Customer Attitude and Factors Influencing Users Acceptance of E-Banking in J&K

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ABSTRACT: *Financial liberalization and technology revolution have allowed the developments of new and more efficient delivery and processing channels as well as more innovative products and services in banking industry. Banking institutions are facing competition not only from each other but also from non - bank financial intermediaries as well as from alternative sources of financing. Another strategic challenge facing banking institutions today is the growing and changing needs and expectations of consumers in tandem with increased education levels and growing wealth. Consumers are becoming increasingly discerning and have become more involved in their financial decisions. The world is changing at a staggering rate and technology is considered to be the key driver for these changes around us. An analysis of technology and its uses show that it has permeated in almost every aspect of our life. Many activities are handled electronically due to the acceptance of information technology at home as well as at workplace. Slowly but steadily, the Indian customer is moving towards the internet banking. The ATM and the Net transactions are becoming popular. This paper investigates the factors which are affecting the acceptance of e- banking services among the customers. An initial conceptualization was developed from mainstream literature to be validated through empirical research. The conceptualization was then tested with primary quantitative survey data collected from students studying in different colleges/Universities of Kashmir Division of state J&K. Correlation and regression analysis and Sign. two-tailed were used to test the key hypothesis derived from literature.*

KEYWORDS: *E-Banking, Customer Attitude, Technology Acceptance Model, Perceived Use, Perceived Ease of Use, Perceived Credibility.*

I. INTRODUCTION

One of the most recent channels of distribution to be used in the financial services organizations is electronic banking; this method was established in the mid1990s, thereafter steadily becoming more important (Allen et al, 2001). The term electronic banking refers to "the provision of information or services by a bank to its customers, via a computer or television"(Allen et al, 2001). A more developed service is one that provides customers with the opportunity to gain access to their accounts and execute transactions or to buy product online via the internet (Daniel, 1999). Some studies have examined the issues on the evolution of e-banking (Sohail and Shanmugham, 2003) and investigated the success factors in various e-delivery channels in banking scenario (Ong and Cheng, 2003). Some have investigated customer preferences of e-banking (Suganthi et al., 2001; Sohail and Shanmugham, 2003).The advents of the Internet, electronic commerce, application communication technology and users' response to this technology have opened opportunities for many businesses. In the present scenario online services have become an added feature in the banking sector. Online banking or Internet banking allows customers to conductfinancial transactions on a secure website. Credit goes to internet that provided ultimate ease tothe customers at their door step. Online banking allows people to perform all the banking relatedactivities such as money transfer, past transactional information, cash withdrawals anddeposits, etc. with just one mouse click. Clients can easily check the account balance every dayjust by visiting their bank website. This providesthe place and time utility to people provided thatone has Internet access (Ezeoha, 2005).Singapore ranks third, after Korea and Australia,in Internet banking usage, according to an ACNielsen survey on customer banking habits andpreferences. Singapore has one of the highestInternet penetration rates worldwide, all majorSingaporean banks provide Internet bankingplatforms and many also provide host-to-hostcapabilities to link up to companies' back-officeoperations for file transfers. The authorities inSingapore have been proactive in recognizingthe role of the Internet as a delivery channel andhave strongly promoted Internet banking. Now,with the wide application of Internet banking inthe run of people daily life, the focus has movedto enhancing the length and breadth of the scope of services offered via electronic channels. Regular reviews and active participation of Singaporean banks, regulators and other government bodies in the Internet banking issues like enhancing online security has become a major trend in the banking sector. (Lallmahamood, 2007). The banks effort and huge investment in electronic services can be regarded as measures in order to meet up with the global standard, reduce transaction cost well as providing better services to customersand promoting efficiency. While e-banking services are numerous in number, there is not enough evidence of its acceptance among

consumers. However, it is evident that customers' acceptance and confidence in the system need to be validated as e-banking has fully gained prominence in Singapore, as This study aims at examining the factors that may influence users' acceptance of e-banking. The impact of perceived usefulness (PU), perceived ease of use (PEOU), perceived credibility (PC) and customer attitude (CA) is sought to determine the level of users' acceptance of the various e-banking services. This study adopts the Technology Acceptance Model (TAM) as the instrument to determine the factors influencing the acceptance of e-banking by customers. TAM is a theoretical model that iscommonly used to evaluate the impact of various factors such as system characteristics on user acceptance (Davis 1986).

Objectives of the Study
The main objectives of the study are as follows:
1) To incorporate Technology Acceptance Model (TAM) in the analysis of the factors influencing users' acceptance of E-Banking in J&K.
2) To study the influence of TAM model on Perceived usefulness (PU) Perceived ease of use (PEOU) Perceived credibility (PC) as well as Customer attitude (CA) as the fundamental determinants.

