

A cross sectional study of online shopping behavior trends of electronics in UAE: A case of Ajman

Sonia Singh (1)

Bhendra Singh (2)

(1) Dr Sonia Singh

Assistant Professor, Computer College

P.O.Box No. - 35529

Dubai, United Arab Emirates

(2) Dr. Bhendra Singh

Assistant Professor, Amity University

P.O.Box No. - 345019

Dubai, United Arab Emirates

Correspondence:

Dr Sonia Singh

Computer College

P.O.Box No. - 35529

Dubai, United Arab Emirates

Email: sonia@computercollege.ac.ae

Introduction

Consumers' behavior is different in every consumer and is influenced by buying habits and choices and tempered by psychological and social drivers. In this technical era the three W's i.e. World Wide Web is structured around the people where social and professional circles are influential and leads to online buying. This world is a technical world and because of the popularity of interactive media and latest technologies, conventional marketing has changed as companies and customers have both changed; there is a revolution in marketing and commerce through providing a number of services such as communications, information access and transactions, entertainment, banking, insurance, advertising, education from pre nursery to doctorate, paying fees and buying and selling, which also opens up possibilities in the areas of marketing, customer service and feedback, lower transactions and ordering costs, and customer retention. The Internet has developed channels for both business managers and consumers to achieve their own goals as it enables businesses to reach their customers worldwide, and consumers of all age groups use this channel to research, select, and purchase products and services from businesses around the world. Business and consumers must take advantage of this information. Now almost all companies are doing their business online by using their websites as live showrooms of their products and services because companies have observed an increment in customer segments for online shopping. Online shopping trends among most consumers began by sending flowers, gifts, cakes on special occasions like birthdays, and most importantly Valentines day, but now it is in its advanced stage where anyone can buy anything from rare medicine to most advanced mobile phones. One important point here is that consumer behavior in buying online electronic products is critical compared to non electronics because not having the advantage to physically examine the

Abstract

Across the world e-commerce has made life fast but simple, easy but full of innovation for individuals and groups. Internet buying and trade has a global reach and is a strategy for many corporations for expansion and growth. But online shopping consumer behavior is different from the physical market where anyone can see, touch and feel the product. Online customers always seek new products, new attractiveness and importantly price compatibility with their budget and for that they don't have any limitations to online shopping. UAE is one of the young nations which has seen a lot of advancement in less time especially in life style, and latest technology is the indicator of high life style. In this paper the author has tried to know the consumer behavior in online shopping of electronics and provide a valuable insight to identify some important factors which lead to consumer buying behavior in online shopping of electronic products in UAE by primary data collection in the smallest emirate of the UAE i.e. Ajman, to show the changing trend in the country. There is huge difference in the consumer behavior of the two big Emirates i.e. Abu Dhabi and Dubai, to other emirates. In other emirates perception, family and social network, education, language, age, economic factors, income distribution, facilities available in society like technology, are more deciding factors of consumer behavior. This paper also provides a solution to online stores sellers which may help the sellers to promote their products in light of consumer behavior theories.

Key words: Online shopping, electronics, consumer behavior, purchase factors

product, to maybe judge any wear or tear, or to understand the technicality of the product from sales representatives which is a very decisive purchase factor for most buyers. Moreover, when consumers identify or recognize the need for buying some product/service online and search for information on the internet, they look for alternatives and finally just before making a purchase best suited to their need they are bombarded by several factors which limit or influence the purchase decision, which is quite high in the case of electronic products.

Research Purpose

Due to tremendous growth in the UAE, interactive media, globalization and above all the UAE philosophy of adopting a geocentric approach, the importance of online shopping is increasing because of its convenience, easiness and speed. So the research question of this paper is how the consumers of the UAE behave while shopping online; to identify and analyze consumer behavior towards online shopping of electronics goods, keeping in mind the UAE; to identify the important factors which influence online shopping behavior; to explore more to know why online shopping of electronics products is less attractive and also to relate consumer segments with identified factors and to suggest some of the strategies to online marketers to make their product more saleable online.

