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## ACTIVE DRIVERS OF ADOPTION OF INTERNET BANKING

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### ABSTRACT

*Application of internet by banking sector in India has changed the definition of banking completely. The management of different banks has been making concrete efforts to facilitate the acceptance of i-banking by bringing out its benefits to the customers. This paper identifies the active factors that influence customers' intention regarding use of internet banking in Himachal Pradesh. Data was collected from a sample of 120 bank customers of 40 different Public Sector bank branches through a well-structured questionnaire. The data was collected from bank customers of Himachal Pradesh by asking close-ended questions regarding their attitude towards i-banking and their future intention about its use. For analyzing and interpreting data in the present study, basic statistical tools, chi-square test (test of independence) and logistical regression analysis were used with the help of SPSS 16.0 version. Relation between socio-demographic characteristics of bank customers and intention to adopt internet banking have been examined in the present study and found a significant statistical difference in gender, residential area, type of family, education of customers and the interest to adopt i-banking. In addition to it, keeping in mind the previous studies, seven factors (i.e., perceived risk, perceived usefulness, perceived quality of service, Perceived cost, Perceived ease of use, trust and awareness) have been chosen in the present study which drive customers intention to use i-banking.*



*The effectiveness of these factors have been examined and observed that three significant factors i.e., perceived risk, perceived usefulness and perceived quality of service are the factors, which actively influence future adoption intention to adopt internet banking. Further the study exhibited that perceived usefulness and perceived quality of service positively influence the intention to adopt i-banking while perceived risk negatively affect the future adoption intention of i-banking. This model has the overall predictability of classifying 76.7 % cases correctly and exhibited that 87.2 % customers are classified for adopting i-banking service whereas 57.1 % customers for not having intention to use it in future.*

**Keywords:** *I-banking, Perceived risk, Perceived usefulness, Perceived quality of service, Perceived cost, Perceived ease of use, trust and awareness*

## 1. INTRODUCTION

Internet is the cheapest delivery channel for banking products as it allows the entity to reduce their branch networks and downsize the number of service staff. The navigability of the website is a very important part of i-banking because it can become one of the biggest competitive advantages of a financial entity (ORTEGA; MARTINEZ; HOYOS, 2007).

Banks also know that the Internet opens up new horizons for them and moves them from local to global frontiers (MAVRI; IOANNOU, 2006). The number of internet users grew by 14 percent in India in the year 2014 and it's share in the world is 8.33 percent of the total number of internet users.

This increases the possibility of success of Internet banking as the resources required to use this service is increasing in India at a good pace. Internet banking refers to systems that enable bank customers to get access to their accounts and general information on bank products and services through the use of bank's a website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (THULANI; TOFARA; LANGTON, 2009).

It is the type of services through which bank customers can request information and carry out most retail banking services such as balance reporting, inter-account transfers, bill-payment, etc., via telecommunication network without leaving their home/organization (ALADWANI, 2001; DANIEL, 1999; MOLS; BUKH; NEILSEN, 1999; SATHYE, 1999).



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It provides universal connection from any location worldwide and is universally accessible from any internet linked computer (BRADLEY; STEWART, 2003; PERUMAL; SHANMUGAN, 2004; ROTCHANAKITUMNUAI; SPEECE, 2003; THULANI; TOFARA; LANGTON, 2009).

It is expected that a large, sophisticated and highly competitive internet banking market will develop in future. Therefore it is essential to check the efficiency of already determined factors which influence the opinion of bank customers to adopt i-banking. It would help banks to make necessary changes in its policies and strategies in order to make i-banking a success.

### **1.1. Need of the study**

The increasingly competitive environment in the financial services market has resulted in pressure to develop and utilise alternative delivery channels. The most recent delivery channel to be introduced is electronic or online banking. The rapid spread of technology has made the Internet the best channel to provide banking services and products to customers. It is also essential that customers accept the innovation.

In the past, a number of researches have been conducted to determine the factors affecting adoption of i-banking. But with passage of time the effectiveness of these factors may have reduced. So it is essential to check the effectiveness of these factors so that banks make necessary changes in its policies and strategies to ensure success of i-banking.

Further the need has also been felt to study the intensity of impact made by the active factors on the intention of customers to adopt i-banking. This would help banks to formulate proper strategies and policies for making i-banking a success. This issue is important because the answer holds the clue that will help the banking industry formulate marketing strategies to promote new forms of Internet banking systems in the future (GERRAD; CUNNINGHAM; DEVLIN, 2006).

### **1.2. Objectives of the study**

Banks now consider application of internet as the part of their strategic plan. It has revolutionized the way banks operate, deliver and compete with other banks, especially because of its competitive edge over the traditional branch networks.



