Factors affecting Mobile Banking services–An Empirical Study

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Abstract

The Banking industry has transformed from the traditional model of queuing the customers to the modern technology based way of transactions that are available at any given point of time on any day and anywhere, provided the person has network access to avail the services from the respective banks. With the adoption of mobile banking mode of services, the banking sector is having a tremendous growth across the globe including India. Presently the Internet technology has brought the third revolution to this world. The banking sector has been upgrading their services with the use of technology from time to time like introducing the ATM – Automatic Teller machine which took more than a decade to get popular and the phone and net banking took half the time of ATM. But the Mobile banking technology which is the third era of technology of banking sector after phone and net banking and comparatively its growth is phenomenal when compared to the first two eras. Even in India the Mobile Banking is growing fast because of the world's second largest subscriber base in mobile sector after China. The Main objective of this paper is to explore the factors that affect the mobile banking services in India with reference to Chennai city.

Key Words: Banking Services, Internet Technology, Net Banking, Mobile Banking, Phone Banking.

JEL classification: R35, P12, R23, R18

Introduction

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There is a radical transformation undergoing today in the world banking sector and there are obvious symptoms appearing daily with the emerging new products with new channels of servicing to its customers in the banking industry. The Technology playing the major role in this transformation has created a new range of products and services which is breaking the geographical barrier. Daniel (1999)[1] defined the term electronic banking as the provision for information, products and services by the bank towards its customers via electronically by the mode of wire or wireless channels, for example services like: interactive television, Internet, mobile phone, and telephone. Keen and Mackintosh (2001)[2]in their study have showed that hi-tech features has played an important role in the adoption of mobile banking, which are expected to grow and hence the mobile phones are no longer used only for talking and text messaging (SMS) like before. The convergence of telecommunications becoming wireless, has made way for a potentially tremendous platform for providing various business services. Dholakia et al. (2003); stated that the mobile phones are the most-fastest devices adopted by the consumer that uses the data also. According to the research conducted by Forrester research group (2007)[3], more than 219 million users are having access to the Internet via mobile Phone. The mobile phone usage is estimated to be approaching four billion subscriptions globally, making the operators and advertisers an opportunity to connect to the potential consumers through mobile phones (Hibberd, 2007)[4].The rapid increase of innovations in telecommunications sector and the mobile phone usage with the newly emerging delivery channels for service has become a vital element for the financial services industry which is extremely competitive has led to usage of mobile phones in the financial sector including banking.

Most leading observers have speculated the fact that, the personality of mobile phones offered by top range devices as an alternative to PC‟s due to their functioning like computers, and many people in the near future will be using only mobile phone instead of PCs The introduction of advanced technologies in delivery of various services have indeed created lot of challenges for the developers of financial industry; and to face these challenges the industry is more interested in understanding the patterns of customer behaviour and enhance the same.. The rapid changes in the technology has in-turn altered the behavioural pattern of customer and the way of interaction with

the financial institutions. Today most of the customers in the banking sector are more technology savvy, and reduce the uneasiness towards the infusion and involvement of new technologies in the services of banking sector, is ubiquitous and hence shall continue to increase. The implementation of electronic business transactions by using the mobile phones is an additional boost to increasing adoption of new technologies, like WAP -wireless application protocol, Bluetooth, and other technological developments. The recent channels for wireless delivery by using the mobile phones which are Internet-enabled, is the starting point for adopting the mobile banking in the development of technology in the recent years. Yet the mobile banking operational service are still in their initial stage and has enormous scope for development, hence there is a need to understand the acceptance of its users and introduction of mobile banking, identify the factors affecting for mobile banking and its usages.

