

## LITERATURE REVIEW ON E-BANKING SERVICES

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### **ABSTRACT**

*Banks adopt E-banking as a means to replace their traditional delivery channel through branch banking mainly due to the cost of setting up of physical branches and increased overheads associate with maintaining them . While adopting any new channel of service delivery, service is one of the primary benefit which a customer expects from the service provider. The consumers compares the benefits and weigh them against the costs associated with the service. E-Banking services are gradually replacing the traditional banking services. In order to gain competitive advantage over the competing banks, the banks are continuously improving their services through e-banking services. This paper has examined reviews collected in the area of e-banking services which includes Internet Banking, ATM banking, Mobile banking etc.,*

**Keywords:** E-banking services, Internet Banking, ATM banking, Mobile banking, Perception Inhibitor, enablers etc.,

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## INTRODUCTION

The different kinds of technological Innovation along with the information technology had made a paradigm shift in the Banking Sector. E-Banking encompasses Internet banking, ATM banking, Mobile banking, Television based banking, PC banking. Banks adopt E-banking as a means to replace their traditional delivery channel through branch banking mainly due to the cost of setting up of physical branches and increased overheads associated with maintaining them. While adopting any new channel of service delivery, service is one of the primary benefit which a customer expects from the service provider. The bank customers compares the benefits and weigh them against the costs associated with the banking service. E-Banking services are gradually replacing the traditional services. In order to gain competitive advantage over the competing banks, the banks are continuously improving their services through e-banking services.

## PERCEPTION ON E-BANKING SERVICES

Convenience had been the major motivating factor for the customers in the adoption of internet banking in many studies done. This was proved by a study done in Australia using a sample of 300 customers (Lichtenstein.S, (2006). Similar study in Nigeria also proved that 84% of 750 respondents perceive e-banking to be convenient and flexible and has transaction related benefits (Auta, E.M. (2007). The result of univariate anova also proved that convenience and usability were the driving force to adopt e-banking than their perception of security (Weir. C.S., et al., (2009).

Sudeep. S (2008), had developed a research model based on theory of planned behaviour (TPM) and technology acceptance model (TAM). He had found that except one factor Consumer security concerns, remaining eight factors namely Perceived usefulness (PU), Perceived Ease of use (PEOU), Consumer awareness(CA), quality of facilities for accessing bank sites, subjective norms, Trust and Privacy, had a positive influence on the acceptance of e-banking. Another study conducted by Malarvizhi.V, Geetha.K.T (2013), the researchers had found out from a sample of 600 bank customers of public, private and foreign banks in Coimbatore, that

perceived usefulness, perceived ease of use, perceived security leads to perceived satisfaction which finally results in perceived adoption of e-banking services. Similar study was conducted by Aderonke, A, Charles A.K., (2010) of Nigeria who had also found that Perceived usefulness was the important factor influencing the adoption of e-banking among users among the other variables namely Perceived Credibility (PC), Computer Self-Efficacy (CSE), and Perceived Ease of Use (PEOU) on customer attitude and customer adaptation. This is similar to the finding of a study, conducted in Malaysia by Amin.H (2007).

Haque.A et al., (2009) of Malaysia had found through multiple regression analysis that only secure transaction have a significant influence on the bank customer perception relating to e-banking transactions and the other factors like regulatory framework, service quality and sufficient mechanism had the least impact on the customer perception. In another study conducted in New Zealand, Chi-square test revealed that there was positive relationship between service quality and user input factor dimensions and electronic banking but it was also found that high income consumers usage of electronic banking services was less due to security reasons (Gan.C et al., 2006). In another study, it was found from a study sample of 230 respondents that protected transaction followed by service quality and regulatory frame work were the factors determining the perception of bank customers in Malaysia (Haque.A et al., (2009). Rani.M (2012), had identified and measured the customer perception towards e-banking services in the area of Ferozepur, which is underdeveloped. The finding revealed that though 60% of the customers have positive perception towards e-banking services, only 52.9% are using the e-banking services especially ATM services due to lack of computer knowledge and internet usage. Significant variations exists between the views of respondents belonging to different income group.

Du, J. (2011) of New Zealand had examined the impacts of demographic characteristics of 1500 bank customers' in the internet banking adoption and the results of t-test and anova results showed that customers with different gender, age, marital status, qualifications, occupations and incomes, have different perceptions of the Internet banking adoption factor. It was also revealed that the young age and the high income groups are more likely to adopt Internet banking. Saeednia.H and Abdollahi.H (2012) of Iran analysed the effect of various factors like, privacy,

usability, and reputation, perceived by 118 customers, on client trust in online banking and found that there was a direct association between perceived reputation and client trust.

