How Demographic Characteristics of People Affect on Virtual Purchase

Asma Javed

Abstract—Shopping from the virtual stores is increasing day by day. It facilitates the buyers to purchase the desired product without visiting the shopping malls. The study was conducted to analyze the affect of demographic variables on virtual shopping. How age, gender, education and income affect purchasing from virtual stores. Population was selected from Faisalabad city and sample size was 250 respondents. Sample was selected on the basis of internet usage. A well structured questionnaire was used for data collection from sample. Research contains different data analyses techniques to calculate the percentages, Chi –square, Frequency, Degree of freedom, standard deviation, P-value, mean and Gamma. Research concluded that male do more online purchasing than women. Research has proposed several recommendations for online stores that will help to increase their profit.

Keywords—Demographic variables, online shopping, facilities of buyers, desired products.

I.   INTRODUCTION

Online shopping has been invented by Michael Aldrich in the year of 1979.He was an English entrepreneur. In March 1980 he attended the launch ceremony of Redifon's Office Revolution, which allowed suppliers, distributers, middle men, consumers and product and service companies to be connect with each other online to make the work or business of all people to be performed electronically.

a.   Rationales of study:

The main focus of the study is to find out the demographic affect on attitude and behavior of people who avoid or accept online shopping medium. Research's conclusions may help online stores to target the accurate demographic characteristics audience.
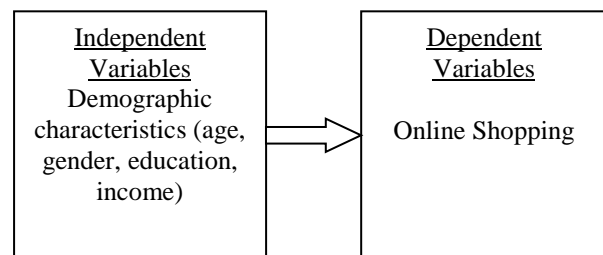
b.   Objectives:

To analyze the demographic characteristics of online shoppers.

c.   Hypothesis:

H1= Male respondents have more positive thinking about online shopping as compared to female respondents.

H2= Young generation has more positive thinking about online shopping.

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d.   Conceptual Framework:

II.   LITERARURE REVIEW

A.   Age

Age is very important variable which is used in almost every research. One of the reason to use age as independent variable is due to the different opinions of people. Different age groups of respondents show different response for the same question and they have different opinions because of age gap between them. Their point of views about the same things is different. This research also used "Age" as independent background variable. Different age groups have been made to get the responses of sample. It is analyzed that people of different age groups not only have different choices but they also have different psyche about different products. Their usage pattern about same thing is also different.

Li et al. (1999) [1] explained that, people who buy the products from the virtual stores are older as compare to the offline shopping consumers. In the late 1990's the primarily consumers of online shopping were young people and their buying power is less as compared to old age people (Donthu and Garcia 1999) [2]. In these days age differences between traditional buyers and internet shoppers are different as people who are mature or older are having different shopping values and shopping behavior than teen agers. But how age affects the intention to buy the products online is still unclear.

By the study of Stafford et al. (2004) [3] there is a affirmative relationship between the age of online consumers and their intention to purchase the products online. But according to Joines et al. (2003) [4] age does not affect the consumer's intention to buy the products online. He reported a negative relationship of age and online shopping. Swaminathan (2004) [5] stated that, there is no relationship of age and online shopping of consumers. He stated that age is not an important factor that influences the person to shop online. It is because of the different age groups which have been identified for different research problems, shows different result. For example," the above studies used 10-year span [Stafford et al.

(2004)] [3]15-year span [Donthu and Garcia (1999)] [2], 20-year span [Swaminathan (2004)][5]". Wood (2002) [6] explained that, consumers that are aged fewer than 25 years are more involved for buying products online as they are more interested to adopt and use new technologies. This age category is conscious to get the full information related to the products and they evaluate the information and compare the alternatives.

