Consumer Intention to Shop Online: B2C E-Commerce in Developing Countries

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Abstract: The development of dot com companies in 90s opened a new door of sales and revenue generation for the businesses world wide. The number of online shoppers increased dramatically within a very short span of time. While some people found it a convenient and sophisticated way of shopping, others remained reluctant to adopt this medium. Different factors are considered responsible for this variation in online behavior. Most of the researches on this topic are conducted in the developed countries so there is a need to study the phenomenon from the developing countries perspective. Based on existing literature on the topic a research model was developed which was further tested by means of a survey.

Key words: Online Shopping %Electronic commerce %Trust %Perceived advantages %Perceived risks

INTRODUCTION

The term “e-commerce”, also referred to as “e-business”, has been defined by many authors in different ways. It is defined as “an electronic environment that makes it possible to buy and sell products and services and information on the internet” [1]. A broader definition would be conducting business transactions, maintaining business relationships and sharing information over the internet [2, 3].

E-commerce has opened the doors of opportunities for virtually all businesses whether they are operating at national or international level. One of the most befitting uses of World Wide Web (WWW) is consumer retailing: Business-to-Consumer (B2C) selling. Using WWW retailers can offer their goods and services all over the globe by means of virtual stores. With the help of virtual stores, any business can offer goods and services to customers via electronic channel with pretty less cost as compared to what is required in traditional brick-and-mortar stores [4, 5].

A rapid growth is witnessed in the area of e-commerce, but online sales generated via this medium are still very low. According to Center for Retail Research [6] online sales in Germany were £38.18 billion (€45.07 billion) which accounted for approximately 9.0% of its total retail sales (+13% over 2010). In France, a country which is reported to have the fastest rate of growth of online retailers in Europe, 2011 online sales were £32.75 billion (€38.66 billion) or 7.3% of retail sales (+24% over 2010). Online sales in the UK were £50.34 billion (€59.4 billion) or 12.0% of UK retail trade. In 2008, online was equivalent to only 8.6% of retail sales. Online retail sales in the US have a market share somewhere around 9%. The main benefits claimed for online shopping include convenience, competitive pricing and variety of selection, borderless access to goods and services and better access to information [7, 8, 9]. Some of the important impediments to e-commerce growth include shortage of experts on consulting, designing, training and execution of e-commerce, security and privacy concerns of the buyers and slow speed of downloading information [10, 11].

Jarvenpaa, Tractinsky and Vitale [12] classified the studies conducted on e-commerce into two categories: technology-centered and consumer-centered. Technology-centered studies focuses on analyzing technical aspects of web-based stores and relate these aspects to the consumer acceptance of these stores. These technical specifications include its user interface [13-15], usability of its website [16], information sharing with consumers [17-7] and security measures [19, 20]. According to the technology-centered view, the low volume of online sales is primarily due to the unproductive use of technology by online vendors.
Alternatively, consumer-centered view focuses on consumers’ perception and beliefs about online shopping. A consumer’s retail channel selection is very much affected by many features which include service quality, product perception, trust and shopping experience. According to consumer-centered view, socio-demographic factors are important determinants of consumer acceptance of virtual stores: an idea supported by literature on consumer behavior with respect to face-to-face shopping [21, 22]. According to consumer’s centered view the success of virtual stores depends upon the consumer’s willingness to purchase online.

Various researchers have investigated the factors affecting online shopping behavior of customers [23-25]. Most of the researches conducted on the subject are carried out in developed countries of the world. In this study, we have attempted to look at the phenomenon from the developing countries perspective. Developing countries have their own peculiar features which need to be considered while studying customers’ intention to purchase online: low credit card and bank account penetration, wider digital divide, shortage of electricity supply, lack of trained manpower to develop and support websites, low income, poor telecommunication infrastructure and lack of computer skills among the public [26-28]. Another important reason of conducting this research is the suggestion extracted from Kuan et al. [29] that the relationship between actual website quality dimensions and customer intention to purchase need to be investigated, an aspect which is mostly ignored in previous researches covering website quality.

