Does Demography Influence Online Purchase Intention? Evidence from North-West India

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Abstract

The phenomenal increase in online shoppers across the globe has influenced India also. A review of extant literature on the relation between demographic factors and online purchase intention revealed that demographic variables and their relation to online purchase intention were not studied in the context of Punjab, India. Three demographic factors; gender, income and marital status were studied and Independent sample T-test was used to study the effect of gender on online purchase intention while One-Way ANOVA was used to study the effect of income and marital status on online purchase intention. It emerged that gender and marital status has a significant effect on online purchase intention. Males are more likely to shop online than females and unmarried people are the most likely to shop online. Online retailers can segment the online shoppers based on gender and marital status. Important managerial implications deal with use of gender as the basis for the allocation of advertisement budgets. In addition, marketing campaigns should direct towards making females more familiar with the use of technology for online shopping.

Keywords: Online shopping, Gender, income, Marital status, Purchase intention, One-way ANOVA,

Introduction

India’s e-commerce market, which was US $3.8 billion [4] is expected to touch US$ 38 billion by the end of 2016 [37]. Favourable demographics is one important factor, which has helped the online retailers to connect with their customer base [4].

Amplified rivalry, more knowledgeable and educated customers with constant changing demands urge companies to pay attention to segmentation issues [26]. Market segmentation is important as customers have different characteristics [9]. As online retailers look to increase their market share, it is imperative to have a clearly segmented market. Although recent research studies have emphasized on psychographic segmentation, still [25] advocates the use of demographic segmentation.

A study conducted in European Union (Survey on ICT, 2015) gave two important findings: more percentage of men shop online and people in the highest income category shopped more online in the preceding 12 months. Bellman S et. al. [6] states the online shoppers are wealthier as compared to the average US population. A survey in the US by Experian in 2013 found that people who shop online have an annual family income above US $ 75,000.

Assocham India in 2015 reported that males account for 65 % of the online shoppers. In the US in 2013, 57 % of women made an online purchase as compared to 52 % men. Kanchan U et. al. [22] find that gender significantly effects online purchase intention.

A review of literature highlights that the relationship between gender and online purchase intention and annual family income and online purchase intention has not been deliberated in the context of Punjab, India. In addition, there is scanty...
research on the relation between marital status and online purchase intention.

The present study looks to plug the aforementioned gaps by studying the relationship between the above-mentioned demographic variables and online purchase intention. The findings of the study will be beneficial to the online retailers for finding a basis for segmentation of online buyers.

**Literature Review**

**Gender and Online Purchase Intention**

An increasing body of literature suggests that information processing is influencing gender differences [44]. Also, there exist gender differences in individuals’ reactions to environment stimuli [28] providing evidence of gender differences in online purchasing” [27]. With different genders, the purchase intention and sensitivity of consuming the product will be different too [35] and the concept of working women has enhanced it [31]. Gender is “one of the most common segmentation criteria used by marketers”[29].

A review of literature illustrates that females are more inspired by non-economic goals than men are and have a lower risk preference [10; 36]. [21] find males to be more intense Internet users than females and have higher purchase intention and attitude to buy online [42]. These gender-linked viewpoints and conduct qualities submit that the prospect of purchasing over the internet “will also vary among men and women” [2].

Women are less inclined to use internet for online shopping [8; 34] and do not devote much time in using Internet as males. The gap between males and females in the use of Internet [5] may be attributed to contrasting online shopping behaviors. Women express excessive privacy concerns and perceived risk when shopping online [16;30]. Shimp et. al. [45] acknowledge that perceived risks adversely distress purchase intention of consumers.

Nel J et. al. [32] found that gender moderated the influence of perceived trust, perceived enjoyment and self-efficacy on behavioural intention. In case of females, “perceived trust and perceived self-efficacy had a stronger influence on behavioural intention” (ibid) while in case of males perceived enjoyment had greater influence on behavioural intention. Female consumers being less confident in using new technology need assurance of its accuracy that is why perceived trust on behavioural intention between genders differed significantly [15]. Amin M et. al. [3] find that gender differences between male and females are higher in trust propensity.

