A STUDY ON FACTORS INFLUENCING CONSUMER ADOPTION OF INTERNET BANKING IN INDIA

RAKESH H M & RAMYA T J

Assistant Professor, Department of MBA, Vidyavardhaka College of Engineering, Mysore, Karnataka, India

ABSTRACT

A feature of the banking industry across the globe has been that it is increasingly becoming turbulent and competitive, characterized by an increasing trend towards internationalization, mergers, takeovers and consolidation of the banking industry. Internet penetration and concept of Internet banking has dramatically changed the Banking Industry. Internet banking is a internet portal through which customers can use different kinds of banking services. Internet banking has major effects on banking relationships. The primary objective of this research is to identify the factors that influence internet banking adoption. Using PLS, a model is successfully proved and it is found that internet banking is influenced by its perceived reliability, Perceived ease of use and Perceived usefulness. In the marketing process of internet banking services marketing expert should emphasize these benefits its adoption provides and awareness can also be improved to attract consumers' attention to internet banking services.

KEYWORDS: Banking Industry, Internet Banking, Adoption, Usefulness, Awareness

INTRODUCTION

Internet banking is creating dramatic changes for the banking industry. Internet banking is defined as an internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments. Banking can be done literally fro many where if one has a computer and net connectivity. Internet banking helps consumers in conducting fast and convenient financial transaction activities.

In many countries, internet banking has gained wide acceptance and India is no on looker to this phenomena. Banks in India started embracing technology in a massive way in the 90's, led in particular by the new private banks and multinational banks. The growing competition and growing expectations led to increased awareness amongst banks on the role and importance of technology in banking, forcing banks to go in for the latest technologies so as to meet the threat of competition and retain their customer base.

There are a lot of benefits in adopting internet banking for the banks and their customers. On the whole, Internet banking increases operational efficiencies and reduces costs, besides giving a platform for offering value added services to the customer, thereby fulfilling all the essential prerequisites for a flourishing banking industry. Study by IAMAI (2006) reveals that costs of banking service through the internet amount to a fraction of the costs through on ventional methods. According to the survey, assuming teller cost at Re 1 per transaction, ATM transaction costs is Re 0.45, phone banking is Re 0.35, debit cards costs Re 0.20 and Internet banking costs only Re 0.10 per transaction. However, banks cannot expect in stantreturns, unless the Internet population itself does not reach a critical mass. In today's environment besides their physical branches, banks need to enhance non-branch delivery networks as a part of their growth strategy.

The primary objective of this research is to identify the factors that influence internet banking A new construct "Perceived reliability" is proposed to enhance the understanding of an individual's acceptance behavior of internet banking

with respect to consumers' perceived security, privacy issues and the perceived risk of consumers. Consumer awareness of internet banking is proposed as the precursor of forming positive attitudes with respect to usefulness, ease of use and reliability, and ultimately adopting internet banking. Using PLS, the model is successfully proved and it is found that internet banking is influenced by its perceived reliability, perceived ease of use and perceived usefulness.

LITERATURE REVIEW

Prior studies in internet banking range from Sathye's (1999) study in Australia, Tan and Teo's (2000) research in Singapore, Hoppe et al's (2001) study in South Africa, Chung and Paynter's (2002) in New Zealand, Wang et al's (2003) study in Taiwan. Among the Indian internet banking researches are Mookerji (1998), Pegu (2000), Gupta (1999) and Dasgupta (2002), Raoet. al. (2003), Ravi et al (2007).

Several studies indicate that online bankers are the most profitable and wealthiest segment to banks (Mols, 1998; Robinson, 2000; Sheshun off, 2000). There could be two fundamental reasons underlying internet banking development: cost savings for banks and reduction of branch networks which has paved the way to self-service channels as quite many customers felt that branch banking took too much time and effort (Karjaluoto et al., 2003). Therefore, time and cost savings and freedom from place have been found the main reasons underlying online banking acceptance (Polatoglu and Ekin, 2001; Black et al., 2002; How croft et al., 2002).

On the customer front internet banking provides many advantages (Pikkarainen et al, 2004; Hway- Boon and Cheng Ming Yu, 2003). Time and cost savings and freedom from place have been found the main reasons underlying online banking acceptance (Polatoglu and Ekin, 2001; Black et al., 2002; How croft et al., 2002). Several studies have analyzed consumer adoption and growth of internet banking.

