

**LITERATURE REVIEW**

**Himani Sharma** *(2011)*, in his research study brings out two significant difficulties in the use of e-banking, viz., heightened stress and technical bottlenecks. It explores the difficulties faced by bankers in using e-banking. Like customers, bankers too face difficulties in fully understanding and imbibing the mechanism of e-banking in their system. They admit that no proper e-banking training is provided to them; consequently, they do not know how to operate the system. This brings in frustration affecting the work, which leads to heightened stress.

**Cooper** *(1997)* reported that ease of use of innovative product or service as one of the three important characteristics for adoption from the customers’ perspective.

Similarly, **Daniel** *(1999)* expressed that another important factor affecting the acceptance and adoption of new innovation is the level of security or risk associated with it. Even in countries where Internet banking is at a developed stage, one of the most important factors slowing the progress of this new innovation is the consumers’ concern for security of financial transactions over the internet. An empirical survey of Australian consumers by **Sathye** *(1999)* confirmed this fact.

**Nancy et al.** *(2001)* have examined the case of the consumer adoption of internet financial services, which may be viewed as an innovation in service delivery. The qualitative study employed Rogers’ model of perceived innovation attributes. The perceived innovation attributes were found to be important determinants of consumers’ adoption decisions. The study argued that customers like to interact with humans rather than machines. They find more possibilities for asking questions and believe that bank clerks are less prone to errors, underlining the fact that face-to-face transactions are carried out more efficiently and courteously.

**Suganthi and Balachandran** *(2001)* investigated the various psychological and behavioral issues such as trust, security of internet transactions, reluctance to change, and preference to human interface which appear to impede the development of internet banking. Accordingly, the action taken by bankers and policy makers in appropriately addressing these critical issues
will determine the success of internet banking.

Nath *et al.* (2001) found that there is a dearth of qualified technology and business-savvy individuals to run e-commerce operations. Such paucity hinders the capability of many banks to launch web-banking, unless they decide to outsource these operations.

Liao and Cheung (2002) established that individual expectations regarding accuracy, security, transaction speed, user-friendliness, involvement of user and convenience are the most important features in the perceived usefulness of Internet-based banking.

Corporate customers see the absence of legal support as a major hurdle to internet banking adoption. Larpsiri *et al.* (2002) argued that it is not clear whether e-documents and records are acceptable as adequate evidence of transactions. They also pointed out that the jurisdiction of the courts and dispute resolution procedures in the case of using the internet for commercial purposes are of critical concerns.

Kuisma *et al.* (2007) identified the reasons for consumer resistance to internet banking by interviewing 30 Finnish bank customers using the means-end approach and the laddering method of interviewing. The findings indicate both functional and psychological barriers arising from service-, channel-, consumer- and communication-related means-end chains inhibiting internet banking adoption.

Kaleem and Ahmad (2008) collected bank employees’ perceptions regarding the potential benefits and risks associated with e-banking in Pakistan. The results suggest that bankers in Pakistan perceive electronic banking as a tool for minimizing inconvenience, reducing transaction costs and saving time. Similarly, they believe that e-banking increases the chances of government’s access to public data, increases the chances of fraud, and that there is a lack of information security. The study also analyzed bank personnel profiles in relation to their perceptions to identify different segments among the respondents.

Abukhzam and Lee (2010) investigated the key factors affecting bank staff’s attitude towards e-banking technology, a step necessary to understand what makes effective the
introduction of e-banking projects in Libya. The paper draws on existing literature on technological developments in the banking industry and the findings from semi-structured interviews with key bank staff of a leading commercial bank in Libya. A number of factors affecting the adoption of e-banking technology are identified, viz., organizational change, management support, IT knowledge and awareness, IT funds, telecommunications infrastructure, IT security, compatibility and complexity.

Geetha K.T. and Malarvizhi, this research paper investigates the factors which are affecting the acceptance of e-banking services among the customers and also indicates level of concern regarding security and privacy issues in Indian context. The finding depicts many factors like security and privacy and awareness level 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. Hence, banks should design the website to address security and trust issues. The recommendations to the banks are that they have to increase the level of trust between banks” website and customers.

Centeno (2004) argues that speed, the convenience of remote access, 7/24 availability and price incentives are the main motivation factors for the consumers to use internet banking.

Durkin, et. al. (2008) notes that the simplicity of the products offered via internet banking facilitates the adoption of internet banking by consumers.