Based on customers trust, studies were conducted by researchers. One such study was conducted in Saudi among 500 samples, chosen from both Saudi and non-Saudi bank customers. The result of 't' test revealed that there were differences in trust and securing between customers of Saudi and non Saudi bank customers. It was also found that the Saudi banks' customers have high trust and security in e-banking services offered compared to non-Saudi bank customers (Shereif Mahdi.M.O 2011). Another study done by Yousafzai.S et al., (2009), had developed a multi-dimensional model of trust comprising of perceived trust worthiness, perceived security and perceived privacy for Internet Banking. The results of Mann-Whitney U and Wilcoxon W test showed that trust and perceived risk are direct antecedents of intention to use Internet Banking. In another study conducted in Turkey, the trust of online banking users on internet banking services are more than telephone banking services (Mermod, A.Y. 2011).

Laukkanen. T (2007) of Finland, had made a qualitative study by comparing customer perceived value and value creation between internet and mobile bill paying service. It was found that customer value perceptions in banking actions differ between internet and mobile channels. Factors like efficiency, convenience and safety were very important in determining the differences in customer value perceptions between internet and mobile banking services.

It was found from another study, that occupation, type of account, designation and size of the banks did not influence the perception of customer respondents. It was revealed that banking customers were more familiar with the ATM Services compared to other e-banking services (Richard.N 2010). Mahmood (2009) of U.K had conducted a survey on 105 respondents regarding their opinions of the general public towards the use of EB. The survey results reveals that 50 respondents, were users of electronic banking services and remaining respondents were non-users due few issues in Electronic banking namely lack of social dimension and a lack of computing skills. .

Carlos R. Sánchez S, Jean-Baptiste Gallié. J.B. (2010) had analysed the similarities and differences of online banking between France and Mexico. Chi-Square test was employed to analyse the data collected using 398 respondents. The study focused on the socio-demographic

variables namely age, sex, civil status, net monthly income, usage and access of computers of . It was found that in the case of Mexico, human factor is a relevant factor in the adoption of internet banking whereas self-government (autonomy) was the significant on the adoption of online banking for French customers. Security and Difficulty were major concern for both Mexican and French consumers. On the other hand, a study was conducted based on the usage duration of online banking. One such study by Chuang.C.C. and Fu-Ling Hu (2011) of Taiwan, on the perception of customers who have short time usage and long time usage of banking website services. A Sample of 111 respondents which included (70 respondents) 63.1% of short time-usage online banking customers and (41 respondents) 36.9% long time usage online banking customers. t-test was done to compare the mean scores of the two types of respondents. The study revealed that the long time-usage online banking customer are highly satisfied with the banking website services than that of short time-usage online banking customers.

#### **FACTORS INFLUENCING ADOPTION OF E- BANKING:**

Geetha.K.T& V.Malarvizhi (2011) had investigated the factors which affecting the acceptance of e-banking services among 200 customers. It was found that factors such as security, privacy and increase in awareness level affects the acceptance of e-banking services among customers. It was also found that there was reluctance among customers to use e-banking services due to risk factor. In another study, using 204 study samples, the data analysis was done using structural equation model which showed that that there was a significant relationship between customer`s life style and their attitudes towards internet banking services (Divandari. A et al., 2012). In another study conducted among 384 M.S. students in Iran, it was found that Positive word of mouth (P-WOM) had a positive effect on electronic banking adoption and on the trust in bank, while perceived risk of e-banking services negative influence on the adoption among students (Ashtiania.P.G. and Ali Iranmanesh.A. 2012).

Kannan.P et al., (2012) in their study had examined the impact of demographic factors influencing the perception of rural customers towards e-banking. The results of Anova showed that age, qualification and income levels of the rural customers influenced their perception towards e-banking services. The same finding was revealed in another study also conducted by (Mermod. A.Y. 2011) where the customers chosen for the study were very much influenced by

the simplicity, safety and security features of internet banking. Similar study was conducted by Gunasekaran. K (2011), who also found that education, family and Income of customers influenced the adoption of e-banking services. Same finding was revealed in a study conducted in Malaysia by Sulaiman.A. et al., (2005) and Izogo.E.E. et al., (2012).

In another study conducted in Nigeria had studied the determinants of acceptance of e-banking services except ATM services. The result of linear multiple regression analysis revealed that acceptance of e-banking was significantly influenced by age, educational background, income, perceived Benefits, perceived ease of use, perceived risk and perceived enjoyment (Odumeru.J.A 2012). Paul.G, Stegbarrer.C. (2010) of Germany, had found out that Informal learning and peer group support would be essential for the diffusion of the Internet among the elderly people compared to the younger generations. The Demographic factors like gender, education and socio-economic status influenced the acceptance of internet banking. Even though the diffusion rate was increasing among elderly age group, they lagged behind the figures of young users.

