A Framework For Understanding Consumer Perceived Characteristics Of Internet Banking As Predictors Of Its Adoption

***Prema. C**

INTRODUCTION

Internet banking is a form of electronic banking offered via the internet whereby consumers can perform and transact financial services in a virtual environment (Bradley & Stewart, 2003). Internet banking offers advantages as a retail channel, namely accessibility, direct communications, cost reductions and new markets (Anderson 1995; Cronin 1996; Daniel and Storey 1997; Doherty et al., 1999; Hughes 2001). The cost effectiveness of internet banking, compared to branch based or telephone banking has been widely discussed (Kelly 1996; Katz and Aspden 1997; Daniel 1997). **In true internet banking, any inquiry or transaction is processed online without any reference to the branch at any time. Using internet banking, consumers can conduct fast and convenient financial transaction activities. Internet banking in this study is defined as an internet portal, through which customers can use different kinds of banking services ranging from providing information and bill payment to making investments.**

With the advent of the Internet and the popularity of personal computers, there is both an opportunity and a challenge for the financial services industry, particularly the banking industry. After the internet penetration, the banking sector has undergone a huge revolution. Internet banking is changing the banking industry and is having major effects on banking relationships. Banking is now no longer confined to the branches were one has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts.

INTERNET BANKING IN INDIA

Internet banking is a new delivery channel for banks in India. The internet banking channel is both an informative and a transactional medium. However, internet banking has not been popularly adopted in India as expected (Ravi et al., 2007). The banks in India started internet banking initially with simple functions such as getting information about interest rates, checking account balances and computing loan eligibility. Then, the services were extended to online bill payments, transfer of funds between accounts and cash management services for corporates. Now, banks have started to facilitate payment of electronic commerce transactions by directly debiting bank accounts or through credit cards.

Internet has significantly influenced delivery channels of the banks and has emerged as an important medium for delivery of banking products & services. Detailed guidelines of RBI for Internet Banking has prepared the necessary ground for growth of Internet banking in India.

In the Indian context, many publications throw light over the importance of internet banking and also its prospects for the Indian banking industry. **Unnithan and Swatman (2001)** studied the drivers for change in the evolution of the banking sector, and the move towards electronic banking by focusing on two economies, Australia and India. The study found that Australia is a country with internet-ready infrastructure as far as telecommunication; secure protocols, PC penetration and consumers' literacy are concerned. India, by comparison, is overwhelmed by weak infrastructure, low PC penetration, developing security protocols and consumer reluctance in rural sector. Although many major banks have started offering internet banking services, the slow pace will continue until the critical mass is achieved for computers, internet connections and telephones. However, the upsurge of IT professionals with growing demands is pressuring the government and bureaucracy in the country to support and develop new initiatives for a faster spread of internet banking.

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Rao and Prathima (2003) provided a theoretical analysis of internet banking in India, and found that as compared to the banks abroad, Indian banks offering online services still have a long way to go. For online banking to reach a critical mass, there has to be sufficient number of users and the sufficient infrastructure in place.

Various authors in the last decade have found that the popularity of internet banking in India is growing very fast **(Gupta, 1999; Dasgupta, 2002)** and it is expected that a large sophisticated and highly competitive internet-banking market will definitely develop soon.

Almost all the banks operating in India are having their websites, but only a few banks provide full fledged transactional internet banking. **A survey carried out by Malhotra and Singh (2007) showed that only 48 percent of the commercial banks operating in India as in March-end 2005 offered internet-banking. A visit to the websites of all commercial banks in India showed that all commercial banks (except two public sector banks) in India were offering some form of internet banking service as on in December 2008. As in all forms of technology innovations, PSU banks have remained lethargic in the race for adopting internet banking practices. There were very few nationalized banks like State Bank of India, Bank of Baroda, Allahabad Bank, Syndicate Bank, Bank of India, Union Bank of India, Canara Bank and Punjab National Bank that offered internet banking services before 2003. SBI's internet banking initiative, launched in July 2001, is doing quite well. But despite positive news like this, PSU banks still have a lot of catching up to do on the internet banking services front. Although almost all public sector banks have "internet banking" section on their websites, most of these banks do not match the number of online transactions provided by their private counterparts.**

Along with the favorable scenario in the techno-legal aspect, the increasing internet consumer base has taken the trend of online banking from basic information dissemination service to fund-based transactions on their accounts, hinting at the ample growth prospect of online banking in India.

