

**INTERNET BANKING: HYDERABAD SCENARIO  
A BANKING AND NON-BANKING GROUP  
PERSPECTIVE**

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**Research Report submitted in partial fulfillment of the requirement for the  
Masters of Business Administration  
Universiti Sains Malaysia  
2009**

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# ACKNOWLEDGEMENT

The writing of this management research project was a wonderful experience and it made me learn many new things, which are very useful both at academic and professional levels. My hearty gratitude to God almighty for being standing by me and helping me all the time.

I would like to express my sincere gratitude to my supervisor Dr. Sofri Yahya, for his valued supervision. Dr. Sofri Yahya was always helpful irrespective of professional or personal matters. A great personality who never thinks twice for helping people. I am very honored to be his student and being having him as my supervisor. Secondly my sincere thanks to Co-supervisor Dr. Harashid for his guidance and inputs, which gave me a proper way of carrying out research. His inputs and thoughts helped me in having more clarity on the subject.

I would also like to thank Assoc. Prof. K. Jeyaraman and Dr. Azlan Amran for their help, suggestions and guidance without whom I would have missed lots of valuable information. I thank to all the lecturers at GSB for their efforts in helping students at every stage of their course. I would also like to thank the administrative staff at GSB Salma, Maziah and Ahmad Shah for their helping hand throughout my course. Thanks to Malaysia for giving me the opportunity to come here and study.

Last but not least, I would like to thanks my family and friends(both from India and Malaysia) who helped me and encouraged me at every stage of life. It is their belief in me which made me achieve many goals of life.

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## ABSTRAK

Salah satu bentuk perbankan yang baru pada masa kini ialah e-perbankan atau perbankan internet. Teknologi perbankan ini menawarkan pelbagai kaedah pengurusan dan perkhidmatan bank yang mudah dan ekonomikal kepada pengguna. Tujuan kajian ini, "Internet Banking: Hyderabad Scenario - A Banking and Non-Banking Group Perspective," adalah untuk mengkaji faktor di sebalik penerimaan teknologi perbankan internet di kalangan rakyat India. Tidak banyak kajian yang pernah dijalankan dalam bidang ini, di mana penganalisan data dilakukan untuk mengenalpasti perbezaan yang wujud dalam persepsi perbankan internet di antara kumpulan perbankan dan kumpulan kerja bukan-perbankan. Thesis ini bertujuan untuk menjalankan tinjauan kajian dengan pertolongan kaji selidik yang melibatkan lebih kurang 200 penduduk dari Hyderabad, India. Formula teori rangkakerja untuk tujuan ini terdiri daripada sektor Pendidikan, Literasi dalam Perbankan dan Komputer, Kemudahan Perbankan, Faktor Kos Teknologi, Keselamatan dan Kemudahan Internet. Keperluan secara bebas yang tidak bergantung kepada teknologi perbankan internet dan penerimaan kemudahan yang bergantung terus kepada teknologi perbankan maklumat. Analisis Data telah dijalankan dengan soalan dan model kaji selidik. Keputusan daripada kajian ini menunjukkan bahawa Kemudahan Perbankan termasuk keselamatan memainkan peranan utama dalam menentukan sama ada pelanggan akan memilih perbankan internet atau perbankan tradisional. Kedua-dua kumpulan perbankan dan bukan perbankan ini menunjukkan perbezaan pendapat dalam konsep perbankan internet. Salah satu analisis kajian yang dijalankan menunjukkan bahawa kos teknologi tidak memainkan peranan utama sebagai penerima, di mana terdapat sedikit pertentangan berbanding kaji selidik yang terdahulu.