In another study, study sample was selected among educated adult customers over 35 years who were from the working environment. It was revealed that five components of the study namely security, Privacy, Trust, Innovativeness, Familiarity and awareness influenced the acceptance of e-banking ( Dixit.N and Datta.S.K 2010). In another study by Mohammed Siddik.M (2012), he had investigated into the ATM Services in India with a sample 350 respondents which revealed that the quality of services and proximity to their residence or office were the reasons for selecting the bank/branch.

Azouzi.D (2009) of Tunisia had found through chi-square test that awareness of e-banking services, ease of use, willingness to adopt e-banking , internet access, convenience were the factors influencing the adoption of e-banking services. Aliyu.A.A. et al., (2012) of Nigeria had found through regression analysis that there was significant relationship between the six factors namely awareness, ease of use, security, cost, reluctance to change and accessibility and adoption of electronic banking. Modi, A.G et al., (2013) had found through Chi-square test that factors like convenience, trust, intention, information about Internet Banking, customer awareness and security have a significant influence on the acceptance of internet banking among

195 retail customers. José Mauro da Costa Hernandez et al., (2008) had found from his study that middle aged male customers use e-banking compared to female customers, the professionals followed by business man use e-banking services. The willingness to use of e-banking services is linked with frequency usage of 292 respondents of his study. It was also found that there was a significant influence of eight variables namely compatibility with lifestyle, subjective norm, self-efficacy, image, relative advantage of security and privacy, relative advantage of control, trialability, and technological support on the intention to adopt Internet Banking.

In a study conducted on the influence of demographic and socio-economic variables that influenced the customers to choose the credit cards, monthly expenditure spent on card and duration of possession of card. The findings revealed that the majority of the cardholders choose credit card for convenience purchase, followed by interest free credit facility (20-50 days), no risk of carrying cash and convenient options for payment. The Chi-square test revealed that there was an association between dissatisfaction of the cardholders and shifting from existing card to any other banks' card during the five years of the study period (Subramanian.S 2012)

### **ENABLERS AND INHIBITORS TO E-BANKING**

Harman Preet Singh et al., (2011) had analyzed the enabling and disabling factors in E-banking. The data collected from 175 respondents was analysed through correlation matrix which revealed that the inclination of youngsters and middle aged people were more than the older people. Enabling factors like Simplicity, clarity in operation etc., influenced the usage of e-banking services and Disabling factors like security concerns and lack of awareness among customers affected the usage of e-banking services. Aiswarya. S and John Gabriel.S (2013), had analysed the present challenges and opportunities of e-banking services using a sample of 100 e-banking customers of both private and public sector banks in Chennai city. The finding revealed that the customers have opted e-banking service only due to Convenience followed by better results in operation. Lack of safety and security were found to be a challenge in e-banking services. The finding was similar to another study conducted by Usha N. Patil (2012) in her conceptual paper who had analysed the various types of risk associated with internet banking. In another study similar to the above, was conducted by Aderonke.A, Ayo Charles K (2010) of Nigeria, it was revealed that the users find that e-banking services useful, convenient, and easy

to use but data privacy and security measure were issues bothering the users of e-banking services.

Al-Hajri.S. (2008) of Oman had found that enabling factors in e-banking usage were relative advantage; organizational performance, customer relationship and ease of use but the disabling factor were that e-banking had not been well adopted in Oman. In another study, it was found that perceived risk had significant impact on the customers' intention to use electronic banking service (Mohammad O. Al-Smadi 2012). A study conducted in Finland, also proved that even though 84.4 percent of the users considered internet banking to be very secure, lack of security was the major concern among the non-users due to lack of education and awareness of benefits of Internet banking (Mattila.M et al., 2002). Similar findings was also revealed in the study conducted in Penang, with the sample of 180 banking customers (Ramayah. T 2006). In another study conducted among banks customers and bank managers of public and private sector in Odisha region, it was found that effectiveness and accessibility have positive effect on the adoption of electronic banking and perceived risk has negative impact in adoption of electronic banking (Panda,J., Sandeep Kumar Panda, S.K., 2012).

### **PREFERRED E-BANKING SERVICES**

Among the various e-banking channels, ATM banking is the popular among the bank customers, many studies have proved it . One such study was done by Guru. B.K., et al., (2004) of Malaysia who had found that ATM was the most popular electronic delivery channel used by 300 Malaysian customers compared to tele-banking and PC-banking. Another study proved the customers preferred electronic banking to manual banking and found to be highly satisfied with the e-banking services due to its valuable benefits like time-saving, efficiency and convenience provided by the selected banks. There was a positive relationship between younger age group (18 -25) and preference of e-banking services than old aged people. It was also found that ATM services was the most preferred e-banking channel followed by Tele-banking (Mobarek.A. 2007). Similar study was conducted among 600 Iranian customers that though they lack knowledge relating to e-banking, they used ATM services more compared to other type of e-banking services (Salehi.M and Alipour.M. (2010). It was also found from a study



conducted among 553 respondents that users preferred more of e-banking services to branch banking and non-users preferred ATM services (Joshua.A.J, Moli P Koshy 2011).