Research Methodology

Our research is deductive in nature where we have collected and analyzed the primary data to find the factors which influence online consumer behavior especially for electronic items, such as low price, non-availability in local store, time saving, to know consumer concerns about online shopping, like privacy, trust factor, after sales service, delivery and return, quality of goods and services and consumer characteristics about these demographics. In order to measure underlying factors to buying of electronic products online we have calculated factor analysis, a fantastic data reduction technique by combining related variables to factors. We have also calculated average rating to find the main barriers in online

shopping. In the research the questionnaire has main segments such as demographics variables, general online purchase behavior and specific electronics item online purchase behavior. The questionnaire was filled in by locals of Ajman who know English, and have internet access. In order to meet time and resource constraints, specific populations in the researcher's circle were used. Out of 327 questionnaires 67 were discarded as they were not completely filled in. So 250 respondents were studied for analysis and research. In research there are many limitations like we had 250 respondents initially, but most of the study was based on only with 95 respondents which comprises only 38% of respondents, as they have shopped online for electronic products.

Literature Review

Different theories of consumer behavior suggest that consumers behave differently for online and offline shopping. There is a difference in consumer behavior of online and traditional shopping, though both include factors like social, cultural, personal and psychological but influence of these factors is more on traditional shopping and online shopping is more based on consumer's individual point of view and personal perceptions. Online consumers are restricted by social, cultural, environmental and psychological factors. Online shopping has its own character though it is a development and supplement of traditional shopping which had its own characters (Na Wang 1, 2008, P4). From this causal model of information research (Yuan Ago, 2005, P 10) defines types of antecedents for online shoppers including personal, product, media and situational factors. For every customer there are our choices to purchase

- 1) Search online and buy offline
- 2) Search offline and buy online
- 3) Search and buy online
- 4) Search and buy offline.

Online shopping consumer behavior is also called online buying behavior and internet shopping / buying behavior which has a direct relationship with five elements such as e-stores, logistics support, product characteristics, websites' technological characteristics, information characteristics and home page presentation (J. Johnson,

1999, P.4). In the model on consumer behavior online (Turban, 2010, P 183) has found that the electronic environment consists of three variables such as independent variables (also called personal and environment characteristics), intervening or moderating variables (under vendor control) and decision making process variables (affected by independent and intervening variables). Online shopping is very much influenced by experience and an experienced online shopper has more trust and better feeling on online services than those who have no prior online shopping experience (Goldsmith and Goldsmith 2002, pp. 318-28). Online purchasing is very much dependent on all those factors which have a strong effect on consumer life style and also has compatibility with it, like positive attitude towards technology, ability to accept multiple types of new technologies, online skills, knowledge and online experience becomes the main factors for online purchasing (Bidgoli 2004, P 272). From research it also has been shown that the formation of an online consumer is strongly influenced by their personal experience, direct marketing, mass media, influence of their social network and the internet and it also has been shown that direct experience (e.g. Product usage) is more attractive towards shopping rather than indirect experience (e.g. Reading a print ad) (Schiffman, 2009, P258). For online marketing it is very important for companies to be knowledgeable about factors such as consumer attitudes, values, beliefs, opinions, buying habits, and buying decisions in different settings and also they should recognize many dimensions of human behavior and decision-making is constituted by national culture (Soares, Farhangmehr, & Shoham, 2007). Utilitarian shopping behavior is known as goal oriented consumer behavior and for decision making purposes it is deliberately, efficiently and pre planned (Bidgoli 2004, P 272). Goal oriented online customers are rational and efficient in decision making, task oriented, specifically directed and seek to complete their task quickly as they are focused and determined about their purpose of shopping. Research shows that goal oriented online shoppers value convenience and easiness and are likely to buy electronics goods over the internet (Yuan, Goa, 2005, P.56).

