Factors affecting adoption of Internet Banking:
A case study from India

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ABSTRACT

The objective of this research is to find out the factors affecting adoption of Internet banking in India. The data is based upon a survey of 150 bank customers using a convenience sampling technique with the aid of a structured self-administered questionnaire. The research model was analyzed using Partial Least Squares (PLS) analysis. The recommended procedures have been tested which is measurement model and structural model. Perceived Usefulness, Perceived Ease of Use, Perceived Risk, Image, Results Demonstrability, Perceived Behavioral Control and Subjective Norm were influence intention to use Internet banking. However, Perceived Ease of Use, Perceived Credibility and Computer Self Efficacy were not influence intention to use Internet banking. The findings of this study are expected to be of great use to the bank marketers. An understanding of the factors identified in this study allows bank managers to direct efforts and resources in the most effective and efficient way to increase bank business in the long run and encourage their bank customer's to adopt Internet banking. Moreover, this paper contributes to the empirical literature of diffusion of financial innovations, particularly Internet banking in a developing country, such as India.

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1. INTRODUCTION

The emergence of Internet technology, particularly the World Wide Web has introduced new ways for doing business. Banking is not an exception to it. Internet is increasingly used by banks as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as Internet Banking, although the range of products and services offered by different banks vary widely both in their content and sophistication. Internet banking allows customers to interact more with the front office operations and at the same time, it allows the bank to concentrate the back office operations by increasing their efficiency (Corrocher, 2002). According to such perspective, Internet banking constitutes an innovation both in the processes of production and in the distribution of financial services. However, Internet banking constitutes a complex innovation that does not fall into the simple categorization of product/process innovations, but encompasses both, as a part of a continuum. As banking technology has focused on reducing cost of distribution and improving the operational procedures, Internet banking is characterized as a process innovation by making customers handle their own banking without going to bank tellers. However, it can be conceived also as a product innovation, since it embodies the creation of new products as such and the development of innovative combinations of the existing products. Banks may offer comprehensive personal financial management packages on the Internet. The current trend worldwide is the movement from traditional branch banking to electronic banking, which provides many benefits, challenges and also opportunities for the whole banking sector. The year 1995 marked the beginning of the Internet banking era, when Wells Fargo began offering account statements on the Web and Security First Network Bank became the

first Internet-only bank (Gandy, 1995; Sullivan, 2001). At present more than 5000 online sites of the banks from all over the world are available. In US and the European Union countries, banks are quickly introducing online banking as an essential component of their business portfolio. More recently in India too, a wider array of financial products and services have become available over the Internet, which has thus become an important distribution channel for a number of banks.

The motivation for this study arose out of the rapid development of Internet banking in India. Since 1997, after the launch of the first Internet based banking service, the number of Internet bankers has grown at an enormous pace. An inhibiting factor is concern whether there is demand for such services, based on concerns about levels of computer ownership, Internet usage and consumer acceptance. Although the number of users of the Internet has increased significantly over the past decade, only a small fraction of those users have made actual purchases over the Internet. The failure of the Internet as a retail distribution channel has been attributed to the lack of trust consumers have in the electronic channel and in the Web merchants.

In broad terms, the present study aims, as the title "Factors affecting adoption of Internet Banking: a case study from India" indicates, to explore the world of electronic banking through the eyes of the consumer, and by so doing seeks to increase the understanding of consumer attitude formation and behaviour. The identification of personal characteristics related to the adoption of internet banking is critical for market targeting and can help banks in product design and in formulating campaigns that will encourage the adoption of the service. In this study these are related to adoption intention, which is defined as an individual decision to try Internet banking service within a specified period of time.

According to Internet World Stats, Internet penetration is rising appreciably in India today. According to a release in 2009 by the Internet and Mobile Association of India (IAMAI) and IMRB International, Internet users in India have reached 71 million in the month of September 2009, up from 63 million in March 2009. During the same period the number of active users (i.e. ones who logon to Internet at least once a month) has risen from 46 Million in March 2009 to 52 Million in September 2009. This indicates that the use of technology, especially the Internet technology is getting more and more importance in a typical Indian life. However, there is lack of users for internet as a medium for banking purpose, while only 1% of these Internet users utilized the Internet banking services in 1998, the Internet banking user base increased to 20% by mid- 2008, while it has declined to 12% in the month of September 2009.

On the basis of survey conducted by IAMAI in 2006 it was found that 43% of online banking user haven't started online financial transaction because of security reasons, 39% haven't started because they prefer face to face, 22% haven't started because they don't know how to use, for 10% sites are not user friendly and for 2% banks are not providing the facility of internet banking. According to research, 68% of the customers cannot say that when they will be starting the financial transactions through internet. Maximum numbers of online banking users are male and maximum of them are in age the group of 25-35. Numbers of female users are very less i.e. 17% only. More than 60% of the people are having accounts in 3-4 banks. Only 37% of Indian Internet users come from Top 10 cities i.e. Mumbai, Bangalore, Delhi, Calcutta, Chennai, Pune, Hyderabad, Ahmedabad, Surat and Nagpur.

