

Impact of Internet Searching Pattern on Online Shopping Behavior: An Empirical Study on Dhaka City

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Abstract

The key purpose of this research is to determine if there are some connections between the trend of looking for internet goods and the propensity to shop online. This research further shows the association of demographic factors and online purchasing behavior among online customers. It is found from the review of the extensive literature that there have been conflicting opinions on the factors determining e-shopping behavior. A survey on the young adults was performed within Dhaka City. Descriptive statistics like cross-tabulation and independent chi-square tests of significance have been conducted to describe the survey findings. Finally, the researchers concluded that the search and comparison of products has a significant relationship with the positive tendency of the shopper to purchase the product online. Demographic factors like age, gender, and private transport facilities have significant associations among types of product searches, reasons for searching, and online searching platform. Household income also significantly associated with internet expenditure and frequency of product searching. The pattern of Internet use has a significant association with the frequency of online product searches but does not significantly associate it with successful online product purchases. Reasons for product searching, discouraging factors for online purchases, and other demographic factors have a duplex impact on successful online purchases of products.

Keywords: E-Shopping, online searching, online shopping behavior, Internet marketing.

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Introduction

In the recent business world, internet shopping is the fastest growing future e-commerce field. Bangladesh is also a part of that potential as a developing country. The purchasing behavior of the consumer is evolving every day. This behavior is beginning to shift as the idea of e-commerce ascending and since 1990 it has revolutionized the entire activity of the global retail sector (Chen & Chang, 2003). By the advancement of technology, consumers not only log in to the internet marketplace for shopping as well as acquire product knowledge for future buying decisions. According to (Gehrt., 2012), due to the advancing online facilities, consumers can meet their needs and wants more efficiently. Comparing brands, product information, quality evaluation, choice convenience, accruing price variability all have become easier for shoppers through these online facilities. (Brown, Pope, & Voges, 2003). Moreover, they can enjoy better flexibility by ordering their daily groceries as well as their very personal items from the online marketplace rather than going to crowded stores physically. (Monsuwé, Dellaert, & Ruyter, 2004). As the online shopper is now more intelligent to make purchase decisions, (Demangeot & Broderick, 2007) urged upon all online sellers to build up an ideal atmosphere by which the shoppers can be satisfied properly. The sophisticated online market has proven a strong emergence of online retailing against the substitute traditional offline retailing (Rezaei, Amin, & Ismail, 2014). This online retail business creates more consumers by facilitating greater time-saving features. (Szymanski, David, & Hise, 2000). However, the risk of credit card fraud, lack of physical contact, product quality uncertainty, and vendor mistrust are the most prominent reasons for customer pessimism regarding the online marketplace (Bhatnagar, Misra, & Rao, 2000). There are also flaws in the distribution system, poor security of electronic payment processes, shortage of personal data privacy, and absence of customer care services (Karim, 2013). Besides, 24 hours in a week, ease of use, less stress, and time-saving are the encouraging factors of online shopping. There are two kinds of activities of internet shopping including online activities which include the system, information and service quality, and offline activities like product delivery, etc. (Ahn, Ryu, & Han, 2004). Efficient product delivery systems, effective logistics support, and prominent customer services rare recognized as the most significant factors of online shopping (Grewal, Iyer, & Levy, 2002). As Bangladesh has been witnessing rapid growth in e-commerce, further significant progress is expected to come in the forthcoming year by progressing the existing contextual factors. Nevertheless, the number of online users in Bangladesh has been increasing rapidly each year, but the number of effective online buyers has not increased at that same pace.

Rationale of the Study

As a developing country, Bangladesh is overpopulated with about 164.6 million people in South Asia. The standard of living and communication system leaning upward with the latest development of technological innovation and online platforms. Recent statistics show that around 100 million people in this country are now using the internet via mobile gadgets and personal computers (Internet Usage Statistics, 2020). People in urban as well as rural areas using the internet for online shopping and purchase different types of services. So there exists an outstanding opportunity to create more online businesses, especially where people face difficulties visiting most nearby shopping centers.

Furthermore, the sophistication of the banking system makes people apply local currency credit cards for online purchases. Therefore, all types of manufacturers, merchandisers, and retailers are operating online to offer and sell their products and services all around the country. Yet, digital businesses are experiencing challenges regarding successful online transactions and sales for different reasons.