The purpose of this paper is to find out the customer perceptions about business to consumer e-commerce in developing countries particularly Pakistan. According to a survey conducted to determine the preparedness of local and multinational firms for e-commerce and to seek their expert views about the future of e-commerce in Pakistan, it was discovered that although local businesses realize the potential of selling on the Internet (83 percent) still majority (55 percent) had no short-term plan to start selling online. None of the surveyed companies was doing B2C e-commerce (only one company was reported doing B2B). One positive sign discovered was that some firms (39 percent) took first step in moving towards e-commerce by establishing their websites on the internet. The other pre-requisites for e-commerce found were that 90 percent of the surveyed businesses had their e-mail address, 94 percent had access to the Internet and 58 percent of the companies had LAN (Local Area Network). However, around 99 percent of the respondents were still of the opinion that e-commerce means being able to make and receive payments through the Internet and any other activity through Internet is not considered e-commerce [30, 31]. E-commerce in Pakistan is facing many challenges (e.g. governmental, organizational and technological), that is why growth and pace of e-commerce is slow. According to Moreno [32] “low computer education, technology sensitization, lack of basic understanding of how-to use Internet, high cost of computers, lack of understanding of English language, unstable political and legal environment, poor regulatory framework for eBusiness and brain drain are notable barriers of eBusiness in Pakistan”. Another objective of current research is to investigate the impact of constructs of online shopping upon customer’s intention to purchase online.

**Research Theory and Model**

**Perceived Advantages:** In many of the previous studies Technology Acceptance Model (TAM) is used to study this behavior. TAM identified two main variables i.e., perceived usefulness (PU) and perceived ease of use (PEOU) affecting a consumer’s decision to adopt a new technology. The former is “the degree to which a person believes that using a particular system would enhance his or her job performance” [29], while the latter is “the degree to which a person believes that using a particular system would be free of effort” [33].

Validity and reliability of the two constructs (PU and PEOU) of TAM is supported in a number of studies [34-37]. PEOU in context of e-commerce is consumer’s expectation to effortlessly use WWW for online shopping [23]. Previous researches have shown that PEOU is an important factor affecting consumer attitude towards adoption of a certain technology [32, 34]. PU in context of e-commerce is the customer’s perception that shopping via WWW will be more beneficial as compared to face-to-face shopping and will ultimately result in better selection of products with respect to quality and prices. Combining these two variables of TAM with time saving, another advantage claimed for online shopping, we came up with our first variable affecting online shopping i.e., Perceived advantage of online shopping. The first hypothesis that we would like to test is:

**H1:** A customer’s intention to shop online is positively related to perceived advantages of online shopping.
Perceived Risk: Risks in online shopping can be divided into two categories: Product risk and Information security and privacy risk. Product risk “is allied with the consumers’ belief whether the product would function according to their expectations” [38]. They assert that this risk is high when the product is technologically complex, high priced or ego satisfying i.e., its use is observed by others. Previous researches show that people prefer face to face buying in case of those products where fashion, size and price of the product matters [40]. In case of online shopping a consumer has a fear that the color of the product or quality may not be the same as it appears on the computer screen. Bhatnagar, Misra and Rao [39] found that the decision to purchase goods or services online largely depends upon the perception of risk. They also concluded that costly and ego-centric items i.e., those items that reflects someone’s personality e.g., clothing and cologne, are less likely to be purchased online.

In several studies conducted on e-commerce it was found that the privacy and security concerns are important factors influencing a consumer’s decision to purchase online. Some of these studies show that these concerns are an important barrier restricting customers from shopping online whereas in some studies this relationship could not be established. Helander and Khalid 2000 [41] discovered that online shoppers did considered information security an important factor affecting their decision to shop online but there were some other factors affecting their decision as well e.g., cost of the item, product availability and convenience. Similarly, in another study it was concluded that security concerns did not affected either the decision to purchase online or the amount spent in online shopping [42].

Online sellers collect detailed information about a buyer. This information includes personal as well as financial data, which is used by the online companies in formulating their marketing strategies [43]. The information collected from the buyers provides a marketing edge to the online sellers, but this act is often viewed by the buyers as an invasion of privacy [44]. There are two types of concerns for the buyers about information provided to online sellers: (1) The personal information provided may be leaked out to others due to improper seller controls [45]; (2) the personal information may be sold to third parties without the consent of the buyer [46]. Some customers will not be interested in engaging online transactions due to these concerns. Our second hypothesis is:

H2: A customer’s perceived risk is negatively related to intention to shop online.