*Kata kunci : Perbankan Internet, Keselamatan, e-dagang, Risiko dan Tindakbalas, Kemudahan Internet dan Kemudahan Perbankan.*



## ABSTRACT

One of the forms of banking is e-banking or internet banking. This technology offers a non-traditional way through which banking products and services can be delivered to customers more conveniently and economically. The aim of this thesis “Internet Banking: Hyderabad Scenario - A Banking and Non-Banking Group Perspective” is to look in to the factors that are effecting the acceptance in the Indian market. This is among the very few researches which will try to analyze the data and find out the differences exists in the perception of internet banking between the banking and non-banking working groups. The thesis aims at doing this research with the help of a survey, which will involve approximately 200 people from Hyderabad, India. The theoretical framework was formulated for this purpose includes, Education, Banking and Computer Literacy, Banking facilities, Cost factor of technology, Security and Internet facilities in the Independent variables and the Acceptance of the Internet banking technology in the Dependent variable. Data Analysis was done in accordance with the research questions and research model. The findings reveal that Banking Facilities inclusive of security plays a major role and determines whether customers would like to go for internet banking or traditional banking. Also both the groups differ in their view points when comes to the concept of internet banking. One of the analysis showed by the research was that cost of technology does not play a major role in acceptance, which was quiet opposite in the previous researches.

***Keywords: Internet Banking, Security, e-commerce, Risk and Response, Internet Facilities and Banking Facilities***

## **Defining of Variables**

The variables have been defined as below to support the analysis of this study

**Internet Facilities:** The availability of the internet at all the times to do an activity and also the quality of the service. (Husain, 1998).

**Education:** In this research study education has been defined as, any individual who has completed the higher secondary school. Which is the 10<sup>th</sup> standard or the SSC (Secondary School Certificate). And is the study can be put to practical use when comes to this topic. (Deshmukh, 1999).

**Banking and Computer Literacy:** Banking Literacy in this context is the basic knowledge of banking which includes transferring money, online transactions, and also to some extent the online trading. Computer Literacy is the knowledge and ability to use the computers and technology efficiently. (Agarwal & Karahanna, 2000).

**Cost Factor:** Cost refers to the ability and the willingness to purchase or use a technology. (Husain, 1998).

**Security:** Security is the extent to which an individual believes that internet banking is secure for transmitting secure information. (Crosby, 1990).

**Banking Facilities:** The importance of the support and services provided by the banks that customers have come to expect. (Diniz, 1998; Uppal, 2006).

**Acceptance:** Technology Acceptance Model assumes that it's the actual behavior which is considered as acceptance of online banking. It can be evaluated by the usefulness and ease of use to which reveals the actual behavior. Whereas ease of use is the degree to which a person believes that using a particular system would free from effort and usefulness is the belief that using a system would enhance the performance. (Venkatesh, 2000); Davis, 1989).

# Chapter – 1

## INTRODUCTION

### 1.1 Introduction

Earlier in India banking was passing through crucial stages. India was facing many e-age challenges. Though being one of the fast developing countries, yet it was lacking behind in the e-world. But over the last decade India has made a tremendous improvement in this area and is now competing in the Global market.

Apart from Global competition, Inter-banking and Intra-banking race has helped a lot for the growth of IT in banking sector. Initially the concept of e-banking was only running successful in Metropolitan cities, but off late many private banks started providing these services in villages, though not fully operational still. (Pilat and Lee, 2001).

As a country we are moving at an exceptionally rapid pace, fuelled not only by enhanced mathematical applications produced by our ever rising computing capabilities, but also by our ever expanding telecommunications capabilities and the substantial broadening of our markets.

Various e-channels like, ATMs, Credit cards, Tele-banking, Mobile-banking, Online banking, online trading, financial products, online-shopping etc are not only changing the face of Indian banks, but also contributing economic value and accelerating the GDP(Gross Domestic Product). (Sullivan and Wang, 2005).

## **Definition**

“Internet banking (e-banking) is defined to include the provision of retail and small value banking products and services through electronic channels as well as large value electronic payments and other wholesale banking services delivered electronically”. (Yibin, 2003).

In short the above definition says that internet banking is a non-traditional banking technology, wherein transaction big or small, irrespective of location or any other aspects is being carried out through internet or via electronic means, without the person being physically present at the bank.

### **1.2 India @ E-banking**

Many banks are in the race of e-banking like ICICI, HDFC, Citibank, Standard Chartered, Indus Ind Bank, PNB etc with varied services. ICICI started the online banking way back in 1996, after which the others joined the group of internet banking by the end of 2000.

The Internet and Mobile Association of India (IAMAI) found that about 23% of the online users prefer Internet banking as the banking channel in India, second to ATM which is preferred by 53%. Out of 6365 Internet users sampled, 35% use online banking channels in India. (IAMAI Report, 2006).

