

Attitudinal Model for Technology Acceptance: A Study of Self-Service Technologies in Banks

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Self-service technologies have found an immense use in our daily activities owing to the rapid advancement in technology, paradigm shift in the taste and changing life-style of consumers as well. To provide maximum benefit to their consumers, the firms have been continuously finding alternatives to services which are in consonance with consumer's needs, expectation and life-style besides providing them the satisfaction. Hence, present study is an understanding of factors that lead to the formation of consumer's attitude towards using self-service technology and finally its acceptance. The research paper empirically validates the model that has been developed considering dimensions from different studies which have a mediating effect on user's acceptance of self-service technology. Research paper thus provides a glimpse of altered service delivery channels like internet banking, mobile banking and automated teller machines instead of traditional ways of banking transactions. The study uses dimensions from various studies on information technology, industrial psychology, diffusion, services marketing, consumer adoption of innovation, human resource management etc. Quantitative data (N=30) were collected through self-administrated questionnaire from bank customers. Data are analyzed using logistics and multiple regressions. The results provide effect of the proposed factors where perceived ease of use, intrinsic motivation and perceived behavior control are found to be strong determinants of attitude towards self-service technology. Complexity is found to be strongly but negatively affect attitude towards SST's. Study proposes a model that reveals positive effect of attitude towards technology and self-service on attitude towards SST's. It also reveals positive effect of attitude towards SST's on technology acceptance.

Keyword: Self-service technologies, service delivery channel, industrial psychology, diffusion, adoption of innovation.

Introduction

The concept of Technology Acceptance has been taken from the studies on attitude formation towards technology and its acceptance. Technology acceptance means how users come to accept and use a technology. There are a number of factors on which use of a new technology by any user depends. Based on research on information Technology (IT) acceptance, many such models have been studied which propose different factors of acceptance determinants. Present study reviews Acceptance literature and based on this

literature different models have been compared along with their dimensions. Different models reviewed are the theory of reasoned action, the technology acceptance model, the motivational model, the theory of planned behavior, a model combining the technology acceptance model and the theory of planned behavior, the model of PC utilization, the innovation diffusion theory, and the social cognitive theory. Service delivery therefore has altered its ways owing to advances in technologies thereby allowing service providers to incorporate them in their traditional ways. These

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technologies have been implemented in the service encounter for the customer to use with varying degrees of success. This research aims to focus on the examination of factors that helps the formation of consumer attitudes towards self-service technologies (SSTs) and finally their acceptance.

Bagozzi, Davis and Warshaw opined that since new technologies such as personal computers are complex and an element of uncertainty exists in the minds of decision makers with respect to the successful adoption of them, people form attitudes and intentions toward trying to learn to use the new technology prior to initiating efforts directed at using. Attitudes towards usage and intentions to use may be ill-formed or lacking in conviction or else may occur only after preliminary strivings to learn to use the technology evolve. Thus, actual usage may not be a direct or immediate consequence of such attitudes and intentions.

Current study is intended to consider technology acceptance of banking customers since banking technology has gained special attention in academic studies during the past five years. One can find two fundamental reasons underlying IT-enabled banking development and diffusion. First, banks get notable cost savings by offering technology enabled banking services. It has been proved that online banking channel is the cheapest delivery channel for banking products once established. Second, banks have reduced their branch networks and downsized the number of service staff, which has paved the way to self-service channels as quite many customers felt that branch banking took too much time and effort. Use of Self-service technologies include banking by telephone, Internet and automated teller machines. A conceptual model of the acceptance of SSTs in the banking industry is developed. One of these technologies (ATMs) has been available for many years and is widely adopted, another technology (banking by phone) has been available for many years but has not been widely adopted, and the

third technology (online banking) is relatively new to the marketplace. Data were collected using questionnaires from banking customers and analyzed using statistical techniques.

Therefore, saving of time and cost and freedom from visiting the bank have been found the main reasons underlying banking technology acceptance. Online bankers are the most profitable and wealthiest segment to banks according to several studies done in this field. On this basis, the power of the online channel cannot be underestimated. Online banking offers many benefits to banks as well as customers. However, in global terms the majority of private bankers are still not using online banking channel though scenario has been changing at fast pace. There exist multiple reasons for this. To start with, access to the Internet is mandatory in order to utilize the service. Secondly, new online users need first to learn how to use the service. Furthermore, nonusers often complain that online banking has no social dimension, i.e. you are not served in the way you are in a face-to-face situation at branch. Third, customers have been afraid of security issues. However, this situation is changing as the online banking channel has proven to be safe to use. IT-enabled banking services provide opportunity to improve competitiveness, increase market share, increase precision of services, higher consumer satisfaction and loyalty, and improve productivity. From the consumers' perspective, technology improvement in services has removed repetitive, time consuming tasks, reduced human error, extended access to service-related facilities and provided consumer some information that may be much more expensive to provide on an individual basis. Furthermore, it provides consumers with a superior experience with respect to the interactive flow of information.