Literature Review
Technology Acceptance Model (TAM)
　　　Based on the theory of reasoned Action, Davis (1986) developed the Technology Acceptance Model which deals more specifically with the prediction of the acceptability of an information system. The purpose of this model is to predict the acceptability of a tool and to identify the modifications which must be brought to the system in order to make it acceptable to users. This model suggests that the acceptability of an information system is determined by two main factors: perceived usefulness and perceived ease of use.

　　　Perceived usefulness is defined as being the degree to which a person believes that the use of a system will improve his performance. Perceived ease of use refers to the degree to which a person believes that the use of a system will be effortless. Several factorial analyses demonstrated that perceived usefulness and perceived ease of use can be considered as two different dimensions (Hauser et Shugan, 1980 ;Larcker et Lessig, 1980 ; Swanson, 1987).

　　　As demonstrated in the theory of reasoned Action, the Technology Acceptance Model postulates that the use of an information system is determined by the behavioral intention, but on the other hand, that the behavioral intention is determined by the person's attitude towards the use of the system and also by his perception of its utility. According to Davis, the attitude of an individual is not the only factor that determines his use of a system, but is also based on the impact which it may have on his performance. Therefore, even if an employee does not welcome an information system, the probability that he will use it is high if he perceives that the system will improve his performance at work. Besides, the Technology Acceptance Model hypothesizes a direct link between perceived usefulness and perceived ease of use. With two systems offering the same features, a user will find more useful the one that he finds easier to use (Dillon and Morris, on 1996).
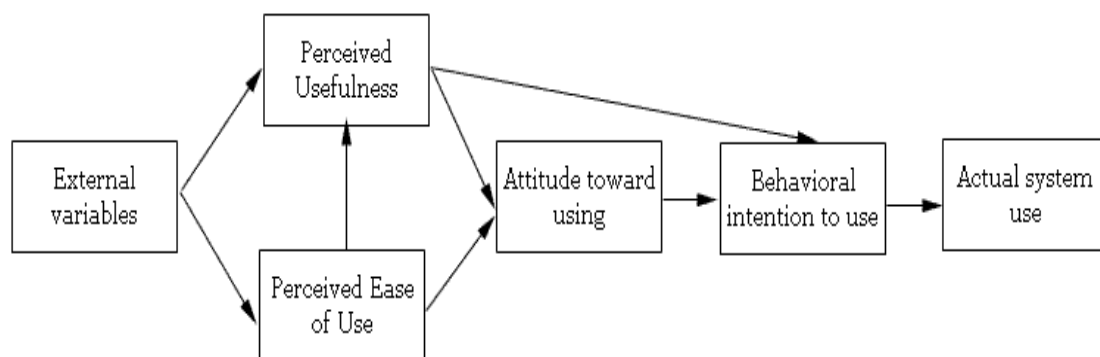
Technology Acceptance Model from Davis, Bagozzi et Warshaw (1989)

According to Davis (1986) perceived ease of use also influences in a significant way the attitude of an individual through two main mechanisms: self-efficacy and instrumentality. Self-efficacy is a concept developed by Bandura (1982) which explains that the more a system is easy to use, the greater should be the user's sense of efficacy. Moreover, a tool that is easy to use will make the user feel that he has a control over what he is doing (Lepper on 1985). Efficacy is one of the main factors underlying intrinsic motivation (Bandura on 1982; Lepper on 1985) and it is what illustrates here the direct link between perceived ease of use and attitude. Perceived ease of use can also contribute in an instrumental way in improving a person's performance. Due to

the fact that the user will have to deploy less efforts with a tool that is easy to use, he will be able to spare efforts to accomplish other tasks.(Davis, on 1986).

It is however interesting to note that the research presented by Davis (1989) to validate his model, demonstrates that the link between the intention to use an information system and perceived usefulness is stronger than perceived ease of use. According to this model, we can therefore expect that the factor which influences the most a user is the perceived usefulness of a tool.

Although the intial TAM model was empirically validated, it explained only a fraction of the variance of the outcome variable, IT usage (from 4% to 45%, according to McFarland and Hamilton, 2006). Therefore, many authors have refined the initial model, trying to find the latent factors underlying perceived ease of use and perceived usefulness. in TAM2, Venkatesh& Davis (2000) showed that social influence processes (subjective norm, voluntarity, image) and cognitive instrumental processes (job relevance, output quality, result demontrability) affected perceived usefulness and intention to use. A notable refinment of the TAM model is proposed by (McFarland and Hamilton, 2006). Their model assumes that 6 contextual variables (prior experience, other's use, computer anxiety, system quality, task structure, and organizational support) affect the dependant variable system usage through 3 mediating variables (computer efficacy, perceived ease of use and perceived usefulness). The model also postulates direct relations between the external variables and system usage (see Figure 2)and not only mediation through perceived ease of use and perceived usefulness.