The Government of India enacted the IT Act, 2000 (Information Technology Act). This act came into effect from the 17th of October 2000. The purpose of this act, in context of banking, was to provide legal recognition to electronic transactions and other means of Electronic Commerce. The working group set by Reserve bank of India, has been working as a watchdog on the different aspect of the Internet banking. ICICI bank was the pioneer bank to use Internet banking for some of its services, in India. ICICI bank and a lot of other Indian banks use the Internet banking system to provide online banking solution. In the current scenario Indian customers are moving towards Internet banking, slowly but steadily. Most of the big Indian banks like SBI, BOB, and BOI etc. have started providing Internet banking services. The banking systems are upgrading and bringing many electronic banking medium for customers so that banking can be made more convenient. There is a potential growth of Internet banking in India. Thus the main objective of this research is to identify factors influencing the adoption and use of on-line banking.

2. LITERATURE REVIEW

There are many factors are seen to be influencing the adoption of Internet banking. This section presents a review of literature and hypotheses that has been generated for the study.

2.1. PERCEIVED USEFULNESS (PU)

As suggested by both TAM and TAM2, PU is a direct determinant of intention (Davis, 1989; Davis & Venkatesh, 1996; Igbaria et. al., 2000; Wang et. al., 2003; Ramayah et. al. 2002, Ramayah et al., 2003; Pikkarainen et al., 2004). The ultimate reason people exploit on-line banking systems is that they find the system to be useful in their banking transactions.

2.2. PERCEIVED EASE OF USE (PEOU)

Extensive research over the past decade provides evidence of the significant effect of PEOU on usage intention, either directly or indirectly through its effect on PU (Davis, 1989; Davis & Venkatesh, 1996; Igbaria et. al., 2000; Wang et. al., 2003; Ramayah et. al. 2002, Ramayah et al., 2003; Pikkarainen et al., 2004). On-line banking systems need to be both easy to learn and easy to use so that individuals will feel less threatened (Wang et al., 2003). This implies that PEOU is expected to have a positive influence on users' interaction with the on-line banking.

2.3. BEHAVIORAL INTENTION (BI)

Behavioral intention measures a person's relative strength of intention toperform a behavior. If a person intends to do a behavior then it is likely that the person will do it. This implies that BI is expected to have a positive influence on users' interaction with the on-line banking.

2.4. RESULT DEMONSTRABILITY (RD)

Result demonstrability is the tangibility of the results of using the technology (Moore and Benbasat, 1991). Agarwal and Prasad (1997) demonstrated the effects of Result Demonstrability on usage intentions.

2.5. PERCEIVED BEHAVIORAL CONTROL (PBC)

Behavioral control refers to the skills, opportunities and resources needed to use the system whereas PBC refers to the factors that may impede the performance of the behavior (Tan & Teo, 2000; George, 2004; Shih & Fang, 2004). With increases in knowledge, resources and ability to use the online banking systems, PBC will lead to greater intention to use the on-line banking by the bank customers.

2.6. SUBJECTIVE NORM (SN)

According to Fishbein and Ajzen (1975, p. 302), SN refer to "the person's perception that most people who are important to him think he should or should not perform the behavior in question" (Tan & Teo, 2000). An important contribution of the TRA and the later TPB is the inclusion of SN as a determinant of intention and behavior. However, early studies by Davis failed to show significant relationship between SN and actual usage. Thus, SN is not included in TAM model. Nevertheless according to TAM2, SN has a direct relationship with individual intention. In the present context, if the system (on-line banking) is perceived to be useful, a person may believe that it actually is useful, and in turn form an intention to use it due to the influence from their referent groups (Schillewaert et al., 2000; George, 2004; Shih & Fang, 2004; Chan & Lu, 2004).

2.7. COMPUTER SELF-EFFICACY (CSE)

Compeau and Higgins (1995) defined computer self-efficacy as "a judgment of one's capability to use a computer" (p. 192). Computer self-efficacy has a major impact on an individual's expectations towards using computers according to Compeau and Higgins (1995). In addition, individuals who did not see themselves as competent computer users were less likely to use computers (Kinzie and Delcourt, 1991; Oliver and Shapiro, 1993).

2.8. PERCEIVED RISK (PR)

Perceived risk is mainly concerned with security aspects of Internet banking which has emerged as the top issues inhibiting IB adoption. There are still customers who fear to make use of IB, as they are concerned with security aspects of such a system. Previous research has found the risk associated with possible losses from the online banking transaction is greater than in traditional environments (Bradley and Stewart, 2003; Mukherjee and Nath, 2003 and Wang et al., 2003). Research has shown PR as an important factor that influences online banking adoption; which is negatively related (Aldas-Manzano et al., 2009; Gerrard and Cunningham, 2003 and Polatoglu, and Ekin, 2001).

