
2.1-Studies Outside India
2.2-Studies in India
2.3-Study in Kerala

The technology is rapidly changing the way personal financial services are being designed and delivered and thus the entire environment of banking services is being changed with the introduction of multi-channel service systems. Recent developments in electronic distribution service channels have become increasingly sophisticated. As regards the service provider is concerned, adoption of IT enabled services can reduce their costs and widen their market, while the users enjoy a broader variety of services and their operations are now more convenient and not bound by office hours. The technology used by the banks to provide latest services is already very advanced. However, electronic banking, or virtual banking in general, cannot entirely replace the existing traditional channels. Despite the convenience and other benefits that the service can offer, not everyone uses e-banking or online banking specifically. A significant portion of the highly educated consumer segment is still opting for branch banking.

Regulatory, structural, and technological factors are significantly changing the banking environment throughout the world. Regulatory changes have reduced or eliminated barriers to cross-border expansion, creating a more integrated global banking market. Structural changes have resulted in banks being allowed a greater range of activities, enabling them to become more competitive with non-bank financial institutions. Technological changes are causing banks to rethink their strategies for services offered to both commercial and individual customers. It is within this rapidly changing environment that customer satisfaction and service quality are compelling the attention of all banking institutions.

Owing to the entry of *de nova* domestic private and foreign banks, Indian banking sector underwent drastic changes in terms of competitive landscape and banking practices. In order to grow by widening the market, the banks must always be equipped with the changing technological environment addressing consumer concerns. Due to the

increasing importance of modern information and communication technologies for the delivery of retail banking services, the analysis of the determinants of technological banking adoption has become an area of growing interest to researchers and bankers.

Extensive research related to technology-based banking services has been carried out internationally from various perspectives. Some studies, have analysed the adoption and growth of online banking, while others describe the benefits to be gained as far as the organization is concerned, main obstacles of growth in the number of online banking users etc. Studies have also been conducted on customers' perspective regarding the factors which influence and discourage the use of technology-based bank delivery channels etc. At national level, there is a considerable lack of study with respect to this area. However, as regards Kerala, the most literate state in India, no such study has been conducted. Therefore, the present study is an attempt to know the influence of technology-based bank delivery channels among the customers in Kerala.

The review of research studies at national and international level has been presented here under three broad heads viz. (a) Studies outside India (b) Studies in India and (c) Studies in Kerala.

2.1-Studies Outside India

Timothy H. Hannan & John M. McDowell (1984) examined the relationship between the decision to adopt new technology and its determinants by the banks which differ considerably in terms of the competitive environments in which they operate. It was found that larger banks and banks operating in more concentrated local banking markets register a higher conditional probability of adopting new technology, all else equal.

Robert Johnston (1995) examined banking customers' perceptions about the service quality they received. It was found that there are 18 service quality attributes such as (1) Access (2) Aesthetics (3) Attentiveness/Helpfulness (4) Availability (5) Care (6) Cleanliness/Tidiness (7) Comfort (8) Commitment (9) Communication (10) Competence (11) Courtesy (12) Flexibility (13) Friendliness (14) Functionality (15) Integrity (16) Reliability (17) Responsiveness and (18) Security.

Niels Peter Mols (1998) compares users of PC-based home banking systems with non-users. The result of the study shows that users of PC banking are more satisfied, less price sensitive, have higher intentions to repurchase and provide more positive word-of-mouth than non-users. For the banks, these results indicate that PC banking systems will become a stable source of revenue from a mass of loyal customers in future.

Mathew Joseph, Cindy McClure & Beatriz Joseph (1999) conducted the study to investigate the influence of technology, such as the ATM, telephone, and Internet, on the delivery of banking service in Australian banking sector. Their study identified six underlying dimensions of electronic banking service quality such as (1) Convenience/Accuracy (2) Feedback/Complaint Management (3) Efficiency (4) Queue Management (5) Accessibility (6) Customization. The results indicate that consumers have perceptual problems with some aspects of electronic banking. According to the study, the best aspect of Electronic Banking is convenience and no waiting time whereas improvement expected is security across electronic banking services.

Milind Sathye (1999) quantifies the factors affecting the adoption of Internet banking by Australian consumers. The study shows that security concerns and lack of awareness about Internet banking is the major obstacle for the adoption of Internet banking in Australia and suggests that delivery of financial services over the Internet should be a part of overall customer service and distribution strategy.

Balachandher Krishnan Guru, Santha Vaithilingam, Norhazlin Ismail & Rajendra Prasad (2000) examine the evolution of electronic banking in Malaysia, analyse the various electronic delivery channels utilised by local banks and to assess the consumers' reactions to these delivery channels. The findings show that most Malaysian banking customers still patronise the bank branches and find interaction with human tellers as important. However, respondents having Internet access at home have a positive indication for PC-based banking and Internet banking in the future.

Achim Machauer & Sebastian Morgner (2001) examines the segmentation of bank customers by expected benefits and attitudes to enhance a bank's ability to address the conflict between individual service and cost-saving standardisation. Cluster analysis

based on combinations of attitudes towards bank service or expected benefits thereof is found as more effective method of bank customer segmentation than a simple grouping of customers according to demographic criteria. Customers' attitudes towards technology and information services are of vital importance for segmentation.

Minjoon Jun & Shaohan Cai (2001) Focuses on the issues associated with Internet banking service quality viz. customer service quality, banking service product quality, and online systems quality. The study reveals that, in terms of frequency of references to the dimensions of Internet banking service quality, no substantial differences exist between Internet-only banks and traditional banks offering Internet banking service.

Minna Mattila, Heikki Karjaluoto, & Tapio Pentto (2001) finds out the factors which have defined consumers' adoption of Internet banking in Finland. In the study, prior technology experience, personal banking experience, reference group influence, and security concerns are found to be the main factors, and demography characteristics and overall perceptions about IB were found to have a significant effect on the adoption.

Suganthi, Balachandher & Balachandran (2001) focused the study to understand the factors that affect the adoption of Internet banking in Malaysia. This study showed that Internet accessibility, awareness, attitude towards change, computer and Internet access costs, trust in one's bank, security concerns, ease of use and convenience are the major factors affecting the adoption of Internet bank services in Malaysia.

Vichuda Nui Polatoglu & Serap Ekin (2001) was conducted in a Turkish bank to know the consumer acceptance of Internet banking (IB) services by examining both consumer-related factors that may affect the adoption of innovation as well as organizational factors such as marketing effort. The results suggest that internet banking not only reduces operational cost to the bank, but also leads to higher levels of customer satisfaction and retention and hence it is argued that Internet Banking is strategically important to the banking sector.

Aodheen O'Donnell, Mark G. Durkin & Danielle McCartan-Quinn (2002) investigated channel preferences amongst corporate customers of a leading retail and corporate bank in the UK. The study reveals that all customers prefer personalised

interaction and that smaller customers, who are generally less profitable for banks than large clients, show relatively less willingness to embrace technological means of communication and to insist on personal interaction with their bank.

Barry Howcroft, Robert Hamilton & Paul Hewer (2002) study the attitudes of bank customers in the UK towards bank delivery channels. The results show that consumer attitudes differ according to age, gender, income, education, etc.

Eun-Ju Lee, Jinkook Lee & David W. Schumann (2002) examines the effects of communication source and modality on consumers' adoption of technological innovation. Specifically, a typology of communication sources and modality is presented, and the respective and interrelated influences of source and mode on consumers' adoption of electronic banking are examined. The results demonstrate that communication factors can serve as significant predictors of consumer adoption of technological innovations and that consumer preferences for communication source and modality vary for different segments of adopters.

Heikki Karjaluoto, Minna Mattila & Tapio Pentto (2002) conducted the study to explore the effect of different factors affecting attitude formation towards Internet banking in Finland and also to determine those factors that influence the formation of attitude towards Internet banking on the one hand, and their relation to the use of online banking services, on the other. The results of the study propose that demographic factors impact heavily online banking behaviour. Specifically, occupation and household income were significant variables. Four factors namely prior computer experience, prior technology experience, personal banking experience, and reference group influence, affect attitude towards online banking as well as online banking usage. A typical online banking user is relatively young, well educated with high level of income, a family man with a good job. Elderly consumers, especially, tend to have a negative attitude towards online services.

Janet Bigham Bernstel & Phillip Swann (2002) explains why Canada Wins In Online Banking. On the basis of various secondary information, the article states the different facts such as (1) 61% of active Internet users in Canada have conducted financial

transactions online, versus 29% of active Internet users in the US. (2) Canadian banks have been aggressive in promoting online banking as a viable and secure option (3) The existence of a different positive corporate culture in Canada (4) In Canada there is a tendency toward cooperation. In American industry, the sharing of ideas and information is antithetical to the typical corporate maxim of "constructive competition." (5) In the case of online banking, that US mind-set has backfired.

Laura Bradley & Kate Stewart (2002) conducted an empirical research which investigates the factors driving and inhibiting Internet banking. The main component of the research was a Delphi study of expert opinion. The paper concludes that Internet banking will become an extremely important distribution channel in the future.

Balachandher Krishnan Guru B., Bala Shanmugam, Nafis Alam & Corrine J. Perera (2003) showed that the majority of Islamic countries were in the early stages of developing internet banking when many banks especially in Europe and the U.S adopted internet banking. Only some Islamic banks in the Middle East had well-developed internet banking websites for the convenience of their customers.

Bodo Lang & Mark Colgate (2003) focus on how customers use a combination of IT channels to interact with their financial service provider and how this interaction affects the relationship quality between the customer and the financial service provider. The study indicates that those customers who do not exhibit an "IT gap" have more positive perceptions of their relationship with their financial service provider.

Minna Mattila (2003) define the factors influencing mobile banking adoption and aims at forming a model describing consumer behavior patterns. The most significant predictors of adoption in this study turned out to be relative advantage gained, compatibility of services with adopters existing values and perceived complexity.

Minna Mattila, Heikki Karjaluoto & Tapio Pentto (2003) analysed the Internet banking behavior of mature customers in Finland. Household income and education were found to have a significant effect on the adoption of the Internet as a banking channel. Perceived difficulty in using computers combined with the lack of personal service in e-banking were found to be the main barriers of Internet banking adoption

among mature customers. Internet banking is the third popular mode of payment among mature customers. It was also found to be more unsecured among mature customers than bank customers in general.

Ong Hway-Boon & Cheng Ming Yu (2003) conducted the study to determine factors that are essential for the successful implementation of e-channels by domestic commercial banks in Malaysia. The results of the survey suggested that banks' operation management is the main factor affecting the success of ATMs, PC and branch banking, while product innovation and knowledge development factors are found to have the most significant effect on the success of banking kiosks and phone banking respectively.