This study attempts to understand the role of factor influences as they relate to individual acceptance and usage behavior in organizational implementation of new

information technologies. In this study, analyses of field study data provide evidence of the reliability and validity of the proposed constructs, factor structures and measures. The practical application of these findings may guide marketers to emphasize issues related to certain critical constructs when utilizing SSTs in their service delivery.

Scope of the Study

Banks constitute an important part of the total infrastructure of the national economy. The economic development of the nation is greatly influenced by the functioning of its banking industry. The study is related to find how much a consumer is receptive to It-enabled banking services. The study takes into consideration consumer's attitude towards using various technologically advanced banking services. The banks chosen for the purpose of study are SBI and ICICI bank. Among public sector banks SBI is chosen because it is the leading bank. Similarly out of the private sector banks ICICI is chosen for its being leading bank among private sector banks that have incorporated It-enabled services. The study is confined to these two leading banks of JAMMU region and respondents of the study shall comprise consumers who possess an account in either of these two banks.

Objectives of the Study

After evaluating scope of the study and analyzing parameters of the study, following objectives have been framed:

- 1) To study the factors of Attitude Formation for Technology-enabled services.
- 2) To suggest a model for enhancing Technology acceptance.

Hypothesis

Hypothesis for the present study is:

- H1: A consumer's "Attitude toward Self-Service" has significant effect on "Attitude Towards Self- service technologies.

H2: A consumer's "Attitude toward Technologies" has significant effect on "Attitude Towards Self-service technologies".

H3: A consumer's "Attitude toward Self-Service Technology" has significant effect On "Technology Acceptance".

Review of Literature

The self-service means that a customer can independently finish the service. The definition of self-service is that a customer completes the service activities by himself/herself without direct aid from the service staffs. The factors that influence a customer's intentions to use the self-service are convenience, time-saving, self-control, money saving, self-image, risk, and self-fulfillment. The "attitude" defined by Fishbein & Ajzen (1975) is the positive or negative feelings or affect owned by a person when he/she is engaged in a specific action. In this study, customers' attitude toward the self-service technologies is defined as customers' affect toward the self-service technologies. The Self-Service Technologies (SSTs) mean that consumers themselves acquire necessary products and service via interaction with Internet or machinery rather than conventional face-to-face trade or service. These examples contain the online reservation system of an airline, ATM, and the online shopping system. Thus, consumers will consider costs of learning new technologies and assess if it is necessary to apply these technologies (Gatignon & Robertson, 1991). Because positive and negative perception from Self-Service Technologies (SSTs) affects consumers' attitude to receive these technologies, it has become a significant issue for all marketing staff in enterprises.

The term 'acceptance' is used from authors with different background and approaches. TAM (Davis, 1989) describes acceptance as 'users decision about how and when he will use technology'. Martinez (Martinez-Torres et al., 2003) notice that initial use (acceptance) is the first critical step toward e-learning, while sustainable success depends on its continued use

(continuance). In this study are presented some of the most common models that used in this topic.

The Theory of reasoned action (TRA) proposed by Fishbein and Ajzen (1975) to explain the people's behaviour in a specific situation. TRA is a well-known model in the social psychology domain. According to TRA a person's actual behavior is driven by the intension to perform the behavior. Individual's attitude toward the behavior and subjective norms are the 'loading factors' toward behavior intention. Attitude is a person's positive or negative feeling, and tendency towards an idea, or behavior. Subjective norm is defined as an individual's perception of whether people important to the individual think the behavior should be performed.

Technology acceptance model (Davis, 1989; Davis, Bagozzi & Warshaw, 1989) was adapted from the Theory of Reasoned Action -TRA. May be the most well-known and widely accepted and cited model is the technology acceptance model (TAM). Davis (1985; 1989) developed the TAM to explain the computer usage and acceptance of information technology. According to Davis 'user acceptance is often the pivotal factor that determines the success or failure of an information system'. The term external variables include all the system design features.

