

A STUDY ON FACTORS INFLUENCING YOUNG USER'S ONLINE BANKING CHANNEL USAGE IN INDIA

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Abstract Online banking is a new technology based, cost efficient, convenient and time saving channel for the customers as compared to traditional bank branches. However it is observed that Indian banking customers are reluctant to adopt online banking services. Maintaining a banking customer is more important than acquiring new customer (Bhattacharjee, 2001). Hence, this study addresses the influence of factors proposed by technology acceptance model along with risk and user's online efficacy to explore the actual usage of young online banking users in Tamilnadu, India. The result shows that, youngsters online banking channel usage is positively influenced by their online efficacy, perceived ease of use and perceived usefulness. The risk associated with online banking channel also negatively influencing the actual usage of the online banking users in India.

Keywords: Innovation, Financial Service, Online Banking, Usage, Technology Acceptance Model, India

INTRODUCTION

Online banking is an innovation to traditional branch banking system and it is now used as a channel for delivering financial services by virtually all banks in India. Online or internet banking refers to providing banking service electronically through the bank's website. RBI categorises the level of online/internet banking services as: i) the basic level service, where the bank's website disseminates information about the products and services of a particular bank. ii) simple transactional websites, which allows customers to submit their instructions, applications for different services, queries on their services, but do not permit any fund based transactions on their accounts and iii) fully transactional websites, which allows customers to operate on their accounts for transfer of funds, payment of different bills, subscribing other products of the banks and to do purchase and sale transactions (RBI report, 2001).

The advent of information technology brought out new electronic banking channels like Automated Teller Machines (ATMs), online banking and mobile banking. Among the technology based channels, online banking is a hybrid channel offering integrated banking services to its customers anytime anywhere. Servicing through the technology based channel is cost effective than the traditional branch banking for the banking industry. A comparison of cost per transaction for the bank through various channels shows the cost to be Rs.12 for online banking, Rs.18 for ATM and Rs.100 for branch banking (Rajput and gupta, 2011, whereas the cost per transaction for customers through various channels is

Rs.0.10 for online banking, Rs.0.45 for ATM, and Rs.0.35 for mobile banking (RBI report, 2001). Though online banking is cost efficient and a convenient channel both for the bank and customers, the banking customers are reluctant to adopt online banking services in India (Khare, 2010). In online banking context, maintaining the existing customer is more important than acquiring new ones. Since the market share and revenue of the online banks depend on both adoption and continuous usage (Bhattacharjee, 2001). More over acquiring a new customer may cost as much as five times more than retaining the existing ones (Bhattacharjee, 2004). Hence it is essential to study the factors influencing the online banking user's actual usage.

Online Banking Environment in India

New generation private sector banks namely ICICI Bank and HDFC Bank were the pioneers in introducing internet banking services in India (Verma et al., 2007). ICICI bank introduced online banking with limited number of services in 1996, followed by Citi bank, IndusInd Bank, HDFC bank in the year 1999. It was during 1996-1998 that the banks adopted internet for their transactions, however the internet banking usage gained importance only in 1999. Currently Indian banking sector is offering a number of integrated online banking services and the RBI initiative to improve technology for the banking sector during 2010-11 has forced banks to offer integrated online banking services (RBI Report, 2011).

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Adoption of Online Banking Technology

In developed countries like US and UK, banking customers prefer to use online banking channel than other banking channels (Arnaudovska et al 2010, Chau and Nagi, 2010, Krauter and Faullant, 2008). In India banking customers do not prefer internet banking due to various reasons like culture, lack of infrastructure, mistrust towards the technology and lack of awareness (Dixit and Datta, 2010, Tarafdar and vaidya, 2004). In spite of high internet usage which is a prime factor for online banking transaction, the Mckinsky report, 2011 found only 7% of banking customers to be using the internet for banking transactions. Therefore it is essential to address the factors influencing the banking customer's online banking adoption.