2.9. IMAGE (IMG)

Image is defined as. the degree to which use of an innovation is perceived to enhance one's image or status in one's social system. (Moore and Benbasat, 1991). Venkatesh and Davis (2000) demonstrated the effect of Image on PU to be significant over time. They argued that higher image leads to higher support from the group, which makes it easier to achieve goals only attainable through group membership, resulting in increased productivity and higher performance. We believe that image will be especially important for high school students.

2.10. PERCEIVED CREDIBILITY (PC)

The lack of PC is manifested in people's concerns that the Internet banking system (and/or the hackers intruding the system) will transfer their personal information or money to third parties without their knowledge or permission (Wang et al. 2003; Ramayah et al., 2002). In general, the PC that people have in the system to conclude their transactions securely and to maintain the privacy of their

personal information affects their voluntary acceptance of Internet banking systems.

3. THEORETICAL FRAMEWORK

This section comprised of three sections. The first section addresses the current theories and models that can be used to explain customers' adoption of Internet banking. Secondly, past literature on the critical factors which may have significant impact on the adoption of Internet banking will be discussed. Lastly, the review will be concluded by proposing a model which will be used to understand customers' adoption of Internet banking in India.

3.1. TECHNOLOGY ACCEPTANCE MODEL (TAM)

The technology acceptance model (TAM) (Davis,1989) has received significant attention in IS acceptance literature. According to TAM, system usage behavior is determined by the intention to use a particular system, which consecutively, is determined by the perceived usefulness and perceived ease of use of the system. While the TAM has much strength, including its specific focus on IS use, its basis in social psychology theory, the validity and reliability of its instruments and its parsimony. The TAM posits that a user's adoption of a new information system is determined by that user's intention to use the system, which in turn is determined by the user's belief about the system. The TAM further suggests that two beliefs which are perceived usefulness and perceived ease of use are instrumental in explaining the variance in users' intentions. Many researchers have introduced additional variables to TAM and suggested that these external variables may be added as a way of improving the model's predictive power (Davis, 1989).

3.2. THEORY OF PLANNED BEHAVIOUR (TPB)

Additional construct namely as perceived behavioral control was incorporating in theory of planned behavior (TPB) which extension from theory of reasoned action (TRA). Perceived behavioral control is an individual lacks substantial control over the targeted behavior (Ajzen,1991). According to TPB, an individual's behavior can be explained by his or her behavioral intention, which is jointly influenced by attitude, subjective norms and perceived behavioral control.

3.3. SOCIAL COGNITIVE THEORY (SCT)

Social cognitive theory extends the TAM model by trying to include a more comprehensive understanding of behavioral intentions to adopt a new technological innovation.

Social cognitive theory was proposed by Bandura (1986) to understand the interaction in the environment an individual has with their behavior. Social cognitive theory is dynamic, thus, this dynamic ability to adapt to change is particularly important in the rapidly evolving global technology industry in which new innovations take place.

3.4. INTEGRATION OF TAM-TPB-SCT

In this paper, social cognitive theory (SCT) is integrated with TAM and TPB as it provides a more comprehensive understanding of behavioral intentions that includes how an individual interacts with their internal and external environment. The basis of social cognitive theory is that both these internal and external factors determine a person's ability to learn new things. As technological innovations require people to learn and adapt to different things, social cognitive theory provides a unique way to examine which of these factors is the most influential in explaining the technological adoption process. Two constructs (Image and Result demonstrability), which predicted to influence a youths intention to adopt Internet banking. These variables have been chosen as factors to explain why an individual will utilize a new technology. The image will influence whether a person intends to adopt Internet banking. Through other people's behavior individuals are more likely to use Internet banking and the better results will retrieve. These additional construct is consistent with the premise of social cognitive theory in which an individual acquires and learns through observing their environment.

Other researchers have noted that the TAM omits variables that may be important predictors of IS usage. Therefore, combination of TAM and TPB will enhance the model because TPB includes constructs that do not appear in the TAM. However, TPB is not specific to IS usage and is less parsimonious than the TAM. Since Internet banking technology is still at infancy stage, many people may choose not to use the Internet banking service due to they lack the required knowledge, skills, or ability to use the new Information technology. Consequently, in this research, new construct "computer self-efficacy" has been introduced to the original TAM as external variable. While computer self-efficacy is not present in the original TAM, this original constructs will enable enhanced understanding of an individual's behavior in the acceptance of Internet banking in the context of e-commerce. In addition, recent research reveals that the perceived credibility in relation to Web systems has a salient influence on their willingness to engage in online shopping, banking and the exchange of money and sensitive personal information (Hoffman, Novak, & Peralta, 1999; Wang, Wang, Lin, & Tang, 2003). Most users who refuse to provide sensitive information to Internet banking

systems, for the purpose of banking transactions, because they do not trust those collecting the data. The lack of perceived credibility is revealed in people's concerns that the Internet banking system will transfer their personal information or money to third parties, without the user permission. The construct of "perceived credibility", proposed by Wang et al. (2003) been included in the extended TAM to explore users' acceptance of Internet banking. Perceived risk is mainly related with security features of Internet banking which emerged as the top of Internet banking adoption. Therefore, this construct has been included in the research model as additional belief of the theory integration.