In the process of online purchasing there are three main dimensions: Human Computer interaction (HCI), behavioral and consumerist orientation (Wan, 2009, P 19). In online shopping, communication is very intensive as the customer gets the product information like price, delivery cost, time, quantity, description by electronic communication, (Rosen # Purinton, 2004) shopping. Web trust can affect online purchase decisions and increase consumers' trust towards the online seller. It is more important to manage the general image of the website than emphasize the functionality of the site. The web trust can also be gained by positive experience between online buyers and sellers. There are 4 major factors as components of web trust - transaction security, website property, navigation functionality and personal variables.

Discussion on results

Demographic segmentation of respondents:

The first segment of questionnaire is a general segment about demographics of respondents is shown in Table 1. In the survey of 240 respondents we had almost 72.40% males and 26.6% female participants, so the majority of respondents are males who are main decision makers for buying electronics products. Also when we analyzed the age distribution of respondents we find that the young generation who have a fascination for electronics products are mainly our respondents as 74.8 % respondents are of age 20 to 30 years and the rest are above 31 years. The analysis of educational background of respondents shows the highest frequency of 46% of respondents falls under educational category of diploma and 22% are high school and rest are for bachelors and masters level. The analysis of income distribution is very surprising as the highest frequency, that is almost 48%, fall under don't want to tell category, which is surprising and it may be happening because most of the respondents are male and they are reluctant to tell their income and almost 28% of respondents come under the category of 20000-30000 AED.

Table 1: Demographic Characteristics of Respondents

Reno.	Characteristics	Category	Frequency	%
1	Gender	Males	181	72.40
		Females	69	26.6
2	Age	20-30	187	74.8
		31-40	39	15.6
		40 and above	26	9.6
3	Education	High School	55	22
		Diploma	115	46
		Bachelor	50	20
		Masters	30	12
4	Income	10000-20000	20	8
		20000-30000	70	28
		30000 and above	42	16.8
		Can't tell	118	47.2

Analysis of buying online:

Frequency and duration of buying online: The first thing we want to know is how frequently people of Ajman buy online products and also how long have they been buying.

Almost 44.4% of total respondents have never purchased anything online, whereas 19.6% of respondents have purchased something at least once in the last three months and the same once in a year. It is very much clear from data that the majority of people in Ajman are not buying things online and also from the above date we came to know that almost 55.6% people have online shopping experience, but for in-depth analysis it was important to know how long they are experiencing the online shopping experience. 48% of respondents have been doing online shopping for less than a year and 17% have been doing it for the last five years

and almost 35% are doing online shopping for more than 5 years, which shows that most people of Ajman are not addicted to online shopping, rather most of them are currently involved in it which shows the sign of youth awareness, usage and adaptability of latest technology and market.

Analysis of Product Segment and retail store visit before buying :

Now our research is moving towards being topic specific because the analysis of this question was important for us to see the trend of type of products people of Ajman purchase to take our research further.

Table 2: Frequency and duration of buy product online

Sr.No.	Characteristics	Category	Frequency	%
1	How frequently do you buy online?	Frequently or at least once three months	49	19.6
		Once in six months	41	16.4
		Once a year	49	19.6
		Never bought online	111	44.4
2	Duration of online shopping	Less than a year	66	48.201
		1-5 years	24	17.266
		More than 5 years	41	35.25

Table 3: Buy Online Product Segmentation

Product Segmentation	Frequency	Percentage
Mobile/computer/camera /Fitness (Electronics Products)	95	68%
Clothes	17	12%
Tickets	15	11%
Books	3	2%
Jewelry and Cosmetic	6	5%
Others	3	2%
Grand Total	139	100%

Table 4 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.747
Approx. Chi-Square		259.569
Bartlett's Test of Sphericity	df	91
	Sig.	.000

After the analysis we got many surprising results as we found that demand of online electronics products is on the high side i.e. 68% of respondents buying electronic items online. Clothes and tickets come after that, almost 12% and 11% whereas the products like Jewellery, books and others have very less online demand. Buying behavior of every customer is different especially when buying online which depends on many factors like type of products, cost and time effectiveness. When we asked before buying how many people visit the retail store to our surprise again almost 75% respondents visit the retail store and all who buy online electronics products definitely go to retail store.