Perceived Trust: A lot of research is made on trust with respect to e-commerce but review of trust related literature reveals that there is no universally accepted scholarly definition of trust [47]. Trust has been defined in context of organization theory, economics, social networks and information systems [48]. For the purposes of e-commerce trust can be defined as “a trustor’s expectations about the motives and behaviors of a trustee” [49]. A consumer’s trust in online seller is one of the most important factors affecting the decision to purchase online or not [8, 50, 51]. Generally people abstain from purchasing online from a vendor whom they do not trust [50].

Review of e-commerce literature reveals the following three dimensions of trust: Integrity, Benevolence and ability [52, 53]. Integrity with reference to business to consumer (B2C) commerce means that online vendor will be fair, consistent and reliable in fulfilling his commitment to the buyer. Benevolence refers to the company’s intention to keep customer’s interest ahead of its own and to work for the welfare of the customers [47]. Ability means the online company has the appropriate skills and competence to fulfill the customers’ demand [54]. In several studies on e-commerce it was revealed that lack of trust on online seller is one of the major reasons why people do not shop online [4, 27]. People are reluctant to provide their personal information over the internet. They fear that this information may be misuse or shared with unwanted people and agencies. This leads to our third hypothesis:

H3: A customer’s perceived trust in Internet shopping is positively related to his intention to purchase online.

Risk and trust are knitted together [55]. One of the consequences of trust is that it reduces the consumers’ perception of risk [56]. It is observed that trust reduces the perceived risk of a customer of being mistreated by an online vendor [57], whereas lower perceived risk influence the attitude of customers towards online stores [12]. Based on this fact the fourth hypothesis is formed as:

H4: A customer’s perceive trust in online shopping reduces his perceived risk.

Computer/Web Knowledge/Experience: It has been concluded in some previous studies that income level, gender, computer experience and use of other face to face
shopping methods affects a consumer’s decision to purchase online [42]. Lack of internet experience restricts the buyers from engaging in online transactions [48], [58] in their study on Singaporean market studied the effect of education, internet experience and network speed on the willingness to shop online. They found computer education and internet experience as important factors affecting online shopping, whereas internet speed was not found to have significant affect on online shopping behavior.

H5: A customer’s computer/web knowledge/experience positively influences attitude towards online shopping.

It has been found in prior studies on e-commerce that people’s predisposition towards computers is an important factor affecting adoption and usage of online [59, 60]. A consumer’s past experience on the internet in general or shopping on the internet in particular might have generated knowledge and consequences that affect his behavior and belief with respect to online shopping [12].

H6: A customer’s computer/web knowledge/experience positively influences trust in online shopping.

Moderating Variable: Website/Internet Quality (IQ): The four variables discussed above i.e. perceived advantage, perceived risk, trust and computer/web knowledge/experience are the ones, which are related to the customers’ personality. But based on our observation and review of existing literature website/internet quality is also an important factor affecting customer’s intention to purchase online. We have treated as a mediating variable as it is something that is not related to the customer’s personality like the four variables we discussed above.

Online vendors can communicate with their customers through their websites, therefore, the appearance as well as information contents can influence a consumers purchase intentions [47]. Different features of a website have been identified in marketing literature that affects the frequency of visits to a website such as: layout, readability, graphics, appeal and ease of use [61]. The customers are comfortable with those web sites that offer ease of navigation [62] and poorly designed websites had a negative impact on sales [42]. Web site designs play a very crucial role in attracting as well as retaining customers [63].

H7: The effect of customers’ perception (on online purchase) on their online shopping intention is influenced by internet quality.

Online Shopping Intention: Online shopping intention used in this study refers to a customer’s willingness to use internet for making an actual purchase of goods and services or comparing prices. This variable is operationalized keeping in view the previous researches on this topic [64].

Fig. 1: Proposed Model for online shopping intention.
Methodology

Sample: The data was collected by means of questionnaires distributed in the urban areas of twin cities of Rawalpindi and Islamabad. Convenience sampling technique was used for data collection. Questionnaires were mostly distributed among professionals, businessmen, civil servants and university students. A total of 390 questionnaires were distributed among the sample population out of which 353 were received and 341 were found to be suitable and processed for analysis.

