

# The role of technology in transforming the communication- a study of mobile banking technology

Renu Aggarwal, YMCAUST, Faridabad, India  
Monica Bhardwaj, IIMT Gurgaon, India

**Abstract—** In this competent business world today the massive presence of mobile devices and the wireless technology have given room to tremendous business opportunities that are based on wireless infrastructure. Such opportunities are available in the form of timeless communications, business transactions, trading and more. The Mobile banking is a medium through which the customer communicates with a bank using a mobile device like mobile phone. Since there is no restriction of time, space hence the convenience of banking anytime anywhere is providing the concept of mobile banking a huge potential. The flexibility and ease of use, decreasing costs and ever increasing computational power is proving to be a highly fertile soil for the mobile devices to prosper, flourish, capture and sustain in the market. The adoption of such new technologies is based on many factors that influence ways of communication, trust and satisfaction of customers. This paper identifies the various factors influencing intention of customer to adopt mobile banking. The way communication has been transformed by this technology is evident however factors concerning cyber presence and security are big issues that need to be identified and tackled with care. The paper identifies security concerns and their impact on adoption of mobile banking.

**Index Terms—**Mobile banking, Customer adoption, Financial institutions

## I. INTRODUCTION

Mobile and other communication devices are fast becoming enablers for organizations to perform business more effectively and efficiently. One of the most efficient applications is mobile banking (m-banking). The impact of technology has affected all aspects of individual and business life. There is increasing use of technology in businesses to achieve more efficiency, accuracy, collaboration and communication. Banking facility is not limited to physical premises these days. Mobile banking Technology has given

wings to the banking services where a customer is free to access his account and related services anywhere using mobile and Internet services. The service industry is benefitted the most by this innovative technology. But is it really a boon to our society or are there any hidden issues that have not been visible and addressed yet. The issues concerning security and privacy, resistance by customers, extent of comfort, confidence and convenience etc.

## OBJECTIVE

- To study the factors influencing intention of customer to adopt mobile banking
- To identify the security concerns and their impact on adoption of mobile banking.

## METHODOLOGY

The research for the above mentioned objectives is facilitated by undergoing literature review and identifying the major factors that have large impact on individual intention of adoption of mobile computing.

The mobile banking has become an affordable and very user friendly technology. It enhances communication amongst the users along with giving an extra edge to the mobile providers and the credit companies to be in direct touch with the customer. The SMS services keep the customers updated about the status of their transactions and account balances. Along with that there are applications provided by many credit companies to help the customer evaluate loan facility they can avail from respective banks or credit companies. These applications enable customer to keep track of their required need and estimate of what they need and their current earnings and balance in their accounts. Hence they are in a better position to assess whether or not they are eligible for a particular loan or not.

Similarly there are massive number of applications offered by several banks and financial institutions easing out the lives of the people by proving convenient, fast and accurate

services.

Hence when a user had to decide on adopting a mobile banking perceived as a new technology, an advanced way of doing business the perceptions that affect in adoption pattern are as discussed.

#### *1.Perception on type of user*

Suoranta, M. and Mattila, M. (2004) gave out the communication source, user's age and user's household income as an indicators of the typical characteristics of potential adopters of mobile banking. The most user's of mobile phone and smartphones are between the age of 16-28. As per the level of income and social status of person grows the use of mobile devices increases with growing inclination towards phones latest technologies these days smartphones.

#### *2.Perception on type of media*

The social media has been a booster for this upcoming and promising technology by opening several avenues to be able to connect with the current and prospective customers and share with them their offerings. It also provides the platform to address the concerns and challenges faced by today's customers. The mobile computing has given opportunity to the companies today to project their new image in the eyes of the customer. It is an instant two way communication between the customer and the financial service company. The regular communication with the customer through SMS based services help them promote their new offerings, informing the customer about latest updations and also having the opportunity to make new customers.

#### *3.Perception on Cost and benefits*

The mobile banking provides cost advantage to user in transaction costs, processing charges and transfer fees as compared to traditional banking. Furthermore there is time saving on call centers as well. Large number of providers of mobile banking provide the facility to reset the password through their mobile phone by answering the pre formatted questions (like debit card number and PIN) hence eliminating the need to be on call with call center executives for long time and wastage of time waiting to get the line free or getting exact service a person is looking for.

The mobile banking provides easy and convenient form of banking. Banks get big benefits by mobile banking in terms of efficiency of the business, integration of processes and attaining competitive edge. So if they tap this new technology to retain customers by creating, maintaining good relations and providing better services it will benefit them significantly. Yu T.K. et al (2009)

Customers enjoy the convenience of paying for the goods and services, utility bills, mobile bills other than managing their bank accounts using mobile banking.

