Volume 1 *No.4* *October 2013* *ISSN: 2320-4168*

BARRIERS TO ACCEPTANCE OF MOBILE BANKING ACROSS DEMOGRAPHICS OF CUSTOMERS IN TAMILNADU

B.ANGAMUTHU

Faculty, Department of Commerce and Management, Karpagam University, Coimbatore – 641 021, Tamilnadu, India. E-mail: muthuanga82@gmail.com

Abstract

In India, the number of mobile subscriptions has crossed 850 million and most of the banks also providing M- Banking services to their customers but the access of mobile- phone based banking services was very low. So, this empirical and analytical research concentrates to study the relationship of barriers to acceptance of M-Banking across various demographic like banking sector, gender, age group, educational status, occupational status, family income, years of usage of mobile phone, frequency of visit to bank branch of the customers. The questionnaire has used to collect primary data and 357 valid bank customers selected from various bank branches of Chennai and Coimbatore Districts using purposive sampling method. The responses against twenty one variables were collected through 5-point Likert scaling technique based on the customers' demographic factors. Finally, the chi-square analysis has been used to interpret for collected data.

Keywords: Mobile Banking, SMS Banking, Cell-phone Banking, E-Banking

Introduction and Design of the Study

Introduction

With the rapid growth in the number of mobile phone subscribers in India, the banks have been exploring the feasibility of using mobile phones as an alternative channel of delivery of banking services. The banks have also started offering, through the mobile phone, information-based services like balance enquiry, stop-payment instruction of cheques, record of last five transactions, etc. In addition, some banks are providing transaction (payment) based services to their customers considering that the use of this technology for the banking services is relatively new and calls for appropriate safeguards to ensure security of financial transactions. Now, sixty banks out of 171 commercial banks are implementing M-Banking facilities to their customers. The following groups of the banks are providing M-Banking services. They are, State Bank of India Groups, Nationalized banks, Other scheduled commercial banks or Private banks, Foreign Banks and Co-operative banks. The statistics on August'2013, the banks providing 6.76 million M-banking transaction with the value of Rs. 14.13 Billion which has grown to 70.28% and 90.42% respectively compared to August'2012.

Objective of the Study

The primary objective of the study is to study the relationship of barriers to acceptance of M-Banking across demographic factors of the customers

Hypotheses of the study

Ho: There is no significant relationship between various barriers to acceptance of the customers across various demographic factors.

Ho1: There is a significant relationship between various barriers to acceptance of the customers across various demographic factors.

Review of Literatures

Cruz and Laukkanen (2010) found that perception of cost, risk, low perceived relative advantage and complexity were revealed to be the main reasons behind the reluctance to use the M-Banking service among the various group of Brazilian Internet users. Koo and Wati (2010) in their empirical study reveal that highest percent of M-Banking user concerns security and importance of trust in M-Banking environment among staff and students in Indonesia. Crabbe et al. (2009) reported that nearly 1/4th of the respondents are using M-Banking system and most of them access M-Banking services as regards to making enquiries of account balance. Further, this study reported that the non-users of M-Banking give importance to perceived usefulness, sustained usefulness, facilitating conditions, credibility and perceived ease of use individually correlated with their non-adoption. Dewan and Dewan (2009) identified choice of banking channels among the young consumers in urban area, Bangladesh. This study found that mobile phone is more a preferred channel of conduct banking transaction than bank branch, ATM, Internet and Phone. Nyangosi and Arora (2009) say that SMS (Short Message Service) banking is less preferred channel than the ATM, Debit/Credit, Internet and Tele-banking among kenyans. Daghfous and Toufaily (2007) assessed the adoption of E-Banking innovations (Phone banking, M-Banking, ATM, TV banking, PC banking, Minitel, Extranet and Internet banking) by Lebanese banks. This study reveals that there is a low interdependence between adoptions of E-Banking innovation among the various types of banks. Laukkanen (2007) stated that M-Banking channel helps the customers check their account balance and latest transactions on 24X7. Further, author says that five inch of display is sufficient for conducting financial information through the mobile phone but non-user of M-Banking expect big size of display of the mobile phone. Brown et al. (2003) found that perceived relative advantage, the ability to try and experiment with the innovation first (trialability), and the diversity of banking needs of a potential user is the important factors on initial adoption of cell phone banking in South Africa but, risk and complexity is the primary factors for non-adoption of M-Banking.