Perceived Usefulness (PU)

The importance of perceived usefulness hasbeen widely recognised in the field of e-banking(Davis et al., 1989; Polatoglu and Ekin, 2001).According to the previous research usefulness isthe subjective probability that the application ofa new technology would improve the way a usercould complete a given task. There is also broadresearch that presents evidence of the significantimpact of perceived usefulness on useracceptance of e-banking (Davis et al., 1989;Venkatesh and Davis, 1996, 2000; Hu et al.,1999, Agarwal and Prasad, 1999; Venkatesh,1999, 2000,). Davis (1989) defined perceivedusefulness as "the degree to which a personbelieves that using a particular system wouldenhance his or her job performance". In thewords of Davis, Bagozzi, and Warshaw (1992),perceived usefulness refers to consumers'perceptions regarding the outcome of theexperience. Perceivedusefulness is defined asthe individual's perception that the applicationof the new technology will enhance or improvehis or her performance (Davis, 1993).Adams et al. (1992) and Davis et al. (1989)reported that user acceptance of computersystems is driven to a large extent by perceivedusefulness. In addition,athwick, Rigdon, andMalhotra (2001), defined perceived usefulnessas the extent to which a person deems that aparticular system will boost his or her job recital.In the same way, perceived usefulness is definedas consumer's perception of functional andutilitarian dimensions (Childers, Carr, Peck, &Carson, 2001). Moreover, Pikkarainen et al.,(2004) previously found that perceivedusefulness had a direct effect on internet bankingusage. People use online banking servicesbecause they find that using banking web sitesenhances the productivity of their bankingactivities and that they are useful for performingfinancial transactions. However, according toGerrard and Cunningham (2003), the perceivedusefulness depends on the banking services suchas checking bank balances, applying for a loan,paying utility bills, transferring money abroad,and obtaining information on mutual funds.Hence, this study will use Davis' definition(1993) of perceived usefulness.There are few broad empirical researchFindings on the impact of the perceivedusefulness on users' acceptance of e-banking(Davis et al., 1989; Agarwal and Prasad, 1999;Venkatesh, 1999, 2000). The proposedrelationship between perceived usefulness andbehavioural intention is based on the theoreticalargument by Wang et al. (2003), and Guritingand Nelson (2006). Wang et al. (2003)discovered that perceived usefulness effectTaiwan people's intentions to adopt e-bankingsystems significantly. In other words, perceivedusefulness has a significant relation withbehavioural intention. Hence, the greater theperceived usefulness of using e-bankingservices, the more likely that e-banking will beaccepted by users (Polatoglu and Ekin, 2001).Furthermore, TAM also supports a prior studyon the consumer acceptance of technologies thatshowed consistent positive relationship betweenusefulness and the acceptance of various types ofinteractive technologies, ranging from computersoftware to email (Davis et al., 1989).Meanwhile, Venkatesh and Davis (2000) haveadopted TAM to explain how perceivedusefulness affect the user acceptance of ebankingsystems. Additionally, Bhattacherjee(2002) claimed that one's willingness to transactwith an electronic firm might be predicted byperceived usefulness. Therefore, a recent studyby Pikkarainen et al., (2004) constructed TAMin Finland and found that perceived usefulness isthe main factor that influences customeracceptance of e-banking. Moutinho and Smith(2002), who studied the behaviour of establishedbank customers in UK, concluded thatusefulness is one of the important expectationsfor user acceptance.

Perceived Ease of Use (PEOU)

The term "perceived ease of use" is definedas the "degree to which a person believes thatusing a particular system would be free ofeffort" (Davis, 1989). According to TAM,perceived ease of use is a major factor thataffects acceptance of information system (Daviset al., 1989).Rogers (1962) has stated thatperceived

ease of use represents the degree towhich an innovative technology is perceived notto be difficult to learn, understand and operate.Rogers (1983) defined PEOU as customerperceptions towards a new product is as better asits substitute. On the other hand, Igbaria Guimaraes and Davis (1995) believe that ease ofuse refers to their perceptions regarding theprocess leading to the final e-banking outcome.In simple terms the ease of use refers to howeasy is the e-banking used (Gefen and Straub,2000). Hence, a technology application which isperceived to be easier to use as compared toothers will enhance the user acceptance.TAM posits that perceived ease of use is oneof the major determinants of IS acceptance.Consult (2002) affirmed that the drivers ofgrowth in e-banking would be determined by theperceived ease of use which is a combination ofconvenience provided to those with easy internetaccess, the availability of secure, high standarde-banking functionality, and the necessity ofbanking services. Daniel (1999) pointed out theperceived ease of use as one's experience of howconveniently a technology can be used.Venkatesh (2000) stated that with increasingdirect experience with the target systemindividuals adjust their system-specific ease ofuse to reflect their interaction with the system.He added that perceived ease of use in the caseof e-banking can be quoted as savings of time,money, and convenience. As a result, the currentstudy will utilize the definition of Davis (1989)to define perceived ease of use.

