BEST: International Journal of Management, Information Technology and Engineering (BEST: IJMITE)
ISSN (P): 2348-0513, ISSN (E): 2454-471X,
Vol. 3, Issue 11, Nov 2015, 53-62

FACTORS INFLUENCING CUSTOMER SATISFACTION OF INTERNET BANKING ADOPTION IN BURDWAN DISTRICT

SOUVIK SINGHA[1] & TANMOY DASGUPTA[2]

[1]Department of Computer Application, Techno India University, West Bengal, India

[2]Department of Business Administration, Burdwan University, West Bengal, India

ABSTRACT

The financial products and services have become available over the Internet. This has thus become an important distribution channel for a numbers of banks. In recent years, the internet banking has become a useful platform to easily access banking services. This research aims to investigate factors that influence the behavioral intention to use internet banking in Burdwan District. The primary objective of this research is to identify the factors that influence internet banking adoption. This paper makes a contribution of internet banking literature by providing insights on the factors that internet banking is influenced by its perceived reliability, Perceived ease of use and perceived usefulness.

KEYWORDS: Internet Banking, Perceived usefulness, Perceived Ease of Use, Adoption, Factors, Customer

INTRODUCTION

In recent years the Internet has been growing and offering many Web-based applications as a new way for organizations to retain their customers and offer them new services and products (Tan &Teo, 2000). In order to make advantage of this application for both parties (customer and organizations), it is crucial to analyze the genuine perception and main reasons of people's willingness to adopt these technologies (Lee, 2009; Liao & Cheung, 2002). Internet banking has emerged as one of the most profitable e-commerce applications (Lee, 2009). Most banks have deployed Internet banking system in an attempt to reduce costs while improving customer service (Xue, Hitt, & Chen, 2011) and ensuring customer satisfaction. Despite the potential benefits that Internet banking offers to consumers, the adoption of Internet banking has been limited and, in many cases, fallen short of expectations (Bielski, 2003). Internet banking is defined as the use of banking services through the computer network (the Internet) offering a wider range of potential benefits to financial institutions due to more accessibility and user friendly use of the technology (Aladwani, 2001; Yiu, Grant, & Edgar, 2007). With Internet banking, customers can perform electronically, a wide range of transactions such as writing checks, paying bills, transferring funds, printing statements, and inquiring about account balances through the bank's website. Furthermore, Internet banking has a significant impact on e-payments, offering a platform to support many e-commerce applications such as online shopping and Internet stock trading.

REVIEW OF LITERATURE

Internet Banking, defined as "the delivery of banking services through the open access computer network (the Internet) directly to customers' home or private address" (Lau, 1997), offers a wider range of potential benefits to financial institutions (Howcroft & Durkin, 2000; Mols, 1998) due to more accessible and user friendly use of the technology, as the Internet does not restrict banks to any specific physical locations. The technology, therefore, allows

banks to think and operate in new geographical zones with new markets, market space and product scopes. Internet banking is therefore believed to improve customer satisfaction as it can provide faster, easier, and more reliable services through a single platform, if they access the bank's web site. Indeed, research by Deloitte Consulting (2000) revealed that roughly one-half of consumers would first enquire with their existing banker if they needed a new financial product. Therefore, if correctly aligned, Internet banking offers an excellent opportunity for cross-selling banking services and products and thus, enhances the bank's competitive position, meets consumer demands better, creates new distribution channels, improves the business image, and reduce costs (Currie, 2000; Lam & Burton, 2005). In the banking sector Internet banking is clearly, attractively and potentially a rich research context. Several research projects have focused on the factors having impacts on the adoption of information technology or Internet but there is limited empirical works which capture the nature and essence of Internet adoption in the banking sector.

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 Zealands, Wang et al's (2003) study in Taiwan. Significant among the Indian Internet banking researches are Mookerji (1998), Gupta (1999), Dasgupta (2002),Rao et al (2003),Ravi et al (2007). Several studies indicate that internet bankers are the most profitable and wealthiest segment to banks (Mols, 1998; Robinson, 2000; Sheshunoff, 2000). There could be two fundamental reasons underlying internet banking development and diffusion, 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 to be the main reasons underlying online banking acceptance (Polatogul and Ekin, 2001; Black et al., 2002; Howcroft 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 Internet banking acceptance (Polatogul and Ekin, 2001; Black et al., 2002; Howcroft et al., 2002). Several studies have analyzed consumer adoption and growth of Internet banking.