As noted earlier, online banking offers many benefits to banks as well as to customers. However, in global terms the majority of consumers are still not using online banking channel. There exist multiple reasons for this. To start with, new online users need first to learn how to use the service (Mols et al., 1999. Second, customers have been afraid of security issues (Sathye, 1999; Hamletand Strube, 2000; How croft et al., 2002). Ndubisi et al (2004) also established the importance of adequate security in order to raise the confidence of consumers to use internet banking.

Hypothesis for the Study

H_1: Awareness level of consumers on the concept of internet banking has a positive effect on the perceived ease of use of internet banking.

H_2: Awareness level of consumers on the concept of internet banking has a positive effect on the perceived usefulness of internet banking.

H_3: Awareness level of consumers on the concept of internet banking has a positive effect on the perceived reliability on internet banking.

Perceived Ease of Use

Perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort. Extensive research over the past decade provides evidence of the significant effect of perceived ease of use on usage, either directly or indirectly through its effect on perceived usefulness (Agarwal and Prasad, 1999; Davis et al, 1989; Hu et al, 1999, Venkatesh, 1999; Venkatesh and Davis, 1996, 2000; Venkatesh and Morris, 2000). Information technologies that are easy to use will be less threatening to the individual (Moon and Kim, 2001). This implies that

perceived ease of use is expected to have a positive influence on users in their interaction with internet banking systems. It is also found that ease of use positively correlate s with use of consumer technologies, such as computer software (Davis, 1989; Venkatesh and Davis, 1996). Suganthi et al (2001) label one of their dimensions "ease of use" showing its effect on internet banking adoption. Therefore the more the consumer perceives internet banking as easy to use, the more he or she is likely to adopt internet banking. Hence the following hypothesis:

H_4: Perceived ease of use has a positive effect on consumer adoption of internet banking

Perceived Usefulness

Davis (1989) asserts that the decision to use new technology is determined by the extent to which a person believes that it is cost effective in providing goods or services compared to the current method. PU is defined as the degree to which a person believes that using a particular technology will enhance his performance. The PU is also an important variable from TAM (Araujo and Araujo, 2003; Noteber get al.2003). PU has been confirmed as an important variable that influences users' technology acceptance and therefore has received a great deal of attention from previous researchers. Internet banking provides two major advantages: convenience (Dabholkar, 1996; Gerrard and Cunningham, 2003; Karjoluoto et al, 2002; Meuter et al, 2000; Polatoglu and Ekin, 2001) and quick service (Karjaluoto et al, 2002; Kluglak, 1997), compared to traditional banking services. Convenience and effective management of personal finances are two advantages in using internet banking. Therefore if consumer perceives internet banking to have perceived usefulness, then the consumer is more likely to perceive internet banking as easy to use and reliable and also influence adoption of internet banking. The following are the hypotheses

H_5: Perceived usefulness has a positive impact on perceived ease of use of internet banking

H_6: Perceived usefulness has a positive impact on perceived reliability on internet banking

H_7: Perceived usefulness has a positive impact on consumer adoption of internet banking

Perceived Reliability

Customers frequently do not trust internet technology for two specific reasons: Security of the system and worries about the reliability of internet services (Lee and Turban, 2001). Strong concern about security is one common factor related to unwillingness to use internet channels for commerce (Black et al, 2001). Most customers are not satisfied with the infrastructure of web security systems (Black et al, 2002). In internet banking, security is one of the most important future challenges, because customers fear higher risk in using the web for financial transactions (Aladwani, 2001; Black et al, 2002; Gerrard and Cunningham, 2003; Sathye, 1999).

This study considers "Reliability" which explains the degree to which internet banking is perceived to be safe and reliable" in the offering and secure transmission of financial transactions. If the potential adopter of internet banking perceives that the new technology is not safe and believes that mistakes are likely to occur, she or he is not likely to adopt (Dabholkar, 1996). Sathye (1999) and Polatoglu and Ekin (2001) found that the security dimension was an important determinant for consumers who used electronic banking. Furthermore, Sathye (1999) found that security was positively related to the use of electronic banking. For banks, their immediate need is not simply to reduce fraud in internet banking. It is also about retaining consumers' confidence and making customers rely, not just in their bank and its ability to deliver secure access to their money, but also in internet banking as a key delivery channel. Therefore perceived reliability is expected to have a positive influence on adoption of internet banking.

