

## **Role of Information Technology in Perceived Online Buying; An Empirical Investigation with Special Reference to Indore City**

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In this e-generation era, changes in consumer lifestyles, technological advancements, increases in consumer income and education, and rapid financial development throughout the world are major reasons for rapid growth of e-commerce. The basic objective of this research work is to explore the association between information technology exposure (represented by and measured in terms of Daily Internet Access, Frequency of Internet Access and Length of Internet Experience) and perception of individuals in Indore towards Online Buying. The study found that individuals in Indore who have a considerable daily access to internet have a positive perception towards online buying of goods and services while length of Internet Experience is not found to be significantly associated with perception of individuals in Indore towards online buying.

**Keywords: Online Buying, e- Commerce, online shopping etc.**

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## **INTRODUCTION**

Commerce via the internet or e-commerce has experienced rapid growth since the early years. The volume of the business to consumer transaction is increasingly annually at a very high rate. A report estimates that e-commerce market will reach INR 46,520 crores by the year 2011 from INR 19,688 crores in 2009. This growth is primarily driven by online travel industry which contributes 76% to total net commerce industry in India. E-Tailing which includes purchases of durable products such as electronic items, home and kitchen appliances as well as personal items – apparels and jewellery, constituted 8% of the overall share. Conducting transactions to different types of financial services such as insurance payments and renewals, as well as transactions through trading accounts amounted to 8% of the overall share. Downloading mobile and digital content comprised 2% of the overall share. Whereas other online services such as classifieds (jobs, matrimonial, cars real estate and others), online food delivery as well as buying movie tickets and DVD rentals comprise 6% of the overall market.

In this e-generation era, changes in consumer lifestyles, technological advancements, increases in consumer income and education, and rapid financial development throughout the world are major reasons for rapid growth of e-commerce. The use of the Internet as a shopping has been growing at an impressive rate throughout the last decade. Forrester estimates number of Internet users in India currently to be 52 million and expects India to have an average growth rate of 10-20 % respectively, but in spite of being at 4<sup>th</sup> rank globally, online shopping in India is considered in its nascent stage.

## **THE CONCEPT OF ONLINE BUYING**

In recent years, online shopping has become popular. In order to shop online, one must be able to have access to a computer as well as a credit card or debit card. Online buying is the process whereby consumers directly buy goods or services from a seller in real-time, without an intermediary service, over the Internet. The process is called Business-to-Consumer (B2C) online shopping. When a business buys from another business it is called Business-to-Business (B2B) online shopping.

## **RATIONALE OF THE STUDY**

The use of the Internet for purchasing goods and services has enormous potential. According to some researchers the Internet is the very encapsulation of “one-to-one marketing” and as such gives the companies the ability to establish enduring relationship with individual customers. Consequently, Electronic Commerce (EC) has emerged as the most important way of doing business for years to come (Samadi and Nejadi, 2006). Despite the increasing popularity of the Internet, most knowledge of Internet marketing is based on anecdotes and experiential evidence from television, radio, popular press or magazines (Waldo, 2000). Similarly to western countries, many companies in India are also rushing to establish an Internet presence despite a great deal of confusion about the actual impact of this new medium on their businesses. Standing on this platform of probable vs. feasible role of internet in online buying of consumers of Indore city, this study is necessitated to explore the association of technology (internet usage) and perceived online buying.

## **LITERATURE SURVEY**

Understanding the mechanisms of virtual shopping and the behavior of the online consumer is a priority issue for practitioners competing in the fast expanding virtual marketplace. There have been intensive studies of online shopping attitudes and behavior in recent past. Most of these studies have attempted to identify factors influencing or contributing to online shopping attitude and behavior. The researchers seem to take different perspectives and focus on different factors in different ways. Prashar et al. (2017) applies the concept of the stimulus–organism–response to explain Indian buyers’ online shopping behaviour, besides examining the importance of design elements in enabling website satisfaction. Case et al. (2001) suggested that internet knowledge, income and education level are especially powerful predictors of Internet purchases among university students. Online population is relatively younger, more educated, wealthier, although the gaps are gradually closing. They search for more products online and are more likely to agree that online shopping was more convenient (Sorce et al., 2005).