Literature Review

The Internet is an interactive medium where the consumer can decide on the navigation route and thus exercise control over the content being displayed. Logical operations like sorting, comparing and querying data are easy to make, which enlarge the capabilities of the Internet in handling information compared with other in-home shopping forms.

The Internet has provided an enormous opportunity for its interactive nature. Logical processes such as sorting, comparing, and querying data are easy to do and expand the Internet's ability to process information relative to other ways of in-home shopping. Although consumers can navigate the route and thus exercise greater access and control over the content being displayed with the interactivity of online shops but when it comes to decision making consumers still tend to prefer traditional shopping.

According to Demangeot & Broderick, internet connection is essential for increasing sales online as without fast and reliable internet no customer base can use the online stores comfortably. They also found that detailed product information and organized service appeals more and more people and altered their buying behavior from the traditional buying to latest online shopping (Demangeot & Broderick, 2007).

To identify the demographic influence on e-shopping behavior, many studies have investigated the sociodemographic factors affecting e-shopping behavior. According to Ding & Lu, 2017, women are more likely to familiar with e-shopping than men though other studies have shown that men are more tending to purchase online (Frag, Krizek, & Dijst, 2006). Moreover, existing online buying pattern suggests men prefer to buy more electronics products than women, whereas women buy clothes and daily goods online. (Zhen, Cao, & Mokhtarian, 2016). Some researchers found that gender has no significant effect on e-shopping behavior (Lee, Sener, & Handy). Some other researchers stated that age negatively influences e-shopping behavior (Frag, Krizek, & Dijst, 2006). However, there is a nonlinear relationship between age and e-shopping behavior. Besides, a number of studies showed that household incomes has a positive influence on e-shopping behavior (Frag, Krizek, & Dijst, 2006) and (Zhen, Cao, & Mokhtarian, 2016). Though it was found insignificant by other studies (Frag, Krizek, & Dijst, 2006) and (Ding & Lu, 2017). Surprisingly, lower-income groups are often observed to purchase more items from e-commerce sites (Irawan & Wirza, 2015).

Some studies also suggested that higher education levels have an impact on e-shopping, (Frag et al., 2006b, 2007; Blasio, 2008; Cao et al., 2012; Zhou & Wang, 2014; Zhen et al., 2018), but Ding and Lu (2017) argued that e-shopping behavior is not affected by education levels. In fact, it's unlikely that those with higher education will shop online (Irawan & Wirza, 2015).

Different studies revealed that the frequency of internet use positively affects e-shopping behavior (Ding & Lu, 2017), (Frag, Krizek, & Dijst, 2006) and (Maat & Konings, 2018). Furthermore, studies by Frag et al. and Ren and Kwan tries to prove, the age of internet experience positively affects e-shopping behavior (Frag, Krizek, & Dijst, 2006) and (Ren & Kwan, 2009). Similarly, Irawan and Wirza stated that frequency of internet usage has a positive effect on e-shopping (Irawan & Wirza, 2015). People having a smartphone conduct e-shopping more frequently (Maat & Konings, 2018). However, it is rare to find a person specially in the urban areas without a smart phone at present times. It is very common practice to engage with e-shopping on smart gadgets.

(Irawan & Wirza, 2015) indicated that the availability of private transportation facilities is also expected to influence an individual's e-shopping behavior of individuals. It has been observed that the number of vehicles owned by the household positively affects the frequency of shopping in Indonesia. In Nanjing, China, people who have a driving license are even more likely to purchase shoes, electronics, books, and everyday goods digitally (Zhen, Cao, & Mokhtarian, 2016). Besides, Frag et al. found no significant effect on e-shopping behavior by having private transport in the United States. Hence, it remains unclear how car ownership influences e-shopping behavior in different regions around the world (Frag, Krizek, & Dijst, 2006).

However, researches on geography have paid much attention to the effect of location factors on e-shopping behavior. According to them, city dwellers will most presumably adopt e-shopping since they are trained enough to regularly use the internet for various reasons (Anderson, Chatterjee, & Lakshmanan, 2003).

From the above literature review, it can be said that there have been conflicting opinions regarding the factors determining e-shopping behavior. All these studies tried to investigate the direct relationship and impact between the demographic factors and e-shopping behavior. But demographic factor-like household income to play different roles in e-shopping among existing studies. This research tries to illuminate different perspectives to the existing conflict of the prior studies by identifying a new mediator variable. Hence, this study attempts to examine the associations among the demographic factors, product searching pattern of the users, and the propensity of online buying.

