for payment of bills'* carried the maximum communalities, followed by the factor - *'Simplicity'*, *'Accessing updated information'*, *'Making timely payments of bills'* and *'Convenience'* respectively. Further, the variance explained by the initial solution and extracted components for different segments of customers using e-banking services are displayed in the Table 10. Eigen values greater than 1 are extracted so that the first five principal components (in case of section one and section three) and the first three (in case of section two) form the extracted solution. Comprehensive examination of the results indicated that five factors (in case of results of Sector 1 to 12) that attracted the customers to use e-banking services were *'Simplicity'*, followed by the *'Reminder for payment of bills'*, *'Electronic record keeping'*, *'Making timely payments of bills'* and

Component	Sector 1 to 12			Sector 14 to 56			OVERALL JUSTIFICATION		
	Initial Eigenvalues			Initial Eigenvalues			Initial Eigenvalues		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1.	3.427	28.562	28.562	5.242	43.686	43.686	3.875	32.291	32.291
2.	1.879	15.659	44.221	1.647	13.723	57.409	1.495	12.462	44.753
3.	1.469	12.240	56.461	1.111	9.255	66.664	1.334	11.114	55.867
4.	1.307	10.895	67.356	.957	7.975	74.639	1.154	9.621	65.488
5.	1.252	10.430	77.786	.794	6.616	81.255	1.020	8.502	73.989
6.	.801	6.673	84.459	.720	5.997	87.252	.758	6.317	80.306
7.	.630	5.247	89.706	.479	3.993	91.245	.618	5.152	85.458
8.	.406	3.382	93.088	.294	2.447	93.692	.605	5.044	90.502
9.	.299	2.488	95.576	.259	2.154	95.846	.366	3.053	93.556
10.	.249	2.078	97.654	.196	1.633	97.479	.291	2.421	95.977
11.	.174	1.451	99.105	.178	1.485	98.964	.246	2.051	98.028
12.	.107	.895	100.000	.124	1.036	100.000	.237	1.972	100.000
Extraction Method: Principal Component Analysis.									
Source: Primary Data									

'Economical services'. These factors explain 78 percent of the variability in the original 12 variables. Similarly, the customers belonging to Sectors 14 to 56 were using e-banking services owing to the *'Reminder for payment of bills'*, *'Simplicity'* and *'Convenience in transactions'*. It explains 67 percent of the variability. Comparing the two results with the results for the overall reasons to use e-banking services, it came to light that in general, customers used e-banking services due to the reminder facility to pay their bills and for its simplicity. This can be attributed to the over occupancy of the customers in other tasks and the increasing use of internet at homes and offices, etc.

As indicated by Tables 1 to 4, there were certain customers who had their bank accounts, but they were reluctant to use Internet banking. Certain questions were posed to such respondents to find out the most plausible reasons for their non-usage of e-banking services. Results indicated that primarily, the non-users are uncomfortable with e-banking services. Another group of respondents revealed their non-requirement as the reason for not using e-banking services. There was also no dearth of customers who felt that e-banking was meant only for the computer - savvy class. Interestingly, the number of respondents who felt insecure in using e-banking services were the lowest. The majority of the non-users of e-banking services can be brought under the category of e-banking users provided proper counselling sessions are provided to such respondents by the banks. The non-users need to be counselled in a way that a genuine urge is aroused in them about the uses of e-banking. In particular, in rural areas, where the respondents feel that the use of e-banking may lead to avoidance/elimination of personal touch of the bankers, they need to be convinced that through toll-free calls, they can easily make contact with the bankers and that too 24 hours a day! General suggestions like these, given in the next section can go a long way in realizing the objective of financial inclusion of the Government of India.

CONCLUSION AND RECOMMENDATIONS

In the modern era, the role of banks is no longer restricted to merely being a custodian of reserves or a provider of loans. E-banking has revolutionized the delivery of services pertaining to the quick access to accounts, business transactions, and notification on mobile phones, etc. But the use of e-banking is confined to a specific segment of the society. The study attempted to find out how more and more customers can start availing e-banking services. More specifically, the present study focused on the major factors that prompt customers to use e-banking. Results indicated that on the whole, a good scope exists for all the banks to popularize their value added services, particularly in the rural areas. The logic assumes more weightage in the wake of introduction of 'direct cash transfer of subsidies' to the bank account of the beneficiaries as per the scheme of the central government.

The study came out with an observation that customers in order to avoid going to financial institutions for loan purposes prefer to use e-banking services. Further, the study pointed out that any time availability of updated information and reminder to make payments conveniently are the prime reasons for the popularity of e-banking services among the customers. Not being too familiar (feeling uncomfortable) along with non-requirement of e-banking services turned out to be the major constraints for not using e-banking. However, most of the non-users also showed a positive inclination to start using e-banking services in case their apprehensions were properly addressed. By and large, the use of e-banking services by the customers has a promising future ahead.

