Technical Assurance to Online Customers: Key Determinant of Online Purchasing Intention

Anchal Jain[1], Mamta Sareen[2]
[1]Phd Research scholar, [2]Department of Computer Science,
Kirori Mal College, University of Delhi, India.

ABSTRACT
Indian e-commerce market is experiencing a period of rapid development. With the high penetration rate of internet users, India establishes a good foundation for the expansion of the online shopping market. This growing rate of adoption might be cause due to the changing lifestyle of Indian urban population; the increased acceptance of IT; the convenience of online shopping in the comforts of one's home etc. Though the survey by Ernst and Young predicted a significant rise in the annual growth rate of e-commerce in India; still online shopping adoption rate is questionable i.e. not as good as expected. Researchers are still in look for the answer for questions like what factors influence customer's intention to adopt online shopping channel, what technical environment is required to assure customers with secure and efficient shopping channel. Keeping all this in mind the present study made an honest attempt to answer these questions by analysing the significance of technological assurance and its antecedents to customer's intention to purchase online. The analysis were based on data collected empirically in early 2013 from 207 respondents using the online and offline survey method to collect respondents' reviews. The research findings help us in understanding the relationship between technical assurance and online consumers' behavioural intention to purchase.

KEYWORDS: *Online shopping, technical assurance, e-environment, e-interface, e-interactivity, e-service, security, privacy, behavioural intention.*

I. INTRODUCTION

The emerging technologies of Internet and ICT (Information communication and technology) has not only reshaped the way the goods or services are developed or delivered but has also changed the way buyers and sellers interact and transact (Ovia 2008). A cultural shift towards buying and selling of goods/services using Internet is being experienced. This shift is commonly known as B2C e-commerce or online shopping. Various statistics by Ernst and Young, Forester, eMarketer etc. indicated that e-commerce had a great impact on the economy of the developed countries. However, it is expected that this impact on the developing countries could be even stronger as there is scope for reducing the inefficiencies and impediments. Surveys clearly indicate that currently India has the world's second largest mobile/internet using population. Ernst and young reported that 11 million users made purchase online in 2011 having the potential to grow to 38 million transactions by 2015. Forrester expects the online buyer population in the country to grow by a factor of 4.5% over the next five years, and online retail to hit $16 billion by 2018, an eight-fold increase over 2013. They also reveal that online retail spending in India increased from $279 million in 2009 to $2.02 billion in 2013 and expected to grow at a compound annual growth rate (CAGR) of more than 50% over the next five years as more Indian consumers started purchasing online. These statistics are clear indicators for the researchers to study the various factors that may contribute towards the growth of e-commerce in India. Since online shopping has become a trend these days, the present paper focuses on identifying the significance of technical assurance and its antecedents to customers purchasing intention particularly in developing country like India. For the same the data has been collected empirically using survey methodology from 207 respondents from various parts of India in early 2013.

II. LITERATURE REVIEW

Number of studies has explored various factors influencing consumer's behavioral intention towards e-shopping or online shopping. Szymanski, P.M. et al., (2000) found convenience, site design, and financial security as major factors enhancing online customer's satisfaction in an online shopping environment. Heijden, H. et al., (2003) developed a study examining the factors influential to online

shopping from the perspective of trust and technology. Chen, L.D. and Tan, J., (2004) found the significance of perceived trust and perceived service quality to individual's attitude by expanded the innovation diffusion theory (IDT) and technology acceptance model (TAM). Efendioglu, A.M. et al., (2005) noted that differing characteristics of local environments (both infrastructural and socio-economic) have created a significant level of variation in the acceptance and growth of e-commerce in different regions of the world. Bijou, Yang et al., (2007) identified easy access to information, stay home and shop, lack of security and privacy as some of the significant predictors of online shopping. Chiemeke, S.C.I. and Evwiekpaefe, A. E., (2011) used UTAUT model in order to identify factors influencing e-commerce acceptance. The research model proposed by them tested the effects of awareness, culture, cost, power, government regulation, accessibility, trust and security and reliability on intention to adopt e-commerce along with the factors of UTAUT model. Yulihasri et al., (2011) identified usefulness, ease of use, compatibility, privacy and security, normative beliefs and self efficacy as major constructs that can influence customer's intention towards online shopping.

Based on the above mentioned studies, present paper aimed at analysing the significance of technical assurance and its antecedents to customer's purchasing intention. For the same the authors have tried to identify various attributes that have the potential to assure technical infrastructure to the online customer.

III. SAMPLE SELECTION AND METHODOLOGY

To collect the perception of customers to purchase online, a survey to identify factors influencing customer's intention to purchase online was conducted in the beginning of the year 2013. Initially a pre-pilot test was conducted, constituted 25 respondents having high level of adoption of online shopping. Based on their feedback, the content validity of the questionnaire was checked and improved before circulating it to sample respondents for actual survey.For the actual data collection, our target group comprised of respondents belonging to different age groups and of different educational background from various states of India. Both online and offline methods were used to collect the required responses. In total about 250 responses were received and of which around 207 responses were filtered to be complete and fit for further analysis. The questionnaire instrument consisted of 3 sections. The first section was designed to extract online consumers' demographic and online shopping characteristics The second section was designed to ask respondents to rate questions related to attributes having potential to influence their level of intention to purchase online on a ten-point Likert scale ranging from 'strongly disagree/absolutely untrue (1)' to 'strongly agree/absolutely true (10)'. This section was formulated after a detailed review of the literature, discussed in the above sections. The questions were designed keeping in mind the online shopping environment present mainly in developing country like India. The last section consisted of overall perception of the respondents regarding the major elements/factors under which the questions in section two were grouped.

