



Relationship of perceived ease use and perceived usefulness on usage of e-commerce site

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Abstract

On-line shopping is becoming common among the people. Especially, in places where time and distance are great constraint people are found preferring the mode of shopping online. There are number of E-commerce sites, where users can shop different items ranging from clothes, shoes, grocery, electric gadgets, books, automobile etc. Present study focuses on selective E-commerce site to find relation among: perceived ease of use of sites and it been perceived useful by its users; perceived ease of use of sites and different usage of site; and sites perceived useful by its users and difference in their usage. Responses of 92 users of different selective E-commerce sites were collected for the purpose of study. Correlation was used to study the association among the variables. Result of the study reveal association among the parameters of perceived ease of use, perceived usefulness and usage of e-commerce site. Positive association was examine among the variable perceived ease to use, perceived usefulness and usage of e-commerce site.

Keywords: e-commerce, perceived ease of use, perceived useful, usage of e-commerce site

1. Introduction

World is becoming small due to the technical development. Everything is available at tip of the figure, whether one wants to see and talk with different people, or make and inquire, or file a complaint, or want to buy certain goods and services. People are using different E-resources like social networking sites, wikis, search engines, e-commerce sites etc. To satisfy their needs. Each and every resource has their own benefit and limitation, but in general all of them have help in reducing the distance among the people in the world. People now, easily share their thought, give comment and opinion, or sell their product and services without geographical barriers due to the use of internet. People use different devices like desktop computer, laptop, tablet, smart phones etc. to assess information on internet. Acceptance of different technical device with diverse software plays an important role in usage of different E-resources by the people. While it is found that, perceived ease of use and perceived usefulness of technology plays an important role in acceptance of technology by the users (Davis, Bagozzi & Warshaw, 1989) [4].

Present research study was undertaken with an aim to determine role of perceived ease of use on site being perceived useful by the users. Role of perceived ease of use of site and its perceived usefulness on use of e-commerce site by the users. For the purpose research paper is divided into six sections. First section of the paper is of introduction succeeded by second section, which clarify the concept of E-commerce, perceived ease to use and perceived usefulness. Third section of the paper gives review of literature on: e-commerce, perceived ease to use, perceived usefulness and usage of e-commerce site. Forth section elucidates objectives of the research study. Fifth section of the study display methodology adopted and hypothesis for research. Section six

of study demonstrates analysis of data followed by seventh section of conclusion which conclude the paper.

2. E-commerce, Perceived Ease to Use, Perceived Usefulness and Usage

E-commerce is a virtual world where people come together and exchange things to satisfy their need. When, people purchase and sale goods or services through electric mode without going to any physical place the transaction has been said to be taken place through e-commerce. E-commerce has change the whole way of doing business by the people. Business unit and consumer, now sale and buy products and services form physical as well as virtual market. For doing transaction in virtual market, people generally visit the company website or online shopping site. The online shopping sites are like virtual super market where they can find number of things on single site. Premkumar and Potter (1995) [7] had defined e-commerce as “the process of buying and selling products or services using electronic data transmission via the Internet and the www.” E-commerce has provided not only with a location and time independence but also has given an ease of communicating with diverse group of people. Thus, e-commerce is a boon for all types of business units whether they are large, small or of medium sized enterprises (SMEs). But the usage of different e-commerce site is mainly dependent upon how people perceive it useful and simple to operate. The more they perceive it to be useful and is simple to operate more would be the chances to visit the site again. Davis (1989) [3] has defined perceived ease to use as a ‘degree to which a person believes that using a particular system would be free of effort’. People will use a particular e-commerce site if they find it easy to understand and operate. Thus, a simple and user friendly application will attract more

of the users than the other. Perceived usefulness was defined as a 'degree to which a person believes that using a particular system would enhance his or her job performance' by Davis (1989) [3]. Perceived usefulness construct is a theoretical substitute for the relative advantage concept developed by adoption theory (Chen, *et al.*, 2002) [2]. Where relative advantage can be understood as the extent to which a technology is perceived as offering a clear advantage and may involve an economic profit, a social prestige or other benefits from its adoption (Rogers, 1983) [8]. Thus, when any e-commerce sites are perceived to be useful and advantageous, more would be the usage of a particular site. Users generally use e-commerce site for finding information about the product or services, or use the site for purchase of the same. Section below discusses the review of literature on E-commerce, perceived ease to use, perceived usefulness and their usage.

