

Chapter-II
REVIEW OF LITERATURE

- 2.1 Introduction
- 2.2 Review of Literature
- 2.3 Conclusion
- References

Chapter-II

REVIEW OF LITERATURE

2.1 INTRODUCTION

The review of existing literature provides base and insight for the study, which will make the researcher able to formulate correct plan for investigation. To analyze the impact of e-banking and information and communication technology (ICT) on banking sector, customers, service quality and payment system, various empirical and theoretical studies have been undertaken. The studies mainly focus upon e-Banking impact on productivity and profitability primarily due to core banking system, electronic fund transfer, real time gross settlement system and electronic clearing services. From the customer angle the studies primarily focus upon; why customers choose e-Banking products and increase in their level of satisfaction due to phone banking, mobile banking, internet banking, website services, ATMs, etc. These services have not only improved the satisfaction level of customers, but also helped in reduction of processing time and transaction time. The productivity of banks in terms of time saving and attending the customers at the branches has also improved.

During the period of research various libraries and institutions were visited. The available related literature in these libraries and institutions was studied which proved to be very useful in getting an insight into the main objectives of the study and in finalizing the methodology. The review of following studies throws light upon different aspects of e-Banking, mainly focusing on the Customer's perception and awareness about e-Banking.

2.2 REVIEW OF LITERATURE

Abasanul Haque, Ahmad Zaki Hi Ismail, Abu Hayat Daraz,¹ This study investigated the determinant factors of consumers' perception on E-Banking transaction in Internet banking by Malaysian bank consumers. The research framework was developed to testify the statistical relationships between consumer perceptions and E-banking transaction. Factor analysis was performed to extraction and make initial decision on the number of factors underlying asset of measured

variables of interest. Thereafter, multiple regressions were estimated to anticipate the effects of the explanatory variables. This study offers an insight into E-banking in Malaysia, which has not been previously been investigated and much statistical significance makes this study a potential cornerstone for future research.

Barbara R. Lewis, Kurt E. Hoel, (1993)², The banking environment is characterized by continuing social, economic, technological and regulatory change, and current challenges include increasing competition from both bank and non-bank institutions, rapidly developing technological innovation, and changing customer needs. The focus is on technological developments and the Nordic Bank environment, and findings from a survey among Norwegian companies are presented. The Survey considers their use of and attitudes onwards electronic banking services.

Dannenberg and Kellner (1998)³, in their study, overviewed the opportunities for effective utilization of the Internet with regard to the banking industry. The authors evaluated that appropriate application of today's cutting edge technology could ensure the success of banks in the competitive market. They evaluated the services of banks via internet as websites provide sophisticated line of products and services at low price. The authors analyzed that transactions via internet reduce the risk of data loss to customers, chance to cut down expenses, higher flexibility for bank employees, re-shaping the banks' image into an innovative and technologically leading institutes, etc. The researchers found that banks could move one step further by entering into a strategic alliance with internet service provider. So, the bank of tomorrow stands to be feasible with today's technology.

Black et al. (2001)⁴ performed a qualitative study on the adoption of internet services and found out that those with the highest income with a greatest use of information technology were most likely to purchase financial services using internet channel.

Sathye (1999)⁵, in his research paper, explored the factors affecting the adoption of internet banking by Australian customers. The author stated that internet and other virtual banking had significantly lower the cost structure than traditional delivery channels. So, the banks should encourage customers to use internet for banking

transactions. The author also emphasized that for adoption of internet banking, it was necessary that the banks offering this service made the consumers aware about the availability of such a product and explain how it adds value to the other products. The analysis of the study showed that security concerns and lack of awareness stand out as the reasons for non-adoption of internet banking by Australian customers. However, internet should be considered as a part of overall customers' service and distribution strategy. These measures could help in rapid migration of customers to internet banking resulting in considerable saving of operating costs of banks.

Carmel Herington, Scott Weaven, (2009)⁶ in this paper explores the measurement of e-service quality for e-retail banking, the importance of e-service quality dimensions to e-retail bank customers, and the relationship between e-service quality and customer satisfaction. This paper informs knowledge gaps related to the measurement and structure of e-service quality, its importance and impact on customer satisfaction. A more holistic measure of e-service quality is supported. Good e-service performance impacts customer satisfaction positively, but does not override unsatisfactory performance in other areas.

Talwar (1999)⁷ examined the IT Revolution in banking sector which had not only provided improved service to the customer, but also reduced the operational cost. The author brought out that computerization of banks, introduction of Real Time Gross Settlement System, setting up of Inffinet, Electronic Payment Products (such as Electronic Clearing Service) had ensured better resource management, systematic efficiency and substantially reduced inter-branch reconciliation entries. However fear of hacking, tampering of data, secrecy maintenance were certain issues which pose threats on usage of electronic banking. The challenges in banking sector were manifold but still the constitution of National Payment Council by RBI and development of the integrated payment and settlement system was a step in this direction to remove the obstacles coming in the way of using electronic banking.

Carlos Flavián, Miguel Guinalú, Eduardo Torres, (2006)⁸ in this paper analyzes how consumers' perceptions of their traditional bank influence their decision to adopt the services offered by the same bank on the internet. The results in the paper showed that consumer trust in a traditional bank, as well as incomes, age and sex are

factors that influence consumers' decision to work with the same bank via the internet. The results in the paper showed that consumer trust in a traditional bank, as well as incomes, age and sex are factors that influence consumers' decision to work with the same bank via the internet.