Instrument and Measures: A questionnaire based survey was used in this study. All the questions (other than related to demographic characteristics) were measured on a seven-point Likert scale where 1 was the least level of agreement and 7 was the highest level of agreement. The scale was adopted from the previous researches such as perceived advantages [65, 66], perceived risk [39, 45]; trust [53]; computer/web knowledge, website and internet quality [63] and intention to purchase [64]. To check the reliability and validity of questionnaire a pre-test was conducted where this questionnaire was distributed among 50 respondents. Once the results of per-test were found satisfactory the questionnaire was distributed among the target population.

Reliability of the data was checked by means of Cronbach Alpha which was found to be 0.779 was above the general acceptable limit (0.70) described by [67]. The data was analyzed by Statistical Package for Social Sciences (SPSS 17.0) and AMOS 7 software. For testing of hypothesis structural equation modeling (SEM) was used.

RESULTS AND DISCUSSION

Table 1 shows a seven (7) model fitness criteria. The model chi-Square (Chi) and associated significant value indicates that this criteria does not fulfill the minimum requirement of model fitness as the significant value is less than level of significance (P<.05) indicating discrepancies factors in the model. Another fitness measure is goodness of Fit index (GFI), by convention the value of GFI equal to or greater 0.90 is acceptable. This criteria fulfill the minimum acceptance level of Model Fit (GFI > 0.90) and AGFI is variant of goodness of fit which

![Diagram of the Proposed Model](image_url)

**Fig. 2: Results of the Proposed Model (SEM)-with Mediating Variable**

(PAD=Perceived Advantages; PRSK=Perceived Risk; TRS=Trust; CK=Computer Knowledge, WB=Website/Internet Quality and INT=Intention to Purchase Online)

| Table 2: Proposed Model Fit Indices-With Mediating Variable |
|-----------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| CMIN | DF | P   | CMIN/DF | GFI | AGFI | NFI | CFI | RMSEA |
| 41.168 | 8 | 0.000 | 5.146 | 0.977 | 0.962 | 0.900 | 0.934 | 0.045 |

(GFI= Goodness of Fit Index, AGFI = Adjusted goodness of Fit Index, NFI = Norms Fit Index, CFI= Comparative Fit Index, RMSEA = Root mean Square Error of Approximation)

| Table 3: Hypotheses Testing Based on Regression Weights-With Mediating Variable |
|-----------------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Variables | Estimates | S.E. | Critical Ratio | P-value | Results |
| WB ←→ PAD | 0.256 | 0.042 | 4.961 | 0.000 | Supported |
| WB ←→ PRSK | 0.101 | 0.033 | 3.947 | 0.012 | Supported |
| WB ←→ TRS | 0.137 | 0.046 | 2.390 | 0.017 | Supported |
| WB ←→ CK | 0.001 | 2.050 | .009 | 0.993 | Not Supported |
| INT ←→ WB | 0.594 | 0.060 | 13.629 | 0.000 | Supported |
| TRS ←→ CK | 0.437 | 0.027 | 8.955 | 0.000 | Supported |
| PRSK ←→ TRS | 0.091 | 0.068 | 2.685 | 0.042 | Supported |

(PAD=Perceived Advantages; PRSK=Perceived Risk; TRS=Trust; CK=Computer Knowledge, WB=Website/Internet Quality and INT=Intention to Purchase Online)
adjusted goodness of fit index for degree of freedom. Further criteria includes CFI (Comparative Fit Index) is revised form of NFI (Norm Fit Index). The suggested value for NFI and CFI is equal or greater 0.90. According to [68] RMSEA value below 0.05 show good fit of the model. Based upon the aforementioned criteria five model fit indices fulfill the criteria of proposed model fitness.

Table 2 shows the result of hypotheses testing after the introduction of moderating variable. The analysis highlights the relationships between perceived advantage (PAD) and website/internet quality (WB), perceived risk (PRSK) and WB, trust (TRS) and WB, WB and Intention to purchase online (INT), Computer Knowledge (CK) and TRS and TRS and PRSK are statistically significant (P<.05). However, the relationship between Ck and WB and is insignificant (P>0.05). The result further reveals that perceived advantages, website and internet quality and customer knowledge/experience play a very important role in customer’s online shopping intention. Perceived advantages of online shopping greatly influence people intention to purchase online. Customer knowledge/previous experience play a very important role in establishing trust which enforces the previous researches on the issue. Trust usually results in reduction of perceived risk which is weakly supported in this research.