3. Review of Literature

Literature on innovation adoption theories discuss about the factors influencing adoption of new technologies. Important theories in innovation adoption are Theory of Reasoned Action (TRA), Innovation Diffusion Theory (IDT), Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB) and Decomposed Theory of Planned Behaviour (DTPB). Davis (1989) [3] developed the Technology Acceptance Model (TAM) emphasising on perceived ease of use, perceived usefulness, attitude towards using, behavioral intention to use, and actual usage as a determinant of accepting technology by its users. Among the determinant mention above perceived ease of use and perceived usefulness are consider an important determinant for the usage of technology by the people according to the model. Al-Gahtani (2001) [1] found TAM as one of the most utilized models for studying Information System acceptance. Fenech (1998) [6] tested TAM behavioural constructs of perceived usefulness and perceived ease of use for predicting user acceptance of the World Wide Web (Web). The results indicate a poor fit for the model until and suggested to introduction an additional construct, computer self-efficacy for the best fit of the model.

In contrast to the mixed results of prior cross-validation efforts, the results of the confirmatory study of Doll *et al.* (1998) [5] provide strong support for the validity and reliability of Davis's six item perceived usefulness and six item of ease-of-use instruments. The multigroup invariance analysis suggests the usefulness and ease-of-use instruments have invariant true scores across most, but not all, subgroups. With notable exemptions for word processing applications and users with no prior computing experience, this research provides evidence that the item-factor loadings (true scores) are invariant across spread sheet, database, and graphic applications. (Doll, Hendrickson & Deng, 1998) [5]. Subramanian (1994) [9] uses data set for voice mail and consumer dial up systems for conducting the replication of the construct measurement of perceived usefulness and ease of use on future usage of technology. Results of the construct measurement for perceived usefulness and ease of use in this research are quite consistent with the results reported in prior research with minor variations. Perceived usefulness, and not

ease of use, is a determinant of predicted future usage according to the current research.

The key components of Davis's technology acceptance model (TAM), perceived usefulness and perceived ease-of-use are widely accepted among the 'management information system' research community as a tool for evaluating information system applications and predicting its usage. Despite this wide acceptance, a series of incremental cross-validation studies have produced conflicting and equivocal results of the model.

4. Research Objectives

In view of literature review, current study was undertaken with an aim to find relation between: perceived ease to use and perceived usefulness; perceived ease to use and usage of e-commerce site; and perceived usefulness and actual usage of e-commerce site. For the purpose "eight" e-commerce site: Amazon, Flipkart, Myntra, Snapdeal, Jabong, ebay, Shopclues and Yebhai was taken into consideration. Main objective was further divided into sub objective of:

- Relation exists among the factors of perceived ease to use.
- Features of perceived usefulness are associated with one another.
- Aspects of usage of e-commerce are related to one another.
- Factors of perceived ease to use are associated with factors of perceived usefulness of the e-commerce site.
- Aspects of perceived ease to use are related to the aspects of usage of e-commerce site.
- Facets of perceived usefulness are related with the facets of usage of e-commerce site.

5. Methodology and Hypothesis

In order to attain the above mentioned objectives, the following hypotheses have been established in the study.

H1: There is a positive Relationship between Perceived Ease to Use and Perceived Usefulness of E-commerce site.

H2: There is a positive Relationship between Perceived Ease to Use and Usage of E-commerce site.

H3: There is a positive Relationship between Perceived Usefulness and Usage of E-commerce site.

Table 1: Demographic details of Respondents

	Category	Respondent	Percent
Education	Bachelor	42	46
	Masters	41	45
	Professional Course	9	10
	Total	92	100
Gender	Male	42	46
	Female	50	54
	Total	92	100
Age (In years)	16-20	28	30
	21-25	49	53
	26-30	14	15
	30 and above	1	1
	Total	92	100

Data was collected through structured questioner from 92 respondent of Vadodara city in March 2016. Responses were collected from the people who were the users of different e-commerce site through convenient sampling technique. Table

I describe the demography profile of the respondents.

6. Data analysis

Responses collected were analysed using SPSS software, which is a widely use software for analysing data in social sciences. Responses were coded and data was entered in the software. Reliability and validity of the data was tested using Cronbach Alpha. Data can be further processed if the Cronbach's Alpha is more than 0.6. The alpha value of the data understudy came to be 0.873 which indicate that data are fit for further processing. Correlation was performed to examine the relationship between the factors of Perceived Ease to Use E-commerce site. Table 2 indicate correlation among the factors for perceived ease to use: '1' easy to use, '2'easy to become skilful, '3' learn and operated easily, '4' flexible to interact, '5' clear and understandable and '6' easy to interact. Result of the test show positive correlation among the factors of perceived ease to use. People found e-commerce site 'easy to use' when they found it 'easy to become skilful' and 'learn and operate easily'. E-commerce site was found 'easy to become skilful' and 'learn and operate easily' when it was 'clear and understandable' to operate. Site was found 'easy to interact' when it was 'clear and understandable' and users found it 'flexible to interact'. While clear and understandable operations also effected the belief of ease to interact with site.