B. Gender

According to Settle (2002) [7] shopping is women's favorite activity and majority of women do the shopping for household. Mostly women are more interested to shop from traditional stores. Usually, shopping is women's favorite activity and women are more interested to buy household for their own choices. Majority of females like to go outside the home for shopping purpose. They like traditional markets to purchase households. This can be because of tangibility of products which are only possible in physical markets. It is fact that women are in charge of shopping in Pakistan and shop online or offline is also affected by many factors, for example occupation is only one factor which also affects the choice of purchasing online or offline. Women who are job holders or social do not much interested to go out as compared the women who spend their full time at home. These house women like to visit physical stores to buy the products because online shopping is unsocial.

Citren et al. (2003) [8] Women seems more conscious about product's evaluation as compared to men. Slyke et al. (2002) [9] explained that, when e-commerce was introduced then only selective products were available for the consumers to buy online and these products were male oriented. These all studies concluded that females show less interest for online shopping as compared to men because of many reasons as women want tangibility of products as some products need tangibility for full satisfaction like for purchasing shoes, women also want social interaction and they are more variety seeking. And in early stages of online markets there were only male oriented products like machinery, hardware and software were available and females had less interest in these products as women are more interested in clothing, foods, cosmetics, and grocery. Slyke et al. (2002) [9] stated that, as women consider shopping as a social activity and they were found to be less interested to shop online than men. And according to Burke (2002) [10] regarding education, higher educated consumers have a higher interest to shop products from online stores. This fact can be justified as education has been positively associated with individual's level of Internet literacy . Men do more internet shopping then women because generally women considered shopping as fun and mostly women like to go physical markets to shop the products they need. And according to Li et al (2007) [1], education is very important for internet shopping, if people are less educated, they would like to, but the products by going to the markets, and obviously they have less information to use internet and having purchase by internet. Income also affects the person's ability to shop online. Higher household income are often positively relate to possession of computers and they have better access of internet and their education level in also high and they are more involved to shop online

These all studies concluded that females are less interested in online shopping as compared to men because of many reasons as women want tangibility of products as some products need tangibility for full satisfaction like for purchasing shoes, women also want social interaction and they are more variety seeking. And in early stages of online markets there were only male oriented products like machinery, hardware and software were available and females had less interest in these products as women are more interested in clothing, foods, cosmetics, and grocery. According to slyke (2002) [9] men do more internet shopping then women because generally women considered shopping as fun and mostly women like to go physical markets to shop the products they need. Li et al. (2003) [1] explained that, education is very important for internet shopping and if people are less educated, they would like to, but the products by going to the markets, and obviously they have less information to use internet and having purchase by internet. Higher household income are often positively correlated with possession of computers, Internet access and higher education levels of consumers and consequently with a higher intention to shop online. Education is an important variable for online shopping. People having good educational background, are able to shop online. But some people while having strong educational background avoid internet shopping. Women considered shopping as a social activity that's why mostly women want to go out of the home for shopping purpose.

III.   METHODOLOGY

A. Nature of the study

The research was designed to identify the affect of demographic variable on internet purchasing. It explores how online shopping is affected by age, gender, education and income. Two hypotheses were proposed and tested by statistical analysis methods. Results of hypothesis identified the nature of relationship among two variables. The research study also calculated the significance level between two hypotheses with the help of statistical tools.

B. Study setting

Research study collected primary data from Pakistani nationals live in Faisalabad city. Respondents were both male and females and selected on the basis of internet usage. These respondents were students of different colleges and universities Government and private sectors, business persons, middle level, and lower level management of private organizations. House women were also invited for their response. Secondary data was collected from research journals and research articles related to the topic.

C. Data collection instrument

Data is collected by using Questionnaire. The questionnaire mainly consists of five point Likert scale. The scale began from 1 and ended on 5. 1 means strongly disagreed, 2 disagreed, 3 neither agreed nor disagreed, 4 agreed and 5 mean strongly agreed.received.

D. *Research Population*

The current study selected the all population form Faisalabad city of Pakistan. This population was selected on the basis of internet usage. Different segments of Faisalabad's

population has been selected include students of colleges and universities, business persons, employees of middle level and lower level of organizations and house women. Total two hundred and fifty respondents were participated to provide their comments regarding the research related queries.