Patrick Ibbotson & Lucia Moran (2003) examines the current nature of the relationship between small to medium-sized enterprises and their banks in Northern Ireland and investigates the level of usage of and satisfaction with electronic banking channels in this region. More than a quarter of respondents are quite happy with their then arrangements and feel no need or inclination to embrace new alternative form of electronic delivery channels.

Philip Gerrard, J. Barton Cunningham & James F. Devlin (2003) study identifies eight characteristics which influenced the rate of adoption of Internet banking services among Singapore consumers. The results show 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. The adopters were also found to be more financially innovative. The perceptions that adopters and non-adopters had about social desirability, confidentiality, accessibility and economic benefits were not different.

Siriluck Rotchanakitumnuai & Mark Speece (2003) suggest that security of the Internet is a major factor inhibiting wider adoption in Thailand. Those already using Internet banking seem to have more confidence that the system is reliable, whereas non-users are much more service conscious, and do not trust financial transactions made via Internet channels.

Vijayan P. & Bala Shanmugam (2003) evaluate the service quality of Internet banking in Malaysia. The study concludes by saying that IB channel and the traditional delivery

channel are not mutually exclusive and hence bankers should strive to integrate all these new delivery channels and traditional channels into a coherent whole.

Yi-Shun Wang, Yu-Min Wang, Hsin-Hui Lin & Tzung-I Tang (2003) conducted the study by introducing "perceived credibility" as a new factor in the acceptance of Internet banking. For the determination of the acceptance and use of various IT, the Technology Acceptance Model (TAM) is widely used, in which perceived ease of use and perceived usefulness constructs are believed to be fundamental. But according to them, these beliefs may however not fully explain the user's behavior toward newly emerging IT, such as Internet banking. Therefore, in this study (TAM) is taken as a theoretical framework and introduces "perceived credibility" as a new factor that reflects the user's security and privacy concerns in the acceptance of Internet banking. It also examines the effect of computer self-efficacy on the intention to use Internet banking. The study also demonstrates the significant effect of computer self-efficacy on behavioral intention through perceived ease of use, perceived usefulness, and perceived credibility

Akinci S., Aksoy S. & Atilgan E. (2004) found that while internet banking adopters are more technology oriented and convenience-minded individuals, non-adopters are more traditional channel oriented, and hesitant customers, lacking confidence in internet banking services relative to the services given through branches. Their findings also showed that security, reliability and privacy issues; download and transaction speed; and user-friendly web site, were among the most significant determinants of the customers' bank selection behaviour.

Anesh Maniraj Singh (2004) examine the effectiveness of Internet marketing in South Africa and to determine respondents' reasons for not banking online, and to develop strategies for banks to get people banking online. According to the results of the study, more males used Internet banking than females. Automated telling machine usage was far greater than Internet banking usage. A large percentage of Internet bankers used the service for inter-account transfers and checking balances/statements. Security was the prime issue for those not banking online. Potential customers wanted guaranteed safety and loyalty rewards to get them to bank online.

Chin-Shan Wu, Fei-Fei Cheng & Hsin-Hui Lin (2004) investigate the usability of Internet banking Web sites in Taiwan. The result indicates that there is a gap between user expectation and actual performance of Internet banking Web sites. Although the ‘content’ and ‘ease of use’ are the most two important categories for Web site users, banks devote to promote themselves to entice customers to visit.

Geoffrey Bick, Andrew Beric Brown & Russell Abratt (2004) examines the perception and expectations of banking customers regarding the value being delivered by retail banks in South Africa. The results show that customers were not satisfied with the service, products and level of customer intimacy delivered to them by their banks.

Imtiyaz Al-Sabbagh (2004) explored the drivers and inhibitors of customers' Internet banking adoption in the Sultanate of Oman. The findings of the study indicate that the main drivers of Internet banking adoption appear to be compatibility, usefulness and ease of use. The extent of use is affected by lack of government support, poor quality of connection and page loading speed. Trust and face-to-face personal banking preference have been found as major inhibitors of Internet banking adoption.

Irwin Brown, Rudi Hoppe, Pauline Mugeru, Paul Newman & Adrie Stander (2004) conducted the study to know the influencing factors for the adoption of Internet Banking in South Africa. The study also compare the results with that of a similar study conducted in Singapore to know the differences in adoption process in terms of the national environment. The results confirm that attitudinal and perceived behavioural control factors influence adoption in South Africa as in Singapore, but with differences in the number of determinants, and the degree of influence of certain determinants. These differences are explained in terms of three environmental dimensions such as socio-economic conditions, the state of Internet diffusion and Government ICT policies.

Jane M. Kolodinsky, Jeanne M. Hogarth & Marianne A. Hilgert (2004) explores the factors that affect the adoption or intention to adopt three e-banking technologies and changes in these factors over time in the USA. The study shows that relative advantage, complexity/simplicity, compatibility, observability, risk tolerance, and product involvement are associated with the adoption. Income, assets, education, gender and

marital status, and age etc of customers also affect adoption. According to the study, adoption changed over time, but the impacts of other factors on adoption did not change.

Kyung Kyu Kim & Bipin Prabhakar (2004) conducted the study based on social network theory and trust theory, determinants of trust in the electronic channel such as propensity-to-trust, word-of-mouth (WOM) referrals, structural assurances. The analyses of independent variables indicated that propensity-to-trust, structural assurances, and relational content of WOM were significant predictors of initial trust in the electronic channel. The findings also indicated that a significant relationship exists between initial trust in the electronic channel and the adoption of Internet banking.

Mari Suoranta, Minna Mattila (2004) focused on studying diffusion and adopters of mobile banking services in Finland. Previous researches had identified the typical characteristics of a potential adopter in the electronic services era. But this paper explores some contradictory empirical findings. The study indicates that wealthier respondents were less willing to adopt the new mobile banking services. According to the findings, the more experienced customers and occasional users were more informed by interpersonal communication, whereas the less experienced and non-users were more informed by mass media.

Nancy Feig (2004) conducted the study to know why bank customers pay their bills online at their financial institutions Web sites. The main reason cited on the basis of survey among 2,233 respondents is “to take care of all of their banking needs in one place”, followed closely by "its free".

Serkan Akinci, Safak Aksoy & Eda Atilgan (2004) conducted the study to develop an understanding of consumers' attitudes and adoption of Internet banking among sophisticated consumers. The analyses revealed significant differences between the demographic profiles and attitudes of users and non-users.

Tero Pikkarainen, Kari Pikkarainen, Heikki Karjaluoto & Seppo Pahnla (2004) investigated online banking acceptance among private banking customers in Finland. The findings of the study, in the light of the traditional Technology Acceptance Model (TAM) which was leveraged into the online environment, indicate that perceived

usefulness and information on online banking on the Web site were the main factors influencing online-banking acceptance.

Abel Ebeh Ezeoha (2005) studied on the problems and challenges of Internet banking regulation in Nigeria. The paper argues that for IB to assume a developmental dimension in Nigeria and for the country to be fully integrated in the global financial environment, the prevalent level of frauds in Nigeria must first be addressed.

Boon Han Yeap & Kooi Guan Cheah (2005) examined the levels of retail IB services provided by foreign and domestic commercial banks in Malaysia. The study found that while foreign banks are marginally more sophisticated at information provision level, domestic banks offer a significantly higher level of transactional facilities.

Carlo Gabriel Porto Bellini, Guilherme Lerch Lunardi, & Jorge Luiz Henrique (2005) presents a framework aimed at addressing the quality of banking services, framework which is based on customer perceptions surveyed by a consultant firm with 11,936 customers of a Brazilian bank. From the survey and the theoretical developments, five constructs driving the quality of banking services and customer satisfaction emerged viz relationship with the customer, business and financial transactions, information technology, branch, and image.

Chai Lee Goi (2005) discusses the Opportunities and Challenges of E-Banking in Malaysia. A number of challenges need to be faced by Malaysian banks, however, the opportunity in this industry is high especially due to the trend of application and development of Information and Communication Technology (ICT).

Hanudin Amin, Suddin Lada, Mohd Rizal Abdul Hamid & Geoffrey H. Tanakinjal (2005) conducted the study to identify the key points which are relevant to the Students' Perception of SMS Banking at The Labuan International Campus-University Malaysia Sabah. Study shows that students perceptions were not homogeneous and an education level was insufficient to explain the SMS banking usage among the respondents.

Irwin Brown & Alemayehu Molla (2005) explore the factors which affect Internet and Cell Phone banking adoption in South Africa. The study compares the differences in the perception of Internet banking and cell phone banking and also the influencing factors.

This study explicate the influence of attitudinal factors such as relative advantage, compatibility, trialability, complexity, risk, subjective norms (social factors) and perceived behavioral control factors (self-efficacy and technological support) on the adoption of Internet and cell phone banking. The findings indicate that both the adoption intent and the perception of Internet banking users differ markedly from cell phone banking users.

Javad Soroor & K. N. Toosi (2005) discuss the security aspects of Electronic banking systems and also presents an overview and evaluation of the techniques which are used in Iranian systems. The paper concludes with an indication of the current best practices and some suggestions for future improvements for electronic banking system in Iran.

Kent Eriksson, Katri Kerem & Daniel Nilsson (2005) studied the technology acceptance of internet banking in Estonia. The study shows that a well-designed and easy to use internet bank may not be used if it is not perceived as useful. Thus the perceived usefulness of internet banking is a key construct for promoting customer use.

Lawrence F Cunningham, James Gerlach & Michael D Harper (2005) study examines the dynamics of perceived risk throughout the various stages of the consumer buying process of e-banking services. The analysis indicate that financial risk drives the risk premium while psychological, physical and time risk play ancillary roles as risk drivers at certain stages of the consumer buying process. Perceived risk for e-banking services shows more radical changes in risk levels than traditional banking services.. A major implication of this study is that there is a risk premium for e-banking services and the risk premium permeates all stages of the consumer buying process.

Mathew Joseph, Yasmin Sekhon, George Stone & Julie Tinson (2005) made an attempt to discover the underlying areas of dissatisfaction associated with the banking experience in the UK, particularly as it relates to the implementation of new service delivery technology in the banking industry. The study provides evidence for the development and use of an I-P grid for preliminary identification and assessment of customer measures of service quality. By demonstrating the feasibility of the approach taken by the study, it should be possible for financial institutions to utilise similar

procedures when evaluating the overall satisfaction levels of their customers' banking experience.

Norizan M. Kassim (2005) investigates the discrepancy between customer's expectation and perception towards the e-banking services in the Qatari banking industry. The largest discrepancies between what were expected by the customers and what were delivered by the bank were found in the availability of the instructions and personnel assistance on how to use the e-banking services and the functionality of the ATM.

Raed Awamleh & Cedwyn Fernandes (2005) reveals the factors that influence customer satisfaction of the internet banking service. According to the study, convenience and security of internet banking transactions have a significant impact on satisfaction. Security of internet banking transactions was significant for those using internet banking for more than two years, while not for others.

