CHAPTER - II

REVIEW OF LITERATURE

2.1 Introduction
2.2 Studies Related to India
2.3 Studies Related to Foreign Countries
2.4 Summary
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REVIEW OF LITERATURE

2.1 INTRODUCTION

This chapter attempts to review the past studies related to technology-based services of commercial banks. This part is dedicated to the examination of some of the relevant studies on factors of technology-based services in commercial banks. The review of literature plays a vital role providing insight into the research problem. It helps a researcher to identify the research gap and develop a meaningful hypothesis. It gives the idea of how the subject of the study could be analyzed.

2.2 STUDIES RELATED TO INDIA

Pennings., (1992)\(^1\) in his study entitled “The diffusion of technological innovation in the commercial banking industry”, analyzed the propensity of organizations to adopt technological innovations. Technological innovations evolve from the stock of skills which organizations have accumulated over time. Linkages with extramural sources of technology are presumed to be important as well. Hypotheses are tested on a sample of commercial banks. Findings show that prior experiences in information technology with a variety of inter-firm linkages, will affect the banks' decision to adopt this innovation.

Meuter et al., (2000)\(^2\) in their study entitled “Self-service technologies: Understanding customer satisfaction with technology-based service encounters” found that self-service technologies (SSTs) are increasingly changing the way of customers interaction with firms to create service outcomes. It is found that out of the total respondents using remote encounters 43% were using e-banking through online fund transfers, 24% were using ATM facility and 33% were using mobile banking facility as a substitute for e-banking. Out of the respondents using phone encounters,
68% were using cell phones during their leisure hours in their occupation and only 32% were using landline telephones of the total respondents using face to face encounters, 93% were using single window operation to save their time and only 7% of the respondents were using green channel of SBI.

_Rajesh Kumar Srivastava_, (2007)³ in his study entitled “Customer Perception on usage of Internet Banking” found that the perception of the consumers can be changed by awareness program, friendly usage, less charges, proper security, and the best response to the services offered. The study also provides the kind of correlation between different factors. Consumers who know how to use Internet and have an access to Internet, and his study considered only the situation wherein banks provide Internet banking services. By grouping the variables, less than one relevant question may result in proper implication for the bankers. In case of the consumers who don’t use Internet banking services, having all facilities at their disposal, technology was not the biggest issue. The first thing is, all bankers should have concern about the requirement of awareness. Even though they people are inclined towards the manual banking, they can be turned to potential customers, it is well proven thing, which says the surrounding influences the individual’s behaviour or in India, only environment that surrounds the public determines the behaviour and decisions of the individuals. So if consumer sees most of their colleagues or friends who surround him using Internet banking then it may influence his decision to follow the Internet banking option to improve the internet banking in the world. Results through this study will help to understand customer’s perception and activities can be initiated to improve the usage of internet banking. If this data is used, it lead to reduction in cost of operation for banks as manual banking is costlier compared to internet banking.
Geetha and Malarvizhi., (2009) in their research work entitled “Acceptance of E-banking Among Customers” found that there is a need for providing better and customized services to the Indian customers. Banks must be concerned about the attitudes of customers with regard to acceptance of online banking. The importance of security and privacy for the acceptance of internet banking has been noted in many earlier studies and it was found that people have weak understanding of internet banking, although they are aware of the risks. The present study shows that customers are more reluctant to join new technologies or methods that contain little risk. Hence, banks should design the website to address security and trust issues.

Pooja Malhotra and Balwinder Singh., (2009) in their work entitled “The Impact of Internet banking on bank performance and Risk” found that only 57 percent of the commercial banks operating in India as on March end 2006 offer Internet banking. Using data on the financial performance, the present study also analyzed the performance of an Internet group in comparison to non-Internet banking group and impact of Internet banking on banks’ performance and risk. A panel data of 85 banks (operating as on March end 2006) was taken for the period of 1998-2006. The analysis indicates several significant differences in the profile of banks that offer Internet banking and banks that do not. Broadly speaking, on an average, Internet banks are larger, more profitable and are more operationally efficient than non-Internet banks. Internet banks have higher asset quality and are better managed to lower the expenses for building and equipment. In contrast to developed countries Internet banks in India rely substantially on deposits, the traditional source of financing. Last, but not the least, attempt was made to see if there is any association between adoption of Internet banking and the banks’ performance and risk. The evidence reveals no significant association between adoption of Internet banking by
banks and their performance. However, Internet banking has a negative and significant impact on profitability of private sector banks particularly new private sector banks. Thus, adoption of Internet banking was a reason behind the lower profitability of these banks, as Internet banks in new private sector were operating with higher cost of operations, including fixed cost and labour cost, thus affecting negatively the profitability of these banks. On the other hand, internet banking has a negative and significant impact on risk, which shows that, the adoption of Internet banking has not increased the risk profile of banks.

