

# Impact of Demographic Factors on Online Purchasing: A Study of Consumers in Uttar Pradesh, India

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**Abstract**—The growth rate of India's E-commerce industry is fascinating and the latest trend emerged out of it is online shopping. The reasons behind this growth are raising level of education, income and availability of resources. Today everyone is having knowledge of computers and use of smart phones also increased. Internet has become essentiality of life where everything is just a click away. Now it is a common means for information transfer, services and trade. But this trend is mainly followed by a particular group of population majorly in metropolitan cities and still has enormous growth potential in other areas which has triggered the idea for conducting this study. The study is conducted in U.P to get insight into the factors that influence online purchasing. Both Qualitative and Quantitative research methods are used to study the impact of Demographic factors of consumers on on-line purchasing. The data was collected through Questionnaires on a sample of 400 respondents from Agra, Varanasi (Banaras), Lucknow and Kanpur. Seven hypotheses were constructed to investigate the relationship between demographic factors and usage of online purchasing and chi-square method was selected to test the hypotheses. The results of study reveal that on-line shopping behaviour of consumers in U.P is significantly affected by various Demographic factors like age, occupation and income. The results of the study could be further used by the researchers and practitioners for conducting future studies in the similar area.

**Keywords:** Online shopping, Consumers, Demographic factors, Influential factors.

## 1. INTRODUCTION

The fast development of telecommunications technology in the past few decades is changing people lives in many aspects – from searching information, planning a vacation to buying products or services. Although classic shop-based retail is still preferred by many, e-commerce is gaining ground. Electronic commerce or ecommerce is a term used to define any type of business, or commercial transaction that involves the transfer of information across the Internet. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to business exchanges trading goods and services between corporations. It allows consumers to electronically exchange goods and services with no barriers

of time or distance. Electronic commerce has expanded rapidly over the past five years and is predicted to continue at this rate, or even accelerate. In the near future the boundaries between "conventional" and "electronic" commerce will become increasingly blurred as more and more businesses move sections of their operations onto the Internet.

With an expected growth of 33% of the global market in 2015 and over 37% in 2018, the Asia Pacific region is becoming the leader of the e-commerce industry. Due to unprecedented economic boom, China is deriving Asia's leadership and also set to outdo the United States as the single country with the largest e-commerce market in the world. Another emerging Asian market in terms of e-commerce is India. According to Comscore report, (2013), India is having the world's third largest internet user Population. About 73.8 million Indians in the age group of 35-44 years surf the web via computers and smart phones. The most important contributing factor to the rapid growth of digital commerce in India is the increasing use of Smartphones. Mobiles and mobile accessories have taken up the maximum share of the digital commerce market in India. In India a significantly low (19%) but fast-growing internet population of 243million in 2014 is an indicator of E-commerce's huge growth potential which promises high internet penetration and growth of this industry. Despite being the third largest user base in world, the penetration of internet in India is low as compared to markets like the United States and China but still it is growing at a much faster pace as it adding on around 6 million new entrants every month. India's e-commerce market was worth about \$3.8 billion in 2009, it went up to \$12.6 billion in 2013 and now as per the IAMAI and IMRB international, the E-Commerce industry earned a revenue of US\$ 13.5 billion in 2014 and is expected to reach US\$ 35 billion by 2020. With the rapid increase in the use of smart phones and internet services, India has earned a place among 20 developing countries on the global forum (GRDI, 2014).

**Table 1: Internet users by Country 2014**

Rank	Country	Internet users	1 year growth %	1 year user growth	Total country population	1 year population change %	Penetration (% of population with internet)	Country's share of world population	Country's share of world internet users
1	China	641,601,070	4%	24,021,070	1,393,783,836	0.59%	46.03%	19.24%	21.97%
2	United States	279,834,232	7%	17,754,869	322,583,006	0.79%	86.75%	4.45%	9.58%
3	India	243,198,922	14%	29,859,598	1,267,401,849	1.22%	19.19%	17.50%	8.33%

Source: www.internetlivestats.com

One of the growing areas of E-commerce is Online Buying. Online shopping or online buying is a form of electronic commerce which allows consumers to directly purchase products or services from seller over the internet using web browser. Online shopping brings all type of goods to virtual world. In all four corners of the world more and more consumers are turning to the World Wide Web, particularly from the countries which are possessing highly developed infrastructure available for marketing activities through internet, for their shopping needs, with just a one click. Today, internet is not only a networking media, but also a global means of information transfer, services and trade. The highly demanding lifestyle is compelling consumers in developing countries like India to adopt internet shopping as an alternative to traditional brick and mortar shopping. Because of availability of resources, education and income, people in metropolitan cities have adopted online shopping as it is convenient; reduce time and cost, and 24\*7 available. Now this trend can be seen in non metro cities also.