But the PSU (Public Sector Units) are still in the olden era of banking. Banks like SBH, Andhra Bank, Canara Bank, Syndicate bank, and Allahabad Bank and others are still to adopt fully the new internet banking technology. Though these banks are doing well with the basic e-banking process, yet the PSU banks needs to catch up a lot to be par with the today's technology. (De and Padmanabhan, 2002; Geetika, Tanuj and Ashwani, 2008).

In the study by IAMAI, it was found that people are still not adapting to financial transactions online, because of the security and facilities concerns (45%), preference for face-face transactions (39%), lack of knowledge (22%), and lack of user friendliness (10%).(IAMAI Report, 2006).

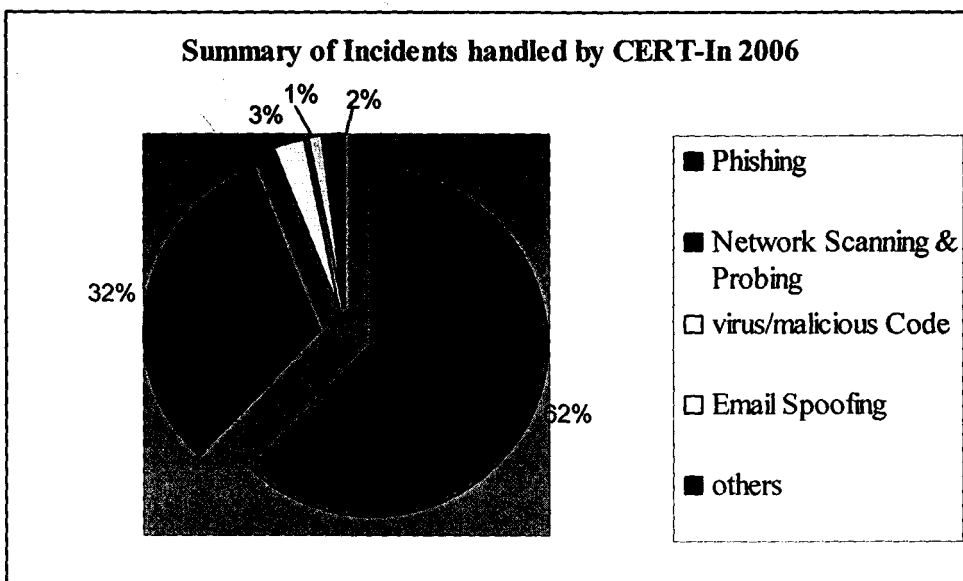
Approximately 12% of the 38.5 million internet users in India are using online banking and it is estimated to go to 16 million by 2007-2008, according to the IAMAI. (<http://www.financialexpress.com/news/About-12%25-netizens-use-online-banking/42998/>)

According to IAMAI there are about 200 banks in India and only very few offer e-banking services. Private Banks like ICICI, HDFC are among the top when comes to internet banking. Lack of knowledge and Security issues are the main reasons obstructing the growth.

Indian internet banking is still on the growing phase and needs to achieve a lot. Actually only 50 banks in India were offering Internet banking services. These services are the most basic and common services offered such as, maintaining a web portal of the bank, information on its products etc. In fact only 8% of the banks are

offering the advanced internet services such as Fund transfer, online trading, Cash management, investment opportunities and others. When compared these operations, foreign banks are much ahead and strong in terms of internet banking. (<http://www.banknetindia.com/banking/ibkg.htm>).

According to the CERT-In (Indian Computer Emergency Response Team) report in 2006 the maximum phishing attacks were against E-commerce sector. It is accounting for 76% and the rest of 24% against the Financial Services.



*Figure 1.1 Security Issues handled by CERT-In 2006*

The above data shows the number of incidents handled by CERT-In in 2006, Phishing being dominated by other types of issues.

Apart from this the acceptance is being delayed by people due to the facilities provided by these banks. The facilities which are inclusive of the security plays a major role in adopting to internet banking. IMRB includes various aspects in terms of

facilities apart from security, like the bank location, the provision of online banking facilities in rural areas, risk issues, user friendliness of websites and others. (IMRB 2006/07).