Analysis of buying online electronics product:

Now from here our research was confined to 95 respondents who are almost 40% of our total respondents initially. Now they form the main focus of our research which is on buying of online electronics products. Almost 60% of 95 respondents have purchased online electronics products once in a year, 1-3 times year by 26% and only 14% bought more than 3 times. From the sample it can be easily analyzed that the people of Ajman are not addicted to online buying of electronics products but also when we analyse how many online stores they visit before actual buying then to our surprise a good number, almost 80% of 95 respondents, visit more than 3 online stores before actually buying. Therefore it is recommended to the online electronics product companies to do marketing research before launching the products online to gain trust and to deliver the right product at the right price with after sales service to increase the sales of online products in Ajman.

Analysis of motivation and factors behind purchase:

Firstly in order to find the motivation behind purchase that urges consumers to buy certain electronic products online, we asked how they got an idea of buying specific electronics products through an online store and we found that 76% of 95 respondents are influenced by family and friends and a few see an online or offline advertisement. So there is a huge scope to increase the

sales of electronics products by online and offline marketing as the majority of the people buy electronics goods on recommendation of family members and social cycles.

Consumer buying behavior for online shopping is different from traditional shopping especially for electronics products. So to analyze the critical factors affecting the consumer's mind for purchase of electronics products we have used factor analysis. In order to improve the reliability of data and to reduce potential multicollinearity among the items, the respondents' ratings are subject to principal axis factoring with varimax rotation.

From Table 4, the KMO value is 0.747 that is more than the required value of 0.60 for the appropriateness of factor analysis, which indicates that 74.7% of the sample is error free and in the remaining 25.3%, there can be a chance of error. Bartlett's test of sphericity was done to examine the hypothesis that variables are uncorrelated in population. So here our hypothesis can be

Ho: In online purchase of electronics goods, there is a significant indifference of all the factors affecting.

H1: In online purchase of electronics goods, there is significant difference of all the affecting factors. The value of Chi-square test (259.569 with significance level 0.000) signifies the rejection of null hypothesis, which indicates that there is a significant difference between the factors affecting online purchase of electronics goods.

Table 5 (next page) shows the table of communalities before and after. The communalities reflect the amount of variance of variable shares with all other variables to the proportion of variance explained by the common factor; here 81.4% of the variance associated with question 1 is common, or shared, variance.

Table 6, (next page) labeled Total Variance Explained lists the Eigenvalues associated with each factor before extraction, after extraction and after rotation. Eigen value indicates the total variance attributed to the factor;

higher the Eigen value the higher will be variance explained by the factor. As here Eigenvalue for factor1 is 3.690 and accounts for 26.354% of variance. From the Table we can observe that the first few factors explain relatively large amounts of variance (especially factor 1) whereas subsequent factors explain only a small amount of variance. After extraction of Eigenvalues greater than 1, we left with five factors, with 59.590% of cumulative variance. In the last part, the eigenvalues of the factors after rotation are displayed to have an effect on optimizing the factor structure and to equalize the relative importance of five factors.

Rotation, factor 1 accounted for considerably more variance than the remaining four (26.354% compared to 9.18, 8.38, 8.094 and 7.573%), however after extraction it accounts for only 19.36% of variance (compared to 12.64, 10.05, 9.03 and 8.49% respectively).

Table 7 (page 27) contains component loading which is nothing else but the correlation between variables and factors in order to formulate an interpretation of the factors or components by looking for a common thread among the variables with large loadings. All loadings less than 0.4 are suppressed in output as low correlations are not meaningful now.

Table 8 (page 27) is nothing else but the alternative representation of loading after rotation. Here though the total variance is explained it remains the same but the amount of variance explained by each variable changes to show the relationship of different factors with other variables.