Chuang, Chao Chao, Hu, Fu-Ling (2010)⁹ This study uses the quantitative research method to explore consumers' perceptions of Internet banking services. It is found that checking account balance, the information about foreign exchange rates, current interest rates and transferring money between accounts are the most important online banking services features from the customer point of view. On the contrary, customers generally pay less attention to the following items, such as exchanging opinions with others, reading versatile daily news and browsing the banking website. Therefore, in addition to improving transaction technicalities factor and making customers' decision making more convenient, future online banking penetration and the success of complicated financial product offering will depend upon online marketing activities connected with increasing website security factor, interactivity factor and better specialty information factor.

Divya Singhal and V. Padhmanabhan (2008)¹⁰ Internet banking is becoming is increasingly becoming popular because of convenience and flexibility. The present paper explores the major factors responsible for internet banking based on respondents' perception on various internet applications. It also provides a framework of the factors which are taken to assess the internet banking perception.

Durkin and Howcroft (2003)¹¹ evaluated that the banker-customer relationship was improved through mobile, phone and internet banking. The authors found that new technology has made the banks very competitive and profitable and internet has played a key role in it. Perception of bankers and customers regarding the use of internet was examined. They pointed out that as consumer usage of remote bank delivery channels increases, relationship management will become more important. Further, the combination of traditional and new delivery channels, if followed, can help to improve their productivity and profitability.

Joseph and Stone (2003)¹², in their paper, explored that customer friendly technology such as ATM, internet banking and telephone banking has been used by the banks to reduce the cost of providing services, and to increase the customer loyalty and market share. Technology plays a vital role in delivery of banking service. The study highlighted that access, location, security and ease of use of ATM machines appears to be the most important component for banking customers for the adoption of e-banking. However, banks should emphasize more on providing speedy and efficient service to the customers. Further, bank managers should conduct periodic marketing studies to understand the level of technological services by the customers so that adequate service could be delivered at the right time.

Fulbag Singh & Davinder Kaur, 2010¹³ banking sector plays a pivotal role in the growth of any economy by mobilizing people's funds into productive channels. Banks provide services for the fulfillment of consumers' financial needs. Whether the area is rural or urban, banks are trying to diversify their services to the masses, and customers should also be aware of these. But due to lower literacy level and inadequate sources of information in rural areas, the customers are not fully aware of the services offered by the banks. Therefore, the present research work is being carried out to find the gaps in the awareness level of rural and urban bank customers and to identify the significant sources of information influencing customer awareness.

Gan et al. (2006)¹⁴ examined consumer choices between electronic banking and non-electronic banking in New Zealand. The authors evaluated that decision to use electronic banking was hypothesized to be a function of service quality, perceived risk factors, price factors, service product characteristics, individual factors and demographic variables. The findings showed that service quality, perceived risk factors, user input factors, employment and education were the dominant variables that influence consumers choice of electronic banking channels. The authors observed that consumer use e-banking because of its suitability, convenience and reliability.

Gaston leblanc, (1993)¹⁵ presented an exploratory study on customer motivations towards the use and non-use of an automated teller machine with data collected from a total of 208 customers of a financial institution. An analysis of results based on demographic variables reveals significant differences between users

and non-users in terms of education only. Results also show that convenient accessibility of a financial institution and avoidance of waiting lines are the principal reasons for using the automated teller. Furthermore, in comparison with non-users, the user group is more likely to believe the automated teller improves service quality, reduces the financial institution's operating costs, presents no personal or financial risks, and is simple to use. The non-user group for its part prefers dealing with human tellers, finds the machine complex to use, and associates personal and financial risks with the use of the automated teller.

Hasan Banu. S (2004)¹⁶, studied about customer services in rural banks. She found that the rural customers are not aware of the purpose for which the loan is available and how they can be availed. Customers do not know the complete uses, regulations and procedures of the banks as the bank personnel do not take interest in educating customers.

Hua (2009)¹⁷ conducted an experiment to investigate how users perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. In this study, it also investigates the relative importance of perceived ease of use, privacy, and security. Perceived ease of use is of less importance than privacy and security. Security is the most important factor influencing user's adoption.

Howcroft et al. (2002)¹⁸ found that the most important factors encouraging consumers to use online banking are lower fees, less paperwork, and reduced human errors, which subsequently minimize disputes.

Heggede O.D.(2000)¹⁹ studied bank customer relationship in India. He analyzed the responses of 11 different classes of bank customers including businessmen, salaried, advocates and peasants. He analyzed customers' views on the one hand and employees views on the other. The paper concluded that there is a low correlation among the different occupations and satisfaction from services in the public sector banks.

Kautish (2008)²⁰ described the paradigm shift of banking sector from traditional banking to online banking. The objective of the paper was to discuss the derivation of value added tool of online banking system which was used to attract new customers and retain the existing ones. It helped the banks to acquire more business from existing customers. People preferred to use online banking because of its availability, better performance, ubiquity, speed and its effectiveness. Further, the author discussed two bank models integrated banking model where the banks provide internet banking services as an extension to their basic services like ATM and phone banking. So, it is a kind of hybrid approach and the other was stand alone internet banking model, where the banks totally rely on the online channel. To improve the services through e-banking, banks should think from the customers' perspective and there should be creativity and innovation in designing and implementation of e-banking processes. The author concluded that as e-banking was a relatively new concept in the global banking scenario so the best of this concept was yet to come.