There is a need, therefore, to uncover the factors that actively affect customer willingness to adopt Internet banking. So, in order to study the active drivers of i-banking services in Himachal Pradesh following objectives have been framed:

- a) To study the relationship between the socio-demographic variables and the intention of customers to adopt i-banking.
- b) To study the effectiveness of the factors (extracted from the previous research works) that influences the customers intention to adopt i-banking.
- c) To study the intensity of the influence made by the active factors which affect the intention of customers to use i-banking.

## **2. REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK OF HYPOTHESES**

A well-structured literature review is characterized by a logical flow of ideas, current and relevant references with consistent, appropriate referencing style, proper flow of terminology and an unbiased and comprehensive view of the previous research on the topic. This part of the study comprises the views of other researches.

Gan, Clemes, Limsombunchai and Weng (2010) observed that 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.

Flavian, Guinaliu and Torres (2006) also found that consumer trust in a traditional bank, as well as income, age and sex are the factors that influence consumers' decision to use i-banking service with the same bank via the internet.

Azouzi Dhekra in a paper titled "The adoption of electronic banking in Tunisia": An exploratory study (2009) in the Journal of Internet banking and Commerce studied the customer behaviour regarding adoption of electronic banking.

This study showed that despite presidential incentives and in spite of being fully aware of the e-banking benefits, numerous respondents have been still using the conventional banking. The younger generation has been more computer savvy and has been willing to adopt e-banking. This study also revealed that those respondents who are literate and Information Technology –literate are more likely to adopt e-banking.



Sohail and Shanmugham (2004) wrote a research paper concerning customers' preference towards e-banking in Malaysia. They concluded that age and educational qualifications of electronic and conventional banking have no significant impact on e-banking adoption, they further argued that accessibility to the Internet, awareness of e-banking and customer resistance to change are the main factors affecting adoption of e-banking .

Hill (2004) conducted a study concerned with identifying the characteristics of online banking users. She states that it is commonly assumed that demography do influence the acceptance of electronic self-service tools, such as online banking. The results of the study have been exhibit that people who use such services are young, techno savvy and high earning. They frequently use online banking tools, and they want to conduct all transactions through online banking.

Davis (1989) and Alsajjan and Dennis (2009) perceived ease of use is the extent to which a person believes that using a particular system will be free of effort (AL-HAJRI; TATNALL, 2008; SATHYE, 1999; TAYLOR; TODD, 1995; YIU; GRANT; EDGAR, 2007) Perceived ease-of-use is a critical factor in the development and delivery of internet banking services.

Rigopoulos and Askounis (2007) perceived ease-of-use is a person's subjective perception of the effortlessness of a computer system, which affects the Perceived Usefulness thus having an indirect effect on a user's technology acceptance.

Amin (2007), Chau (2001), Lee (2009) and Rigopoulos and Askounis, (2007) stated that the easier it is for a user to interact with a system, the more likely he or she will find it useful. There is substantial empirical support for this view.

Al-maghrabi and Dennis (2010), Alsajjan and Dennis (2009) and Eriksson, Kerem and Nilsson (2005) concluded that perceived ease-of-use affects the consumers' intentions to use internet banking.

Pikkarainen, Pikkarainen, Karjaluoto and Pahnla (2004) found that Perceived ease-of-use was not positively correlated with online banking use. This indicated that Perceived ease-of-use does not statistically and significantly affect the use of online



banking. Wang, Wang, Lin and Tang (2003) found that Perceived ease-of-use had a significant positive effect on behavioural intention.

The study of Ericsson et al. (2005) confirms that the perceived usefulness is an important factor because it determines whether the perceived ease of internet bank use will lead to increased use of the internet bank. In addition the perceived usefulness of internet banking is, for banks, a key construct for promoting its use by customers.

Bradley and Stewart (2003), Mukherjee and Nath (2003), Wang, Wang, Lin and Tang (2003) stated that there are some customers who fear to make use of Internet Banking, as they are concerned with security aspects of such a system. Previous research has found that the risk of possible losses from online banking transaction is greater than in traditional environments.

Aldas-Manzano, Lassala-Navarre, Ruiz- Mafe and Sanz-Blas (2009), Gerrard and Cunningham (2003) and Polatoglu and Ekin (2001) showed that Perceived Risk is an important factor and is negatively influences online banking adoption.

Polatoglu and Ekin (2001) in their study, concluded that Perceived risk has been one of the major factors affecting consumer adoption, as well as customer satisfaction, of online banking services. Martin (1998) concluded that Security turned out to be a major obstacle for many customers who were otherwise willing to switch to the online banking world.

Kufaris and Hampton-Sosa (2004) stated that perceived security control of the website strongly influence acceptance of online banking by customers. If the customers are less concerned about unauthorised use of or illegal access to their personal and financial data by third parties, they will have greater influence on the willingness to use online banking, which in turn will lead to higher acceptance of online banking. Thus, banks should improve their web security features in order to enhance the acceptance of online banking by the customers.