NEED FOR THE STUDY

Quick adoption of internet banking can lead to success for the banks, consumers as well as for the economy. The evidence for consumers' reluctance to use internet banking calls for a scholarly inquiry about the underlying factors influencing individual consumers' decision to adopt internet banking.

Human beings, being creatures of habit will probably view anything that is new with caution and suspicion. The same applies to internet banking. People are cautious and often reluctant to move from traditional ways of banking to internet banking. On the other hand, globalization and its impact on the use of information technology in the banking industry compels banks to "push" clients towards internet banking.

Most of the earlier researchers have investigated the diffusion of new banking technologies in developed countries. Very less is known about the same in developing countries among which India is one. In India, comparatively less number of studies have been conducted on the current status of internet banking and internet banking adoption, particularly from the consumer point of view. Thus, there is a lot of scope for the research to present new ideas concerning consumer adoption of internet banking in India, which may be useful to the Indian banking industry.

REVIEW OF LITERATURE

❁There could be two fundamental reasons underlying internet banking development and diffusion on this basis of which no bank can underestimate the power of the internet channel. First, banks get notable cost savings by offering internet banking services. It has been proved that internet banking channel is the cheapest delivery channel for banking products once established. **(Sathye, 1999; Giglio, 2002)**. Second, banks have reduced their branch networks and downsized the number of service staff, which has paved the way for self-service channels as quite many customers felt that branch banking took too much time and effort **(Karjaluoto et al., 2003).**

Internet banking offers many benefits to banks as well as to customers. However, in global terms, the majority of the consumers are still not using the internet banking channel. Since internet banking is largely a technology-based procedure or process, it is logical to consider the technology itself when trying to understand who is utilizing it. Importantly, from a consumer standpoint, the technology necessary to reliably and securely process internet banking transactions has only recently become available and easily accessible to consumers. Technological innovations in and of themselves, however, do not necessitate the level or magnitude of change as seen recently in the retail banking

industry. Beyond being available, a technology must offer clear-cut benefits for both for bankers and customers in order to be successfully adopted and utilized.

❁ **Lee (2000)** presented a model of consumer adoption and diffusion of technological innovations in the United States. Diffusion of technologies such as ATMs, debit cards, smart cards, direct deposit, and direct payment were considered in the study. The model conceptualizes that an individual consumers' adoption of a technological innovation is influenced by consumer, innovation, and communication factors.

❁ **Polatoglu and Ekin (2001)** listed nine factors that, according to them, influenced the diffusion of internet banking. They were: relative advantage, observability, trialability, complexity, perceived risk, type of group, type of decision and marketing effort.

❁ **Gerrard and Cunningham (2003)** studied the diffusion of internet banking among Singapore consumers. The results showed that adopters of internet banking perceive the service to be more convenient, less complex, more compatible to them and more suited to those who are PC proficient.

❁ **Al-Sabbagh and Molla (2004)** found that the main drivers of adoption are compatibility, usefulness and ease of use.

❁ **White and Nteli (2004)** studied internet banking in UK. Using trade-off analysis to interview 56 internet banking customers, they identified and ranked five key service quality attributes to enable them to find out why there are not more customers in internet banking. Cluster analysis revealed two groups of respondents. One group was most concerned about security- related issues, while the other group was more interested in convenience, speed and timeliness of the service.

❁ **Lichtenstein and Williamson (2006)** conducted an interpretive study of Australian banking consumer experiences with the adoption of internet banking. The research provides an understanding of how and why specific factors affect consumer decision of whether or not to bank on the internet. A theoretical framework that conceptualizes and links consumer-oriented issues influencing adoption of internet banking was provided. The findings suggest that convenience was the main motivator for consumers to bank on the internet, while there was a range of other influential factors that may be modulated by banks.