### **1.3 Problem Statement**

E-banking has changed the traditional patterns of banking into modern in which customers need not physically visit the bank. These changes in technology, competition and lifestyles all have an impact on how banks operate today. (Credo, 2001:41). Every bank today realizes that it must provide some kind or type of e-banking in order to survive in the market.

Because there is no face to face interaction with customers and other institutions, banks dealing with e-banking must provide their customers with a virtual service which is as good as non-virtual service and also should try to counter strike or balance the loss of physical interaction.

One of the main reasons curbing the use of internet banking is the lack of proper internet facilities and also the cost involved behind the use part from facilities. Also most of the banks do not provide a user friendly web page which becomes difficult for people who are naive in using internet banking.

Most of the non-banking people prefer branch banking rather than internet banking, and this is because of lack of proper banking knowledge and also lack of computer skills. These two things are hindering or obstructing the use on banking via internet.



Banks need to create trust among the vast population and it becomes very difficult to cater all the needs.

## **GAP Analysis**

Though TAM is a widely accepted model across the globe, but the research by using the TAM was immense and many studies were done in this aspect. TAM was concentrating on the usefulness and perceived use in terms of behavior and attitude, social norms. But the context and the way things used to operate in India has been changed immensely and this thesis tries to focus on the key areas by excluding the social norms and other aspects.

### **1.4 Research Objectives**

- a) What is the perception of internet banking customers regarding the e-banking services?
- b) What is the understanding on the behavior of people from both the banking and non-banking sector groups in terms of internet banking?
- c) Do background education and banking literacy helps in the use new technologies like that of Internet Banking?

## **1.5 Research Questions**

Though the concept of e-banking is very vast, yet many researchers tried to answer and solve the problems relating to it. This thesis currently tries to answer the below questions

- 1) What are the key determinants of acceptance of Internet Banking in Indian Scenario?
- 2) Does general Banking Literacy plays a major role than a person with Banking education background in acceptance of IB?
- 3) Do people from Banking and Non-Banking view internet banking as same, or do they differ in their view points?
- 4) Does people give preference to the internet banking as the prominent than compared to branch banking, in terms of method of banking?

## **1.6 Significance of the Study**

The present study tries to understand the key determinants of the user acceptance of internet banking. Understanding the determinants for the acceptance of internet banking will provide an added leverage to enhance the acceptance of internet banking in the future, also helps in more usage from the existing users.

This study focuses on both the groups i.e. banking and non-banking industry and intends to find out the differences and similarities between them, in order to get a more clear picture of the determinants affecting the acceptance of internet banking.

Many people ignored this aspect of having banking and non-banking group. It gives an opportunity to banks on what variables or determinants to concentrate for those who are from non-banking.

The results of this study can be used by banks as a benchmark to improve the internet banking system or to utilize the information to find ways to attract new customers for internet banking by simultaneously increasing the usage for existing customers. It gives them an idea on the key focus areas, which if worked will give the maximum business to the banks.

### **1.7 Outline of the Thesis**

Chapter One discusses in detail on the aspect of Internet banking and its role in the economy. It attempts to explain in detail about the services, types of e-banking and the technological aspects of it. The main theme discussed in this chapter is that of the issues or obstructions hampering the growth of the Internet Banking in India. The chapter introduces to the Problem Statement, Research Objectives, Research Questions and the Significance of the study.

Chapter Two deal with the literature review of e-banking in relations to each of the variables under study. It brings out the research done in respect to the issues which are Technology, Education, Service, Initiative issues in this regard. This chapter tries to provide empirical evidence in regards to the relationship between the variables (Independent variable, Dependent variable, Intervening or Moderating Variables,

Mediating Variables). The theoretical frame work also unites or identifies the gaps in the previous literature. The development of Hypotheses is done at this stage.

Chapter Three deals with Research Methodology. This chapter presents the methodology and questionnaire development. The data (Primary and Secondary) and methods used for collecting it. The sampling frame and the procedures adapted will be discussed in detail. The limitations of data are clearly identified. Also it explains the findings and the analysis of the data collected followed by the summary of result.