Rahmath Safeena, et al., (2010) in their study entitled “Internet banking Adoption in an Emerging Economy” made an attempt to analyze the perceived usefulness, perceived ease of use, consumer awareness and perceived risk are the important determinants of online banking adoption. They concluded that majority of customers have accepted online banking because of many approving factors. Analysis concluded that usefulness, ease of use of the system awareness about online banking and risks related to the main perusing factors to accept online banking system. These factors have strong and positive effects on customers to accept online banking system.

Neha Dixit and Saroj K. Datta., (2010) in their study entitled “Acceptance of E-banking among Adult Customers” analyzed the factors which affect the acceptance of internet banking services among adult customers and also indicated level of concern regarding security and privacy issues in Indian context. The finding depicts many factors like security and privacy, trust, innovativeness, familiarity, awareness level increase the acceptance of internet banking services among Indian customers. The finding shows that in spite of their security and privacy concern, adult customers are willing to adopt online banking if banks provide them necessary guidance.
Mohammad Azizul Baten., (2010) in his study entitled “E-Banking of Economical Prospects in Bangladesh”, analyzed the present scenario of banking sectors in Bangladesh and at the same time it demonstrates the scope and benefits of e-banking compared with the existing system. This study also tries to present actual situation of e-banking in the marketing point of view in Bangladesh. The results of this study shows that e-banking serves several advantages to Bangladeshi banking sector, however, the study also shows that the Bangladeshi customers do not have enough knowledge regarding e-banking which is rendered by banking sector in Bangladesh. A discussion of the implications of these results and limitations are provided at the end.

Saritha., (2011) in her study entitled “Marketing Strategies of Commercial Banks — A Study on SBI and ING Vysya Bank in Kadapa Corporation”, analyzed the ‘Marketing Strategies’ of SBI and INGV Bank for their financial services in Kadapa Corporation, A.P. India. Product related strategies include ‘Interest based, Fee based and Technology based activities’. ‘Interest based activities strategy’ includes mobilisation of deposits and advancing loans to the customers. Location strategy, parking place strategy and sitting facility strategy are ingredients of ‘Place related strategies’. Promotion related strategies comprise of ‘Marketing division strategy, Advertising media strategy, Social activities strategy and Branding strategy’. Price related strategies comprise ‘Strategic pricing strategy, Pricing approach strategy and Price privileges strategy’. ‘People related strategies’ have a huge workforce manning the extensive network in the country. This massive manpower results in structural and managerial impediments and refutes the popular belief of the public sector banks is that the ‘larger the number of employees serve the customers’ better. People related strategies are pertaining to well versed with computers and training programmes to
employees. The physical evidence refers to physical environment, facilities, the branch decors, excellent furnishings, spacious layouts and atmosphere. ‘Processes’ refer to the actual procedures, mechanisms, and flow of activities by which the service is rendered. ‘Processes related strategies’ are classified into ‘Market processes, Customer processes and Operational processes’.

**Sabah Abdullah Al-Somali., (2011)** in his study entitled “Internet Banking Acceptance in the Context of Developing Countries: An Extension of the Technology Acceptance Model”, analyzed the factors affecting the adoption of Internet banking by customers in Saudi Arabia in the light of the technology acceptance model (TAM). The model was tested with a survey sample \(n = 202\). The findings of the study indicate that the security, quality of the Internet connection and awareness about Internet banking and its benefits have significant effects on the perceived usefulness (PU) and perceived ease of use (PEOU) of Internet banking acceptance. It was revealed that the effects of education and trust also have significant impact on the attitude towards the acceptance Internet banking. Overall, the results of this study are vital to both researchers and practitioners and it allowed us to understand TAMs validity in technology acceptance research.

**Vikas Choudhary., (2011)** in his study entitled “Performance of commercial banks in India during Post-Liberalization”, analysed the performance of commercial banks after financial reforms. To compare the performance of public sector, private sector and foreign banks selective indicators were taken into considerations. These indicators were; Share in aggregate deposits of various banks, Distribution of Branches region wise, Share of various banks in financial indicators like net profit, gross profit etc, non performing assets and capital adequacy ratio. From the analysis it was concluded that share of private sector banks in aggregate deposit was increasing.
and share of public sector banks were maximum in aggregate deposits. Whereas SBI group was having maximum branches in rural areas. All the banks have shown decline in NPA’s where increase has been depicted in Capital Adequacy Ratio. Before liberalization there was a monopoly of public sector banks, but after reforms in 1991, the entry of many foreign players have been permitted. Post liberalization demand PSBs to compete with well diversified and resource rich foreign banks and to provide better services and unique products to suit customer’s need. Public sector banks have already sacrificed a lot of their profits for achievement of social objectives. Due to cut-throat competition and technology, the public sector banks are thinking to improve productivity and profitability which is essential to survive in a globalised economy. All these require inner strength and control over costs, new techniques of managing various branches, motivating people, proper consideration for innovation, better system and procedures, fixing adequate and reasonable norms and creation of team spirit in bank management.