Relationship between Perceived Ease of Use(PEOU) and User Acceptance of E-banking
The significant impact of perceived ease ofuse on usage intention from the precedingresearch provided evidence that it is eitherdirectly or indirectly through its effect onperceived usefulness (Davis et al., 1989;Agarwal and Prasad, 1999; Hu et al., 1999).Moon and Kim, (2001) said that perceived easeof use would have a positive effect on users'perception of credibility in their interaction withthe e-banking systems. Similarly, Chin andGopal, (1995) affirmed that higher perceivedease to use internet will favourably influence theuser acceptance of e-banking. Cooper (1997)stated that ease of use as one of the threeimportant characteristics in user acceptance ofinnovative service.According to TAM, the easier a technologyis to use, the most useful it can be and it willdirectly influence the user acceptance(Venkatesh, 2000). Earlier studies have shownthat there is a positive relationship betweenperceived ease of use and usage intention.(Ramayah et al., 2003; Wang et al., 2003; Luarnand Lin, 2005). In particular, Guriting andNdubisi (2006) found that perceived ease of usehad a significant positive effect on useracceptance of e-banking. Ramayah et al. (2003)showed that perceived ease of use has positiveinfluence on the willingness to accept and use e-banking.For instance, bank customers are likelyto accept e-banking when they find it easy to usethe technology. Bhattacherjee (2002) found thatone's willingness to adopt with an electronicfirm might be predicted by additional variablessuch as perceived ease of use. Pikkarainen et al.(2004) applied the traditional TAM in Finlandand found that system use is determined byperceived ease of use, which are related toattitude and thereby to actual adaptation.

Perceived Credibility (PC)
Perceived Credibility is "the belief that thepromise of another can be relied upon evenunder unforeseen circumstances" (Suh and Han,2002). Particularly, perceived credibility prior toservice subscription has a significant impact oncustomer acceptance, since customers generallystay away from a service provider whom they donot trust (Reichheld and Schefter, 2000).According to Jacoby and Kaplan (1972),perceived credibility refers to a user feels thecertainty and pleasant consequences of using anelectronic application service, when there is nofinancial risk, physical risk, functional risk,social risk, time-loss risk, opportunity cost risk,and information risk. Besides, Wang et al.(2003) claims the security and privacy are twoimportant dimensions in perceived credibility.Consequently, perceived credibility is used as anew construct to reveal the privacy and securityconcerns in the usage intention of e-banking (Baand Pavlou, 2002). In the context of e-banking,perceived credibility refers to the security andreliability of transactions over the Internet(Goldfinger, 2001). Moreover, Ramayah andLing (2002) found that Internet banking users'concern about security as the use of Internetbanking is limited to accounts enquiry only dueto the credibility concern. Suganthi et al. (2001),Daniel (1999) discovered that security concern isan important affecting user acceptance oradoption of new innovative and interactivetechnology. Therefore, perceived security isdefined as the extent to which one believes thatthe e-banking is secure for transmitting sensitiveinformation (Moon & Kim, 2001).Doney and Cannon (1997) ascertained theperceived credibility as trust. The perceivedcredibility is the extent to which one partnerbelieves that the other partner has the requiredexpertise to perform the job effectively andreliably (Ganesan, 1994). Zaheer, McEvily, andPerrone, (1998) stated that one's trustworthinessor credibility in an electronic bank might not bederived only from prior familiarity with thebank, but also from calculative, institutional andidentification and beliefs about the bank. Thisstudy developed perceived credibility as a newTAM factor to explain the user's security,privacy and financial risk concerns in the useracceptance of e-banking using technologyacceptance model (TAM) as a conceptualframework. Hence, the researcher can exploit thedefinition of Jacoby and Kaplan (1972) to defineperceived credibility based on the previousstudies on the topic.