India's e-commerce market rose from about \$2.5 billion in 2009 to \$6.3 billion in 2011, \$8.5 billion in 2012 and further to \$16 billion in 2013 and which is expected to touch \$56 billion by 2023-- 6.5 percent of the total retail market (Industry Chamber Assocham, 2013). The number of people making online purchases is increasing day by day and so do the average amount spent by them. This may raise an issue that what are the factors that lead consumers to do online shopping. Since online shopping is higher associated with consumers, one possible factor could be attributed by their demographic profile. This study examines whether demographic profile of consumers affect their online shopping behaviour.

## 2. REVIEW OF LITERATURE

Electronic commerce enables consumers to search for information and purchase products or services through internet with direct interaction to online store i.e., consumer make purchase decision mainly based on the cyberspace appearance such as pictures, images, quality information, and video clips of the product, rather than actual experience (Lohse and Spiller, 1998; Kolesar and Galbraith, 2000). Li Na and Zhang Ping, (2002) found in their study that online shopping has become the third most popular Internet activity, immediately following e-mail using, instant messaging and web browsing. Most of the online shoppers are young, highly educated, active, intensive and expert users of internet (Shalini and Kamalaveni, 2013). According to Hsieh et al., (2013) internet is influencing people's daily life more in present as compared to past. People's daily activities have gradually shifted from physical conditions to virtual environment. Davis (1993) stated that consumer's attitudes regarding Internet shopping depend on the direct effects of relevant online shopping features. These features can be classified into consumer's perceptions of functional and utilitarian dimensions such as "ease of use" and "usefulness", or into their perceptions of emotional and hedonic dimensions like "enjoyment". Donthu and Garcia (1999) proposed that risk aversion, innovativeness, brand consciousness, price consciousness, importance of convenience, variety-seeking propensity, impulsiveness, attitude toward adverting, attitude toward shopping, and attitude toward direct marketing would influence online shopping behaviour and found that among them, age, income, importance of convenience, innovativeness, risk aversion, impulsiveness, variety-seeking propensity, attitude toward direct marketing, and attitude toward advertising were factors influencing online shopping behavior. As per Michal Pilik (2012) online buying behaviour is affected by various factors like, economic factors, demographic factors, technical factors, social factors, cultural factors, psychological factors, marketing factors and legislative factor. There are many studies in literature on demographic profile and these studies that have examined the link between demographic profile and online shopping found that demographic profile of a consumer determines online shopping behaviour (Khatibi et al., 2006; Jha, 2008). Johnson (1999) examined the relationship among demographics, personal characteristics, and attitudes towards online shopping and found that people who have a more wired lifestyle and who are more time constrained tends to buy online more frequently, i.e., those who use the Internet as a routine tool and/or those who are more time starved prefer shopping on the Internet.

There are many studies present in literature examining the association between demographic profile and online shopping behaviour but study in this geographical area covering whole of Uttar Pradesh is rare to found. The study also throws light on the factors which are considered most by the respondents while going for online shopping.

### 3. OBJECTIVES

The study was undertaken to investigate the use of online purchasing among the respondents with special reference to important demographic factors like age, gender, marital status, education, occupation, income and credit card ownership. The study also reveals the factors considered by the consumers while doing online shopping.

### 4. HYPOTHESES

H<sub>1</sub>: There is significant relationship between online purchasing behaviour and gender.

H<sub>2</sub>: There is significant relationship between online purchasing behaviour and age.

H<sub>3</sub>: There is significant relationship between online purchasing behaviour and marital status.

H<sub>4</sub>: There is significant relationship between online purchasing behaviour and education.