E. *Sampling method and sampling frame*

Sample size was three hundred respondents and from them two hundred and fifty respondents participated well to response and remaining fifty questionnaires were not considered as the part of research because of no feed back by respondents. One hundred and fifty questionnaires were distributed to universities and colleges in Faisalabad, sixty questionnaire were distributed to the business people, sixty questionnaires were distributed to private business sectors and remaining thirty questionnaire were spread to different homes for the responses of women stay at home. Both male and females were selected to fill the questionnaire and 165 male and 85 females were filled the questionnaire. The percentage of participated male respondents was (66.0%) and female respondents were (34.0%). The respondents of universities and colleges were participated (50%), business men (20%), private organizations (20%) and house women were participated (10%) to the responses.

F. *Measures and methods*

Research data was analyzed with the help of univariate analysis and bivariate analysis. Chi square, degree of freedom, gamma, p value, frequencies, percentages, mean and slandered deviation were applied to measure the level of significance among dependent and independent variables. Entire calculations were completed with SPSS software.

IV.   RESULTS RESULTS AND DISCUSSIONS

A. *Univriate analysis*

TABLE 1:   GENDER

Gender	Frequency	Percentage
Male	165	66.0
Female	85	34.0
Total	250	100.0

Gender is very important segment of the research which tells the difference in Male and Female's answers on the same question. Research study was conducted in Pakistan and lifestyle of females is very different here as compared to men. Man is dominated personalities at home and they do most of household decisions. In many families of Pakistan, men are responsible and selected for household shopping and mostly females stay at home. Research includes both males and females as respondents and data is gathered by both male and female respondents. Sample size of 250 respondents was selected and numbers of Male respondents were 165 that become 66% of the total respondents. And female respondents

were 85 in numbers and contributed 34% in responses. Research concluded that majority of male do online shopping. They have more access of computer and internet while working at office. Mostly men take more purchasing decisions in Pakistan that's why mostly purchase transactions are complete by them. Our results match with Slyke et al. (2002) [9] stated that, as women consider shopping as a social activity and they were found to be less interested to shop online than men. Women enjoy shopping from traditional stores and get more satisfactions while purchasing offline.

TABLE 2:   DISTRIBUTION OF THE RESPONDENTS ACCORDING TO THEIR AGE

Age (in years)	Frequency	Percentage
15 to 25	145	58.0
26-30	34	13.6
Above 30	71	28.4
Total	250	100.0

Age is also very important factor in research that tells the different responses of different age groups of respondents on the same question. Age is segmented on the basis consumers who use internet. Total 250 respondents were selected. Respondents of 15 to 25 years in age were 145 in numbers which becomes 58% of total respondents and was the biggest category of respondents according to their age. These respondents use internet in their daily life whether for shopping or other activities. Second category of respondent according to the age was 26 to 30 years old. Total respondents of this age category were 34 and contributed 13.6% of the respondents. These are young male and female internet users. Third age category included respondents above 30 and they are total 71 in numbers and contributes 28.4% of the total respondents. Research concluded that age group of 15-25 years respondents involve maximum in online shopping. These are young males and female students. They connect to the internet daily and mostly they are connected to the internet stores for making some purchases. According to them, internet is a rich source of information and product's related attributes are clearly mention on the website's page that help them to think deeply before the final purchase. These people are mostly buy clothes and books online and do not buy expensive products from the internet. These respondents show high motivation when online stores offer sales and discounts as these are young people who do not have a lot of money for purchasing want to get more benefits in purchasing. Our results match with Kunz (1997) [11] found that men's are mostly online shoppers and they are mostly young as result shows most of the online shoppers fall into the age category of 15-25 years. These are young respondents who like online purchasing mostly in their daily life as compared to the other age categories of respondent who are less involved to purchase via online stores.