Relationship between Perceived Credibility (PC)and User Acceptance of E-banking

According to Howcroft et al. (2002),perceived credibility was found to have arelationship with the user acceptance. It isgenerally recognised that perceived credibilityplays a positive role in individuals' decision toadopt a new technology including e-banking(Walker et al., 2000). Specifically, Wang et al.(2003) claimed that perceived credibility had thehighest significant positive effect on behaviouralintention to accept and use the e-banking.Simultaneously, Pavlou (2001) also suggestedthat perceived credibility has the superior abilityto predict and reflect he users' intention toaccept and adopt e-banking. Furthermore, theprevious study of Featherman and Pavlou (2002)integrates Perceived Credibility Theory andTAM (Davis et al., 1989) to identify a researchmodel where perceived credibility has positiverelation with user acceptance to e-banking.Apart from that, the level of credibility hasbeen identified as an important characteristicfrom a consumer's perspective in the acceptanceof e-banking (Suh and Han, 2002). In the study of Singapore consumers, Gerrard andCunningham (2003) found security concerns ofe-banking high in both adopters and nonadopters.In addition, the positive relationshipbetween security and privacy towards e-bankingwas empirically tested by Poon (2008).Furthermore, Tan and Teo (2000) and Black etal., (2002) found that credibility perceptionassociated with transaction security is positivelyrelated to willingness to make internetadaptations. Nevertheless, Howcroft et al. (2002)found that security concerns were an obstacle tothe adaptation of e-banking among Australianconsumers.

Customer Attitude (CA)

It has been noted that customer's attitudetowards acceptance of a new information systemhave a critical impact on successful informationsystem adoption (Davis, 1989; Venkatesh andDavis, 1996). TAM has been tested and found itsability to clarify attitude towards using aninformation system such as e-banking (Adams etal., 1992; Davis, 1993). Attitude toward useracceptance of technology is defined as anindividual's overall affective reaction (liking,enjoyment, joy, and pleasure) to use atechnology (Davis, 1989; Taylor and Todd,1995). Davis (1993) put forward that consumersattitude towards e-banking is firstly associatedwith the direct possessions of relevant e-banking*Sh.Singh*74features. E-banking features can be consumer'sattitude of functional and utilitarian dimensions,like ease of use and usefulness (Childers et al.,2001).Additionally, Howcroft et al. (2002) obtaineda better understanding of consumer attitudetowards e-banking services. More explicitly,Howcroft et al. (2002) describes that usersattitude towards e-banking is the reflection of anumber of factors such as technology, security,convenience, newtechnology experience, priorpersonal banking experience etc. On thecontrary, Pikkarainen et al. (2004) defined thatcustomers' attitudes can be measured bycompatibility preference for self-service,technology, lifestyle as well as the bank branchservices. In terms of demographic attitudes,consistent with the previous definition, Singh(2004) acknowledged that attitude towards ebankingis the characteristics of typical users,which is influenced by age and gender but notwith educational level. Thus, the current studywill employ the definition of Taylor and Todd(1995) to define customer attitude.

Relationship between Customer Attitude and UserAcceptance of E-banking

Davis (1993) clarify that TAM suggestsone's feeling or attitude towards using atechnology represent the major determinants todecide whether he or she will accept and use thesystem. Particularly, a user's overall positive ornegative feelings (it is good or bad to use aservice) and feelings of joy or displeasure (theinnovation makes tasks more interesting ordifficult) significantly affect his or her desire toaccept a new technology in the near future(Venkatesh et. al., 2003). On the other hand,Gerrard and Cunningham (2003) describes thatacceptance intention is related to the level oftrust, interpersonal and institutional which haspositive relationship to customers' attitude.By understanding the determinants ofconsumers' attitude, Bobbitt and Dabholkar(2001) concurs that this attitude has a direct andpositive effect on consumers' intentions to useand to accept the new system. At the same year,Lee and Turban (2001) argued that there is astrong relationship between customers' attitudeand user acceptance of e-banking. Furthermore,a research done by Laforet and Li (2005) statedthat consumer attitude and behaviour wereexamined with regard to Chinese acceptance ofnew technology-based banking services.Nevertheless, factors influencing the useracceptance of new information technology arelikely to differ with the technology andcustomers' attitude.In a nutshell, on the basis of the TechnologyAcceptance Model (TAM) and e-bankingstudies, the present study will develop twofundamental variables perceived usefulness(PU), and perceived ease of use (PEOU) in thelight of TAM along with the addition of anothertwo variables; perceived credibility (PC) andcustomer attitude (CA) to investigate the factorsinfluencing e-banking in Singapore. Specifically,this study will concur Davis (1993)'s PUdefinition as one's perception that usingtechnology such as e-banking will improve in hisor her performance. Besides this, the currentstudy will also utilise Davis (1989)'s definitionto claim that e-banking is perceived to be ease ofuse if the particular system is free of effort to usewith. Meanwhile, this study will also capture thedefinition of Jacoby and Kaplan (1972) todeclare that e-banking user will feel certaintyand pleasant when there is no risk, any securityand privacy concern. Furthermore, the presentstudy will acquire Taylor and Todd's (1995)definition to claim positive attitude and feelingtowards a technology that will affect the useracceptance of e-banking. So the

aim of thepresent study is to carry out the relationshipbetween PU, PEOU, PC, CA and the useracceptance of e-banking.