Liao and Wong (2007)²¹ empirically explored the major considerations associated with internet-enabled e-banking systems and systematically measured the determinants of customer interactions with e-banking services. In order to study customers' interaction with internet banking, the respondents were asked to explain the extent of using internet banking services. The results suggested that perceived usefulness, ease of use, security, convenience and responsiveness to service requests significantly explained the variation in customer interactions. Exploratory factor analysis and reliability test indicated that these constructs were relevant and reliable. Confirmatory factor analysis confirmed that they possessed significant convergent and discriminatory validities. Both perceived usefulness and perceived ease of use have significant impact on customer interactions with e-banking services. Perceived security, responsiveness and convenience also represented the primary avenues influencing customer interactions. In particular, stringent security control was critical to e-banking operations. The findings had managerial implications for enhancing extent of e-banking operations and developing viable e-banking systems and services.

Mahdi Salehi, Alipour, Mehrdad, (2010)²² have stated "Now a day's due to emerging global economy, e-commerce and e-business have increasingly become a necessary component of business strategy and a strong catalyst for economic

development. The new information technology is becoming an important factor in the future development of financial services industry, and especially banking industry. The results of this study shows that e-banking serves several advantages to Iranian banking sector, however, the study also shows that the Iranian customers have not enough knowledge regarding e-banking which is rendering by banking sector in Iran.

Manoharan (2007)²³ highlighted the e-payment system in India and its performance impact on Indian banking sector. The author described that competition in banking industry had forced the banks to rethink the way they operate their business. So, e-banking has made it possible to find alternate banking practices. In the paper, the author divided the payment system in India into three parts, i.e., large value payment system, retail payment system, and retail electronic system. Each one includes different categories of e-payment. The author studied the performance of various Indian payment systems in the last three years in which RTGS emerged as the principal payment system in India for wholesale payment. The study focused that having a huge opportunity of e payment system in India still 90 per cent of transactions were cash based. So, an effort should be made to increase the use of e-payment, and RBI should make efforts to strengthen the legal framework of electronic banking system.

Ndubisi and Sinti (2006)²⁴ examine the determinant structure of customer attitude on adoption of IB in Malaysia. They show the “attitudinal factors” play a significant role in IB adoption. In addition, IB adoption can predict by behavioral tendency and webpage features. According to this study, easy-touse technologies and trial ability should be put in place in order to increase adoption. Moreover, risk has no significant influence of adoptions.

Neha Dixit, Dr. Saroj K. Datta (2010)²⁵ Internet banking is a form of self service technology. The numbers of Internet users have increased dramatically, but most of them are reluctant to provide sensitive personal information to websites because they do not trust e-commerce security. This paper investigates the factors which are affecting the acceptance of e-banking services among adult customers and also indicates level of concern regarding security and privacy issues in Indian context. The finding depicts many factors like security & privacy, trust, innovativeness,

familiarity, awareness level increase the acceptance of e-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 him necessary guidance. Based on the results of current study, Bank's managers would segment the market on the basis of age group and take their opinion and will provide them necessary guidance regarding use of online banking.

Nelubiri and Sinti (2006)²⁶ examined the impact of internet banking on customers' attitude, their needs and behaviour. The objective of the study was to see the internet banking adoption in Malaysia. The authors used five perceived attributes that is relative advantage, compatibility, complexity, trialability and absorbability for IB adoption. The results of the study indicated that for better understanding of internet banking acceptance, it was very necessary to observe customer attitude and perception towards internet banking. So, the banks should adopt such internet banking facilities which could enhance processing of transaction, inter-activity and customization.

Pooja Malhotra, Balwinder Singh, (2010)²⁷, This exploratory study is an attempt to present the present status of internet banking in India and the extent of internet banking services offered by internet banks. In addition, it seeks to examine the factors affecting the extent of internet banking services. The purpose of the study is to help fill significant gaps in knowledge about the internet banking landscape in India. This paper contributes to the empirical literature on diffusion of financial innovations, particularly internet banking, in a developing country, i.e., India.

Pikkarainen et al. (2004)²⁸ highlighted that electronic banking technology had created new ways of handling daily banking affairs especially via online banking channel. The authors adopted technology acceptance model to leverage the online environment. The model indicated online banking acceptance among private banking customers in Finland through a sample survey. The findings of the study indicated that perceived usefulness, information on online banking, security and privacy, quality of service, ease of use on the website were the main factors influencing online banking acceptance. The authors suggested that banks should now more concentrate on their e banking issues so that online banking could become more popular and adaptive for customers.

Ratnasingam (2002)²⁹ argued that the impact of technology trust in Web services implies the use of security services such as digital signatures, encryption mechanisms, and authorization mechanisms. This paper relates to the condition of the consumers' perceptions on security issues in E-banking. Mainly consumers' perceptions are derived from the set of technologies that are customarily visible to them over the Web.

Rajesh Kumar Srivastava (India) 2007³⁰ Customer's perception on usage of internet banking Internet banking is still at infancy stage in the world. Many studies focused on usage of internet banking but many factors on non usage were overlooked. This research was carried out to validate the conceptual model of internet banking. The causes were identified and researched through correcting the causative factors so that internet banking can be used by more people. This will help the banking operations to be more cost effective. The research is focused on what are the customer's perceptions about internet banking and what are the drivers that drive consumers. How consumers have accepted internet banking and how to improve the usage rate were the focus of research area in this study. The study revealed that education, gender, income plays an important role in usage of internet banking.