Sylvie Laforet & Xiaoyan Li (2005) investigate the market status for online/mobile banking in China. The issue of security was found to be the most important factor that motivated Chinese consumer adoption of online banking. Main barriers to online banking were the perception of risks, computer and technological skills and Chinese traditional cash-carry banking culture. The barriers to mobile banking adoption were lack of awareness and understanding of the benefits provided by mobile banking.

Walfried M. Lassar, Chris Manolis & Sharon S. Lassar (2005) explores the relationships between consumer innovativeness, self-efficacy on the internet, internet attitudes and online banking adoption, while controlling for personal characteristics. The results confirm the positive relationship between internet related innovativeness and online banking they also surprisingly show that general innovativeness is negatively related to online banking.

Wendy W.N. Wan, Chung-Leung Luk & Cheris W.C. Chow (2005) investigate the factors that influenced Hong Kong bank customers' adoption of four major banking channels, i.e. branch banking, ATM, telephone banking, and internet banking. The study focus on the influences of demographic variables and psychological beliefs about the positive attributes possessed by the channels. The result of the study shows that ATM is

the most frequently adopted channel, followed by internet banking and branch banking. The least frequently adopted channel is telephone banking. Psychological beliefs about the extent to which a channel possessed certain positive attributes were more predictive of adoptions of ATM and internet banking than adoptions of branch banking and telephone banking. Demographic backgrounds were strongly associated with adoption of all banking channels except ATM

Abel Ebeh Ezeoha (2006) discusses on the problems and challenges of Internet banking regulation in Nigeria. The study shows the necessity of efforts to be taken both locally and internationally on how to eliminate Nigerian Internet fraud and other forms of financial crime.

Achraf Ayadi (2006) explores the importance of some prerequisite factors in developing Internet Banking services in the Tunisian banking sector. According to the emergent case of Web services two types of preconditions are investigated: technological and organizational preconditions. The research illustrates that centralised architectures, fragmented Information Systems (IS) organizational rigidity and disregarding user's implication could be factors of slowness (or failure) in implementing IB.

Agboola A. A. (2006) examined electronic payment systems and tele-banking services in Nigeria. As per the study, the least fully adopted technologies were ATM, Electronic Home and Office Banking and Telephone Banking and the reason for low rate of adoption of these technologies are due to low level of economic development, ineffectiveness of National Telecommunications Carrier epileptic supply of power, high cost, fear of fraudulent practices and lack of facilities necessary for their operation.

Carlos Flavian, Miguel Guinalú & Eduardo Torres (2006) analyses how consumers' perceptions of their traditional bank influence their decision to adopt the services offered by the same bank on the internet. The analysis was to assess the influence of trust, income, age, sex, education and employment of the customers on the adoption of the financial services offered by a traditional bank on the internet. A Binomial Logistic Regression process was analysed to assess the influence of trust, incomes, age, sex, education and employment on the adoption of the financial services offered by a

traditional bank on the internet. The results show that the factors which influence the decision of a customer to proceed with the same bank via internet are: (1) consumer trust in a traditional bank (2) income (3) age and (4) sex

Chai Lee Goi (2006) conducted the study to know the factors influencing the development of E-Banking in Malaysia. As per the study, development is mainly because of new marketing strategy especially to create E-Customer Relationship Management (E-CRM) and to improve banking activities. The other reasons are development of technology, applications and tools, as well as the government support.

Chiemeke, S. C. & Ewwiekpaefe, A. E. (2006) examined the level of adoption of Internet banking in Nigeria. The results reveal that Internet banking is being offered at the BASIC level of Interactivity with most of the bank having mainly information sites and providing little Internet transactional services. The level of security of the banks was also low as most of the banks have not adopted 128 bit Secure Sockets Layer (SSL) encryption security measures. Most of the banks perform extremely well in providing up-to date information. However, further improvements on security and provision of key ingredients of Internet banking which includes confidentiality, effective communication integrity and availability, should be considered in order to satisfy customer's requirements.

Christopher Gan, Mike Clemes, Visit Limsombunchai & Amy Weng (2006) examined consumers' choices between electronic banking and non-electronic banking in New Zealand by conducting a mail survey among 1,960 households. The findings in the paper show that the service quality, perceived risk factors, user input factors, employment, and education are the dominant variables that influence consumers' choice of electronic banking and non-electronic banking channels.

Daryl Mckee, Christina S. Simmers & Jane Licata (2006) examines customers' beliefs about their ability to participate in a service (service use self-efficacy) and its effect on response to service. A theoretical model is proposed that explains how self-efficacy affects customers' perceptions of service value and complaint intentions ("voice"). These factors in turn, predict exit intentions and positive word of mouth. The

model is tested on a sample of 444 members of a group insurance plan. The results of a structural equation model confirm the hypothesised relationships. The findings suggest that service managers should take steps to increase customer service use self-efficacy, such as providing training with feedback, vicarious experiences (e.g., print or video portrayals of successful service experiences) verbal persuasion (e.g., “You can do this”–type coaching) and a low-stress environment.

FlaviAyn, Carlos; GuinalAu, Miguel; Torres & Eduardo (2006) analyse how consumers’ perceptions of their traditional bank influence their decision to adopt the services offered by the same bank on the internet by collecting data from customers of various banks which provide their services by traditional channels as well as on the internet. The results in the paper showed that consumer trust in a traditional bank, as well as incomes, age and sex are factors that influence consumers’ decision to work with the same bank via the internet

Hanudin Amin, Mohamad Rizal Abdul Hamid, Geoffrey Harvey Tanakinjal & Suddin Lada (2006) conducted the research to analyse the undergraduate students’ attitudes and expectations towards mobile banking by focusing on Islamic banking in FT, Labuan. The findings illustrate that students tend to learn and adopt mobile banking in their banking transactions. In addition, the results also demonstrate students’ attitudes and expectations to be the most consistent explanatory factors in predicting their willingness on adopting mobile banking usage in the future.

Ibrahim, Essam E.; Joseph, Matthew; Ibeh & Kevin I. N. (2006) conducted the study to explore the key factors of the electronic service quality (e-SQ) perceptions of UK banking customers and to evaluate the customers’ perceptions of their banks’ actual performance on the identified e-SQ dimensions. According to the result of the study, there are six factors of (e-SQ) perceptions such as provision of convenient/accurate electronic banking operations, accessibility and reliability of service provision, good queue management, service personalization, provision of friendly and responsive customer service, provision of targeted customer service etc

Kari Pikkarainen, Tero Pikkarainen, Heikki Karjaluoto & Seppo Pahnla (2006) test and validate the End-User Computing Satisfaction (EUCS) model in order to investigate online banking users' satisfaction with the service. The results of the study indicate that the easiest way to increase satisfaction with online banking is to concentrate on the End-User Computing Satisfaction (EUCS) variables. According to their study, the content of online banking services should be improved first to gain better results in overall satisfaction.

Kassim, Norizan Mohd; Abdulla & Abdel Kader Mohammed Ahmed (2006) investigate and extend the trust-relationship commitment model to an internet banking setting by adding attraction as a new factor by considering sample survey of bank customers' responses via a cross-sectional survey in Doha, Qatar. The findings in the paper indicate that both trust and attraction have significant positive impact on relationship commitment with attraction having a strong positive effect, with communication representing the most important determinant of attraction and having a significant positive relationship with both trust and attraction.

Keldon Bauer & Scott E Hein (2006) conducted the study on the effect of heterogeneous risk on the early adoption of Internet Banking Technologies. Perceived risks in Internet banking are seen to be responsible for some of the hesitation to adopt. It was also found that older consumers are less likely to adopt Internet banking regardless of their risk tolerances. However, younger consumers are found to be early adopters only when they have relatively high levels of risk tolerance.

Petrus Guriting & Nelson Oly Ndubisi (2006) examine the factors which determine the intention to use online banking in Malaysia Borneo. This study extends the model to include user computer experience and confidence in addition to the fundamental factors such as perceived ease of use and perceived usefulness factors. The results indicate that perceived usefulness and perceived ease of use are strong determinants of behavioural intention to adopt online banking. There is also an indirect effect of computer self-efficacy and prior general computing experience on behavioural intention through perceived usefulness and perceived ease of use.

Philip Gerrard, J. Barton Cunningham & James F. Devlin (2006) illustrates why consumers are resistant to using internet banking. The survey was conducted among bank customers who were not the users of internet banking. The findings suggest that almost all of those who are not currently using internet banking have negative perceptions about the riskiness of the service. Eight factors were identified which explain why consumers are not using internet banking. In the order of frequency, the factors are (1) perceptions about risk (2) the need (3) lack of knowledge (4) inertia (5) inaccessibility (6) human touch (7) pricing and (8) T fatigue.

Raed Awamleh & Cedwyn Fernades (2006) analyses the channels of internet banking and service preferences of educated banking consumers in the UAE and examine the factors influencing the intention to adopt or to continue the use of internet banking among both users and non users of internet banking. It was revealed that relative usefulness, perceived risk, computer efficacy and image have a significant impact on continued usage of internet banking for internet banking users, while relative usefulness and result demonstrability were the only one significant for non-users of IB.

Ramayah T., Fauziah Md. Taib & Koay Pei Ling (2006) classifies Users and Non-Users of Internet Banking in Northern Malaysia. According to the study, these banks have achieved considerable success as far as awareness is concerned. But this awareness has not been translated into actual use. Using the discriminate analysis it was found that Internet banking users had more prior Internet experience, had positive views on ease of use, were more aware of the Internet banking services and benefits and also had less security concerns as compared to the non-users of Internet banking.

Rhett H. Walker & Lester W. Johnson (2006) establish empirically the reasons why people use, or choose not to use, three types of technology-enabled service: internet banking, telephone bill-paying, and internet shopping services. The findings show that willingness to use the internet and telephone for financial and shopping services is influenced by the individual sense of personal capacity or capability to engage with these service systems, the perceived risks and relative advantages associated with their use, and the extent to which contact with service personnel is preferred or deemed necessary.

Richard Boateng (2006) explores some of the issues which affected the key decisions of bank relate to entering e-banking, e-banking channel choice, e-banking development, enticing customers, and managing channel conflict. The findings indicate that operational constraints related to customer location, the need to maintain customer satisfaction and the capabilities of the Bank's main software have been influential factors in motivating the decision to enter electronic banking services. Technological and human resources capabilities together with the development of electronic transactions in the Ghanaian market influenced the e-banking development. The paper also highlights the need for African Banks to understand customers' needs, the corresponding services to offer, the resources and partnerships required to offer it and development of appropriate e-banking strategies that maximise value for both customers and banks.

Sally McKechnie, Heidi Winklhofer & Christine Ennew (2006) provide insights into factors determining the extent to which an innovation is adopted. The paper reviews the literature on the technology acceptance model (TAM) and justifies the use of this model to explore the factors contributing to the extent to which consumers use the Internet as a distribution channel for financial services (FS). The application of the TAM model is helpful but additional links need to be included. The key drivers of extent of use are past experience with the Internet as a purchasing channel (for non-FS) and attitudinal aspects, i.e. positive emotions towards the Internet as a distribution channel for FS.