1.2Importance of Mobile Banking

Mobile Banking nothing but a fusion occurring between the telecommunication industry and the banking industry, to avail the services of banking by the help of mobile devices. There are enormous advantages of Mobile banking is for those customers who avail these services form the banking sector. Mobile banking is mutual beneficial for both the banks and the customer. In this mode of operations, the banks do not require huge investment nor have to alter their existing infrastructure, send the message to a huge number of people in lesser effort, also helps to form good cordially relations with customers. Banks get the most valuable data regarding the requirements of the customers and the same is achieved with the help by customer‘s relationship management with effective practices which in-turn gets a quick feedback and also helps the banks in customer retentions and their loyalty. The banks are not able to reach out to its customers in isolated areas, but today it is possible through mobile phones. All the banks are having their customer database, so the SMS advertising is used to give information about the products and service to existing customers and at the same time the SMS services can also be used for communication and promotion of products and service to new customers. Coming to the advantages of the customers is that they can operate anywhere and anytime and avail the services

of banking provided by their banks with the help of mobile phones. Now there is no need for standing in the queues or talk to the employees for getting the services. Hence mobile banking is cost-effective for both the banks as well its customers.

1.3 Need for Mobile Banking

The innovation of ATM (Automated teller Machine) and Internet Banking enabled customers to complete the financial transactions by sitting at home but the customers were having problems of carrying but mobile phones are free from these difficulties. Mobile phones can be carried everywhere and used by large number of people. . In the age of globalization and digitalization mobile banking has shown a way to reach the top of the pyramid in the banking business through its variety of services.Mobile banking helps to bring the unbanked in the banking world.

1.4 Mobile Banking services in India

In India the services of Mobile banking were started with SMS messaging in the year 2002 and slowly picked up with the increase of mobile subscriber base in recent years and today half the populations are using the mobile phones. But only less than 5% are using their mobiles for the banking services even though the mobile banking is convenience, but its usage is not being used to its potential. The world of smart phones is in-turn making the people to use the ever growing internet usage on mobile handsets, for using the applications based on banking services have emerged as a new concept. Peterson, (2009)[5]; Banks in India compete with each other to use this advanced technology to increase customer base and reduce their operational costs. Wang, Lin & Tang, (2003)[6]; Ashta, (2010)[7]; With the launch of mobile banking in India, there is indeed a tremendous growth in mobile banking transactions. The primary factor which attracts customers to mobile banking is its availability 24 hours / 365 days and ease of transactions, but still mobile banking has a long way to achieve as majority of customers still prefer to bank in the traditional ways. Mehta (2012)[8;] Earlier the banks used to offer SMS banking, now these banks are offering most of the banking services on mobile phone through WAP-based applications.

The RBI has taken large initiatives for mobile banking like relaxing the per day limit value of mobile banking transactions from Rs.50, 000 to no limit. Allowing non - banks to offer banking services by appointing the business correspondents by banks is towards focusing the drive of banking services to the rural areas where most of the population is still deprived of banking facilities and services. This in-turn shall allow the banks and its non-bank business correspondents to offer services using a mobile phone with the development of barcode, field communication, and sound wave techniques, thus helping to achieve the goal of financial inclusion for all in India. With the adoption of these technologies, mobile banking has led to more transactions, and also increased the reach to connect to the last when compared to the traditional channels of banking like branches and ATMs.

2. Rationale of the study

Rugimbana (1995)[9];Predicting ATM Usage: The Relative Importance of Perceptual and Demographic Factors". Karjaluoto (2002)[10] in their research paper "Selection Criteria for a Mode of Bill Payment: Empirical Investigation among Finnish Bank Customers",found that mobile banking had a vast potential market due to its functionality and option of availing the banking services virtually any time and anywhere.

Rao et al. (2003)[11] in "Online banking in India"**Vyas (2009)[12]** in **Mobile banking in India - Perception and Statistics**suggested that the banks have to expand their thinking regarding mobile banking beyond the existing online banking. The mobile banking is powerful and compelling channel for delivering the services to its end users with new values such as immediate access and additional control to their personal finances.

Barnes and Corbitt (2003)[13]in "**Mobile banking: concept and potential"; Scornavacca and Barnes (2004)[14]** "**M-banking services in Japan: A strategic perspective".; Luo, et al (2010**)[15]; "**Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services": discussed** that the recent innovations in the sector of telecommunications has enabled the launch of mobile banking for

accessing the banking services, where a customer uses a mobile phone or personal digital assistant to interact with the bank.