❁ **Ndubisi and Sinti (2006)** examined consumer attitudes, system's characteristics and internet banking adoption in Malaysia. The research framework links attitudinal constructs such as importance to internet banking needs, compatibility, complexity, trialability, and risk to internet banking adoption. The results of the study reveal that the attitudinal factors play a significant role in internet banking adoption.

❁ **Hernandez and Mazzon (2006)** proposed a new method to investigate adoption of new technologies and tested the method on internet banking adoption in Brazil. A total of 600 respondents living in one of the biggest cities in Brazil were sampled for interviewing. Specifically, the results seems to suggest that intention to use internet banking is influenced solely by people's beliefs about internet banking.

❁ **Clemes et al (2006)** conducted a mail survey of 1,960 households in New Zealand to understand consumers' choice between electronic and non-electronic banking. The decision to use electronic banking was hypothesized to be a function of service quality dimensions, perceived risk factors, user input factors, price factors, service product characteristics, individual factors and demographic variables such as age, gender, marital status, income etc. The findings reveal that the service quality, perceived risk factors, user input factors, employment, and education are the dominant variables that influence consumer's choice of electronic banking and non-electronic banking channels.

❁ **Amin (2007)** conducted a study on internet banking adoption among young intellectuals in Malaysia. The aim of the study was to study technology acceptance of internet banking among undergraduate students in Malaysia, using the modified Technology Acceptance Model (TAM) as the theoretical framework. The results suggest that Perceived usefulness, perceived ease of use, perceived credibility had significant relationship with behavioural intention.

❁ **Qureshi et al (2008)** studied consumer acceptance of online banking in Pakistan, a developing country. In Pakistan, the adoption ratio was found to be very high. There were many banks which provided internet banking facilities to customers. The basic purpose of their research was to evaluate the customer acceptance of online banking. The study revealed that almost 50% of the clients shifted from traditional banking to online banking system. The core reason of this transfer was perceived usefulness, security and privacy provided by online banking.

❁ **Mukherjee and Nath (2003)** concentrated on the concept of trust in online relationship marketing in India and tested

a model of trust in which "shared value", "communication" and "opportunistic behaviour" were taken as antecedents of trust. They concluded that both shared value and communication played a significant positive role on trust and that trust had significant positive influence on commitment.

❁ **Srivastava (2007)** studied consumers' perception on usage of internet banking. The study focused on the factors that drive consumers to use internet banking. How consumers have accepted internet banking and how to improve the usage rate were also another area of focus. The research found that if skills of consumers can be upgraded, consumers will be more willing to use internet banking. In addition, the study shows that inhibitory factors like trust, gender, education, culture, religion , security and price can have only a minimal effect on the consumer mindset towards internet banking.

CONCEPTUAL FRAMEWORK

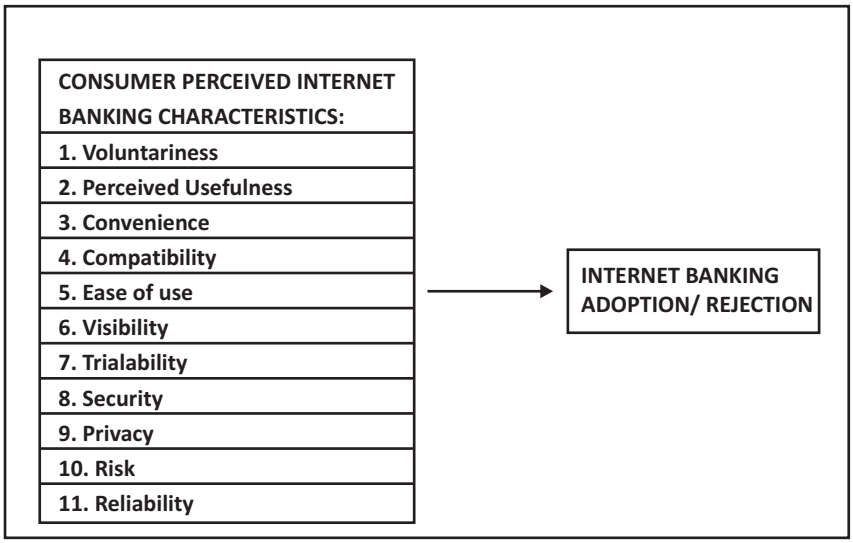
In the literature, consumers' adoption of internet banking as an innovation is consistent with the **Theory Of Diffusion Of Innovations (Rogers 1983) and the Technology Acceptance Model (TAM) (Davis ,1989)**. There have been a few studies more specifically in the area of information technology adoption (Moore and Benbasat, 1991). The theory of diffusion of innovation has not been much applied to financial innovations, which includes internet banking.