Richard.R (2010) had made a comparative study between Indian customers and Kenyan customers of e-banking services. A questionnaire was distributed to a 256 customers in India and 125 customers from Kenya. The results of measures of dispersion, analysis of variance (ANOVA), chi-square analysis showed that ATM technology was the most adopted technology by Kenyan banks (98.7 followed by m-banking, EFTs and internet banking each with 96 percent in case of the Kenyan respondents. In India, ATM still was mostly adopted (96.7%) followed by debit cards (91.3%) and EFTs (90.7%). This was also proved in a study conducted in Tiruchy by Maheswari. N (2011) which revealed that majority of customers had adopted ATM banking (91.8%) than other e-banking services which implied that banking customers were more familiar with the ATM Services compared to other e-banking services. The result of another study also revealed that most of the respondent, preferred internet banking, ATMs, tele banking etc Vemuala. H (2013).

Al-Smadi .M.O. (2012) had found that among the e-banking services, in the first place was the usage of ATM service followed by credit cards usage, then comes the internet banking and phone banking. In another study, it was found from a study conducted among 407 customers in Nigeria, that there was no significant relationship between electronic banking facilities and customers' choice of banks. The chi-square test showed that there was a significant relationship between customers' employment sector and choice of banking facilities and customers' age-group and their choice of banks (Ahmed Audu Maiyaki, et al., (2010). In an exploratory investigation among 70 South African senior citizens to adopt electronic banking services, it was found they were already using ATM and telephone (landline) banking and showed more eagerness to learn the new e-banking services but their major concern was safety in adopting the new e-banking services. (Diako.B. et al., (2012). In a study conducted among 288 students, in Ghana, it was found that ATM and E-Zwich were popular due to convenience, reliability, security, flexibility, time saving and ease of use. The mean usage of female (8.7955) was slightly higher than that of male (8.350) (Marfo-Yiadom.E., et al., 2011)

## CUSTOMER SATISFACTION OF E-BANKING SERVICES

Maheswari. N (2011) had compared the satisfaction level of customers of e-banking services with reference to selected nationalized and private banks in Trichirappalli district. The result of Mann-Whitney U and Z tests revealed that there was a significant difference in the satisfaction level of customers between nationalized banks and private banks and it was also found that different educational groups were satisfied with the qualities of e-banking services provided by private banks. The finding is similar to the study conducted by Vemuala.H. (2013), and Dhandayuthapani. S.P. (2012). On the contrary, the finding of a study revealed that 122 rural bank customers taken up for the study were satisfied with the services of public banks compared to private banks (Kannan.P et al., (2012)

A comparison was done between the satisfaction level of online banking services with the non-online banking customers with a study sample of 185 respondents in Kuwait by Hernan E. Riquelme et al., (2009). The result of multiple regression and discriminant analyses showed that majority of customers were highly satisfied with the online services compared to non-online customers. On the contrary, impact of five service variables namely reliability, responsiveness, assurance, empathy, and tangibles affecting the customer satisfaction towards e-banking in Bangladesh was investigated by Nupur.J.M., (2010). The result of regression analysis and anova test proved that service quality dimension determines the customer satisfaction level. Another study conducted among 360 respondents in West Africa by Gbadeyan.R.A et al., (2011) also found that the quality of e-banking services influence the choice of bank among customers.

## CHALLENGES IN E-BANKING SERVICES:

A result of online survey of conducted in Brazil among 3,585 internet banking users respondents proved that perception of cost, risk, low advantage and complexity were found to be the perceived obstacles among older people, with high incomes and lower educated customers and female respondents between the age limit of 35-55 years, towards the adoption of mobile banking services (Pedro Cruz, et al., 2010). In another study with a study sample of 200 respondents, the anova results revealed that the socio-cultural issues does not support e-banking

due to lack of confidence on the online banking. In a study, Dastgir Alam, M.K., (2012) had developed a six factor model comprising of infrastructure, knowledge, legal-security, socio-cultural, economic and management and banking issues to analyse the challenges for the e-banking development.