Ganesan and Vivekanand (2009) pointed out that Information about financial institutions, their customers, and their transactions are extremely sensitive; thus doing business via a public network introduces new challenges for security and trustworthiness. Due to the open nature of the internet, transaction security is likely to emerge as the biggest concern among the e-bank's account holders. The rapid





growth in account hacking and online fraud are on the rise. The negative publicity damages consumers trust in the online service.

Mishra (2005) in his paper explained the advantages and the security concerns about internet banking. According to him, improved customer access, offering of more services, increased customer loyalty, attracting new customers are the primary drivers of internet banking.

Alsajjan and Dennis (2009) explored that trust has a critical influence on users' willingness to engage in online exchanges of money and sensitive personal information.

Al-maghrabi and Dennis (2010) and Gefen, Karahanna and Straub, (2003) stated trust refers to an expectation that others will not behave opportunistically. Al-Somali, Gholami and Clegg (2009) concluded that Consumers' trust in their online transactions is important and has been identified as a key to the development of the system.

Sohail and Shanmugham (2004) wrote a research paper and concluded that age and educational qualifications of electronic and conventional banking have no significant impact on e-banking adoption. They further argued that accessibility to the Internet, awareness of e-banking and customer resistance to change are the main factors affecting adoption of e-banking

Fitzgerald (2004) analyzed four different research papers to identify current and potential customers' perceptions on online banking. He concluded that there are common perceptions regarding online banking which ignore demographic, geographic or psycho-graphic characteristics. He argued that the major factors for 'non-adoption' are security concerns and lack of awareness of online banking.

Zeithaml and Bitner (1996) in their study, recommended that a customer relationship with a company was strengthened when customer made a positive assessment about the company's service quality and weakened when a customer made disappointing assessment about the company's service quality.

Gopal (1997) in his study, stated that quality of services rendered by a bank was the most important factor which can make customer shift loyalties and business to other banks.





Kandampully (2000) in his article recommended that service quality could be used as a tool for differentiating themselves with others and can provide a competitive edge. Service quality has also been crucial for developing loyal customers and is hence responsible for the success of any service organization.

Proença and Rodrigues (2011) observed that Portuguese users of self-service technology (SST) banking services are likely to be young to middle-aged individuals, with medium to high levels of education. The users of i-banking have a greater propensity to complain and are more price-sensitive than non-users of such services

Lockett and Littler (1997) believed that the decision to adopt an innovation is surrounded by uncertainty. Uncertainty does play a role in adoption decisions in the form of perceived risk. They measured perceived risk in terms of perceived risk of error and risk of security in comparison with conducting banking through bank branch. The cost of an innovation consists of three components: purchase cost, switching cost and usage cost (Gatignon and Robertson, 1989). The Perceived cost and perceived risk are negatively related to the rate of adoption.

Keeping in mind the different factors which have emerged from literature reviewed, following hypothesis have been developed in the present study and are tested in an empirical manner in order to see if these factors are effectively influencing i-banking adoption or not.

- H1: There is statistically no significant difference in Socio-demographic variables and intention of bank customers to adopt i-banking.

(Socio-demographic variables: Gender, Age, marital status, residential area, type of family, Education, Annual income)

- H2: perceived ease of use has a positive influence of i-banking adoption intention of bank customers.
- H3: perceived usefulness has a positive influence of i-banking adoption intention of bank customers.
- H4: perceived risk has a negative influence of i-banking adoption intention of bank customers.
- H5: Trust has a positive influence of i-banking adoption intention of bank customers.



- H6: Awareness has a positive influence of i-banking adoption intention of bank customers.
- H7: Perceived quality of service has a positive influence of i-banking adoption intention of bank customers.
- H8: perceived cost has a negative influence of i-banking adoption intention of bank customers.

### 3. RESEACRH METHODOLOGY

In this study, confirmatory research design and a quantitative research approach was adopted. Initially data was collected at pilot level to check the designed questionnaire's ability to attain the objectives of the study. Later some changes were made in questionnaire so that objective of the study is achieved. The questionnaire has two sections.

First section consist of questions related to characteristics of respondents whereas second section consist of questions exploring the attitude of consumers towards online banking. A number of close ended questions were incorporated in questionnaire. In order to make the sample representative of the population, data has been classified in multi-stages. Survey was conducted in three divisions of Himachal Pradesh.

Both primary and secondary data has been used in the present study. At macro level, the geographical area of this study has been limited to Himachal Pradesh. At micro level, it has been divided into twelve districts. Data has been collected from three districts of Himachal Pradesh. At the first stage, this area is divided into three administrative divisions.

First administrative division is Shimla in which districts Shimla, Solan, Sirmour and Kinnaur are included. In the second division is Mandi, districts Mandi, Bilaspur, Kullu and Lahaul –Spiti are included. Third and last division is Dharamshala includes districts Una, Hamirpur, Kangra and Chamba.