Research Questions and Objectives

The review of literature related to internet shopping and e-commerce led the authors to put forward the following questions to be addressed in the empirical part of this study:

1. What is the effect of the online search pattern of a product on the user's willingness to buy those items?
2. What is the impact of socio-demographic variables on individual internet usage behavior and on e-shopping?

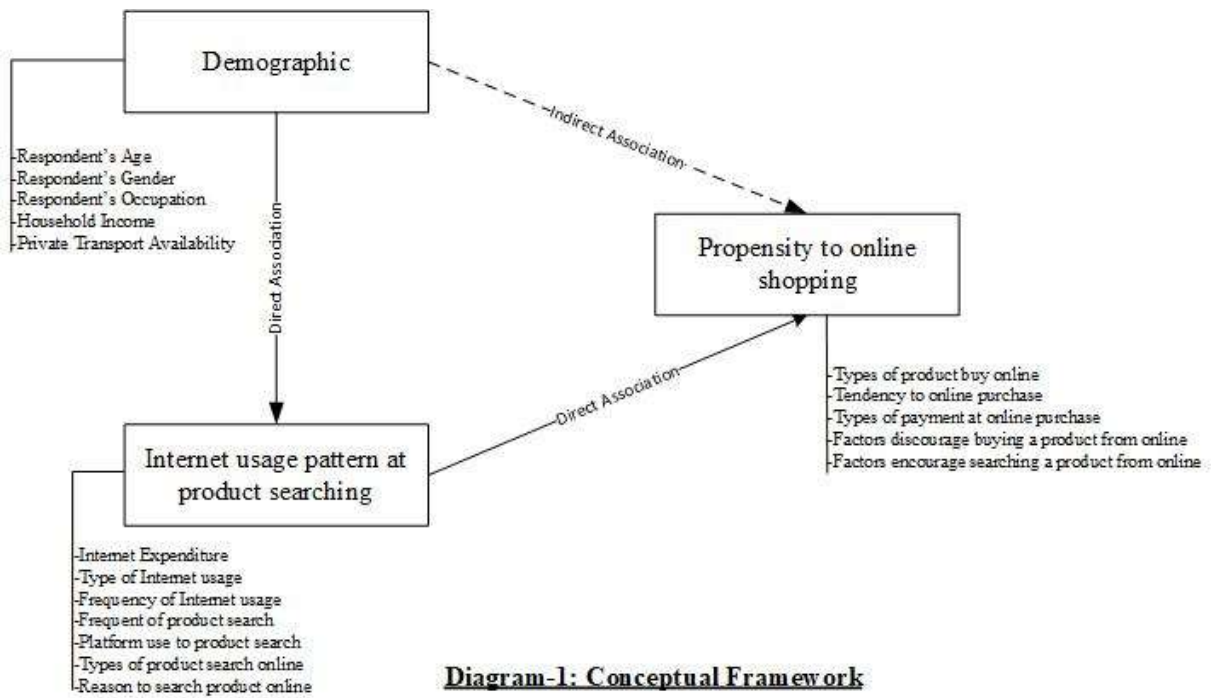
This study aims to determine whether there is some connection between searching for available online products and propensity to online purchases. This research further shows the correlation of demographic variables and online purchasing behavior among the online shoppers.

Hypotheses Development and Conceptual Framework

H₁ = Product searching and comparison have a significant association with the shopper's affirmative tendency of buying the product online

H₂ = Pattern of internet usage have positive association with online product search

H₃ = Demographic attributes have significant impact on online product search



Methodology

As an exploratory research, this study uses data from an online survey implemented in Dhaka metropolitan area in 2020. As Dhaka is the Capital city of Bangladesh as well as the largest city of the country, researchers select this city to collect data from 212 respondents. Because the purpose of this study is to investigate e-shopping via the internet, the population is chosen as young and adult internet users living in Dhaka City. To develop the questionnaire, a total number of 17 variables have been developed which are nominal and ordinal in nature (Appendix-1). Among these variables, 5 variables played as the mediator variables to explain the relationship between independent and dependent variables.

The questionnaire contained 17 close ended questions regarding the respondents' demographic attributes, pattern of internet usage and online shopping behavior. Descriptive statistics including cross tabulation Chi-square test has been performed to explain the variables.