The external features have a direct influence on perceived usefulness (PU) and perceived ease of use (PEOU), while attitude toward using has an indirect influence on the actual system use. Davis (1993, p. 477) defines PEOU as the degree to which an individual believes that using a particular system would be free of physical and mental effort, and PU as the degree to which an individual believes that using a particular system would enhance his/her job performance. As Davis et al (1989) states, the goal is to provide us with an explanation of the determinants of information systems acceptance. Similar to TRA user beliefs determine the attitude toward using the information system. This attitude drives to intention behavior to use which lead to actual system use. According to them TAM differs from TRA "in two keys". The first is that define PEOU and PU as external variables that determine the intention to use not the actual use. The second key is that TAM does not include subjective norms. Yi (Yi et al., 2005), claims that TAM and IDT have similarities, More specific PEOU and PU are conceptual similar to relative advantage and complexity (the opposite of ease of use). As Taylor and Todd (1995) claims, TAM performs slightly better compared with the Theory of Planned Behavior (TPB).

Venkatesh and Davis (2000), proposed an extension of

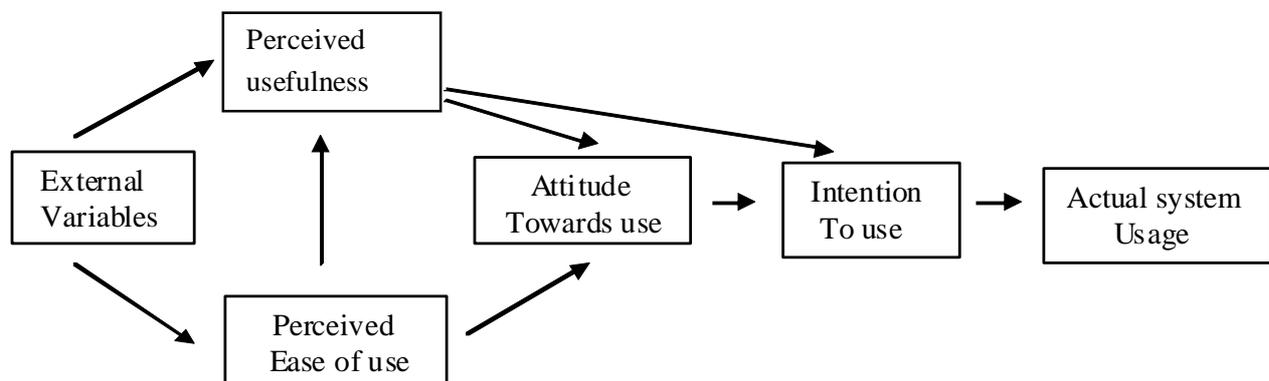


Figure 1: Technology Acceptance Model
 Source: Davis et al. (1989), Venkatesh et al. (2003)

TAM, the TAM2. TAM2 include social influence process such subjective norm, and cognitive instrumental process such as job relevance, output quality and result demonstrability.

Motivational Model (MM) A significant body of research in psychology has supported general motivation theory as an explanation of behavior. Several studies have examined motivational theory and adapted it for specific contexts. Vallerand (1997) presents an excellent review of the fundamental tenets of this theoretical base. Within the information system domains, Devis et al. (1992) applied motivational theory to understand new technology adoption and use (venktash and Speier 1999). Extrinsic motivation is the perception that users will want to perform an activity "because it is perceived to be instrumental in achieving value outcomes that are distinct from the activity itself, such as improved job performance, pay or promotions. The perception that users will want to perform an activity "for no apparent reinforcement other than the process of performing the activity per se".(Davis et al.1992, P 1112)

The Ajzen's Theory of planned behavior (TPB) is another well-known model. TPB is a well known theory (grounded on sociology) that has been used to explain social behavior and information technology use (Ajzen, 1985, 1991; Conner & Armitage, 1998; Dillon & Morris, 1996; Sutton, 1998; Kwon & Onwuegbuzie, 2005). More specifically, according to Ajzen (Ajzen, 1985, 1991), intention is an immediate predictor of behavior. This intention is loaded by Subjective Norm -SN- (i.e. perceived social pressure), PBC (the beliefs about the ability to control the behavior) and one's attitude towards a behavior. Furthermore, a behavioral belief (a specific behavior lead to a specific outcome), weighted by the evaluated desirability of this outcome forms an attitude (Kwon & Onwuegbuzie, 2005). Ajzen (Ajzen 1991, p. 188) defines PBC as "the perceived ease or difficulty of performing the behavior". TPB views the control that people have over their behavior

as lying on a continuum from behaviors that are easily performed to those requiring considerable effort, resources, etc. TPB has been successfully applied to the understanding of individual acceptance and usage of many different technologies- (Harrison et al. 1997; Mathieson 1991; Taylor and Todd 1995b). A related model is the Decomposed Theory of Planned Behavior (DTPB). In terms of predicting intention, DTPB is identical to TPB. In contrast to TPB but similar to TAM, DTPB "decomposes" attitude, subjective norm, and perceived behavioral control into its underlying belief structure within technology adoption contexts.