As noted earlier, Internet 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 must first learn how to use the service (Mols et al., 1999). Second, customers have been afraid of security issues (Sathye, 1999; Hamlet and Strube, 2000; Howcroft 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.

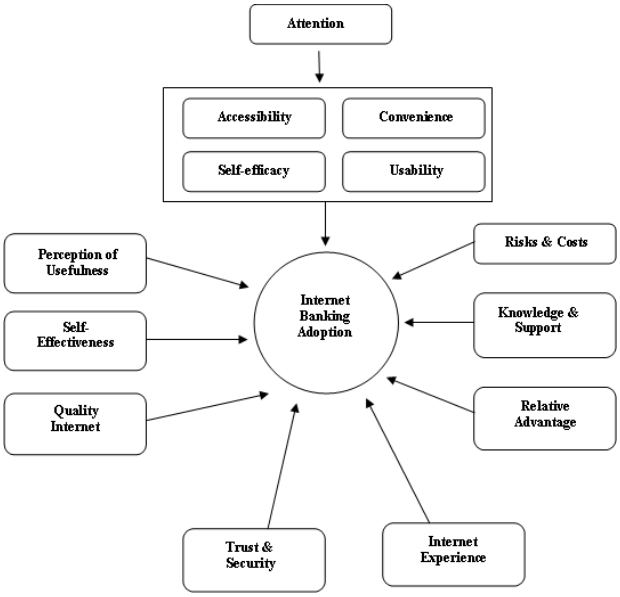

Figure 1: Internet Banking Adoption Model

FACTORS INFLUENCING THE ACCEPTANCE OF INTERNET BANKING

Many factors are seen to be influencing the acceptance of Internet Banking and it is important to take these factors into account when studying customer attitudes towards Internet Banking. Awareness of service and its benefits (Pikkarainen, 2004) has reported that the amount of information a customer has about Internet Banking and its benefit may has a critical impact on the adoption of Internet banking. In addition (Howcroft et al., 2002) find that lack of awareness of Internet banking services and its benefits are found to be reasons for customers' reluctance to use Internet banking services. Security and reliability of transactions over the internet is a burning issue and it is an important factor that customers consider before adopting Internet banking.

Perceived Usefulness (PU)

Perceived usefulness is the degree to which a person believes that using a particular system would enhance their performance. In fact, researches on information system adoption suggest that a system that does not help people perform their jobs is not likely to be received favourably (Nysveen et al., 2005). Perceived usefulness is also known as performance expectancy (Venkatesh et al., 2003). Perceived usefulness is recognized as having strong positive effect on the intention of adopters to use the innovation.

Perceived Ease of Use (PEOU)

Perceived ease of use is defined as the degree to which a person believes that using a particular system would be free of physical and mental effort. Cooper (1997) identifies "ease of use" as one of the three important characteristics from customers' perspective for adoption of innovative service. Wallis (1997) identifies that technological innovation must be easy to use to ensure customer take up or acceptance.

Perceived Reliability (PR)

One of the major influencing factors around the establishment and use of new technologies for financial transactions is that of security and trust (McKnigh, Choudhury&Kacmar, 2002). The need for security of personal details

and financial information is therefore critical to the success of Internet Banking. As a result, the lower the perception of risk involved in using Internet Banking, the more likely that it will be adopted.

Perceived Compatibility

Compatibility refers to how well a technology fit with an individual's working and lifestyle, value and needs (Agarwal&Presad, 1997). Those who feel banking via this channel is compatible with their lifestyle would more likely to adopt Internet Banking.

Cost

Price/Cost is one of the single most important factors that influence the consumer adoption of innovation. Suganthy et al. (2001) found cost as one of the major characteristics of Internet Banking. Two types of costs are involved in the Internet Banking, viz. normal costs associated with Internet activities and second is the bank charge and cost (Sathye, 1999). If consumers use new technologies, the technologies must be reasonably priced relative to alternatives (Willis 1997). Otherwise, the acceptance of the new technology may not be viable from the standpoint of the customer.