Table 1: Descriptive Statistics

Variable	N	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Age	212	1.16	.445	2.959	.167
Gender	212	1.31	.464	.821	.167
Occupation	212	1.42	.836	2.090	.167
Household Income	212	1.93	.978	.879	.167
Private Transport Availability	212	1.26	.439	1.106	.167
Valid N (listwise)	212				

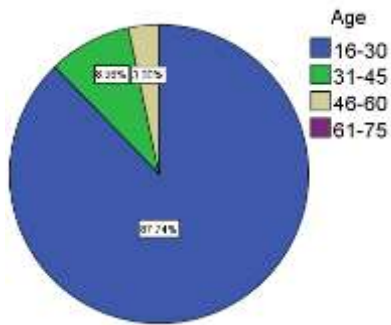


Diagram:2

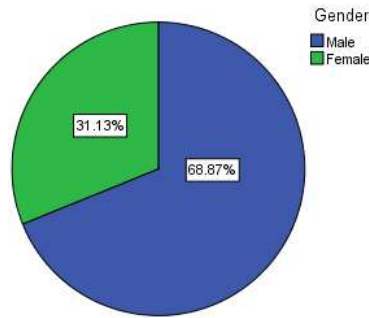


Diagram:3

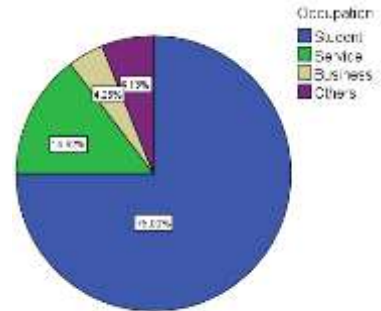


Diagram:4

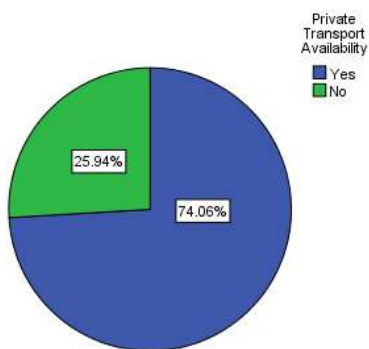


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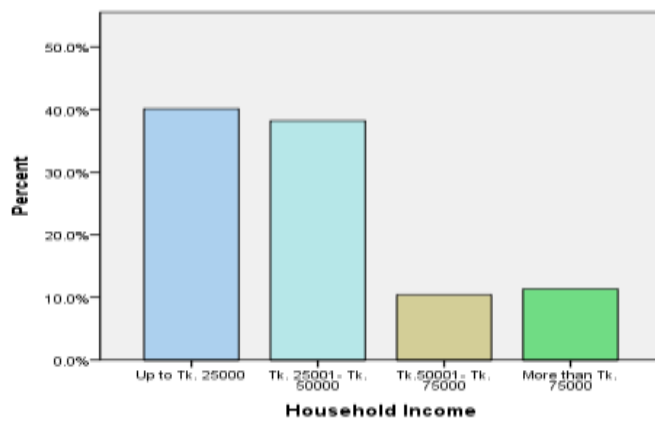


Diagram:6

From Table-1, it is observed that the mean of all independent variables ranges from 1.16 to 1.26 indicates that the responses of the customers fall within a considerable level. The value of standard deviations at each scale (less than 1) also prove this consistency.

Analysis and Discussion

The independent chi-square test between the frequent types of product search and types of product buy online shows a significant ($P < 0.05$) association between them. That is, the product people buying actually reflection of what types of product they are searching online. However, types of product searching and types of product buying also influenced by other demographic factors.

However, types of product searching or buying product online do not reflect by the household income. Because there is another variable, reasons for searching products online, control this behavior. In this case, a bidirectional influence exists. The same thing happens when we try to find the association between frequency of product search and tendency of product bought online. Though, there is significant association between frequent of internet usage and frequent of product search. To examine this relationship further research is needed. Young people (age between 16 and 30) are more likely to search mobile gadgets (87.7%) than the other age group. Specially men (92% within product search online) are more inclined to search these types of product. On the other hand, older people (age between 45 and 60) are more intend to search (42.9% within age) grocery product on online. Social network platform mostly uses (34%) to search different product at online, within this matter women most likely use (48%) this platform. However, both male and female most likely to search products to identify for future purchase from the store (34%). People who are doing businesses most frequent to search product online (44.4% within occupation). However, people who earn not more than Tk 50,000 are more frequently search product online.

Apart from that, private transport availability negatively impacts on internet expenditure and people who have private transportation facilities they most likely to search grocery products and mobile gadgets.