II. HYPOTHESIS FORMULATION

Hypothesis 1
H1: Perceived usefulness (PU) has a positiveeffect on user acceptance of e-banking.

Hypothesis 2
H2: Perceived ease of use (PEOU) has a positiveeffect on user acceptance of e-banking.

Hypothesis 3
H3: Customer attitude (CA) has a positive effect on user acceptance of e-banking.

III. RESEARCH METHOD

The present study is based on twofundamental variables; perceived usefulness(PU) and perceived ease of use (PEOU) incontext of TAM. Davis (1993) definition of thePU stated that using the new technology (for instance e-banking) will improve his or herperformance. PEOU is developed in this studybecause Cooper (1997) found that ease of use isone of the three important characteristics for useracceptance of innovative service. Additionally,this study added perceived credibility (PC) andcustomer attitude (CA) as another twoindependent variables as Ba and Pavlou (2002)claimed that perceived credibility regardingsecurity and privacy concerns is used as a newconstruct to test the user acceptance of e-bankingwhereas Taylor and Todd (1995) found thatperson's attitude and feeling may affect theacceptance of the technology such as e-banking.The independent variables of this study areperceived usefulness (PU), perceived ease of use(PEOU), perceived credibility (PC) andcustomer attitude (CA). These independentvariables may be the determinants that influencethe user acceptance of e-banking. Therefore, thedependent variable for the study is the useracceptance of e-banking. Consequently, thispaper will measure and review the effect of theindependent variables towards the dependentvariables in the context of customers' perceptionon e-banking.

Sample Size and Target Respondent
The target respondent for this study is set at 250 as sample size. Educational institutionsoperating in Kashmir were treated as thepopulation of this study. Students are selected asthe respondents because they are more exposed to e-banking usage in Kashmir.

Sampling Method
Non-Probability Convenience sampling is selected as the sampling method in this research.
Total 300 questionnaires were distributed andcollected for this study. Out of this, 50respondents were found disqualification in thesurvey after filtering. All the questionnaireswere distributed to the respondents through self-administeredapproach. Questionnaires were completed anonymously by the respondent's andreturned back to the researcher. To be assumed,all theundergraduates that utilize e-bankingservices are targeted in this research.

Procedure and Measures
The questionnaire used in this research wasadopted from the consumer acceptance of onlinebanking (Pikkarainen et al., 2004). Questionnairewas slightly modified in view of the variables ofthe study. It had two sections, one for
Demographical information and the other tomeasure consumer acceptance of online banking.The responses for questions made use of circlinganswers and at the end space was given forrecording their personal comments. Therespondents were required to select theappropriate number given against each statementbest explaining their attitude.
Demographic section was based on tick boxes. To measureperceived usefulness, total of 10 items weregiven, for quality of the internet connection itwas two, while to measure security and privacyfive items were given. All the items weremeasured based on five point likert scale rangingfrom 1. Strongly disagree, to 5.Strongly agree,developed by Renis Likert. Moreover, a fivepoint likert scale ranging from 1.Almost never,to 5.Almost always was also used to measureacceptance of online banking on the basis of fiveitems. These scales were also used in previousTAM related researches (Igbaria et al., 1995;Teo et al., 1999; Pikkarainen et al., 2004).

IV. RESULTS AND DISCUSSION

Analysis of Frequency Distribution
Demographic profile of respondents for thisresearch includes gender and age group.
The following table1represents the demographic characteristics of therespondents

Table 1.1: Demographic characteristics

Variable Classification of Variables Frequency Percentage (%)

Gender	Total (250)	100%
Male	126	50.4
Female	124	49.6

Table 1.2 Age Variables Frequency Percentage (%)

Age	Total (250)	100%
18-21	108	43.2
22-25	136	54.4
25>	6	2.4

Source: Primary Data

Gender

Table 1 shows the frequency and percentageof gender which consists of 126 male (50.4%)and 124 female (49.6%) out of the totalrespondents of 250. There is very slightdifference between male and female respondentswhich is 0.8%. It indicates that the sampleconsisted of an almost equal number of male andfemale respondents.

Age

The university/institute students are the targetrespondents in this study. Therefore, according to thetable 1, the portion of number for three age groupsincludes 18-21, 22-25, and 25 above. A large pool ofrespondents giving a percentage of 54.4% falls in theage group between 22-25 years old followed by theage group 18-21 which consists of 43.2%. The lowestpercentage of the respondents' age group is 25 abovewhich represent 2.4%. The reason why the percentageof age group 25 above remains the lowest is becausemost of the university students complete their degreecourses on age of 22, 23, and 24yrs. which is under age of 25yrs.