IV. MEASUREMENT/ OPERATIONALIZATION OF THE CONSTRUCTS

A questionnaire instrument with a ten-point Likert scale ranging from 'strongly disagree/ absolutely untrue (1)' to 'strongly agree/absolutely true (10)' was used for measure the level of significance of different constructs. These constructs include intention to purchase online, technical assurance, e-environment, and e-interface which are discussed briefly below:

4.1 Intention to purchase online

Customer Intention can be defined as a measure of effort the person is ready to exert in order to accomplish or perform a desired behaviour (Ajzen, I., 1991). It has been often noticed that an individual's behavioural intention have a positive impact on the decision of performing the intended action or behaviour (Ajzen, I., 1991). Hence, customer's intention to purchase online is often influenced by his/her views regarding online shopping channel (Belanger et al., 2002), willingness to perform a specified behaviour online (Salisbury, W.D. et al., 2001). Vijayasarathy, L.R., (2002) identified product perception, past shopping experience, customer service, and perceived risk as some of the factors influencing online purchasing behavior of customer. The literature also indicates level of trust in the web-store's ability (Schlosser, A.E. et al., 2006), risk reducing factors (Lwin, M.O. and Williams, J.D., 2006; Tan, S.J., 1999; Van den Poel, D. and Leunis, J., 1999), measures/policies

regarding privacy and security (Jarvelainen, J., 2007; Schlosser, A.E. et al., 2006), etc. as some of the significant factors influencing the customer's intention. Keeping in view of the above, the authors have identified technical assurance as a key element that has the potential to influence customer's intention to purchase online.

4.2 Technical Assurance

Researchers have often laid emphasis on the technical environment offered by the web-store with respect to security, privacy, usability, site design, etc. as the key element to influence the customers behavior in the virtual environment (Jarvenpaa, S.L. and Todd,P.A., 1997; Keeney, R.L., 1999; Palmer, J. and Griffith, D., 1998; Rasmussen, J., 1996; Torkzadeh, G. and Dhillon, G., 2002). Belanger, F. et al., (2002) found security to be one of the major concerns cited by the respondents and stated that these concerns need to be taken care by the technical protection measures like encryption and authentication. Palmer, J.W., (2002) identified the advantage of e-interactivity to the online customers and it was found that interactivity offer by the site influence online customers positively (Alba, J. et al., 1997; Jarvenpaa, S.L. and Todd, P.A., 1997). The authors are of the view that technical assurance is the assurance given to the customer that adequate technical measures have been embedded over the site that offers secure shopping channel and features that reduce human efforts, time and thereby increase customer's efficiency. Keeping in view of the above, the authors highlighted the significance of two factors namely e-environment and e-interface as antecedents of technical assurance that influence customer's intention to purchase online.

4.3 E-Environment

The e-environment refers to the technical measures/mechanisms taken by an organization that aims at giving technical assurance to the users. It also reframes the concept of technology trust defined by Pauline, R., (2008) that laid emphasis on the concept that underline technological infrastructure is capable enough to facilitate transaction according to user's expectation with respect to security and privacy. Further, the presence of trusted third parties or external entities (e.g. TRUSTe) has often been found to enhance the user's confidence about using a specific website (Kim, D.J., et al., 2001). Unauthorized access, use, alteration and destruction of the sensitive and personal information are also cited as one of the impediments towards adoption of online shopping (Olusegun, 2006). Based on the above discussion the authors have defined e-environment as the underlying technical measures adopted by the website regarding authentication, authorization, privacy and security issues in order to assure their customers with a technically secure environment. Thus, e-environment comprises of three factors namely security/privacy, TTP's and authentication/authorization which are discussed below.

4.3.1 Authentication/Authorization: In an online shopping environment, authentication can be defined as the process to verify the identity of the user requesting access to the site or one's account (Thompson, 2004). While authorization can be defined as giving permission to someone to use or access the system or account. Logically, authorization is preceded by authentication. Password protection, digital signature, verifying code etc. are some of the mechanisms usually embed by the organisation to ensure the authenticity of the user in order to safeguard users from security attacks like ID spoofing attacks, replay attacks, Brute-Force Attacks etc (Jolly, A., 2003).