With the help of Table 8, we will identify the variables with high loading and try to give a phase which is a name given to a factor by combining meaning of factors. Factor 1 includes convenience shopping, more choice, not in local store, saves time and entertainment which are the factors for online purchase of electronics goods which can be broadly defined as the easiness and fun factors for online purchase of electronic products. Factor 2 includes best price and price comparison which broadly represents price analysis. Factor 3 includes more gifts and home delivery

	Initial	Extraction
Best price	1.000	.814
Convenience shopping	1.000	.483
More choice	1.000	.602
Not in local store	1.000	.583
Save time	1.000	.616
entertainment	1.000	.647
Product review	1.000	.569
Price comparison	1.000	.780
discount	1.000	.556
More gift	1.000	.418
privacy	1.000	.388
compulsory purchase	1.000	.607
Save extra charges	1.000	.712
Home delivery	1.000	.567

<<

Table 5: Communalities

Extraction Method: Principal Component Analysis.

Below

Table 6: Total variance explained

Extraction Method: Principal Component Analysis.

Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
				Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.690	26.354	26.354	3.690	26.354	26.354	2.711	19.368	19.368
2	1.286	9.182	35.537	1.286	9.182	35.537	1.770	12.640	32.008
3	1.174	8.386	43.923	1.174	8.386	43.923	1.408	10.056	42.063
4	1.133	8.094	52.017	1.133	8.094	52.017	1.265	9.035	51.099
5	1.060	7.573	59.590	1.060	7.573	59.590	1.189	8.492	59.590
6	.955	6.823	66.413						
7	.862	6.157	72.570						
8	.838	5.988	78.558						
9	.736	5.257	83.815						
10	.663	4.738	88.553						
11	.543	3.877	92.431						
12	.397	2.834	95.264						
13	.347	2.478	97.742						
14	.316	2.258	100.000						

Table 7: Component Matrix^a

	Component				
	1	2	3	4	5
Best price	.551				-.539
Convenience shopping	.507				
More choice	.683				
Not in local store	.701				
Save time	.673				
entertainment	.692				
Product review		.488		.443	
Price comparison	.727				-.475
discount				.551	
More gift					
privacy	.546				
compulsory purchase			-.585		
Save extra charges		.639		-.523	
Home delivery			.598		

Extraction Method: Principal Component Analysis. a. 5 components extracted.

Table 8: Rotated Component Matrix^a

	Component				
	1	2	3	4	5
Best price	.191	.871	-.121	-.020	-.057
Convenience shopping	.600	.031	.196	-.254	.138
More choice	.727	.234	-.026	.071	-.115
Not in local store	.681	.241	-.028	.235	.075
Save time	.642	.137	.080	.213	.366
entertainment	.783	.092	.149	-.033	-.046
Product review	.059	.003	.386	.640	.076
Price comparison	.299	.779	.235	.070	.151
discount	.015	.318	.299	.217	.565
More gift	.249	-.019	.568	.145	-.109
privacy	.366	.356	.274	.111	-.200
compulsory purchase	.057	.060	-.213	.742	-.067
Save extra charges	-.072	.148	.231	.158	-.779
Home delivery	-.006	.092	.731	-.151	.037

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 6 iterations.

Table 9: Main barriers in online shopping

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total	Average Rating
a. Safety of payment	33 (13.2%)	39(15.6%)	38 (15.2%)	45 (18%)	95 (38%)	250	3.52
b. Low trust level of online store / Brand	33 (13.2%)	40(16%)	43 (17.2%)	50 (20%)	84 (33.6%)	250	3.44
c. Lack of after sales service	41 (16.4%)	47 (18.8%)	45(18%)	50 (20%)	67 (26.8%)	250	3.22
d. High Shipping Cost	45 (18%)	57 (22.8%)	49 (19.6%)	42(16.8%)	57 (22.8%)	250	3.036
e. Refund Policy	80(32%)	50 (20%)	45 (18%)	35(14%)	40(16%)	250	2.48
f. Warranty and claims	107 (42.8%)	47(18.8%)	40(18%)	30(12%)	30 (12%)	250	2.36
g. Delivery too slow	121 (48.4%)	44(17.6%)	40 (16. %)	25(10%)	20 (8%)	250	2.11

which together can be named as happy shopping from home as you are getting products with more gifts at home only. Factor 4 can be named as product trust as it includes product analysis and compulsory purchase. As factor 5 has discount and saves on extra charges it can be named as value for money.