At the second stage, a sample of one district from each division has been selected, where number of bank accounts per 1000 population is maximum. Data was collected from 120 bank customers (who are not the users of i-banking) of 40 different public sector bank branches . A sample of 40 bank customers were selected



from each selected districts i.e., Shimla, Mandi and Dharamshala (Headquarter of District Kangra). In order to collect the information, the respondents were selected by applying purposive sampling method.

#### **4. ANALYSIS AND INTERPRETATION**

The relation between socio-demographic characteristics of 120 respondents and the intention to adopt i-banking have been shown in Table 1. It has been observed that female respondents are more interested than male respondents to use internet banking services. young respondents up to the age of 45 years are more inclined to use i-banking in comparison to the respondents above the age of 45 years.

The willingness to adopt i-banking among unmarried respondents has been marginally higher than married respondents. Respondents living in urban area are more inclined to use i-banking services than respondents living in rural areas. The members of joint families are more interested to subscribe i-banking services. Further, the respondents living in nuclear families are comparatively less interested to use it.

The intention to adopt i-banking is higher among highly educated respondents than moderately educated respondents. However, respondents educated upto the higher secondary level are not at all interested to subscribe this service. The respondents earning income up to rupees 300000 annually, are slightly more inclined to use i-banking service than respondents earning annual income above rupees 300000.

The chi-square values shows that there is a statistically a significant difference between the gender, area of residence, type of family (joint/ nuclear), education of respondents and intention to adopt i-banking services. However, it is further exhibited that statistically there is no difference in age, marital status, annual income of respondents and the willingness to subscribe this service.



Table 1: Socio-Demographic Variables in Relation to Internet Banking Adoption Intention

Sr. No	Characteristics	ADOPTION INTENTION			Chi-square value
		No (N=70)	Yes (Yes=55)	Total (Total=125)	
1.	GENDER				21.538*
(i.)	Female	0 (0)	30 (100)	30 (100)	
(ii.)	Male	42 (46.7)	48 (53.3)	90 (100)	
2.	AGE				1.319
(i.)	21 years to 45 years	18 (30)	42 (70)	60 (100)	
(ii.)	Above 45 years	24 (40)	36 (60)	60 (100)	
3.	MARITAL STATUS				0.026
(i.)	Married	36 (35.3)	66 (64.7)	102 (100)	
(ii.)	Unmarried	06 (33.3)	12 (66.7)	18 (100)	
4.	RESIDENTIAL AREA				12.187*
(i.)	Urban	06 (14.3)	36 (85.7)	42 (100)	
(ii.)	Rural	36 (46.2)	42 (53.8)	78 (100)	
5.	TYPE OF FAMILY				10.989*
(i.)	Nuclear family	18 (60)	12 (40)	30 (100)	
(ii.)	Joint family	24 (26.7)	66 (73.3)	90 (100)	
6.	EDUCATION				11.758*
(i.)	Up to higher secondary	06 (14.3)	0 (0)	06 (100)	
(ii.)	Graduate	06 (33.3)	12 (66.7)	18 (100)	
(iii.)	Post graduate and more qualified	30 (31.2)	66 (68.8)	96 (100)	
7.	ANNUAL INCOME				0.063
(i.)	Less than and or equal to Rs. 300000	12 (33.3)	24 (66.7)	36 (100)	
(ii.)	Above Rs. 300000	30 (35.7)	54 (64.3)	84 (100)	

Source: Data collected through Primary probe.

\*significant at 1 percent

An effort has been made to identify the active factors which drive bank customers to adopt i-banking. The logistical regression model has been used to explain the intention of bank customers regarding adoption of i-banking service. Dependent variable has been dichotomous (Yes/No) in nature corresponding to relation with the perception of bank customers towards various variables, driving bank customers to subscribe and use i-banking service.

The Wald statistics has been used to test the significance of regression coefficient. Most of the independent variable in the model is also dichotomous. The design and codes given to independent variables has been given in Table 2.

Table 2: Design variables in the logistical regression analysis

Sr. No	Characteristics	Design variables
1.	PERCEIVED RISK	
(i.)	Not risky	0
(ii.)	Risky	1
2.	PERCEIVED QUALITY OF SERVICE	
(i.)	Good quality services not offered by bank	0
(ii.)	Good quality services offered by bank	1
3.	PERCEIVED USEFULNESS	



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(i.)	Not useful	0
(ii.)	Useful	1
4.	PERCEIVED COST	
(i.)	Reduction in operating cost	0
(ii.)	Increase/No change in operating cost	1
5.	PERCEIVED EASE OF USE	
(i.)	Not easy to operate	0
(ii.)	Easy to operate	1
6.	TRUST	
(i.)	Security measures not taken by bank	0
(ii.)	Securities measures taken by bank	1
7.	AWARENESS	
(i.)	Non-aware of internet banking	0
(ii.)	Aware of internet banking	1

The Wald statistics has been used to test the significance of the regression coefficient and shown in Table 3. There are four variables i.e., perceived cost, perceived ease of use, trust and awareness with no significant coefficient ( $p > 0.05$ ). Therefore these variables are not active determinant factors for adoption of i-banking. But the factors perceived usefulness, perceived quality of service and perceived risk are determined as effective determinant in i-banking adoption process. The intensity of effectiveness of these factors on i-banking adoption has been explained further.