Education	Frequency	Percentage
Intermediate	18	7.2
Bachelor	63	25.2
Master	151	60.4
PhD	18	7.2
Total	250	100.0

Third category consists of the distribution of respondents according to their education. It is the requirement of topic to find out the level of education of online shoppers. Education is compulsory to use internet because mostly websites are designed in English language. To understand English language person must have some minimum qualification to be able to browse internet. Besides that online shopping has a process that persons must have to follow if they want to buy from the online stores. Web pages guide their customers to complete the shopping process. Total (7.2%) of respondents were qualified to intermediate level education. These respondents also use internet for shopping. Respondents having bachelor's qualification were (25.2%) of total respondents that is second highest category of respondents according to their education. The highest educational category of respondents fall into masters' level education as these respondents was highest in percentage that is (60.4%). Total numbers of respondents were 151 out of 250 respondents. Only (7.2%) of respondents were qualified to phd level. These respondents were highly qualified but they were only 18 respondents out of 250. Research has concluded that online shoppers are qualified and majority of respondents who use internet have masters level qualification. Results match with Li et al, (2003) [1] explained that, education is very important for internet shopping and if people are less educated, they would like to, but the products by going to the markets, and obviously they have less information to use internet and have purchases by internet. They do not enjoy the online shopping process and feel difficulty to find and evaluate the desired product in an effective way.

TABLE 4: DISTRIBUTION OF THE RESPONDENTS ACCORDING TO THEIR INCOME

Income (Rs.)	Frequency	Percentage
Up to 25000	58	23.2
25000-50000	78	31.2
Above 50000	52	20.8
No income	62	24.8
Total	250	100.0

Income is very important factor to buy the products. It is a form of money that consumers have to pay if they want to buy any product from online or offline channel. More the income more you purchase. Income you earn describes your purchasing power. Research made different categories of income earned per month by respondent. It helped to analyze the effect of income on purchasing online. Respondents having up to 25,000 rupees income per month were (23.2%). Respondents earned 25000-50000 rupees income per month were total (31.2%) respondents. Respondents has above 50,000 rupees income per month contribute (20.8%) in online shopping. Respondents who did not mansion their monthly income were total 62 respondents out of 250 and they were (24.8%) percent. Respondents who earn 25000-50000 per month are majority who involve in online shopping. This is second highest income category but these respondents are more involve to purchase from online source. Respondents who earn highest income that is more than 50,000 per month are also buy products online but these are not majority of online shoppers. There is earning higher income but not purchasing mostly from internet. There are many other factors that affect online purchasing decisions. These factors include geographical area, satisfaction of purchasing, loyalty of brand and quality consciousness. While having good purchasing power these respondents do not prefer online shopping. As there is not physical access of products and risk level is higher in online shopping. Our results match with Rajamma and Ganesh, (2007) [12] consumer are very conscious about tangibility of products and they want from the online stores to convince them and build customers trust on the web store.

TABLE 5: DISTRIBUTION OF THE RESPONDENTS ACCORDING TO

Using internet	Frequency	Percentage
Daily	180	72.0
Often	40	16.0
Sometimes	24	9.6
Rarely	6	2.4
Total	250	100.0

These results represent the consumers according to the internet usage in their life. Internet connection is required to start and complete the online shopping task. If person is in favor of online shopping but he do not have internet connection, then he cannot be able to browse any website who sale their products online. Information about internet usage of respondent is required for online shopping because this task cannot be done without using internet. Online shopping can be

possible only when person connects to internet. Internet is a medium for online screening and purchasing of required products. Total percentages of respondents who use internet daily to perform any activity were (72%). These are majority of respondents who connects to internet in their daily lives. Respondents who often use internet contributed (16%) percent of total. These respondents are internet users but they do not use internet daily. Respondents who use internet for sometimes have (9.6%) contribution. Rarely internet users were only (2.4%). This is the fewest segments of respondents and research concludes that maximum of respondents are taking benefits from technologies and connecting to internet is the part of their daily life. Our results match with Rohm et al. (2005) [13]stated that, when the number of users on internet increases then definitely usage of technology and worldwide webs also increase. If more people use internet then more chances of online shopping because connecting to internet is the primary step of browsing website. If people do not connect to internet then there are no chances of online shopping.

B. Bi-Variate analysis

a. Tesing of Hyotheses

Hypothesis 1: Male respondents have more positive thinking about online shopping as compared to female respondents.