Chiu Yu-Bin et. al. [13] finds that personal innovativeness and perceived usefulness influence attitudes and online purchase intentions for males and females. Compared to above analysis of differences in purchase intentions between males and females, Costello AJ et. al. [14] conclude “no overall effect of gender was found for purchase intention”.

**Income Level and Online Purchase Intention**

Income is a critical factor affecting purchase intention [33]. Wang CCI [53] believe income “plays a crucial role in purchasing decision process” and income has a “certain impact on consumer’s purchase intention” [55]. Consumers with dissimilar income amounts seem to have different perceptions of the product [23]. With an increase in income “the purchase intention for the product increases” [11].

Qin Y et. al.[38] studied purchase of life insurance in China and found that different income groups have compelling divergences in the “life insurance purchase intention in different income groups”. In other words, with high income the peoples’ intention to purchase a life insurance is more intense (ibid).

Buying online is linked to income and education because such purchases require a computer and internet connection along with the ability to use these. Swinyard WR et. al. [50] found that online shoppers are wealthier, better educated, having a high computer literacy, spend more time on computers and internet, find online shopping easier and entertaining and are not afraid of loses from online transactions.
Goritz AS et. al. [18] found that buyers with a higher income level buy online more often. Hansen T et. al. [19] finds that household income positively relates to online shopping. Von Alvensleben R et. al. [52] have also found in their study that income has a positive correlation to purchase intention. Even in a developing country like Bangladesh, consumers with adequate earnings are marked by business organizations [20].

Marital Status and Online Purchase Intention

Marital status is an important demographic variable but there is a difference of opinion among researchers whether it influences online purchase intention or not. Shalini GR et. al. [43] mention that married respondents of their study preferred online shopping as compared with unmarried respondents. Gong W et. al. [17] state that along with demographic factors like age, income education, marital status and the perceived usefulness of these are significant predictors of online shopping. Wongsiriwat K et. al. [54] discovers that demographic factors are important for luxury handbags. As for as the purchase of luxury brands is concerned, people with different marital status respond differently to the various attributes of products. The perception of value like functional value, financial value, individual value and social value can be “different for people of different marital status” [46].

Richa D et. al. [41] indicates that marital status precisely does not influence online shopping parameters. This consequence is founded on the “nascent stage of online shopping in India” (ibid) which is due to the single or married people chiefly “using Internet for their specific needs” (ibid). Studying the purchase of luxury goods and brands, Chen Chiang-Yawet. al. [12] find that demographic variables (age, education, occupation, marital status and income) do not have a remarkable effect on purchase of luxury brands. Ravi P et. al. [39] study of cosmetic products demonstrates that gender and marital status “have a minimum effect on attitude, factors towards online shopping”. Shukla RK et. al. [47] find that regardless of marital status “customer’s expectations from residential real estate service providers for home buying remains moreover same”.

Kim EY et. al. [24] found that the number of children in a home is positively associated with online purchases. On the contrary, Bhatnagar Aet. al. [7] find no noteworthy relationship between marital status and online shopping. Singh P [48] find that unmarried people shop more online as compared with married respondents. The reasons advanced (ibid) for this result are that unmarried respondents have a smaller amount of obligations as rivalled by married people who have to take up responsibilities of their families.

The review of literature, led to the formulation of the hypothesis:

- Gender has a significant influence on online purchase intention.
- Income level significantly influences online purchase intention.
- Marital status has a significant influence on online purchase intention.

Methodology

The sampling frame of the study included the north-west areas of India including Punjab, Chandigarh and Panchkula. Two-stage non-probability sampling was used to carry out the data collection. Initially, judgment sampling formed the basis to determine whether the person met the criteria for being a respondent for the survey. Only those people were included in the survey who had carried out online purchase at least once in the last one year. In the second stage, data collection was carried out based on convenience sampling.

650 questionnaires were distributed for collection of data but usable responses were 598. The data collection activity was carried out over August-December, 2015 and analysis was done in July, 2016. The data was entered in SPSS v.21 for the purpose of analysis and independent samples T-test and one-way ANOVA were used to gain meaningful insights into the online purchase intention of the respondents.
Demographic Profile

Considering the demographic profile of the respondents, 49 % were males and 51 % were females.