4. RESEARCH METHODOLOGY

4.1. RESEARCH MODEL

The research model tested in this study is shown in Figure 1. In the extended model, like many other studies of the TAM, the "attitudes" construct has been removed for simplification. Several hypotheses were constructed for testing as summarized in Table 1.

4.2. POPULATION AND SAMPLING

The population of interest is defined as current and potential users of on-line banking in India. Individuals working in both the private and the government sector in north India states, mainly in Haryana, Punjab and NCR constitute the sampling frame for this research. Working individuals are considered appropriate as a sampling frame for the research because they are current Internet users and will, in all likelihood, be internet users in the future. Besides that, most of them are busy with their careers thus they may hardly go to the bank during the week day. Thus, on-line banking may
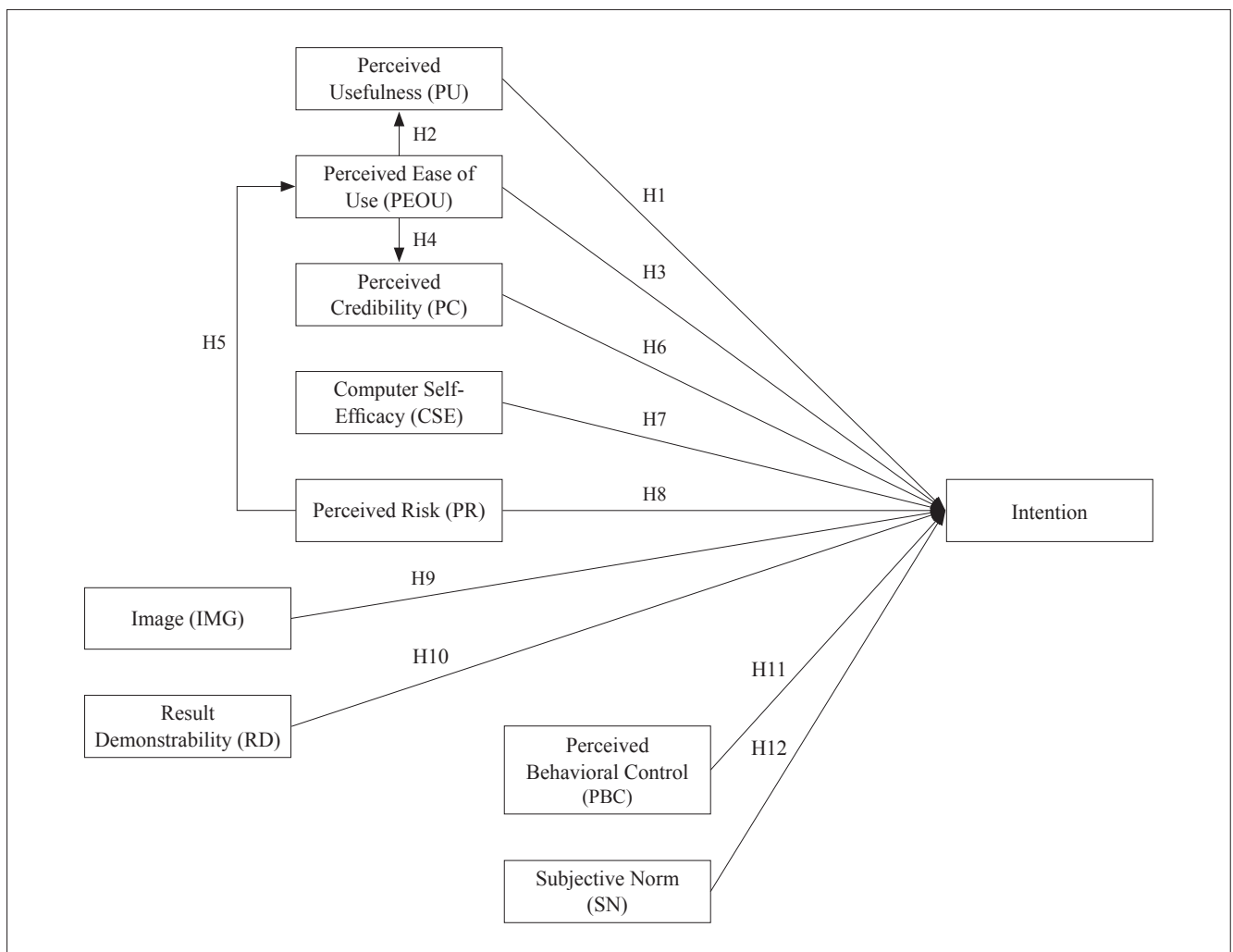
FIGURE 1: Research Framework