A series of recommendations are being suggested on the basis of the present study, which can prove to be helpful in popularizing the services among the customers. Firstly, the banks need to imbibe confidence among customers that online banking is as safe and secure as traditional banking. For this cause, banks need to implement advanced encryption methods to prevent security infringement. Secondly, the customers who have expressed inability to use e-banking on account of being uneducated in terms of technology (especially, the older generation), they need to be educated on basic skills required to conduct e-banking. It can further be endowed with the preferred language of the people. Thirdly, banks need to propagate that the use of online banking can help avoid standing in long queues. Fourth, banks need to popularize the use of e-banking services by making presentations at their own branches with respect to the user-friendliness of e-banking services. It is pertinent to mention here that an unnecessary increase in charges for using e-banking services can be detrimental to the growth of e-banking. If the cost of transacting electronically exceeds the cost of transacting manually, then the very purpose of introducing e-banking will get defeated. Looking at the present scenario, it is apprehended that in future, the overall performance of banks will be judged by the level of satisfaction of the customers. Those banks which will be successful in creating customers by offering innovative and advanced services ahead of their competitors will reap more benefits. For this reason, it is recommended that banks

should target their promotional activities towards literate, young and resourceful brigade who possess a rich potential to use e-banking services for long as can be generalized from this study.

DIRECTIONS FOR FUTURE RESEARCH

- 1) The study can be extended by using additional sample size. Further, demographic features can be broadened by expanding them into slabs like identical income groups, identical age groups, identical educational groups etc.
- 2) The study can be extended by making comparisons of rural and urban respondents in different states of India.

REFERENCES

- 1) Cadotte, E. R., Woodruff, R. B. and Jenkins, R. L. (1987). "Expectations and Norms in Models of Consumer Satisfaction." *Journal of Marketing Research*, 24 (3), pp. 305 - 14.
- 2) Flavian, C., Torres, E. and Guinaliu, M. (2004). "Corporate Image Measurement A Further Problem for the Tangibilization of Internet Banking Services." *International Journal of Bank Marketing*, 22 (5), pp. 366-384.
- 3) Gan, C., Limsombunchai, V. C. and Weng, A. (2006). "A Logit Analysis of Electronic Banking in New Zealand." *International Journal of Bank Marketing*, 24 (6), pp. 360 - 383.
- 4) Kamel, H. and Hassan, I. (2003). "A Study on Risk Factors of Internet Banking." *International Journal of E-Banking*, 5 (4), pp. 17 - 22.
- 5) Karjaluoto, H., Mattila, M. and Pentto, T. (2002). "Factors Underlying Attitude Formation Towards Online Banking in Finland." *International Journal of Bank Marketing*, 20 (6), pp. 261- 272.
- 6) Masocha, R., Chilya, N. and Zindiye, S. (2011). "E-banking Adoption by Customers in the Rural Milieus of South Africa: A Case of Alice, Eastern Cape, South Africa." *African Journal of Business Management*, 5 (5), pp. 1857-1863.
- 7) Mattila, M. (2003). "Factors Affecting the Adoption of Mobile Banking Services." *Journal of Internet Banking and Commerce*, 8 (1) <http://www.arraydev.com/commerce/JIBC/0306-04.htm>. accessed on January 19, 2013.
- 8) Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. and Pahlila, S. (2004). "Consumer Acceptance of Online Banking: An Extension of the Technology Acceptance Model." *Internet Research*, 14 (3), pp. 224- 235.
- 9) Rafiu, O. (2007). "The Emergence of Internet Banking in Nigeria: An Appraisal." *Information Technology Journal*, 6 (4), pp. 490 - 496.
- 10) Rajput, N. and Gupta, M. (2011). "Impact of IT on Indian Commercial Banking Industry: DEA Analysis." *Global Journal of Enterprise Information System*, 3 (1), pp. 17 - 31.
- 11) Rayport, J. F. and Jaworski, B. J. (2004). "E-Commerce: Security Issues." *International Journal of Online Security*, 42 (1), pp. 41-57.
- 12) Sathye, M. (1999). "Adoption of Internet Banking by Australian Customers: An Empirical Investigation." *International Journal of Bank Marketing*, 17 (7), pp. 324 - 334.
- 13) "What is the literacy rate of Chandigarh" (n.d.) <http://www.census2011.co.in/questions/30/state-literacy/literacy-rate-of-chandigarh-census-2011.html> accessed on January 13, 2013.