H<sub>5</sub>: There is significant relationship between online purchasing behaviour and occupation.

H<sub>6</sub>: There is significant relationship between online purchasing behaviour and income.

H<sub>7</sub>: There is significant relationship between online purchasing behaviour and credit card ownership.

### 5. RESEARCH METHODOLOGY

The Study covered four main cities of Uttar Pradesh (Varanasi, Lucknow, Agra, and Kanpur). The Study was based on primary data. A sample of 400 consumers was taken into consideration. Convenience sampling is used for sample selection. Questionnaire instrument and face to face interview method was used for data collection purpose. Questionnaire was divided in to two sections, Part- A consisting questions relating to demographic profile and the mode of payment used by the consumers and Part-B consisting questions relating to the factors that influence online shopping on five point Likert scale.

**Table 2: Sample size for questionnaire**

Survey Respondents	
City	No. of Respondents
Varanasi (Banaras)	115
Kanpur	88
Lucknow	105
Agra	92

The overall internal reliability as measured by Cronbach alpha (Brown, 2002) was found to be 0.89. This means the data is reliable since, usually, 0.7 and above is acceptable (Yu, 2007).The chi-square test method was used to examine the relationship between variables.

**Table 3: List of variables**

Variable	Definition	Scale	Range of Values and their Codes
<b>Gender</b>	Your gender	Categorical	Male(1)/ Female(2)
<b>Age</b>	Your age	Categorical	18-25(1)/26-35(2)/36-45(3)/46-55(4)/Above 55(5)
<b>Marital Status</b>	Are you married?	Dichotomous	Yes(1)/No(2)
<b>Education</b>	What is your level of education?	Categorical	10 <sup>th</sup> (1)/12 <sup>th</sup> (2)/Graduation (3)/Masters(4)/Others(5)
<b>Income</b>	What is your annual income?	Categorical	Below 50,000(1)/50,000-1,00,000(2)/1lakh-3lakh(3)/3lakh-5lakh(4)/Above 5lakh(5)
<b>Occupation</b>	What is your profession ?	Categorical	Student(1)/Govt. Employee(2)/Business(3) /IT Professional(4)/Others(5)
<b>Credit Card Ownership</b>	Do you have a credit card?	Dichotomous	Yes(1)/No(2)
<b>Online Purchase</b>	Have you purchased online?	Dichotomous	Yes(1)/No(2)

### 6. RESULTS

Initially, the results of the survey are presented by using descriptive statistics. This is followed by the results of analysis for each selected factor.

Descriptive Result: The background profile of respondents is provided in Table 3.The male respondents were observed to be dominant (52%) in this survey. Of the males, 67.8% conducted e shopping and the corresponding percentage for females was 69.8.

**Table 3: Demographic profile of respondents**

Demographic Factors	Categorisation	No. Of Respondents (f)	% in Total Sample
<b>GENDER</b>	Male	208	52
	Female	192	48
	Total	400	100
<b>MARITAL STATUS</b>	Married	295	73.8
	Unmarried	105	26.3
	Total	400	100
<b>AGE</b>	18-25	84	21
	26-35	135	33.8
	36-44	94	23.5
	46-55	42	10.5
	Above 55	45	11.3
	Total	400	100

<b>INCOME</b>	Below 50,000	68	17
	50,000 – 1,00,000	21	5.3
	1,00,000 – 3,00,000	190	47.5
	3,00,000 – 5,00,000	93	23.3
	Above 5,00,000	28	7
	Total	400	100
<b>EDUCATION</b>	10 <sup>th</sup>	14	3.5
	12 <sup>th</sup>	57	14.3
	Graduation	181	45.3
	Masters	117	29.3
	Others	31	7.8
	Total	400	100
<b>OCCUPATION</b>	Student	84	21
	Government Employee	80	20
	Business	84	21
	IT Professional	65	16.3
	Others	87	21.8
	Total	400	100
<b>CREDIT CARD OWNERSHIP</b>	Yes	198	49.5
	No	202	50.5
	Total	400	100

In this study, the respondents are categorized into 5 levels of age groups; 18-25 years old; 26 to 35 years old; 36 to 45 years old and 46 to 55 years old and 55 years above. From Table 3, a majority of the respondents (33.8%) fall in the age range between 26 to 35 years of age. This is followed by 23.5% of the respondents from the 36 to 45 years of age category while 21% fall in the 18-25 years of age category. Finally, 10.5% of the respondents come from 46-55 years of age category. Frequency analysis is used to determine the different methods of payment that are mainly used by users of online shopping in making their payments for their online purchases. The results of the frequency analysis are given in table 4.