RESEARCH MODEL AND HYPOTHESES

PU and PEOU are significant factors affecting acceptance of an information system or new technology. Hence an application perceived to be useful, perceived to be easier to use than another is more likely to be accepted by the user. By applying these into internet banking context we hypothesize:

- **H1:** Perceived usefulness has a positive effect on use of internet banking.
- **H2:** Perceived ease of use has a positive effect on use of internet banking.

PR is one of the major factors affecting consumer adoption, as well as customer satisfaction of internet banking services. PR usually arises from uncertainty. Hence we hypothesize:

- **H3:** Perceived reliability have a negative impact on use of internet banking.

Based on literature review this research model consists of three factors that probably have an effect on customer acceptance of internet banking in Burdwan District. Factors are Perceived usefulness (PU), Perceived ease of use (PEUS) and Perceived reliability (PR). Awareness is modeled as having a indirect influence on internet banking adoption through influencing the variable. The internet banking literature supports that individual factors like knowledge has an impact on customers adoption of internet banking. The benefits associated with internet banking and their knowledge of how to use basic technology. Therefore customers who are more aware of internet banking are more likely to perceive internet banking as more useful, easy to use and more reliable. Here the following hypotheses are framed:

H4: Awareness level of customers on the concept of internet banking has a positive effect on the perceived ease of use of internet banking.

H5: Awareness level of customers on the concept of internet banking has a positive effect on the perceived usefulness of internet banking.

H6: Awareness level of customers on the concept of internet banking has a positive effect on the perceived reliability on internet banking.

H7: Perceived usefulness has a positive impact on perceived ease of use of internet banking.

H8: Perceived usefulness has a positive impact on perceived reliability on internet banking.

H9: Perceived usefulness has a positive impact on customer adoption of internet banking.

H10: Perceived ease of use has a positive effect on customer adoption of internet banking.

H11: Perceived reliability has a positive impact on customer adoption of internet banking.

RESEARCH METHODOLOGY

The key intention of this paper is to evaluate those factors that manipulate the nature of customer towards Internet banking in Burdwan district. A survey instrument in the form of questionnaire was developed through data collection for acceptance of internet banking.

Reliability is the factor was estimated by using Cronbach's Alpha. The values are given in Table 1. The correlation of latent variables are shown in Table 2, given all AVE (Average variance extracted) values are greater than 0.5 and Cronbach's alpha is greater than 0.70. So the convergent validity of the constructs in the model is proven. Establishing discriminate validity require an appropriate AVE analysis. It is tested to see if the square root of every AVE is much greater than any correlation among any pair of latent construct. 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 2, it can be noticed that AVE is greater than r square, discriminate validity is established for all constructs in the model.

RESEARCH QUESTIONNAIRE

A questionnaire will develop to gather data, and will be divided into four sections, as discuss below.

Internet Banking Usage: This section aim at gathering information relating to respondent.

Banking: The banking section asks questions relating to which banks respondents use.

Factors of influence: This section related to whether respondents actually use or intended to use Internet banking, and what factors would likely influence their usages in this regards.

Demographic Profile: This section aim at obtaining demographic data about respondents, including gender, age, education, employments status, and income.

Hence the hypotheses are:

H12: Demographic Characteristics, such as gender, age, instruction, and occupation have a significant effect on consumer adoption of Internet banking.

H13: Convenience has a positive effect on consumer adoption of Internet Banking.

H14: The prior internet knowledge has a positive effect on consumer adoption of Internet Banking.

H15: Security perception has a positive effect on customer adoption of Internet Banking.

H16: The perceived risk of using Internet banking, the more likely that Internet banking will be adopted.