This study also shows that internet usage expenditure and types of internet facilities influence the frequency of internet usage that directs the positive association with the tendency to online purchase. Furthermore, the tendency to online buying and factors discourages to buy online are influenced by types of internet use. Types of product searching platforms associated with types of payment to buy online.

The responses on reasons for searching product online shows that most of the cases (34%) people search product online to identify the product for future purchases from the store and sometimes people search product only to know that product (23%). However, types of online searching platforms do not impact online purchase behavior but people mostly use social networks (e.g. Facebook) to search and compare products rather than other online platforms (e.g. official product web site, e-commerce websites, YouTube, etc.).

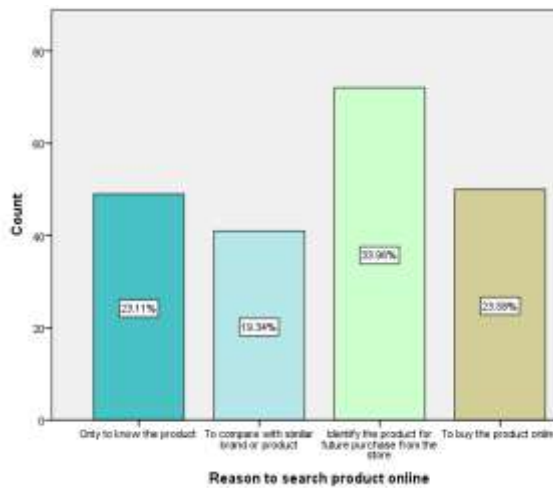


Diagram: 7

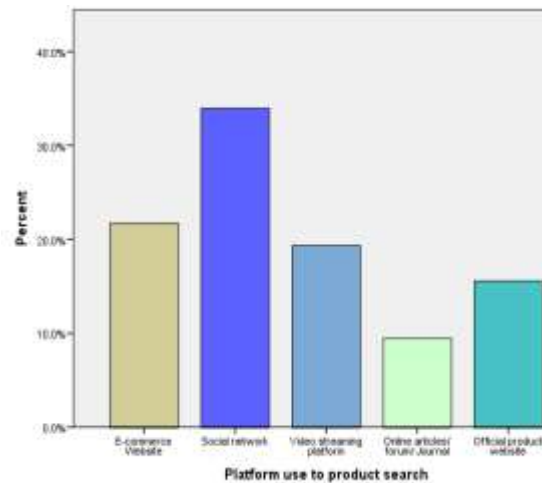


Diagram: 4

Some other factors discourage consumers to buy online products. This study shows that 48% of the respondents declined to buy from online because of vague product quality perception. However, other factors also reasonably discourage buyers from online buying. Even online payment restrictions and complex purchase process also make the consumer dispirited buying from online. Because this study revealed that most of the cases people interested to buy for cash on delivery.

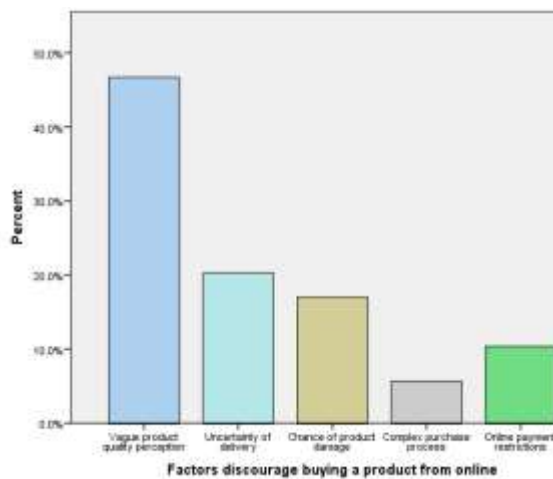


Diagram: 5

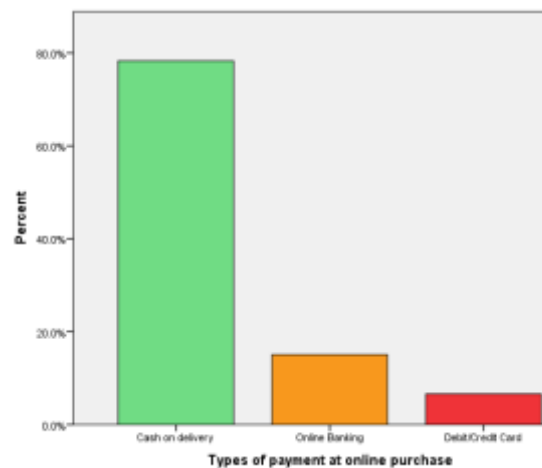


Diagram: 6

Even if the product price on online platforms and in the store is the same, many people choose to buy from the store. Private transportation services will not, however, associated substantially with purchasing from the supermarket.