Technology Acceptance Model

The Technology Acceptance Model (TAM) was introduced by Davis in 1986 and based on Theory of Reasoned Action (Suh and han 2002), TAM was specially tailored to predict the behaviour of information technology acceptance. The theory is a parsimonious and theoretically tested and justified model which explains the determinants of Information technology adoption across a wide range of information technologies and user populations (Davis, 1989). Many studies had validated TAM across wide range of Information systems (Suh and han, 2002). According to TAM individual's perceived usefulness (PU) and perceived ease of use (PE) influence their attitude and behavioural intention towards using new technologies. Perceived usefulness concerns the degree to which a person believes that using a particular system would enhance his or her job performance (Al-somali et al., 2009). Perceived ease of Use is defined as the degree to which a person believes that would be free of effort (Davis, 1989). Perceived usefulness and Perceived ease of use together influence a person's attitude towards using a specific form of technology, attitude in turn influence the intention to use specific technology. The current Research proposes to use the attributes of TAM proposed by Davis to measure the individual's adoption of online banking services. Researchers like Tan and Teo, (2000); Erikkson et al., (2008); Eastin, (2002); Safeena et al., (2010); Aldas-Manzano et al., (2009); Zhao et al., (2010) have considered Risk as one of the important attribute in online banking context. Since banking involves financial transactions the perception of risk will be more relevant for online banking context and hence it has been considered for this study. Studies like Tan & Teo (2000), Hoppe (2001), Walker (2006) Mouakket, (2009) and Amin (2007) found that individual's ability to use technology influence the adoption and continuous usage and hence the individual's efficacy on online technology is considered for this study.

Review of Literature

Actual usage is the extension of initial adoption of any new technology. The influence of TAM attributes along with individual's online self-efficacy and risk were discussed as follows.

Perceived Usefulness

Davis (1989) states the degree to which a person believes that using a particular system would enhance his or her job performance. (Al-somali et al., 2009; Amin, 2007; Jun et al., 2008; Safeena, 2011) studies have found that, individuals perceived usefulness have significant influence on attitude, intention and acceptance of online banking services across countries. Therefore to identify whether online banking channel is useful in terms of convenience, speed, cost and time saving benefits for the users the following hypothesis H1 is formulated

H1. Perceived usefulness has positive influence on actual usage of online banking services

Perceived Ease of Use

Perceived ease of use is a person's subjective perception of the effortlessness of a system (Safeena, 2011). Crespo (2008) found that, individuals perceived ease of use have significant effect on their attitude towards e-commerce activities. Pikkaranieen et al, (2004), Eriksson et al (2005) confirms that, online banking user's perceived ease of use have strong impact on their acceptance of online banking services. Sathye (1999) also found that, customer's perceived difficulty in online banking usage is the main reason for non-adoption of online banking services in Australia. Hence the hyposthesis H2 is formulated

H2. Perceived ease of use has positive influence on actual usage of online banking services

Perceived Risk

Perceived risk can be defined as a kind of subjective expected loss. If the customers perceive that the online banking system is risk free then they will use it. When they feel secured they will prefer to use online banking. Perception of risk is more powerful explanatory factor in cosumer behaviour (Safeena, 2011), because individuals are more motivated to avoid mistakes than maximizing purchasing benefits. The main components considered in perceived risk are security and privacy in online banking channel. Security is one of the prominent factors which affect the E-banking adoption (Ali and Bhardwaj, 2010). It was found that, Security and privacy risk has significant impact on online banking adoption (Dixit and Datta (2010); Polasik and wisniewski,

2009; Pikkaranien et al., 2004). Therefore, in this study to test whether customer's perceived risk has a negative impact on actual usage of online banking services the following hypothesis was formulated.

H3. Perceived risk has negative impact on actual usage of online banking services.

