

## DEMOGRAPHIC CONSIDERATIONS IN MOBILE BANKING ADOPTION-AN EVALUATION

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### **Abstract**

Advances in technology and changes in consumer behaviour have paved the way for a variety of self-services in Banks. Banks investing in these self-services can expect more consumers and opportunities for service recovery and price competitiveness. This has resulted in major transformations in the interactions between banks and customers. The banks in India are in the midst of Information Technology revolution. 'Stay connected 24 hours' is the mantra of the current business of service industries, and is facilitated by the SSTs in banking industry. The transition from fixed to portable and roaming access has thus resulted in mobile office concept. The traditional banks have realized the role and importance of SSTs, making them to invest in SSTs for their survival. Customers have not adopted these technologies in a big way in India though the mobile phone users are to an extent of 1009.46 million and the internet users are around 402 million according to IAMAI report. In India, the technology penetration is less than 1% when compared to 22% worldwide. Hence, the current research aims at identifying the major determinants which enhance the usage of the Mobile Banking in the city of Chennai, Tamil Nadu, India, with a view to increase the customer base.

**KEY WORDS:** Technology, Mobile banking, Customers, Adoption, Demographics.

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## Introduction

Advances in technology and changes in consumer behavior have paved the way for a variety of self services in Banks. Banks investing in these self services can expect more consumers and opportunities for service recovery and price competitiveness (Proenca and Rodrigues, 2011). This has resulted in major transformations in the interactions between banks and customers (Dhabholkar *et al.*, 2003). The banks in India are in the midst of Information Technology revolution (Rajneesh De and Padmanabhan, (2006). 'Stay connected 24 hours' is the mantra of the current business of service industries, and is facilitated by the SSTs in banking industry.

The transition from fixed to portable and roaming access has thus resulted in mobile office concept. The traditional banks have realized the role and importance of SSTs, making them to invest in SSTs for their survival (Zhang and Prybutok, 2005; Bauret *al.*, 2005). The growing competition and mounting customer expectations have led the traditional banks to realize the role and importance of technology, leading to total automation in the global banking industry. India, with more than 1.3 billion people, is the fastest growing country in terms of its population and one of the largest economies of the world. These technologies are identified to be the major channels to retain the existing customers and to attract new customers in developed countries. In contrast, the banks in India have trivial technology users' record. IB and Mobile Banking (MB) are also on the upswing as the user base grows. These self-service technologies (SSTs), now, seem to complement the whole banking system. Never the less, customers have not adopted these technologies in a big way in India though the mobile phone users are to an extent of 1009.46 million and the internet users are around 402 million according to IMAI report. In India, the technology penetration is less than 1% when compared to 22% worldwide. Hence, the current research aims at identifying the major determinants which enhance the usage of the Mobile Banking in the city of Chennai, Tamil Nadu, India, with a view to increase the customer base.

## Mobile Banking (MB)

Online banking allows customers to do financial transactions from their home via

internet. Now, with the emergence of Wireless Application Protocol (WAP) technology, banks use the infrastructure and applications developed for the internet and have moved to mobile phones. People no longer have to be tied with the desktop to do their banking. The WAP interface is much faster and convenient than the internet, allowing customers to see account details, transaction details, make bill payments, and even check the credit card balance. Several studies found that the estimated transaction cost through MB is 16 US cents, while a fully computerized bank using its own software US 26 cents, that of a telephone bank 54 US cents, a bank branch at US \$1.27, an ATM at 27 US cents, and for the Internet it costs just 13 US cents. More than 2,000 banks in the world now have transactional websites and the growth of online lending solutions is making them more cost efficient. Mobile banking (MB), an integral part of m-Commerce, has become very popular among mobile users ever since its existence in 2007. It creates a new and convenient communication, and fast financial transactional channel for the mobile users, which is accessible from anywhere, anytime. The fact is that the majority of the Indian consumers are unaware that their banks are currently offering MB is clearly perceptible.

### **Objectives of the study.**

1. To evaluate the role of demographics in the adoption of Mobile Banking
2. To segment the customers into clusters based on their perception on Mobile banking.

### **Research methodology**

Data collection for the study was done through structured questionnaire involving the variables drawn from various studies relating to adoption of MB. The data was collected through the questionnaires from 240 Bank customers who were using Self service banking technologies. The data so collected were analyzed using SPSS 18.0 (Statistical Package for Social Sciences).

### **Review of Literature**

Anckan and Incau (2002) studied the value creating features of MB through a consumer survey in Finland. The results indicated a low willingness of consumers to use mobile services in general but an exceptionally high willingness to use some applications.

It was found that attitudinal and social factors rather than perceived behavior played a significant role in adoption of WAP enabled MB services. Brown *et al.*(2003) had identified the influencing factors of MB. The relative advantage, trialability and consumer banking needs were shown to be the determinants of MB, and the perceived risk as an inhibitor of MB adoption. Attributes, such as relative advantage, compatibility, and communication and trialability had influenced adoption of MB services. Further complexity and risk factors were not found to be barriers to its adoption. Pousttchi and Schelrig (2004) assessed the MB applications from the view of customer requirements. They suggested that banks should not use the advantages of one technology, but to use the advantages of different technologies since no single technology can provide MB solutions without problems.