As the variable 'perceived usefulness' increase by one unit, the possibility of i-banking adoption increase by 2.661 times.

Further, the variable 'perceived quality of service' has a positive estimated coefficient. This means that increase in this factor by one point would multiply the i-banking adoption by 2.707.

In addition to it, variable 'perceived risk' is negatively associated to intention of i-banking adoption. It means, future adoption intention of i-banking is 0.111 times less likely to happen if bank consumer feels risky while using this service.

After verifying the significance of regression coefficients, the goodness of fit test to the model has been conducted with the help of Hosmer- Lameshow test and given in Table 4. The Hosmer- Lameshow statistics is 6.651 with p value of 0.575 ( $p > 0.05$ ). The probability for the chi-square distribution with 8 degrees of freedom which shows that model has a goodness of fit with observed data. H-L statistics has a significance of 0.575 which means that it is statistically significant.



Table 3: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>						
PERCEIVED RISK	-2.199	.516	18.145	1	.000	.111
PERCEIVED QUALITY OF SERVICE	.996	.498	4.004	1	.045	2.707
PERCEIVED USEFULNESS	.979	.468	4.375	1	.036	2.661
PERCEIVED COST	.988	.518	3.640	1	.056	2.686
PERCEIVED EASE OF USE	.097	.499	.038	1	.846	1.102
TRUST	.613	.458	1.792	1	.181	1.846
AWARENESS	-.809	.477	2.882	1	.090	.445
Constant	.128	.625	.042	1	.838	1.136

a. Variable(s) entered on step 1: PERCEIVED RISK, PERCEIVED QUALITY OF SERVICE, PERCEIVED USEFULNESS, PERCEIVED COST, PERCEIVED EASE OF USE, TRUST, AWARENESS.

Table 4: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6.651	8	.575

Analysis of model has a good predictive capacity with 76.7 percent of classified cases correctly (rate of correct classification) for a cut-off value of 0.50 is shown in Table 5. Here, 87.2 percent have been correctly classified for adopting i-banking and 57.1 percent have been classified for not having intention to adopt i-banking.

Table 5: Classification Tablea (Future internet banking adoption intention)

	Observed	Forecasted		
		VAR00020		Percentage Correct
		Will not adopt internet banking	Will adopt internet banking	
Step 1	VAR00020 Will not adopt internet banking	24	18	57.1
	Will adopt internet banking	10	68	87.2
	Overall Percentage			76.7

a. The cut value is .500

The developed hypothesis has been tested and given in Table 6. The chi-square value shows that there is a statistically a significant difference in Gender, Residential area, Type of family, Education of bank customers and their intention to adopt i-banking. Further, the results of logistical regression supports null hypothesis that perceived usefulness(H3) and Perceived quality of service(H7) has positive influence on intention of customers to use i-banking. However, it also supports the null hypothesis that Perceived risk (H4) is negatively associated to intention to adopt i-banking.



Table 6: Hypothesis

Hypothesis	Fulfilment
H1: There is statistically no significant difference in Socio-demographic variables (Gender, Age, marital status, residential area, type of family, Education, Annual income) and intention of bank customers to adopt i-banking.	Statistically there is a significant difference in Gender, Residential area, Type of family, Education and i-banking adoption intention.
H2: perceived ease of use has a positive influence of i-banking adoption intention of bank customers.	Not supported
H3: perceived usefulness has a positive influence of i-banking adoption intention of bank customers.	Supported
H4: perceived risk has a negative influence of i-banking adoption intention of bank customers.	Supported
H5: Trust has a positive influence of i-banking adoption intention of bank customers.	Not supported
H6: Awareness has a positive influence of i-banking adoption intention of bank customers.	Not supported
H7: Perceived quality of service has a positive influence of i-banking adoption intention of bank customers.	Supported
H8: perceived cost has a negative influence of i-banking adoption intention of bank customers.	Not supported

## 5. FINDINGS

Information technology developments in the banking sector have sped up communication and transactions for clients. It is vital to extend this banking feature to clients for maximizing the advantages for both clients and service providers Qureshi, Zafar and Khan (2008).

It has been observed that female customers and customers living in urban area are more inclined to use i-banking. In addition to it, customers living in joint families and highly educated customers are interested to use this service in future. Less educated customers have hardly any interest in subscribing this service. However, there is statistically no significant difference in age, marital status, annual income of bank customers and intention to use i-banking service.