4.3.2 TTP's: TTP's are one set of organizations that try to promote trust on web. The TTP will put their log on firm's website which demonstrates the confirmation of the policy of TTP. It is basically considered as consumers' trust on the entities in the external environment that surrounds the e-commerce system. This type of trust contributes to the overall trust towards using a system. The presence of trusted third parties or external entities (e.g. TRUSTe, BBB, Virsign etc. has often been found to enhance the user's confidence about using a specific website (Kim, D.J., et al., 2001). The companies can also verify, audit, and certify privacy policies (Ranganathan and Ganapathy, 2002**).**

4.3.3 Security/privacy: Security in e-commerce can be viewed as a security of financial information transmitted over internet (Gupta, 1995) i.e. surety from the vendor that user's sensitive data like credit card number will not be misused. On the other hand privacy in e-commerce is defined as the willingness to share personal information over the Internet that allows for the conclusion of purchases (Bélanger et al. 2002). Though, it has been reported by researchers that online shoppers tend to be more risk taker in comparison to offline shoppers (Donthu, N. and Garcia, A., 1999), still online users

are hesitant to transact in an online shopping environment cause of security and privacy issues. Thus online shopping site owners must made an attempt to ensure secure shopping channel to the customers.

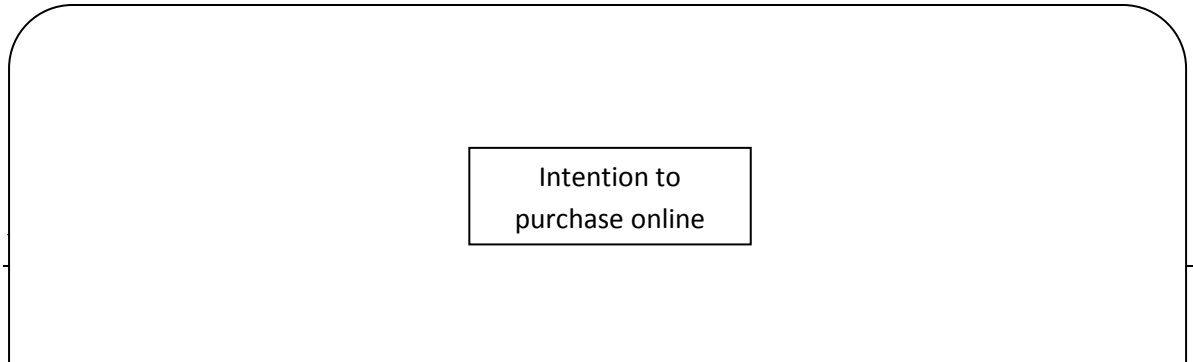
4.4 E-interface

Unlike offline shopping channel, e-interface acts as the only communication medium between customer and the site for online shopping channel. Hence, its effectiveness and ability establishes good relationship with the customers (Jiang, Z. and Benbasat, I., 2003). The online environment significantly limits a customer's perception of the products they browse online as they can't feel, touch, or try online products (Jiang, Z. and Benbasat, I., 2003). In order to overcome this limitation, emerging technologies like recommender system, 3D image processing etc. are designed to give users a strong sense of virtual presence that is often termed as virtual reality (Lombard, M. and Ditton, 1997). This virtual reality is the byproduct of effective e-interface. Researchers often cited that interactivity and services provided by the site constitute the effective e-interface. Thus, the authors have found that e-interactivity and e-services are the most cited issues pertaining to the e-interface of online shopping channel.

4.4.1 E-service: E-service is the concept of services that help people to overcome their problems or doubts and thus help them to meet their needs by exchanging information between the entrepreneur and the customer (Rust, R.T. and Kannan, P.K., 2003). As in an online shopping channel sales personnel and the customer are virtually interacting with each other thus the need of efficient and effective e-service provided by the site owner increase. The authors identified FAQ's, 24*7 customer care service as some of the measures can be provided by the site in order to enhance customer experience with e-service measures which have the potential to enhance e-interface between the customers and the site.

4.4.2 E-interactivity: E-interactivity can be defined as the interaction between the site and its users which can be achieved via computer-mediated interactive environment (Hoffman, D.L. et al., 1996). Teo *et al.*, (2003) noticed that user's attitude towards a website can be twisted by increasing the level of e-interactivity over that web site. Following the above discussion, the authors identified chat room sessions, feedback and reviews as e-interactivity measures that has the potential to enhance e-interface between the customers and the site.

Based on the above discussion, the research model in figure 1 was proposed. To validate the significance of proposed research model and analyse/depict the relationships between the various factors identified in the study, following hypothesis were set and tested.