Chapter Four discusses the profile of the respondents. This tries to understand the validity and the reliability of the outcome of the questionnaire. It attempts to test or answer the entire hypotheses discussed in the chapter two. Finally there will be a review of the objectives of the study and the decision to accept or reject the outcome.

Chapter Five is all about the Discussions and Conclusions, and summarization of the entire study. This section interprets the findings and attempts to answer the Research Questions of Chapter One. It highlights the limitations of the study and the recommendations or suggestions for the future researchers.

Chapter Five will be followed by the Key terminologies used in the dissertation, references used in the study and the appendix.

1) Introduction

2) Literature Review

3) Research Methodology

4) Results

5) Discussion and Conclusion

References

Appendix

# Chapter – 2

## LITERATURE REVIEW

### 2.1 Introduction

The various factors which has a direct relationship with the prospects of e-banking in India and can be summarized as Education, Banking facilities, Cost effectiveness of computers, Security reasons, Internet facilities, Banking and Computer literacy and Acceptance. These are some of the various factors which have an impact over the internet banking function. Many researchers have done studies into the various aspects of the above factors. These researches helped to understand the environment of the banking as a whole and allowed to take same initiatives and steps to boost the economy with the banking usage both traditional and modern banking.

Though there is a good amount of research done in the aspects of Internet usage, Education and Security reasons, yet this was not sufficient as many researches excluded or did not consider the factors relating to Willingness, Human Capital (Cost effectiveness) and knowledge specific to banking and not as a whole education.

According to Singh and Malhotra (2004), most of the e-services provided by banks in India are customer correspondence and balance enquiry, whereas in Oman many customers' indicated that they use the e-facilities to avail the statement enquires and other bills and utilities payments. (Sabbagh and Molla 2004).

Research on the adoption of internet banking has also been on the increase in the past few years. Some amount of this research is focused on the process by which adoption occurs or the aspect of the diffusion. (Brown, 1981; Roger, 1995). Jun and Cai (2001) looked into the key quality attributes of the internet banking products and services by analyzing the internet banking customers' comments on their banking experiences.

In a study by Liao et al (1999), the theory of planned behaviour (Benham and Raymond, 1996) was applied to study the adoption of virtual banking. This theory portrays that behaviour is determined by intention to perform the behaviour and in turn intention is determined by three factors namely attitude, subjective norms and perceived behavioural control.

Heggade (2000) studied bank customer relationship in India. After his analysis of 11 different classes of bank customers including businessmen, salaried, advocates, he found out that there is low correlation among different occupations and satisfaction from services in PSBs (Public Sector Banks).

According to the research done by Sharma and Singh (1993) on quality of customer services in Standard Chartered bank (SCB) and Punjab National Bank (PNB) with a sample of 40 respondents revealed that the services of PNB are very poor in comparison to SCB. The limitations of this study are that it is related to only two banks.

Zeithaml and Gilly (1987), found that there was a lack of response from consumers for not adopting the technological innovations. The main reason according to them was consumers do not show much interest if the innovations are new and also they don't trust the technology. One research also states that larger financial institutions are able to invest more in internet banking and provide customer tailored services than compared to the smaller banks. (Furst, Lang and Nolle, 2002).

A research says that people with a PC (Personal Computer) at home are more likely to involve or indulge in internet banking than people without a PC. Also these people are the optimum users of the bank's advertisements. (Irwin and Klenow, 1994). (Foster and Rosenzweig, 1995).

A team of researchers claims that even though if the banks provide the latest technologies and technology based services, consumers will not accept such technology until and unless they perceive it to be accessible to them. (Lavidge and Steiner, 1961). Kalish (1985) suggests that awareness dissemination precedes the actual product adoption.

According to a study security concerns and lack of awareness are the two major reasons for the failure of adoption of internet banking. (Sathye, 1999). Also research has been done in regards to the satisfaction and dissatisfaction with the information provided online by the retail banks. (Waite and Harrison, 2002). Consumers are more keen on the branch banking and would like to avoid for their regular transactions in relation to current account, credit aspects and other savings. Moreover the older



population is less keen on the internet banking and do not want to change from their traditional banking concept. (Howcroft et al, 2002).