Sharman Lichtenstein & Kirsty Williamson (2006) provides an understanding of how and why specific factors affect the consumer decision whether or not to bank on the internet, in the Australian context. The findings suggest that convenience is the main motivator for consumers to bank on the internet, while there is a range of other influential factors that may be modulated by banks. The findings also highlight increasing risk acceptance by consumers in regard to internet-based services and the growing importance of offering deep levels of consumer support for such services. Gender differences are also highlighted in this study.

Supriya Singh (2006) examines the users' perspective on the security of Internet Banking in Australia within the social context. The user-centered research approach supplements the technological and industrial approaches to security. According to the

study, most effective way to increase the perception of Internet Banking security to increase ease of use, convenience, personalization and trust

Ya-Yueh Shih & Kwoting Fang (2006) expanded the Theory of Reasoned Action (TRA) to probe the attitude and subjective norm factors that would influence the adoption intention of Internet Banking (IB). Moreover, network quality attributes were also used to enhance the understanding of consumer attitude towards Internet banking based on TRA (named 'extended TRA'). According to the study, attitude is significantly related to the intention to adopt internet banking, while subjective norm is not. Network quality attributes including information quality, transaction speed, and security play significant roles in influencing attitude.

Baumann, Chris; Burton, Suzan; Elliott, Gregory; Kehr & Hugo M. (2007) explore the factors predicting customer loyalty in retail banking. Loyalty was measured in terms of a customer's willingness to recommend a bank and their intention to remain with their main bank short-term and long-term. The results indicate that willingness to recommend is best predicted by affective attitude, overall satisfaction and empathy. Short-term behavioral intentions, however, were best predicted by overall satisfaction and responsiveness, while long-term intentions were predicted by overall satisfaction, affective attitude and empathy. The study adds to the discussion of the relationship between perceived satisfaction, service quality and a customer's intentions to recommend a bank and/or remain a customer.

Carmel Herington & Scott Weaven (2007) analyse whether the banks can improve customer relationships with high quality online services. The study explore the impact of online service quality on the level of customer delight and on the development of customer relationships by conducting a survey Australian respondents who use online banking. According to the result of the study, online service quality has no impact on customer delight, e-trust or the development of stronger relationships with customers. It does have a relationship to e-loyalty. However, the "efficiency" dimension of online service quality is related to e-trust. The "personal need" and "site organization" dimensions of online service quality are related to e-loyalty, with "personal needs" exhibiting the strongest impact. Customer delight has no relationship to online service

quality, nor e-trust, relationship strength or e-loyalty. Banks can achieve customer loyalty by attending their personal needs in online situations as well as by providing a well organised site. Alternatively, if banks wish to develop strong relationships with customers, they must provide user-friendly and efficient websites while also developing trust in the website. Relationship building and e-loyalty appears to represent different things to different customers. Therefore, online service quality alone is not a sufficient means of building strong relationships and retaining customers.

George Rigopoulos & Dimitrios Askounis (2007) demonstrate a revised TAM model for measuring users' attitude towards online electronic payments adoption. The summarised findings are (1) Perceived usefulness will have a positive relationship with behavioral intention (2) Perceived ease of use (PEOU) will have a strong indirect positive relationship to behavioral intention (3) Perceived ease of use will have a less strong direct positive relationship to behavioral intention (4) Behavioral intention will have a strong positive relationship to system usage (5) Perceived usefulness (PU) and perceived ease of use (PEOU) will have a strong positive relationship to behavioral intention (6) PEOU and PU will have a strong positive relationship to actual usage.

Gita Radhakrishna & Leo Pointon (2007) conducted the study to investigate the incidence of fraud in internet banking, the adequacy of the relevant regulations and statutes and also to know whether the setting up of a cyber court would better facilitate the prosecution of such financial crimes in Malaysia. It was found that the applicability of various existing laws and banking practices to internet banking has not been fully tested in Malaysia.

Hanudin Amin (2007) study the technology acceptance of internet banking among undergraduate students in Malaysia. The theoretical framework is based on modified version of Technology Acceptance Model (TAM). The model employs perceived credibility (PC) and computer self-efficacy (CSE) also in addition to the perceived usefulness (PU) and perceived ease of use (PEOU) used in TAM. The results suggest that PU, PEOU and PC had a significant relationship with behavioral intention. Results also suggest that PU and PEOU had a significant relationship with CSE. On the contrary,

CSE did not associate with PC. Also, PEOU had relationship with PU and PC that indicate these scales are related to PEOU in explaining undergraduate preference.

Hernandez, JosAs Mauro C.; Mazzon & JosAs Afonso (2007) proposes a new method to investigate adoption of new technologies by looking into the determinants of internet banking adoption in Brazil. The eight variables considered for the study were (1) Relative advantage of control (2) Compatibility with lifestyle (3) Image (4) Subjective norm (5) Self-efficacy (6) Relative advantage of security and privacy (7) Results demonstrability, and (8) Trial ability. The findings show that the variables that influence the intention to use/continue to use IB are not exactly the same as those that influence actual adoption. The intention to use IB is influenced solely by people's beliefs about IB, while its actual adoption is influenced by an individual's characteristics.

Khalil Md Nor & J Michael Pearson (2007) conducted the study is to test empirically the influence of trust together with some of the attributes of the theory of Diffusion of Innovation (IDT) on Internet banking acceptance. The results show that trust, relative advantage, and trial ability, have a significant effect on attitude toward using Internet banking. Consequently, attitude significantly affects the intention to use the technology.

Ki Soon Lee, Hyung Seok Lee & Sang Yong Kim (2007) identified the factors influencing the adoption of mobile banking service in South Korea. The study focused attention on perceived risk, perceived usefulness, and trust in mobile banking adoption by modifying the concept of a Technology Acceptance Model (TAM) within the context of mobile banking. It introduced “perceived risk” and “trust” in a proposed model to reflect consumers' needs to use mobile banking. According to the study, both perceived usefulness and trust had important effects on the adoption behavior of mobile banking. Consumers' trust and the perceived usefulness of the mobile banking service had direct effects on their adoption behavior. Perceived risk, however, has an indirect effect on adoption behavior even though it had an insignificant direct relationship with adoption behavior. This demonstrated that the perceived risk indirectly influenced adoption behavior only through trust. In other words, the consumer's trust on the bank, telecom provider and also towards wireless Internet has significant influence on their using

mobile banking. Thus, trust has a stronger influence on the adoption behaviour than perceived usefulness of the traditional TAM variable.

Petrus Guriting, Gibson Chunwen & N N O Ndu (2007) examine the role of Computer Self-Efficacy (CSE) at three distinct levels of user perceptions (low, mid and high) and the adoption of online banking. The study employs the extended Technology-Acceptance Model (TAM) as the theoretical framework. Based on the data collected, it was found that perceived usefulness and perceived ease of use were strong determinants of the behavioural intention to adopt internet banking. CSE was more important at low and mid levels of PU and PEOU than at high level of perception.

Susan C. Hayes & Fiona B. Martin (2007) investigated the perceptions of 94 consumers with an intellectual disability and 53 carers regarding interactions with financial service providers. Consumers and carers mentioned a number of problems with banks. The 'digital divide' was evident, with few consumers having access to Internet or telephone banking. It has been suggested that people with intellectual disabilities need education programmes about electronic banking.

Tommi Laukkanen (2007) explore and compare customer value perceptions in internet and mobile banking. The purpose especially is to compare customer perceived value and value creation between internet and mobile bill paying service. The empirical findings indicate that internet users and mobile users differ in their channel attribute preferences. The findings suggest that efficiency, convenience and safety are salient in determining the differences in customer value perceptions between internet and mobile banking.

Tommi Laukkanen (2007) conducted the study to increase the understanding of the diverse retail channel preferences of online bank customers by examining their channel attribute preferences in electronic bill paying by examining two different groups of online customers as: (1) Those who pay their bills over the internet and (2) Those who, in addition, have experience of using a mobile phone for this service. The empirical findings indicate that internet users and mobile users differ in their channel attribute preferences. The most important attribute the internet users consider is screen size while the customers who also use a mobile phone for paying bills, on the other hand, pay the

greatest attention to location. In addition, the study identifies a group of potential mobile banking users among those who have never used a mobile phone for banking actions.

Tommi Laukkanen, Suvi Sinkkonen, Marke Kivijarvi & Pekka Laukkanen (2007) investigate innovation resistance among mature consumers in the MB context. The reasons inhibiting mature consumers' mobile banking adoption were compared to those of younger consumers. The empirical findings indicate that the value barrier is the most intense barrier to mobile banking adoption among both mature and younger consumers. However, aging appears to be related especially to the risk and image barriers.

Venkata Seshaiiah S. & Vunyale Narendra (2007) analysed the factors which affect the choice of customers in choosing the retail banks by the customers by conducting a survey of 1000 bank customers. The 15 different factors that could be identified, in the order of their importance, are (1) Safety of Deposits (2) Size and Strength (3) Accuracy (4) General Service Quality (5) Speed of Delivery (6) Proximity (7) Security of Environment (8) Cordiality of Staff (9) Price and Service Charges (10) Product Packaging (11) General Public Impression (12) Peer Group Impression (13) Face Lift (Structural) (14) Friendship with Staff and (15) Advertisement and Publicity.

Yahya Dauda, A. Solucis Santhapparaj, David Asirvatham & Murali Raman (2007) addresses the perceived e-commerce security influence on adoption of Internet banking, and the role of national environmental factors such as attitude, subjective norms, and perceived behavioral control factors towards adoption, and compares these factors with Singapore Internet banking adoption. The result of the study, which was based on the information collected from banking customers in Malaysia and Singapore, shows that consumer perceived non-repudiation, trust relative advantage Internet experience and banking needs are the most important factors that affect adoption in Malaysia. While Internet experience and banking needs were found to significantly affect Internet banking adoption in Singapore.

Acharya, Ram N.; Kagan, Albert; Lingam & Srinivasa Rao (2008) estimates online banking intensity and bank performance indices using a combination of primary and secondary data. Online banking intensity is specified as a latent construct and estimated

using web feature data collected from bank websites. The results of the study indicate that the increasing use of internet as an additional channel of marketing banking services has significantly improved the financial performance of community banks.

Ahmad Kaleem & Saima Ahmad (2008) conducted the study to collect bank employees' perceptions of the potential benefits and risks associated with electronic banking in Pakistan. The results suggest that bankers in Pakistan perceive electronic banking as tool for minimizing inconvenience, reducing transaction costs and saving time. Similarly, they believe that electronic banking increases the chances of government access to public data, increases the chances of fraud and that there is a lack of information security. The most important benefit of electronic banking considered by public bank employees and private bank employees are 'minimizing transaction costs' and 'time saving and minimizing inconvenience' respectively. Both of these groups did not consider 'reducing the risk of carrying cash' as an important benefit. Branch managers who are directly responsible for the operations viewed 'facilitates quick response' as the most important benefit of electronic banking.