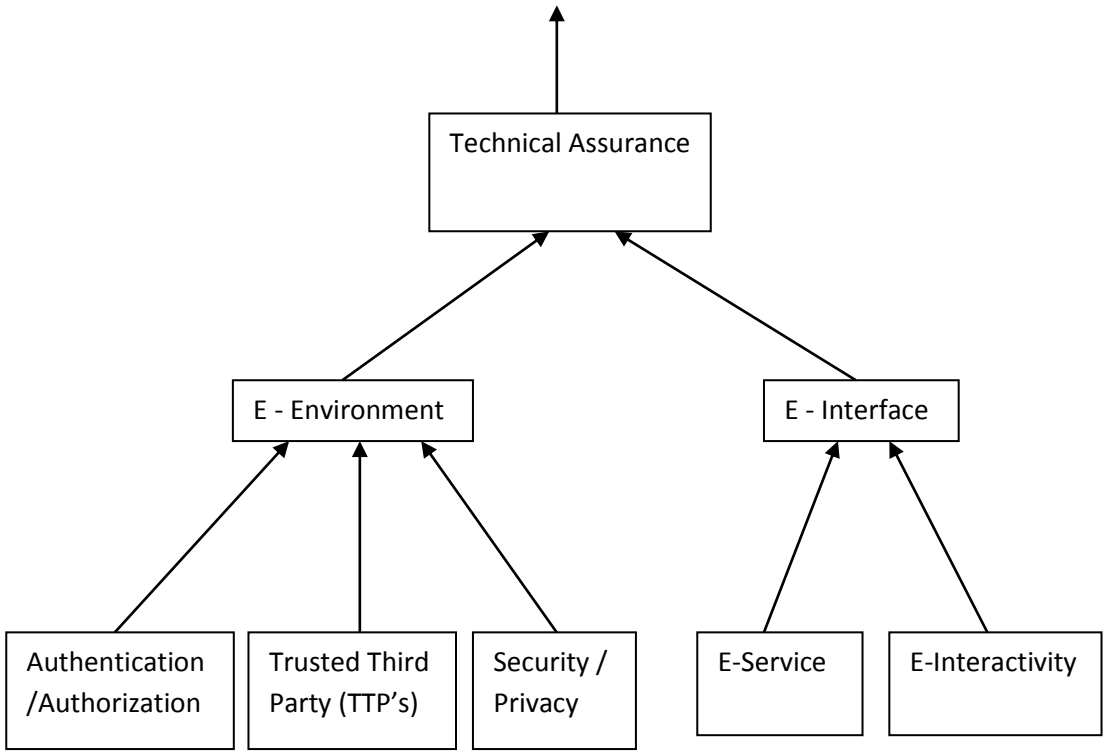


Figure 1. Proposed research model.

H1: ***Technical Assurance*** offered by the site influences the customers' behavioural ***Intention to purchase online.***
H1a: ***E-Environment*** has the potential to influence ***Technical Assurance*** offered by the site and thus influence customer's intention to purchase online.
H1b: ***E-interface*** has the potential to influence ***Technical Assurance*** offered by the site and thus influence customer's intention to purchase online.
H1a1: ***Authentication/Authorization*** measures offered by the site ensure ***E-Environment*** to customers in online shopping environment.
H1a2: ***Trusted Third Party*** mechanism offered by the site ensures ***E-Environment*** to customers in online shopping environment.
H1a3: ***Security/Privacy*** measures offered by the site ensure ***E-Environment*** to customers in online shopping environment.
H1b1: ***E-Service*** has the potential to influence ***E-Interface*** offered by the site.
H1b2: ***E-Interactivity*** has the potential to influence ***E-Interface*** offered by the site.

V. METHODOLOGY

The research began with a pilot study among twenty five individuals who have made an online purchase at least once. The pilot test was conducted in order to ensure the relevance of the variables selected and validity and reliability of the questionnaire. After incorporating the required changes, based on the suggestions from pilot survey, updated questionnaire were distributed to the respondents and data was collected. Data in this study were analysed using Statistical Package for Social Science (SPSS) Version 20.0. Firstly the reliability test of scales was performed using Cronbach's alpha test. Then the linear regression model was used in order to study the significance of independent variables influencing dependent variable i.e. online customer's intention to purchase online. The proposed model (as specified in figure 1), used intention to purchase online as dependent variable and four core independent variables viz. customer's attitude, attitude towards technical infrastructure, attitude

towards technology and attitude towards risk.. The regression analysis was carried out on the data collected from 207 respondents. Finally the model obtained was duly tested.

VI. DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

In order to find the relationship between the demographic characteristics and the customer's intention to purchase online, data on the various characteristics was analysed. The aim behind selecting the characteristics was to have a fair distribution of the sample survey with respect to sex, age, occupation, monthly income and educational qualification. Since Internet usage has often been cited as one of the influencing factors effecting customer's intention to purchase online, hence care was taken to collect data regarding the frequency of Internet usage and the purpose for choosing the electronic medium for shopping. The descriptive statistics of the respondents' demographic characteristics were analysed and presented in Table 1.