Table 1: The gender breakup of respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>292</td>
<td>48.8</td>
</tr>
<tr>
<td>Female</td>
<td>306</td>
<td>51.2</td>
</tr>
<tr>
<td>Total</td>
<td>598</td>
<td>100.0</td>
</tr>
</tbody>
</table>

31 % of the respondents were in the income group of 0-4 lacs INR per year, 37 % were in the income group of 4.1-8 lacs INR per year, 18 % were in the income group of 8.1-12 lacs INR per year, 7.7 % were in the income group of 12.1-16 lacs INR per year and 6 % were in the income group of above 16 lacs INR per year.

Table 2: The income breakup of the respondents (in lacs)

<table>
<thead>
<tr>
<th>Income</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>186</td>
<td>31.1</td>
</tr>
<tr>
<td>4.1-8</td>
<td>222</td>
<td>37.1</td>
</tr>
<tr>
<td>8.1-12</td>
<td>108</td>
<td>18.1</td>
</tr>
<tr>
<td>12.1-16</td>
<td>46</td>
<td>7.7</td>
</tr>
<tr>
<td>&gt;16</td>
<td>36</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>598</td>
<td>100.0</td>
</tr>
</tbody>
</table>

56.4% of the respondents were unmarried, 40.1 % were married and 3.5 % of the respondents were divorced.

Table 3: The marital status of the respondents

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmarried</td>
<td>337</td>
<td>56.4</td>
</tr>
<tr>
<td>Married</td>
<td>240</td>
<td>40.1</td>
</tr>
<tr>
<td>Divorced</td>
<td>21</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>598</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Independent Sample T-Test

The collected data was analyzed with a view of gaining a comprehensive into how demography influences the online purchase intention. For understanding the role of gender on online purchase intention, an independent sample t-test was run. The group statistics highlighted that there were 292 males and 306 female respondents. The mean value for online purchase intention for males and females was 3.3059 and 3.1242 respectively while the standard deviation for males and females was 1.023 and .962 respectively. It is shown in the Table 4.

Table 4: Difference in mean of online purchase intention across gender

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Intention</td>
<td>Male</td>
<td>292</td>
<td>3.3059</td>
<td>1.02322</td>
<td>.05988</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>306</td>
<td>3.1242</td>
<td>.96222</td>
<td>.05501</td>
</tr>
</tbody>
</table>

Levene's Test for Equality of Variances

The Levene’s test for equality of variances (F=1.015, p>.05) shows that the condition for equality of variances is met. For the purpose of analysis, equal variances are assumed. There is a significant difference in the scores for males (M= 3.3059, S.D. =1.023) and females (M= 3.1242, S.D. = 0.962); t (596) = 2.239, p <0.05.

Table 5: T-Test for effect of gender on online purchase intention

<table>
<thead>
<tr>
<th>Independent Samples T-Test</th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.015</td>
<td>.314</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>2.235</td>
<td>589.104</td>
</tr>
</tbody>
</table>

One-Way ANOVA

The results of descriptive statistics and ANOVA outputs are provided below.

Descriptive Statistics

A One-Way ANOVA was run to understand the influence of income and marital status on online purchase intention. The mean and standard deviation values for income and marital status are discussed below:

Income Groups

The descriptive statistics for income show that the mean and standard deviation for income group of 0-4 lacs INR was 3.267 and 0.8956, for income group of 4.1-8 lacs INR the mean and standard deviation was 3.246 and 0.963, for income group of 8.1-12 lacs INR the mean and standard deviation was 3.163 and 1.089, for income group of 12.1-16 lacs INR mean and standard deviation was 3.159 and 1.085 and for income group of 16 lacs INR was 3.3059 and 1.023 respectively.
lacs INR and above the mean and standard deviation was 2.944 and 1.251 respectively.