Type of E-banking Usage

Table 2: Type of E-banking usage

E-banking Services Frequency Percentage (%)

Service	Total (250)	Percentage 100%
ATM	128	51.2
Internet Banking	98	39.2
Mobile Banking	24	**9.6**
Others	**0**	**0**

Source: Analysis of data collected

Table 2 illustrates the type of e-banking services used by the respondents. From the table, there are 128 respondents who use ATM usage the most which indicates 51.2%. The next goes to the internet banking which covers 98

Respondents and consists 39.2%. Mobile banking remain 9.6% and other channels remain zero and this shows that the university/institute students nowadays use more on internet banking and ATM services rather than mobile banking as it is still in the baby stage in Jammu and Kashmir.

Table 3: Frequency of using E-banking Frequency of using Internet Frequency Percentage (%)

Usage	Frequency	Percentage 100%
A few times a year	26	10.4
About once a month	54	21.6
A few times a month	112	44.8
A few times a week	52	20.8
About once a day	6	2.4

Source: Analysis of data collected

Frequency of Using E-banking

In relation to the frequency of using e-banking, 112 of the total respondents or 55% access to e-banking services a few times a month, 54 respondents or 21.6% employ e-banking services about once a month, 52 respondents or 20.8% use e-banking services about a few times a week, while 26 respondents or 10.4% make use of e-banking services in a few times a year and only 6 respondents or 2.4% access to e-banking services about once a day. It

shows that very tiny proportion of respondents use e-banking services on daily basis instead of several times a month (table 3).

Table 4: Reliability results on determinants affecting E-banking acceptance
Independent Variables Cronbach's Alpha

Perceived Usefulness (PU)	0.845
Perceived Ease of Use (PEOU)	0.887
Perceived Credibility (PC)	0.823
Customer Attitude (CA)	0.862

Dependent Variable

User Acceptance (UA) of E-banking	0.906

Source: Analysis of data collected

Ensuring Reliability

The perceived attributes hypothesized to be relevant to user acceptance of e-banking services are perceived usefulness (PU), perceived ease of use (PEOU), perceived credibility (PC), and customer attitude (CA). In addition to conducting the pilot study to ensure that the respondents would understand the questions, standard scale reliability tests (Cronbach's alpha coefficients) were performed for the measures used in the questionnaire. This was to ensure that each scale reflected consistently the construct it was measuring. Table 4 shows that the overall Cronbach's alpha coefficients for all measures is above than the critical threshold of 0.7 as suggested by Nunnally (1978). So, the reliability test shows that independent and dependent measures demonstrated sufficient reliability in terms of the Cronbach's alpha as shown in table 4.

Correlation Analysis

Table 5: Correlation results on PU

Test	UA	PU	PU1	PU2	PU3	PU4	PU5
Pearson Correlation	1	0.565**	0.423**	0.525**	0.412**	0.453**	0.568**
Sign. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
N	250	250	250	250	250	250	250

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Analysis of data collected

Perceived Usefulness (PU) Correlation Test

From table 5, the results signified that the Pearson Correlation r-value = 0.655 and p-value = 0.00. This implies that the independent variable, PU is significantly associated with the dependent variable, UA. Meanwhile, the strength of the associations between PU and UA is strong as r = 0.565. Similarly, the coefficient range of attribute PU1 is (r = 0.423), PU2 (r = 0.525), PU3 (r = 0.412), PU4 (r = 0.453) and PU5 (r = 0.568) indicates moderate association between perceived usefulness and user acceptance of e-banking. Pearson's correlation for all the dimensions is positively associated as the value r for all the questions are positive. Therefore, the variable perceived usefulness is significantly and positively correlated with the dependent variable user acceptance (r = 0.655, p < 0.01).

Table 6: Correlation results on PEOU

Test	UA	PEOU	PEOU1	PEOU2	PEOU3	PEOU4	PEOU5
Pearson Correlation	1	0.579**	0.485**	0.487**	0.455**	0.509**	0.505**
Sign. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
N	250	250	250	250	250	250	250

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Analysis of data collected

Perceived Ease of Use (PEOU) Correlation Test

Table 6 shows that the correlation coefficient between perceived ease of use and user acceptance of e-banking falls between +0.41 to +0.60 as (r = 0.579) and (p-value = 0.00), indicates that the range falls on a significant moderate association. Besides, the coefficient range of all of the five attributes also consider to be in moderate association as PEOU 1 falls on (r = 0.485), PEOU2 (r = 0.487), PEOU3 (r = 0.455), PEOU4 (r = 0.509) and PEOU5 (r = 0.505). Pearson's correlation for all the dimensions is positively associated as the value r for all the variables are positive. As a result, perceived ease of use is found significantly and positively correlated with the user acceptance (r = 0.579, p < 0.01).