Main barriers in online shopping:

At the the end of the questionnaire we asked all our respondents to rate the main barriers to online shopping. It was asked of all respondents who have been doing online shopping and also from those respondents who never shopped online, to judge their concern or to gain an experience of online shopping. This analysis is very important for sellers as after knowing the barriers for buying online they can work to change the mindset of consumers for online purchasing of electronic goods.

From the calculation of average rating of all respondents, which is an indicator of average sentiments of all respondents, we analyze that sellers of online electronic goods must provide secure and safe payment solutions to their

customers also to try to create more trust among customers for their online stores and also should work to provide more after sales service as the average rating of these three parameters is 3.52, 3.44 and 3.22.

Conclusion

From the research we conclude that the people of the Emirate of Ajman are buying online but not as rapidly as other emirates especially Abu Dhabi and Dubai. Study reveals that online shopping is mostly influenced by family networks or social circles and also people do online shopping because of convenience and time saving. Online shopping is becoming popular among the young generation and also over the past year more people have shown more inclination towards online buying. Before buying they check both offline stores and online stores to compare price, quality or offers. The potential of online shopping is large, but still there is a safety issue which is a barrier to online shopping due to high internet hacking people are afraid to share their personal and financial information on the internet. Companies must empha-

size on the safety of credit card and customer personal information data. After sales service and attitude of sellers by maintaining good communication with consumers can increase consumer purchase intention and by increasing trust the possibility to repeat purchase. So it is necessary for the online shopping industry to have continuous improvement in terms of the product variety, services, efficiency, security and popularity of brand to meet consumer changing needs and expectations.

Bibliography

Ayass, T. (2009). Investigation of the antecedents of an e-commerce trust model. USA: ProQuest.

Barry Silverstein. (2002). Business to Business internet marketing. Canada: Jim Hoskins.

Bashir Adil ,(2013) Consumer Behavior towards online shopping of electronics in Pakistan ,Thesis

Bidgoli, H. (2004). The Internet encyclopedia. Canada: John Wiley and Sons.

Brown, D. B. (2004). Consumers Getting Savvy About Online Shopping.

(Keynote, Interviewer)

Goldsmith, R.E. and Goldsmith, E.B.

(2002), "Buying apparel over the internet", *Journal of Product & Brand Management*, Vol. 11 No. 2, pp. 318-28.

J. Johnson, S. B. (1999). Predictors of on-line buying behavior. Jansson-Boyd, C. V. (2009). *Consumer Psychology*. England: McGraw-Hill International.

Na Wang 1, 2.D. (2008). *Study on the Influencing Factors of Online Shopping*. Changchun: Atlantis Press.

Nielson. (2010). *Global Trends in Online Shopping*. USA: Nielson.

Paim, N. D. (2011). *Students' Online Shopping Behavior: An Empirical Study*. Singapore: IPEDR.

Pedersen, P. E. (2002, 2 22). Search mode and purchase intention in online shopping behavior. 1-35.

Rosen, E. E., & Purinton, E. (2004). Website design: Viewing the web as a cognitive landscape. *Journal of Business Research*, 57, 787-94

Saaksjarvi, M. (2007). Consumer mind set and attitude toward online marketing messages. In *Int J. Internet Marketing and Advertising* (pp. 26-30). Finland: Inderscience Enterprises Ltd.

Schiffman. (2009). *Consumer Behavior*. India: Person.

Soares, M., Farhangmehr, M., & Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. *Journal of business research*, 60, 3, 277-284.

Turban. (2010). *Electronic Commerce: A Managerial Perspective 2006, 4/E*. New Delhi: Surabh Printers Pvt Ltd.

Wan, Y. (2009). *Comparison-Shopping Services and Agent Designs*. USA: Idea Group Inc (IGI).

Yoon, Sung-Joon (2002), "The antecedents and consequences of trust in online-purchase decisions". *Journal of Interactive Marketing*, Vol.16 No.2, pp.47-63.

Yuan Gao. (2005). *Web systems design and online consumer behavior*. London: Idea Group Inc (IGI).