Rogers (1983, 1995) defines innovation as "T*he process by which innovation is communicated through certain channels over time among members of a social system*." The perceived characteristics of innovations, such as "Relative Advantage", "Compatibility", "Complexity", "Trialability" and "Observability" were proposed to determine individual consumers' decision to adopt technological innovations.

Moore and Benbasat (1991) drew on Rogers' five characteristics of innovation to develop an instrument that measures a wider range of user perceptions concerning an IT innovation. The instrument adds to the traditional ease of use measures by providing measures for "Relative Advantage", "Compatibility", "Result Demonstrability", "Ease Of Use", "Image", "Observability", "Voluntariness" And "Trialability". However, as internet becomes more pervasive in everyday life, the question of internet security and its impact on reliability is encountered. Studies on the consumer adoption of internet banking have not simultaneously considered security, privacy, risk and reliability as important determinants of adoption behaviour.

Perception of innovation characteristics includes "Voluntariness", "Relative advantage", "Compatibility", "Ease of use", "Trialability", "Visibility", (Moore and Benbasat, 1991). Relative advantage and ease of use constructs are similar to the concepts of perceived usefulness and perceived ease of use respectively, as given by Davis (1989) in the technology acceptance model (TAM). Another important construct identified in the literature as an important

Figure 1 : Research Framework



characteristic is "Convenience". "Ease of use" has also been used in both the technology acceptance model and the diffusion of innovations theory. Further, there are few more perceived innovation characteristics specifically for internet banking which include "Perceived Security" (Swaminathan, Lepowska-White and Rao,1999), "Privacy" (Gattiker et al,2000; Jones et al,2000, Hamlet and Strube,2000), "Perceived Risk" (Mols,1998; Walker at al,2002) and "Reliability" of internet banking (Lee and Turban,2001; Min and Galle,1999; paul,1996; Madu and Madu, 2002). The conceptual model for this research is given in Figure 1. It is hypothesized that internet banking adoption is a function of the perceived characteristics of innovation (internet banking).

PERCEIVED ATTRIBUTES OF INNOVATION

The following section identifies the main attributes or characteristics of innovations as established in prior adoption studies. A brief description of each characteristic is given

❁ **Voluntariness :** Voluntariness is *"The degree to which use of innovation is perceived as being voluntary or of free will"* (Moore & Benbasat, 1991, p.195).

❁ **Perceived Usefulness (PU) :** PU is defined as the degree to which a person believes that using a particular technology will enhance his performance (Davis ,1989). PU is also an important variable from Technology Acceptance model (TAM) (Araujo and Araujo, 2003; Noteberg et al.2003; Gefen at al., 2003; Matheison, 1991; Malhotra and Galleta, 1999).