According to Kothari and Maindargi (2016), respondents are preferring online shopping due to various motives like less price or price discount, time saving, availability of no of sites and variety of products, easy purchase method, user-friendly websites etc. Researchers like Alam

et al. (2008) explored additional factors like website design, reliability, customer service and security/privacy significantly influencing young consumer perception of online shopping. In the research conducted by Vellido et al. (2000), nine factors associated with users' perception of online shopping were extracted. Among those factors the risk perception of users was demonstrated to be the main discriminator between people buying online and people not buying online. This evidence that consumers' attitude towards online shopping is a prominent factor affecting actual buying behavior. Other discriminating factors were; control over and convenience of the shopping process, affordability of merchandise, customer service and ease of use of the shopping site. However, product characteristics together with the particular shopping situation and consumer characteristics would influence the evaluation and selection of the appropriate retailing channel. Phau and Poon (2000) pointed out that some limitations of the Internet as a retail channel restrict the products that are sellable online. Rosen and Howard (2000) provided estimates for e-retail figures for different categories of products and concluded that certain goods and services appeared more suitable for an online sales format.

In Indian context, factors affecting online shopping are similar to those of globally but there may be some specific factors as well as penetration of IT and its adoption in India has been slow. Convenience, Accessibility, Scope, Attraction, Reliability, Experience and Clarity are the important factors affecting online shopping in India (Rishi, 2008).

## **RESEARCH DESIGN AND METHODOLOGY**

### **RESEARCH QUESTION**

Although a large number of studies associating information technology and online buying behavior have been undertaken, there exist a limited number of studies conducted in emerging markets specifically in Indore, which is a mediocre tier II city in central India. Online shopping is an emerging concept for Indore. This city is featured with increased commercialization coupled with progression to become an education hub. The number of residents in the city is increasing at a very fast speed, as the migration rate to this city from the outskirts and other towns of the state is very high. So, it has become imperative to explore the association of information technology with perceived online buying. With this background, this research work has attempted to answer the following basic question:

**What is the association of information technology usage with perceived online buying in Indore city?**

**RESEARCH OBJECTIVE**

The basic objective of this research work is to explore the association between information technology exposure (represented by and measured in terms of Daily Internet Access, Frequency of Internet Access and Length of Internet Experience) and perception of individuals in Indore towards Online Buying.

**RESEARCH HYPOTHESIS**

With the background of existing literature which evidence that internet affects the online buying behavior of individuals (Case et.al., 2001; Bellman and colleagues, 1999; Alam et al., 2008), this research work hypothesized that:

***H01:** There is a significant association between Daily Internet Access and Perceived online buying of individuals in Indore.*

***H02:** There is a significant association between Frequency of Internet Access and Perceived online buying of individuals in Indore.*

***H03:** There is a significant association between Length of Internet Experience and Perceived online buying of individuals in Indore.*

**RESEARCH METHODOLOGY**

The basic objective of this research work is to explore the association of information technology usage with perceived online buying in Indore city. Since, there exist a limited number of studies conducted in emerging markets globally as well as nationally that provide insights to the role of information technology for perceived online shopping, this work would be one of the preliminary studies of the related arena. The target population in this study was defined as all internet users, who use internet for different purpose and above the age of 18 years. The sample unit in this study is the individuals who are internet user. A total of 310 respondents have finally been considered for the purpose of exploring the association of

information technology usage with perceived online buying in Indore city. Sampling Method used can be best described as convenient cum purposive non-probability sampling method.