Çelik & Hakan (2008) provide an insight into the determinants of customers' IB acceptance. Therefore, it attempts to extend the technology acceptance model (TAM) by adding contextual factors for IB case. A research model reflecting the effects of perceived risk (PR) perceived playfulness (PPL) and perceived behavioral control (PBC) on TAM constructs is proposed. The results indicate that perceived usefulness (PU) and perceived ease of use (PEOU) are immediate direct determinants of customers' attitudes towards using IB (ATT). PU, PR and ATT determine the large proportion of behavioral intentions to use IB (BI). Although PPL positively influences only PEOU, PBC exerts positive direct effects on PEOU and PU and indirect effects on PU and ATT.

Christos Floros (2008) examines the performance of internet banking (IB) websites by considering the factors such as the reach percentage (real users) the traffic rank and the number of web pages viewed (per IB user per day). The results show that only large Greek banks show high average statistics. However, their statistics are low compared to other European banks.

David H. Wong, Nexhmi Rexha & Ian Phau (2008) study the role of traditional service quality in an e-banking environment by providing a review of how traditional service quality perceptions have evolved through the current and continuing stream of change in banking technology and the corresponding changes in the nature of how banks interact with their customers. Quadrant analysis was performed on the service quality dimensions from the SERVQUAL scale. Large discrepancies were found between customer expectations and their perceived performance of traditional banking services.

Egwali Annie Oghenerukeybe (2008) describes a user study performed to investigate user's perception of factors influencing the effective implementation of existing SI objectives and to evaluate the effectiveness of Security Indicators (SI) in banking web browsers using the Communication-Human Information Processing Model (C-HIP) model, a model proposed by Wogalter in 2006 in the field of warning sciences. Findings revealed that Security Indicators are not very effective at alerting and shielding users from revealing sensitive information to spoofed sites.

Gounaris, Spiros; Koritos & Christos (2008) compare, through empirical evidence, two widely adopted models (the Technology Acceptance Model (TAM) and the Diffusion of Innovations (DoI) model) to an underutilised one (Perceived Characteristics of the Innovation) in order to examine which is better in predicting consumer adoption of internet banking (IB) while investigating innovation attributes, other important predictors of adoption of innovations, such as consumer personal characteristics. Design/methodology/approachThe data derive from both users and non-users of IB through a web survey. The paper finds that PCI performed significantly better than TAM and DoI in predicting consumer adoption of IB, whereas the addition of consumer demographics and psychographics further improved the predictive ability of the overall logit model. Non-usability innovation characteristics are important predictors of consumer adoption of technologically based innovations. The paper also incorporates other non-usability types of characteristics (i.e. social, psychological) into TAM and DoI, and identifies the moderating role of shopping context, between innovation characteristics and decision to adopt.

Grabner-Krauter, Sonja; Faullant & Rita (2008) investigate the role of internet trust as a specific form of technology trust in the context of internet banking. The results confirm the influence of internet trust on risk perception and consumer attitudes towards internet banking. Propensity to trust is a determinant not only for interpersonal relationships but also for trust in technological systems.

Guo, Xin; Duff, Angus; Hair & Mario (2008) construct a measurement instrument to capture service quality in the Chinese corporate banking market. For the purpose of the study, Chinese Banking Service Quality (CBSQ) constructs are utilised from the generic service quality literature and Chinese business culture. The study identifies that Service quality in Chinese corporate banking is measured by a nested model, consisting of two higher-order constructs (i.e. functional quality and technical quality) and four lower-order dimensions (i.e. reliability, human capital, technology and communication).

Johns, Raechel; Perrott & Bruce (2008) show how technology has dramatically altered the way businesses operate in a business-to-business (B2B) context and has had profound influences on services, altering the way services are delivered. It is believed that the increased use of self-service technologies (SSTs) impacts on B2B relationships. The paper seeks to explore the impact of the use of internet banking on business relationships. It was expected that perceptions of technology would impact on the relationship. However, it was the perception of the relationship which led respondents to develop a perception of the technology. Further research is recommend

Lisa J Servon & Robert Kaestner (2008) analyses a demonstration program mounted by a major bank to understand whether access to information and communications technologies, combined with financial literacy training and training on how to use the Internet, can help low- and moderate-income individuals in inner-city neighborhoods be more effective financial actors. There was evidence of a potential link between information and communications technologies and financial literacy. Overall, urban low- and moderate-income individuals are interested in becoming technologically and financially literate and an intensive intervention may enable these goals

Luis V. Casalo, Carlos Flavian & Miguel Guinalú (2008) characterise both Customer loyalty and positive word-of-mouth (WOM) in the e-banking context. The research showed that satisfaction with previous interactions with the bank website had a positive effect on both customer loyalty and positive WOM. In addition, website usability was found to have a positive effect on customer satisfaction and loyalty was also significantly related to positive WOM.

Mary Loonam & Deirdre O'Loughlin (2008) explore the emergence of SSBT and investigate customers' perceptions of internet banking self-service within the Irish financial services sector. Despite commonalities between traditional service quality and e-banking service quality dimensions, due to the remote form of the online encounter, many traditional service quality attributes were found to be redundant and instead e-dimensions such as web usability, trust, access and information quality service recovery and flexibility emerged as important to e-banking service provision.

Michael Mazur (2008) conducted a survey from CashEdge in New York. 85% of the survey participants said they would bank only with an institution that offered online banking capabilities. In addition, 82% said they would use more online capabilities if offered to them. A majority (66%) of those surveyed considered having to go to a branch to be a chore. The study show that the popularity of online banking is based on both speed and convenience.

Michael Reid & Yair Levy (2008) contributed to the extensive body of research of technology acceptance by attempting to validate the integration of trust and computer self-efficacy (CSE) constructs into the classical TAM model. The results of the study, based on the data from the customers from three banks in Jamaica, indicate that the classic TAM provided a better fit than the extended TAM with Trust and CSE. The results also indicated that trust is indeed a significant construct impacting both perceived usefulness and perceived ease-of-use. Additionally, only trust was found to be significantly different between male and female bank customers.

Murali Raman, Richard Stepheaus, Nafis Alam & Mudiakaran Kuppusamy (2008) study is to evaluate consumer perceptions on quality of e-services and Internet banking

adoption in Malaysia. The study was made by using a model by including the variables like ease of use, appearance, reliability, customization, communication and incentive. The results show that Internet banking users and non-users have different expectation towards e-service quality preferences.

Ozdemir S., Trott P. & Hoecht A. (2008) conducted the study to identify perceptual, experience related, demographic, socio-economic and situational characteristics of internet banking adopters and non-adopters in the Turkish retail banking sector. The result shows that there were significant differences between adopters and non-adopters of the service in terms of their perceptual, experience and consumer related characteristics. Internet banking adopters perceived internet banking use as less risky, more user-friendly and more useful compared to internet banking non-adopters. Internet banking adopters were also found to have more experience with mobile internet, and have higher income and longer working hours.

Pekka Laukkanen, Suvi Sinkkonen & Tommi Laukkanen (2008) conducted the study among the retail banking customers in Finland who had not adopted internet banking. For the purpose of study, three groups of internet banking non-adopters were identified namely postponers, opponents and rejectors. The resistance of the rejectors is much more intense and diverse than that of the opponents, while the postponers show only slight resistance. The results also indicate that psychological barriers are even higher determinants of resistance than usage and value, which are constructs related to ease-of-use and usefulness determining acceptance in the traditional technology acceptance model. The results indicate that psychological barriers are even higher determinants of resistance than usage and value.

Raechel Johns & Bruce Perrott (2008) seek to explore the impact of the use of internet banking on business relationships. It shows how technology has dramatically altered the way businesses operate in a business-to-business (B2B) context and has had profound influences on services, altering the way services are delivered. It is believed that the increased use of self-service technologies (SSTs) impacts on B2B relationships.

Ram N. Acharya, Albert Kagan & Srinivasa Rao Lingam (2008) examine the impact of online banking intensity on the financial performance of community banks in USA. The results indicate that the increasing use of internet as an additional channel of marketing banking services has significantly improved the financial performance of community banks.

Sonja Grabner-Krauter & Rita Faullant (2008) investigate the role of internet trust as a specific form of technology trust in the context of internet banking. The result shows that Internet trust on risk perception and consumer attitudes influence internet banking. Propensity to trust is a determinant not only for interpersonal relationships but also for trust in technological systems.

Spiros Gounaris & Christos Koritos (2008) compare, through empirical evidence, two widely adopted models (the Technology Acceptance Model (TAM) and the Diffusion of Innovations (DoI) model) to an underutilised one (Perceived Characteristics of the Innovation) in order to examine which is better in predicting consumer adoption of internet banking (IB) while investigating innovation attributes *vis-à-vis* other important predictors of adoption of innovations, such as consumer personal characteristics. The paper finds that Perceived Characteristics of the Innovation (PCI) performed significantly better than TAM and DoI in predicting consumer adoption of IB, whereas the addition of consumer demographics and psychographics further improved the predictive ability of the overall logit model.

Tahir Masood Qureshi, Muhammad Khaqan Zafar & Muhammad Bashir Khan (2008) evaluate the customer acceptance of online banking. Almost 50% of the clients shifted from traditional banking to online banking system. The core reason of this transfer is perceived usefulness, security and privacy provided by online banking.

Tommi Laukkanen & Mika Pasanen (2008) study on how mobile banking innovators and early adopters differ from other users of online banking services. An Internet survey was conducted among customers of a large Scandinavian bank in Finland. Logistic regression was used to identify variables differentiating between users of mobile banking and other online banking services. The results indicate that only age and gender

differentiate these two groups of customers, while education, income, occupation and size of the household were found to be insignificant in differentiating the groups.

Wai-Ching Poon & Booi-Chen Tan (2008) examined the factors affecting the growth of e-banking in Malaysia from the consumers' perspective. The results show that there are seven factors influencing the growth of e-banking such as (1) Internet accessibility and ease of use (2) cost of services (3) trust in bank (bank's credibility) (4) security concerns (5) awareness (6) reluctance of customers and (7) government supports. The advantages of e-banking are modest when compared to other online channels. It is one of the fastest rising services and is a powerful tool for improving customer satisfaction.