Reeti Agarwal, Sanjay Rastogi and Ankit Mehrotra (2009)³¹ Determining factors affecting customer perception and attitude towards and satisfaction with e-banking is an essential part of a bank's strategy formulation process in an emerging economy like India. To gain this understanding in respect of Indian customers, the study was conducted on respondents taken from the northern part of India. The major findings depict that customers are influenced in their usage of e-banking services by the kind of account they hold, their age and profession, attach highest degree of usefulness to balance enquiry service among e-banking services, consider security & trust most important in affecting their satisfaction level and find slow transaction speed the most frequently faced problem while using e-banking.

Sureshchander and Rajendran (2003)³², in their paper, focused on investigating the important factors of customers' perceived quality in banks of developing economy like India. The authors had taken 15 public sector banks, 14 private banks and 14

foreign banks for the period under study. The researchers found that there seems to be a great variation in respect of services offered by three groups of banks. They used core services such as human element, systemization of services, tangibility of services and social responsibility as critical factors. They analyzed that three groups of banks in India seem to vary significantly in terms of service quality factors but from the customer perception of service quality, it could be acceptable only if customers' need could be satisfied at the right time in a right manner.

Singh and Singh (2002)³³ described that technology has provided customers new ways of delivering the products. Banks began to look e-banking as a mean to replace traditional banking. E-banking products and services like ATM, EFT were a source of differentiation for all the banks. The researchers analyzed the revised technology adoption life cycle model. The authors explained that the banks required a dynamic strategic technique for adoption of innovative technology. As customers became more aware about e-banking, it becomes imperative for the banks to consider the use of technology to respond to the continuous changing requirement.

Singh (2004)³⁴ examined the impact of online banking and internet banking. The objective of the study was to find who uses internet, why and where. It also examined the respondents' reasons for not using banking online. The researcher analyzed that males use more internet banking than females. Main services used through websites were inter-account transfer, paying accounts, checking balance/ statement, communication with the banks, etc. Security was the main issue for not using banking online. The author suggested that to make online banking more adaptive, websites should be more attractive, more informative and colourful. Training should be given to customers. Charges of online facilities should also be less. Banks should advertise and publicize their new products and services offered on the websites so as to make internet banking more popular among customers.

N Sakthivel & P Murugeswari, 2009³⁵ In the ever-changing scenario, banks have evinced keen interest in delivering value-added products and services with the help of rapidly evolving electronic and telecommunication technologies. Internet banking is a web-based service that allows customers to access their account information. In this system, customers are allowed to log on to the bank's website

with the help of identification issued by the bank and a Personal Identification Number (PIN). Often, the range of products and services offered by each bank on internet varies widely in terms of content. It is observed that internet banking is offered as a value-added service by most of the banks, in particular, by banks which do not have a large branch network. The present study is an attempt to analyze the customers' attitude towards internet banking services of ICICI Bank at Gobichettipalayam.

Shastri (2001)³⁶ analyzed the effect and challenges of new technology for banks. Technology has brought a sea change in the functioning of banks. The earlier manual system of preparation of vouchers is slowly being automated thereby saving a lot of time and effort. The use of automated teller machines (ATMs) and introduction of IT are more than in the past.

Sourabh Sharma & K S Thakur, 2010³⁷ This paper is a survey of public and private sector bank customers' responses toward computerization of banking services. The objective of this paper is to measure the customers' awareness, perception, and the level of satisfaction with regard to Virtual Banking Services offered by the Indian public and private sector banks in the city of Jaipur. This survey declares that in comparison, private sector bank customers are satisfied with regard to ATM, I-Banking and IVRS services. However, the study also reveals that public sector banks are preparing to take on private sector banks in this regard.

Serkan Akinci, Safak Aksoy, Eda Atilgan,(2004)³⁸ “This descriptive study was conducted to develop an understanding of consumers' attitudes and adoption of Internet banking among sophisticated consumers. The analyses revealed significant differences between the demographic profiles and attitudes of users and non-users. IB users were further investigated, and three sub segments were defined according to a set of bank selection criteria. Finally, based on the similarities between various Web-based bank services, four homogeneous categories of services were defined.

Terry M.Wickre(1980)³⁹, in his study to increase the customers awareness about visa card and then master charge card issued by the bank conducted a pre and post study before their various advertising strategies found that by advertising customers

were becoming more aware of credit card and how it worked . Advertising had increasing the consumer's ability to discriminate one bank card from another and reduces confusion in the card holder's minds. It also provides bankcard customers with convenient and beneficial plastic cards and EFT services.

Tommi Laukkanen, (2007)⁴⁰ the paper provides enhanced information for business managers about both positive and negative customer value perceptions in internet and mobile banking. By understanding how and what kind of value different service channels provide for customers service providers are better enabled to create actions to enhance internet and mobile banking adoption. The contribution of the paper lies in achieving a more profound understanding on consumer value perceptions to internet and mobile banking. It expands the literature on electronic and mobile commerce and on electronic banking especially.

Robbins (2006)⁴¹ tried to evaluate whether the adoption of e-banking by the banks affected the importance of bank location. The study looked into the state of consumer adoption of e-banking products and growth of e-banking products since 1995. The study also investigated whether consumer choice had changed as a result of increased e banking use and how banks had responded. The study also questioned why location was still important today. The author focused that e-banking was not a perfect substitute of physical presence of banks in the market. Consumers want the convenience of e-banking products but only of those banks which fall close to their place. So, the location of a bank branch and electronic banking were complementary to each other.