Research Methodology

This Empirical and Analytical research depends on the primary data and it is collected from non-users of M-Banking who are operating their accounts in the various bank branches of Chennai and Coimbatore Districts of Tamil Nadu State. The primary data were collected with the help of questionnaire and it was distributed to several customers but this study has considered 357 valid questionnaires. The questionnaire consist two parts like demographic factors and variables related to the barriers to acceptance of M-Banking. Purposive sampling method is most suitable technique for sample selection and the primary data were collected during the months from January to June'2011. The Chi-square (χ^2) analysis was used to draw the inference of present research.

Analysis, Discussions and Conclusion

This section discusses the relationship between each barrier to acceptance of M Banking across demographic factors like banking sector, gender, age group, educational status, occupational status, family income, years of usage of mobile phone, frequency of visit to bank branch of the customers. The observed frequencies about barriers to acceptance of M-Banking were used to analysis purpose and it was collected through five-point scaling technique. Here, χ^2 analysis was used to draw the inference through the testing of following hypotheses.

Ho: There is no significant relationship between various barriers to acceptance of M-Banking among the various groups of banking sector, gender, age group, educational status, occupational status, family income, years of usage of mobile phone and frequency of visit to the bank branch.

Ho1: There is a significant relationship between various barriers to acceptance of M-Banking among the various groups of banking sector, gender, age group, educational status, occupational status, family income, years of usage of mobile phone and frequency of visit to the bank branch.

Banking sector and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the value of χ^2 concludes that there is a significant relationship between banking sector of the customers and their various barriers (except possibility of errors, display size of the mobile phone is small) to acceptance of M-Banking because χ^2 values come out to be greater than the table value of χ^2 with 4 df. On the other hand, the value of χ^2 reports that there is no significant relationship between banking sector of the customers and their barriers (possibility of errors, display size of the mobile phone is small) to acceptance of M-Banking because those χ^2 value comes out to be lesser than table value of χ^2 with 4 df. Correlation level of 0.4 to 0.8 reveals moderate relationship of the reasons for non-usage of M-Banking technology-enabled financial information between public and private bank customers.

Table – 1: Relationship of Barriers to Acceptance of M-Banking across Demographic Factors of the Customers