Yazan K. A. Migdadi (2008) identify the differences in the internet banking service encounter's quality between clicks-and-mortar retail banks in Jordan and the different internet banking models of the UK retail banks, and between clicks-and-mortar and dot com. retail banks in the UK, the web sites were evaluated by using the web site quantitative evaluation method (QEM) that developed by Mateos et al. (2001) and Miranda et al. (2006) the evaluation of the banks' web sites was conducted in March 2008 for sixteen clicks-and-mortar retail banks in Jordan, eleven clicks-and-mortar retail banks in the UK, and six dot com. retail banks in the UK. The results indicate that the IB service encounter quality of the clicks-and-mortar in Jordan retail banks is very close to the UK banks. Web sites are rich in their content, and significant in the navigation, but the speed of home page down load and web site accessibility should be developed.

Yazan K. A. Migdadi (2008) identified the quality of internet banking service encounter of the retail banks in Jordan, and also identified the quality dimensions that should be improved or sustained, to achieve these purposes the banks' web sites were evaluated by using the web site quantitative evaluation method (QEM). Web sites of sixteen retail banks in Jordan was conducted in March 2008 and the quality dimensions that should be improved or sustained, to achieve these purposes the banks' web sites were evaluated by using the web site quantitative evaluation method (QEM).

Yi Cai, Yali Yang & Brenda Cude (2008) empirically investigate the factors that influence US consumers' attitudes toward and use of electronic banking and to explore

the reasons that a magnitude discrepancy exists between the impact of the specific factors on consumers' attitudes and the impact on their actual behaviours. It was found that consumers' perceptions of the characteristics of e-banking, namely the perceived advantages and problems, had different impacts on consumers' attitudes toward and their use of such service. While the perceived problems were more important in forming consumers' attitudes toward e-banking, the perceived advantages had the greatest impact on consumers' use of such service.

Zhao, Anita Lifan; Hanmer-Lloyd, Stuart; Ward, Philippa; Goode & Mark M.H. (2008) identify the risk factors that discourage Chinese consumers from adopting internet banking services (IBS). The results of the study indicate that the concept of perceived risk has merit in explaining Chinese consumers' decisions on whether to use IBS. Results clearly reveal that the significant risk barriers identified are influenced by culture and do not simply follow predominant Western patterns.

Abdullatif I Alhudaithy & Philip J Kitchen (2009) Rethinking Models Of Technology Adoption For Internet Banking: The Role Of Website Features, *Journal of Financial Services Marketing, London*, Vol. 14, Issue 1, Year: 2009, pp: 56-69 introduce a theoretical paper 'website features' as potentially influential in technology adoption, and specifically Internet banking. It is argued that the effective features and their impacts differ along the stages of the customer purchase process. A theoretical framework is developed for evaluating website design in relation to these stages. This may assist website designers in enhancing website effectiveness for the benefit of the business-customer relationship

Adam Vrechopoulos & Evangelos Atherinos (2009) investigate web banking store layout effects on user-consumer behaviour and to report on a laboratory experimental investigation into user acceptance of three different layout types. The result indicates that layout has an effect on user acceptance of web banking.

Ali Hussein Saleh Zolait, Minna Mattila & Ainin Sulaiman (2009) introduce a new approach to User's Informational-Based Readiness (UIBR) for investigating the acceptance of marketing innovations such as Internet Banking (IB) services. The

findings reveal that both intention and attitude are positively related to all variables of interest and are significantly related to all investigated variables.

Bora Aktan, Edip Teker & Pervin Ersoy (2009) examine the usage of internet in Turkey to make a basic due-diligence investigation for the financial institutions, by using statistics compiled mostly from the Bank Association of Turkey over the period 2005 and 2008. The findings show that internet usage in Turkey with its young population has continued to grow dramatically in financial services.

Dube Thulani, Chitura Tofara & Runyowa Langton (2009) explore the extent of adoption and usage of internet banking by commercial banks in Zimbabwe and investigate the challenges they face in the adoption of this technology. An exploratory research design was used to achieve the envisaged aims of the study. Overall, the results showed that while the majority of the banks in Zimbabwe have adopted internet banking, usage levels have remained relatively low, as not many customers are using this innovation in Zimbabwe. Compatibility with existing legacy systems, cost of implementation and security concerns regarded as the major challenges faced by banks in the adoption of internet banking.

Evangelia K Blery, Stamatina Mitsi, Mirsini-Anna Perdiki, Eleni Rouva & Katerina Finitzi (2009) discuss the influence of service quality on customer loyalty in the Greek banking sector. It has been revealed that customers stated repurchase intention does not always ensure their actual repurchase behavior. The findings showed that there are relationships between service quality, customers stated repurchase intention and their recommendations to third parties in the Greek banking sector.

Glen Fest (2009) discuss the paradoxes of mobile adoption. According to the study, most of the bank consumers fear that the mobile features might be easily blocked by inherent safety features in mobile devices. Eventhough, malware is very rare in mobile apps, most of the consumers fear that hackers will gain remote access to phones. Most consumers also fear that data will be stolen via a wireless signal, although information is encrypted. Some of the consumers worry about their phone being stolen.

Guangying Hua (2009) investigate how users' perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. It was observed that perceived ease of use and privacy policy have a significant impact on user's adoption of online banking. Perceived ease of use is of less importance than privacy and security. Security is the most important factor influencing user's adoption.

Hanudin Amin (2009) investigated the factors influencing the online banking acceptance in Malaysia. This study applies Technology Acceptance Model as the base model in order to investigate the online banking acceptance. The study results suggest that PU, PEOU, perceived credibility and social norm are significant.

Hernan E. Riquelme, Khalid A. Mekkaoui & Rosa E. Rios (2009) conducted a study in one of the main banks in Kuwait, the Middle East (a) to identify which customer service and online attributes predict overall satisfaction (b) to determine if satisfied customers use more online banking features than less satisfied customers and (c) to identify characteristics of less satisfied customers. The findings suggest that satisfaction can be generated through improving courtesy, content, timeliness and product and services offered. The latter being the most important factor in driving internet banking satisfaction. The findings suggest that the majority of the customers in the sample are satisfied or very satisfied with the service and online systems attributes.

Joaquín Aldas-Manzano, Carlos Lassala-Navarre, Carla Ruiz-Mafe & Silvia Sanz-Blas (2009) analyse how consumer innovativeness can be used as a variable to positively influence internet banking adoption both directly and reducing consumer perceived risk. The results reveal consumer innovativeness as a key construct to improve e-banking adoption both directly and by its effective role in reducing consumer risk perception of using internet channel in the financial services context.

John Mylonakis (2009) carried out the study in 2007 on 300 bank customers within the area of Athens, Greece. The main findings of the study reveal that a majority of customers are satisfied with their bank. Most bank customers believe that the use of new technologies helps their communication with banks. They trust the bank employees for

obtaining information on the existing banking products and services, while for new programs, they prefer to choose alternative channels, such as the Internet, phone services, brochures and press releases.

Joshua A. J. (2009) The study has endeavored to look at the adoption of technology-enabled banking self services (TEBSS) in totality as it has considered the factors pertaining to all the four prominent TEBSS namely ATMs, internet banking, tele-banking and mobile banking which are used by the banks. It was found that the customers tend to use various banking services delivery modes in a complimentary way and each electronic banking channel has its own peculiarities.

Michel Rod, Nicholas J. Ashill, Jinyi Shao & Janet Carruthers (2009) The results of the study show significant relationships among online customer service quality, online information system quality, banking service product quality, overall internet banking service quality and customer satisfaction.

Ming-Chi Lee (2009) explores and integrates the various advantages of online banking to form a positive factor named perceived benefit. In addition, drawing from perceived risk theory, five specific risk facets - financial, security/privacy, performance, social and time risk - are synthesised with perceived benefit as well as integrated with the technology acceptance model (TAM) and theory of planned behavior (TPB) model to propose a theoretical model to explain customers' intention to use online banking. The results indicated that the intention to use online banking is adversely affected mainly by the security/privacy risk, as well as financial risk and is positively affected mainly by perceived benefit, attitude and perceived usefulness.

Myria Ioannou & Judy Zolkiewski (2009) investigate the effect of e-banking on the development of retail relationships in Cyprus. They suggest that e-banking has a significant impact on relationship development, especially at the first stages of the developmental process, but it cannot substitute the other delivery channels.

Polasik, Michal; Wisniewski & Tomasz Piotr (2009) seeks to identify empirically the factors underlying the decision to adopt online banking in Poland. One of the dominant relationships observed in the study is the link between the decision to open an online

account and the perceived level of security of internet transactions. Experience with the medium of internet and certain demographic variables also proved to be robust predictors of the adoption status.

Poolthong, Yaowalak, Mandhachitara & Rujirutana (2009) explore how social responsibility initiatives can influence perceived service quality and brand effect from the perspective of retail banking customers in Bangkok. This paper also examine the impact of trust as a mediating variable between perceived service quality and brand effect. In the study, perceived service quality is positively associated with brand effect mediated by trust. Corporate Social Responsibility (CSR) initiatives play an important role in perceived service quality, which in turn, influences trust and brand effect.

Rohaya Shaari & Hafizi Muhamad Ali (2009) studied the demographic influences on internet banking in Malaysia. The findings of the study suggest that bank should continue to offer personalised services to the customers. Further, internet banking should be used as an informational and transactional tool to complement and enhance banking operations.

Sabah Abdullah Al-Somali, Roya Gholami & Ben Clegg (2009) conducted the study to identify the factors that encourage customers to adopt online banking in Saudi Arabia. The research constructs were developed based on the technology acceptance model (TAM) and incorporated some extra important control variables. The findings of the study suggests that the quality of the Internet connection, the awareness of online banking and its benefits, the social influence and computer self-efficacy have significant effects on the perceived usefulness (PU) and perceived ease of use (PEOU) of online banking acceptance. Education, trust and resistance to change also have significant impact on the attitude towards the likelihood of adopting online banking.

Satyabhusan Dash, Ed Bruning & Manaswini Acharya (2009) investigate the relationship between Canadian and Indian consumers' national cultural orientations and banking service quality expectations. According to the study, consumers low on power distance expect highly responsive and reliable service. High power distance customers attach higher importance to tangible service attributes. Consumers high on individualism

expect lower empathy and assurance from service providers. Furthermore, Indian consumers attach higher importance to tangible attributes, whereas Canadian consumers find service reliability more important. However, differences in overall service quality expectations are not significantly different across the two countries.

Shradha Malhotra Banga (2009) studied the performance of banks in India involved in Electronic Fund Transfer (EFT) by classifying the banks into Public Sector Banks (PSBs) Private Banks (PBs) Foreign Banks (FBs) Co-operative Banks (CBs) and Non-banking Financial Intermediaries (NBFI). The result shows that there is a disparity in the performance of different categories of banks. The PSBs have around half share in the number of EFT transactions in India. But as regards the value of EFT is concerned, PBs holds the first position and PSBs are having only second position.