In order to collect the data a self-structured questionnaire was developed. The questions were designed to collect information on access of internet by respondents including daily usage, frequency of usage and length of previous internet usage. Along with this, the respondents were also asked to mark their perception of online buying and the preferred goods and services for perceived online buying. Demographic information of the respondents was also collected. All the questions included in the questionnaire were close ended. The questionnaire was offered to the targeted respondents off line as well as online. The questionnaire was designed in such a way that it motivated respondents to participate and complete the questionnaire by using simple and easy to follow layout design (Malhotra, 1996). Collected data was analyzed with the help of Statistical Package for Social Sciences (SPSS). Chi-square was the basic tool applied for data analysis.

## **DATA ANALYSIS**

The respondents were asked to mark their responses from the given options, each question being a close-ended question. To measure the information technology exposure of respondents were asked to mark responses for questions relating to their Daily Internet Access, Frequency of Internet Access and Length of Internet Experience. A question relating to their perception towards online buying was also incorporated in the questionnaire. Along with this, the demographic information relating to the respondents was also collected. Table I gives the summary of demographic characteristics of the respondents:

**Table1: Demographic characteristics of the respondents**

<b>Variables and categories</b>	<b>N=310</b>	<b>%</b>
<b>Age</b>		
18-30	214	69 %
31-50	91	29%
Above 50	5	2%
<b>Gender</b>		

Male	153	49%
Female	157	51%
<b>Marital Status</b>		
Married	97	31%
Unmarried	213	69%
<b>Income</b>		
No income but pocket money	89	29%
Less than Rs. 3 lacs	93	30%
Rs.3 lacs to 5 lacs	100	32%
Rs.5 lacs to 10 lacs	28	9%
<b>Educational Qualification (pursuing/completed)</b>		
Graduation	86	28%
Post graduate	168	54%
Professional	16	5%
Other(specify)	40	13%

The prime objective of the study is to explore the association between information technology (represented by and measured in terms of Daily Internet Access, Frequency of Internet Access and Length of Experience with Internet) and perception of individuals in Indore towards Online Buying. . The hypotheses of the study have been tested with the help of chi-square performed with the help of SPSS. The hypotheses have been tested at 5% significance level.

**Association between Daily Internet Access and Perceived Online Buying**

The respondents were asked to mark their daily internet access in three categories, the first representing “Poor Daily Internet Access” (less than 1 hour per day), second representing “Moderate Daily Internet Access” (1 to 3 hours per day), and “Considerable Daily Internet Access” (more than 3 hours per day). This was associated with their perception of online buying. The results of the chi-square test are exhibited below:

As seen from table II, a lower percentage of respondents in “Poor Daily Internet Access” category have indicated positive perception towards online buying, where as in case of in “Considerable Daily Internet Access” category, a higher percentage of respondents have indicated positive perception towards online buying. In case of respondents in “Moderate Daily Internet Access” category, less percentage of respondents have shown a positive perception towards online buying. Apparently, there seems to be a difference in perception towards online buying of individuals in Indore.

**Table 2: Descriptive Statistics and Chi-square Statistics for Daily Internet Access and Perceived Online Buying**

<b>Daily Internet Access →</b>		<b>Poor</b>	<b>Moderate</b>	<b>Considerable</b>	<b>Total</b>
<b>Positive Perception towards online buying</b>	Count	48	65	75	188
	%	25.5	34.6	39.9	100%
<b>Negative Perception towards online buying</b>	Count	49	50	23	122
	%	26.8	46.4	26.8	100%
<b>Total</b>	Count	97	115	98	310
	%	31.3	37.1	31.6	100%
<b>Pearson Chi-Square</b>			Value	Df	Asymp. Sig. (2-sided)
			<b>16.243</b>	<b>2</b>	<b>.000</b>

A close look to chi square value of 16.243 with a df of 2 and significance level of .000 reveals that there is a significant association between Daily Internet Access and perceived online buying at 5% significance level. Hence null hypothesis H1 *There is a significant association between Daily Internet Access and Perceived online buying of individuals in Indore* is not rejected. Thus, it can be concluded that there is a significant association between Daily Internet Access of individuals in Indore and their perceived online buying.