Combined TAM and TPB (C-TAM-TPB) model combines the predictors of TPB with Perceived usefulness from TAM to provide a hybrid model (Taylor and Todd 1995a).

Model of PC utilization -Derived largely from Triandis (1977) theory of human behavior this model presents a competing perspective to that proposed by TRA and TAM. Thompson et al. (1991) adapted and refined Triandis model for IS contexts and used the model to predict PC utilization. However, the nature of the model makes it particularly suited to predict individual acceptance and use of range of information technologies. Thompson et al. (1991) sought to predict usage behavior rather than intention, however in keeping with theory's roots ,the current research will examine the effect of these determinants on acceptance .The theory explains core constructs such as task-fit as "the extent to which an individual believes that using a technology can enhance performance of his or her task." Based on Roger and Showmaker (1971) complexity is the "the degree to which an innovation is perceived as relatively difficult to understand and use."(Thompson et al. 1991, p.128).one of the construct proposed by the model is social factors. Derived from Triandis "Social factors are the individual's internalization of the reference group's subjective culture and specific interpersonal agreement that the individual has made with others, in specific social situations" (Thompson et

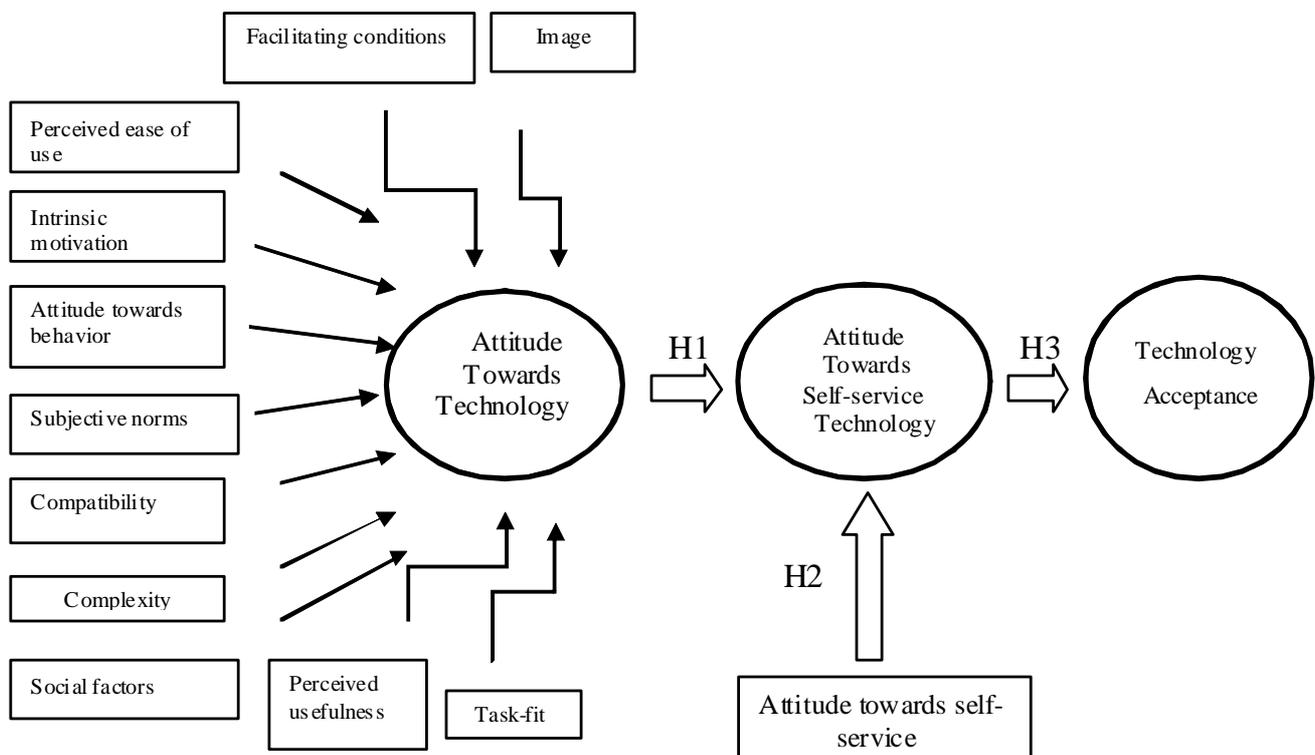
al. 1991,p.126). Facilitating conditions -objective factors in the environment that observers agree make an act easy to accomplish. For example returning items that are purchased online is facilitated when no fees is charged to return the item. In an IS context "Provision for support of PC's may be one type of facilitating conditions that can influence system utilization" (Thompson et al.1991 ,p.129).