H_8: Perceived reliability has a positive impact on consumer adoption of internet banking

RESEARCH METHODOLOGY

Data Collection Procedure

Data for the study was collected by means of a survey conducted in Mysore, India in July 2013. A total of 100 questionnaire forms were given to respondents of which 70 were returned with a response rate of around 70 percent. All the respondents were professionals from the educational industry who were internet banking users. It was interesting to find that all the respondents had minimal usage (use rarely) of internet banking. The questionnaire consisted questions related to background, possible factors affecting acceptance of internet banking and use of internet banking services. Likert five point scales ranging from "Strongly Agree" to "Strongly disagree" were used as a basis for questions.

Reliability and Validity

Reliability of the factors was estimated by using alpha. The reliability and Average Variance extracted (AVE) values are given in below table. The correlation of latent variables is shown in Table two. Since all AVE values are greater than 0.5 and alpha is greater than 0.70, convergent validity of the constructs in the model is proven.

Table 1: Reliability and Average Variance Extracted (AVE)

Construct	Composite Reliability	AVE	Alpha
Perceived Awareness	0.9345	0.7267	0.9107
Perceived Ease of Use	0.8342	0.6312	0.7083
Perceived Usefulness	0.9363	0.7124	0.9012
Perceived Reliability	0.8721	0.5729	0.8369

Establishing discriminate validity requires an appropriate AVE analysis. It is tested to see if the square root of every AVE (there is one for every latent construct) is much larger than any correlation among any pair of latent construct. As a rule of the thumb, the square root of each construct should be larger than the correlation of the specific construct with any of the other constructs in the model and should be at least 0.50. From table two, it can be noticed that AVE is greater than r square; discriminate validity is established for all constructs in the model.

Table 2: Correlation of Latent Variables

	Awareness	Reliable	Ease of Use	Usefulness	Adoption
Awareness	1.00				
Reliable	0.497	1.00			
Ease of Use	0.794	0.411	1.00		
Usefulness	0.734	0.663	0.699	1.00	
Adoption	0.552	0.556	0.454	0.548	1.00

Data Analysis and Results

The average age of respondents was 36years. Close to 62 percent of the respondents were male. All the respondents were belonged to the middle income and the upper income level. In analyzing the demographics there seemed to be no difference in the education level or occupation, but there is a significant variation between the male and female groups on their awareness level. Males have significantly higher scores than females on their level of awareness. There is no relationship between adoption and marital status. The study uses partial least squares for data analysis. The result shows that all relationships are significant at significant at 95 percent level. Internet banking adoption is predicted by awareness, perceived ease of use, perceived usefulness and perceived reliability. Almost forty five percent of the variance is explained by the model in the adoption of internet banking. The following table represents the result of testing the structural links of the research model using PLS analysis. The estimated path coefficients are given along with the associated t value. All the coefficients are significant at 95 percent significance level providing strong support for the hypothesized relationships.

The results of the hypotheses testing i.e. relationships verified path coefficient, t- statistics and whether the hypothesis is supported are shown in Table three.

Table 3: Result of Hypotheses Tests

Hypothesis	Effects	Path Co-Efficient	T-Statistics	Remarks
H_1	Aware and Ease of Use	0.551	6.41	Supported
H_2	Aware and Usefulness	0.669	8.73	Supported
H_3	Aware and Reliability	0.198	1.23	Supported
H_4	Usefulness and Ease of Use	0.239	2.30	Supported
H_5	Usefulness and Reliability	0.473	2.43	Supported
H_6	Ease of use and Adoption	0.075	1.12	Supported
H_7	Usefulness and Adoption	0.293	3.65	Supported
H_8	Reliability and Adoption	0.341	3.39	Supported

- The relationship between awareness level and perceived ease of use was found to be significant (β =0.551) thereby supporting hypothesis 1.

- The relationship between awareness level and perceived usefulness was found to be significant (β =0.669) thereby supporting hypothesis 2.

- The relationship between awareness level and perceived reliability was found to be significant (β=0.198) thereby supporting hypothesis 3.

- The relationship between perceived usefulness and perceived ease of use was found to be significant (β =0.239) thereby supporting hypothesis 4.

- The relationship between perceived usefulness and perceived reliability was found to be significant (β =0.473) thereby supporting hypothesis 5.

- The relationship between perceived ease of use and internet banking adoption was found to be significant (β =0.075) thereby supporting hypothesis 6.