**Table 4: Method of Payment**

Mode of Payment	Frequency (N=400)	Percentage
Debit Card	79	19.8
Credit Card	104	26
Cash	131	32.8
Mobile Phone	62	15.5
Payment by Invoice	24	6
Total	400	100

The results in Table 4 show that a majority of online consumers make payment by cash i.e., cash on delivery (32.8%) for their online purchases, followed by use of credit cards (26%) while (19.8%) consumers pay through debit cards. Less number of people goes for the option of payment through mobile phone (15.5%) and payment by invoice (6%).

A mean value analysis was used to identify and examine dominant factors that influence online consumers to shop online. Table 5 shows the results of mean values of the important factors that influenced online consumers to shop online.

Based on the results shown in Table 5, the most important and dominant factors that influenced online consumers to shop online are “Lower Prices” (4.26), “voucher and coupon” (4.20) and “convenience” (4.07).

**Table 5: Mean Value of Factors that Influence Online Shopping**

INFLUENCING FACTOR	SD	D	N	A	SA	MEAN	S.D
Convenience	14	42	28	134	182	4.07	1.122
Lower Prices	16	32	22	93	237	4.26	1.124
Easy to Compare	28	50	29	91	202	3.97	1.308
Wide variety of products	26	48	28	93	205	4.01	1.284
Wide variety of return options	28	52	36	124	160	3.84	1.272
Vouchers and Coupons	16	37	26	93	228	4.20	1.153
Some products are only available online	22	49	27	87	215	4.06	1.261
Free shipping	29	49	27	91	204	3.98	1.313
Cash on delivery	28	51	28	91	202	3.97	1.311
Social Media Interaction	42	65	30	81	182	3.74	1.436
24*7 Services	22	49	28	90	211	4.05	1.259
Cash Back Offers	22	45	35	128	170	3.95	1.208

Results show that all the given factors have a mean more than 3 which indicates that all these factors somehow attract consumers towards online shopping. But convenience, coupon and vouchers and lower prices of product and services influence the decision of consumers regarding online shopping. Other factors like wide variety of products, some products only available online and 24\*7 are some other reasons to opt for online mode of shopping.

**Table 6: Chi-square results of online purchase behaviour according to demographic factors**

Dependent Variable	Independent Variable	Hypothesis	Degree of Freedom	Chi-square Value	P-Value
Online purchasing	Gender	H <sub>1</sub>	1	.186	.666
	Age	H <sub>2</sub>	4	13.080	.011
	Marital Status	H <sub>3</sub>	1	2.031	.154
	Education	H <sub>4</sub>	4	6.012	.198
	Occupation	H <sub>5</sub>	4	15.873	.003
	Income	H <sub>6</sub>	4	13.851	.008
	Credit Card Ownership	H <sub>7</sub>	1	.792	.373

## 7. CONCLUSION

This article investigates the online purchasing behaviours among respondents of Uttarpradesh. The Chi-square results from consumer's response across different demographic factors in table 6 shows that gender, marital status, credit card ownership and education level has no impact on online shopping behaviour whereas there is significant relation between age, income and occupation of consumers with online purchasing. Consumers prefer doing online shopping as it is more convenient, provide many offers in terms of coupons and vouchers which as a result lower prices and all in total attract the consumers to choose this mode of shopping. This market has great potential in the country as people are getting more and more knowledgeable about the means (internet, computers, smartphone) leading to online shopping. To gain advantage from such an opportunity online shopping organisations have to use the relevant variables and factors identified from the study to formulate their strategies and plans. The organisations should focus and prioritise the consumer implicit and explicit requirements in online shopping environment. The results of the study provide insight for policymakers regarding how to promote online shopping in the respective area. The result of the study can also be used by other researchers and practitioners for conducting future studies in the similar area.

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