

Consumer behavior and its determinants in technology oriented online service delivery channel

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ABSTRACT: E-business is rapidly spreading in service industries. Customer that adopt this innovative way to buy services like e-ticketing like airline, railway, bus ticket, .Some Customer in the same profile adopt online transaction at different rates. Despite the rapidly changing landscape of on-line competition, many fundamental issues regarding the adoption of electronics based online services by Indian consumer remain unclear. Why do some customer actively accept and adopt to online services and others adopt at latter stage. After reviewing research paper in the area of diffusion of technology, technology acceptance model TAM and online shopping models, this paper has dealt with determinants like perceived usefulness, perceived ease of use, trust. Results of this study has established that prospective Indian consumer will adopt to online service namely air/railway ticketing, booking of cab etc. only when they find it ease to use, there are usefulness and have relative advantage and they also find system to be trustable.

Key words : Trust, perceived usefulness, perceived ease of use, online service

Introduction

Rapid advancement in the area of information technology and arrival of internet has drastically changed the landscape of the way the electronic shopping and electronic ticketing for various services are carried out now a days around the world. Consumer of service are looking more convenient way of transacting using eplatform including purchase ticket. Similarly service provider are also

increasingly finding useful provide service through internet rather traditional way of booking. Despite the rapid increase, there is very limited information on how and why certain groups of adopt to online services while others accept e-services reluctantly.

Technology Acceptance Model (TAM)

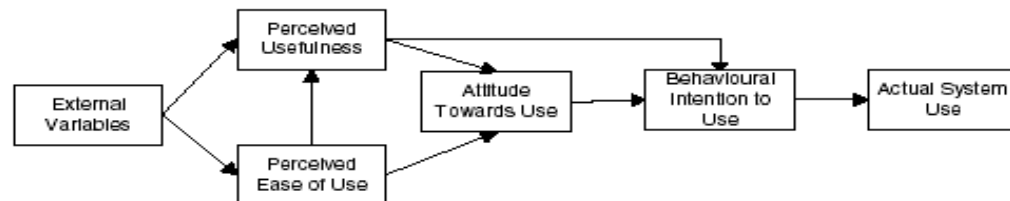


Figure 1 Technology Acceptance Model

Fred Davis established that among the many variables that may influence system use, previous research suggests two variables are key to software application use. First,

potential users tend to use or not use an application to the extent they believe it will help them perform their job better and this is referred as *perceived usefulness*. Second, even

if potential users believe that a given application is useful, they may, at the same time might perceived that the systems is too hard to use and that the performance benefits of usage are outweighed by the effort of using the application. That is, in addition to usefulness, usage is theorized to be influenced by *perceived ease of use*. The measures presented in F.Davis' study target employee acceptance of organizational software, but these measures have been

tested and validated for various type users, experienced and inexperienced, types of systems, word processing, spreadsheet, email, voice mail, etc., and gender (Jackson *et al.*, 1997; Chau, 1996; Karahanna & Straub, Doll *et al.*, 1998;1999; Venkatesh & Davis, 2000; Venkatesh & Morris, 2000). Studies have also used TAM to evaluate user adoption of e-commerce (Gefen & Straub, 2000; Moon & Kim, 2001; Gefen *et al.*, 2003; Pavlou, 2003).

The *Perceived Usefulness*

Definition of the word useful: "capable of being used advantageously." Perceived usefulness explains the user's perception to the extent that the system will improve the user's place of work performance. A system high in *perceived* usefulness, in turn, is one for which a user believes in the existence of a positive use-performance relationship. Significance of perceived usefulness has

been widely established in the field of online service delivery channel (Liao and Cheung, 2002, Laforet and Li, 2005, Guriting and Ndubisi, 2006; Jaruwachirathanakul, Eriksson *et al.*, 2005;; Polatoglu and Ekin, 2001;). According to them usefulness is the subjective probability that using the technology would improve the way a user could complete a job. Thus from above stated work clearly stated usefulness of technology as an important issues in considering a technology based online service to be adopted or not.