Calisir and Gumussoy (2008) compare the consumer perception of internet banking and other banking channels and report that internet banking, ATM and phone banking substitute each other.

Maenpaa et.al. (2008) examine the consumer perceptions of internet banking in Finland and their findings indicate that familiarity has a moderating role in the perception.

Guerrero, et.al. (2007) examine the usage of internet banking by Europeans and their results indicate that ownership of diverse financial products and services, attitude towards finances and trust in the internet as a banking channel influence clients” usage of internet banking.

Polatoglu and Ekin, 2000, in their research paper stated that, Perceived risk was one of the major factors affecting consumer adoption, as well as customer satisfaction of online banking
services. Perceived risk usually arises from uncertainty. To Howcroft, et. al., (2002) the principal characteristics that inhibit online banking adoption are security and privacy.

Chung and Paynter, 2002, in their research paper stated that, Security is perhaps the most feared problem on the internet. Banks and customers take a very high risk by dealing electronically.

Howcroft et al., 2002, in research paper stated that Today's consumers are increasingly more concerned about security and privacy issues.

Sohail and Shaikh, 2007, in their research paper stated that, Much work has not been done in India with regard to Internet banking issues. The present study intends to know the factors affecting the acceptance of e-banking by the customers and also indicates level of concern regarding security and privacy issues in Indian context.

Sayar and Wolfe, 2007, in their research paper stated that, A majority of studies highlight the fact that “security” is the biggest single concern for customers when faced with the decision to use internet banking. Security has always been an issue, but its scope has changed from mere doubts about the privacy of personal information to worries of financial loss.

Surekha Invalli, Raghurama A and Chandramma M, in their research paper the study was to develop an understanding of adoption of e-banking services among the consumers in urban and semi-urban regions. The analyses revealed the influence of demographic variables, experience with computer technologies and medium of information as predictors of channel adoption. Depending upon banking behavior, four segments of consumers were identified with the help of factor analysis. Logistic regression was used to analyze the significance of different levels of socio-techno-demographic variables and behavioral factors on the propensity to adopt ATM and Internet banking at an individual level. The findings of this study support the influence of technological orientation and education on the adoption of e-banking channels. Overall, ATM was highly adopted by young to middle-aged, educated, and moderate to highly affluent category customers with technical aptitude. These categories of customers also visit branches, interact with bank staff and tend to be loyal. The odds of more frequent ATM/card usage versus less frequent usage increases with education, whereas the usage need not increase with increasing
income. Age was significantly associated, but not at levels above 60; it can be inferred that retired people prefer to visit branch. Net banking appeals to those customers who are highly-oriented towards usage of computer and use Internet at workplace. In this case, the dissemination of information regarding benefits of net banking usage through the branch manager, magazines and friends at workplace was found to be influencing the adoption. Bank should continue to go ahead with customer-oriented approach by setting multi-channel strategy through collaboration between different customers as in the case of online education loan and funds transfer facility through ATMs. This strategy aims at encouraging the usage of e-banking services among the parents with inputs from their young children. User-friendly ATMs with voice-based controls can be installed in semi-urban areas to inhibit the fear of ATM usage.

**Dr. Mohammad O. Al-Smadi**, the main research is to identifying the factors that affect the adoption of electronic banking services among the banking customers. This would deepen the knowledge of the factors which facilitate or limit the customers' attempt to transfer to the electronic banking services in Jordan. In order to fill this important gap, a research model was developed through integrating TAM with TBP and incorporating five cultural dimensions and perceived risk to provide a comprehensive investigation. The results revealed a positive and significant impact of perceived risk on the customers' attitudes to use electronic banking services.

**Jayawardhena and Foley, (2000)**, in his research paper, Electronic banking services have benefits for both banks and customers. For banks, electronic banking is conceded a strategy weapon; help them to achieve competitive advantage and increase their market share. Furthermore, using electronic services can save the cost of resources, which are needed for traditional banking services.

**Aladwani, (2001)**, From the customers' point of view, Aladwani, (2001) found that electronic banking provide faster, easier and more reliable services to customers.

**Ayrga, (2011)**, in his research states that customers are still hesitant to use electronic banking services, because they are concerned with security issues, and they may do not have sufficient ability to deal with the applications of electronic banking.
Azouzi, 2009, Banks have used electronic channels to do banking operations with both domestic and international customers. Currently, banks are mostly using electronic channels to receive instructions and deliver their products and services to their customers. Although the range of services provided by banks over the electronic channel vary widely in content, this form of banking is generally referred to as electronic banking.