Table 1: Reliability and Average Variance Extracted (AVE)

Construct	Composite Reliability	AVE	Cronbach Alpha
Awareness	0.925605	0.717839	0.901806
PR	0.896936	0.597718	0.859418
PEOU	0.840700	0.637729	0.714763
PU	0.918513	0.694602	0.883286

Table 2: Correlation of Latent Variables

	Awareness	PR	PEOU	PU	Adoption
Awareness	1.000				
PR	0.442	1.000			
PEOU	0.712	0.441	1.000		
PU	0.669	0.501	0.611	1.000	
Adoption	0.556	0.550	0.421	0.528	1.000

DATA ANALYSIS AND RESULTS

Perceived Utility of Internet Banking Services

In this section this paper referred to the customer's perceived utility of various internet banking services. Respondents were provided with a list of internet banking services in Burdwan district.

- Review account balances (86%)
- Recent transaction or mini- statement (60%)
- Review credit cards balances (55%)
- Status on cheque, stop payment on cheque (43%)
- Change of pin (9%)
- Ordering cheque books (7%)
- Bill payment processing (7%)
- Access to loan statements (7%)
- Domestic fund transfers (6%)
- Mobile recharging (4%)

Influence of Demographic Variables

The usages of Internet banking in Burdwan district was tested to see whether it is associated with demographic variables are gender, age, education, income and profession. It may be said that the internet banking usage is not associated with demographic variables except age and education as their estimated correlation coefficients were .611 and .521 respectively, significant .05 level.

Table 3: Result of Hypotheses Test

Hypothesis	Effects	Path Co- efficient	Remarks
H4	Aware & PEOU	0.552	Supported
H5	Aware & PU	0.668	Supported
H6	Aware & PR	0.190	Supported

Table 3 – Contd.,			
H7	PU & PEOU	0.246	Supported
H8	PU & PR	0.373	Supported
H9	PEOU & ADOP	0.095	Supported
H10	PU & ADOP	0.290	Supported
H11	PR & ADOP	0.361	Supported

The r square values of awareness influencing perceived ease of use, perceived usefulness and perceived reliability is 0.547, 0.446 and 0.270 respectively. Awareness influences perceived usefulness to a large extent, while perceived ease of use has the least influence on internet banking adoption. In sum, all hypotheses have been proved that awareness, perceived usefulness, perceived ease of use, perceived reliability have clearly a positive effect on the use of internet banking in Burdwan district.

CONCLUSIONS

In this study the factors influencing the acceptance of Internet banking model has successfully proved that internet banking is influenced by its perceived usefulness, perceived ease of use and perceived reliability. Awareness can also be improved to attract customers' attention to internet banking services. The result of this paper shows that PU, PEOU and PR are the important determinants of internet banking adoption. This study conducted to explore the factors influencing intention to adopt internet banking services in Burdwan district.

REFERENCES

1. Tan, M., &Teo, T. S. H. (2000). Factors influencing the adoption of Internet banking.Journal of the Association of Information Systems, 1 (1).
2. Lee, M-C. (2009). Factors influencing the adoption of Internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. Electronic Commerce Research and Applications 8(3), 130-141.
3. Lee K. C., and Chung, N. (2011). Exploring antecedents of behavior intention to use Internet banking in Korea: Adoption Perspective. In E-adoption and socio-economic impacts: Emerging infrastructural effects. New York: IGI global.
4. Xue, M., Hitt, L. M., & Chen, P. (2011). Determinants and outcomes of Internet banking adoption. Management Science, 57(2), 291-307.
5. Bielski, L. (2003). Striving to create a safe haven online: ID theft, worms, bugs, and virtual eavesdropping banks cope with escalating threat.ABA Banking journal, 95(5).
6. Aladwani, A. M. (2001). Online banking: A field study of drivers, development challenges, and expectations. International Journal of Information Management, 21(3), 213-225.
7. Yiu, C. S., Grant, K., & Edgar, D. (2007). Factors affecting the adoption of Internet banking in Hong Kong-Implications for the banking sector.International Journal of Information management, 27(5), 336-351.
8. Lau, E. (1997). Government policy on smart card applications and Internet banking.Hong Kong Monetary Authority.
9. Howcroft, B., &Durking, M. (2000). Reflections on bank-customer interactions in the new millennium.Journal of

Financial Services marketing, 5(1), 9-20.