The use of internet technology has a direct relationship with the profitability of the bank. The banks who invest in the e-banking tend to raise their profit margins by reducing the costs and increasing the non-interest incomes, which in turn will increase the ROA (Return on Assets) and ROE (Return on Equity). (Sinkney, 1998).

Many of the banks ignored or did not adapt to the internet banking techniques in the initially because they did not see the underlying benefits of it. The average internet banking transaction costs the institution only one twentieth of a teller transaction. (Polatoglu & Kin, 2001).

According to a research on the determinants of the adoption of the internet banking technology and the relationship between internet banking and the conventional banking technology in the Italian context revealed that, many banks seems to perceive internet banking as a substitute to the traditional banking. Also the study revealed that banks which try to provide the innovative services are more probable to use or adapt to the innovative technology than the traditional banks. (Corrocher, 2002).

Among many issues and concerns, the security concern plays a vital role. Customer protection is the major technical issue related to online banking. Customer protection relates to unfair trade practices, unauthorized access, and hacking or phishing activities. This concern is very vital for the gaining of customer confidence, as there is no face to face interaction with the customers. (Zugelder, 2000).

Customers' confidence on internet banking depends on how banks deal with the problematic transactions or false transactions and the security outcomes that may arise due to it. One of the reasons for the failure of internet in retail banking is largely attributable to the lack of customers trust in the electronic banking. (Stewart, 1999).

Some researches reveal that an average internet banking customer is more profitable, maintains larger balances, uses most of the banking services and products provided by the bank and also are very keen on adapting to new technologies and services than compared to that of traditional banking customers. (Hitt and Frei, 2002).

The cost of an online banking transaction is comparatively less than compared to branch banking. The concept of online banking strengthens the relationship between the bank and the customer as the service is made available to the customer at home or office, or in the mobile phones. This type of services creates loyalty. And also internet banking is a must for all the banks in order to keep pace with the fast change in the services and innovative products provided by financial institutions. (Robinson, 2000).

Internet banking changes the responses of the customers' demands. It has the advantage of providing the services to its customers, without being approaching the branch bank. Thus by this way it eliminates the waste of time and money, provides convenience and accessibility and will have a positive impact on customer satisfaction. In this way the customers' can claim more privacy while dealing with their transactions or dealing with the branch personnel. (Brogdon, 1999).

According to a survey by Gervy and Lin (2000), security is utmost important concern of the internet users. Most of the internet users are aware that cookies are placed in their systems without their permission and also that their activities are tracked on the internet. The survey results also revealed that many a users are afraid to give their financial data on the internet and were not so keen on online banking activities.

Customers with greater awareness on the concept of internet are more likely to use internet banking than those who are novice in this regard. Awareness is the key factor indicating the customer's confidence. (Furnell and Karweni, 1999).

The empirical data available by a research studied that, the negative approach or attitude of customers' toward the security of internet banking still remains one of the most significant barriers to its adoption. The research states that customers are afraid that their personal financial information will be revealed to third parties while doing the transactions via internet. (Thorton Consulting, 1996; Bestavros, 2000).

According to a study on electronic banking in Greece on the adoption of internet banking, the research findings suggested that product-specific attributes like price and speed are treated or conceived differently by different customers. And the major role played in this aspect was by the Price factor. Apart from this speed and the bank's reputation also plays an important in the adoption issues. (Athanassopoulos and Labrousos, 1999).

Some interesting facts provided by Keltner (2000) after an interview with Gordon Kent, Program Manager for Citibank's Business Access electronic banking product,

reveals that banks first needs to change the behaviour and attitude of their sales representatives. Internal education in banks plays an important role in this aspect.

## **2.2 Relationship of the Variables**

### **2.2.1 Security and IB (Internet Banking) Relationship**

Security is important for performing repeat transactions and often attracts a good number of potential customers through various forms of communication means. (Crosby, 1990).

Further it has been stated in numerous studies that the greatest challenge to the acceptance of the internet banking technology will be the winning of the customers trust in the areas of Security and Confidentiality. (Furnell and Karweni, 1999). Ensuring security and gaining the trust are the basic prerequisites before going on board with the internet banking technology, which involves activities with sensitive information. (Adam, 1999).