The communication has been transformed by this technology in a way where the benefiter is both the provider as well as the receiver. The customer now is not restricted to the limits of banks opening and closing hours to access and use their money. After the ATM (Automated Teller Machines) which gave the advantage to bank ANYWHERE, mobile banking came up with the booster of banking ANYTIME. For regions having low proximity to traditional banks particularly the rural areas this technology has delivered significant savings. It is cheaper than money transfers done traditionally, convenience for those who are unable to go to the banks in open hours and relatively safe option for transferring the money. The market is flooded with the inexpensive mobile devices these days that provide the applications to use feature of mobile banking.

Mobile banking enables the financial institutions and banks to understand the needs of their customers accurately and build mutually beneficial relationships. They can market their offerings direct to the customer's needs. In other words mobile banking is alternative to putting companies brand into customer's pockets.

#### *4.Perception on ease of use and satisfaction*

Saleem, Z. et al (2011) found in their study that mobile banking is profitable option for the banks technologically to increase the customer satisfaction.

The success of mobile banking depends on ease of use of its features and legal framework for mobile banking. Carrying out transactions through mobile phones attracts customers due to its convenience. But concerning the security and privacy issues, the providers must foresee the threats arising out of mobile banking and ensure the providers are in the regulated area and not allowing the unregulated bodies. This will build customer confidence in the online payment system who can use this promising tool without any fear or hesitation. Weber R. H. (2010).

Brett King, the consultant and the author of book "Bank 2.0" identified 7 trends that according to him will change retail forever. The 7 trends included the arrival of iPhone, applications and the "screen", the phone serving as a wallet, knowing the customer and building services framework as per customer's needs, the data present in more collaborative and integrated manner, banks giving more emphasis on brand, products, and customer advocacy rather than the social media platforms, more real time flexible systems and peer-to-peer payments as strong need for consumers in 2012.

The study carried out by Yong-Ki Lee suggested the factors that influence a person to use mobile banking from the unified perspectives include view of general technology, technology-specific view, user own characteristics, and task-user characteristics of mobile banking.

#### *5. Perception on technology and risk*

In the study to identify factors influencing the intent to use mobile banking services in SMS banking, the highest deciding factor was the perceived risk rate. Taleghani, M et al (2011). To minimize the lack of customer adoption risk, Kaduściwas et al (2011) proposed a collaboration model permitting the set up of a single technology standard for mobile payments based on integration of various types of providers like telecom, retailers, mobile device manufactures. Sjursen, H. (2008) emphasizes on need of collaboration between the banks and the mobile providers that leads to increased functionality. The degree of repeat use of the mobile banking services can be increased or decreased by the aid of technological infrastructure and services setting. Hence the usefulness perceived by customer and their intention to use it varies depending upon technology levels that drive mobile banking.

#### *6. Perception on system quality and information quality*

System quality and information quality considerably affect customer's trust. The trust of the consumer plays a vital role in determining consumer satisfaction with mobile banking. So in order to satisfy the mobile banking customers, the mobile banking system quality and information quality must be provided. Sanayei, A. et al (2011). With the advent of mobile banking the banks are under pressure to provide administrative efficiency besides quality efficiency. The technological aspect plays crucial role in adoption of mobile banking however there are other factors as well that need to be identified.

#### *7. Perception on Customer service*

Yu, T.K. and Fang, K. (2009) emphasized on good customer relations. Properly established Sound managed and maintained customer relations plays important role in increasing benefits to the bank by offering organizational efficiency, good integration, and providing competitive advantage. In the study by G., R. and Ravindran, D. S. (2012) strong relationship was observed between perceived service quality, the satisfaction and the intentions to continue with mobile banking. The customer satisfaction was found to be realized through

service quality. However the risks factor negatively affects the service quality and satisfaction.

The key drivers identified by Singh, S., et al (2010) that influence the user's intention of adopting mobile banking are

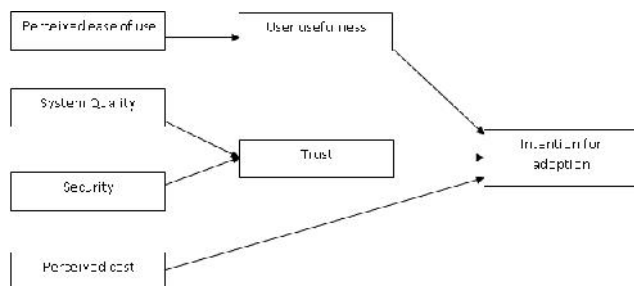
- 1. Perceived usefulness**
- 2. Perceived ease of use influencing intention, adoption and enhancing perceived usefulness**
- 3. Subjective norms** - Perception of opinion of others (family, friends, authority figures)
- 4. The higher self-efficacy** - People with self confidence
- 5. The financial cost** - Lesser the cost higher is the intention of adoption
- 6. Customers trust**
- 7. Secured transactions** - Security includes many factors like confidentiality, authentication, and integrity.