10. Mols, N. P. (1998). The Internet and the banks' strategic distribution channel decisions. International Journal of bank Marketing, 17(6), 295-300.
11. Deloitte Consulting, (2000). Myth vs. reality in financial services: What your customers really want.
12. Currie, W. (2000). The global Information society.
13. Lam, R., & Burton, S. (2005). bank selection and share of wallet among SMEs: Apparent differences between Hong Kong and Australia. Journal of Financial Services Marketing, 9(3), 204-213.
14. Sathye, M. (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. International Journal of Bank marketing, 17(7), 324-334.
15. Hoppe, R., Mugera, P., & Newman, P. (2001). Factors affecting the adoption of Internet banking in South Africa: A comparative study.
16. Chung, W., &Paynter, J. (2002). An evaluation of Internet banking in New Zealand.Proceedings of the 35th Annual Hawaii International Conference on System Sciences (HICSS'02), 7, 185.
17. Wang, Y. S., Wang, Y. M., H, L. H., & Tang, T. I. (2003). determinants of user acceptance of internet banking: An empirical study.m International Journal of Service Industry Management, 14(5), 501-519.
18. Gupta, D. (1999). Internet banking: where does India stand? Journal of Contemporary Management, 2(1).
19. Dasgupta, P. (2002). Future of E-Banking in India.available at www.projectshub.com.
20. Mols, N. P. (1998). The Internet and the banks, strategic distribution channel decisions.International Journal of bank Marketing, 116(5), 195-201.
21. Robinson, T. (2000). Internet banking-still not a perfect marriage.Information week, 17(4), 104-106.
22. Sheshunoff, A. (2000). Internet banking- an update from the frontliners. ABA Banking Journal, 92(1), 51-55.
23. Karjaluoto, H., Koivumaki,T., &Salo, J. (2003). Individual differences in private banking: empirical evidence from Finland. Proceedings of the 36th Hawaii International Conference on System Sciences (HICSS), 196.
24. Polatoglu, V. N., &Ekin, S. (2001). An empirical investigation of the Turkis consumers' acceptance of internet banking services.International journal of Bank Marketing, 19(4), 156-65.
25. Black, N. J., Lockett, A., Ennew, C., Winklhofer, H., &McKechnie, S. (2000). Modeling consumer choice of distribution channels: an illustration from financial services. International Journal of Bank Marketing, 20(4), 161-173.
26. Howcroft, B., Hamilton, R., & Hewer, P. (2000). Consumer attitude and the usage and adoption of home-baseb banking in the United Kingdom. The International Journal of Bank Marketing, 20(3), 111-121.
27. Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., &Pahnila, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. Internet Research: Electronic Networking Applications and Policy, 14(3), 224-235.

28. Hway-Boon, O., & Yu, C. M. (2003). Success factors in e-channels: The Malaysian banking scenario. International Journal of Bank Marketing, 21(6/7).
29. Mols, N. P., Bukh, N. J., & Neilson, J. F. (1999). Distribution channel strategies in Danish retail banking. International Journal of Retail and Distribution, 27(1), 37-47.
30. Hamlet, C., &Strube, M. (2000). Community banks go online. ABA Banking Journal's, 61-65.
31. Ndubisi, N. O., Supinah, R., &Guriting, P. (2004). The extended technology acceptance model and internet banking usage intention. International Logistic Congress proceeding, Turky, 973-988.
32. Nysveen, H., Pedersen, P.E. and Thornbjornsen, H. (2005). Intentions to use mobile services: Antecedents and cross-service comparisons. Journal of academy of marketing Services, 33(3), 330-346.
33. Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003). User acceptance of information technology: 27(3), 425-478.
34. Cooper, R.G. (1997). Examining Some Myths About New Product Winners, in Katz, R., ed., The Human Side of Managing Technological Innovation, Oxford, 550-560.
35. McKnight, D., Choudhury, V., &Kacmar, C. (2002). developing and validating trust measures for e-commerce: An integrative typology. Information Systems Research, 13(3), 334-359.
36. Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics, and perceived voluntariness in the acceptance of information technologies. Decision Sciences, 28(3), 557-582.
37. Wallis report (1997). The Financial System Inquiry Final Report, AGPS, Canberra.