Bharti Motwani, SukhjeetMatharu, Sharda Haryani[16] in their study "A comparative Study of Mobile Banking Services in Public and Private Sector Banks" pointed out that the following steps taken by the banks will improve the usage of mobile banking

- Training courses to be conducted to the customers without charging any fee to encourage the usage of mobile banking
- Every customer can be given manual which gives information about the usage of mobile banking

Tiwari &Buse, (2007)[17] in "The Mobile Commerce Prospects: A Strategic Analysis of Opportunities in the Banking Sector" and **; Kim et al., (2009)[18];**in their study "**Understanding dynamics between initial trust and usage intentions of mobile banking"**inferred that Mobile banking is an m-commerce application done via mobile phone devices which enables customers to access their bank accounts, to conduct banking related transactions such as balance enquiry, issue of cheque, checking account status, transfer of money and stocks selling.

Anayasi and Otubu (2009)[19] in their study **"Mobile Phone Technology in Banking System":- Its Economic Effect"** observes effects on economy due to mobile banking and its offering ofdifferent services to the customers and found that it helps money management without cash handling, gives greater scope for the extension of mobile banking business to all the remote areas, which contributes towards economic development.

Comninos et al. (2008)[21] in "**Towards evidence-based ICT policy and regulation m-banking the unbanked." suggested** that customers shall transact electronically whether it's online or mobile banking, only if it is convenient and has maximum security

Nitin Nayak, VikasNath, Nancy Goel(2014)[22] in their study "A study of adoption behavior of Mobile banking services by Indian consumers"reveals that

- Mobile banking will be adopted by customers only when it is simple to use
- Trust between service provider and customer is very important for the usage of mobile banking services.

Shamshersingh(2014)[23]in his study" **Customer Perception of Mobile Banking: An Empirical Study in National Capital Region Delhi"**; finds the following factors are considered as a hindrance for using mobile banking by the customers

- Safety and security issues
- Technological difficulties

The study also revealed that the banks should try to increase the confidence level of customers which will have the positive impact on the customer's perception

Archana sharma (2011)[24] in her study "Mobile banking as technology adoption and challenges" reveals that there is wide gap between technology and its adoption. Introduction of new technology will create value only when it is functioning properly without any interruption. The customers get discouraged because of intricate functions while accessing mobile banking services.

Sunil Kumar Mishra &Durga Prasad Sahoo (2013)[25] in their study "Mobile Banking Adoption and Benefits towards Customers Service" inferred that by giving right service at the right time the banks can not only create new customers but also retain the existing customers. Through Mobile banking the customers can do the transactions without visiting the branch by standing in queues and the bank executives can save their valuable time by attending to other prioritized work.

Camner and Sjoblon, (2009)[26]**;**in"Can the success of M-PESA be repeated? A review of the implementations in Kenya and Tanzania" .considers Mobile Banking as latest services of banking that has brought the system to the people's pockets. People can now instantly know balance, transaction history, products, transfer of funds at anytime from anywhere through their mobile phones. Mobile banking can capture and serve the people who were outside of the banking world

till now. It's a fusion to create the financial security with more efficient infrastructure that ensures economic development.

Dasgupta, S., R. Paul, and S. Fuloria, (2011)[27],; in "Factors affecting behavioral intentions towards mobile banking usage: Empirical evidence from India," identified that the future of mobile banking in India had a great potential.

Krugel, G., Desai, S., Solin, M., Leishman, P., Davidson, N., Tellez, C., et al. (2010)[28] found that even with the presence of the technology a large number of enrolments for the service were done, but had failed to translate into the actual usage and hence not serving towards its ultimate purpose.

