

# Assessing the Consumers' Propensity for Online Shopping: A Demographic Perspective

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## ABSTRACT

This paper is aimed at achieving two goals: first, to identify consumers' propensity for online shopping, and second, to investigate the association of gender, income, age, and education with consumers' propensity for online shopping. The study was conducted on a sample of 293 consumers in Saudi-Arabian market. Data were collected through a questionnaire contained four measures of consumers' propensity for online shopping. The findings of the study outlined that 66% of the respondents preferred traditional retail-store shopping to online shopping. The findings also revealed insignificant differences in consumers' propensity for online shopping between males and females and between the various levels of age. Conversely, significant differences were found between the levels of income and education for the higher levels. Based on the research findings, marketers are recommended to pay more attention to consumers who prefer online shopping to traditional shopping, and at the same time, work diligently to stimulate consumers who prefer traditional shopping in retail stores; removing their uncertainty and perceived risks associated with online shopping transactions.

**Keywords:** Online shopping, e-shopping, Internet Shopping, Demographics, e-market.

## INTRODUCTION

With the development of the Internet usage during the last two decades, Online shopping has grown up rapidly to be a major activity for numerous consumers all over the world. The amount of sales on the Internet increased globally to reach about 348.6 billion dollars in 2009 (Keisidou et al., 2011) and was expected to reach 778.6 billion dollars in 2014 (IMAP retail report, 2010). The reason for online shopping growth may be explained in terms of the advantages the Internet provided to both the sellers and the buyers. It allowed business organizations an easy access to enter the global markets effectively at a low cost. Simultaneously, it enabled consumers obtain adequate information on the products and to make convenient shoppings, anywhere at anytime.

In the framework of the business concern to study consumers in the electronic markets and the factors influencing their behavior, marketers are interested in the differences in consumers' propensity for online shopping; to be guided in making proper marketing decisions in several areas, e.g., market segmentation, targeting, building competitive positioning and strategies in e-markets. Previous studies that examined the research topic could be classified into three categories: the propensity for online purchasing, uncertainty avoidance, and perceived risk associated with online shopping (Al Kailani and Kumar, 2011).

Despite the Westerners' interest in studying topics related to consumers' willingness and attitudes towards online shopping and the factors that influence their behavior in e-markets, the researcher did not find similar studies concerning the Arab or Gulf regions. Accordingly, this study is aimed at identifying the consumers' propensity for online shopping in the Saudi-Arabian market, and the consumers' propensity for online shopping associations with some related demographics. The findings from this study could guide both national and international businesses in e-commerce to understand the basic dimensions of doing e-business in the Saudi market, especially with the lack of studies and information regarding consumers' online shopping behavior in this market.

## LITERATURE REVIEW AND RESEARCH HYPOTHESES

### Online shopping

Considering the importance of online shopping to consumers, previous studies indicated three perspectives on online shopping: first, the consumer's completion of online shopping transactions (Degeratu et al., 2000), second, the data collection of goods and services (Yang and Cho, 1999), and third, a combination of these two perspectives (Pan et al., 2010; Hill and Beaty, 2011). In terms of the third perspective, online shopping is defined as efforts made by the consumer via digital technologies - most notably the Internet - in search of information on products and making trade-offs, as well as the completion of purchase transactions (Alturkestani, 2004). Correspondingly, the current study adopts the definition of consumers' propensity for online shopping as consumers' tendency to use

digital channels in search of products and collect information about product features and prices for the purpose of the trade-offs, and making shopping transactions.

Regarding the measurement of the consumers' propensity for online shopping, some measures were used in the previous studies. Lian and Lin (2008) measured the extent to which consumers like to buy online, the attractiveness of this kind of purchase to consumers, the consumer's likelihood to return to the store website and purchase within the next three months or during a year, and the consumers' intention to increase their online purchase. The likelihood of ever purchasing from a particular store again was used by Jarvenpaa et al. (2000). Similarly, Jahng et al. (2001) measured consumers' acceptance of online shopping and their attitudes towards certain electronic stores. Along the same lines, Domina et al. (2012) measured consumers' online shopping intention and their willingness to recommend others to purchase online.