Shamsul Haq1, S., et al., (2013), had analysed the challenges faced by banks and influence of socio-demographic on the adoption of e-banking services in Rajasthan. 300 respondents were chosen for the study and the result of Chi-square tests revealed that education and income played a significant role in the usage of e-banking services. Attitudinal factors like complexity, perceived risk and perceived cost of e-banking have negative relationship with the adoption of e-banking services. In another study conducted in Chandigarh, the major challenge was that there was also low usage of internet banking in Chandigarh as majority of customers were not familiar with use of computers . 170 respondents from private and public sector banks were chosen and the result of Chi-square test revealed that security, privacy were the major concerns the users of e-banking services. (Virk, N. 2013)

A study conducted by Mattila.M., et al., ( 2002) of Finland, had found that even though 84.4% of 1167 sample respondents considered Internet banking very secure, but lack of security was the major concern among the non-users, due to lack of education and awareness of benefits of Internet banking. Another study also proved the same in a study conducted by Mohammad Azizul Bate, M.A., et al., (2010) of Bangladesh, which also found that the bank customers lack of knowledge in banking services. Yet one more study conducted in Nigeria, also found from a sample of 100 respondents, that lack of knowledge , trust, security hindered customers from using e-banking services (Anwana, E.O. 2010). Mughal , M.M.,et al., (2012) of Pakistan had found that privacy, security, trust, ease of usefulness, knowledge and awareness, inaccessibility were the factors affecting the adoption of e-banking among customers which were real challenges in the adoption of e-banking.

#### MEASURES

In a study conducted among 292 respondents, it was found that there was a gap between the customer expectation and service provided by branch network. It was suggested that bank should

improve their services at their branches (Kamakodi.M et al., (2008) . In another study conducted by Malarvizhi.V, Geetha.K.T (2013), it was suggested e-banking usage can be increased through initiatives of Bank through sensitizing the public about the benefits of using e-banking services. In another study, it was recommended that banks should provide alternative banking services as they enhance brand perception. Data was collected from 391 users of various e-banking services and it was found that the overall customer satisfaction in alternative banking services varied based on demographic characteristics. Kumbhar, et al., (2010). In another study, it was suggested in a study conducted among Mellat banks, that banks need to adopt different strategies for different groups of customers with different lifestyles and follow suitable advertising and promotion. (Divandari. A., et al., 2012). It was recommended in a study conducted in Ghana that the Banks should target at young people and embark on educational campaign about the usage of Internet banking, telephone banking etc (Edward Marfo-Yiadom et al., 2011). In another study conducted by Dixit.N., and. K. Datta.S (2010), the researcher has suggested that the bank should increase the level of trust between bank website and customers and the bank should take initiatives to increase the knowledge on internet banking among customers. It was recommended in another study, conducted by Ashwin G.Modi et al., (2013) that the bank should make internet bank user friendly with simple operating system and develop understandable web design.

#### DIRECTIONS FOR FUTURE RESEARCH:

It is very apparent that flurry of studies were conducted on e-banking services, pertaining to adoption, perception, acceptance, usage, satisfaction of customers at the both international level and national level. Barriers exist for any type of emerging technology, the major inhibitors to the e-banking adoption are, lack of security, privacy issues and risk factor associated with the usage of e-banking services, which could be mitigated by launching intensive awareness program and effective grievance redressal mechanism in banks. The scope for future study in this area can be extended by taking up studies based on influence of psychographic variables on the adoption of e-banking services and in addition awareness of cybercrime in internet banking can also be undertaken for future research.

## REFERENCES

- Aderonke, A., Charles, A.K. (2010), "An Empirical Investigation of the Level of Users' Acceptance of E-Banking in Nigeria", *Journal of Internet Banking and Commerce*, April 2010, Vol. 15, no.1, (<http://www.arraydev.com/commerce/jibc/>)
- Aiswarya.S and John Gabriel.S (2013), "Challenges and Opportunities of E-Banking services with reference to Customer Perception in Chennai city", *Madras University Journal of Business and Finance*.
- Aliyu,A.A., Sayf M.D Younus, Rosmaini Bin HJ Tasmin (2012), "An Exploratory Study on Adoption of Electronic Banking: Underlying Consumer Behaviour and Critical Success Factors. Case of Nigeria", *Business and Management Review* Vol. 2(1) pp. 01 – 06 March, 2012 ISSN: 2047 - 0398 , <http://www.businessjournalz.org/bmr>
- Al-Hajri.S.,(2008), "The Adoption of e-Banking: The Case of Omani Banks", *International Review of Business Research Papers*, Vol. 4 No. 5 October-November 2008 pp. 120-128
- Amin.H, (2007), "Internet Banking Adoption Among Young Intellectuals", *Journal of Internet Banking and Commerce*, December 2007, vol.12, no.3.
- Anwana, E. O. (2010), "Geographic factors inhibiting E-banking in Nigeria: A case study of Akwa Ibom and Cross River States", *International Journal of Economic Development Research and Investment* vol. 1, no 1, April 2010.
- Ashtiania, P.G., Ali Iranmanesh, A., (2012), "New approach to study of factors affecting adoption of electronic banking services with emphasis on the role of positive word of mouth", *African Journal of Business Management* vol. 6(11), pp. 4328-4335, 21 March, 2012, <http://www.academicjournals.org/AJBM> , ISSN 1993-8233
- Auta, E.M. (2007), "E-Banking in Developing Economy: Empirical evidence from Nigeria", *Journal of Applied Quantitative Methods*, vol.5, no.2, Summer 2010.
- Azouzi,D. (2009), "The Adoption of Electronic Banking in Tunisia: An Exploratory Study" *Journal of Internet Banking and Commerce*, December 2009, vol. 14, no.3, (<http://www.arraydev.com/commerce/jibc/>).
- Baten, M.A., Kamil, A.A.,(2010), "E-Banking of Economical Prospects in Bangladesh", *Journal of Internet Banking and Commerce*, August 2010, vol. 15, no.2 , (<http://www.arraydev.com/commerce/jibc/>).