Sofri Yahya Dr., Harashid Dr. & Thakur Rajendar Singh (2009) conducted the study in Hyderabad to know the issues and prospects of Internet Banking. According to the study, the factors which have a positive impact on the adoption of Internet Banking are Education level of customers, Banking literacy & knowledge, Computer literacy in terms of computer proficiency, Availability of internet facilities, Awareness about availability and benefits of online banking technology

Tommi Laukkanen, Suvi Sinkkonen & Pekka Laukkanen (2009) conducted the study to know how customers experience different kinds of resistance to Internet banking perceive the information and guidance offered by the service provider. Based on the earlier literature, a typology of consumer resistance to innovations is proposed and four resistance segments, namely Non-Resistors, Functional Resistors, Psychological Resistors and Dual Resistors were identified. The results show that those customers reporting both functional and psychological resistance to Internet banking are more dissatisfied with the information and guidance offered by the service provider compared to those with only psychological resistance or no resistance to the innovation.

Athanasios G. Patsiotis, Tim Hughes, Don J. Webber (2012) conducted the study to examine internet banking adoption and resistance behaviour in Greece in order to develop profiles of adopters and non-adopters of the service. The aim is to illustrate

customers' resistance behaviour towards internet banking. In the study, it was found that the adopters and non-adopters were found to have different characteristics.

Shumaila Yousafzai, Mirella Yani-de-Soriano (2012) conducted the study is to deepen the understanding of customers' actual internet banking behaviour by combining the construct of technology readiness with the technology acceptance model and demographics, such as age and gender, into one integrated framework. The results indicate the importance of customer-specific factors in predicting actual behaviour. Technology readiness, age and gender moderate the beliefs-intention relationship. Customers with varying levels of technology-related views and demographics hold different beliefs about technology. The relationship between usefulness and behaviour was stronger for younger males with high levels of optimism and innovativeness (explorers and pioneers), whilst the relationship between ease of use and behaviour was stronger for older females with a high level of discomfort (paranoids and laggards).

Ulun Akturan, Nuray Tezcan (2012) conducted the the study to investigate consumers' mobile banking adoption through an integration of the technology acceptance model (TAM) with work on perceived benefits and perceived risks. It was found that perceived usefulness, perceived social risk, perceived performance risk and perceived benefit directly affect attitudes towards mobile banking, and that attitude is the major determinant of mobile banking adoption intention. In addition, no direct relationship between perceived usefulness and intention to use, perceived ease of use and attitude, financial risk, time risk, security/privacy risk and attitude was detected.

ChauShen Chen (2013) conducted the study to discusses the effects of diffusion and adopters of mobile banking services (MBSs), perceived risk, brand awareness, and brand image of MBS providers, on attitude toward using MBSs, and on intention to use MBSs. In accordance with sample usage frequency in MBSs, this study subgroups the sample population into several behavioral segments (frequent/infrequent users) to concentrate sample characteristics and the behavioral models. The Analytical results of this study demonstrate that mobile banking users with different behavioral patterns have dissimilar perceptions of innovation benefits and risk. Moreover, brand awareness and brand image

of the MBSs provider are crucial exogenous factors associated with attitude and intention to use MBSs.

Dimitrios Maditinos, Dimitrios Chatzoudes, Lazaros Sarigiannidis (2013) conducted the study to introduce an extended technology acceptance model (TAM) model as a tool for examining the factors that have a significant impact on customers' online banking acceptance. The results revealed the important impact of perceived usefulness, security risk and performance risk on the intention to use internet banking. On the contrary, the impact of perceived ease of use and quality of the internet connection seemed to have only an indirect effect on internet banking adoption.

Francisco Jose Liebana-Cabanillas, Juan Sanchez-Fernandez, Francisco Munoz-Leiva (2013) conducted the research is to propose and test an integrative theoretical model that allows to determine the relative influence of the determining factors (external influences, ease of use, attitude, usefulness, trust and risk) for the acceptance of mobile payment system and to analyze the eventual moderating effect of the gender of the consumer in the use of these tools. The empirical results show that the the gender of the user introduces significant differences in the proposed relationships between ease of use and usefulness of the new system, between usefulness, attitude and intention to use, as well as between users' trust and a favorable attitude towards its use.

Niklas Arvidsson (2013) conducted a study to understand consumers' attitudes on start using mobile payment services. The study finds that the most important factor explaining whether consumers are likely to use a mobile payment service is ease of use. In addition, relative advantage, high trust, low perceived security risks, higher age and lower income were associated with a positive view on adopting the service. The study leads to the conclusion that the studies of innovation in the payment industry cannot rely on technology adoption models and innovation diffusion theory alone.

Wendy Ming-Yen Teoh, Siong Choy Chong, Binshan Lin, Jiat Wei Chua (2013) conducted the study to discover the factors influencing perception towards electronic payment (e-payment) from the Malaysian consumers' perspective. The results reveal

that benefits, self-efficacy, and ease of use exert significant influences on consumers' perception towards e-payment.

2.02-Studies In India

Gupta M. P. & Rohet Sareen (2001) consider various issues and concerns of consumers regarding e-payments in India. According to the study, a widespread market for electronic money ('e-money') products is expected due to several reasons such as the net boom, cost efficiencies and the opportunity for greater convenience and security. But these benefits cannot be fully realised without wide consumer acceptance of e-money, for which they should have confidence in the new products, understand the benefits and risks of the products, and believe that their concerns about the products have been considered and addressed.

Gupta M. P. & Sonal Shukla (2002) revealed that CRM is gradually picking up and is considered as a viable proposition by banks in improving services to their customers. It was found that high level of commitment is expected among those who implement CRM. Resistance to change is one of the major challenges while implementing CRM.

Sureshchandar G. S., Chandrasekharan Rajendran, R. N. Anantharaman & T. J. Kamalanabhan (2002) Investigates the discrepancies among the various groups of banks in India with respect to the total quality service (TQS) dimensions from the perspective of the management. The study identifies the dimensions that contribute most to discriminating between the three groups of banks in India.

Avinandan Mukherjee & Prithwiraj Nath (2003) concerns how trust is developed and sustained over different levels of customer relationship in online banking. In the study, it was found that online trust issues affect customers' relationship commitment to banks and willingness to engage in online transactions. The future commitment of the customers to online banking depends on perceived trust. Perceived privacy and security concerns hinder customers from engaging in commercial transactions on the Web. Perceptions of opportunistic behaviour of online banks and lack of proper communication also affect the overall level of trust towards the online banks and their systems.

Nikhil Agarwal, Ruchi Agarwal, Prasoon Sharma & Sherry A. M (2003) discuss the avenues where e-banking can play significant role in e-democracy. According to the authors, online bill payment, online brokerage, online account management, anywhere banking, smart card solutions etc are the potential areas where E-Banking can be used for successful E-Governance. The authors present two case studies also based on implementation of e-banking in digital democracy. Ie., *FSC* (Farmer Service Centre) nourished by Government of India and *eSeva*, an online community bill payment system initiated by Andhra Pradesh Government.

Sanjaya S Gaur & K Abdul Waheed & Avish J Kuzhimattathil & Ashish Mahajan (2003) discusses the general IT adoption characteristics in Indian Banking, Financial Services and Insurance (BFSI) such as different kinds of IT delivery channels usage, operating systems and databases usage, networking status and security systems usage based on a survey carried out during March - June, 2002 and also highlights the perceived benefits and hindrances/inhibitors of IT adoption and levels of satisfaction in IT enabled business processes in Indian BFSI.

Sureshchandar G. S., Chandrasekharan Rajendran & Anantharaman R. N. (2003) focussed their study to investigate the critical factors of customer perceived service quality in banks of India, by comparing three groups of banks with respect to the service quality factors from the perspective of the customers and observed a great amount of variation with respect to the level of service quality offered by these three groups of banks. Customers are seemed to keep the “technological factors” of services such as core service and systematization of the service delivery as the yardstick in differentiating good and bad service and the “human factors” play a lesser role.

Balwinder Singh & Pooja Malhotra (2004) presents data, drawn from a survey of websites of Indian commercial banks, on the number of commercial banks that offer Internet banking and on the products and services they offer. It investigates the profile of commercial banks that offer Internet banking, using univariate statistical analysis, relative to other commercial banks with respect to profitability, cost efficiency, and other characteristics. It was also found that the profitability and offering of Internet banking does not have any significant correlation.

Balwinder Singh & Pooja Malhotra (2004) evaluated the shift towards a timelier, readily accessible, interactive web based financial reporting by banks in India. The findings show that Indian private banks are more advanced in using Internet for financial reporting than government-owned banks.

Vignesen Perumal & Bala Shanmugam (2004) in their study evaluates whether Internet banking is a boon or bane. It throws light on the fact that even though there are enormous opportunities and virtual banks are on the rise ‘brick and mortar’ banks and transactions should not be neglected. This is because there are numerous aspects of banking which cannot be currently accomplished by electronic impulses.

NVM Rao, Prakash Singh & Neeru Maheshwari (2005) analyses a comparison of various models using metric method. The different elements of the metric include revenue generation, value proposition, infrastructure etc. A mathematical model taking into consideration various ranking and weightages to the elements of the metric has been developed to analyse whether investments in e-initiative increased productivity and profitability in the Indian banking system. The model suggests that the performance of the banking sector has improved considerably. Profitability, customer satisfaction, and many other parameters show a market improvement.

Shajahan S. (2005) conducted the study based on 100 account holders of ICICI Bank in Chennai for portraying their varying levels of satisfaction. The study indicates that Internet literacy is the major factor underlying online banking penetration in India.

Arumuga Perumal S. (2006) discuss about different security measures that are to be considered in Virtual banking system, to share the fundamental concept behind the security technology and to understand the relative advantages and limitations of different approaches. It is observed that the success of a biometric authentication system will depend on the method used to combine the individual decisions or matching scores. For better security, multifactor authentication is suggested as the best so that Password with any one biometric system make the virtual banking with higher security in forth coming years. However, it needs to be recognised that such high cost technological initiatives

need to be undertaken only after the viability and feasibility of the technology and its associated applications have been thoroughly examined.

Sakthivel A. M. (2006) is an extensive primary research in Bangalore, in order to identify the willingness of Internet users to avail different services over Internet. The paper aims at providing a specific focus to identify the impact of demographics in influencing Indian Internet users in consuming different services online. The study revealed that age and occupation have significant impact on consuming different categories of services online.

Pooja Malhotra & Balwinder Singh (2007) studied the factors affecting a bank's decision to adopt Internet banking in India. The results show that larger banks, banks with younger age, private ownership, higher expenses for fixed assets, higher deposits and lower branch intensity evidence a higher probability of adoption of new technology. Banks with lower market share also see the Internet banking technology as a means to increase the market share. It was also found that the profitability and offering of Internet banking does not have any significant correlation.