Table 1. Demographic profile of the respondents

Demographic characteristic		Frequency	Percentage
Sex	Male	87	42
	Female	120	58
Age	Below 20	33	15.9
	Between 20 and 25	66	31.9
	Between 25 and 30	43	20.8
	Between 30 and 35	39	18.8
	Above 35	26	12.6
Occupation	Private sector/MNC	68	32.9
	Govt sector/PSU/Banks	25	12.1
	Students/Non earning	101	48.8
	Businessman	13	6.3
Educational qualification	12^{th} or less	41	19.8
	Graduate	79	38.2
	Post graduate	32	15.5
	Professional degree	55	26.6
Monthly income	Non earning	100	48.3
	Less than 50,000	26	12.6
	Between 50,000 and 1,00,000	47	22.7
	More than 1,00,000	34	16.4
Frequency of internet usage	Daily less than 2 hours	65	31.4
	Daily more than 2 hours	92	44.4
	Weekly	20	9.7

	As and when required	30	14.5
Purpose to go online	For checking emails	6	2.9
	For social networking sites	19	9.2
	For information gathering	76	36.7
	For online shopping	106	51.2

As can be observed from Table 1, the sample was fairly diversified with respect to the attributes identified. The number of male respondents (42%) and female respondents (52%) are comparable which can account to be an impartial feedback from both the perspectives. Almost three fourth of the sample respondents fell within the age group of 20-35 years. This clearly indicates that technology acceptance is much more prevalent among young people. This included almost 20% of young professionals and experiences professionals each. All of them have minimum education level of high school or equivalent. About 40% of them have done graduation and around 40% of them have master's degree or have done some professional course. As regards to occupation, almost one-third of the respondents belonged to private or MNC sector and only 12% of the respondents belonged to government sector. Majority of respondents use Internet quite frequently. Around 75% of the respondents use Internet daily among then 45% use Internet for more than 2 hours a day. In contrast to frequent Internet users only 14% of the respondents go online as and when required. Very few of the respondents go online for social networking sites (9%) or checking emails (3%) only. 51% of the respondents go online to shop and around 37% of the respondents go online for information gathering or e-learning

VII. RELIABILITY

Reliability refers to the consistency or repeatability of a measure i.e. a system will yield approximately same or compatible result in different circumstances. In order to test the reliability of the proposed model, Cronbach's Alpha test was carried out. (See table 2 for a complete list of reliability coefficients). As can be seen from Table 2, the composite reliability score for each of the constructs was found to be above 0.70 which is considered to be the acceptable critical value for reliability (Suh, B. and Han, I., 2003). Further a composite reliability of all the factors was also calculated and was found to be 0.891.

Table 2. Reliability of measurement items

Constructs	Cronbach's alpha (>0.7)
Intension To Purchase Online	.796
Technical Assurance	.707
E-Environment	.876
E-Interface	.817
Composite	.891

VIII. RESULTS AND INTERPRETATIONS

Based on the findings of literature review and the data collected empirically, the present research has the following observations. (1) Technical assurance influencing online customer's intention to purchase online; (2) Since secure and interactive environment may dominate a customer's intention to purchase online, the effects of technical assurance on customer's intention of purchase online will be considered in this research context. Thus the present study considered e-environment and e-interface as dominant factor assuring technical infrastructure and in turn influencing customer's intention to purchase online. The results in respect of online customers' behaviour to purchase online have been discussed in the following section.

4.5 Influence of technical assurance to customer's intention to purchase online

Positing that technical assurance will influence customer's intention to purchase online; technical assurance was regressed against intention to purchase online and was found to be statistically significant. The results indicated that technical assurance has a significant role in influencing customer's intention to purchase online (see table 3). This could be attributed because of the fact that the customer's intention to purchase online is greatly influenced by the interactive nature and security measures of the web site. Thus the result support hypothesis H1.

Table 3. Coefficients[a] of regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.815	.107		63.969	.000
Technical Assurance	1.305	.134	.561	9.705	.000

a. Dependent Variable: Intention to purchase online

4.6 Factors influencing Technical Assurance offered by the site to online customers

In order to identify the relationship between the identified core factors of technical assurance, the two core factors namely e-environment and e-interface were regressed against the dependent variable technical assurance. According to the results shown in table 4 obtained after liner regression, both the factors were found to be statistically significant.

Table 4. Coefficients[a] of regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.283	.176		-12.969	.000
E-Environment	.224	.028	.495	8.080	.000
E-Interface	.111	.025	.270	4.413	.000

a. Dependent Variable: Technical Assurance

Although the survey pointed out various factors that had the potential to influence the technical assurance attribute, the authors after factor analysis found that these can be grouped as E-environment and E-interface. Online customers were found to be more worried about environmental issues like unauthorized access to their information and security and privacy measures. Same can be seen from table 4 that E-environment measures were contributing more significantly to influence technical assurance to online customers. Further users also expected some interactive measures or effective touch points with the sales personnel in order to improve the e-interface between the customer and the site. Thus the result supports the hypothesis H1a, and H1b.

4.7 Factors influencing e-environment offered by the site to online customers

E-environment offered by the site to purchase online was found to be one of the major attribute assuring technically secure environments to the customers. Three attributes namely authentication/authorization, trusted third party and security/privacy were identified as antecedents to e-environment. As can be seen from table 5 all the three attributes were found to be significantly influencing the technical assurance to the customers to purchase online.