Tommi Laukkanen, (2007)⁴² "The purpose of the study is to increase the understanding of the diverse retail channel preferences of online bank customers by examining their channel attribute preferences in electronic bill paying. Two different groups of online customers were examined: those who pay their bills over the internet and those who, in addition, have experience of using a mobile phone for this service. The study provides new insights for decision makers in the electronic retail sector and especially in banking.

Uppal R.K.(2006),⁴³ with stratified sampling of 500 bank customers, explained the impact of computerization on the satisfaction of customers of all bank groups and concluded that customer services are quite better in fully computerized banks and further in e-banks in partial and non-computerized banks. The study is only concerned with the urban sector of Punjab.

Uppal, R.K.; Chawla, Rosy, (2009)⁴⁴, this study highlights customer perceptions regarding e-banking services. The study investigates the perceptions of the bank customers regarding necessity of e-banking services, quality of e-banking services, bank frauds, future of e-banking, preference of bank customers regarding banks, comparative study of banking services in various bank groups, preferences regarding use of e-channels and problems faced by e-bank customers. The major finding of this study is that customers of all bank groups are interested in e-banking services, but at the same time are facing problems like, inadequate knowledge, poor network, lack of infrastructure, unsuitable location, misuse of ATM cards and difficulty to open an account.

R K Uppal & Rimpi Kaur, (2008)⁴⁵ IT has transformed the business environment, the world over. It has a major impact in helping banking service and their customers with the introduction of a number of e-channels like ATMs, EFTs, Credit Cards, Internet-banking, Mobile-banking, Tele-banking, etc. It has bridged the gaps in terms of the reach and coverage of systems, and enabled better management of banking business. The present paper attempts to analyze the impact of IT on the profitability of banking industry in India. The present paper contains analysis of correlation and regression between profitability and different e-channels to study the impact of IT on banks' profitability. It is concluded from the data that IT has nominal impact on profitability of old private sector banks but foreign banks show high impact, whereas public sector banks and new private sector banks have average impact on their profitability. Overall, IT has very low impact on profitability of Indian private sector banks as compared to public sector banks and foreign banks proving 20 per cent more impact. The paper concludes with some recommendations to improve IT related business in Indian banking industry.

Vinh Sum Chau, Liqing W.L.C. Ngai, (2010)⁴⁶ “This paper aims to investigate the perceptions, attitudes and behavior of the youth market for internet banking services (IBS). The authors find that young people (age 16-29) have more positive attitudes and behavioral intentions towards using IBS than other user-groups. It has also confirmed that there is a positive impact of IBS quality on satisfaction and loyalty.

Walter (2006)⁴⁷ evaluated why people use or choose technology enabled services like internet banking, telephone bill paying and internet shopping service. The author used a behavioural model for the study. The findings of the study showed that customers’ adoption rate to use internet and telephone banking was influenced by their willingness to use service, their personal capacity to engage in the service, the risks and advantage involved in the services. The paper also brings out depict that while choosing technology enabled services, customers want convenience, time saving, faster service and security. The author concluded that for more use of technology enabled services, it should make more customers friendly, reduce the system complexity and undue waiting time involved in the service handling.

Yu and Boon (2003)⁴⁸, in their study, examined the implications of technological advances in the banking sector in Malaysia. An empirical study was made through a structured questionnaire. The results highlighted that electronic channels provide alternatives for faster delivery of banking services to the customers. They described that prior to adoption of electronic channels like ATMs, kiosks, internet banking; investment costs must be identified to ensure a more cost-effective and efficient execution of e channel services. The authors analyzed the commercial banks in Malaysia via frequency analysis and factor analysis. The results of the study indicated that banks’ operation management was the main factor affecting the success of ATMs, PC and branch banking, while product innovation and knowledge development factors were found to have most significant effect on the success of banking kiosks and phone banking respectively.

Ziqi Liao and Michael Tow Cheung (2002)⁴⁹ Consumer attitudes toward the usefulness of and willingness to use Internet e-retail banking were identified and

measured. Our survey was undertaken in Singapore, because its geography and well-developed infrastructure implied similar and small physical- and telecommunication costs, thereby highlighting the differences between traditional and Internet-based retail banking upon the latter's introduction. The data showed that expectations of accuracy, security, network speed, user-friendliness, user involvement and convenience were the most important quality attributes underlying perceived usefulness. Regression discovered that willingness to use depended significantly on the first five factors, allowing the interdependencies or marginal rates of substitution between them to be estimated. Our results draw attention to demand-side changes in explaining the recent slowdown in Internet e-retail banking, and may also be useful for development planning and marketing.

Sarangapani and Mamatha (2008a)⁵⁰ explained the concept of e-banking and highlighted all the concerns and challenges while implementing the same. The authors emphasized that e-banking was necessary not only for improving the quality of services rendered to the customers but also for better marketing of products. The authors evaluated various e-banking modems for banking transactions like ATM, EFT, ECS, SPNS, PC banking, mobile banking and internet banking. But they mainly emphasized on virtual banking, smart cards, e-cheques and internet banking. They analyzed the websites of various banks for internet banking adoption in which private sector banks were providing maximum IB services followed by public sector banks, foreign banks and old private sector banks. The author suggested some measures which could contribute towards greater adoption of e-services. The customers should be taken into confidence that the transactions made by them are risk free, and there is no scope of any fraud. Further, they should also be assured that hackers can do no harm to their interests. Furthermore, the system should be free from legal intricacies.