Aruna Dhade & Manish Mittal (2008) focused the study on the primary opinion of the customers of new private sector banks and public sector banks in India to analyse the factors such as (a) Customers' preferences while selecting the bank of their choice (b) The satisfaction level of the customers (c) Instances of customers shifting from one bank to another due to dissatisfaction. According to the study, male customers are paying attention to process time of transaction and availability of technology and female customers are paying more attention to customer service and easy accessibility while selecting a particular bank. It is evident from the study that the customers of private banks are more satisfied than those of the SBI. Customers of SBI are more sensitive with regard to processing time taken for account handling and technological updates. Dissatisfaction in those areas can lead to shifting to another bank, while in the case of private banks' customers, proximity to residence and sometimes delay in the processing time can be the likely reasons to change the existing bank with a new one.

Geetika & Tanuj Nandan & Ashwani Kr. Upadhyay (2008) discusses the concept of Internet Banking, perception of Internet bank customers, non-customers and issues of major concern in Internet banking. The result of the study shows that there is a significant difference in the perception towards security features between users and non-users of internet banking.

Kamakodi N. & M Basheer Ahmed Khan (2008) conducted an empirical study regarding the expectations of bank customers and also evaluate the level of services provided by the banks in India. It is evident from the study that a wide gap exists in human service in banking while technology based services are exceeding the customer expectations and hence, it is recommended that banks have to improve services at the branch levels to retain competition advantage.

Kamakodi N. & M Basheer Ahmed Khan (2008) conducted a study on e-banking channel acceptance by Indian customers. The results indicate that the majority of the customers are very comfortable and willing to use e-banking channels. At the same time, over 80% feel that 'human contact is necessary' and the technology alone cannot give a sustainable competitive advantage for the banks.

Ravi R. A. (2008) compares public sector banks and private sector banks in India in terms of user perception of their retail banking services. Both public and private sector banks provide modern services to the customers. Safety of investments, confidentiality of transactions and good will are the areas of strength of public sector banks identified by the study. In the case of private sector banks, they are politeness and hospitality, use of latest technology, speed, accuracy and promptness, confidentiality of accounts, variety of services offered etc.

Sakthivel N. (2008) conducted the study based on customers' perception towards ATM Services. It was found that convenience is the most important factor which influenced the customers of ICICI Bank and SBI to opt for ATM services. The most significant problem faced by the customers of ICICI Bank and SBI is the requirement of 'high minimum balance'. 'Crowd during peak hours' is another problem faced by the customers of ICICI Bank

Sumeet Gupta (2008) conducted the study to find out the customers' awareness level and also to analyse the perceptions and expectations of customers from e-banking. It also analyses various factors which encourage and discourage customers for using e-banking. The result shows that even customers who know about e-banking are not using the facility due to misconception and lack of trust in the system. Those who use are using only few facilities of e-banking. It has been found that customers have doubt about the safety and security of e-banking.

Sunil Kumar & Rachita Gulati (2008) analysed the effect of size and group affiliation on the Technical Efficiency (TE) of Indian Public Sector Banks (PSBs) within a cross-sectional perspective. The results suggest that the extent of TE in the Indian public sector banking industry is to the tune of 88.5%. Observed level of technical inefficiency is primarily due to managerial underperformance in organizing inputs (i.e., pure technical inefficiency) rather than divergence of actual scale of operations from the most productive scale size (i.e., scale inefficiency). Regarding group affiliation, the results revealed that the banks affiliated to State Bank of India group are more efficient than the nationalised banks. The relationship between size and technical efficiency indicates that the small banks are more efficient than their large counterparts. In addition, the hypothesis 'the larger the bank in terms of total assets, higher is the level of its efficiency' does not hold good in Indian public sector banking industry.

Sunil Kumar & Rachita Gulati (2008) attempted to evaluate the extent of technical efficiency in public sector banks operating in India and to provide strict ranking to these banks. The results show that only seven of the 27 banks are found to be efficient and the banks affiliated with SBI group turned out to be more efficient than the nationalised banks. They also observed that staff productivity, market share and size are the major determinants of the technical efficiency.

Uppal R. K. (2008) study on the perceptions of bank customers in India regarding e-banking services and also analyses the quality of those services in the changing environment in the banking sector. As per the study, majority of bank customers are highly satisfied with e-banking services. They prefer e-channels due to time and cost

utility. But the customers are not fully aware of the operational part of each channel and their transaction facilities

Uppal R. K. & Rimpi Kaur (2008) studied the responses of customers of PSBs, Indian Private Sector Banks, and Foreign Banks operating in Amritsar district of Punjab. The result shows that there is a significant difference among these three bank groups with regard to the time spent by the customers to transact a business. The study reveals that the main reason of switching to e-banking by the customers is due to the time factor.

Varsha Virani (2008) conducted the study to identify the usage of banking channels by customers of Kotak Mahindra Bank. The result shows that younger customers have better understanding when compared to the older ones. The customers who are aware of services are taking the benefit of it.

Mohammed Sadique Khan, Siba Sankar Mahapatra & Sreekumar (2009) explores the service quality of i-banking operative in India from customer's perspective. Seven quality dimensions, viz. reliability, accessibility, user friendliness, privacy/security, efficiency, responsiveness and fulfillment, are identified based on principal component factor analysis. The results show that customers are satisfied with quality of service on four dimensions such as reliability, accessibility, privacy/security, responsiveness and fulfillment, but least satisfied with the 'user-friendliness' dimension. The two dimensions, viz. 'Privacy/Security' and 'Fulfillment' are not contributing significantly towards the overall service quality. This is an implication that the customers feel that bankers fail in providing the services on these two dimensions satisfactorily and the opinion of male and female of business class differs from the other classes.

Pooja Mengi (2009) conducted the study to identify the dimensions of SERVQUAL that ensures maximum satisfaction for bank customers. The study compares customers' perceptions of service quality of public and private banks of Jammu. Two Public Sector banks and four private sector banks were selected for the study. SERVQUAL scale was used to determine different dimensions of service quality and chi-square analysis was used to understand the impact of SERVPERF (service performance) dimensions (tangibility, reliability, responsiveness, assurance and empathy) on customer satisfaction.

The results of the study indicate that tangibility and reliability provides maximum satisfaction to the customers of PSBs. It was found that customers of public sector banks are more satisfied with the service quality, than those of private sector banks.

Sofri Yahya, Harashid & Thakur Rajendar Singh (2009) conducted the study regarding the issues and prospects of Internet Banking in Hyderabad. The result of the study shows that education, banking literacy and computer literacy have a positive impact on the acceptance of IB

Sultan Singh & Komal (2009) conducted a comparative study of three major banks in India i.e. SBI, ICICI Bank and HDFC Bank regarding the impact of ATM on customer satisfaction. The results of the study shows that there is a significant difference between the various banks as far as customer satisfaction level is concerned. The material satisfaction level is highest in SBI, followed by ICICI Bank and HDFC Bank. However, while considering the customer satisfaction in terms of efficiency and performance, HDFC Bank is at 1st position, followed by ICICI Bank and SBI.

Uppal R. K. & Pooja (2009) is a case study which traces the present status of e-banking in India, which visualises its prospects and looks at the challenges. It concludes that in the scenario of severe competition and escalating customer expectations, banks cannot remain lukewarm to IT. It has been observed that the performance of many private banks and foreign banks operating in India is better than the Public Sector Banks (PSBs) in fulfilling the service expectations by customers. Therefore, the key to survival is to provide IT enabled value-added services.

Uppal R. K. & Rosy Chawla (2009) investigate the perceptions of the bank customers regarding necessity of e-banking services, quality of e-banking services, bank frauds, future of e-banking, preference of bank customers regarding banks, comparative study of banking services in various bank groups, preferences regarding use of e-channels and problems faced by e-bank customers in Ludhiana district, Punjab. The result of the study shows that even though customers of all banks are interested in e-banking services, they are facing the problems like, inadequate knowledge, poor network, lack of infrastructure, unsuitable location, misuse of ATM cards and difficulty to open an account etc.

Usha Lenka, Damodar Suar & Pratap K. J. Mohapatra (2009) examines whether service quality of Indian commercial banks increases customer satisfaction that fosters customer loyalty by collecting data from bank customers in Orissa. It was found that human aspects are more important than technical and tangible aspects of service quality that influence customer satisfaction and promote and enhance customer loyalty.

Lakshmi Kumar, D. Malathy, L.S. Ganesh (2011) conducted a study to understand the technology diffusion in the banking sector in India by analyzing ATM technology and its replacement of the teller (labor). The study shows that the degree of substitutability of the teller by the ATM is high. However, the ATM is not a perfect substitute. By running counterfactual experiments, the study concludes that both a fall in the price of ATMs and an increase in the wage bill for tellers contributed to the diffusion of the ATM.

Ankit Kesharwani, Shailendra Singh Bisht (2012) conducted to extend the Technology Acceptance Model (TAM) in the context of internet banking adoption in India under security and privacy threat. The paper reveals that perceived risk has a negative impact on behavioral intention of internet banking adoption and trust has a negative impact on perceived risk. A well-designed web site was also found to be helpful in facilitating easier use and also minimizing perceived risk concerns regarding internet banking usage.

Arun Thamizhvanan, M.J. Xavier (2013) conducted the study to identify the determinants of online purchase intention among youth in the Indian context. The research established that impulse purchase orientation, prior online purchase experience and online trust have significant impact on the customers' online purchase intention. Males are found to have more intention to shop online than females.

Jaspal Singh, Parminderjit Kaur (2013) conducted the study to determine the factors that lead to satisfaction of the customers as regards to e-banking services provided by selected banks in India. In their study, six factors namely ease of use, reliability, convenient accessibility, security, low transaction cost and the time consumption emerged as factors that lead to customer satisfaction as regards e-banking services. The results of multiple regression showed that out of the above mentioned six factors, three

factors, namely, ease of use, low transaction cost and security are found to be statistically significant.

Rakhi Thakur, Mala Srivastava (2013) conducted the study was to investigate the factors influencing the adoption intention of mobile commerce. In this study, Perceived usefulness, perceived ease of use and social influence are found to be significant dimensions of technology adoption readiness to use mobile commerce. The results indicate that security and privacy concerns are important in deterring customers from using mobile commerce.

Rakhi Thakur, Mala Srivastava (2014) conducted the study to accomplish two objectives – to test the functional relationship between adoption readiness, perceived risk and usage intention for mobile payments in India and to investigate the stability of proposed structural relationships across different customer groups. The literature concerning major attributes of technology acceptance were systematically reviewed to develop construct of adoption readiness. A comprehensive model consisting of adoption readiness, personal innovativeness and perceived risk was put together and the model was then empirically tested using structural equation modeling. On appraising the proposed model, five out of six hypotheses were fully supported while one hypothesis was partially supported.

2.3-Study in Kerala

Ajimon George (2013) conducted the study among the IB users in Kerala to understand their perceptions on varied aspects of IB. From this study, it was revealed that IB users are satisfied about the quality of IB services and their satisfaction is independent on various quality dimensions. Though the users face problems, the gravity of the same is found to be less. But the occurrence of these problems have negative effects on customer satisfaction.