**Marital Status**

The descriptive statistics for marital status show the mean and standard deviation for unmarried people was 3.367 and 0.903, for married people the mean and standard deviation was 3.002 and 1.058 and for divorced people the mean and standard deviation was 3.142 and 1.254 respectively. The values are depicted in the Table 6 below:

<table>
<thead>
<tr>
<th>Table 6: Differences in mean for income and marital status on online purchase intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive</td>
</tr>
<tr>
<td><strong>Income (in Lacs)</strong></td>
</tr>
<tr>
<td>0-4</td>
</tr>
<tr>
<td>4.1-8</td>
</tr>
<tr>
<td>8.1-12</td>
</tr>
<tr>
<td>12.1-16</td>
</tr>
<tr>
<td>16 and above</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
</tr>
<tr>
<td>Unmarried</td>
</tr>
<tr>
<td>Married</td>
</tr>
<tr>
<td>Divorced</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

**ANOVA Output**

On running the one-way ANOVA for income, it is found that for between groups, F (4,593) =0.953, p > 0.05. Income has insignificant influence on online purchase intention.

On running the one-way ANOVA for marital status, it is found that for between groups, F (2,595) =9.703, p < 0.001. Marital status has a significant influence on online purchase intention.

<table>
<thead>
<tr>
<th>Table 7: ANOVA showing effect of income and marital status on online purchase intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANOVA</td>
</tr>
<tr>
<td>Sum of Squares</td>
</tr>
<tr>
<td>Between Groups</td>
</tr>
<tr>
<td>Within Groups</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Between Groups</td>
</tr>
<tr>
<td>Within Groups</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Result and Discussion**

The results suggest that gender has a significant influence on online purchase intention. Males have a stronger online purchase intention than females. It is inferred that income does not have a significant influence on online purchase intention while marital status has a significant effect on online purchase intention.

Based on the research important insights have been gained as to how gender, income and marital status of the shoppers effects the online purchase intention. The gap in the field of research related to demography and online purchase intention in Punjab has been fulfilled.

The research has important ramifications for the online marketing managers. Purchase intention should be considered carefully by the marketing managers as it is an important precursor to actual purchase behaviour.

Demography is the traditional, easy to apply and perhaps the most important parameter for carrying out market segmentation. It is found that online purchase intention can be segmented based on demographic variables of gender and marital status, but not based on annual family income.

The results of the study reflect that males have a stronger online purchase intention which may be attributed to males having a higher comfort level with the use of technology. Marketing managers of online retailers should be engaged in making females more acquainted and comfortable with using technology for online shopping. Secondly, for females the feel of a given product is a vital yardstick for shaping the online purchase intention. There is no possibility of offering this facility in any digital medium.

Another important learning dealt with allocation of promotion budgets of online retailers. A relatively larger portion of the promotions budget of online stores should be targeted at males. As the intention to shop online is stronger for males, less efforts need to be made to convert the intention into actual buying behaviour.

It also comes into focus that marital status has a significant influence on online purchase intention. Unmarried people are found to have a stronger online purchase
intention as compared to married and divorced people. The reasons may lie on the grounds that married people may go in for joint decision making and different considerations may come into the picture while making purchase decisions. Another reason is that married people generally combine shopping and recreational trips and this option is severely limited in case of online shopping. The nature of products required to set up a house after marriage are high involvement products and for the reason, people may avoid shopping online.

Conclusion

Although this study has thrown up important learnings still it cannot be claimed that it is devoid of any limitations. One major limitation came in the form of using convenience sampling for the purpose of data collection. It resulted in all the shortcomings which are inherent to convenience sampling being a part of the research. Electronic means of data collection were not employed, so the efficiency of data collection was low. Additionally, this led to the sampling frame to be restricted. The study covered the purchase intention of only actual online buyers and was silent on the intentions of prospective buyers.

Perceptual mapping may be considered as a basis to further elaborate demographic segmentation as a basis for online purchase intention in future studies. Future studies may consider the role of psychographic variables as a basis for carrying out online shopping market segmentation activities. The combined effect of the different demographic variables on purchase intentions should be considered as a basis for forthcoming studies. Probability sampling techniques should form the basis of data collection for future studies. This will help limit the bias in the sample collected for analysis. Electronic means of data collection should be employed as they often result in efficiencies of operation. Also, a wider sampling frame is advisable for future studies. The buying intentions of potential online shoppers should be deliberated in upcoming studies.

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