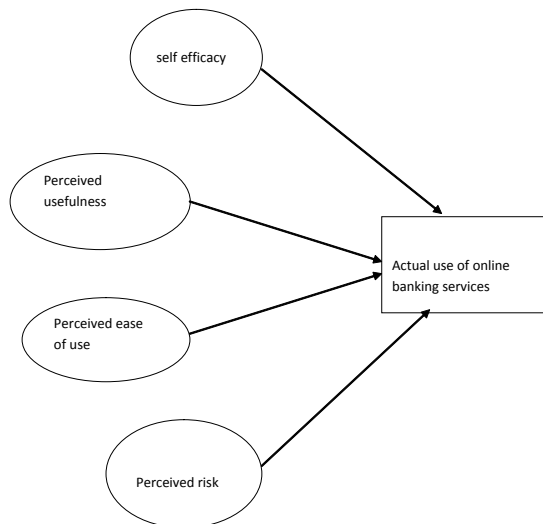
Self Efficacy

Self efficacy refers as an individual's self confidence in their ability to perform tasks across computer and its application domains (Al-somali et. al., 2009). Wang et al., (2003), Gerrard and cunnighm (2003) states that, stronger a person's self-efficacy beliefs the more likely he or she will adopt the online banking technology. Individuals computer self efficacy have positive relationship with their intention to adopt online banking through their perceived usefulness and ease of use (Amin, 2007; Mouakket, 2009). This shows higher the computer self efficacy more comfortable in online banking usage. So the following hypothesis was proposed to identify whether computer self-efficacy of the individuals in terms of efficiency of surfing internet, ability to test the functions of online bank website and level of seeking reference manual for will influence their actual usage of online banking services.

H4. Individuals perceived self efficacy have significant effect on actual usage of online banking adoption.

Based on the above hypothesis the following research model (Figure 1) is constructe

Figure 1: Research Model



Research Methodology

This study aims to empirically test the various factors of Technology acceptance model proposed by Davis (1989)

along with individual's online self efficacy and their perception towards risk to identify those factors that influence youngster's choice of actual use of online banking services. Students are found to be the heavy online users (Arnaudovska et al., 2010). They are also considered as representative of young population in any country; hence they are used as samples in this study. On the basis of number of educational institutions five major cities namely Chennai, Coimbatore, Salem, Trichy and Erode in the state of Tamilnadu one of the fast growing states in India in terms of Information Technology and infrastructure were selected for this study. 150 students pursuing engineering degree were selected from a random selection of different engineering colleges in these five cities. Students with minimum one year online banking experience were only considered for the study.

The final sample size after elimination for incompleteness of questionnaire was 105. Data was collected with the help of a questionnaire. The questionnaire items represent technology acceptance model factors proposed by Davis (1989), risk and online technology efficacy proposed by Safeena, (2011), Al-somali et al., (2009), Pikkaranien et al., (2004) and Mouakket, (2009). The responses were measured by five point Likert scales with the anchors ranging from "Strongly agree" to "Strongly disagree". Analysis of demographic of respondents reveal the average age of the respondents to be 25. 65% of the samples were men and 35% were women. Even though all of them are online banking users for more than 1 year, only 30% of the respondents had more than 5 years of internet experience.

To test the attributes influencing online banking usage Structural equation modeling was used with the help of Visual PLS Software package and SPSS (Statistical package for social science – 16.0). Structural equation modeling (SEM) expresses the relationship among several variables that can be either directly observed variables (manifest) or unobserved hypothetical (latent) variables (Udo et al., 2010). SEM is a powerful statistical tool that combines a measurement model (affirmative factor analysis) and the structural model (regression of path analysis) in to one statistical synchronic test. (Sadeghi and Hanzae, 2010).

Analysis and Results

Reliability and Validity Assessment

Reliability tests are used to refer to the accuracy of constructs. Cronbach's coefficient alpha was computed for each construct to test its reliability. According to Nunnally (1978), an alpha score larger then 0.7 is generally acceptable as sufficient accuracy for a construct. The reliability of each construct was measured by CITC values (Corrected item total correlation) of all its indicators. Table -1 shows the alpha values of each construct.