Security is one of the most important challenges, because customers fear higher risk in using the web for financial transactions. (Cunningham, 2003).

### **2.2.2 Internet Facilities and IB Relationship**

The value added for clients is based on the increased availability of the internet opportunities, as it will give an initiative, and an opportunity to use the facility. If this facility is not there, then banks will be facing the problem of the gaining potential customers interest in terms of IB. (Storbacka, 1994).

Quality of the internet connection has a positive impact on customer's perception about the adoption of the internet banking. People don't want any problem with the internet while doing online transactions as any problem will leave in dilemma as to the transactions was completed or not. Such a poor facility can relate negatively with the acceptance of e-banking. (Pikkarainen *et al* 2004).

Many of the rural areas in India lack the opportunity to gain the advantages from the services provided by internet, because of lack of internet kiosks and facilities. These people tend to be happy with the traditional banking and have a negative approach on the internet banking. (Hasanbanu, 2004).

### **2.2.3 Cost and IB Relationship**

Rapid advances in the technology in terms of security and other features coupled with the decreased or low cost of the technology implementation and usage has the immediate effect on the adoption on the online banking. Especially low or medium costs of technology usage have a great affect on the usage of IB in the developing nations. (Meuter, 2000).

Because of the cost advantage involved in the e-banking by the banks, they can charge low fees or even wipe out the fees involved behind the services provided by the banks. This encourages customers to go ahead with more transactions and different services involved in the internet banking. This gives a scope for gaining more customer acceptance for the use of e-services provided by the banks. (Bughin, 2003).

Many people tend to go to the branch and do their transactions, instead of doing the same on internet in order to avoid the fee involved in the internet. Because of this they are not willing to accept or adopt to the internet banking technology. (Geetika, 2008).

Not only the cost involved in using a technology is negatively associated with the acceptance of internet banking, but also the cost to purchase such a technology demotivates an individual to go for Internet banking and not gaining the advantages of it. (Husain, 1998).

#### **2.2.4 Banking Facilities and IB Relationship**

According to Meuter (2000), the use of the technology has an extensive appeal to the service provider in that it can standardize service delivery, reduce labour costs and expand the options for delivery. This will increase the consumer enthusiasm to have a look at the technology usage and also for getting repeat customers.

Internet banking is helpful in expanding the product offerings. Through internet banking, banks can provide as variety of services, which gives a positive notation for the acceptance of the internet banking by the non-users and also to get more business from the existing customers. (Diniz, 1998).

According to Seitz (1998), one of the services which results in the neglect or non-acceptance of the internet banking is, the facility provided by the banks on their web portal. Many people do not intend to accept the internet banking as they do not find

the multi-language support offered by most of the banks. It has the negative impact on the acceptance and this simple service can get many e-customers to the bank.

Banks should have good internal resources, highly qualified technical staff and mastery of the technology in order to have the ability to convince the adoption of banking through as a medium for the customers. If this facility is not there , then it is very difficult to gain the confidence of customers in regards to the acceptance of internet banking technology. (Dixon and Nixon, 2000).

The level of adoption of e-banking in a bank is higher if the bank continuously adopts different technological innovations. With respect to acceptance of internet banking, technological progress by banks and the level of automated services influence positively the behaviour regarding e-banking innovations. (Miller, 1985).

### **2.2.5 Banking & Computer Literacy and IB Relationship**

Awareness of the services and the usage of the services provided by banks has a positive impact on the adoption of the IB technology. Most of the people are not aware of the many services and do not have basic banking knowledge and hence do not show interest in using the e-banking. (Pikkarainen *et al* 2004).

According to Agarwal and Karahanna (2000), the higher the computer self-efficacy the higher will be the chances of acceptance of the e-banking technology. This is one of the primary reasons for many people not going for the e-banking.

Awareness of the information and the knowledge about the technology we use will give the opportunity to accept and use any technology. Absence of this will lead to lethargic towards the technology. Hence people who are well versed with computers and know about the banking tend to use more of internet banking than those who are not. Self efficacy refers to the level of confidence a person has in oneself. Lack of self efficacy can acts as an negative attribute towards the e-banking methodology. (Husain, 1998).