Bindy Tater et al., (2011) made study on the topic entitled “Customer Adoption of Banking Technology in Private Banks of India”. It is revealed from the study that ATM banking remains the most popular banking service among customers after branch banking, mobile banking and internet banking respectively as they provide convenience, privacy, security, ease of use, real time accessibility, and accurate record of various transaction. From this study, it is clear that there is no significant difference between ATM banking, branch banking, mobile banking and internet banking services provided by different private banks to the customers. There is a relationship between benefits of banking services and increasing banking technology adoption. Customer’s unwillingness to use e-channel for commercial purpose decreases banking technology adoption.
Himani Sharma., (2011) in his study entitled “Bankers’ Perspectives on E-banking” found that there is no much awareness among Indian customers regarding use of e-banking services. But, the guidance and opinion by bankers does promote the use of such services amongst the customers. Bankers are satisfied regarding the retention rate and access rate of e-banking customers and they are also satisfied with switch over rate of customers from traditional banking to e-banking. Regarding impact of e-banking, the study indicates that e-banking helps in improving the relationship between bankers and customers. The bankers expressed confidence that such bonds would bring improvement in the overall performance of banks. About different promotional measures adopted by banks to promote e-banking, the study discloses that banks mostly resort to the use of print media followed by internet, SMS on mobile, outdoor advertisements and television. Majority of the bankers believe that banks are wanting in providing sufficient guidance to customers for using e-banking services.

Kanhaiya Singh., (2011) in his study entitled “Technological innovation in Indian Banking Sector – Use of IT products”, found that the financial market has turned into a buyer’s market. Banks have now bloomed into one-stop supermarkets. Their focus is shifting from mass banking to class banking with introduction of value added and customized products. Technology now allows banks to create what looks like a branch in a business building’s lobby without having to hire manpower for manual operations. These branches are working on the concept of 24 X 7 working made possible due to Tele banking, ATMs, Internet Banking, Mobile Banking and E-banking. This technology driven delivery channels are used to reach maximum customers at lower cost and in most efficient manner. The beauty of these banking innovations is that it puts both banker and customer in a win-win situation. The need
of an hour is to design a system to promote marginal efficiency of investment in technology and widen the gap between marginal benefits and marginal cost involved in Banking transformation with special reference to technological upgradation.

**Hui-I Yao., (2011)** in his study entitled “Effectiveness of Customer Relationship Management on Customer Satisfaction in the Commercial Banks of Taiwan”, found that the CRM implementation is associated with customer satisfaction; and there are significant interactions amongst IT capability, contact rate management and recovery management with customer satisfaction. A regression model was churned to evaluate the criteria to measure the level of CRM implementation on customer satisfaction.

**Sawant., (2011)** in his study entitled “Technological Developments in Indian Banking Sector”, found that the banks need to use optionally leverage technology to increase penetration, improve their productivity and efficiency, deliver cost-effective products and services, provide faster, efficient and convenient customer service and thereby, contribute to the overall growth and development of the country. Technology enables increased penetration of the banking system, increases cost effectiveness and makes small value transactions viable. Besides making banking products and services affordable and accessible, its simultaneously ensures viability and profitability of providers. Technology allows transactions to take place faster and offers unparallel convenience through various delivery channels. Technology enhances choices, creates new markets, and improves productivity and efficiency. Effective use of technology has a multiplier effect on growth and development.

**Surabhi Singh and Renu Arora., (2011)** in their study entitled “A Comparative Study of Banking Services and Customer Satisfaction in Public, Private and Foreign Banks”, made an attempt to study customers’ perception of quality of
services, both transaction based and IT enabled in terms of its constituent factors in public sector, private sector and foreign banks. Also through the present study, we would gauge the extent of IT adoption in public sector, private sector and foreign banks in this e-age. The present investigation was planned with the objective to assess the extent of use of services especially the IT enabled services in these banks and to analyze the constituent factors affecting customer satisfaction with the quality of services. The present study was conducted in public sector, private sector and foreign banks of Delhi. Multistage random sampling was used for selection of sample. The study was proposed to be conducted in five zones (East, West, North, South, and Central) of Delhi. One branch of the above banks in any zone of Delhi was selected randomly. While selecting the branch, care was taken to see that branch should provide at least five IT enabled services. This step was followed to have Intra Bank comparison. The study shows that the customers of nationalized banks were not satisfied with the employee behavior and infrastructure, while respondents of private and foreign banks were not satisfied with high charges, accessibility and communication.