- The relationship between perceived usefulness and internet banking adoption was found to be significant (β =0.293) thereby supporting hypothesis 7.

- The relationship between perceived reliability and adoption was found to be significant (β =0.341) thereby supporting hypothesis 8.

    Hence all hypotheses are supported.

CONCLUSIONS

The r square values of awareness influencing perceived ease of use, perceived usefulness and perceived reliability is 0.542, 0.496 and 0.327 respectively. Perceived ease of use and perceived usefulness are both influenced by awareness to some extent. The relationships are positive showing that the relationships exist. Awareness influences perceived usefulness to a larger extent, while perceived ease of use has the least influence on internet banking adoption.

This could be because, the sample consisted of teaching professionals and bankers who already find computers and internet easy to use and hence did not feel that it is the primary influencing factor towards adoption of internet banking. In sum, all hypotheses have been proved, in that, Awareness, need, perceived usefulness, perceived ease of use, perceived reliability clearly have a positive effect on the use of internet banking.

Limitations and Further Research

The study has few important limitations that affect the findings of the study;

- The first limitation concerns the sample, which comprised of only one socio-economic status and occupation, teaching professionals

- Another limitation regards the size of the sample. The size of the sample is very small to make generalizations on adoption of internet banking.

- Another limitation concerns inclusion of only one moderating variable. On this basis, the model might also suffer from the fact that other possible factors influencing the acceptance of online banking were not included in the model.

- These limitations pave the way to future studies. The other interesting avenue for further research could be a detailed study on internet banking usage including respondents from different backgrounds.

REFERENCES

1. Lee, P. "The Cutting Edge: So Far, Online Banking is Mostly Wishful Thinking," Los Angeles Times, September 30, 1996, p. D-1.

2. Rogers, E.M. and Shoemaker, F. (1971) 'Communications in Innovation', Free Press, New York, NY.

3. Robinson, G. (2000) 'Bank to the future', Internet Magazine, www.findarticles.com.

4. Sathye, M. (1999) 'Adoption of Internet banking by Australian consumers: an empirical investigation', International Journal of Bank marketing, Vol 1**7**, No. 7 pp. 324-334.

5. Sohail, M.S and Shanmugham, B. (2003) 'E-banking and customer preferences in Malaysia: An empirical investigation', Information Sciences, Vol 150, No 4, pp 207-217.

6. Stewart, K. (1999) 'Transference as a means of building trust in World Wide Web Sites', in: Proceedings of the 20th ICIS, Charlotte, North Carolina.

7. Hair, J. F., Anderson, R. E., Tatham, R.L. and Black, W.C (1995) Multivariate Data Analysis. Prentice-Hall Inc. Englewood Cliffs, New Jersey.

8. Jayawardhena, C. and Foley, P. (2000) 'Changes in the banking sector – the case of internet banking in UK, Internet Research', Electronic Networking Applications and Policy, Vol. 10, No. 1.pp.19–30.

9. Karjaluoto, H.; Mattila, M. and Pento, T (2002) 'Factors underlying attitude formation towards online banking in Finland', International Journal of Bank Marketing, **Vol 20**, No. 6, pp. 261-272.

10. Mattila, A. and Mattila, M. (2005) 'How perceived security appears in the commercialisation of internet banking, Int. J. Financial Services Management, Vol, No 1, pp 23-34.

11. Balachandher, K.G.; Santha, V.; Norhazlin, I.; and Prasad, R. (2000) 'E-banking in Malaysia: A note on evolution of services and consumer reactions', Journal of International Banking and Commerce, Vol 5, No**.** 1, pp 34-45.

12. Bielski, L. (2000) 'E-business models stress putting the customer first', ABA Banking Journal, Issue 2000, pp. 67–76.

13. Broderick, A. and Vachirapornpuk, Y (2002) 'Service quality in Internet banking: the importance of customer role', Marketing Intelligence and Planning, No. 20, pp.55-77

14. Clark, M.S and Mills, J. (1993) 'The difference between communal and exchange relationships', Personality and Social Psychology Bulletin, Vol 19, pp. 684–691.

15. Daft, R.L and Lengel, R.H (1986) 'Organizational information requirements, media richness, and structural design', Management Science, Vol**32**, pp. 554–571.

16. Naimi Braghani, Sara (2007), "factors influencing the adoption of internet banking", Lulea university of technology, master thesis in marketing and E-commerce