Harris and Spence (2002)⁵¹, in their paper, explored the ethics of business to business electronic commerce with focus on banking sector. The researchers had chosen a case study of online foreign exchange developments at an investment bank. The important areas include freedom of choice, trust and transparency of business-to-business transaction and limits to responsibility with regard to facilitation of fraud. The authors found that e-banking had forced the banking sector to recognize, restructure and reconsider its institutional arrangements. The challenges of e-banking

services would be successful for banks only if fraudulent activities could be controlled, transparency in transaction could be maintained, ethical rules and regulation to be followed so that e-banking could be widely acceptable among customers.

Abhav Jain B S Hundal, (2006)⁵² Rapid changes in the financial services environment- increased competition by new players, product innovations, globalization and technological advancement— have led to a market situation where battle for customers has become intense. In order to rise up to the challenges, service providers are even more interested to enhance their understanding of consumer behavior patterns. This paper examines the forces that can act as barriers in mobile banking service adoption. A quantitative survey sheds more light on this research issue. The data was collected from a survey in the Northern region of India and includes 330 respondents.

Lustik (2003)⁵³ analyzed the main criteria for successful inter-bank strategy and brought out benefits of e-banking from the viewpoint of banks, their clients and the economy in general. The author explained that banks in Estonia had achieved significant success in the implementation of electronic banking. The findings of the paper were helpful to understand the main reasons and factors responsible for the rapid growth of electronic banking. The author further revealed that making payment via e-banking creates overall economy savings to the amount of 0.93 per cent of GDP. Electronic banking was not a small application to computer fans and innovative adopters, and a profound research was needed to map its customer base for the enhancement of value creation process.

Adelowo Solomon Adepoju Mohammed Enagi Alhassan (2010)⁵⁴ Over time, consumers have come to depend on and trust the Automatic Teller Machine (ATM) to conveniently meet their banking needs. But in recent time there have been a proliferation of ATM frauds in the country even and across the globe. Managing the risk associated with ATM fraud as well as diminishing its impact is an important issue that face financial institutions as fraud techniques have become more advanced with increased occurrences. The ATM is only one of many Electronic Funds Transfer (EFT) devices that are vulnerable to fraud attacks. This paper carried out an empirical research to analyze the cases of ATM usage and fraud occurrences within some banks

in Minna. The research identifies the common ATM fraud, how, where and when these frauds are perpetuated and then proffer security recommendation that should be adhered to by both the banks as financial institutions and the ATM users in order to eliminate or reduce it to the barest minimum.

Ahmed Audu, Sany Sanuri Mohd. (2010)⁵⁵ This paper aims at investigating the relationship between the electronic banking facilities, customers employment sector and customers age group choice of banks. The results show that there is no significant relationship between electronic banking facilities and customers' choice of banks. It was however found that there is significant relationship between customers' employment sector and customers' age-group on one hand and their choice of banks on the other hand. It was recommended that the management of Nigerian commercial banks should find the relevant factors that are considered important by customers of various age group to appropriately segmenting the target market.

Anne J. Broderick, Supattra Vachirapornpuk, (2002)⁵⁶ One of the key challenges of the Internet as a service delivery channel is how service firms can manage service quality as these remote formats bring significant change in customer interaction and behaviour. Drawing on theoretical frameworks of service quality and adapting these to particularly reflect the remote delivery format of the Internet, this study proposes and tests a service quality model of Internet banking. The research uses participant observation and narrative analysis of a UK Internet banking Web site community to explore how Internet banking customers perceive and interpret the elements of the model. Findings show that the level and nature of customer participation had the greatest impact on the quality of the service experience and issues such as customers' zone of tolerance.

Ramani (2007)⁵⁷ studied the impact of e-payment system on Indian banking sector. E-payment was required for handling large volume of business payment and remittances for hassle free, quicker and faster payment remittances at low cost, and paperless transactions. The researcher highlighted various steps taken by RBI for the e-payment. It includes RTGS, deferred net settlement system such as electronic clearing services debit and credit, electronic fund transfer and NEFT. The researcher studied that these methods had increased the use of core banking solutions, data

warehousing and data mining. E-payment had reduced the chances of fraud, improved customer service by cutting the delay in payment obligation.

Krishnan (2001)⁵⁸ examined the evolution of E-banking in Malaysia and analyzed the various electronic delivery channels used by local banks to assess the consumer reaction to these delivery channels. The objective of the study was to present progressive development of e-banking, electronic delivery channels and some pertinent issues for successful implementation of E-banking. The study was based on a sample of 300 bank customers, and revealed that 90 per cent of respondents visit their bank branches at least once every month, 63.3 per cent customers indicated four or more visits to ATMs every month, 20 per cent of the respondents were using tele-banking services. Only 6.7 per cent customers indicated that they would not be interested at all using these services. The results showed that among different channels of e-banking like mobile banking, internet banking, ATM's, PC banking; ATMs were widely accepted by the people. The researcher also found that bank branches and interaction with human tellers were still important. 60 per cent of the respondents had internet access at home and it presents a positive indication of PC banking in future. The author concluded that for successful implementation of e-banking, the major pre-requisites were legal and physical infrastructure because e-banking requires a lot of tangible and technological changes in banks.

Caalin Guraau, (2002)⁵⁹ Internet banking is one of the newest Internet technology applications, which promises multiple benefits both for the financial institutions and for clients. In the last five years a large number of banks have launched Web sites, offering online banking services. While the implementation and the functioning of these digital systems seem to be relatively smooth in the developed economies, the situation may be different in countries with economies in transition. The present paper investigates and analyses the present situation of online banking in Romania, and the appropriate strategies for the successful implementation and development of online banking services in the Romanian context.