Table 5. Coefficients[a] of regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.033	.443		11.368	.000
Authentication/Authorization	.495	.140	.255	3.536	.001
Trusted Third Party	.223	.065	.249	3.442	.001
Security/Privacy	.364	.158	.187	2.304	.022

a. Dependent Variable: E-Environment

According to table 5 all the three attributes were found to be significantly contributing to influence e-environment. Among all the three attributes authentication/authorization mechanism were found to be most significant i.e. mechanism like digital signature, password protection were found to have positive relation with assuring technical infrastructure to the customers. This indicates that the customers need to be assured that their authentication to sites and the payment gateways are well protected. Further, it has been reported by researchers that online shoppers tend to be more risk taker in comparison to offline shoppers (Donthu, N. and Garcia, A., 1999); still they are hesitant about sharing their credit card details or other confidential information over internet. Thus, issues related to security and privacy followed next in ensuring E-environment to the customers. Trusted third party measures were also found to be significantly contributing to ensure e-environment issue of online shopping. This imply that in the faceless world of the online environment, customer's trust towards the legal framework associated with the online transaction, or customer's trust towards the third party recognition bodies ensure customer with secure online shopping environment. Thus, the results support the hypothesis H1a1, H1a2, and H1a3.

4.8 Factors influencing e-interface offered by the site to online customers

To identify the significance of attributes contributing towards e-interface of technical assurance, another liner regression analysis was conducted, as can be seen in table 6. However, factor analysis was conducted on the various questions pertaining to e-interface factor and the result reduced the factors to e-interaction and e-service.

Table 6. Coefficients[a] of regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.986	.103		67.981	.000
E-Service	.700	.125	.399	5.601	.000
E-Interactivity	.369	.125	.210	2.950	.004

a. Dependent variable: E-Interface

According to table 6 both the factors namely e-service and e-interactivity were found to be significantly contributing to influence e-interface. Among these two factors, e-service was found to contribute strongly to e-interface attribute of technical assurance. This implies that services like 24*7 efficient customer care service, effective FAQ's, etc. Have the potential to enhance customer experience and thus remarkably influence their intention to purchase online. E-interactivity that is often incorporated using chat room session for providing useful suggestions or resolving problems or by providing trial room facility was also found to be significantly contributing to ensure efficient

interface to the online customers and thus influence them to purchase online. Hence the result supports the hypothesis H1b1, H1b2.

IX. SUMMARY RESULTS, DISCUSSIONS

In an attempt to identify factors influencing customer's intention to purchase online, contribution technical assurance and its antecedents were hypothesised. The paper further made an attempt to decompose e-environment and e-interface to identify factors contributing maximum to ensure technical environment to the customers and thus influence their intention to transact online. The analysis of the data so collected empirically validates the set hypothesis in the context of developing country like India.