TABLE 1: Research hypotheses

Hypotheses		Source
H1:	Perceived usefulness has a direct positive effect on intention to use Internet banking	Davis (1989)
H2:	Perceived ease of use has a direct positive effect on perceived usefulness of the Internet banking	Davis (1989), Davis and Venkatesh (1996)
H3:	Perceived ease of use has a direct positive effect on intention to use Internet banking	Davis (1989)
H4:	Perceived ease of use has a direct positive effect on perceived credibility of the Internet banking	Wang et. al., (2003)
H5:	Computer self-efficacy has a direct positive effect on perceived ease of use of Internet banking	Tan and Teo (2000), George (2004)
H6:	Perceived credibility has a positive effect on intention to use Internet banking	Wang et. al., (2003)
H7:	Computer self-efficacy has a direct positive effect on Intention to use Internet banking	Tan and Teo (2000), George (2004)
H8:	Perceived risk has a negative effect on intention to use Internet banking	Chan and Lu (2004)
H9:	Image has a positive effect on intention to use Internet banking	Chan and Lu (2004)
H10:	Result demonstrability has a positive effect on intention to use Internet banking	Chan and Lu (2004)
H11:	Perceived behavioral control has a positive effect on intention to use Internet banking	Tan and Teo (2000)
H12:	Subjective norm has a positive effect on intention to use Internet banking	Chan and Lu (2004)

be more suitable for them. A structured questionnaire was used to collect data using an intercept survey. The convenience sampling method was used as it was impossible to get a list of banking customers. The instruments used in this study were adopted from previous literature.

5. FINDINGS

5.1. DEMOGRAPHIC PROFILE

A total of 150 responses were received and the profile of those responding is presented in Table 2.

Table 2 presented the demographic data on 150 respondents segregated into 116 users of online banking and 34 non-users. It includes variables like age, gender, qualification, profession and no. of banks dealing with. Amongst the results, most of the users of online banking lie up to age of 35 years old that denotes young age respondents are more likely to adopt internet banking. Nearly 57% of respondents are male and 43% are female. Amongst the users of internet banking, 59% are male, hence shows that male are more likely to adopt internet banking. Most of the users are highly qualified and belong to private sector. Most of internet banking users deals with more than one bank. In order to check the association of demographic variables and usage of internet banking, chi square test was used.

5.2. ANALYSIS

To analyze the research model we used the Partial Least Squares (PLS) analysis using the SmartPLS 2.0 software (Ringle, et al., 2005). Following the recommended two-stage analytical procedures by Anderson and Gerbing (1988), we tested the measurement model (validity and reliability of the measures) followed by an examination of the structural model (testing the hypothesized relationship) (see Hair et al., 2013; Ramayah et al. 2011; 2013). The Smart PLS M2 Version 2.0 and two-step analysis approach was used to analyze the data. To test the significance of the path coefficients and the loadings a bootstrapping method (1000 resamples) was used (Gholami et al., 2013).

5.3. MEASUREMENT MODEL

Convergent validity is the degree to which multiple items measuring the same concept are in agreement (Ramayah & Rahbar, 2013). The convergence validity of the measurement is usually ascertained by examining the loadings, average variance extracted and also the composite reliability (Gholami et al., 2013). The loadings were all higher than 0.7, the composite reliabilities were all higher than 0.7 and the AVE were also higher than 0.5 as suggested in the literature (see Table 2). The discriminant validity of the measures (the degree to which items differentiate among constructs or measure distinct concepts) (Ramayah & Rahbar, 2013) was examined by comparing the correlations between constructs and the square root of the average variance extracted for that construct (Gholami et al., 2013). As can be seen from

TABLE 2: Profile of the respondents

| | | Online banking | | Total |
		Users	Non-Users	
Age	below 25 years old	30	11	41
	25-30 years old	30	6	36
	31-35 years old	29	8	37
	36-40 years old	7	8	15
	41-45 years old	9	1	10
	46 and above	11	0	11
Total		**116**	**34**	**150**
Gender	Male	68	18	86
	Female	48	16	64
Total		**116**	**34**	**150**
Qualification	Sr secondary	0	2	2
	Diploma	2	0	2
	Bachelor of degree	18	8	26
	Post graduation	73	21	94
	Doctorate	23	3	26
Total		**116**	**34**	**150**
Profession	Private sector Employee	85	19	104
	Public sector Employee	8	1	9
	Self Employed	23	14	37
Total		**116**	**34**	**150**
No of banks dealing with	1	16	7	23
	2	34	22	56
	3	39	3	42
	4	23	0	23
	5 and above	4	2	6
Total		**116**	**34**	**150**

Table 2, all the square root of the AVE was higher than the correlations values in the row and the column indicating adequate discriminant validity (Fornell & Larcker, 1981).