Geetha., (2012) 18 in her research work entitled “Acceptance of E-Banking among Customers - An Empirical Investigation in India”, analyzed the factors which affect the acceptance of e-banking services among the customers and also indicated the level of concern regarding security and privacy issues in Indian context. Primary data were collected from 200 respondents through a structured questionnaire. Descriptive statistics was used to explain demographic profile of respondents and Factor and Regression analyses were used to know the factors affecting e-banking services among customer in India. The finding depicts many factors like security and privacy and awareness level had increased the acceptance of e-banking services
among Indian customers. The finding shows that if banks provide them necessary
guidance and ensure safety of their accounts, customers are willing to adopt e-
banking.

Vibhor Jain., (2012) in his study entitled “Customer perception on service
quality in Banking Sector: with special reference to Indian Private Banks in
Moradabad Region”, found that in the banking sector HDFC bank which is perceived
to be offering better quality of services followed by the other private banks. With the
increasing competition amongst banks, the findings can act as a strategic tool to
achieve competitive advantage and customer satisfaction. It is also an eye-opener for
the banks to see the gap between customer expectation and perception regarding the
quality of services rendered which should further act as a motivation which results,
increases reputation and to achieve customer loyalty. The present study is an attempt
in the direction, where quality perceptions of the four leading banks have been
compared to reach at logical conclusions.

Archana Sharma., (2012) his study entitled “Mobile banking as technology
Adoption and Challenges” found that mobile phones have immense potential of
conducting financial transactions thus leading the financial growth with lot of
convenience and much reduced cost. For inclusive growth, the benefits of mobile
banking should reach to the common man at the remotest locations in the country. For
this all stakeholders like regulators, Government telecom service providers and
mobile device manufactures need to make efforts so that penetration of mobile
banking reaches from high-end to low-end users and from metros to the middle towns
and rural areas. Inclusion of non-banking population in financial main stream will
benefit all. There is also need to generate awareness about the mobile banking so that
more and more people use it for their benefit.
Seranmadevi and Saravanaraj., (2012) in their research work entitled “Technology at Indian Banking Sector” found that the technological advancement and interaction in financial service industry are completely inevitable and most invited. The technological development will enhance people of all the segments to update their business and individual operations in a simplified and most convenient manner. It makes a certain change in the standard of living of the people, and it is used as tool in abolishing the economic imbalance. It will support the sustainable as well as the balanced economic growth. The technological advancement and intervention in the banking sector not only facilitates the banks to offer value added financial services to its customers, but also helps to maintain the bulk volume of daily financial transactions and constructing a wide range of data warehousing. So that the bank can construct, develop and maintain a complete data base of the customer which will be used to build up strong customer relationship management.

Neena Brar and Jaspreet Singh., (2012) in their study entitled “Internet Banking Need for Current Scenario” found that the perception of the consumers can be changed and can be made positive by awareness programmes, friendly usage, fewer charges, proper security, and the best response to the services offered. First thing that all bankers should concern about is the requirement of awareness. Even though these people are inclined towards the manual banking, they can be turned into potential customers, it is well proven thing, which says the surrounding influences the individual’s behaviour or in our region only environment that surrounds the public determines the behaviour and decisions of the individuals. So if a consumer sees most of his colleagues or friends who surround him/her using Internet banking then it may influence his/her decision to follow Internet banking option.
Puri., (2012) in his study entitled “Recent IT Trends in Banking Industry in India”, found that the banking today is re-defined and re-engineered with the use of Information Technology and it is sure that the future of banking will offer more sophisticated services to the customers with the continuous product and process innovations. Thus, there is a paradigm shift from the seller's market to buyer's market in the industry and finally it affected at the bankers level to change their approach from "conventional banking to convenience banking" and "mass banking to class banking". The shift has also increased the degree of accessibility of a common man.

Ramakrishna., (2012) in his research work entitled “Service Innovation in Banks for Sustainability”, observed that banks in India are moving towards sustainability through innovation and innovative service operations and offerings. The trend is evident in both public sector as well as private sector banks. It is found that both types of banks have embraced service innovation as a part of their future banking strategy and are moving continuously towards customer-centric and service-centric banks. It is also found that the innovation is not limited only to product or process innovations but also to business model innovation, operations innovation, markets innovation, and more importantly, paradigmatic innovations. These banks must create and sustain an environment that promotes creativity, leverages diversity, and facilitates multidimensional collaboration of resources and technologies in pursuit of desirable social and economic outcomes in future. The rate at which innovations are adopted by firms constitutes an important part of the process of technological change. ICICI is found to be more aggressive in innovation and it is positioned ahead in terms of services offered.