**Association between Frequency of Internet Access and Perceived Online Buying**

The respondents were asked to mark their frequency of internet access in three categories, the first representing “Low Frequency of Internet Access” (once a week or less), second representing “Moderate Frequency of Internet Access” (1 to 3 times a week), and “Considerable Frequency of Internet Access” (more than thrice a week). This was associated with their perception of online buying. The results of the chi-square test are exhibited below:

As seen from table III, a lower percentage of respondents in “Low Frequency of Internet Access” category have indicated positive perception towards online buying, and the same is the case with respondents in “Considerable Frequency of Internet Access” category and respondents in “Moderate Frequency of Internet Access” category. So, the individuals in Indore seem to be indifferent in their perception towards online buying on the basis of their frequency of internet access.

**Table 3: Descriptive Statistics and Chi-square Statistics for Frequency of Internet Access and Perceived Online Buying**

<b>Frequency of Internet Access →</b>		<b>Low</b>	<b>Moderate</b>	<b>Considerable</b>	<b>Total</b>
<b>Positive Perception towards online buying</b>	Count	125	37	26	188
	%	66.5	19.7	13.8	100%
<b>Negative Perception towards online buying</b>	Count	55	38	29	122
	%	45.1	31.1	23.8	100%
<b>Total</b>	Count	180	75	55	310
	%	58.1	24.2	17.7	100%
<b>Pearson Chi-Square</b>			Value	df	Asymp. Sig. (2-sided)
			<b>13.981</b>	<b>2</b>	<b>.001</b>

But a close look to chi square value of 13.981 with a df of 2 and significance level of .001 reveals that there is a significant association between Frequency of Internet Access and perceived online buying at 5% significance level. Hence null hypothesis H2 *There is a significant association between Frequency of Internet Access and Perceived online buying of individuals in Indore* is not rejected. Thus, it can be concluded that there is a significant association between Frequency of Internet Access of individuals in Indore and their perceived online buying.

**Association between Length of Internet Experience and Perceived Online Buying**

The respondents were asked to mark their Length of internet Experience in three categories, the first representing “Low Length of internet Experience” (Less than 1 year experience of using internet), second representing “Moderate Length of internet Experience ” (1 to 3 years experience of using internet), and “Considerable Length of internet Experience” (more than 3 years experience of using internet). This was associated with their perception of online buying. The results of the chi-square test are exhibited below:

As seen from table 4, a lower percentage of respondents in “Low Length of internet Experience” category have indicated negative perception towards online buying, and the same is the case with respondents in “Considerable Length of internet Experience” category. As far as respondents in “Moderate Length of internet Experience” category are concerned, a higher percentage has indicated negative perception towards online buying. So, the individuals in Indore seem to differ in their perception towards online buying on the basis of their length of internet experience.

**Table 4: Descriptive Statistics and Chi-square Statistics for Length of Internet Experience and Perceived Online Buying**

<b>Frequency of Internet Access →</b>		<b>Low</b>	<b>Moderate</b>	<b>Considerable</b>	<b>Total</b>
<b>Positive Perception towards online buying</b>	Count	37	53	98	188
	%	19.7	28.2	52.1	100%

<b>Negative Perception towards online buying</b>	Count	21	43	58	122
	%	17.2	35.2	47.5	100%
<b>Total</b>	Count	58	128	156	310
	%	18.7	31.0	50.3	100%
<b>Pearson Chi-Square</b>			Value	Df	Asymp. Sig. (2-sided)
			<b>1.739</b>	<b>2</b>	<b>.419</b>

But a close look to chi square value of 1.739 with a df of 2 and significance level of .419 reveals that there is no significant association between Length of Internet Experience and perceived online buying at 5% significance level. Hence null hypothesis H2 *There is a significant association between Length of Internet Experience and Perceived online buying of individuals in Indore* is rejected. Thus, it can be concluded that there is no significant association between Length of Internet Experience of individuals in Indore and their perceived online buying.