Table 1: Alpha Values for Constructs

Sl. No	Variables	Alpha
1.	Perceived usefulness	0.8410
2.	Perceived ease of use	0.8322
3.	Computer self-efficacy	0.7123
4.	Risk	0.9309
5.	Actual usage of online banking services	0.9166

All the constructs alpha value exceeds 0.8 which proves good reliability. After getting the purified data by conducting the reliability test, the constructs were tested for its convergent validity. The convergent validity is used to indicate the degree of association among the measures of a construct. The Average Variance Extracted (AVE) values are the indicators for the validity. An AVE value of above 0.5 indicates good convergent validity. The AVE values for all the constructs exceed 0.5 which proves good convergent validity.

Empirical Findings

After conducting the reliability and validity tests, the proposed hypothesis were tested by conducting the Structural Equation Modeling to measure standardized path coefficient. The boot strap procedure was employed in Visual- PLS software to get the t-statistics of each construct. The t- value is the indicator to confirm the significance level of hypothesis or path model relationship. A t-statistics of more than two leads to acceptance of hypothesis. The t values of all constructs are presented in Table-2.

The t-values exceed two for all the proposed constructs. Hence, the hypotheses H1, H2, H3 and H4 are statistically accepted. Therefore we interpret that Indian online banking user's perceived usefulness, perceived ease of use and their self-efficacy in using online technology have significant positive influence on their actual usage which is similar to studies in (Safeena, 2011) and (Al-somali et al., 2009). The young users who are students have high online efficacy and they are exposed to technology oriented products like internet, internet equipped mobile phones and credit cards at their young age. Their technology exposure may give them higher online efficacy and confidence over the technology

equipped channel like online banking. The youngsters may perceive the online banking channel as useful and easy for banking activities as online banking is devoid of constraints in terms of time and place and can be performed anytime, anywhere. In the formal education system in India, students are engaged from six to eight hours anytime between 8.00 am to 6.00 pm online banking channel with short and long breaks in between, hence for students users online banking may be a convenient channel which allows the student users to access their bank account at any time any where. In addition to that, students like to use the high-tech products like online banking, mobile banking etc., due to their young age. The youngster's perception towards risk shows negative influence on their actual usage of online banking services. The result is in line with other studies like Zhao (2010) and Eastin (2009). It shows that, young user's actual usage is influenced by their negative feelings towards security and privacy dimensions of online banking transactions. This may be attributed to the loss experienced by their past online transactions or lack of awareness of the existing security system. Hence the banks have to create awareness among the students by educating about their authentication system, soundness and privacy policies.

CONCLUSION

The Technology Accepted Model (TAM) identified few factors that influence actual usage of online technology. The aim of this paper was to extend TAM to add the perception towards risk of transacting online and online efficacy of individuals to capture their combined influence on actual usage of online banking services among young users in India. The study identified that all the variables, perceived usefulness, perceived ease of use, online self-efficacy and risk to influence youngster's actual usage of online banking channel. In Indian context, the young users are driven to use online banking technology because of its ease and usefulness. Further more, the self-efficacy also gives more confidence to the online banking users, which would in turn enhance their banking activity through online technology. It is also found that only the risk free online transactions may encourage the users in online banking activity. Hence the banking industry should pay attention to security and privacy guarantee

Table 2: Constructs and t Values

Sl.No	Path of the construct	Hypothesis	t-value	Result
1.	Perceived usefulness → Actual Usage	H1	3.162	S
2.	Perceived ease of use → Actual Usage	H2	5.098	S
3.	Perceived risk → Actual Usage	H3	3.474	S
4	Computer self-efficacy → Actual Usage	H4	2.985	S

S- Significant; Ns-Not Significant

displayed in online banking website. It is also suggested that, the banks need to educate their customers about their integrated security system and its soundness.

To generalize the findings of this study, the study can be further extended in different online context and country. The further research can be concentrated on the continuous usage of online banking users.

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