Dixit and Datta, (2010)[29]; the banking sector is having an enormous effect due to the development of information technology that has developed more user friendly banking services with flexible methods of payments

Ivatuary and Mas, (2008)[30]; in their article ""The Early Experience with Branchless Banking'' states that the new banking dimension is Mobile banking making any bank go digital where the bank is branchless banking that has a great potential to extend the distribution of its financial services with lower the delivery cost to those people who could not be reached by traditional methods of banking with branch network; that includes cost for both the building and maintenance of the delivery channel to its customers of accessing the services

Yu & Fang, (2009)[31]; a study on **Measuring the post-adoption customer perception of mobile banking services** considered the M-banking as a subset of banking services where it allows all the customers to access their banking activities with the help of their mobile phone handsets.

Hayat (2009)[32] **—** a study on **Mobile payments: Will Colombo keep its leadership in South Asia?** recommends that it is important for a banking regulator to provide adequate protection for consumers, guarantee security of transactions, ensure economic stability, provide interoperability

of electronic systems and to all mobile payments, the Anti Money Laundering, Know-Your-Customer principles must be applied.

3. Significance of the Study

Technology helps in the improvement of the services rendered by Global banking sector. Mobile banking is one such initiative using the technology. This research work aims to understand the various factors affecting the mobile banking services towards the Customers. The significance of the study is to find out the problems in the form of factors affecting such services and to give suggestions for the overall success towards this initiative.

4. Statement of Problem

To access the financial services, various banks have implemented Mobile banking services to its customers. Banks have also invested major portion of its funds in order to reach its customers anytime and also to reduce cost of providing such benefits. Besides providing these services, still customers stand in the long queues to get the transaction done. Therefore the research made an attempt to study the factors affecting the Mobile Banking services offered by the Banks.

5.Objectives of the study

a) To understand the features of Mobile banking services offered by the banks

b) To study about the factors affecting the Mobile Banking services offered by the Banks.

c) To give suggestions based on the study.

6. Methodology

In this study both primary and secondary data is used. The Mobile Banking services provided by all sector of banks were collected from all banking sector using the Questionnaire format for date collection in the city of Chennai only. For this purpose, a format of questionnaire was framed into 3 segments namely 1 – Personal (F1, F2, F3, and F12), 2 – Services (F4 to F7), and 3 – Security

(F8 to F11). Each variable was scaled from 1 to 5 where 1 is strongly agree, 2 – agree, 3 - neutral, 4 – disagree, and 5 – strongly disagree. Out of the 300 questionnaires which were distributed among various banking customers 290 were returned back out of which only 289 were having data which was usable. The secondary data were collected from various articles that were sourced from

different and journals dealing with the current issues of mobile banking. Another major secondary source for the expert's opinion extraction is done by Internet & Text books related to Mobile Banking & Research Methodology.

7. Data Analysis

The various statistical tools usage was done through a questionnaire format and the data was gathered. The bank customers were asked to answer the questions regarding their knowledge about Mobile banking products, its services and the common problems faced in this sector.

8. .Limitations of the study:

- ✓ The study is restricted to Chennai city only.
- ✓ This study due to time constraint is not generalized.

9. Analysis and interpretation

The collected data was analysed using the software SPSS version 18.0 and the following results were found in various test conducted is mentioned below:

a) Table No 1 – Respondents Profile

b) Table No 2 – KMO and Bartlett's Test

c) Table No 3 – Descriptive Statistics

d) Table No 4 – Communalities

e) Table No 5 – Total Variance Explained

f) Table No 6 – Rotated Component Matrix

Table No 1 – Respondents Profile

Category		No. of respondents	Total	Percentage	Total
Gender	Male	181	181	62.63	62.63
	Female	108	289	37.37	100.00
Age	Below 20 Years	21	21	7.27	7.27
	20 - 30 Years	138	159	45.75	55.02
	30 - 40 Years	73	232	25.26	80.28
	40 - 50 Years	34	266	11.76	92.04
	50 - 60 Years	17	283	5.88	97.92
	Above 60 Years	06	289	2.08	100.00
Occupation	Business	41	41	14.19	14.19
	Government Sector	69	110	23.88	38.06
	Private Sector	134	244	46.37	84.43
	Students	19	263	6.57	91.00
	Others	26	289	9.00	100.00
Education	Under-Graduate	162	162	56.06	56.06
	Post-Graduate	87	249	30.10	86.16
	Professional level	40	289	13.84	100.00
Annual Income in Rs.	Less than 1,50,000	36	36	12.46	12.46
	1,50,001 – 2,50,000	76	112	26.30	38.75
	2,50,001 – 5,00,000	122	234	42.41	80.97
	5,00,001 – 10,00,000	37	271	12.80	93.77
	Above 10,00,000	18	289	6.23	100.00
Mobile Banking Transactions per Month	1 to 10	76	76	26.30	26.30
	11 to 25	151	227	52.25	78.55
	Above 25	62	289	21.45	100.00

The total no of respondents were 289, out of which the male respondents were 181 and 108 were female respondents. 7.27% of respondent are in the age group below 20 years followed by 45.75% of respondents in the age group of 20-30 years. There were 25.26% of the respondents from the age group of 30-40 years, 11.76% of respondents from the age group of 40-50 years, 5.88% of the respondents from the age group of 50-60 years, 2.08% of the age group above 60 years.

The respondents who does own business consists of 14.19% followed by 23.88% in the Government sector. The largest percentage goes to private sector which comprises 46.37% and student respondents with a least percentage of 6.57%.

In the present study 56.06% are graduates followed by 30.10% post graduates and 13.84% are professionals.

The next category for income and the results indicate that 12.46% earn an annual income below 1, 50,000 followed by 26.30% earn income between 1,51,000 -2,50,000 and 42.41% are between Rs.2,51,000-5,00,000 and 12.80% for those between Rs.5,00,001 -10,00,000 and 6.23% in the range above Rs.10,00,000.

26.30% of the respondents do up to 10 transactions through mobile phone in a month, whereas 52.25% do between 11-25 transactions per month whereas 21.45% of respondents do more than 25 transactions in one month

Table No 2– Descriptive Statistics

Code	Particulars	Mean	Std. Deviation	Analysis N
F1	Mobile banking is safe to use	3.607	1.358	289
F2	Mobile banking is easy to use	2.544	1.365	289
F3	Mobile banking is very use-full for me as an individual	3.521	1.029	289
F4	Payments by Mobile banking is instant	3.918	0.986	289
F5	Service and Individual information is ready available	2.975	1.277	289
F6	Transfer of money by mobile banking is reliable	3.442	1.180	289
F7	Charges for mobile banking is less compared with other services	4.259	1.065	289
F8	Maximum security for each transaction	3.566	1.198	289
F9	No Personal information is compromised	3.563	1.119	289
F10	Provides a system that completes all transaction	3.520	1.016	289
F11	Provides a good network support without problems	3.766	1.077	289
F12	I am satisfied with my Mobile Banking Services	3.412	1.344	289

KMO (Measure of Data Adequacy): In this study for examining the appropriateness of collected data, the most popular diagnostic measure called as KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy is used to measure the extent of homogeneity of variables used and thereby indicates to which construct they belong. According to Sharma (1996), the measured acceptable value of KMO must be higher than 0.6 and in this study KMO test result is 0.678 and hence it can

be inferred that all the variables in each of the sector belongs together, and therefore it also explains that the data can be used to run the factor analysis.