- Chuang, C.C., and Fu-Ling Hu (2011), "An Empirical study of customers' perception of E-Banking service based on time usage", Journal of Internet banking and Commerce, August 2011, vol.16, no.2, (<http://www.arraydev.com/commerce/jibc/>).
- Carlos R. Sánchez S, Gallié, J.B., (2010), "Adoption of Internet Banking by French Consumers Adoption Characteristics", Global Conference on Business and Finance Proceedings Volume 5, Number 1 pp 248-253 ISSN 1941-9589 online & ISSN 1931-0285.
- Cruz,P., Laukkanen, T., (2010),"Mobile banking rollout in emerging markets: evidence from Brazil", International Journal of Bank, Marketing vol. 28 no. 5, 2010, pp. 342-371, Emerald Group Publishing Limited 0265-2323.
- Du, J.(2011), in his thesis, submitted for the degree of Master of Commerce and management, Lincoln University, 2011.
- Diako.B., , Lubbe,S., Klopper, R., (2012) Readiness of South African Senior Citizens for Electronic Banking , Alternation Special Edition 5 (2012) 255 - 287 ISSN 1023-1757.
- Dixit,N., Datta.S.K. (2010), "Acceptance of E-banking among Adult Customers: An Empirical Investigation in India", Journal of Internet Banking and Commerce, August 2010, vol. 15, no.2 (<http://www.arraydev.com/commerce/jibc/>).
- Divandari.A , M. Haghghi ,E. Abedi (2012), "Providing A Conceptual Model for Identifying Critical Success Factors (Csfs) Affecting Internet Banking Customer's Attitude (Case Study: Mellat Bank)",International Journal of Information Science and Management IJISM, Special issue (ECDC 2012) 9-10 May 2012.
- Dhandayuthapani. S.P. (2012) thesis submitted in Bharathidasan University "E-Banking Practices and Customer satisfaction in Thanjavur District, Tamil Nadu: An Empirical Study".
- Gan, C., Clemes, M., Limsombunchai, V., Weng, A. (2006), "A Logit Analysis of Electronic Banking in New Zealand", Commerce Division, Discussion Paper No.108, Lincoln University, Canterbury, ISSN 1174-5045.
- Guru,B.K., Vaithilingam,S., Ismail,N., Prasad.R., (2000) of Malaysia, "Electronic Banking in Malaysia: A Note on Evolution of Services and Consumer Reaction", Journal of Internet Banking and Commerce, 2000.
- Geetha.K.T & Malarvizhi.V (2011), "Acceptance of E-banking among customers (An Empirical Investigation in India)", Journal of Management and Science vol .2, no.1, ISSN:2249 - 1260/E ISSN:2250 - 18 19.