Table 7: Correlation results on PC

	UA	PC	PC1	PC2	PC3	PC4	PC5
Pearson Correlation	1	0. 465**	0.342**	0.410**	0.351**	0.335**	0.365**
Sign. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
N	250	250	250	250	250	250	250

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Analysis of data collected

Perceived Credibility (PC) Correlation Test

Based on table 7, the results signified that thePearson Correlation r-value = 0.655 and p-value= 0.00. This implies that the independentvariable (PC) is significant and moderatelyassociated with the dependent variable (UA).

However, the coefficient range of attribute PC1is (r = 0.342), PC3 (r = 0.351), PC4 (r = 0.335),and PU5 (r = 0.365) indicates very weakassociation between perceived usefulness anduser acceptance of e-banking. Moreover, the

attribute PC2 falls on (r = 0.410) indicates amoderate association. Pearson's correlation forall the dimensions is positively associated as thevalue r for all the questions are positive. Thisanalysis reveals that perceived credibility issignificantly and positively correlated with thedependent variable user acceptance (r = 0.465,p < 0.01).

Table 8: Correlation Results on CA

	UA	CA	CA1	CA2	CA3	CA4	CA5
Pearson Correlation	1	0.775**	0.560**	0.624**	0.574**	0.714**	0.678**
Sign. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
N	250	250	250	250	250	250	250

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Analysis of data collected

Customer Attitude (CA) Correlation Test

Table 8 depicts that the correlationcoefficient between customer attitude and useracceptance of e-banking falls between +0.61 and+0.80 as (r = 0.775) and (p-value = 0.00),indicates that the range falls on a significantstrong association. Besides, the coefficient rangeof CA2, CA4 and CA5 also considers to be instrong association as coefficient range falls on (r= 0.624), (r = 0.714), (r = 0.678) respectively.Besides, CA1 and CA3 has the coefficient rangefalls on +0.41 to +0.60 where (r = 0.560) and(r = 0.574) respectively, this indicates that thereis a moderate association between the variables.Pearson's correlation for all the dimensions ispositively associated as the value r for all thevariables are positive. Therefore, customer attitudeis found significantly and positively correlatedwith the user acceptance (r = 0.775, p < 0.01).

V. CONCLUSION

Based on the research results, threehypotheses were accepted which makes thestatistic to be reliable since it gave positiveresults. From a theoretical view, the resultspresented contributions to the existing literaturein a number of ways. First, this study makes acontribution to e-banking literature by providinginsights on the determinants that seem toinfluence user acceptance of e-banking serviceamong university students. The result shows thatcustomer attitude (CA), perceived usefulness(PU) and perceived ease of use (PEOU) arecritical factors that affect the user acceptance. Indepth, this study has contributed to all bankingresearchers about the user acceptance of e-banking of the university students nowadays.This study shows that the positive feeling andattitude of user is essential for the e-bankingusage level. However, the positive feeling suchas enjoyment and excitement is related toefficiency, effectiveness and convenience whichfalls on the variables PU and PEOU.Apart from that, perceived credibility (PC)was found to have a relatively weak relationshipwith the user acceptance of e-banking serviceand this is inconsistent to many banking studiesconducted during the past years such as Poon(2008), Yuen and Yeow (2009), Roca, Garciaand Vega (2009), as the researchers claimed thatPC has a significant effect on e-bankingacceptance. This can be explained with thepositive attitude of a customer that may affectthe trust and thus reduce perceived credibility(Cho et al. 2001). Meanwhile, this study alsocontributes to the technology acceptanceliterature as the results shows that PU and PEOUhave the effect on technology acceptance (Davis,1989). Furthermore, this study found that bothPU and PEOU have the same influential level inexplaining technology. Most importantly, thisstudy reveals to all e-banking researchers thatthe CA is the most influential factor to determinethe user acceptance. Further, this study showsthat CA is in line with the PU and PEOU as Teoet al. (1999) argue that enjoyment is related tothe usefulness and ease of use.Besides, the results of the study also providebanking sector information about the planning ofe-banking web sites and service selection. In theplanning and development of e-banking services,software developers should pay attention interms of the user friendliness and informativecontent that is above all perceived usefulnessand perceived ease of use, as this will affect thecustomer attitude toward acceptance amonguniversity students. Finally, this study can betaken as evidence by all the researchers who areworking on e-commerce, e-learning, e-shoppingand etc. to adopt CA into their researchframework as CA is statistically significantvariable among the other variables in the model.This study has provided an impression aboutthe determinants that influence users' intentionto use e-banking in **Kashmir** for future. Thisstudy has developed an extension of the TAMmodel which is incorporating additionalconstructs such as perceived credibility andcustomer attitude.

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