TABLE 1: RELATIONSHIP BETWEEN GENDER AND ONLINE SHOPPING

Gender	Online shopping			Total
	Low	Medium	High	
Male	49	68	48	165
	29.7%	41.2%	29.1%	100.0%
Female	19	52	14	85
	22.4%	61.2%	16.5%	100.0%
Total	68	120	62	250
	27.2%	48.0%	24.8%	100.0%

Chi-square = 9.37   d.f. = 2   P-value = .009**
Gamma = .058** = Highly significant

Data was collected from male and female respondents who were involved in online shopping. According to the Bi-variate analysis, male respondents who were highly involved in online shopping were (29.1%), male respondents who were involved medium level in online shopping were (41.2%) and male respondents who were involved low level in online shopping were (29.7%). Involvement of female respondents in online shopping at high level were (16.5%), medium level (61.2%) and low level involvement in online shopping were (22.4%). So hypothesis (H=1) is accepted as results shows that male respondents have high involvement in online shopping. Chi-square value (9.37) shows a highly significant association between gender and their thinking about online shopping.

Gamma value (.058) shows affirmative relationship between the variables. It means male respondents have more positive thinking about online shopping as compared to female respondents. So the hypothesis "Male have more positive attitude towards virtual purchase than female respondents" is accepted. Our results match with Slyke et al. (2002) [9] stated that, as women consider shopping as a social activity and they were found to be less interested to shop online than men.

Hypothesis 2: Young generation has more positive thinking about online shopping

TABLE 2: RELATIONSHIP BETWEEN AGE OF THE RESPONDENTS AND ONLINE SHOPPING

Age	Online shopping			Total
	High	Medium	Low	
15- 25	21	72	51	145
	14.5%	49.6%	35.2%	100.0%
26-30	6	22	6	34
	17.6%	64.7%	17.6%	100.0%
Above 30	41	25	5	71
	57.7%	35.2%	7.01%	100.0%
Total	68	120	62	250
	27.2%	48.0%	24.8%	100.0%

Chi-square = 66.09   d.f. = 4   P-value = .000**
Gamma = -.596** = Highly significant

Different age groups of respondents were selected to identify the relationship of age and online shopping. Respondents of age category (15-25) were (35.2%) at low positive thinking (49.6%) medium level of positive thinking and (14.5%) high level of positive thinking about online shopping. Respondents of age category (26-30) had (17.6%) high positive thinking about online shopping, (64.7%) medium level of positive thinking and (17.6%) low level positive thinking about online shopping. Respondents of above 30 category had (7.01%) high level positive thinking about online shopping, medium level positive thinking (35.2%) and (57.7%) low level of positive thinking about online shopping.

Chi-square value (66.09) shows a significant association between age of respondents and online shopping. Gamma value shows a strong negative relationship between the variables. It means majority of the low age (up to 25) had medium to high level thinking about online shopping. On the other hand majority of the last age group (above 30) had low level thinking about online shopping. So the hypothesis "Young generation has more positive thinking about online purchasing" is confirmed. Results are meet with (Wood, 2002)

[6] stated that consumers that are aged fewer than 25 years are more involved for buying products online as they are more interested to adopt and use new technologies. Donthu and Garcia (1999) [2] concluded that primarily consumers of online shopping were young people and they had less purchasing power as compare to the older age consumers. Stafford et al (2004) [3] there is a affirmative relationship between the age of online consumers and their intention to purchase the products online. Results are not match with Joines et.al (2003) [4] stated that age does not affect the consumer's intention to buy the products online. There are other factors rather than age that motivate the people to buy from online stores. He reported a negative relationship of age and online shopping. Results are also not match with (Swaminathan, 2004) [5] stated that, there is no relationship of age and online shopping of consumers. Results of the study concluded that age of respondents and their intention to do online shopping, have affirmative relationship. Respondents who are young are more involved in online shopping as compared to the middle and older age category of respondents.

V. CONCLUSION AND RECOMMENDATION

A. discussion about results

The findings identified that how demographics (age, gender) of respondents affect to their purchasing from online stores. The research has resulted that "there is association between age and virtual shopping" respondents who are minor in age are more motivated to shop online as compared to old age respondents. There is a affirmative relationship between the age of online consumers and their intention to purchase the products online (Stafford et al. 2004) [3].