Table 2: Correlation among Factors of Perceived Ease to Use

Factors	1	2	3	4	5	6
1	1					
2	0.518	1				
3	0.500	0.496	1			
4	0.396	0.440	0.465	1		
5	0.490	0.564	0.570	0.598	1	
6	0.378	0.363	0.477	0.750	0.618	1

Table 3 indicate correlation among "five" factors of perceived usefulness of e-commerce site. Factors of perceived usefulness include: '1' improve performance in searching and buying, '2'help in search and buy thing faster, '3' increase effectiveness in searching and buying, '4' easy to search and purchase and '5' increase productivity in searching and buying. High positive correlation was found among the factors of perceived usefulness of e-commerce site.

Table 3: Correlation among Factors of Perceived Usefulness

Factors	1	2	3	4	5
1	1				
2	0.616	1			
3	0.594	0.640	1		
4	0.579	0.774	0.667	1	
5	0.625	0.691	0.788	0.748	1

Correlations among the factors of usage of e-commerce site are mention in Table 4. Factors of usage of e-commerce site include: '1' inquire for purchase of items, '2' finding companies supplying similar product, '3' inquire rating of product and '4' purchasing things. Result of the test show positive correlation among the factors of usage of e-commerce site. High positive correlation was seen among 'inquire for

purchase of items' and 'finding companies supplying similar product'- factors of usage of e-commerce site.

Table 4: Correlation among Factors of Usage of E-commerce site

Factors	1	2	3	4
1	1			
2	0.537	1		
3	0.379	0.444	1	
4	0.145	0.309	0.357	1

Result of correlation among the factors of Perceived ease to use and factors of perceived usefulness is shown in Table 5. Factors of perceived ease to use and perceived usefulness were found positively correlated with one another. 'Flexible to interact' factor of perceived ease to use was found high correlated with 'help in search and buy thing faster' and 'easy to search and purchase' factors of perceived usefulness. Low degree of positive correction of 0.488 was examined among perceived ease to use and perceived usefulness at five percent significant level. P value of the same was 7.81E-07 which shows that perceived ease to use and perceived usefulness of e-commerce site positively relates with each other.

Perceived Usefulness	Perceived Ease to Use					
	1	2	3	4	5	6
1	0.343	0.414	0.150	0.420	0.267	0.249
2	0.272	0.387	0.348	0.549	0.296	0.296
3	0.356	0.442	0.200	0.410	0.321	0.175
4	0.227	0.357	0.210	0.511	0.205	0.198
5	0.288	0.454	0.180	0.476	0.233	0.245

Table 6 shows the result of correlation among "six" factors of perceived ease to use and "four" factors of usage e-commerce sites. Result of the tests shows low degree of positive correlation among the factors. Lower degree of positive correlation of 0.381was observed at five percent significant level among perceived ease to use and usage of e-commerce site. P value 0.0001 of correlation confirmations positive association among perceived ease to use and usage of e-commerce site.

Table 6: Correlation among Perceived Ease to Use and Usage of E-commerce Site

Usage	Perceived Ease to Use					
	1	2	3	4	5	6
1	0.125	0.215	0.231	0.058	0.311	0.017
2	0.247	0.133	0.128	0.249	0.196	0.174
3	0.306	0.270	0.226	0.412	0.407	0.306
4	0.328	0.107	0.029	0.308	0.111	0.225

Results of correlation among the "five" factors of Perceived Usefulness and "four" factors of Usage of E-commerce site are mention in Table 7. All factors accept 'improve performance in searching and buying' of perceived usefulness and 'finding companies supplying similar product' of Usage of e-commerce site were found positively associated but were at low degree of correlation. Low degree of positive correlation among Perceived usefulness and usage of e-commerce site came to be 0.282 at five percent level of significance. P value 0.007 confirms positive relation between

perceived usefulness and usage of e-commerce site.

Table 7: Correlation among Perceived Usefulness and Usage of E-commerce Site

Usage	Perceived Usefulness				
	1	2	3	4	5
1	0.120	0.254	0.266	0.155	0.170
2	-0.036	0.212	0.268	0.140	0.229
3	0.055	0.263	0.224	0.253	0.090
4	0.258	0.129	0.124	0.128	0.210

7. Findings and Conclusion

Perceived ease to use and perceived usefulness plays an important role in acceptance of technology by the people. Current study was undertaken with an aim to find relation among the factors of: perceived ease to use, perceived usefulness and usage of e-commerce site. From the data analysis lower degree of positive correlation among all the three factors was seen in the study. All the factors accept 'improve performance in searching and buying' of perceived usefulness and 'finding companies supplying similar product' of usage of e-commerce site were found positively associated.

8. References

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