Innovation diffusion theory (IDT) (Rogers, 1983), is another model also grounded in social psychology. Since 1940's the social scientists coin the terms diffusion and diffusion theory (Rogers, 1983). This theory provides a framework with which we can make predictions for the time period that is necessary for a technology to be accepted. Constructs are the characteristics of the new technology, the communication networks and the characteristics of the adopters. Innovation diffusion theory is a set of four basic elements: the innovation, the time, the communication process and the social system. Here, the concept of a new idea is passed from one member of a social system to another. Moore

and Benbasat (1991) redefined a number of constructs for use to examine individual technology acceptance such as relative advantage, ease of use, image, compatibility and results demonstrability. Relative advantage is defined as "degree to which an innovation is perceived as being better than its precursor"(Moore and Benbasat ,p.195) Ease of use is defined as "the degree to which an innovation is perceived as being difficult to use"(Moore and Benbasat 1991, p.195) image is "the degree to which use of an innovation to enhance one's image or status in one's social system.(Moore and Benbasat 1991, p.195) compatibility is "The degree to which an innovation is perceived as being consistent with the existing values, needs and past experiences of potential adopters."

Expectation-disconfirmation model (EDT) according to Premkumar & Bhattacharjee (2006) is based on expectation-disconfirmation-satisfaction paradigm. Oliver (1980) introduced EDT to explain the critical factors of consumer satisfaction/dissatisfaction, in the marketing area.

Figure 2: The research model



Here product information and marketing formed a pre-usage initial expectation. After that the customers use the product and form a perception of product performance. The comparison of initial expectation vs. perceived performance drives to the disconfirmation for the product.

All things considered, Figure 2 illustrates the theoretical framework of the study.

After that the customer forms his/her satisfaction level. The EDT is validated in IT by Bhattacharjee (2001) in a study for online banking services. Furthermore Bhattacharjee and Premkumar (2004) used EDT in order to explain changes in beliefs and attitudes toward IT usage.

Venkatesh et al. (2003), proposed the Unified Theory of Acceptance and Use as a composition of eight prominent models (TRA, TAM, Motivational Model, TPB, Combined TAM-TPB, PC Utilization, IDT and Social Cognitive Theory). The UTAUT model aims to explain user behavioral intentions to use an IS and subsequent usage behavior. According to this theory 4 critical constructs are direct determinants of usage intention and behavior (Venkatesh et. al., 2003). The core constructs are: o performance expectancy o effort expectancy o social influence, and o facilitating conditions) Gender, age, experience, and voluntariness of use are posited to mediate the impact of the four key constructs on usage intention and behavior.

Apart from these theories, there are variables divided into two groups based on the ability or inability of banks to facilitate acceptance. This was done to meet a key research objective, namely to identify strategies that banks could adopt to maximize the acceptance of self-service banking. These groupings are the following:

Bank factors. They influence the perceptions of customers towards internet banking and include items

under the control of the bank, namely perceived usefulness, adoption features, bank online features, and risk and privacy.

Other factors. They are not under the control of banks and reflect compatibility with the consumer's personal preferences and the external environment.

Only bank factors are able to be controlled by banks when they attempt to gain more online customers. The other factors are dependent on the customers themselves. For this reason, bank factors are potential facilitators of self-serving banking technology acceptance from the perspective of the bank and the bank is able to influence the perceptions of customer towards its benefits and services, for example, by offering attractive web site features. Conversely, other factors not under the control of banks are viewed as potential barriers to SST acceptance in banks. The identification of facilitators will enable banks to develop strategies that would directly influence the acceptance of self-service banking technology, while knowledge about potential barriers will provide banks with a way to influence SST in an indirect way such as persuading government to improve the current infrastructure.

Tornatzky and Klein (1982) and Tan and Teo (2000) suggest that relative advantage is an important factor in determining adoption of innovations. This is supported by Rogers' study of Innovation Diffusion Theory that found that the perceived usefulness of an innovation is positively related to its rate of acceptance (Rogers, 1983). Likewise, as internet banking service allows users to control their accounts from anywhere at their own convenient time at lower cost, it provides numerous advantages to the user in terms of price and convenience (Polatoglu and Ekin, 2001). As a consequence, the greater the perceived usefulness of using internet banking services, the more likely that internet banking will be accepted. Before engaging with the new service, several issues in relation to the