Result concluded that "there is relationship between gender and online shopping" as male respondents have more positive thinking about online shopping as compared to female respondents and mostly online purchasing transactions are completed by male consumers. Men are more involved in online shopping as compared to females. Majority of females were in favor of purchasing the products from traditional markets. According to the Slyke et al. (2002) [9] as women consider shopping as a social activity and they were found to be less interested to shop online than men. Shopping is favorite activity of women and they want to perform this activity to shop from the physical market. Online shopping is unsocial and customers do not attract with anybody face-to-face. Women also want tangibility of products that is not possible in online shopping. Customers only access the picture of product and the product's related information. The study has also found that online shopping also affect by monthly income of respondent. Respondents who have medium level of income are more involved in online shopping. Majority of respondents that do online shopping earn 25,000-50,000 rupees per month. Research has concluded that "there is a relationship between education and online shopping." Educated people involve more in online shopping. When a person starts to buy any product from internet store, he/she have to follow online shopping process. The process starts from identification of desired web that offer the desired product to buy. Mostly online stores'

website has designed in English language that needs some minimum qualification to understand. Majority of online shoppers have master's level qualification. Li et al. (2003) [1] explained that, education is very important for internet shopping and if people are less educated, they would like to buy the products by going to the traditional markets and obviously they have less information to use internet and having purchase by internet.

B. Limitation of the study

The research has been conducted in one city of Pakistan and it could be better if more than one city is included.

C. Recommendations

It is recommended to online stores to target the audience on the basis of demographic characteristics.

D. Scope for future

Based on the findings of this study, future research is recommended to expand the scope of purchasing from virtual stores.

REFERENCES

[1] H. Li, C. Kuo, Russel and M.G, "The impact of perceived chnnel utilities, shopping orientaation, and demographic on the consumers online buying behaviour," journal of computer-mediated communication, 1999.

[2] R. Burke, "Technology and the customer interface: what consumers want in the virtual and physical store," journal of academy of marketing science, vol. 30(4), pp. 411-432, (2002).

[3] M. B. Kunz, " On-line customers: Identifying store, product and consumers attributes which influence shoping on internet.," unpublished doctoral dissertation, university of tennessee , 1997.

[4] R. K. Rajamma and G. Ganesh, "Services purchased at brick and mortar versus online stores, and shopping motivation.," The Journal of Services Marketing., vol. 21, (2007).

[5] A. Rohm and Swaminathan, "A typology of online shoppers based on shopping motives," Journal of business research, vol. 57, pp. 748-757., (2004).

[6] N. Donthu and A. Gracia, "The Internet Shoppers.," Journal of Advertising Research, vol. 59(3), pp. 52-8, (1999).

[7] T. F. Stafford, A. Turan and M. S. Raisinghani, "International and Cross-Cultural Influences on Online Shopping Behavior," Journal of Global Information Management, Vols. 7, No. 2, pp. 70-87, 2004.

[8] J. Joines, C. Scherer and D. Scheufele, "Exploring the motivations of consumers web use and their implecations for e-commerce," The journal of consumer Marketing, vol. 20(2), pp. 90-108, (2003).

[9] V. Swaminathan, "A typology of online shoppers based on online motives.," journal of business research, vol. 57 , pp. 748-757, 2004).

[10] S. Wood, "Future fantasies: a social change perspective of retailing in the 21st century," journal of retailing, vol. 78 (1), pp. 77-83, (2002)..

[11] R. B. Settle, "Gender Effects on Internet, Catalogue and Store Shopping.," Journal of Database Marketing, Vols. 9, No. 2, pp. 150-162, (2002).

[12] A. V. Citrin, S. Jr, E. R. Spangenberg and M. Clark, "Consumer Need for Tactile Input: An Internet Retailing Challenge," Journal of Business Research, Vols. 56, No. 11, pp. 915-923, (2003).

[13] C. V. Slyke, C. L. Comunale and F. Belanger, "Gender Differences in Perceptions of Web-Based Shopping," Communications of the ACM, Vols. 45, No. 7, pp. 82-86, (2002).