Arun Kumar Kaushik., (2012) in his study entitled “E-banking system in SBI” found that internet banking provides greater reach to customers. Feedback can
be obtained easily as internet is virtual in nature. Customer loyalty can be gained. Personal attention can be given by bank to customer and quality service can be also served. It can be easily concluded that technological development in banking industry positively improves their services, competitiveness, branding and also loyalty. After studying the SWOT analysis, the various strengths of SBI such as quality customer service, greater reach, customer loyalty, easy access to information, 24 hours access, easy online applications etc. SBI should put efforts to multiply the number of strengths. In terms of weakness lack of awareness of internet banking among the customers, obsolesce of technology related to security, complicated procedures of availing internet banking facilities, lack of knowledge are found among the employees of SBI. SBI should concentrate on the weaknesses and reduce them to zero. In the third segment of SWOT analysis of Internet banking we dealt with opportunities like 95 % market of Internet market is untapped, SBI”s path to become first virtual bank. In the last segment the various challenges which are in front of SBI, like sameness in IT infrastructure within various banks, need of various vendor supports for complex technology, maintaining secured IT infrastructure, alternative mechanism in case of failure of present security system.

2.3 STUDIES RELATED TO FOREIGN COUNTRIES

Karjaluoto., (2002)\textsuperscript{26} in his study entitled “Factors underlying attitude formation towards online Internet banking in Finland”, found that ‘banking is no longer bound to time and geography. Customers over the world have relatively easy access to their accounts, 24 hours per day, and seven days a week’. The author further argued that, with Internet banking services, the customers who felt that branch banking took too much time and effort are now able to make transactions at the click of their fingers.
Allen N. Berger., (2003) in his study entitled “The Economic Effects of Technological Progress: Evidence from the Banking Industry”, analyzed the technological progress and its effects on the banking industry. Banks are intensive users of both IT and financial technologies and have a wealth of data available that may be helpful for the general understanding of the effects of technological change. The research suggests improvements in costs and lending capacity due to improvements in “back-office” technologies, as well as consumer benefits from improved “front-office” technologies. The research also suggests that significant overall productivity increases in terms of improved quality and variety of banking services. In addition, the research indicates that technological progress likely helped facilitate consolidation of the industry.

Suoranta and Mattila., (2004) in their study entitled “Mobile banking and consumer behaviour: New insights into the diffusion pattern”, indicated that demographics, perceived risk and attributes pertaining to innovation diffusion such as relative advantage, complexity, compatibility and trialability affect the adoption of mobile banking in Finland.

Dogara W. Ahmad Bello., (2005) in his study entitled “The Impact of E-banking on Customer Satisfaction in Nigeria”, found that the Electronic banking has become a necessary survival weapon and is fundamentally changing the banking industry worldwide. Today, the click of a mouse offers bank customers services at a much lower cost and also empowers them with unprecedented freedom in choosing vendors for their financial service needs. Today no country has a choice-whether to implement E-banking or not given the global and competitive nature of the economy. Banks have to upgrade and constantly think of new innovative customized packages
and services to remain competitive. The invasion of banking by technology has created an information age and rendered banking services more appealing.

Laforet and Li, (2005) 30 in their study entitled “Consumers’ attitudes towards online and mobile banking in China”, investigated the barriers to Chinese consumer adoption of online banking. They indicated that security was the most important factor that motivates adoption. Also, they indicated perception of risks, computer and technological skills, lack of awareness and understanding of the benefits, and Chinese traditional cash-carry banking culture as the main barriers to adoption.

Jiaqin Yang et al., (2007) 31 made a study on the topic “New issues and Challenges facing e-banking in rural area”. The banking industry has been a leader in the e-business world in recent years. While the large city and urban area banks have been leading the way in the recent application and development of e-banking, many small and local community banks are catching up this trend and are becoming more interested in the e-banking services to gain competitive edges in the market place. This study analyzed those small and local community banks which are mostly located in smaller cities and townships or less populated rural counties and their efforts in developing and operating their e-banking services. The successes and struggles of two specific such small local banks are analyzed in detail to provide managerial insights and serve as comparative examples in evaluating the performance of e-banking operations for those small and local community banks. The results of this research confirmed the perception that the addition of new e-banking service will reduce banks’ operating cost and increase the degree of customer satisfaction, but those small and local community banks should speed up their effort in using some recent new technologies (e.g., m-banking) and promotional effort to increase their e-banking
services. Finally, for future research, a larger and more comprehensive small and local community bank sample should be used to further collect the information about any newest trends and developments in their e-banking operations.

**Amin., (2008)** in his study entitled “The adoption of mobile banking in Malaysia: The case of Bank Islam Malaysia Berhad (BIMB)”, found that perceived usefulness, perceived ease of use, perceived credibility, the amount of information on mobile banking and normative pressure are significant factors in explaining the acceptance of mobile banking.