Abid et al., 2006, The definition provided by Abid et al., 2006 “Any use of information and communication technology and electronic means by a bank to conduct transactions and have interaction with the stakeholders”

Woodall (2003), suggested the ways a country can adopt e-readiness. These factors are interrelated with country social, economical, political profile and may vary in size and quality depending upon digital facilities and infrastructure available for Information Communication Technology (ICT). He recommended that policy maker have to make environment feasible for ICT and digital services and create awareness among society about associated profit which individuals and business organization can get by linking commerce and societies with these technologies.

Porter (2005), according to him, country e-readiness is measure of facilities and digital connection which counties must have to adopt electronic services. Countries have to adopt these facilities as it an integral contributor for economical development of country

Nouman Anwar Dar, in his paper In Pakistan consumers are aware of e-banking products and services. But there is room to make more awareness to consumer in order to full make of adoption of e-banking in Pakistan, whereas few consumers are actually using the e-banking products and services.

Kumbhar Vijay M., in his research paper evaluates major factors (i.e. service quality, brand perception and perceived value) affecting on customers’ satisfaction in e-banking service settings. It also evaluates influence of service quality on brand perception, perceived value and satisfaction in e-banking. Required data was collected through customers’ survey. A result
indicates that, Perceived Value, Brand Perception, Cost Effectiveness, Easy to Use, Convenience, Problem Handling, Security/Assurance and Responsiveness are important factors in customers satisfaction in e-banking it explains 48.30 per cent of variance. Contact Facilities, System Availability, Fulfillment, Efficiency and Compensation are comparatively less important because these dimensions explain 21.70 per cent of variance in customers’ satisfaction. Security/Assurance, Responsiveness, Easy to Use, Cost Effectiveness and Compensation are predictors of brand perception in e-banking and Fulfillment, Efficiency, Security/Assurance, Responsiveness, Convenience, Cost Effectiveness, Problem Handling and Compensation are predictors of perceived value in e-banking. Therefore, banker and e-banking service designers should think over these dimensions and make possible changes in the e-banking services according to the customers’ expectations and need of the time. It will be helps to enhance service quality of e-banking and increase the level of customers’ satisfaction in e-banking.

**Tater Bindiya, Tanwar Manish, Murari Krishna (2011)**, in their research paper, It is reflected from the survey 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. Kruskal Wallis test applied to the data collected ensures that customer’s usage of different banking services is same for all the banks. From these, 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 relation between benefits of banking services and increasing banking technology adoption. Customer’s unwillingness to use e-channel for commercial purpose decreases banking technology adoption.

**Islam, Sheel and Biswas (2007)** investigate the satisfaction levels of HSBC ATM cardholders (both staff and non-staff) with respect to various aspects (for instance, promptness of card delivery, the performance of HSBC ATM, and the service quality of ATM personnel) of using HSBC ATM and their opinions on various other related issues such as positive and inconvenient features of HSBC ATM, recommendation to improve the service quality. The findings provide significant results related to use and worth of holding the ATM. Further, the findings helped the ATM section to identify their positive and negative features and the customer recommendation.
Wan et al. (2005) study the customers’ adoption of banking channels in Hong Kong. They covered four major banking channels namely ATM, Branch Banking, Telephone Banking and Internet Banking. The study segmented the customers on demographic variables and psychological beliefs about the positive attributes processed by the channels. The psychological factors were ease of use, transaction security, transaction accuracy, speediness, convenience, time utility, provision of different personal services, social desirability, usefulness, economic benefits, and user involvement.

Roboff and Charles (1998) found that people have a weak understanding of online banking security risks although they are aware of the risks. Furthermore, they found that consumers often trust that their bank is more concerned about privacy issues and will protect them. Finally, they argue that although consumers' confidence in their bank is strong, their confidence in technology is weak.

Dr. Al-Smadi Mohammad O, the study aims to identify and understand factors that affect bank customers' use of electronic banking services. Also this study integrates technology acceptance model (TAM) with the theory of planned behavior model (TPB) and incorporates five cultural dimensions and perceived risk to propose a theoretical model. The main findings of the study are: uncertainty avoidance has a positive and significant impact on perceived ease of use and perceived usefulness. Perceived risk has the stronger impact on customers' attitude, which in turn influences customers' intention to use electronic banking services.