❁ **Convenience:** Convenience of conducting banking outside the branch official opening hours has been found significant in cases of adoption (Ramsay and Smith,1999; Thorton and White,2001). Banks provide customers convenient, inexpensive access to the bank 24 hours a day and seven days a week. Various studies support this factor (For eg. Pew (2003), Gerrard and Cunningham (2003) (Gerson, 1998). , Li et al (1999), Chung and Paynter (2002). Time savings appears an important aspect of the convenience of online services (Bellman et al, 1999; Dellaert and Kahn, 1999)

❁ **Compatibility:** Compatibility is *"The degree to which an innovation is perceived as being consistent with the existing, past experiences and needs of potential adopters* (Rogers, 1995, p.15)." Compatibility with personal characteristics is positively related to innovation adoption since the more compatible they are, the less uncertainty to the potential adopter (Rogers, 1983; Tornatzky and Klein, 1982). Compatibility, which is based on attitude, includes, for instance, lifestyle. A study by Tan and Teo (2000), states that internet users who feel that using internet banking is compatible with their values about living and working are more inclined to adopt such services. It was found that internet banking users perceived the internet banking to be more compatible to them than non-users did (Gerrard and Cunningham, 2003).

❁ **Perceived Ease of Use (PEOU):** Perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort. According to TAM, the PEOU is one of the main variables influencing the use of technology. 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; Jackson et al,1997; venkatesh,1999,2000; Venkatesh and Davis,1996,2000; Venkatesh and Morris,2000). IT's 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.

❁ **Trialability :** Trialability refers to how easily a consumer can try an innovation before actual adoption (Rogers 1995, p.243). It is the degree to which an innovation may be experimented with on a limited basis. An innovation that can be tested under the consumer's own conditions is more likely to be adopted than an innovation that cannot be tried on a personal basis (Rogers, 1995). Consumers, who have opportunities to try internet banking, therefore, are expected to be more open to adoption of internet banking. Most banks in India have responded to this need by developing demos, which allow potential users to try out internet banking. The ability to conduct a trial may confirm how easy it is to use internet banking or for those who are apprehensive of the service, it may give them the necessary confidence.

❁ **Visibility:** Visibility refers to the degree to which an innovation is perceived as visible to others. Originally, Rogers (1995) included observability as a factor that enabled the diffusion of innovations. Observability is the degree to which

an innovation is visible to others (Rogers, 1995, p.244). Innovations that are easily observed and communicated by others generate greater exposures to potential adopters. Rogers (1995, p.244) suggested that the observability of an innovation is positively associated with its adoption. Observability was further split into visibility and result demonstrability by Moore and Benbasat (1991) in their study of diffusion of information technology. But as explained earlier, internet banking is an activity that requires privacy, and one cannot demonstrate financial transactions to others. Moreover, consumers cannot observe internet banking transactions of other consumers which normally is conducted privately. Result demonstrability is also not included as one cannot demonstrate a private financial transaction to other public. Hence, visibility alone is considered for this study and is defined as the degree to which internet banking is widely used or visible to others. The more it is visible, the likely its adoption.

❁ **Perceived Security:** Perceived security is a major reservation consumers have about internet banking. Concerns about transaction security such as potential cyber crime and errors in transactions can limit adoption of electronic technologies (Gingrade, 1998; Simms, 1999). Security is the state of being free from dangers like theft or losing money and information (Gefen et al, 2003). Consumer concerns about security and privacy have been noted by many experts (Miyazaki and Fernandez, 2001; Gefen et al., 2003; Nissenbaum, 2004). One particular survey by Chung and Paynter (2002) identified consumer fears regarding transaction security as an inhibitor to the adoption of internet banking. Security has also been identified as a key consumer concern in other internet banking adoption studies (Black et al., 2002; Siu and Mou., 2005). Hain et al (2003) observed that non-internet banking consumers were more concerned about security and privacy issues than internet banking consumers.