Reasons	Banking Sector			Gender			Age group			Education			Occupation		
	x^2	df	Result	x^2	df	Result	x^2	df	Result	x^2	df	Result	x^2	df	Asymp. Sig
The mobile internet/Short Message service is expensive	98.711**	4	Accept Ho_1	8.828	4	Accept Ho	8.578	8	Accept Ho	7.359	8	Accept Ho	27.877**	8	Accept Ho_1
The bank's mobile banking service has high fees	44.907**	4	Accept Ho_1	6.455	4	Accept Ho	6.627	8	Accept Ho	5.223	8	Accept Ho	14.093	8	Accept Ho
Slow data transmission	12.256*	4	Accept Ho_1	3.467	4	Accept Ho	3.259	8	Accept Ho	1.796	8	Accept Ho	6.104	8	Accept Ho
Possibility of errors	5.604	4	Accept Ho	11.466*	4	Accept Ho_1	3.616	8	Accept Ho	7.446	8	Accept Ho	14.357	8	Accept Ho
Possibility of misuse of financial information	13.139*	4	Accept Ho_1	1.267	4	Accept Ho	6.470	8	Accept Ho	11.488	8	Accept Ho	7.477	8	Accept Ho
Sufficient guidance is not available	25.117**	4	Accept Ho_1	3.840	4	Accept Ho	5.177	8	Accept Ho	12.161	8	Accept Ho	15.155	8	Accept Ho
I do not like to use mobile phone in banking/latest technology-enabled banking services	17.209**	4	Accept Ho_1	1.344	4	Accept Ho	13.739	8	Accept Ho	17.383*	8	Accept Ho_1	19.455*	8	Accept Ho_1
I prefer to do my transactions by other ways	30.269**	4	Accept Ho_1	1.879	4	Accept Ho	12.883	8	Accept Ho	9.447	8	Accept Ho	10.198	8	Accept Ho
Use has been dissatisfactory	21.562**	4	Accept Ho_1	1.317	4	Accept Ho	6.456	8	Accept Ho	17.112*	8	Accept Ho_1	11.335	8	Accept Ho
The cost of purchasing mobile device suitable for mobile banking operations is too high	25.037**	4	Accept Ho_1	.620	4	Accept Ho	4.697	8	Accept Ho	10.164	8	Accept Ho	7.573	8	Accept Ho
The amount to be transacted not big enough	84.617**	4	Accept Ho_1	4.489	4	Accept Ho	.770	8	Accept Ho	5.586	8	Accept Ho	12.673	8	Accept Ho
I did not know about mobile banking	17.796.**	4	. Accept Ho_1	2.835	4	Accept Ho	8.600	8	Accept Ho	5.055	8	.752	17.417*	8	Accept Ho_1
It requires more knowledge and learning	16.243**	4	Accept Ho_1	3.494	4	Accept Ho	3.957	8	Accept Ho	10.164	8	Accept Ho	8.296	8	Accept Ho
Its use is too complicated	75.407**	4	Accept Ho_1	1.852	4	Accept Ho	13.524	8	Accept Ho	3.882	8	Accept Ho	25.774**	8	Accept Ho_1
Display size of the mobile phone is small	8.173	4	Accept Ho	4.532	4	Accept Ho	6.461	8	Accept Ho	6.209	8	. Accept Ho	20.686**	8	Accept Ho_1
My cell phone is inappropriate for banking operations	70.367**	4	Accept Ho_1	8.987	4	Accept Ho	9.125	8	Accept Ho	6.384	8	Accept Ho	27.700**	8	Accept Ho_1
There is a high level risk in mobile banking	33.166**	4	Accept Ho_1	2.870	4	Accept Ho	12.368	8	Accept Ho	8.625	8	Accept Ho	18.878*	8	Accept Ho_1
There are no benefits in using mobile banking	30.670**	4	Accept Ho_1	3.639	4	Accept Ho	4.223	8	Accept Ho	13.360	8	Accept Ho	7.711	8	Accept Ho
I like the mobile banking with regional language	40.660**	4	Accept Ho_1	13.428**	4	Accept Ho_1	9.939	8	Accept Ho	6.709	8	Accept Ho	15.211	8	Accept Ho
I do not want to spend more time using the mobile phone	37.677**	4	Accept Ho_1	10.380*	4	Accept Ho_1	13.355	8	Accept Ho	5.505	8	Accept Ho	8.448	8	Accept Ho
Network problems	57.562**	4	Accept Ho_1	6.942	4	Accept Ho	5.325	8	Accept Ho	7.446	8	Accept Ho	14.558	8	Accept Ho

Source: Primary data; *= Sig. @ 5% level & **=Sig. @1% level

(Cont.,) Table – 1: Relationship of Barriers to Acceptance of M-Banking across Demographic Factors of the Customers