Christopher Gan, Mike Cledes, Visit Limsombunchai, Amy Weng, (2006)⁶⁰ the competitive landscape of financial institutions is shifting and internet banking is no longer a competitive advantage but a competitive necessity for banks.

However, a limited number of empirical studies have been published in the marketing literature about electronic banking. This paper seeks to examine consumers' choices between electronic banking and non-electronic banking in New Zealand. The findings in the paper show that the output from the logistic regression indicates that the service quality, perceived risk factors, user input factors, employment, and education are the dominant variables that influence consumers' choice of electronic banking and non-electronic banking channels.

Chien-Ta Bruce Ho, Wen-Chuan Lin, (2010)⁶¹ develop a multiple item scale for measuring internet banking service quality. . There are five dimensions and 17 items in the measurement scale for measuring the service quality of internet banking. The five dimensions are named customer service, web design, assurance, preferential treatment, and information provision. Based on the understanding of the key service quality dimensions and the perception of customers toward e-service quality, managers may discover methods to improve customer satisfaction, build customer trust, and create loyal customers.

Erickson et al. (2005)⁶² studied the technology acceptance of internet banking in Estonia. The objective of the study was to see that to what extent customers accept internet banking as a tool for the satisfaction. The findings of the study suggested that internet banking proved to be beneficial for the customers. However, banks need to put much efforts not only into making a user friendly internet bank, but also to explain their customers how the internet bank was useful to them.

Boatang (2006)⁶³ explored some of the issues that affected the key decisions of banks while adopting e-banking techniques. The decisions were related to entering e-banking, e-banking channel choice, customers and managing conflicts. The findings of the study indicated operational constraints related to customer location, the need to maintain customer satisfaction and the capabilities of the banks. The author pointed out the need for African banks to understand customer needs, corresponding service to offer, the resources and partnership required to offer it, and develop appropriate e-banking strategies that maximized value for both customer and banks.

Chalam and Nageswara (2006)⁶⁴ focused that as the computer touched each and every aspect of the economy, so banking sector was not an exception to it. The objective of the study was to find out change in banking sector through the techniques of e-banking. The authors evaluated several e-banking products like ATM, EFT, ECS, EDI, telebanking, etc. E-banking had benefited to the individual through anywhere, anytime banking; to traders and merchants through immediate settlement of payment; to banks through unlimited network, online banking, attracting and retaining the customers, debit and credit card facilities; and to the nation through globalization of trade, more exports, more transparency in business, etc. The researchers concluded that emerging challenge in e-banking was due to lack of awareness among people, no cyber laws by government and low density of telephone lines and low computerization of banking activities. They recommended that banks should adopt hardware and software security measures, appoint skilled personnel and adoption of digital signature certification authority so as to tackle the major challenges in e-banking.

Flavian et al. (2006)⁶⁵ explored how customers' perception of traditional bank influence their decision to adopt the services of the internet. The researchers found that if the customer trusts in brick and mortar bank then it was possible that they feel more motivated to use the online services offered by the same bank due to trustworthiness of the customer in the traditional banking system. The results of the study suggested that to use internet banking; trust, income, age, sex, education and employment were the most affecting factors for the use of online banking services and the banks can reduce their costs and widen their market through online banking adoption.

Cynthia (2000)⁶⁶ states that the 24 hours access to the ATM machine is a double edge sword it has both advantage and disadvantage. It is easy to deduce that ATM fraud is carried out most in the day time. Also there are occurrences at night but most ATM users prefer to make withdraw during the day thus preventing incidences of robbery at night. On the present level of security provide by banks as regards to ATM. The responses from the tables denote that the security level is poor. Some banks do not provide any means where customers can easily report cases of ATM fraud. ATM manuals or FACTA (Fair and Accurate Credits Transactions Act) is a

pertinent document that should be given to ATM users as they are been issued with ATM but from the study this is absolutely neglected.

David H. Wong, Nexhmi Rexha, Ian Phau,(2008)⁶⁷ aim to re-examine the role of traditional service quality in an e-banking environment by providing a review of how traditional service quality perceptions ^{have} evolved through the current and continuing stream of change in banking technology and the corresponding changes in the nature of how banks interact with their customers.

Gaston leblanc, (1993)⁶⁸ presented an exploratory study on customer motivations towards the use and non-use of an automated teller machine with data collected from a total of 208 customers of a financial institution. An analysis of results based on demographic variables reveals significant differences between users and non-users in terms of education only. Results also show that convenient accessibility of a financial institution and avoidance of waiting lines are the principal reasons for using the automated teller. Furthermore, in comparison with non-users, the user group is more likely to believe the automated teller improves service quality, reduces the financial institution's operating costs, presents no personal or financial risks, and is simple to use. The non-user group for its part prefers dealing with human tellers, finds the machine complex to use, and associates personal and financial risks with the use of the automated teller.

Hans H. Bauer, Malik Hammerschmidt, Tomas Falk (2005)⁶⁹ In the internet economy, the business model of web portals has spread rapidly over the fast few years. Despite this, there have been very few scholarly investigations into the services and characteristics that transform a website to a portal as well as into the dimensions that determine the customer's evaluation of the portal's service quality. Based on an empirical study in the field of e-banking, the authors validate a measurement model for the construct of web portal quality based on the following dimensions; security and trust, basic services quality, cross-buying services quality, added value, transaction support and responsiveness. The identified dimensions can reasonably be classified into three service categories; core services, additional services and problem-solving services. The knowledge of these dimensions as major determinants of consumer's quality perception in the internet provides banks a

promising starting point for establishing an effective quality management for their e-businesses.