❁ One of the most significant challenges of internet banking has been consumers' security and privacy concerns. Security has been identified as one of the biggest barriers for the uptake of internet banking (Sathye 1999). Cooper (1997) and Daniel (1999) identified that an important factor affecting the acceptance and adoption of a new innovation is the level of security and risk associated with it. Even in countries where internet banking has long been established, one of the most important factors slowing progress of internet banking is the consumers concern for security of financial transactions over the internet. Security failure at a particular bank could not only cause large losses for that bank, but could spawn a general lack of reliability in internet banking transactions. Awamleh and Fernandes (2005) revealed that security of internet banking transactions has a significant impact on customer satisfaction in internet banking. Security of internet banking transactions was significant for those using internet banking for more than two years. White and Nteli (2004) showed that customers have concerns with the security and safety aspects of the internet. O'Connell (1996) and Daniel (1999) discovered that security concern is an important factor which affects acceptance and adoption of new technology or innovation.

❁ **Privacy:** Customers who adopt electronic financial services are more likely to perceive problems related to loss of privacy, as the internet seemingly allows other people to access their information easily (Gattiker et al,2000; Jones et al,2000). Customers do not always believe privacy policies will keep customer information confident (Gerrard and Cunningham,2003). The importance of security and privacy to the acceptance of internet banking has been noted in many other studies as well. (Hamlet and Strube 2000; Tan and Teo 2000; Polatoglu and Ekin 2001'; Black et al 2002; Giglio 2002; Howcraft et al 2002). To be more precise, privacy and security were found to be significant obstacles to the adoption of online banking in Australia (Sathye 1999).According to many studies (Westin and Maurici 1998; Cranor et al 1999), privacy issues have proven to be important barriers to the use of online services. Ramasay and Smith (1999) found privacy to be a key consumer concern. Confidentiality of consumer data is another important concern in the adoption of internet banking (Gerrard and Cunningham, 2003). Customers fear that someone will have unlimited access to their personal financial information.

❁ **Perceived Risk :** Perceived risk can also cause customers to reject new technology based service delivery. Perceived risk is related to reliability (Mols, 1998). Perceived risk is associated with consumers' uncertainty about decision outcomes and possible negative consequences associated with a particular choice (Dowling and Staelin, 1994). While Rogers' theory of diffusion of innovations does not make an explicit link between perceived risk and individual adoption, Risk perception as a barrier to product adoption and purchase has long been studied in marketing (Bauer, 1967; Dowling and Staelin,1994),but till date there are only a handful of studies which have made the connection between internet technology adoption and perceived risk (Featherman and Pavlou,2002;Lee et al,2005). Featherman and Pavlou's (2002) study, for example, integrates perceived risk theory and technology acceptance model (Davis et al,

1989) and identifies a model where perceived risk negatively influences intentions to adopt e-service.

❁ In internet banking, risk perceptions can escalate because there is no personal face-to-face contact. There is also a potential financial risk (potential loss of money/ assets) and perceived threat to privacy (release of sensitive information) (Milne and Boza, 1999). The risk perception of internet banking is a function of two concerns: Security (whether the information transmitted via the internet is safe) and privacy (whether internet banking provides privacy of sensitive customer information). The intangible nature of internet transactions tends to heighten the consumer's perception of risk. Black et al (2001), while not specifically using the word "*risk*", suggest that errors and the security afforded might be considered as measures of risk. Suganthi et al (2001) view risk in the context of security concerns. It can be thus concluded that risk in internet banking is related more to the security and privacy issues and as such only overall perceived risk is being captured in this study.

❁ **Perceived Reliability :** Reliability refers to the degree to which consumers believe a new technology will perform a job consistently and accurately. Reliability has been reported as critical when deciding whether or not to adopt technologies, such as information and data exchange technology (Simms,1999;Smith,1996;Takac and Singh,1992). The element of reliability in this context would determine the security of transacting for consumers generally and determine the acceptability rate of internet banking. If the potential adopter of internet banking perceives that the new technology is not reliable 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 reliability dimension was an important determinant for consumers who used electronic banking. Furthermore, Sathye (1999), Liao and Cheung (2002) found that reliability was positively related to the use of electronic banking.