5.4. STRUCTURAL MODEL

Structural model shows the causal relationships among constructs in the model (path coefficients and the R^2 value). Together, the R^2 and the path coefficients (beta and signifi-

cance) indicate how well the data support and hypothesized model (Chin 1998; Sang et al. 2010; Ramayah et al., 2011). Table 3 and Figure 2 show the results of the structural model from the PLS output. Perceived ease of use was positively related to perceived usefulness ($R^2 = 0.452$, $\beta = 0.672$, $p < 0.01$) and also significantly related to perceived credibility ($R^2 = 0.065$, $\beta = 0.256$, $p < 0.01$). Computer self-efficacy was also positively related to perceived ease of use ($R^2 = 0.039$, $\beta = 0.198$, $p < 0.01$). These findings support H2, H4 and H5 of this research.

Next we tested the direct effects of all the variables on intention to use. Perceived usefulness ($\beta = 0.207$, $p < 0.01$), Image ($\beta = 0.136$, $p < 0.01$), result demonstrability ($\beta = 0.176$, $p < 0.05$), perceived behavioural control ($\beta = 0.454$, $p < 0.01$) and subjective norm ($\beta = 0.080$, $p < 0.05$) were positively related to intention while perceived risk ($\beta = -0.251$, $p < 0.01$) was negatively related to intention as hypothesized. Thus H1, H8, H9, H10 H11 and H12 were also supported. Perceived ease of use ($\beta = -0.081$, $p > 0.05$), perceived credibility ($\beta = -0.008$, $p > 0.05$) and computer self-efficacy ($\beta = 0.041$, $p > 0.05$) were not significant predictor of intention. Thus, H3, H6 and H7 are not supported. All the variables explained 79.3% of the variance in intention. A closer look showed that the most important predictors are perceived ease of use, perceived behavioural control and perceived usefulness.

Next Q^2 which measures predictive relevance was tested via the blindfolding procedure. This procedure omits a part of the data for a particular block of indicators during parameter estimations and then attempts to estimate the omitted part using the estimated parameters Chin, 2010). Chin (2010) also suggested that the omission distance can be any number from 5 to 10 as long as the sample is large. As proposed by Fornell and Cha (1994) a $Q^2 > 0$ implies the model has predictive relevance whereas $Q^2 < 0$ represents a lack of predictive relevance. Using the blindfolding procedure we can calculate the cross validated communality (cv-comm) and cross validated redundancy (cv-red) but Chin (2010) suggested that one would use the cross-validated redundancy measure to examine the predictive relevance of one's theoretical/structural model (Chin, 2010). Thus we calculated the cross validate redundancy for 4 endogenous constructs perceived ease of use, perceived usefulness, perceived credibility and intention (see Figure 2). The Q^2 values were 0.029, 0.323, 0.053 and 0.594 respectively indicting the model has predictive relevance.

6. CONCLUSION

The present paper makes a contribution to electronic banking literature by providing insights on the factors that

seem to affect online banking acceptance. This study identifies factors that are more influential than others in Internet banking adoption in the Indian banking market. The empirical results show that the Perceived Usefulness, Perceived Risk, Image, Result demonstrability, Perceived behavioral Control and Subjective Norms have significant effects on intention to use Internet banking. Perceived Ease of Use has significant effects towards Perceived Usefulness and Perceived Credibility of the Internet banking. Computer Self-Efficacy has significant effects towards Perceived Ease of Use of the Internet banking. However Perceived Ease of Use, Perceived Credibility and Computer Self-Efficacy have no significant effects towards intention to use Internet banking.

Regarding the computer self-efficacy, the empirical evidence in this study is consistent with that of Brown et al. (2003), and Venkataesh and Zhang (2010). That is, this study supports that perceived self-efficacy did not play a determinant role in influencing the intention to use Internet banking. However, computer self-efficacy was captured by