Factor analysis

Table No 3 – KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.678
Bartlett's Test of Sphericity	Approx. Chi-Square	859.105
	df	67
	Sig.	.000

Principle Component Analysis: The collected data was further tested with the Principle Component Analysis with a primary aim of analysing the conducting factor to determine whether all the variables are in the same construct

Table No 4 – Communalities

Code	Particulars	Initial	Extraction
F1	Mobile banking is safe to use	1.00	.725
F2	Mobile banking is easy to use	1.00	.583
F3	Mobile banking is very use-full for me as an individual	1.00	.619
F4	Payments by Mobile banking is instant	1.00	.562
F5	Service and Individual information is ready available	1.00	.610
F6	Transfer of money by mobile banking is reliable	1.00	.607
F7	Charges for mobile banking is less compared with other services	1.00	.658
F8	Maximum security for each transaction	1.00	.681
F9	No Personal information is compromised	1.00	.814
F10	Provides a system that completes all transaction	1.00	.766
F11	Provides a good network support without problems	1.00	.947
F12	I am satisfied with my Mobile Banking Services	1.00	.588

Extraction Method: Principal Component Analysis.

Table No 5 – Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.94	24.46	24.46	2.94	24.46	24.46	2.27	18.96	18.96
2	1.85	15.45	39.91	1.85	15.45	39.91	1.94	16.13	35.09
3	1.27	10.58	50.49	1.27	10.58	50.49	1.20	10.01	45.10
4	1.14	9.50	60.00	1.14	9.50	60.00	1.71	14.27	59.37
5	.91	7.61	67.61	.91	7.61	67.61	.99	8.23	67.61
6	.78	6.52	74.12						
7	.68	5.65	79.77						
8	.57	4.74	84.52						
9	.54	4.52	89.03						
10	.48	4.01	93.05						
11	.45	3.78	96.82						
12	.38	3.18	100.00						

Extraction Method: Principal Component Analysis.

Table No 6 – Rotated Component Matrix[a]

Code		Component				
		1	2	3	4	5
F1	Mobile banking is safe to use	-.015	.591	-.351	.500	.000
F2	Mobile banking is easy to use	.673	-.280	.123	-.219	.059
F3	Mobile banking is very use-full for me as an individual	-.218	.519	.425	.322	-.153
F4	Payments by Mobile banking is instant	-.058	.728	.109	-.015	.187
F5	Service and Individual information is ready available	-.741	.042	.207	.114	.113
F6	Transfer of money by mobile banking is reliable	-.220	-.106	.113	.726	.097
F7	Charges for mobile banking is less compared with other services	-.018	.801	.078	-.068	.038
F8	Maximum security for each transaction	.829	-.089	.000	.051	-.059
F9	No Personal information is compromised	.105	.107	.891	.092	.000
F10	Provides a system that completes all transaction	-.037	.102	.072	.865	.055
F11	Provides a good network support without problems	-.073	.155	-.034	.127	.957
F12	I am satisfied with my Mobile Banking Services	.725	.168	.176	-.119	.032

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 8 iterations.

According to the resulted tabulation after performing the rotation method of Varimax with Kaiser normalisation in the above table 6 the 1st component is having positive effect with highest on F8 followed by F12, F2, F9 and negative effect on F5, F6, F3. The 2nd component is having positive highest effect on F7, followed by F4, F1, F3, and negative effect on F2, F6 and F8. The 3rd component is having positive effects on F9 followed by F3, F5 and F12, and negative effect on F1 & F11. The 4th component is also having positive effects on F10 followed F6, F1, and F3 and negative effects on F2, F12, F7 and F4. The 5th component is also having positive effects on F11, F4, F5, F6 and negative effects on F3 and F8.

Findings

The result of Kaiser-Meyer-Olk test, Measure of Sampling Adequacy shows .678 as a positive result, the individual factor test reveals that there are few factors affecting the Mobile banking services. The findings shows that

- The annual charges levied by the banks towards such services are very high
- They feel that the banks have to take an extra effort to solve the safety and security issues
- Customers who are not technically sound face difficulties while using mobile banking the services also lack in providing the ready information required by the customers.
- The respondents also feel that the Security regarding information provided for verification during transactions is also doubtful.

Suggestions

- The banks must give a break – up of the charges levied on various services, but the banks have to reduce its annual charges
- The customer's safety in-terms of availing the services should be strengthened as there is a possibility of hacking and cracking of personal details.