In the same context, a number of studies measured consumers' attitudes to perceived risks of online shopping, e.g., financial, performance, physical, time, psychological, social, and security-related risks (Jahng et al., 2001; Griffin et al., 2011). Times of purchase was used by Li and Zhang (2002) and Doolin et al. (2005). Also, Lee et al. (2001) measured the amount of purchase, repetition of purchase within six months. Some other measures were used, e.g., consumers' satisfaction with online shopping, future purchase intention, frequency of online shopping, number of purchased items, and expenditures on online shopping (Richa, 2012).

Reviewing previous studies on the concept and measures of consumers' attitudes and propensity for online shopping, the researcher classifies the measures into two categories. First, quantitative measures, e.g., volume of the purchased products, times of purchase, the amount of purchase on online shopping. Second, qualitative measures, e.g., satisfaction, future purchase intention, desire to resume purchases, and perceived risks. The current study is based on the two categories of measurement to measure the consumers' propensity for online shopping; taking into account that online shopping term in this study is used as an alternative to e-shopping on the grounds that the Internet is the most-used e-shopping channel in the Saudi-Arabian market.

Considering the findings of the previous studies on consumers' propensity for online shopping, hypothesis number one (H1) is developed as follows.

**H1.** There are no significant differences in consumers' propensity for online shopping.

- H1a.** There are no significant differences in consumers' preferences for online shopping.
- H1b.** There are no significant differences in consumers' times of online shopping.
- H1c.** There are no significant differences in consumers' intentions of online shopping.
- H1d.** There are no significant differences in consumers' amounts of online shopping.

### **Demographics and online shopping propensity**

Differences between shoppers are of extreme interest in market targeting and the setting of marketing strategies. Several studies investigated the demographics association with consumers' propensity for online shopping. Those studies have focused on gender, income, age, and education. The following presentation is a review of the most prominent results from those studies.

**Gender:** Regarding the association of gender with the propensity for online shopping, results from the previous research are mixed. A number of studies concluded that males outperform females in making online shopping (Nayyar and Gupta, 2010; Stafford et al., 2004; Rodgers and Harris, 2003). This is in line with the findings by Burke (2002) who concluded that males are more interested in and inclined to use electronic technology in making purchase transactions than females. On the other hand, females still prefer using the catalogs for home shopping transactions. Nevertheless, Burke, (2002) revealed that females who preferred online shopping have had the largest shopping transactions compared to males. Along the same lines, Doolin et al. (2005) and Susskind (2004) revealed that males purchase more frequently and spend more money on online shopping transactions than females. The result is assigned to the males' more interest in the world of computers and its uses (Doolin et al., 2005). Besides, Nayyar and Gupta (2010) and Haque & Mahmoud (2007) ascribed the superiority of males over females in making online shopping to females' willingness to get out of the houses for walks and entertainment with friends. Further studies have ascribed that result from the notion that females are more receptive to some types of the perceived risks associated with online shopping (Garbarino, 2004); privacy and security risks, in particular (Bartel-Sheehan, 1999). As a whole, some studies revealed that females in online shopping have a higher level of apprehensiveness and skepticism than males (Susskind, 2004; Rodgers and Harris, 2003).

In opposition to the above mentioned studies which concluded males superiority over females in making online shopping transactions, Richa (2012) revealed that females were superior to males in making online shopping; since females are more likely to buy impulsively than males. Hence, females are more attracted to promotional schemes that offered online. Besides, the rising of working women gave a boost to this behavior (Richa, 2012). In this regard, Rainne (2002) concluded that females are great buyers online in holiday seasons. Chang and Samuel (2004) found that the proportions of females who engaged in online shopping were greater than males in the case of making purchases more than four times, compared to the higher percentage of males in the case of purchase making for five times or more. In the same line, Bhatnagar et al. (2000) revealed differences between males and females in the categories of goods and services that are bought online.