- Gbadeyan R. A., O.O.Akinyosoye – Gbonda(2011), “Customers’ preference for e-banking services: A Case study of selected bank in Sierra Leone”, Australian Journal of Business and Management Research vol.1 no.4 [108-116], July-2011.
- Gunasekaran.K (2011), “An Empirical Investigation of Banking/ Internet Banking from Bank Customers’ Perspective”, Thesis submitted in Bharathidasan University.
- Harileela Vemuala (2013) thesis “A Study on Indian Consumers’ Service quality perception and satisfaction in Retail Banking (with special reference to Hyderabad)”.
- Harman Preet Singh, H.P., Grove.S.T., (2011) “Marketing of E-banking services: A critical Analysis on lifecycle Demographics, Enabling and Disabling factors” ZENITH International Journal of Multidisciplinary Research, vol.1 issue 7, November 2011, ISSN 2231 5780 [www.zenithresearch.org.in](http://www.zenithresearch.org.in).
- Hernan E. Riquelme, Khalid A. Mekkaoui, Rosa E. Rios (2009), Internet Banking Customer Satisfaction and Online Service Attributes”, Journal of Internet Banking and Commerce, August 2009, vol. 14, no.2 (<http://www.arraydev.com/commerce/jibc/>).
- Haque,A., Tarofder,A.K., Rahman.S., Raquib, M.A., (2009), “Electronic Transaction of Internet Banking and its perception of Malaysian Online customers”. African Journal of Business Management, vol 3 (6), pp.248-259, June 2009.
- Haque, A., Ismail, A.Z.H., and Daraz, A.H. (2009), “Issues of E-Banking transaction : An Empirical Investigation on Malaysian Customers Perception”, Journal of Applied Sciences 9(10):1870-1879, 2009.
- Haq1,S., Bilal Khan,M., (2013), “E-Banking Challenges and Opportunities in Indian Banking Sector”, Innovative Journal of Business and Management 2 : 4 July – August (2013) 56 - 59.
- Izogo1, E.E., Nnaemeka, O.C., Onuoha Ama Onuoha,O.A., Ezema-DBA, K.S. (2012), Impact of Demographic Variables on Consumers’ Adoption of E-banking in Nigeria: An Empirical Investigation”, European Journal of Business and Management, ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) vol 4, no.17, 2012.
- José Mauro da Costa Hernandez’, Mazzon, J.A., (2008), “An empirical study of the determinants of Internet Banking adoption among Brazilians non-users”, Rev. adm. contemp. vol.12 no.spe Curitiba 2008, [On-line version ISSN 1982-7849](#).
- Joshua.A.J, Moli P Koshy (2011), “Usage Patterns of Electronic Banking Services by Urban

- Educated Customers: Glimpses from India”, Journal of Internet Banking and Commerce, April 2011, vol. 16, no.1,(<http://www.arraydev.com/commerce/jibc/>)
- Kamakodi.M and Basheer Ahmed Khan.M (2008), “Customer Expectation and Service level in E-banking era: A empirical study – The Icfai journal of Bank Management (IUP journal), Nov 2008, vol VII, no.4, pp. 50-70.
- Kannan. P, Suresh Kumar, M. A. (2012), Rural Customer Preferences of Banking Services in India- Factor Analysis and Reliability Test”, European Journal of Scientific Research ISSN 1450-216X vol.74 no.1 (2012), pp. 143-53,<http://www.europeanjournalofscientificresearch.com>
- Kumbhar, Maruti.V. (2010), thesis “An Empirical study of Alternative Banking and its impact on Customers’ satisfaction: A case of Public and Private Sector Banks in Satara City”
- Karimzadeh,M., Alam, D., (2012), “Electronic Banking Challenges in India: An Empirical Investigation”, Interdisciplinary Journal of Contemporary Research in Business, June 2012, vol 4, no 2, [ijrb.webs.com](http://ijrb.webs.com)
- Lichtenstein.S, (2006), “Understanding Consumer adoption of Internet Banking: An interpretive study in the Australian Banking context”, Journal of Electronic Commerce Research, vol.7, no.2, 2006, pp 50-66.
- Laukkanen, T. (2007), “Internet vs mobile banking: comparing customer value perceptions”, Business Process Management Journal vol. 13 no. 6, 2007, pp. 788-797 Emerald Group Publishing Limited 1463-7154.
- Maiyaki, A.A., Mohd. Mokhtar.S.S., (2010), “Effects of Electronic Banking Facilities, Employment Sector and Age-Group on Customers’ Choice of Banks in Nigeria”, Journal of Internet Banking and Commerce, April 2010, vol. 15, no.1.
- Modi,A.G., Kiran J.Patel and Kundan. M. Patel (2013), “ Acceptance of Internet Banking among retail customers: Survey evidence from Ahmedabad region”, The IUP Journal of Bank Management, vol. xii, no.1, Feb 2013 , pp.63-71.
- Mobarek.A. (2007), “E-Banking Practices and Customer Satisfaction – A case study in Botswana”, 20<sup>th</sup> Australian Finance and Banking Conference 2007, [papers.ssrn.com](http://papers.ssrn.com)
- Mermod, A.Y. (2011), “Customer’s Perspectives and Risk Issues on E-Banking in Turkey; Should we still be Online?”, Journal of Internet banking and Commerce, April 2011, vol.16, no.1., (<http://www.arraydev.com/commerce/jibc/>)