- Customers must be given individual training regarding the usage of the Mobile Banking services who want to avail such services as they may not be technically sound and also it takes some time for understanding the technology
- Time is precious therefore the banks must come up with a system that tries to solve the issues on such factors affecting the Mobile banking services.

10. Conclusion

Therefore, the study concludes with an analysis and suggestion on various factors affecting Mobile banking namely giving importance and taking immediate measures on security issues so that the customer shall not face the factor such as in-complete transaction and problem of network, awareness and training to customers regarding the technical aspects, and make them feel confident in adapting the mobile banking in their daily life. Since there are number of other studies that have suggested that this particular delivery channel is yet to grow towards its potential, the financial sector particularly the banks has to make the system much faster, mobility access and convenience to customers so that it reaches to all the citizens of the country.

References:

1. Daniel, Elizabeth (2000)[1]. The provision of electronic banking services in the UK and Scandinavia. Journal of Financial Services Marketing, 4(4), pp. 319–330.
2. Keen.P and Mackintosh.R(2001)[2] The freedom economy Gaining the M-Commerce edge in the era of wireless internet Osborne/Mcgraw-Hill, Berkeley; CA, USA
3. Forrester Research group [Xonline][3] www.forrester.com, access date on 2007.
4. Hibberd, M. (2007)[4] Put your message here, Mobile Communication International, 40 - 44.
5. Peterson, Marcus, (2009)[5],"A Brief History of Internet Banking", EzineArticles
6. Wang, Y., Wang, Y., Lin, H., & Tang, T. (2003)[6]. Determinants of user acceptance of internet banking: an empirical study. International Journal of Bank Marketing, 14 (5), 501-519.
7. Ashta, A (2010)[7] Evolution of Mobile Banking Regulations

8. Mehta Shalini (2012)[8] "Mobile banking in India does not need a one-size-fits-all solution" Retrieved from: http://www.dnaindia.com/money/1683740/columnmobile-banking-in-india-does-not-need-a-one-size-fits-all-solution
9. Rugimbana, R (1995)[9] "Predicting ATM Usage: The Relative Importance of Perceptual and Demographic Factors", International Journal of Bank Marketing,13(4),18-31.
10. Karjaluoto, H. (2002),[10] "Selection Criteria for a Mode of Bill Payment: Empirical Investigation among Finish Bank Customers", International Journal of Retail and Distribution Management, 30(6),331–339.
11. Rao, G. R., &Prathima, K. (2003)[11]. Online banking in India. Monday Business Briefing, 11 April 2003.
12. Sunil Kumar Mishra &Durga Prasad Sahoo (2013)[25] Mobile Banking Adoption and Benefits Towards Customers Service Special Issue of International Journal on Advanced Computer Theory and Engineering (IJACTE) Vol 2 Issue1 pp 78-83
13. Camner and Sjoblon, (2009)[26]; Can the success of M-PESA be repeated? A review of the implementations in Kenya and Tanzania.
14. Dasgupta, S., R. Paul, and S. Fuloria, (2011) [27],; in "Factors affecting behavioral intentions towards mobile banking usage: Empirical evidence from India,"," Journal of Marketing ,3(1),6-28.
15. Krugel, G., Desai, S., Solin, M., Leishman, P., Davidson, N., Tellez, C., et al. (2010)[2828]Annual Report 2010. London: GSM Association.
16. Dixit, N. and Datta, S.K. (August, 2010)[29] Acceptance of E-banking among Adult Customers: An Empirical Investigation in India. Journal of Internet Banking and Commerce, 15(2), 1-17.
17. Ivatuary and Mas, (2008)[30;""""The Early Experience with Branchless Banking''www.ssrnpapers.com
18. Yu, T. K., & Fang, K. (2009)[31]. Measuring the post-adoption customer perception of mobile banking services. Cyber Psychology and Behavior, 12, 33-35.

19. Hayat Muhammad Aslam (2009)[32,] —Mobile payments: Will Colombo keep its leadership in South Asia?
http://www.sundaytimes.lk/090712/FinancialTimes/ft323.html