Oh and Lee (2005) investigated the relation between mobile carriers and MB in Korea. It was shown by them that technology helped to shape the Actor-network of Convergence services. The barriers of MB adoption in India were investigated by Jain and Hundal (2006). The results revealed that the non adopters (40.30%) of MB services were relatively young (25-34 years) and were found in the income group of Rs. 20000-30000. The reluctance to adopt new technology was attached to functional problems of mobile phones and insufficient management from the service providers' side. However, the determinants of adoption of MB in India was studied by Hundal and Jain(2007). The study evaluated the applicability of Rogers' (1995) innovation attributes constructs in analyzing the adoption of MB. MB technology. Donner (2008) identified some issues germane to the design and development of MB systems, and concluded that MB in the developing world was a fruitful domain for mobile research in general. MB. The determinants of MB adoption in Korea were examined by Guet *al.* (2009). A web-based survey from 910 customers of Woori Bank in Korea was analyzed. The results indicated self-efficiency as the strongest antecedent of perceived ease of use, and structural assurances as the strongest antecedent of trust which affected behavioral intention to MB.

**Data Analysis****Table 1 Demographic profile of the respondents**

Demographic Variables	Category	Frequency (n=240)	Percentage (100%)
Gender	Male	177	73.7
	Female	63	26.1
Age	21-30	123	51.1
	31-40	59	24.6
	41-50	37	15.3
	51& above	21	8.9
Education	School	29	12.2
	Graduate	88	37.4
	PostGraduate	65	27.0
	Technical	10	3.9
	Professional	48	19.4

The above table depicts the demographic profile of the respondents. Majority of the respondents are male and people in the age group of 21-30 constitute 51.1% most of the respondents are graduates

**Table: 2 Association between Demographic variables and Mobile banking adoption using Pearson Chi-Square**

Demographic Variables	Value	df	Sig.
Age	63.830 <sup>a</sup>	3	.000
Gender	18.689	1	.000
Education	82.668	1	.000

(Source: Primary data)

The above table indicates that the Chi-square value is.000 which is significant at 5 % level for age, gender and education. Therefore, it can be concluded that there is significant association between age, gender, education and Mobile banking adoption. This is proved in different studies that younger generation has a flair for internet and they are considered as techsavvy when compared to the older people. It is believed that perception to adopt SSTs can be moderated by age. It is also perceived that younger generation is ready to embrace new technology compared to the older people. In the present day banking environment though men and women vie with each other they differ in the usage of mobile technology for banking services. Education provides good understanding of the banking practices which helps the customers make meaningful decisions on the banking requirements. Thus they have a better liking for the technology-driven banking services.

### Cluster analysis

The customers' perceptions on the use of mobile banking (MB) are identified for segmenting the customers in to clusters

**Table 3 Cluster centers for the respondents' perception on MB adoption**

	Cluster		
	1	2	3
MO1	3.71	4.33	4.18
MO2	3.03	4.33	4.74
MO3	3.46	4.60	3.58
MO4	3.50	4.77	3.59
MO5	3.66	4.29	4.23
MO6	3.55	4.34	4.14
MO7	3.71	4.33	4.18
MO8	3.03	4.33	4.74
MO9	3.46	4.60	3.58
MO10	3.50	4.77	3.59

**Table 4** Number of cases in each cluster for the respondents' perception on MB adoption

Cluster	1	67.000	27.77
	2	94.000	39.08
	3	79.000	33.15
Valid		240.000	

The first cluster consisted of 27.77% customers who moderately agreed on all the variables specifying that MB would be useful to conduct their banking activities. This group may be called as **vulnerable/penetrable cluster**. Whereas the second cluster consisted of 39.07% of customers who perceived that MB would be useful in the following: to conduct banking transactions with ease and speed, to update and understand banking details clearly, to pose as tech-savvy, and to give control over banking activities. They also believed that the familiarity with the mobile device and confidence over MB service providers would enhance the satisfaction level in MB, and further it would be convenient to pay utility bills through mobile device. This cluster is called **convinced cluster**. The third cluster consisted of 33.15% customers who perceived that MB would improve the quality of decision making by coping up with the difficulties with mobile device. This cluster is called **trendy customers**.

## DISCUSSIONS AND STRATEGIC IMPLICATIONS

Customers are not uniform in their behavioral pattern, attitudes, needs and expectations. Therefore, a thorough understanding of the customer is a pre-requisite to offer him / her satisfaction through providing service. Time has now come to look inwards and match the quality and nature of customer service with the expectation of the customers. Good customer service and satisfactory response to their needs go a long way to increase the business of the bank. In addition, the diffusion agent needs to know that the increased use of advanced technology-based service innovations are likely to occur among younger, more highly educated and more affluent customers. The results provide insights for the consumer educators and policy makers who are interested in disseminating technology-based innovations. To increase consumers' likelihood of adopting MB technologies, diffusion agents should build effective communication strategies that emphasize convenience and easy

to use features. Similarly, addressing security concerns can increase the likelihood that customers will adopt MB services. The major challenge for these banks is to determine how to integrate MB in a consumer oriented way. The research proposition is therefore supported and it is unsurprising to find that those customers who consider 24×7 access as important are more likely to register for MB. Banks are compelled to understand that the products delivered through MB must not only fulfill the wants, preferences, security, and quality expectations of customers, but also induce and motivate the customers to use these SSTs on a large scale in future.

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