BIBLIOGRAPHY

1) Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences* , Vol.30,2,361-391.
2) Amin, H. (2007). Internet Banking Adoption among young intellectuals. *Journal of Internet Banking and Commerce, December 2007* , Vol.12,3.
3) Anderson, S.W.(1995), 'A Framework for Assessing Cost Management system changes: The cost of activity-based costing implementation at General Motors 1986-1993', Journal of Management Accounting Research, Vol 7, No. Fall, pp.1-51.
4) Awamleh, R., & Fernandes, C. (2005). Internet Banking: An empirical investigation into the extent of adoption by banks and the determinants of customer satisfaction in the United Arab Emirates. *Journal of Internet Banking and Commerce* , Spring 05,Vol.9.
5) Black, N. J., Lockett, A., Ennew, C., Winklhofer, H., & McKechnie, S. (2002). Modeling consumer choice of distribution channels : an illustration from financial services. *International Journal of Bank Marketing , 20* (4), 161-173.
6) Bradley,L. and Stewart, K. (2003)The Diffusion of Online Banking, *Journal of Marketing Management*, 19, pp.1087-1109.
7) Cronin,M.J. (1996), *Global Advantage on the Internet: From Corporate connectivity to international competitiveness*, New York, Van Nostrand Reinhold.
8) Dabholkar, P. (1996). Evaluations of new technology based self service options: An investigation of alternative models of service quality. *International Journal of Research in Marketing , 13*, 29-51.
9) Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly , 13*, 318-339.
10) Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science , 35* (8), 982-1003.
11) Doherty,N.F., Ellis-Chadwick,F. and Hart,C.A. (1999), "Cyber Retailing in the UK: The Potential of the Internet as a Retail Channel", *International Journal of Retail and Distribution Management*, Vol.27, No.1, pp.22-36.
12) Hughes, T. (2001), "Market Orientation and the Response of UK Financial Services Companies to Changes in Market Conditions as a Result of E-commerce", International Journal of Bank Marketing, Vol.19,No.6, pp. 222-231.
13) Daniel, E. (1997), 'On-line Banking: Winning the majority', *Journal of Financial Services Marketing*, Vol. 2, No.3, pp.259-270.
14) Daniel, E. and Storey, C (1997), "On-line Banking: Strategic and Management Challenges", Long Range Planning, Vol. 30, No.6, pp.890-898.
15) Dasgupta, P. (2002). *Future of E-Banking in India.* available at www.projectshub.com.
16) Featherman, M., & Pavlou, P. (2002). Predicting e-services adoption: a perceived risk facets perspective. *International Journal of Human Computer Studies , 59* (4), 451-474.
17) Giglio, V. (2002, March/April). Privacy in the world of cyberbanking: emerging legal issues and how you are protected. *The Secured Lender* , 48-60.
18) Gingrade, A. (1998). Reshaping the infotech landscape of insurance. *Inform , 12* (5), 42-46.
19) Gefen, D., Karahanna, E., & Straub, D. W. (2003). Inexperience and experience with online stores: The importance of TAM and trust. *IEEE Transactions on Engineering Management , 50* (3), 307-321.
20) Gerrard, P., & Cunningham, J. B. (2003). The diffusion of internet banking among Singapore consumers. *The International Journal of Bank Marketing , 21* (1), 16-28.
21) Gupta, D. (1999). Internet banking: where does India stand? *Journal of Contemporary Management , 2* (1).
22) Hernandez, M. J., & Mazzon, J. A. (2006). Adoption of internet banking: proposiiton and implementation of an integrated methodology approach. *International Journal of Bank Marketing , 25* (2), 72-88.
23) Howcroft, B., Hamilton, R., & Hewer, P. (2002). Consumer attitude and the usage and adoption of home-based banking in the United Kingdom. *The International Journal of Bank Marketing , 20* (3), 111-121.
24) Hu, P. J., Chau, P. Y., Sheng, O. R., & Tam, K. Y. (1999). Examining teh technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems , 16* (2), 91-112.
25) 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)*, (p. 196). Big Island, Hawaii.