**Madueme Ifeoma Stella., (2010)** in her research work entitled “Evaluating Banking Productivity and Information technology using the translog production function”, analyzed the impact of Information Communication Technology (ICT) on the productivity of the Nigerian banking sector. Impact on Productivity was conceptualized as the ability to make positive contributions to output after deductions for depreciation and labour expenses has been made. The Transcendental Logarithmic Production function and the CAMEL rating were used for the study. Results showed that bank output such as loans and other assets significantly increased the changes in expenditure on information communication technology. Information communication technology labour expenses impacted more on bank output than the capital expenditure on ICT gadgets. The recommendation centered on the need to increase investments in Information Technology in order to increase productivity of banks. This is based on the purview that increased productivity in many instances leads to improved operational efficiency and profitability which are the laudable goals of any banking establishment.

**Akinlolu Agboola., (2010)** in his study entitled “Information and Communication Technology (ICT) in Banking Operations in Nigeria – An Evaluation
of Recent Experiences”, found that the period between 1990 and 2005 was characterized by fundamental changes in the content and quality of banking business in the country. Technology has been discovered to be the main driving force of competition in the banking industry during the period of study. Whereas only one bank had ATM in 1998 by 2004, 14 of the studied banks had acquired the technology. EFT also increased from 3 to 14; Smart Cards from 1 to 11; Electronic Home and Office Banking from 3 to 9 and Telephone Banking from 3 to 12 within the same period. The adoption of ICT in banks has improved customer services, facilitated accurate records, provides for Home and Office Banking services, ensures convenient business hour, prompt and fair attention, and enhances faster services. The adoption of ICT improves the banks’ image and leads to a wider, faster and more efficient market. It has also made work easier and more interesting, improves the competitive edge of banks, improves relationship with customers and assists in solving basic operational and planning problems.

Peterson Obara Magutu., (2011) made a study entitled “E-Commerce Products and Services in the Banking Industry: The Adoption and Usage in Commercial Banks in Kenya”. The main objective was to explore the challenges faced and benefits that accrue from adoption and usage of e-commerce products and services of commercial banks in Kenya. A survey was carried out to achieve the envisaged aims of the study. A total of 100 questionnaires were distributed but only 70 banks responded. Research showed that while the majority of the banks in Kenya have adopted e-commerce products and services, usage levels have remained relatively low, as not many customers are using this innovation in Kenya. To establish benefits and challenges in the adoption and usage of e-commerce, 32 variables were used to measure the level of application among these banks. These variables were
analyzed using factor analysis procedure and in order to achieve a simple and meaningful structure, that is, have a non-zero loading of the explained variance for each individual factors, varimax rotation was done. As a result, 10 critical factors were established as the best practices which include: improved customer service, reduced number of customers in the banking hall, reduced operating costs and increased market share. The challenges faced in the adoption of e-commerce products and services include compatibility with existing legacy systems, cost of implementation and security concerns ranked high, ensuring desired levels of security and privacy. Unreliable telecommunication as well as lack of legislation governing e-commerce transactions rated highly.

Nor Azila and Moha Noor., (2011) in their research work entitled “Electronic Customer Relationship Management Performance” made an attempt to provide some important insight to the influence of e-CRM performance on customer loyalty. In addition, the findings are matched with previous empirical studies in terms of the importance of e-CRM performance and its impact on customer loyalty. Although this study has some interesting findings on the consequence of e-CRM performance on customer loyalty, this study also has several limitations. From a methodological point of view, data in this research were obtained from Jordan University students. It would be useful to obtain a broader sample of respondents in the future studies. This study is concerned about the e-CRM performance and its impact on customer loyalty in mobile phone services in Jordan.

Gbadeyan and Akinyosoye., (2011) in their study entitled “Customer Preference for E-banking Services” analyzed and have shown the various benefits accruing to Internet banking and found that many people are increasingly using this service. The service ranges from bill payments, online deposits and account opening,
ticket booking to fund transfer. This facility has made it easy for people to arrange for their travel bookings and tickets online, without going to the book reservation centre or office any more (Singhal and Padhmanbhan, 2008). There are lot of issues raised in the study which border on security, theft and fraudulent practices with regard to the use of e–banking services. These issues if not addressed can jeopardize the success of this innovative and laudable financial services in the banking industry.