Out of seven extracted factors considered in the present study, only three factors i.e., Perceived Usefulness, Perceived Quality of Service and Perceived Risk, have been found active in influencing intention of customers to use i-banking. Further





it has been observed that Perceived Usefulness and Perceived Quality of Service have been positively influencing the adoption intention of customers while Perceived Risk has been affecting their intention negatively.

However, Perceived cost, Perceived ease of use, trust and awareness have not been influencing the intention of bank customers to adoption i-banking. The developed model has the overall capability of classifying 76.7 % cases correctly and exhibited that 87.2 % customers will adopt i-banking service whereas 57.1 % customers would not use it in future.

## **6. SUGGESTIONS**

Internet Banking is becoming the essential part of modern day banking services and the banks are making every effort to make i-banking a success. It has been observed in the present study that male respondents are less inclined to use i-banking. So efforts must be made to encourage male bank customers to use this service.

Customers living in rural area are less interested to use this service. Therefore special schemes must be launched by banks to encourage them to use i-banking. Customers living in nuclear families are relatively less keen to use this service. So special promotional drives should be made to motivate such customers. The bank website should also be designed in hindi or in other commonly used languages so that even less educated customers understands it easily.

Special seminars should be organised by the banks to tell them the method of using i-banking. Banks must improve their quality of service as this factor has been influencing the intention of bank customers to adopt this service. Banks should advertise the multifarious usefulness of i-banking by launching special schemes and providing printed manual of its usage.

Banks must make realistic efforts to ensure their bank customers that everything has been done to safeguard their interest and therefore customers should not feel risky while using this service. Government should enact strict laws against cyber crimes.

## **7. CONCLUSION**



I-banking in India is still at infant stage. So in order to make it a success, banks are making efforts to encourage its customers to use i-banking. In the present study, efforts were made to check the effectiveness of the factors that has been explored in the previous studies. Here, female customers were found more interested to use i-banking than male customers.

Customers living in urban area are comparatively more inclined to use this service than customers living rural area. In comparison to members of nuclear families, members of joint families are more interested to use this service. Less educated and moderately educated customers are less interested than highly educated customers to make use of this service. Therefore banks should start special schemes to attract female customers to subscribe this service. They should also encourage rural area customers as these customers have less confidence in it.

Customers living in joint families should be provided with special incentives if they adopt this service. Special efforts should be made by the banks to increase the confidence of less educated and moderately educated bank customers so that they adopt this service in future. Statistically there is no significant difference in the age, marital status, annual income of customers and the intention to adopt i-banking. Customers living in joint families should be given proper attention

Three significant factors i.e., perceived risk, perceived usefulness and perceived quality of service have been identified, that dynamically influence the future intention of customers to adopt internet banking . Further, it has also been observed that perceived usefulness and perceived quality of service positively influence the intention to adopt i-banking while perceived risk negatively affect the intention of adopting i-banking.

As usefulness of i-banking perceived by bank customers is positively related to i-banking adoption. So banks should publicize the multifarious benefits of i-banking to a large extent which would result into increase in subscription of internet based banking service. Perceived quality of i-banking service also puts a positive impact in the minds of bank customers to adopt this service. Therefore bank should enhance the quality of its i-banking service which would satisfy the bank customers and would definitely increase the subscription of this service.



Further, risk perceived by bank customers is negatively associated with i-banking adoption intention, so banks should make every effort to improve its security system so that risk perceived by bank customers is reduced and customers will be more confident in using i-banking service.

## **8. LIMITATIONS AND SCOPE OF FUTURE RESEARCH**

Many limitations were faced while conducting this study in Himachal Pradesh. Firstly, the data was collected from Himachal Pradesh. So the analysis of results may not represent the perception of consumers of the whole country. Secondly, money was also a constraint faced during the study.

If the data was collected at a large scale, the expenses of conducting research study would have been also high. Therefore, with the limited resources the study was conducted. Thirdly, the data was collected from sample size of only 120 respondents, which is relatively small. Hence, queries about accuracy of results, could be raised.

A scope of further research, a more comprehensive research approach should be applied to study the impact of the factors influencing the consumers intention to adopt i-banking in developing nation like India. In order to make i-banking successful, more comprehensive research should be conducted to obtain more insights and information, which would be useful for framing proper policies and strategies by the banks as well as by the Government.

## **9. IMPLICATION OF THE STUDY**

The study will be a benefit to the banks. The information will be helpful to researchers, bankers, policy makers and the Government, as the development of i-banking will help the growth of state and Indian economy.

## **REFERENCES**

ALADWANI, A. (2001) Online Banking: A Field Study of Drivers, Development Challenges, and Expectations, **International Journal of Information Management**, v. 21, p. 213-225.

ALDAS-MANZANO, J.; LASSALA-NAVARRE, C.; RUIZ-MAFE, C.; SANZ-BLAS, S. (2009) The role of consumer innovativeness and perceived risk in online banking usage, **International Journal of Bank Marketing**, v. 27, n. 1, p. 53-75.