Al-Smadi and Al-Wabel, 2011, the research paper states that, for over a decade, banks have been affected by changes associated with globalization and financial liberalization. Reacting to these changes, banks expand the choice of services offered to the customers and increase their reliance on technology.

Shilpan Vyas, this research paper introduces to e-banking, giving the meaning, functions, types, advantages and limitations of e-banking. It will also show the impact of e-banking on traditional services the result concludes saying that E-banking is a borderless entity permitting anytime, anywhere and anyhow banking. This facilitates us with all the functions and many advantages as compared to traditional banking services.
Olga Luštšik (2004), in this article the author explores the implementation techniques of activity-Based Costing (ABC) in the banking sector on the example of an Estonian bank in order to analyze the cost structure for traditional and electronic channel transactions. The article shows how it is possible to implement ABC in banking and proves empirically that electronic channels help reduce the costs of both banks and their clients.

Gbadeyan R. A. and Akinyosoye O. O. – GBONDA (2011), This paper therefore, examines, if customers’ choice of banks is influenced by the quality of e–banking services and/or products provided. Other specific objectives are to determine if customers’ long term relationship is influenced by the bank’s service offerings; and finally to examine the effect of education on customers’ adoption of e–banking. The paper recommends various measures should be put in place to ensure more security such as installation of encrypted software, verification system of customer’s identification cards, frequent change of password, examining test questions and using mixed password such as the use of alphanumeric amongst others. The paper concludes that e – banking has become important phenomenon in the banking industry and it will continue as more it progress and innovations are made in information technology.

Gonzalez et al, 2008; Singhal and Padhmanbhan, 2008; Brodie et al, 2007; Williamson, 2006; Beer, 2006; Cooper, 1997; IAMAI’s, 2006 and Joseph et al, 1999. The use of e–banking has brought many benefits amongst which include: there are no barrier limitations; it is convenient; services are offered at minimal cost; it has transformed traditional practices in banking; the only way to stay connected to the customers at any place and any time is through internet applications; it results in high performance in the banking industry through faster delivery of information from the customer and service provider; customers prefer the use of e–banking because it saves time; it makes possible the use of innovative product or service at a low transaction fees and it encourages queue management which is one of the important dimensions of e–banking service.
Singhal and Padhmanbhan, 2008; Harris and Spencer, 2002 there are certain issues raised on e–banking that are considered as major problems of Internet banking amongst which include: the case of Internet criminals and fraudsters attempt to steal customer information through various methods such as phishing and pharming, in short, there is increased concern about privacy and security of customers’ information as a result of the fragility of information collected and held electronically and transferred via computer – mediated communications.

Other problems are: fund transfers make it very easy for criminals to hide their transactions; there is inaccessibility to e–banking due to poor internet penetration, customer inflexibility to new technology, low educational level, poor computer literacy and constructive use of Internet services; language, cultural and logistical barriers; different legislation and information overload to customers (Williamson, 2006; Singhal and Padhmanbhan, 2008; Masocha et al, 2011; Harris and Spencer, 2002). As a result of the aforementioned problems, online banking services have thus become a crucial concern of financial institutions during this era of sophisticated technological breakthrough (Williamson, 2006). The fact therefore remain that the various electronic banking services and products have no doubt exposed customers to new ways of convenience rather than the conventional banking.

Internet banking, however, is now used as the term for new age banking system (Singhal and Padhmanbhan, 2008). Internet banking is defined as the use of the Internet to deliver banking activities such as funds transfer, paying bills, viewing current and savings account balance, paying mortgages and purchasing financial instruments and certificates of deposits (Singhal and Padhmanbhan, 2008; Ahasanul et al, 2009).

Internet banking is also called Online banking, e–payment and e–banking (Ozuru et al, 2010; Singhal and Padhmanbhan, 2008; Beer, 2006; Jun and Cai, 2001; IAMAI, 2006). E–payment is described as a means whereby banking businesses are transacted through automated processes and electronic devices such as personal computers, telephones, and fax machines, Internet card payments and other electronic channels (Turban et al, 2006; Ozuru et al, 2010). The electronic communications used in Internet banking includes: Internet, e–mail, e–books, data base and mobile phones (Chaffey et al, 2006). Cell phone banking apart from Internet banking is considered the way of the future (Fisher – French, 2007; Masocha et al, 2011).