The independent chi-square significant tests (Appendix-3) shows some indirect association among the respondents' demographic factors and the propensity of online shopping. Gender has a significant association with the types of product buy and types of payment online. That is men are more like to buy expensive products on the internet and they also more adopt to pay online through online banking or credit card than cash on delivery. However, household income plays a significant role in payment online or cash on delivery.

Conclusion

Finally, from this research, it can be said that age, gender, and private transport facilities have a significant association among types of product search, reasons for searching, and online searching platform. Household income also significantly associated with internet expenditure and frequency of product searching. On the other hand, the search for and comparison of products has a significant relationship to the affirmative tendency of the shopper to buy the product online. Internet usage patterns, like types of internet usage, have a significant association with the tendency to buy online products but it does not associate significantly with successful online product purchases. However, there are some indirect associations between demographic factors and propensity to online shopping. Online payment restrictions and discouraging factors significantly associated with successful online purchases.

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Appendix 1: List of Variables

	Latent Variables	Observed Variables			Description
		Independent	Mediator	Dependent	
1.	Demographic	AGE			Respondent's Age
2.		GNDR			Respondent's Gender
3.		OCPN			Respondent's Occupation
4.		HINCM			Household Income
5.		PRVTRNS			Private Transport Availability
6.	Internet usage pattern at product searching		INTEXP		Internet Expenditure
7.			CONNTYP		Type of Internet usage
8.			FRQINTUSE		Frequency of Internet usage
9.			FRQSRCHPRD		Frequent of product search
10.			PLTFRM		Platform use to product search
11.			PRDSRCH		Types of product search online
12.			RESNSRCH		Reason to search product online
13.	Propensity of online shopping			PRDBUY	Types of product buy online
14.				TNDCYBUY	Tendency to online purchase
15.				PYMT	Types of payment at online purchase
16.				FCTDISBUY	Factors discourage buying a product from online
17.				FCTENGSRC	Factors encourage searching a product from online

Appendix 2: Independent Chi-Square Tests (Cross Tabulation): (P value at alpha=0.05)

Demographic * Internet usage pattern at product searching							
	INTEXP	CONNTYP	FRQINTUSE	FRQSRCHPRD	PLTFRM	PRDSRCH	RESNSRCH
AGE	0.350	0.502	0.084	0.814	0.672	0.022	0.024
GNDR	0.672	0.497	0.094	0.850	0.039	0.000	0.000
OCPN	0.397	0.819	0.588	0.000	0.479	0.143	0.296
HINCM	0.020	0.150	0.073	0.042	0.771	0.424	0.281
PRVTRNS	0.000	0.109	0.557	0.180	0.266	0.000	0.527

Appendix 3: Independent Chi-Square Tests (Cross Tabulation): (P value at alpha=0.05)

Internet usage pattern at product searching * Propensity of online shopping					
	PRDBUY	TNDCYBUY	PYMT	FCTDISBUY	FCTENGSRCH
INTEXP	0.400	0.241	0.074	0.176	0.200
CONNTYP	0.233	0.033	0.053	0.046	0.332
FRQINTUSE	0.732	0.471	0.214	0.003	0.481
FRQSRCHPRD	0.226	0.065	0.274	0.945	0.403
PLTFRM	0.194	0.624	0.019	0.065	0.279
PRDSRCH	0.000	0.273	0.070	0.532	0.329
RESNSRCH	0.193	0.400	0.292	0.856	0.794

Appendix 4: Independent Chi-Square Tests (Cross Tabulation): (P value at alpha=0.05)

Demographic * Propensity of online shopping					
	PRDBUY	TNDCYBUY	PYMT	FCTDISBUY	FCTENGSRCH
AGE	0.872	0.408	0.819	0.292	0.180
GNDR	0.000	0.062	0.011	0.241	0.445
OCPN	0.348	0.173	0.406	0.003	0.385
HINCM	0.540	0.833	0.001	0.699	0.722
PRVTRNS	0.314	0.500	0.229	0.638	0.253