	Family income (Rs. Per month)			Years of usage of mobile phone			Frequency of visit to bank branch		
	x^2	df	Result	x^2	df	Result	x^2	df	Result
The mobile internet/Short Message service is expensive	8.596	8	Accept Ho	6.470	8	Accept Ho	6.966	8	Accept Ho
The bank's mobile banking service has high fees	5.793	8	Accept Ho	2.711	8	Accept Ho	2.904	8	Accept Ho
Slow data transmission	4.981	8	Accept Ho	7.716	8	Accept Ho	3.386	8	Accept Ho
Possibility of errors	21.171**	8	Accept Ho_1	4.758	8	Accept Ho	6.091	8	Accept Ho
Possibility of misuse of financial information	8.236	8	Accept Ho	12.555	8	Accept Ho	2.804	8	Accept Ho
Sufficient guidance is not available	9.605	8	Accept Ho	7.713	8	Accept Ho	10.288	8	Accept Ho
I do not like to use mobile phone in banking/latest technology-enabled banking services	5.257	8	Accept Ho	10.232	8	Accept Ho	6.749	8	Accept Ho
I prefer to do my transactions by other ways	6.705	8	Accept Ho	7.010	8	Accept Ho	9.207	8	Accept Ho
Use has been dissatisfactory	11.220	8	Accept Ho	6.301	8	Accept Ho	4.560	8	Accept Ho
The cost of purchasing mobile device suitable for mobile banking operations is too high	4.733	8	Accept Ho	8.119	8	Accept Ho	4.306	8	Accept Ho
The amount to be transacted not big enough	6.237	8	Accept Ho	6.217	8	Accept Ho	6.015	8	Accept Ho
I did not know about mobile banking	2.526	8	Accept Ho	4.049	8	Accept Ho	4.481	8	Accept Ho
It requires more knowledge and learning	7.145	8	Accept Ho	9.368	8	Accept Ho	7.543	8	Accept Ho
Its use is too complicated	7.265	8	Accept Ho	6.625	8	Accept Ho	4.467	8	Accept Ho
Display size of the mobile phone is small	5.481	8	. Accept Ho	11.810	8	. Accept Ho	4.552	8	. Accept Ho
My cell phone is inappropriate for banking operations	4.092	8	Accept Ho	5.714	8	Accept Ho	9.008	8	Accept Ho
There is a high level risk in mobile banking	6.248	8	Accept Ho	7.442	8	Accept Ho	2.849	8	Accept Ho
There are no benefits in using mobile banking	8.436	8	Accept Ho	8.235	8	Accept Ho	9.270	8	Accept Ho
I like the mobile banking with regional language	10.965	8	Accept Ho	11.437	8	Accept Ho	4.747	8	Accept Ho
I do not want to spend more time using the mobile phone	11.793	8	Accept Ho	3.850	8	Accept Ho	2.901	8	Accept Ho
Network problems	17.828*	8	Accept Ho_1	6.440	8	Accept Ho	5.204	8	Accept Ho

Source: Primary data; *= Sig. @ 5% level & **=Sig. @1% level

Gender and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the values of x2 conclude that there is no significant relationship between gender of the customers and their barriers (except possibility of errors, I like the mobile banking with regional language and I do not want to spend more time using the mobile phone) to acceptance of M-Banking because the χ^2 values comes out to be lesser than the table value of χ^2 with 4 df. On the other hand, χ^2 reported that there is a significant relationship between gender of the customers and their barriers (possibility of errors, I like the mobile banking with regional language and I do not want to spend more time using the mobile phone) to acceptance of M-Banking because those χ^2 values come out to be greater than the table value of χ^2 with 4 df.

Age group and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the values of x2 conclude that there is no significant relationship between age group of the customers and their barriers to acceptance of M-Banking, because the χ^2 values come out to be lesser than the table value of χ^2 with 8 df.

Educational status and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the values of χ^2 conclude that there is no significant relationship between educational status of the customers and their barriers (except I do not like to use mobile phone in banking/latest technology-enabled banking services, use has been dissatisfactory) to acceptance of M-Banking because those χ^2 values comes out to be lesser than the table value of χ^2 with 8 df. On the other hand, χ^2 reported that there is a significant relationship between educational status of the customers and their barriers (I do not like to use mobile phone in banking/latest technology-enabled banking services, use has been dissatisfactory) to acceptance of M-Banking because those χ^2 values comes out to be greater than the table value of χ^2 with 8 df.