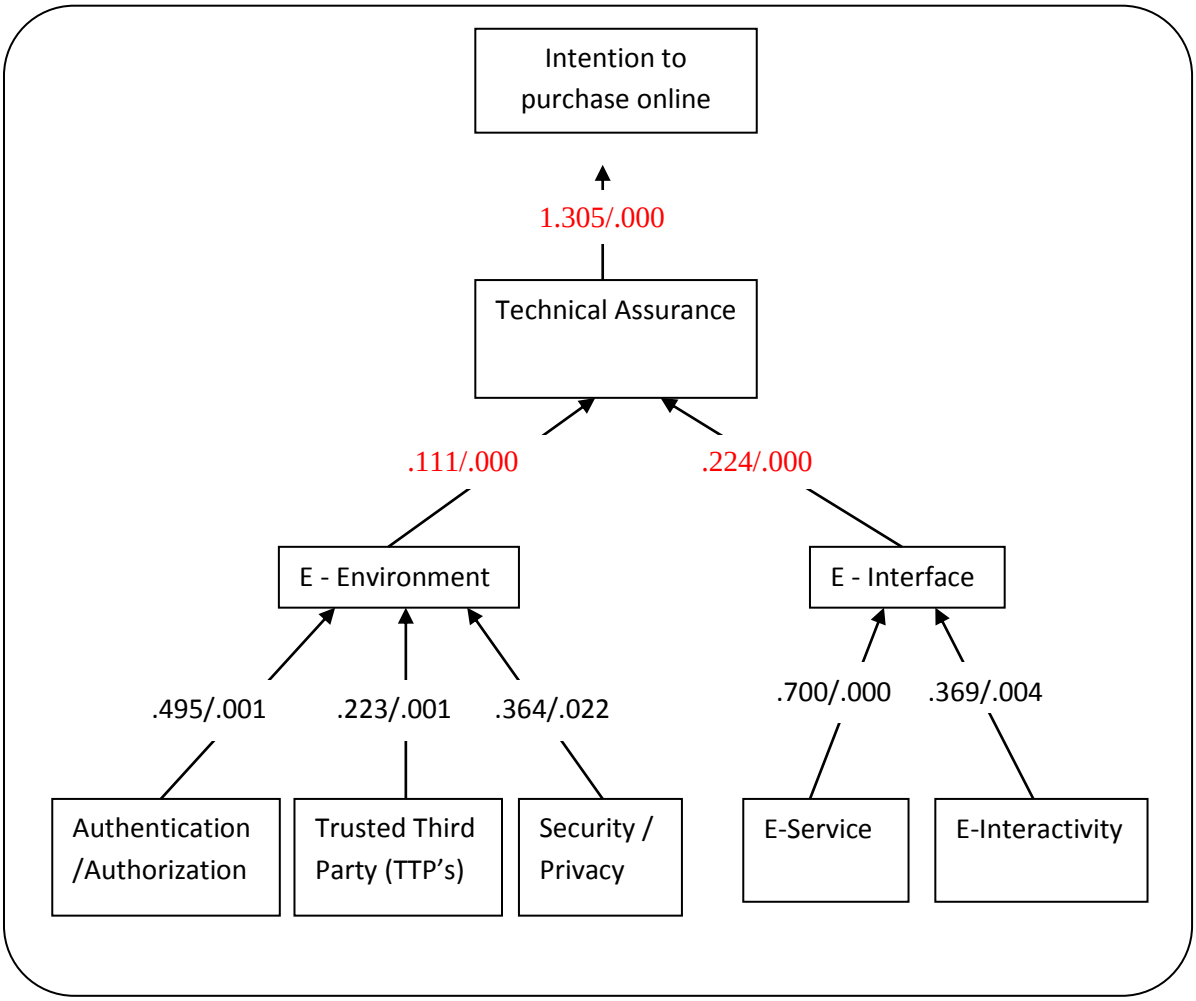


Figure 2. Relationship between intention to purchase online and technical assurance.

The results (see figure 2) show that there is a positive relationship between technical assurance and customer's intention to purchase online. Further, from the previous section, we can summarize that the independent variable e-interface have a greater influence on technical assurance given by the site owner. This means that the online consumers significantly care about effective and efficient interface provided by the service providers or the site owners when making online purchases. Thus it is important for sellers to pay more attention towards providing efficient interface by including chat sessions with the sales personnel or issues like effective 24*7 customer care service. Further the study also demonstrated the power of e-environment on customer's intention to purchase online i.e. customers are always in look for a secure and authentic platform to proceed their transactions. Thus the authors highlighted the significance of security measures, authority and authentication mechanism

and TTP's offered by the site owner or service provider to influence customer's decision to shop online.

X. IMPLICATIONS AND SCOPES

The present research offers some insights into the links between online shopping and consumers' decisions to choose online shopping over traditional offline shopping channel. The inferences from the research can help online marketers and retailers to develop appropriate marketing strategies and make technological advancements in order to improve customer's experience with their site which might result in customers' retention and also creation of new market. The online customers usually worry about security and privacy issue offered by the site. Hence companies must embed features related to authentication or authorization of user, data integrity or encryption mechanism, TTP's etc. in order to ensure customers with secure and authentic shopping environment.

Further the results also indicate that users are constantly in search of the features that enhance site-customer interface. Hence, companies must also emphasis on interactive measure like chat room facility or trail room facility and providing services like 24*7 customer care, FAQ's etc. to enhance customer's experience with the site.

The present study involves a number of limitations that need to be addressed. Acknowledgement to these limitations suggested directions for future research. During the course of analysis the authors found the youth of India to more IT savvy and inclined towards online shopping environment. However, no specific analysis had been done in order to identify the scope of different age group to online shopping because of lack of data in this regard.

REFERENCES

[1]. Ajzen, I., 1991, The theory of planned behavior, *Organizational Behaviour and Human Decision Processes*, vol. 50, pp. 179-211.

[2]. Alba, J., Lynch, J., Weitz, B., Janiszweski, C., Lutz, R., Sawyer, A. and Wood, S., 1997, Interactive home shopping: Consumer, retailer, and manufacturer incentives to participate in electronic marketplaces, *Journal of Marketing*, vol. 61(3), pp. 38-53.

[3]. Belanger, F., Hiller, J. and Smith, W.J., 2002, Trustworthiness in electronic commerce: The role of privacy, security, and site attributes, *Journal of Strategic Information Systems*, vol. 11(34), pp. 245-270.

[4]. Bijou Yang and David Lester and Simon James, 2007, Attitudes Toward Buying Online as Predictors of Shopping Online for British and American Respondents, *Cyberpsychology and Behavior*, vol. 10(2).

[5]. Chiemeke S.C.1 and Evwiekpaefe A. E., 2011, A conceptual framework of a modified unified theory of acceptance and use of technology (UTAUT) Model with Nigerian factors in E-commerce adoption, *Educational Research (ISSN: 2141-5161)*, vol. 2(12), pp. 1719-1726.

[6]. Chen, L.D. and Tan, J., 2004, Technology Adaptation in E-commerce: Key Determinants of Virtual Stores Acceptance, *European Management Journal*, vol. 22(1), pp. 74-86.

[7]. Donthu, N. and Garcia, A., 1999, The Internet Shopper, *Journal of Advertising Research*, vol. 39(3), pp. 52-58.

[8]. Efendioglu, A.M., Vincent, F.Y., William, L.M., 2005, E- commerce In Developing Countries: Issues And Influences, *University of San Francisco*.

[9]. Gupta, S., 1995, HERMES: A research Project on the Commercial Uses of the World Wide Web.

[10]. Heijden, H., Verhagen, T., Creemers, M., 2003, Understanding *online* purchase intentions: contributions from technology and trust perspectives, *European Journal of Information Systems*, Basingstoke, vol. 12, pp. 41–48.