Hazlina Abdul et.al., (2011) in their contribution entitled “Impact of Service Quality on Customer Satisfaction study on online banking and ATM Services in Malaysia” analyzed about demographic, perception and expectation information, gaps of online banking and ATM services in Malaysia and found that 3 out of 11 dimensions of E-SERVQUAL model are found unable to respond customers’ need. These dimensions are responsiveness, customization, and flexibility for E-SERVQUAL model which was applied for online banking system in Malaysia. Therefore, Malaysian anchor banks are required to improve their services related to these dimensions in order to fulfill the customers need. On the other hand, tangible and responsiveness dimensions out of 5 dimensions of SERVQUAL model are found unable to fulfill the respondents demand as well. So, ATM services related to these dimensions need for further enhancement to satisfy customers.

Adewuyi., (2011) in his study entitled “Electronic Banking in Nigeria: Challenges of the regulatory authorities and the way forward”, analyzed areas of information and communication technology deployment by banks, guidelines on e-banking in Nigeria, reasons for automation of banking operation, challenges of regulatory on e-banking in Nigeria and the way forward.

Anber Abraheem Shlash Mohammad., (2011) in his study entitled “Service Quality Perspectives and Customer Satisfaction in Commercial Banks
Working in Jordan”, analyzed the level of service quality as perceived by customers of commercial bank working in Jordan and its effect on customer satisfaction. Service quality measure is based on modified version of SERVQUAL as proposed by Parasuraman et al. (1988), which involve five dimensions of Service quality, namely Reliability, Responsiveness, Empathy, Assurance, and Tangibles. Customer satisfaction was measured by nine items adapted from Walfried et al. (2000), 260 questionnaires were distributed randomly to customers of commercial bank branches located in Jordan and Irbid. Multiple regression analysis was employed to test the impact of service quality on customer satisfaction. The results of this study indicated that service quality is an important antecedent of customer satisfaction. It is apparent from the present study that managers and decision makers in Jordanian commercial banks to seek and improve the elements of service quality that make the most significant contributions on customer satisfaction.

Hasan Omari., (2012) made a study on the topic “The Impact of e-Banking on Achieving Competitive Advantage for Banks in Jordan”. A questionnaire consisting of 24 parts divided on 4 areas was distributed to the study sample consisting of (209) Branch Managers of 3 main banks: The Housing Bank for Trade and Finance, Arab Bank, and Jordan Islamic Bank in 3 provinces: Amman, Irbid, and Zarqa, who were selected randomly from the population of the study. After conducting the necessary statistical treatment, the results showed the presence of a statistically significant impact at the level of significance (α = 0.05) for e-banking services in achieving competitive advantage in the banking sector in Jordan.

Nyasha Kaseke., (2012) made a study on the topic entitled “Virtual Banking by commercial banks and customer satisfaction in Zimbabwe”. The research used random sampling technique focusing on commercial banks customers with a
sample size of 250. Research findings revealed that customers are satisfied with Virtual Banking. The main factors satisfying the customers were convenience, service points being always up, banking solutions being cheap, instant update by banks, money being secure and confidentiality. The correlation coefficient matrix shows that the majority of factors range from 0.2 to 0.7 and significant factors have loadings above 0.33 of the factors using centroid factor analysis indicating that the majority of the factors influence the level of satisfaction. The study concluded that the concept of Virtual Banking has been accepted by customers and customers are satisfied with the banking model. The researchers recommended that there is need to create awareness by commercial banks and improve access to technology for the customers to realise full benefits and improve levels of satisfaction with Virtual Banking.

Amaoko, (2012) in his research work entitled “The impact of ICT on banking operations in Ghana”, found that the ICT has contributed positively to the provision of banking services and the growth of the Ghanaian banking industry. Internet banking and on-line banking are not yet developed in Ghana. The study recommended that banks should develop user friendly systems and applications for general population, Government and banks should play a key role in enhancing ICT infrastructure, put in place incentives like tax reduction, make PC available and affordable for every Ghanaian. Financial institutions should offer programs to reassure customer’s safety with regards to ICT through sensitization, workshops and support the skills development among bank personnel, there should be a central monitoring unit permanently manned by personnel to check the operations of all the bank’s ATM’s so that shortage of funds, occasional shut downs, seizure of electronic cards etc. are handled with dispatch. Lastly the banking institutions should also come out with more electronic products and services to reduce the turnaround time of
customers. Such products will give them the opportunity to sit at the comfort of their homes, workplaces and transact business with the banks.

Morufu and Taibat., (2012) in his study entitled “Banker’s perception of electronic banking in Nigeria: A review of post consolidation experience”, found that ‘minimized inconvenience’ and ‘government access to data’ appear as the most important benefits and risk respectively while ‘reduces HR requirements’ and ‘charges high costs for services’ are the least important benefits and risk associated with electronic banking.