It is evident from the analysis that perceived advantage intensifies website/internet quality by 26%. The critical ratio (CR=4.961) indicates that perceived advantage is believed as an important determinant in ensuring web/internet quality in online-shopping. The table further depicts the regression co-efficient (Beta) value is 0.101 between perceived risk (PRSK) and website/internet quality (WB) and the relationship is pointed from the analysis that if there is one degree change in perceived risk there would be almost 10% change in website/internet quality and p-value (p<0.05) suggests that there is significant and positive relationship between these two variables. The results further demonstrate that trust and web/internet quality (ß= 0.046, P<.05) remain positive and significant. There is a strong positive relationship between website/internet quality and intention to purchase online shopping as (ß= 0.594). Whereas, the relationship between computer knowledge and trust is the second highest regression co-efficient (ß= 0.437).

The results of the study show that the hypothesis H1 is proved that customer’s intention to shop online is positively related to perceived advantages of online shopping and the result of this study not support H2 (A customer’s perceived risk is negatively related to customer intention to shop online), whereas, H3 is supported by the results of the study. Further this study concludes (H5, H6 and H7) are valid and confirm that WB and INT, CK and TRS and TRS and PRSK are positively and significantly related to the each other.

**DISCUSSION**

The constructs used in perceived advantages (perceived ease of use and perceived usefulness) have been studied with reference to e-commerce adoption in different studies and different conclusions are drawn about them [69]. In a study conducted on online shopping among grocers in Germany, perceived advantages was found to have a significant impact on adoption behavior and also concluded that there was no significant influence of perceived risk on online shopping intention. In a study conducted by [70] compared the online shoppers with non-online shoppers. Online shoppers revealed several perceived advantages of shopping online including product reviews, saving time and convenience. Credit card security was the main concern for non online shoppers.

It is also reported in one of the studies on the topic that as the respondents’ sense of computer competency increased to the level of expert, the more likely they were to make purchases online [71]. This study shows that some characteristics of online trade firms, such as security and privacy policies, service quality and warranties, have a more direct influence on trust, while the quality of the Web site has an indirect influence on consumers’ satisfaction. Among all these variables, satisfaction with the previous purchases is undoubtedly the main determinant for trust, which reinforces findings of previous studies.

The results obtained from another study on the topic [72] confirm that the intention to shop on the Internet is positively influenced by general attitude toward the system and negatively influenced by the risk associated with the Web. In addition, perceived usefulness is the main determinant of attitude toward e-commerce, for both Internet buyers and non-buyers. However, some significant differences can be seen between both considered samples.

**Practical Implications:** It is concluded that a customer’s perception about advantages of online shopping and his trust on online vendor are the two most important variables affecting his intention to purchase online.
Online vendors should focus on developing trust by adopting different steps. E-vendors can play a significant role in gaining customer trust. The success of e-Bay largely depended on institution-based structural assurances that it incorporated in its e-commerce strategy. The institution-based structural assurances can be incorporated into the company’s Web site to increase trust-assurances such as statements of guarantees, contact telephone numbers and Better Business Bureau seals. Finally, convincing the consumers that the e-vendor has nothing to gain by not being trustworthy also builds trust. Convincing consumers of this might be achieved, as in other business interactions, through increased publicity of legal action taken by the authorities as well as by meaningful sanctions for untrustworthy vendors by consumer protection agencies such as the Better Business Bureau.

Another important finding of this research is that customer’s knowledge and experience with computers and specifically with internet is very much helpful in building their trust on this medium. The growth in the number of internet users will be helpful in increasing e-commerce activity provided online vendors establish a trustworthy relationship. The policy makers should ensure that online buyers are provided suitable protection against theft of personal and confidential information and malpractices of online vendors. Strict regulations need to be introduced to ensure the security of customer information and finances.

**Limitations and Future Research:** This research is conducted in Pakistan which is one of the developing countries. Shopping online is not very much common though it is becoming popular. Majority of the population doesn’t own a credit card and therefore, they are not able to shop online. People mostly are accustom to face to face shopping in which they can see and feel the item as well as they can bargain over the prices. The results of this model might not be the same when used in a developed country or where people have more tendencies to use credit cards.

**REFERENCES**