- Maheswari. N Aug 2011, Thesis “ Comparative study on E-banking Services between Nationalized and Private Banks in Trichirapalli District (A study from customers’ perspectives).
- Malarvizhi.V, Geetha.K.T.(2013), “ Structural Model linking, usage and adoption of e-banking technology”, Madras University journal of business and finance, vol.1, No.1, Jan 2013
- Mattila,M., Karjaluoto,H., Pentto,T., (2002), “Internet Banking Adoption Factors in Finland”, Journal of Internet Banking and Commerce, 2002, (<http://www.arraydev.com/commerce/jibc/>)
- Marfo-Yiadom,E., Ansong, A., (2011), “Customers’ Perception of Innovative Banking Products in Cape Coast Metropolis, Ghana”, International Journal of Business and Management, vol. 7, no. 3; February 2012, [www.ccsenet.org/ijbm](http://www.ccsenet.org/ijbm)
- Mohammed Siddik.M (2012), “A Study on E-banking services in India – with special reference to ATM services”. Journal of Exclusive Management Science - March 2012, vol 1 issue 2 - ISSN 2277 – 5684
- Mohammad O. Al-Smadi (2012), “Factors Affecting Adoption of Electronic Banking: An Analysis of the Perspectives of Banks' Customers”, International Journal of Business and Social Science, vol. 3, No.17; September 2012.
- Mughal,M.M., Farhan,M., Ali,K., Khan,AJ., (2012), Accepting of E-banking among Banking Customers of Pakistan”, Information Management and Business Review vol. 4, no. 6, pp. 332-339, June 2012 (ISSN 2220-3796).
- Mahmood, Z. (2009), Attitudes towards the use of E-banking: Result of a Pilot Survey, Communications of the IBIMA volume 8, 2009, ISSN: 1943-7765.
- Nupur, J.M., (2010), E-Banking and Customers’ Satisfaction in Bangladesh: An Analysis”, International Review of Business Research Papers vol 6, issuer 4. September 2010. pp. 145 - 156
- Odumeru, J.A (2012), “The Acceptance of E-banking by Customers in Nigeria”, World Review of Business Research, vol. 2. No. 2. march 2012. pp. 62 – 74.
- Paul.G, Stegbarrer.C. (2010) “Is the digital divide between young and elderly people increasing”, First Monday, vol.10, no.10, October 2005.
- Panda,J., Sandeep Kumar Panda, S.K., (2012), “Moving towards E-Banking in an Emerging Economy: Indian Scenario”, Radix International Journal of Banking, finance and Accounting”, volume 1, issue 8 (Aug. 2012), ISSN: 2277 – 100X.
- Rani, M. (2012), “A study on the Customer Perception towards E-banking in Ferozpur District”, ZENITH, International Journal of Multidisciplinary Research, vol.2, issue 1, January 2012, ISSN 2231 5780.

- Richard.N (2010) thesis “Perception towards E-Banking : A Comparative study of India and Kenya”.
- Ramayah.T (2006), “Classifying Users and Non-Users of Internet Banking in Northern Malaysia”,*Journal of Internet Banking and Commerce*, August 2006, vol. 11, no.2 (<http://www.arraydev.com/commerce/jibc/>).
- Sulaiman, A. Lim C.H and Wee, A. (2005), “Prospects and Challenges of E-Banking in Malaysia”, *The Electronic Journal on Information Systems in Developing countries*, 2005, vol. 22, issue 1, pp 1-11.
- Saeednia.H and Abdollahi.H (2012), “Factors affecting client trust in online banking – A case study of Saman Bank”, *International Journal of Economics and Business Modeling* ISSN:0976–531X & E-ISSN:0976–5352, volume 3, issue 1, 2012, pp.-149– 151
- Salehi,M., Alipour,M. (2010), “Banking in Emerging Economy: Empirical Evidence of Iran”,*Journal of Economics and Finance* vol2, no.1, February, 2010.
- Shereif Mahdi.M.O (2011), “Trust and security of electronic banking services in Saudi commercial banks: Saudis versus Non Saudis opinions”, *African Journal of Business Management* vol. 5(14), pp. 5524-5535, <http://www.academicjournals.org/>
- Sudeep.S (2008), thesis “Internet banking and customer acceptance: The Indian Scenario”  
Cochin University of science and technology
- Subramanian.S (2012) thesis “A Study on marketing of e-banking products with reference to credit card in Thanjavur , Tamil Nadu”
- Usha N. Patil (2012), “Internet Banking in India : Risk Analysis and adoption in an emerging economy”, *Indian Streams Research Journal Research Papers* Vol.2, Issue.III/April; 12 pp.1-4, ISSN:-2230-7850.
- Virk.N., (2013) “Factor Analysis of customer’s preference attributes in using E-banking”, *The IUP journal of Bank Management – Vol XII No1*, Feb 2013, pp 72-78.
- Weir. C.S., Douglas, G., Carruthers, M., Jack, M. (2009), “User Perceptions of Security, convenience and usability for e-banking authentication tokens”, *Computers and Security* 28(2009), pp.47-62.
- Yousafzai.S, Pallister, J., Foxall, G. (2009), “Multi-dimensional role of trust in Internet banking adoption”, *The Service Industries Journal*, vol.29, no.5, may 2009, 591-605.