## MAJOR FINDINGS

Individuals in Indore who have a considerable daily access to internet have a positive perception towards online buying of goods and services. This may imply that regular internet surfers are more prone to buying goods and services online. Similarly, individuals in Indore who access internet quiet frequently also have a positive perception towards online buying of goods and services. This may also imply that frequent internet surfers are more prone to buying goods and services online. Length of Internet Experience is not found to be significantly associated with perception of individuals in Indore towards online buying. This implies that for how long an individual is exposed to internet may not make any difference in probable future online buying, and it is only those with higher frequency and higher daily access of internet, which may provide a basis of creating of e-market for customers in Indore city.

## KEY RECOMMENDATION

The marketers in the process of creating an online market (who are technically termed as e-marketers) should focus on creating the foundation of online market by focusing on those who are regular internet surfers and have a high access of internet on daily basis. This will provide basis for initial gearing up of this non-conventional mode of selling goods and services to customers in Indore, a city that is yet to conceive information technology as an accepted medium of B2C business exchange. Standing on this platform, the industry would be able to expand this arena to those in the process of experiencing internet and those not yet open to this aspect of information technology. Simultaneously, the e-marketers shall attempt to work on such strategies and policies, which will facilitate and promote the use of information technology (including internet) in day-to-day life of individuals in Indore city.

## **LIMITATIONS AND FUTURE SCOPE OF RESEARCH**

One of the major limitations of this research work is that it has focused only on exposure of information technology (in terms of internet) to explore the perception of individuals in Indore city towards online buying. A large number of studies have explored that investors' demography, including age, income, education, life style, etc., has an important role in online buying behavior of individuals. This study has not made any such attempt. The researchers of future may initiate and extend their research work in this direction. This survey work has been conducted at a point of time when online buying in Indore is in a very nascent stage. Total online market of the recent past is very small and the number of individuals involved in also very meager. So, the results of the study may not stand true and reliable for all times. The researchers of future may conduct similar studies from time to time in relevance with the environmental and infrastructural changes that may take place in this city. The data required for the study have been drawn entirely from Indore city, so the results may lack generalization, not only for international and national context, but even for tier III and other tier II cities. Future researchers may draw their samples for similar studies from larger geographical areas (depending up on the scope of their respective studies) so as to facilitate generalization.

## **CONCLUSION**

Studies conducted by various academicians, research scholars and research organizations have evidenced that along with other factors, exposure to technology/internet has a significant role in developing perceptions of individuals towards online buying. These studies have proved that the more technology/internet savvy a person is the more are his chances of getting into online buying in future. As such, no studies on these lines have been conducted in tier ii cities in general and for Indore specifically. So, there is a grave need to conduct such studies in non-metro cities and towns, which carry the potential of being markets of tomorrow. This research work attempted to answer the question that whether or not the exposure to technology/internet is associated with perceived online buying of individuals in Indore city.

The exposure to internet of respondents was measured on three dimensions viz., daily internet access, frequency of internet access and length of internet experience. Thereafter, responses were also obtained on perceived online buying of respondents. Then, an association between information technology exposure (represented by Daily Internet Access, Frequency of Internet Access and Length of Internet Experience) and perception of individuals in Indore towards Online Buying was explored applying chi-square analysis with the help of SPSS. The study somewhat confirmed the earlier findings that information technology affects the online buying behavior of individuals, as Daily Internet Access and Frequency of Internet Access were found to be significantly associated with perceived online buying of individuals in Indore city. The study further revealed that there exists no significant association between length of internet experience and perceived online buying of individuals in Indore city.

## **REFERENCES**

Alam, S.S., Baker, Z., Ismail, H.B., and Ahsan M.N. (2008). "Young Consumers Online Shopping: an Empirical Study," *Journal of Internet Business*, Issue 5, pp. 81-98.

Case, T., Burns, O. M., and Dick G. N. (2001). "Drivers of On-line Purchasing among U.S. University Students," Proceedings of the 7<sup>th</sup> Americas Conference on Information Systems at Massachusetts USA, 2-5 August 2001, pp.799-803.