Conversely, other studies found no differences between males and females with regard to their propensity for online shopping (Hui and Wang, 2007; Hernández et al., 2011; Bae and Lee, 2011; Alsamadi, 2002). Similarly, Bhatnagar et al. (2000) revealed no differences between males and females in their intentions to purchase online, but differences were in the product categories that are bought online. Regarding the perceived risks, Griffin and Viehland (2011) proved insignificant differences between males and females in the perceived risks associated with online shopping in different product categories.

Considering the mixed findings of the previous studies on the differences between males and females with regard to their propensity for online shopping, hypothesis number two (H2) is developed as follows.

**H2.** There are no differences between males and females in their propensity for online shopping.

**Income:** Some research has studied the income association with the online shopping propensity. A positive relationship was found between income and consumers' propensity for online shopping. The higher were consumers' incomes; the higher were their propensities for online shopping (Sussking, 2004; Bagchi and Mahmood, 2004; Liebermann et al., 2002; Lohse et al., 2000; Kim et al., 2000; Donthu and Garcia, 1999). This result was attributed to the ability of high-income households to possess PCs, and to widely use the Internet compared to low-income households (Lohse et al., 2000). Similarly, Alsamadi (2002) concluded that higher-income consumers were higher in making online shopping since they could bear its associated perceived risks. Along the same vein, Griffin and Viehland (2011) attributed the superiority of high-income consumers in online shopping to the sensitivity of low-income consumers to online shopping perceived risks.

Regarding the amounts of money spent on online shopping, Doolin et al. (2005) concluded that higher-income consumers spent more money than low-income consumers. Nevertheless, this study found that higher-income consumers were not necessarily the most frequent in making online shopping transactions than low-income shoppers. In opposition to those results, Nayyar and Gupta (2012) found a negative association for consumer's annual income with Internet retailing. Other studies found no differences between high-income earners and low-income earners in making online shopping (Dahiya, 2012; Hernández et al., 2011).

Considering the mixed findings of the previous studies on the differences between consumers' income levels with regard to the propensity for online shopping, hypothesis number three (H3) is developed as follows.

**H3.** There are no differences between consumers' income levels in their propensity for online shopping.

**Age:** Numerous studies have shown mixed results on the relationship between age and the online shopping propensity. It was found that young people - especially under 25 years - were more likely to use new technology - as the Internet - to search for new products, to access data on the products, and to evaluate product alternatives than older people (Ratchford et al., 2001; Burke, 2002; Wood, 2002). Correspondingly, some other studies attributed young people's superiority in making online shopping to the perception of the older people who find the benefits of online shopping are less than the cost of learning the skills of the Internet (Ratchford et al., 2001). In the same line, Trocchia and Janda (2000) found that the most important obstacles to e-commerce that reduce consumers' propensity for online shopping are: the lack of information technology experience, resistance to change, and insistence on being experienced with the product before the purchase. That's in addition to the older people's difficulty to adopt the computers and new technologies. Form different perspective, Dholakia and Uusitalo (2002) attributed the young people's superiority in online shopping to the ample time available to older people to visit traditional retail stores; satisfying their social needs when communicating with the salespeople in stores.

Conversely, some studies found that the Internet shoppers have been shown to be older (Donthu and Garcia, 1999; Bhatanger et al., 2000). Other studies have found no differences between age levels in making online shopping (Richa, 2012; Alsamadi, 2002; Doolin, 2005; Hernández et al., 2011). With regard to the risks perceived by consumers, Liebermann and stashevsky (2002) revealed that older people were found to perceive some types of risks than younger people. On the contrary, Griffin and Viehland (2011) revealed no differences in perceived risks associated with online shopping between adult and young consumers with an exception of electronic appliances; in which, older consumers are often aware of time risks with delivery dates, or the risks of technical defects and how to return the online purchased product or make it repaired. Hernandez et al. (2010) concluded that older people who frequently engage in online shopping may find it a bit complicated in the early stages of learning this technique, but getting used to online shopping transactions after one or more times of purchases, older people's online shopping transactions will not differ from younger people.

Considering the mixed findings of the previous studies on the differences between young and old consumers with regard to the propensity for online shopping, hypothesis number four (H4) is developed as follows.