Laith Al-Rubaiee., (2012) in his contribution entitled “Effect of E-Banking Services on Customer Value and Customer Loyalty”, analysed about why customers decide/ accept to use e-banking services and why others did not. The objective of this study is to investigate the effect of electronic banking services on Customer value and Customer loyalty. 13 Jordanian commercial banks were chosen and 260 questionnaires consist of 40 statements were distributed on bank customers using e-banking services, 206 useable questionnaires were analyzed; the results revealed that e-banking services have a positive effect on customer value and customer loyalty. In addition, the research indicated that there is an indirect effect of E-Banking Services on Customer Loyalty through Customer value as mediator.

Rangsan. Nochai and Titida. Nochai., (2013) in their contribution entitled “The Impact of Internet Banking Service on Customer Satisfaction in Thailand: A Case Study in Bangkok”, analyzed the Internet banking service dimensions which have impact on customer satisfaction among top three banks in the Bangkok area: Bangkok Bank, Kasikorn Bank and Siam Commercial Bank. Questionnaires were used to collect data from 450 respondents by using quota sampling. Multinomial logistic regression analysis was employed to obtain the important Internet banking
service dimensions that have the impact on customer satisfaction. Results showed that providing 24 hours-7 days service, completing a task accurately, contacting staff to check immediately, providing accurate information and updating faster transaction process and providing online registration times were the important factors that have the impact on customer satisfaction.

Tasmin., (2013) 47 in his study entitled “The impact of online banking on customer service delivery in the Malaysian Banking industry: KANO’S Model Approach”, analyzed the significant factors that may cause online banking to have an impact on customer service delivery with the ultimate aim of either accepting or rejecting any preconceived idea of the researcher. The study employed some hypotheses in order to guide the research in achieving the overall aim of the research as well as testing the stated hypotheses. Behavioral factors such as security, convenience and cost were the main concerns of the respondents towards effective service delivery. The study reveals that “Cost” is the major driver of effective service delivery of online banking services in Malaysia. Equally, the study also explores various implications of the research.

Adewoye., (2013) 48 in his study entitled “Impact of Mobile Banking on Service Delivery in the Nigerian Commercial Banks”, analyzed the impact of mobile banking on service delivery in the Nigerian commercial banks. The study was carried out in Lagos state with 140 Questionnaires administered and distributed to both senior and junior staff of the selected banks, Thirty five staff were picked from each of the four selected banks. One hundred and twenty five questionnaires were found useful for the purpose of the study representing 83.30% of the total questionnaires distributed. The collected data was analyzed using frequency table, percentage and mean score analysis while the non-parametric statistical test Chi- square was used to
test the formulated hypothesis using STATA 10 data analysis package to examine the impact of mobile banking on service delivery and also to study the relationship between mobile banking and service delivery in the sampled banks. The results of the findings show that Mobile banking improve banks service delivery in a form of transactional convenience, savings of time, quick transaction alert and reduced service cost which have recuperated customer’s relationship and satisfaction. To this end, it is recommended that the managements of banks should create awareness to inform the public about the benefits derived from the e-banking service products. Collaboration among banks should perfectly maintain skilled manpower. Computer wizards should be employed by every bank, in order to prevent fraudulent personnel and hackers from manipulating the bank’s data and to prevent thieves stealing money from the banks accounts. Finally provision and maintenance of public network system such as telephone facilities are basic infrastructures to the efficient functioning of the mobile banking services.

Ahmad Nahar Al-Rfou., (2013) in his study entitled “The usage of internet banking evidence from Jordan”, analyzed the usage of internet banking at commercial banks in Jordan from the points of view of electronic services employees. 75 questionnaires were distributed through e-mail. A total of 40 usable questionnaires were received. The results of this study indicate that the usage of internet banking services is weak. The results also, mentioned that there is a significant relationship between, ease for use, security, privacy and quality of Internet connection and the usage of internet banking.

The population comprised of forty eight respondents, four managers were selected from twelve banks and out of the 48 questionnaires distributed, 42 were collected i.e 87.50% response, purposive sampling was used and the data collected was analyzed using SPSS. The researcher employed use of Mean and Standard Deviation. The study revealed that there is a need for bankers to educate the public about the use of online banking products, invest more into ICT infrastructure and stressing the government to reduce tax of ICT gadgets. This study recommends that individual technologies need to be investigated, impact of adopting other individual technologies, profitability and performance issues should also be investigated to open up and clear the way for policy and business decisions.

2.4 SUMMARY

From the above reviews, the researcher has identified the important issues and their relevance to the present research work. All these assist the researcher to map the field and position the present research within the context. Moreover it establishes theoretical framework and methodological focus. Further it is found from the review of previous studies specified that there are many surveys and studies on technology - based commercial banks in general. But there is no separate study on the service for the adoption of technology - based services in banks. Hence in the present study, in addition to the analysis of the factors determining technology adoption, new areas namely E-CRM and Online Service Quality in commercial banks are taken for the analysis.