acceptance need to be considered by bank customers. An example of this is terms and conditions applied to the service. Only reasonable bank terms and conditions would be accepted. Ability to try is another one of the issues preceding adoption. This is because it will lessen uncertainty for the adopter (Rogers, 1983). Accessibility to internet itself is a fundamental requirement to an adopter. The lack of internet accessibility will cause a potential adopter to ignore internet banking services and maintain his/her attachment to the traditional branch bank or other channels. Therefore, the lesser the uncertainty of acceptance, the more likely that internet banking will be acceptance. Features of the bank's web site are important for intention to adopt internet banking since they define the media that delivers service. Reliability of accessibility to the web site is essential regardless of banking hours so that users can perform their bank transactions at their own convenience. The reliability to access the bank's web site, thus, would encourage the adoption of the online service. It would be essential for banks to provide user friendly features to assure the users (Suganthi and Suganthi, 2001). In parallel, effective response times from bank's web site is another determinant to facilitate the adoption. As well, security evidence presented on bank's web site can help ease customer concerns and increase confidence to make use of the service. The more the user gets comfortable with the features of web, the more s/he is likely to accept internet banking services. Risk and privacy are potentially major barriers to the acceptance of internet banking. The introduction of internet banking services is facilitated by the bank's reputation in terms of size, awareness and trust (Polatoglu and Ekin, 2001). The more the user's aversion to the risk and privacy concerns are lowered, the more s/he is likely to accept internet banking services

Inhibiting factors -Compatibility with personal characteristics is positively related to innovation adoption since the more compatible the less the uncertainty to the potential adopter (Rogers, 1983;

Tornatzky and Klein, 1982). Compatibility, which based on attitude, includes, for instance, the preference for self-service, technology, lifestyle as well as current branch bank service. According to the study by Tan and Teo (2000), internet users who feel that using internet banking is compatible with their values about living and working are more inclined to adopt such services. In terms of technology, the degree of fear of new technology, from general to a phobia, becomes a factor affecting the consumer's reluctance to opt for internet banking. Preference of being served at the current branch is a possible discouragement for adopting internet banking services. Hence, the less internet banking is compatible with the customer's personal characteristics, the less s/he is likely to adopt this service.

With regard to the external environment, government and industrial support seem to be major driving forces in internet banking acceptance (Tornatzky and Klein, 1982). This is because they can give potential participants assurances that internet banking takes place in an orderly and well managed environment. This can take the form of government support for conducting online business. Other environmental factors include a suitable technological infrastructure and adequate internet bandwidth without which internet banking could not function. Once in place, banks are likely to form alliances and enter into co-operative arrangements such as being able to transfer funds electronically between banks. The absence of these developments are likely to impede the adoption of internet banking. Personal relationships when conducting bank transactions can add value to a customer dealing with banks. Reference groups also impact on consumer behavior because people try to surround themselves with people and things that are consistent with their own identities (Tornatzky and Klein, 1982; Karjaluoto et al., 2002). Since internet banking tends to reduce face-to-face conversation, it is therefore seen as one of the potential barriers . Adequate existing alternative modes of transacting

banking business, such as ATM and telephone banking may currently fulfill a customer's need, which may make them reluctant to change and face uncertainty.

Research Methodology

The research study was conducted by collecting both primary and secondary data. Primary data have been collected by administering a self designed questionnaire to the customers who possess an account in both public as well as private sector banks located in Jammu. Secondary data was obtained from various books, journals, published papers, newspapers, websites etc.

To determine whether questionnaires can accurately measure latent variables, before conducting the conceptual model, this study uses reliability analysis and exploration of reliability factor analysis to evaluate the reliability and validity of research tools. Reliability refers to the trustworthiness or stability of scores obtained by a scale. The Cronbach alpha was calculated for the data and value for the same has been 0.800. Since the value is higher than 0.5, therefore it shows that data for the study is reliable. It further shows that the data is fit for factor analysis. Then factors affecting customers' acceptance of self-service banking technology were carved out by applying factor analysis technique using SPSS 17 software. Thereafter, a detailed analysis was carried out by applying appropriate statistical tools such as Mean and regression technique

Results and Analysis

A questionnaire was created with items validated in prior research adapted to the technologies and organizations studied. TRA scales were adapted from Davis et al. (1989); TAM scales were adapted from Davis (1989), Davis et al. (1989), and Venkatesh and Davis (2000); MM scales were adapted from Davis et al. (1992); TPB/DTPB scales were adapted from Taylor and Todd (1995a, 1995b); MPCU scales were adapted from Thompson et al. (1991); IDT scales were adapted from Moore and Benbasat (1991); and SCT

scales were adapted from Compeau and Higgins (1995a, 1995b) and Compeau et al. (1999). Five-point scales were used for all of the the aforementioned constructs' measurement, with 1 being the negative end of the scale and 5 being the positive end of the scale. Out of 45 questionnaires only 30 were usable.