[11]. Hoffman, D.L., Novak, T.P. and Chatterjee, P., 1996, Commercial Scenarios for the Web: Opportunities and Challenges, *Journal of Computer - Mediated Communication*, vol. 1(3).

[12]. Jarvenpaa, S.L. and Todd, P.A., 1997, Consumer reactions to electronic shopping on the World Wide Web, *International Journal of Electronic Commerce*, vol. 1(2), pp. 59-88.

[13]. Jarvelainen, J., 2007, Online Purchase Intentions: An Empirical Testing of a Multiple-Theory Model, *Journal of Organizational Computing*, vol. 17(1), pp. 53-74.

[14]. Jiang, Z. and Benbasat, I., 2003, The effect of interactivity and vividness of functional control on changing web consumers' attitude, ICIS 2003 proceedings, pp. 93.

[15]. Jolly, A., 2003, The Secure Online Business, Great Britain and the United States- Kogan Page

[16]. Keeney, Ralph L., 1999, The Value of Internet Commerce to the Consumer, *Management Science*, vol. 45(4), pp. 533-542.

[17]. Kim, D.J., Braynov, S.D., Rao, H.R. and Song, Y., 2001, A B-to-C Trust Model for Online Exchanges, *Proceedings of the Seventh Americas Conference in Information Systems*, August 2-5, 2001, Boston, MA.
[18]. Lwin, M.O. and Williams, J.D., 2006, How consumers respond to warranties in Internet retailing, *The Journal of Consumer Affairs*, vol. 40(2), pp. 236-260.
[19]. Olusegun, *2006*, Weekly compilation of presidential documents, *meeting with foreign leaders* vol. 42(13), pp. 684-586.
[20]. Ovia J (2008), The role of banks in promoting e-commerce in Nigeria, *Internet Group Seminar, Golden Gate Restaurant, Lagos, Niger*.
[21]. Palmer, J., Griffith, D., 1998, An emerging web site design model for marketing, Comm. ACM, vol. 41(3), pp. 44-51.
[22]. Palmer, J.W., 2002, Web Site Usability, Design, and Performance Metrics, *Information Systems Research*, vol. 13(2), pp. 151-167.
[23]. Paulin, R., 2008, The impact of e-commerce customer relationship management in business-to-consumer e-commerce, *Journal of Electronic Commerce in Organizations*, vol. 6(4).
[24]. Ranganathan, C., S. Ganapathy (2002). Key dimensions of business to consumer web sites. Information and Management 39 457-465.
[25]. Rasmussen, J., 1996, Design with the user in mind, and you can't go awry, Computing Canada, vol. 22(25), pp. 47-48.
[26]. Rust, R.T. and Kannan, P.K., 2003, E-service: A New Paradigm for Business in the Electronic Environment, in Communications of the ACM, vol. 43(6), pp. 37-42.
[27]. Salisbury, W.D., Pearson, R.A., Pearson, A.W. and Miller, D.W., 2001, Perceived security and worldwide web purchase intention, *Industrial Management & Data Systems*, vol. 101(4), pp. 165-177.
[28]. Schlosser, A. E., White, T. B., and Lloyd, S. M., 2006, Converting Web Site Visitors into Buyers: How Web Site Investment Increases Consumer Trusting Beliefs and Online Purchase Intentions, *American Marketing Association*, vol. 70, pp. 133-148.
[29]. Suh B. and Han I., 2003, The impact of customer trust and perception of security control on the acceptance of electronic commerce, *International Journal of Electronic Commerce*, vol. 7 (3), pp. 135-161
[30]. Szymanski, D. M. and Hise, R. T., 2000, E-satisfaction: An initial examination, *Journal of Retailing*, vol. 76(3), pp. 309-22.
[31]. Tan, S.J., 1999, Strategies for Reducing Consumers' Risk Aversion in Internet Shopping, *Journal of Consumer Marketing*, vol. 16(2), pp. 163-180.
[32]. Teo, Thompson S.H. and Yon Ding Yeong, 2003, Assessing the consumer decision process in the digital marketplace, *Omega*, vol. 31, pp. 349-363.
[33]. Thompson, 2004, Electronic Ecommerce, Thompson Course Technology, ISBN 978-1418837037
[34]. Torkzadeh, G. and Dhillon, G., 2002, Measuring factors that influence the success of Internet commerce, *Information Systems Research*, vol. 13(2), pp. 187-204.
[35]. Van den Poel, D., and Leunis J., 1999, Consumer Acceptance of the Internet as a Channel of Distribution, *Journal of Business Research*, vol. 45(3), pp. 56-249.
[36]. Vijayasarathy L.R., 2002, Product characteristics and Internet shopping intentions, *Internet Research*, vol. 12(5), pp. 411 – 426.
[37]. Yulihasri, Md. Aminul Islam and Ku Amir Ku Daud, 2011, Factors that Influence Customers' Buying Intention on Shopping Online, *International Journal of Marketing Studies*, vol. 3(1).