E-banking negatively correlates with the complexity of technology usage in terms of adoption or acceptance of such a technology. People without having insight into the computer knowledge and also banking would fail to react positively with the internet banking. These people always tend to go for the traditional banking.

#### **2.2.6 Education and IB Relationship**

Education has a positive impact on the Customer's attitude towards using of the internet banking technology. If this basic feature is not available with the individual then the e-banking ideology cannot be accepted by individuals. (Lai, 2005).

According to Deshmukh (1999), the basic education in India which includes the higher secondary school is not enough for an individual to carry on with the use of many advanced technologies like that of internet banking. There is a large amount of population which falls in this criteria and they tend to ignore the acceptance of internet banking because of lack of proper education.



The education provided by most of the universities and colleges lacks the practical approach to the learning methodology. This discourages people to accept the technologies like trading, online banking and others as they lack self-efficacy and are unwilling to adopt to this technology. (Bhatt, 1998).

### **2.3 Review of Variables specific to India**

Further in this literature, all the aspects or the variables affecting the internet banking will be reviewed. The below review of literature shows focuses on the research done in the context of India (specific to India). Though the concept of Internet Banking is vast and the amount of research done in the internet banking was very vast, yet when comes to the Indian context, the amount of research is not much. Many researchers has focused more on the traditional banking research but not the online banking. The below reviews tries to highlight some of the researches done in the relation to India.

#### **2.3.1 Review on Internet Facilities**

Husain (1988) highlighted the importance of Internet, IT more specifically in various sectors. He said in the introduction of any new technology or system, various organizational, financial and functional problems are faced. People are generally reluctant to accept new system, however lucrative it may be. Such problems related to computerization and internet applications have been critically discussed.

According to a survey by 2004 end there was only 7.1% of the population had a telephone, 2.4% with mobiles, .72% with computers and only 1.75% has an internet connection. (Vikas, 2004).

The banks are undergoing a rapid and radical transformation due to the developments in terms of IT, Telecommunications and electronic data processing. IT which is an integration of information system, communication and technology is on its high and more hi-tech banking is coming to India. (Pathrose, 2001). He said that the key to survival of banks is retention of customers' loyalty by offering them VAS (Value Added Services) according to their needs.

### **2.3.2 Review on Education**

The study of Bhatt (1998) reveals that there was an increase of 24 and 12 times in the number of higher education institutions offering both general and professional courses. There was also a 10 times increase in the universities. He says that the government spends approximately 4% of the GNP (Gross Net Profit) on education whereas the target being that of 6%. (Bhatt 1998, 2006).

As per Deshmukh's study on education it shows that only a meagre 6% of population in the age group of 17-24 were able to enroll for higher education. Though the Literacy rate was at an increase it did not affect much as the population increase was more than that of education. (Deshmukh, 1999).

Also one of the researchers found that in Indian context private higher education is non-public, it is exploitative, inferior to public higher education, limited to the elite, etc. (Glass, 2007). Also in India government schools have been found failing in a research to provide quality education to the poor population. (The Probe Team, 1999). (Dreze and Sen, 2002). (Aggarwal, 2000). (Watkins, 2000).

Many people are drop outs from their school or from their college education in India because they need to work for their living and cannot spend for the fees. Also due to the poor quality of govt. schools and high cost of private education, they tend to stop studying and forced to work for a living. (Ray, 2000).

### **2.3.3 Review on Banking Knowledge and Computer Literacy**

According to the study by Hasanbanu (2004) on customer services in rural India, he found that rural customers are not aware of the purpose for which loans are available and the process of availing the loans. Customers do not know the rules, regulation and procedures and also the bank personnel do not take much interest in education them.

One of the first experiments was done during the year 1999. The research hypothesized that “groups of children when provided appropriate resources will attain computer literacy with minimum intervention, which has a direct or indirect impact on the acceptance of internet banking technology”. (Mitra, 1999; 2000, 2001).

### **2.3.4 Review on Cost**

According to R.K Uppal (2008) customers perception on acceptance of internet banking is also depends upon on the cost involved behind using that technology. He said that many users restrict the use of IB or not go for it because of the cost factors associated with it.

Not only the acceptance of the internet banking is negatively related to the low income groups, but also it is the quality of education these groups possess. Many people in