Profile of Respondents

A statistical elaboration of the sample took place. The gender distribution of the survey respondents is 60 per cent males and 40 per cent females. The results also indicated that the samples have age predominantly below 35 years, which is 75 per cent. More than 90 per cent of the respondents are working adults with annual salary of 3-4lac pa.80 percent of the sample population are ATM users, whereas 18 percent adopt internet banking and rest 2 percent use phone banking.

Factor Analysis

Factor reduce the number of items, and identify the dimensions of latent variables. Any item that failed to load on a single factor at 0.5 or is dropped out there are 12 items which have been dropped in this analysis. The factor analysis process of dropping an item was repeated until all items loaded at 0.5 or greater on one and only one factor (Lederer et al., 2000; Vijayasathy, 2004). Results of factor analysis and factor loadings are shown in the Table 1.

Table 1: Factor Loading

eu	.852										
peu14	.845										
peu17	.747										
peu15	.680										
eu23	.676										
eu25	.626										
Peu18	.538										
Peu13	.500										
im50		.890									
im51		.829									
atb49		.673									
im52		.635									
im50		.890									
ass55			.875								
ass54			.874								
ass53			.702								
pbc38			.583								
c21				.846							
c22				.793							
c19				.769							
c20				.637							
atb46					.863						
atb47					.832						
atb48					.632						
sf31						.857					
sf30						.857					
sf29						.755					
sn28							.886				
sn27							.860				
tf8							.516				

pu1							.808				
pu4							.803				
pu6							.575				
pu3							.534				
pu2							.518				
com45								.872			
com43								.591			
com44								.563			
fc41									.847		
fc40									.831		
fc42									.675		
i34										.906	
i32										.824	
tf9											.765
tf7											.632

Table 2 shows Eigen values, cumulative percentage and percentage of variance explained by various factors.

Table 2: Eigen values

Component	Initial Eigen value		
	Total	% of variance	Cumulative %
1	9.880	17.964	17.964
2	5.321	9.674	27.638
3	4.998	9.088	36.726
4	4.091	7.438	44.163
5	3.943	7.170	51.333
6	3.267	5.939	57.272
7	2.537	4.613	61.886
8	2.366	4.303	66.188
9	2.236	4.066	70.254
10	2.064	3.752	74.006
11	1.926	3.502	77.507
12	1.818	3.306	80.813

(Results of factor analysis ,SPSS 17.0)

Reliability Analysis

The reliability of scale indicates that the study is free from random error. Internal consistency is measured in this research using Cronbach's coefficient alpha, (α). The statistic provides an indication of the average correlation among all of the items that make up the scale. Values range from 0 to 1 with higher values indication greater reliability. Table 3 indicates the result of analysis of the Cronbach's alpha scale for Perceived Usefulness, Perceived Ease of Use, Intrinsic motivation,

complexity, Attitude towards behavior, social factors, subjective norms ,compatibility ,facilitating conditions, image, attitude towards self-service and task -fit where value of all variables is more than 0.7 except one variable task-fit. This indicates that the survey instrument (questionnaire) can be a reliable tool to measure all constructs consistently. Moreover, all of the measures of constructs had been used in past studies, and have thus been validated.

Table 3: Reliability Analysis

VARIABLES	CRONBACH'S ALPHA
Perceived ease of use	.886
Intrinsic motivation	.903
Complexity	.841
Attitude towards behavior	.874
Social factors	.818
Subjective norms	.755
Perceived usefulness	.767
Compatibility	.821
Facilitating conditions	.830
Image	.887
Attitude towards self-service	.839
Task-fit	.595

Correlation Analysis of Variables

Pearson correlations were calculated to identify the correlations between the variables and to describe the relationship of the dependent variable and the outcome. All the major variables were correlated together using the correlation test. The average score of the multi-items for a construct was computed since a single construct in the questionnaire was measured by multiple items, and the score was used in further analysis such

as correlation analysis and regression analysis (Wang and Benbasat, 2007). As cited in Wong and Hiew (2005) the correlation coefficient value (r) range from 0.10 to 0.29 is considered weak, from 0.30 to 0.49 is considered medium and from 0.50 to 1.0 is considered strong. p value of all predictors taken together on the dependent variable is highly significant (.000) . r value for the variable perceived ease of use is .87 i.e. variable is highly correlated to the attitude towards acceptance.

Variables Intrinsic motivation ($r=.71$), Attitude towards behavior ($r=.56$), Subjective norms ($r=.54$), and Perceived behavior control ($r=.75$) are highly correlated and significant. Variable complexity is scored reversely and therefore it is strongly but negatively correlated to the dependent variable attitude towards acceptance. Compatibility and facilitating conditions are less significant whereas Variables social factors, perceived usefulness and image are insignificant in context of present study.