Occupational status and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the values of χ^2 conclude that there is no significant relationship between occupational status of the customers and their barriers (except the mobile internet/Short Message service is expensive, I do not like to use mobile phone in banking/latest technology-enabled banking services, I did not know about M-Banking, its use is too complicated, display size of the mobile phone is small, my cell phone is inappropriate for banking operations and there is a high level risk in m-banking) to acceptance of M-Banking because those χ^2 values comes out to be lesser than the table value of χ^2 with 8 df. On the other hand, χ^2 reported that there is a significant relationship between occupational status of the customers and their barriers (the mobile internet/Short Message service is expensive, I do not like to use mobile phone in banking/latest technology-enabled banking services, I did not know about M-Banking, its use is too complicated, display size of the mobile phone is small, my cell phone is inappropriate for banking operations and there is a

high level risk in m-banking) to acceptance of M-Banking because the χ^2 values comes out to be greater than the table value of χ^2 with 8df.

Family income and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the values of χ^2 conclude that there is no significant relationship between family income of the customers and their barriers (except possibility of errors and network problems) to acceptance of M-Banking because the χ^2 values comes out to be lesser than the table value of χ^2 with 8df. On the other hand, χ^2 reported that there is a significant relationship between family income of the customers and their barriers (possibility of errors and network problems) to acceptance of M-Banking because the χ^2 values comes out to be greater than the table value of χ^2 with 8df. Further, correlation level statistics comes out to be <0.4 and it is reported that there is less relationship of the reasons (possibility of errors and network problems) for non-usage of M-Banking technology-enabled financial information among the various groups of family income. Years of usage of mobile phone and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the values of χ^2 conclude that there is no significant relationship between years of usage of mobile phone by thecustomers and their barriers to acceptance of M-Banking because those χ^2 values comes out to be lesser than the table value of χ^2 with 8 df.

Frequency of visit to the bank branch and Barriers to Acceptance of M-Banking: It is inferred from the table 1, that the values of χ^2 conclude that there is no significant relationship between frequency of visit to the bank branch of the customers and their barriers to acceptance of M-Banking because those χ^2 values come out to be lesser than the table value of χ^2 with 8df.

References

Cruz, P., and Laukkanen, T., (2010): "Mobile banking rollout in emerging markets: evidence from Brazil", International Journal of Bank Marketing, Vol. 28 No. 5, pp. 342-371

Koo, C., and Wati, Y., (2010): "Toward an Understanding of the Mediating Role of "Trust" in Mobile Banking Service: An Empirical Test of Indonesia Case", Journal of Universal Computer Science, vol. 16, no. 13,pp. 1801-1824

Crabbe M, Standing, C., and et al., (2009): "An adoption model for mobile banking in Ghana", Int. J. Mobile Communications, Volume 7, No. 5, 2009, pp 515-543.

Dewan, S.M., and Dewan, A.M., (2009): "Young Consumers' M-banking Choice in Urban Bangladesh: Preliminary Indication", Proceedings of 12th International Conference on Computer and Information Technology (ICCIT 2009),December, Dhaka, Bangladesh, pp. 121-126.

Nyangosi, R., and Arora, J.S., (2009): "Emergence of Information Technology in the Kenyan banking Sector: An empirical study", available from: http://www.gbmf.info/2009/Emergence%20of%20Information%20Technology%20_Nyangosi_Arora.pdf

Daghfous, N., and Toufaily, E., (2007): "The adoption of 'E-Banking' by Lebanese Banks: Success and Critical Factors" Available from: http://www.esg.uqam.ca/recherche/document/2007/02-2007.pdf

Laukkanen, T., (2007): "Bank Customers' Channel Preferences for Requesting Account Balances", Proceedings of the 40th Annual Hawaii International Conference on System Sciences (HICSS'07), IEEE Computer Systems.

Brown, I., Caje, E.Z., and et al., (2003): "Cell phone banking: predictors of adoption inSouth Africa—an exploratory study", International Journal of Information Management, Volume 23, No.5, pp 381–394.