26) Katz, J. and Aspden, P. (1997), "Motivations for and Barriers to Internet Usage: Results of a National Public Opinion Survey", *Internet Research: Electronic Networking Applications and Policy*, Vol.7, No.3, pp.170-188.
27) Kelly, S. (1996), "Banks gain net interest", Computer Weekly, October 17th, pp.46, 48.
28) Lee, E. J. (2000). *Consumer adoption and diffusion of technological innovations: A case of electronic banking technologies.* PhD Dissertation, The University of Tennessee, Knoxville.
29) Lichtenstein, S., & Williamson, K. (2006). Understanding consumer adoption of internet banking: An interpretive study in the Australian Banking context. *Journal of Electronic Commerce Research , 7* (2), 50-66.
30) Malhotra, P., & Singh, B. (2007). Determinants of internet banking adoption by banks in India. *Internet Research , 17* (3), 323-339.
31) Miyazaki, A. D., & Fernandez, A. (2001). Consumer perceptions of privacy and security risks for online shopping. *Journal of consumer affairs , 35* (1), 27-44.
32) Mols, N. P. (1998). The internet and the banks, strategic distribution channel decisions. *International Journal of Bank Marketing , 116* (5), 195-201.
33) Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research , 2* (3), 173-191.
34) Moon, J. W., & G, K. Y. (2001). Extending the TAM for a world-wide-web context. *Information and Management , 38* (4), 217-230.
35) Ndubisi, N. O., & Sinti, Q. (2006). Consumer attitudes, system's characteristics and internet banking adoption in Malaysia. *Management Research News , 29* (1/2), 16-27.
36) Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of internet banking services. *International Journal of Bank Marketing , 19* (4), 156-65.
37) Qureshi, T. M., Zafar, M. K., & Khan, M. B. (2008). Customer acceptance of online banking in Developing Economies. *Journal of Internet Banking and Commerce. , 13* (1), Available at http://www.arraydev.com/ commerce/jibc.
38) Rao, G. R., & Prathima, K. (2003). Internet Banking in India. *Mondaq Business Briefing,April 11.*
39) Ravi, V., Carr, M., & Sagar, V. N. (2007). Profiling of internet banking users in India using intelligent techniques. *Journal of Services Research , 6* (2), 61-73.
40) Rogers, E.M. (2003) "Diffusion of Innovations", The Free Press, New York.
41) Sathye, M. (1999). Adoption of internet banking by Australian consumers: an empirical investigation. *International Journal of Bank Marketing , 17* (7), 324-334.
42) Simms, M. (1999). New on the Web: Market Data Vendors Roll Out Red Carpet on Web offerings. *Wall street and Technology* , Third quarter, 10-12.
43) Suganthi, R., Balachander, K. G., & Balachandran. (2001). Internet banking patronage: an empirical investigation in Malaysia. *Journal of Banking and Commerce , 6* (1), 20-32.
44) Tan, M., & Teo, T. S. (2000). Factors influencing the adoption of internet banking. *Journal of the Association for Information Systems , 1* (5), 1-42.
45) Tornatzky, L. G., & Klein, J. K. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management , 29* (1), 28-45.
46) Unnithan, C. R., & Swatman, P. (2001). *E-banking adaptation and Dot.com viability: A comparison of Australian and Indian Experiences in the Banking Sector,*. Deakin University, School of Management Information Systems. Available at: http://www.deakin.edu.au/buslaw/infosys/docs/ working papers/archive/working-papers-2001/2001-14-unnithan.pdf .
47) Venkatesh, V. (1999). Creation of favourable perceptions: Exploring the role of Intrinsic Motivation. *MIS Quarterly , 23* (2), 239-260.
48) Venkatesh, V., & Davis, F. D. (2000). A theoretical Extension of the Technology Acceptance Model: Four Longitudinal Studies. *Management Science , 46* (42), 186-204.
49) Venkatesh, V., & Morris, M. G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behaviour. *MIS Quarterly , 24* (1), 115-139.
50) White, H., & Nteli, F. (2004). Internet Banking in the UK: Why are there not more customers? *Journal of Financial Services Marketing , 9* (1), 49-56.