Kothari, P. and Maindargi, S (2016). A Study on Customers Attitude towards Online Shopping in India and its Impact: With Special Reference to Solapur City, *International Journal of Advance research , Ideas and Innovations in Technology*, Volume 2, Issue 6.

Malhotra (1996). *Marketing Research : An Applied Orientation* . Prentice Hall

Phau, I. and Poon, S., (2000). Factors influencing the types of products and services purchased over the Internet. *Internet Research* , Vol. 10

Prashar, S., Vijay, T.S. and Parsad, C. (2017). Effects of Online Shopping Values and Website Cues on Purchase Behaviour: A Study Using S–O–R Framework. *VIKALPA The Journal for Decision Makers*, 42(1). 1–18

Rosen, K.T. & Howard, A. L. (2000). E-Retail: Gold Rush or Fool’s Gold?’, *California Management Review*, Vol.42, No.3,72-100

Rishi, J.B. (2008). “An Empirical Study of Online Shopping Behavior: A Factor Analysis Approach”, *Journal of Marketing and Communication*, Volume 3, Issue 3, pp. 40-49.

Samadi,M. & Yaghoob-Nejadi, A . (2009). A Survey of the Effect of Consumers' Perceived Risk on Purchase Intention in E-Shopping. *Business Intelligence Journal*, 2 .

Sorce, P., Perotti, V. and Widrick S. (2005). “Attitude and Age Differences in Online Buying”, *International Journal of Retail and Distribution Management*, Volume 33, pp. 122 – 132.

Vellido, A., Lisboa, P. J. G., and Meehan K. (2000). “Quantitative Characterization and Prediction of On-Line Purchasing Behavior: A Latent Variable Approach”, *International Journal of Electronic Commerce*, Volume 4, Issue 4, pp. 83-104

Waldo(2014). Correlates of Internet Addiction among Adolescents. *Psychology*, 5, 1999-2008. <http://dx.doi.org/10.4236/psych.2014.518203>

### **Webliography:**

Internetworldstats-Usage and Publication Statistics, accessed on March 31,2012. [www.internetworldstas.com/top20.htm](http://www.internetworldstas.com/top20.htm)

Widger,D.,Z., 2009, Global Online Population Forecast 2008 to 2013, accessed on March 31, 2012, [www.forrester.com/Global+Online+Population+Forecast+20082013/-...](http://www.forrester.com/Global+Online+Population+Forecast+20082013/-...)

Online retail industry to reach Rs.7000 crore mark by 2015; ASSOCHAM ,July 3,2011, accessed on March 15, 2012,[www.assochem.org/prels/shownews.php?id=2965](http://www.assochem.org/prels/shownews.php?id=2965)

Internet Is Indian Youths’ Favourite Pastime, [Padameshwar Singh Nongthombam](http://www.watblog.com/2010/11/23/internet-is-indian-youths-favourite-pastime/), November 23, 201,accessed on March 16, 2012, <http://www.watblog.com/2010/11/23/internet-is-indian-youths-favourite-pastime/>

Digital Commerce, March 2011, [www.ccavenue.com/downloads/ecomm21\\_47.pdf](http://www.ccavenue.com/downloads/ecomm21_47.pdf)

Forrester, India to be world 3<sup>rd</sup> largest Internet market by2013, accessed on March 15, 2012, <http://ideasmakit.blogspot.in/2009/07/forrester-india-to-be-worlds-3rd.html>

Internet a basic need for Indian youth: Survey, Sept. 22, 2011, accessed on April 15, 2012, [http://zeenews.india.com/news/nation/internet-a-basic-need-for-indian-youth-survey\\_732968.html](http://zeenews.india.com/news/nation/internet-a-basic-need-for-indian-youth-survey_732968.html)

Youth can not live without the internet , Matthew Hopson, October 15, 2009, accessed on April 10, 2012, <http://www.neowin.net/news/youth-cannot-live-without-the-internet>