TABLE 3: Measurement Model

Construct	Mean	SD	AVE	CA	CR	1	2	3	4	5	6	7	8	9	10
1. Behavioral Control	5.661	1.520	0.822	0.928	0.949	**0.907**									
2. Computer SE	4.398	1.695	0.687	0.850	0.897	-0.157	**0.829**								
3. Credibility	4.340	1.570	0.773	0.708	0.872	0.414	-0.225	**0.934**							
4. Ease of Use	5.352	1.428	0.737	0.909	0.933	0.780	-0.198	0.256	**0.859**						
5. Image	4.306	1.738	0.798	0.870	0.921	0.270	0.077	0.209	0.348	**0.893**					
6. Intention	5.228	1.594	0.772	0.899	0.931	0.801	-0.059	0.441	0.659	0.434	**0.878**				
7. Results	5.182	1.534	0.738	0.879	0.917	0.701	-0.087	0.224	0.697	0.429	0.700	**0.859**			
8. Risk	4.402	1.561	0.664	0869	0.907	-0.442	0.294	-0.632	-0.262	-0.084	-0.540	-0.295	**0.815**		
9. Subjective Norm	4.897	1.538	0.773	0.905	0.932	0.245	0.118	0.134	0.275	0.439	0.376	0.306	-0.051	**0.879**	
10. Usefulness	5.956	1.150	0.731	0.925	0.942	0.632	0.108	0.262	0.672	0.339	0.685	0.540	-0.290	0.374	**0.855**

NOTE: AVE = Average Variance Extracted; CA= Cronbach's Alpha; CR = Composite Reliability
    Values on the diagonals represent the square root of the AVE while the off diagonals are correlations

TABLE 4: Hypothesis Testing

| Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Decision
H1	Perceived Usefulness → Intention	0.207	0.076	2.712**	Supported
H2	Perceived Ease of Use → Perceived Usefulness	0.672	0.056	12.091**	Supported
H3	Perceived Ease of Use → Intention	-0.081	0.059	1.384	Not Supported
H4	Perceived Ease of Use → Perceived Credibility	0.256	0.082	3.128**	Supported
H5	Computer SE → Perceived Ease of Use	0.198	0.075	2.655**	Supported
H6	Perceived Credibility → Intention	-0.008	0.037	0.226	Not Supported
H7	Computer SE → Intention	0.041	0.037	1.126	Not Supported
H8	Perceived Risk → Intention	-0.251	0.061	4.117**	Supported
H9	Image -> Intention	0.136	0.051	2.650**	Supported
H10	Results Demonstrability-> Intention	0.176	0.084	2.092*	Supported
H11	Perceived Behavioral Control -> Intention	0.454	0.076	5.997**	Supported
H12	Subjective Norm -> Intention	0.080	0.047	1.703*	Supported

**p< 0.01 (t > 2.33); *p< 0.05 (t > 1.645)

effort expectance, argued by Venkataesh et al. (2003) and Venkataesh and Zhang (2010), this study empirically concluded that effort expectance was not a salient factor influencing the intention to use Internet banking. A possible reason is that mobile technology has advanced rapidly and the convergence of such technologies and financial services has evolved over time. As a result, consumers have rich experiences using cell phone and Internet, which largely reduces the effect of self-efficacy.

Although perceived credibility of the internet banking could also contribute to the increased in internet banking intention (Wang, Lin & Tang, 2003; Ramayah et al., 2002) our findings do not support this relationship. The probable reason for this conflicting result could be due to the lack of trust on Internet banking as well as the concern for privacy and security issues have been escalating in Malaysia (Ahmad Nasir Mohd Zin & Zahri Yunos, 2005;Ilham et al., 2012).

Perceived ease of use appeared to have no significant effects on intention to use Internet banking. This is inconsistent with the results of some prior studies (Chau, 1996;