**H4.** There are no differences between age levels of consumers in their propensity for online shopping.

**Education:** Generally, the willingness to buy new products is related to educational level (Nayyar and Gupta, 2012; Sussking, 2004). In this regard, studies revealed that more educated consumers were more adoptive to the recent innovations and new products (Dholakia and Uusitalo, 2002). In online shopping, studies have found that people who were more educated were more likely to make online shopping transactions (Donthu and Garcia 1999; Burke, 2002). This result has been attributed to the positive relationship between education and propensity of online shopping because of the higher educated consumers' Internet learning ability (Donthu and Garcia, 1999). Besides, high-educated people make good innovators and early adopters of new technology as a whole compared to low-educated people (Dillon and Reif, 2004).

Investigating the same relationship, other studies have found no differences between education levels and the propensity for making online shopping (Griffin and Viehland, 2011; Richa, 2012; Doolin et al., 2005; Hui and Wang, 2007; Alsamadi, 2002; Bagchi and Mahmoud, 2004; Mahmood et al., 2004). This result was ascribed logically to the current convenience of using computers and the Internet commonly, regardless of the education levels (Zhou et al., 2007; Alsamadi, 2002).

Considering the mixed finding of the previous studies on the differences between consumers' education levels with regard to the propensity for online shopping, hypothesis number five (H5) is developed as follows.

**H5.** There are no differences between the education levels of consumers in their propensity for online shopping.

## METHODOLOGY

### Sampling and data collection

350 questionnaires were made available to a convenience sample of consumers in Riyadh city (the capital of the Kingdom of Saudi Arabia). A total of 321 filled questionnaires were received, of which 28 were invalid and excluded from the analysis. Therefore, 293 valid questionnaires were eventually taken into analysis, representing a response rate of 84% of the distributed questionnaires. Table I. shows frequencies and percentages of the sample characteristics, categorized by gender, monthly household income, age, and education.

**Table I. Characteristics of the study sample**

Demographics		Frequencies	%
Gender	Male	163	56
	Female	130	44
Household income (Per month)	Less than S.R. 10000 (low)	186	64
	10000-25000 (middle)	65	22
	More than 25000 (high)	42	14
Age	15-30 years	209	71
	Over 30 years	84	29
Education	Diploma or less	51	18
	Bachelor	182	62
	Postgraduate	60	20

### Statistical analysis

The researcher used Chi-square goodness of fit to test hypothesis number one (H1) on the differences between the proportions of consumers' propensity for online shopping. For testing the hypotheses from two to five

(H2, H3, H4, and H5) on consumers' demographics associated with the propensity for online shopping, the researcher used Chi-square independence to test the significance of the differences between the proportions of different groups of each demographic variable.

## FINDINGS

### Testing of H1

Table II. demonstrates the results from a Chi-square test of goodness of fit to test (H1) that hypothesized no differences in the proportions of consumers' propensity for online shopping. The table presents the results of testing the four sub-hypotheses. It shows meaningful differences in the proportions of each of the components of consumers' propensity for online shopping, including: the preferences to online shopping, the number of online shopping times, shopping intention in the future, and the amounts of purchase. The significance level for each was less than 0.05. Thus, the null hypotheses: H1a, H1b, H1c, and H1d are all rejected. In Table II., respondents who preferred online shopping to traditional shopping represented 34%, whereas respondents who preferred traditional shopping in retail stores represented 66%. The table also shows meaningful differences in the number of times of online purchase. The highest number of times of online shopping is 5 times, representing 38% of the responses. There are meaningful differences in the proportions of the respondent's future intentions of making online shopping. Respondents who had no intentions of making online shopping represented 62%. Finally, there are meaningful differences in the proportions of responses to the question that measures the amounts of online shopping. Surprisingly, 61% of the respondents represents the high-amount-online shoppers.

**Table II. (H1) Testing (Chi-square test for goodness of fit)**

Questions	Answers	Frequencies	%	df	$\chi^2$	Sig.
Do you prefer Online shopping to traditional-retail-store shopping?	Yes	100	34	1	29.519	0.000**
	No	193	66			
How many times did you make online shopping within the last six months?	One	61	20	4	72.307	0.000**
	Two	37	13			
	Three	36	12			
	Four	45	15			
	Five	114	38			
Would you like to repeat online shopping in the near future?	Yes	112	38	1	16.249	0.000**
	No	181	62			
How do you estimate the amounts of your online shopping?	Low	113	39	1	15.321	0.000**
	High	180	61			

\*\* Marginally significant at the  $p$ -value  $\leq 0.05$  levels.