AL-HAJRI, S.; TATNALL, A. (2008) Technological Innovation and the Adoption of Internet Banking in Oman, **The Electronic Journal for Virtual Organizations and Networks**, v. 10, p. 59-83.

AL-MAGHRABI, T.; DENNIS, C. (2010) Driving online shopping: Spending and behavioral differences among women in Saudi Arabia, **International Journal of Business Science and Applied Management**, v. 5, n. 1, p. 30-47.

ALSAJJAN, B.; DENNIS, C. (2009) Internet Banking Acceptance Model: Cross-Market Examination, **Journal of Business Research**.

AL-SOMALI, S.; GHOLAMI, R.; CLEGG, B. (2009) An Investigation into the Acceptance of Online Banking in Saudi Arabia, **Technovation**, v. 29, p. 130–141.

AMIN, H. (2007) Internet Banking Adoption among Young Intellectuals, **Journal of Internet Banking and Commerce**, v. 12, n. 3.

BRADLEY, L.; STEWART, K. (2003) Delphi Study of Internet banking, **Marketing intelligence and planning**, v. 21, n. 5, p. 272-281.

CHAU, P. (2001) Influence of Computer Attitude and Self-Efficacy on It Usage Behavior, **Journal of End User Computing**, v. 13, n. 1, p. 26-33.

DANIEL, E. (1999) Provision of Electronic Banking in 62 **International Arab Journal of e-Technology**, v. 2, n. 1, January 2011 the UK and the Republic of Ireland," **International Journal of Bank Marketing**, v. 17, n. 2, p. 72-82.

DAVIS, F. D. (1989) Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology, **MIS Quarterly**, p. 319-340.

ERIKSSON, K.; KEREM, K.; NILSSON, D. (2005) Customer Acceptance of Internet Banking in Estonia, **International Journal of Bank Marketing**, v. 23, n. 2, p. 200–216.

FIELD, A. (2005). **Discovering Statistics using SPSS** (Second ed.). New delhi. Sage Publication.

FITZERGELAD, K. (2004) **An Investigation into People's Perceptions of online Banking** [online] Available from: [http://staffweb.itsligo.ie/staff/eward/ebus % 2002-03 / Discussion % 20topics // Online %20 Banking.ht](http://staffweb.itsligo.ie/staff/eward/ebus%2002-03/Discussion%20topics//Online%20Banking.ht) Accessed 7 March 2010].

FLAVIAN, C.; GUINALIU, M.; TORRES, E. (2006) How bricks-and-mortar attributes affect online banking adoption. **Int. J. Bank. Mark.**, v. 24, n. 6, p. 406-423.

GAN, C.; CLEMES, M.; LIMSOMBUNCHAI, V.; WENG, A. (2010) A logit analysis of electronic banking in New Zeland. **Int. J. Bank. Mark.**, v. 24, n. 6, p. 360-383.

GATIGNON, H.; ROBERTSON, T. S. (1989) **Diffusion of Innovation**, a working paper for the European Institute for the Advanced studies in Management, May.

GANESAN, R.; VIVEKANANDAN, K. (2009) A Security Hybrid Architecture model for Internet Banking (E-banking). **Journal of Internet Banking and Commerce**, v. 14, n. 1, p. 1-17. 66.

GEFEN, D.; KARAHANNA, E.; STRAUB, D. (2003) Trust and TAM in Online Shopping: An Integrated Model, **MIS Quarterly**, v. 27, n. 1, p. 51-90.



GERRARD, P.; CUNNINGHAM, J. B. (2003) The Diffusion of Internet Banking Among Singapore Consumers, **International Journal of Bank Marketing**, v. 21, n. 1, p. 16-28.

GERRAD, P.; CUNNINGHAM, J. B.; DEVLIN, J. F. (2006) Why consumers are not using internet banking: A qualitative study, **J. Service Marketing**, v. 68, n. 2, p. 160-168.

GOPAL, K. S. (1997) Competition in the Banking Industry, **IBA Bulletin**, January, p.11.

HILL, K. (2004). **Study on demographics Vs Marketing' CRM daily** (online) Available:[http://crmdaily.newsfactor.com/story.xhtml?storytitleWhich\\_Comes\\_First\\_Demographics\\_or\\_Marketing\\_&story\\_id=23250&category=lylt](http://crmdaily.newsfactor.com/story.xhtml?storytitleWhich_Comes_First_Demographics_or_Marketing_&story_id=23250&category=lylt)(Accessed 24 April 2004) 63

KANDAMPULLY, J. (2000) The impact of demand fluctuation on the quality of service: a tourism industry example, **Managing Service Quality**, v. 10, n. 1, p.10-18.

KOTHARI, C. R. (2004) **Research Methodology** (second ed.). New Delhi. Wishwa Prakashan.