FIGURE 2: Hypothesis Testing Results
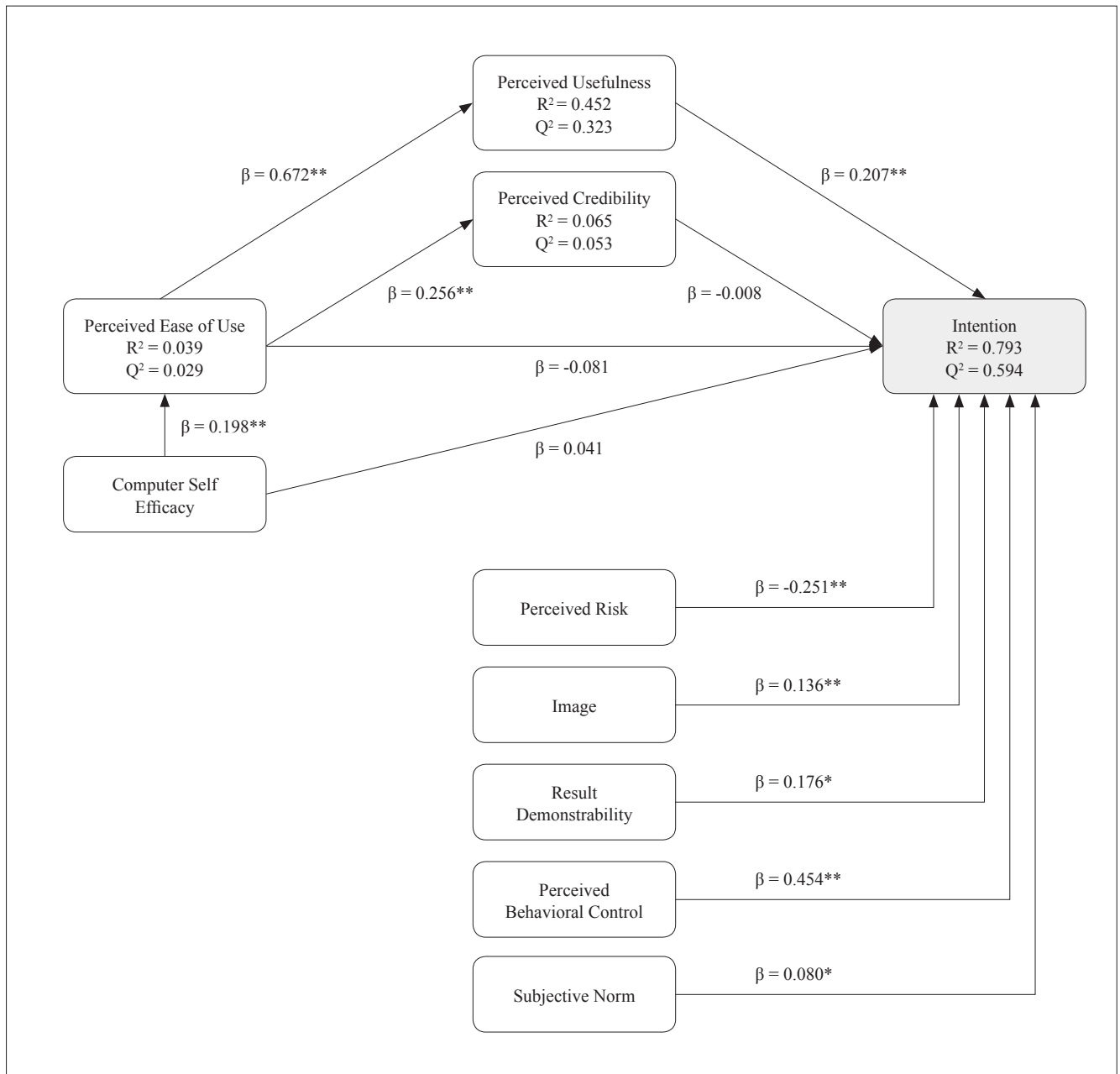
Moon and Kim, 2001; Nitish et al., 2004). According to Chau and Hu (2002) this inconsistency is worth noting, because it shows significant differences between users who are technology savvy and the typical users commonly examined in previous studies (most of the participants of this study noted that they have good computer skills). This result is in line with the findings of Malathi and Rohani (2011) on the nature of an engineering course that requires participants to be exposed to more complex technologies than just e-books. Their findings show significant differences between users who are technology savvy and typical less technologically inclined users. Hence, perceived ease of use does not influence the intention to use Internet banking.

The contributions of this research can be appreciated from two perspectives: theoretical and practical. The theory used in this research was integration of Technology Acceptance Model (TAM) (Davis, 1989), Theory of Planned Behaviour (TPB) (Ajzen, 1991) and Social Cognitive Theory (SCT) (Bandura, 1986). The model in this study develops the rationale for these causal relationships based on combined theoretical backgrounds and incorporates factors that affecting adoption of Internet banking.

The results from this study would be beneficial to bank policy makers and to other researches that has an interest on this area of study. An understanding of the factors identified in this study allows bank managers to direct efforts and resources in the most effective and efficient way to increase bank business in the long run and encourage their bank customers' to adopt Internet banking. As on-line banking in India still at its infancy stage, the understanding of the determinants of intention to use internet is still very limited. Thus, the understanding of the factors which might influence the intention to use on-line banking can help in making on-line banking the main distribution channel in the future.

There are however several limitations to this research. First, the sample was drawn from the Haryana, Punjab and NCR region only and may not represent the whole population. Second, there were a limited number of respondents due to time constraints. The total amount of respondents was 150 people and a larger number of respondents would reflect a more accurate study. Therefore, the sample may not be a true representation of the beliefs and intention of the Indian population towards using Internet banking. Furthermore, the pool of respondents may not have prior experience in on-line banking. Again this may not be a true representation of the entire population. Third, online banking in India is still in its infancy with a shortage of information on its use in the time of the research. Thus, the relevant literature inevitably comes from other countries such as Singapore, Hong Kong and Taiwan; such literature may not accurately describe the phenomenon and situation in India.

Since there are very few similar researches done, this study provides a guideline for future research to better understand Internet banking. Future researches can be performed in the similar area of interest to understand Internet banking adoption covering a larger collection of data for more accurate results and wider geographical area. Besides, researches can be conducted to examine users' satisfaction on using Internet banking compared to traditional banking. Banks expect to see a surge in Internet banking usage in the future. Therefore, it is definitely worthwhile to conduct and intensify future research in this area.

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