### Testing of H2, H3, H4, and H5

Table III. states statistical testing for H2, H3, H4, and H5. The table shows insignificant differences between males and females in their propensity for online shopping in all the four sub-variables utilized for the measurement ( $p$ -value $>0.05$ ). This result is validating the findings by Bae and Lee (2011) and Griffin and Viehland (2011). Thus, the null hypothesis (H2) is upheld.

Regarding income, the table shows significant differences in consumers' preferences for online shopping to traditional retail-store shopping ( $p$ -value=0.006), and with the future intention of online shopping ( $p$ -value=0.030). Data are distributed to higher-income respondents either who preferred online shopping (51%), validating the results by Griffin and Viehland (2011) and Alsamadi (2002) or who did not (70%), and who had future intentions to buy online (54%) and who had not (69%). Conversely, there are insignificant differences between income levels and each of the times of purchase and the amounts of purchase ( $p$ -value $>0.05$ ), validating results from Richa (2012) and Hernandez et al. (2011). Thus, (H3) is partly upheld.

Regarding age, Table III. shows insignificant differences between age levels in consumers' propensity for online shopping in the four sub-variables used for measurement ( $p$ -value $>0.05$ ), committing the findings by Donthu and Garcia (1999) and Burke (2002). Thus, the null hypothesis (H4) is upheld.

In education, significant differences have been found in the consumers' intentions of online shopping due to education levels ( $p$ -value = 0.005). Data are distributed with the education above the diploma; bachelor education in particular; validating the findings by Donthu and Garcia (1999) and Burke (2002). In the same line, significant differences were found in the times of online shopping due to education level ( $p$ -value=0.050). The number of times of online shopping increased with a bachelor level education, validating results from Donthu and Garcia (1999) and Burke (2002). Conversely, insignificant differences were found between consumers' preferences for online shopping

and amounts of online shopping due to education ( $p$ -value>0.05); validating the findings by Richa, 2012, and Griffin and Viehland (2011) who revealed no differences between education levels and the propensity for making online shopping. Thus, (H5) is partly upheld.

**Table III. Frequencies and H2, H3, H4, and H5 Testing (Chi-square test of independence)**

Demographics		Online shopping preferences		Times of online shopping							Intentions of online shopping				Amounts of online shopping					
		Frequencies		$\chi^2$	Sig.	Frequencies					$\chi^2$	Sig.	Frequencies		$\chi^2$	Sig.				
		Yes	No			1	2	3	4	5			Yes	No			Low	High		
Gender	Male	62	101	2.495	0.114	31	23	24	30	55	7.727	0.102	64	99	0.168	0.682	59	104	0.871	0.351
	Female	38	92			30	14	12	15	59			48	82			54	76		
Income	High	51	135	10.304	0.006**	37	20	21	23	85	12.985	0.112	61	125	7.010	0.030**	76	110	1.515	0.469
	Middle	29	36			15	10	10	11	19			29	36			24	41		
	Low	20	22			9	7	5	11	10			22	20			13	29		
Age	15-30 years	67	142	1.393	0.238	43	27	28	30	81	1.284	0.864	78	131	0.253	0.615	80	129	0.026	0.873
	Over 30 years	33	51			18	10	8	15	33			34	50			33	51		
Education	Diploma or less	15	36	2.130	0.345	8	7	6	5	25	15.363	0.050**	21	30	10.453	0.005**	21	30	0.626	0.731
	Bachelor	60	122			40	21	22	25	74			58	124			67	115		
	Postgraduate	25	35			12	8	8	17	15			33	27			25	35		

\*\* Marginally significant at the  $p$ -value  $\leq 0.05$  levels.