KOUFAIRS, M.; HAMPTON-SOSA, W. (2004) The development of initial trust in an online company by new customers. **Information and Management**, v. 41, n. 3, p. 377-97.

LEE, M. (2009) Factors Influencing the Adoption of Internet Banking: An Integration of Technological acceptance model and Tpb with Perceived Risk and Perceived Benefit, **Electronic Commerce Research and Applications**, v. 8, p. 130–141.

MARTIN, J. (1998) Say Goodbye to Bankers' Hours, **Management Review**, v. 87, n. 1, p. 33-37.

LOCKETT, A.; LITTLER, D. (1997) the Adoption of direct banking services, **Journal of Marketing management**, n. 13, p. 791-811.

MAVRI, M.; IOANNOU, G. (2006) Consumers' Perspectives on Online Banking Services, **International Journal of Consumer Studies**, v. 30, n. 6, p. 552-560,

MISHRA, A. K. (2005) **Internet Banking in India Part-I**, <http://www.banknetindia.com/banking/ibkg.html> (15 Sept. 2010)

MOLS, N.; BUKH, P.; NEILSEN, J. (1999) Distribution Channel Strategies in Danish Retail Banking, **International Journal of Bank Marketing**, v. 27, n. 1, p. 37-47.

MUKHERJEE, A.; NATH, P. (2003) A Model of Trust in Online Relationship Banking, **International Journal of Bank Marketing**, v. 21, n. 1, p. 5- 15.

ORTEGA, B. H.; MARTINEZ, J. J.; HOYOS, J. M. D. (2007) An Analysis of Web Navigability in Spanish Internet Banking, **Journal of Internet Banking and Commerce**, v. 12, n. 3.

PERUMAL, V.; SHANMUGAN. (2004) Internet Banking: Boone or Bane, **Journal of Internet Banking and Commerce**, v. 19, n. 3.



PIKKARAINEN, T.; PIKKARAINEN, K.; KARJALUOTO, K.; PAHNILA, S. (2004) Consumer Acceptance of Online Banking: An Extension of the Technology Acceptance Model, **Internet Research**, v. 14, n. 3, p. 224-235.

POLATOGLU, V.; EKIN, S. (2001) An Empirical Investigation of the Turkish Consumer's Acceptance of Internet Banking Services, **International Journal of Bank Marketing**, v. 19, n. 4, p. 156-165.

PROENÇA, J. F.; RODRIGUES, M. A. (2011) A comparison of users and nonusers of banking self-service technology in Portugal. **Manag. Serv. Qual.**, v. 21, n. 2, p. 192-210.

QURESHI, T.; ZAFAR, M.; KHAN, M. (2008) Customer Acceptance of Online Banking in Developing Economies, **Journal of Internet Banking and Commerce**, v. 13, n. 1.

RIGOPOULOS, G.; ASKOUNIS, D. (2007) A TAM Framework to Evaluate Users' Perception towards Online Electronic Payments, **Journal of Internet Banking and Commerce**, v. 12, n. 3.

ROTCHANAKITUMNUAI, S.; SPEECE, M. (2003) Barriers to internet banking adoption: a qualitative study among corporate customers in Thailand, **International Journal of Bank Marketing**, v. 21, n. 6, p. 312-323.

SAZOUZI, DHEKRA (2009) The adoption of electronic banking in Tunisia: An exploratory study, **Journal of Internet banking and Commerce**.

SATHYE, M. (1999) Adoption of Internet banking by Australian consumers: an empirical investigation, **International Journal of Bank Marketing**, v. 17, n. 7, p. 324-334.

SOHAIL, M.; SHANMUGHAM, B. (2004) E-banking and customers' preferences in Malaysia: an empirical investigation. Information sciences, **informatics and Computer Science: an international Journal**, v. 150, n. 3-4, p. 207-217.

TAYLOR, S.; TODD, P. (1995) Assessing IT Usage the Role of Prior Experience, **MIS Quarterly**, v. 19, n. 4, p. 561-570.

THULANI, D.; TOFARA, C.; LANGTON, R. (2009) Adoption and Use of Internet Banking in Zimbabwe: An Exploratory Study, **Journal of Internet Banking and Commerce**, v. 14, n. 1.

WANG, Y.; WANG, Y.; LIN, H.; TANG, T. (2003) Determinants of User Acceptance of Internet Banking: An Empirical Study, **International Journal of Service Industry Management**, v. 14, n. 5, p. 501-519.

WHITLEY, D. (2001). **E-Commerce-Strategy techniques and application**. New York: Tata McGraw Hill.

YIU, C.; GRANT, K.; EDGAR, D. (2007) Factors Affecting the Adoption of Internet Banking in Hong Kong- Implications for the Banking Sector, **International Journal of Information Management**, v. 27, p. 336-351.

ZEITHMAL; BITNER (1996) **Services Marketing**, McGraw – Hill, Newyork, NY