Joseph H.Plummer (1971)⁷⁰ conducted a study on the life style pattern of male and female credit card holder using their demographic and purchase data, the basic demographic pattern and card usage data indicate a widespread use of commercial bank charge cards across many demographic segments of population. From the stand point of potential market segments, however the higher income better educated, middle aged and professional segments are more prominent on the user index scale. The study depicts certain aspects of credit card users' lifestyles. Both male and female users indicate a convenience orientation towards credit cards as a satisfactory cash substitute. The study indicates that users of commercial bank charge cards in contrast to non - users, exhibited a "contemporary state of mind" and a rejection conservative, traditional concepts which is a major detriment of card usage beyond demographic variables.

Keldon Bauer and Scott E.Hein(2006)⁷¹ Financial service providers have increasingly offered customers new remote access to such services, with Internet banking being the latest example. While Internet banking has been available for years, the early adoption by customers of this technology was disappointing to most. This paper examines the demand for remote access to banking accounts by consumers and finds that when the technology is new, the traditional risk return models including variables allowing for heterogeneous risk add power in modeling the adoption decision. Perceived risks in Internet banking are seen to be responsible for some of the hesitation to adopt. Ironically, older consumers are found to be less likely to adopt Internet banking regardless of their risk tolerances. However, younger consumers are found to be early adopters only when they have relatively high levels of risk tolerance.

Laukkanen (2007)⁷² highlighted the attributes in multi-channel electronic banking. The main objective of the study was to understand the diverse retail channel preference of online bank customers by examining their channel attribute preferences in electronic banking. For the research purpose, the author divided the customers into two groups those who pay their bills over the internet, and those who use a mobile

phone for the service. With the help of conjoint analysis, the results of the study revealed that internet and mobile users differ in their preferences towards electronic channels attributes in bill paying. It was found that screen size followed by location and response time were the most important attributes for internet users. However, locations followed by screen size and response time were the most important attributes for mobile users. The author concluded that banks and producers should diversify consumer group so that the use of electronic banking techniques and services could be increased.

Mantel (2000),⁷³ in his study, proposed a framework for describing why consumers use electronic banking products such as electronic bill payment, credit cards, debit cards, stored value and e-cash for their banking needs. The author explained that consumer behavior was consistent with their preference, which includes convenience, incentives, control, privacy, security and personnel involvement. The paper suggested that consumers make rational decisions regarding the use of alternative of E-payment instruments rather than irrationally resistant to change. Migration towards electronic banking products was more dependent on establishing business cases rather than overcoming consumer reluctance. Further, the study provided that greater control, convenience and communication power were some of the reasons which made the consumers shift to electronic payment products.

Raghvan (2006) ⁷⁴highlighted the transformation in the banking sector due to effect of information technology, tele-communication and electronic data processing. He also attempted to visualize the perception of banks in India in the year 2020 taking into account the impact of internet banking, ATMs, EFT on the performance of banks and initiative taken in liberalization, privatization and globalization. He also evaluated the future of online and internet banking. Due to tangible and proven benefits, automation of manual processes; online and internet banking was slated to increase manifold. He also evaluated that currently an estimated 46 lakh net users were online and this was estimated to touch 160 lakh by March 2008. Furthermore, he analyzed the projected indicators of banks in India in 2020 with special emphasis on internet banking, online banking and electronic banking.

Unnithan and Swatman (2001)⁷⁵ studied the drivers for change in the evolution of the banking sector, and the move towards electronic banking by focusing on two economies, Australia and India. The study found that Australia is a country with internet-ready infrastructure as far as telecommunication; secure protocols, PC penetration and consumers' literacy are concerned. India, by comparison, is overwhelmed by weak infrastructure, low PC penetration, developing security protocols and consumer reluctance in rural sector. Although many major banks have started offering i-banking services, the slow pace will continue until the critical mass is achieved for PC, internet connections and telephones. However, the upsurge of IT professionals with growing demands is pressuring the government and bureaucracy in the country to support and develop new initiatives for a faster spread of e-banking.

A review of the literature on the subject indicated that the introduction of Information Technology is vital for the present banking system. The study revealed that no comprehensive attempt has yet been made regarding perception and awareness about E-Banking. Hence, there is a need to study the customer's perception and awareness about E-Banking. Despite the increasing importance of E-Banking, the research pertaining to E-Banking has been limited. Therefore, this study is mainly concerned with the customer's perception and awareness about E-Banking.

2.3 CONCLUSION

Attempt is made in this chapter to consider and cover all the related literature concerned with the study. In all 75 reviews was taken. Care has been taken in this chapter to review different sectors of the economy such as banking services, Information and Technology services etc. These reviews mainly focus upon e-banking impact on productivity and profitability primarily due to core banking system, electronic fund transfer, real time gross settlement system and electronic clearing services. From the customer angle the studies primarily focus upon; why customers choose e-banking products and increase in their level of satisfaction due to phone banking, mobile banking, internet banking, website services, ATMs, etc. But no studies have undertaken to highlight on customers' perception and awareness about e-banking in Solapur District. Therefore, the present topic 'A Study of Customers' Perception and Awareness about E-banking in Solapur District' is selected which is unique and different.

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