Multiple Regression Analysis

Multiple Regression analysis was performed to test the

hypothesis relationship between independent and dependent variables. Three hypotheses were proposed and results were enumerated in Table 4. H1 posited that a consumer's "Attitude toward Self-Service" has significant effect on "Attitude towards self-service technologies". Results revealed significant result ($p = 0.000$) The coefficient of determination R^2 is 75 per cent. Thus, the factor can significantly account for 75 percent of consumer's Attitude towards acceptance of self-service technologies. Thus, H1 is supported stating that attitude towards self-service is a major determinant of usage behavior and intention.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756 ^a	.572	.504	.18250

a. Predictors: (Constant), pbc.38, ass.53, ass.55, ass.54

ANOVA b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.114	4	.278	8.360	.000 ^a
	Residual	.833	25	.033		
	Total	1.946	29			

a. Predictors: (Constant), pbc.38, ass.53, ass.55, ass.54

b. Dependent Variable: mean

Investigation of study was performed on second proposed hypothesis on whether a consumer's "Attitude toward Technologies" has significant effect on "Attitude towards self-service technologies". Results revealed significant result. The coefficient of determination R^2

is 100 per cent. Thus, the eleven factors can significantly account for 100 percent of consumer's Attitude towards acceptance of self-service technologies.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000 ^a	1.000	.	.

a. Predictors: (Constant), tf.7, fc.41, peu.17, sf.30, pu.4, c.19, i.34, tf.8, com.45, im.50, pu.6, tf.9, atb.46, eu.23, c.20, pu.1, eu.25, sn.28, com.43, fc.40, peu.14, peu.13, sf.31, pu.2, sf.29, atb.49, peu.15, c.22, c.21

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.946	29	.067	.	. ^a
	Residual	.000	0	.	.	.
	Total	1.946	29			

a. Predictors: (Constant), tf.7, fc.41, pe.17, sf.30, pu.4, c.19, i.34, tf.8, com.45, im.50, pu.6, tf.9, atb.46, eu.23, c.20, pu.1, eu.25, sn.28, com.43, fc.40, pe.14, pe.13, sf.31, pu.2, sf.29, atb.49, pe.15, c.22, c.21

b. Dependent Variable: mean

Hence H 2 is verified stating that perceived ease of use and perceived behavior control are major determinants of usage behavior and intention.

"Attitude toward Self-Service Technology" has significant effect On " Technology Acceptance"(p = 0.000).Here p<.05 which posited that H 3 is strongly supported.

The final hypothesis H3 proposed that a A consumer's

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000 ^a	1.000	.	.

a. Predictors: (Constant), tf.7, fc.41, pe.17, sf.30, ass.53, pu.4, com.45, c.22, i.34, pu.6, im.50, tf.8, atb.46, tf.9, pu.2, eu.23, ass.55, sn.28, eu.25, pe.14, pe.13, fc.40, pu.1, c.19, sf.31, com.43, atb.48, pu.3, pe.15

a. Dependent Variable: technology acceptance

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.500	29	.328	.	. ^a
	Residual	.000	0	.	.	.
	Total	9.500	29			

a. Predictors: (Constant), tf.7, fc.41, pe.17, sf.30, ass.53, pu.4, com.45, c.22, i.34, pu.6, im.50, tf.8, atb.46, tf.9, pu.2, eu.23, ass.55, sn.28, eu.25, pe.14, pe.13, fc.40, pu.1, c.19, sf.31, com.43, atb.48, pu.3, pe.15

b. Dependent Variable: technology acceptance

Thus, attitude towards self-service technology have significant positive effect on attitude towards

Technology acceptance.

Conclusion and Recommendations

This paper has examined the factors influencing consumer's Attitude towards acceptance of Self-service technologies with major factors from different theories as the guiding principle. Results showed that consumer's attitude is determined by their perception of how convenient it is to use, intrinsic motivation and perceived ease of performing the behavior. Further, the results highlighted the importance of Subjective norms, Complexity and Attitude towards behavior towards use of self-service technologies.

Among the twelve factors Perceived usefulness, Social factors and Image were proven to be insignificantly influencing the attitude towards using SST's. They may be a necessary condition, but not the sufficient criterion to lift consumers' attitude to adopt SST's. This is unusual exception to general technology acceptance situations and thus it is worthy of the consideration of the banking industry. All things considered, the current findings significantly enhance understanding of user acceptance of SST's. This study can act as a reference for those researchers that are interested in this field of Information Systems. Future research can extend the study to different samples and extended the proposed model to include other technology adoption factors. The model could also be used to study the adoption of other technologies apart from SST's. Factors could show a different result owing to different samples.

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