#### **8. CONCEPTUAL MODEL**

The users of mobile commerce besides being the technology users also belong to the group of the social network. This social network consists of family, friends, reference groups and mentors. These groups have strong influence and recommend the services that are good thereby discouraging those that are not. When they decide to adopt any new technology the major factors under consideration are the perceptions, opinions and actions of an individual with respect to various dimensions of the product such as kind of service offered.

Hence adoption of mobile technology has factors that emanate from individual needs, criteria of usefulness, cost and benefits and perception about the associated risk and factors of security leading to building customer trust and satisfaction. Hence a conceptual model is proposed that can be further developed in light more in depth research and impact of these factors on each other and cumulatively that

result in shaping the intention of user for adoption of mobile computing.



### CONCLUSION

Mobile banking is more than doing transactions. It is a tool of communication that has given a platform for the financial service providers to get connected to their customers, identify their needs and deliver accordingly. The communication is not limited to the companies only. The transformation of communication between the social groups has been also realized. The mobile banking offers customers an innovative technology providing services from entrainment, bill payments, planning holidays, calculating loans ranging from individual use to business use. However to develop future for this promising technology it is important to make an environment that builds and sustains customer trust in the banking services. It is important to understand major factors that affect the intention of adoption mobile banking. The satisfaction, service quality and technology play key role in building the trust in customers. Technology indicates the security issues including data security and consumer protection Weber and Darbellay (2010). Hence the mobile banking has a big potential in market and organizations can tap it by focusing on the key factors. The

conceptual model proposed opens more scope for research in identifying the relationship among these factors and their cumulative effect on the intention of adoption of mobile banking.

### References

- Brett King (2012) “7 Trends That Will Change Retail Forever”, ABA Banking Journal.
- Chung, N., Kwon, S.J. (2009) “The Effects of Customers’ Mobile Experience and Technical Support on the Intention to Use Mobile Banking”, Cyber psychology & Behavior, Vol. 12, No. 5, pp. 539-543.
- G., R. , Ravindran, D. S. (2012) “An Empirical Study On Service Quality Perceptions And Continuance Intention In Mobile Banking Context In India” Journal of Internet Banking and Commerce, Vol. 17 No. 1, PP.1-22
- Kadušić, E., Bojović, P. and Žgalj, A. (2011) “Consumer Adoption - Risk Factor of Mobile Banking Services”, World Academy of Science, Engineering and Technology, Vol. 80, pp. 136-141.
- Saleem, Z., Rashid, K. (2011) “Mobile Banking Adoption In Banking Sector Of Pakistan”, Journal of Yasar University, Vol. 21 No. 6, pp. 3538-3560.
- Sanayei, A., Shaemi, A., Jamshidi, H. (2011) “An Analysis of the Factors Affecting Customers Satisfaction and Trust in Mobile Banking (Case Study: Branches of Bank Mellat in Isfahan)” Interdisciplinary Journal Of Contemporary Research In Business, Vol. 3 No. 7, pp. 440-452.
- Singh, S., Srivastava, V., Srivastava, R.K. (2010) “Customer Acceptance of Mobile Banking: A Conceptual Framework”, SIES Journal of Management, Vol. 7 No. 1, pp. 55-64.

- Sijursen , H.(2008) “Collaboration between banks and operators for the provision of mobile banking and an assessment of future trends “Journal of Telecommunications Management, Vol. 1 No. 3, pp. 232–236.
- Suoranta, M., Mattila, M. (2004) “Mobile banking and consumer behavior: New insights into the diffusion pattern”, Journal of Financial Services Marketing, Vol. 8 No.4, pp.354–366.
- Taleghani, M. Gilaninia, S., Rouhi, A., Mousavian, S.J.( **2011**) “Factors influencing on customers’ decision to use of cell phone banking based on SMS services” Interdisciplinary Journal Of Contemporary Research In Business, Vol. 3 No. 5, pp.86-97.
- Weber, R. H., Darbellay, A. (2010) “Legal issues in mobile banking”, Journal of Banking Regulation, Vol. 11 No. 2, pp. 129–145.
- Yu, T.K., Fang, K. (2009) “Measuring the Post-Adoption Customer Perception of Mobile Banking Services”, Cyberpsychology & Behavior, Vol. 12 No. 1, pp.33-35.