## DISCUSSION AND CONCLUSIONS

The findings from this study implied that the consumer preferences for online shopping accounted for 34%, versus 66% for traditional shopping in retail stores. Traditional shopping in retail store still accounts for two-thirds of shopping in the Saudi-Arabian market. The reason why traditional shopping preferences are higher than online shopping is explained by the role of traditional shopping in entertainment for both individuals and families. At the same time, traditional shopping represents the largest consumers' guarantee to preview the product well before buying it, and then carries less risk and dissonance than those perceived by consumers in online shopping. The study also revealed differences in the consumers' times of online shopping for the higher times (38%); in consumers' intention to make online shopping (38%); and in consumers' amounts of online shopping. Surprisingly, high-amount-online shoppers represented 61% of the respondents.

The study also revealed insignificant differences between males and females and between different age levels in terms of their propensity for online shopping in all the sub-variables: online shopping preferences to traditional shopping, times of online shopping, intentions of future online shopping, and amounts of online shopping ( $p$ -value>0.05). This may be ascribed to the widespread use of computers and the Internet, as well as the equal use of credit cards in electronic payment by males and females and by various age levels. This result is important to marketers on the Internet. It reflects the diversity and breadth of the Saudi e-market, especially for females as a large market segment in terms of their purely-owned incomes and the product categories they use, as well as the diversity of needs and wants of different age levels that make up the market.

On the other hand, there are significant differences between consumers' monthly household income levels and each of the consumers' online shopping preferences and their future intentions of online shopping, but not with times and amounts of online shopping. Data are distributed to higher-income respondents either who preferred online shopping or who did not, and who had future intentions to buy online or who had not. As regards education, there are significant differences in both the intentions of future online shopping and times of online shopping for the top levels of education; bachelor in particular. This may be attributed - in part - to the positive relationship between the levels of education and income and to the link between education and some types of products that are sold

online, e.g., books, electrical and electronic appliances, computer hardware and software, CDs or disks, magazines, airline tickets, hotel services, and services of communications.

## RECOMMENDATIONS AND FUTURE RESEARCH

The results of this research are important to marketers in targeting the Saudi market consumers who prefer online shopping to traditional shopping. This category of consumers represents a relatively large proportion (34%), considering the recentness of online shopping compared to the long history of traditional shopping in this market. Marketing managers can target this type of consumers via marketing communications and the companies' websites. This innovative category is actively making online shopping in terms of preferences, times of purchases, purchase intentions, and amounts of purchases so that they are valuable for the marketers.

At the same time, marketers should work to attract consumers who are still not aware of the convenience of online shopping in search of information on products; in comparison of alternatives; and in attaining easy and quick purchases. Marketers should work on removing the consumers perceived risks that are associated with electronic markets as a whole. They may use online shoppers as opinion leaders to convince non-shoppers with the convenience and time savings of online shopping through the word-of-mouth communications. Briefly, it can be concluded that those consumers are purchasing actively online in terms of times of purchase, intentions to purchase, and the amounts of purchase; despite the decline of consumers who prefer online shopping to traditional shopping. Marketers who would like to deal online in the Saudi-Arabian market must understand the consumers who accept this type of shopping, and take that into account when developing their marketing programs, including aspects of significant or insignificant differences in consumers' propensity for online shopping in this market.

The success in (B2C) business is an outcome of understanding the factors that influence the purchasing behavior of consumers in the electronic markets, including demographics. Deep insight into online consumer behavior in Saudi-Arabian market can guide marketers in the fields of segmentation, targeting, building strong customer relationships, developing competitive positioning, designing the website, and in the development of other marketing strategies. Marketers must be sure that their websites give positive consumer experiences in terms of the site attractiveness, ease of use, reliability, adequacy of data for the company and its products, and credibility of the information provided in the promotional messages of the company.

Considering the previous findings from the current research, marketers and researchers are recommended to do further research on the online shopping propensity of consumers in the Saudi market. Especial attention should be paid to the association of online shopping with consumers' perceived risk and its influencing factors. Additionally, marketing managers need to investigate how consumers' propensity for online shopping differs for different categories of goods and services that could be sold online in this market, where consumers are too high in purchasing power, lifestyle, and the adoption of new technologies.

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