Research question 1: Does perceived usefulness have positive effect on customer adaptation online services?

Hypothesis 1: Perceived usefulness has positive effect on customer adaptation.

Perceived Ease Of Use

Perceived ease of use explains the user's perception of the amount of effort required to utilize the system or the extent to which a user believes that using a particular system will be effortless (Davis *et al.*, 1989; Riemenschneider *et al.*, 2002). The definition of "ease": "freedom from complexity or great endeavor." Effort is a finite resource that a person may allocate to the various activities for which he or she is responsible (Radner and othschild, 1975). All else being equal, we claim, an application perceived to be easier to use than another is more likely to be accepted by users. Tornatzky and Klein (1982) find that compatibility, relative advantage, and complexity have the most consistent significant relationships across a broad range of innovation types Rogers stated that perceived ease of use is the degree to which consumers perceive a new product or service as better than its substitutes (Rogers, 1983). Similarly, Zeithaml *et al.* (2002) stated that the degree to which an innovation is easy to understand or use could be considered as

perceived ease of use. Study above literature indicates ease of use of technology as one determinant to be explored for adoption of online service.

Research question 2: Does perceived Ease Of Use have positive effect on customer adaptation of online services?

Hypothesis 2: Perceived Ease Of Use has positive effect on customer adaptation.

Trust

Trust is uncertainty that is involved in social and economical transaction. Trust is also explained as the degree to which a person perceives a particular technology solution as secure and trustworthy. Disposition to trust is the extent to which a person is willing to trust others. In an environment transaction elements of trust are required, especially those conducted in an uncertain environment of online transaction (Ba, S., and Pavlou, PA, Lee, H.C). Mistrust has been solicited as one of the important reasons for customer not adopting an online service (Keen, P.G.W). American citizens believe that e-government has the possibility to improve the way government operates, but that they have 'concerns about sharing personal information with the government over the internet, fearing that the data will be misused and their privacy diminished' (GAO, 2001). Therefore one may rationally argue that the significance of trust has been elevated in e-commerce because of the high degree of uncertainty present in most on-line transactions (Fung, R et al.). Studying above literature we like to consider trust in our research as one of the variables in our study.

Research question 3: Does Trust have positive effect on customer adaptation of online services?

Hypothesis 3: Trust has positive effect on customer adaptation.

Objective of the study

Literature review reveals that a great deal of analysis and research were conducted in this area of TAM, DOI and Trust in work place / e-commerce environment and were conducted in an international environment but not enough is known regarding how customers perceived and assess technology enabled services in India.

The areas which require careful study, analysis and research are following :

- A. Variables namely perceived usefulness, perceived ease of use in Technology acceptance model, diffusion of innovation as published by researchers in work business environment, whether these are applicable for acceptance and usage of technology by customer of online services
- B. Some of the factors of trust that are important in interpersonal service are applicable in technology based online services.

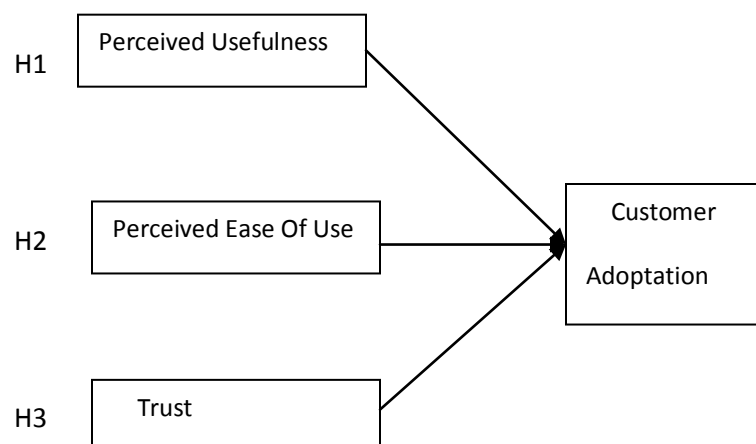


Figure 2: Proposed Research Model

Methodology

Our research is design for causal study between independent variables namely trust , perceived ease of use, perceived usefulness and dependent variables intent to use online service. In order to attain the objectives of this causal study, and for testing the hypotheses we have followed methods:

1. Questionnaire is designed.
2. Pilot study of the questionnaire is conducted and reliability is established.
3. Final Data collect data from respondents.
4. Multiple regression technique is used to analyse the data.
5. Result analysis has validated most of the hypothesis and proposed research model with modification.
6. Based on results authors have suggested contribution made by this research and further pointed out some of the limitation of the study.

Designing of questionnaire

We have adopted a survey research approach and to conduct the survey a structured questionnaire were prepared . There were four sections: perceived usefulness, perceived ease of use, security and privacy, customer attitude, and finally customer adaptation of online service banking. Pikkariainen et al. (2004) developed this 5-item scale to measure perceived usefulness. A higher score indicated higher

perceived usefulness. Reliability measures of each of the constructs were found to be above the 0.70 cut off (Cronbach, 1970).

Sample

Data have been collected from 214 form students, general public through questionnaire on which pilot test has already been conducted. Data is collected personally by visiting, through e-mails and also through surveyors explaining the respondent about objective of the study. Demographic description of the respondent is as given below.

Table 1 : Demographics

Demographic s	Minimu m	Maximu m	Mean
Age	12	81	31
Years of computer use	0	20	8
Annual Income(in Rupees)	120000	2400000	210000
No. of times online service used per month	0	11	1.1

Table2 . Correlation matrix for perceived usefulness, perceived ease of use, Trust, and customer adaptation

Variable s	PUSF	PEOU	Trus t	custo mer adapta tion
PUSF	1	0.37	0.31	0.29
PEOU		1	0.21	0.24
Trust			1	0.3
customer adaptatio				1

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Model Testing

To test the model and the hypotheses, Multiple regression analysis was used. It is constructive statistical technique that can be used to analyse the associations between a set of independent variables and using a single dependent variables .

Method : Stepwise analysis(criterion: Probability of F to enter ≤ 0.05)

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Change Statistics		
					Multiple R Change	R Square Change	Sig. F Change
1	.759 ^a	.576	.574	.78709	.759	.576	.000
2	.777 ^b	.603	.601	.74283	.018	.027	.000
3	.781 ^c	.610	.592	.73368	.003	.007	.002

a. Predictors: (Constant), TRUT

b. Predictors: (Constant), TRUT, PUSF

c. Predictors: (Constant), TRUT, PUSF, PEOU

RESULTS

The model explains 61% of the variance in adapting online service.

Because the overall model is significant ($F = 144.512$, $P = 0.001$), we tested the significance of each variable. Trust , Perceived ease of use, Perceived Usefulness,

are significant. Table 5 illustrates which hypotheses are supported.

Discussion

This research paper presents a conceptual framework that considers how perceived

usefulness, ease of use, and trust affect customer adaptation to electronic based online services in the context of Indian consumer. All the hypotheses regarding the relationship between the variables are developed and tested by using reliability test and multiple linear regression. In general the results supported all of the developed hypothesized relationships. Perceived usefulness, trust and perceived significant effect influencing adoption online services by the Indian consumer. Therefore in order to achieve goal of more consumer using online services like air/rail or cab booking service provider should design the electronic platform of the service in way consumer more useful and easy to use compare to the conventional brick and mortar system. Results also indicates that trust on the system of online service and it is therefore strongly recommended to the designer of e-platform service to make technology platform trustable so that consumer of service feels confident to use the online services without facing any monetary loss or any other hassle.

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