Consumer Perspectives Relative to Interpreting e-Commerce Acceptance in UAE

Richmond Adebiaye[1,*], Theophilus D. Owusu[2]

[1]Information Systems, College of Business and Technology, Parker University, Dallas Tx, United States
[2]Graduate Business School, Keiser University, Fort Lauderdale, USA
*Corresponding author: richmond.adebiaye@yahoo.com

Abstract The success of consumer e-commerce is perhaps based on its attractions. Increasingly diversified products create even more reason for consumers to be attracted to online purchasing. However, the proliferation of e-commerce has created a dilemma in determinant factors that drive consumer decisions. Using a survey methodology (N = 125), this study examines the correlations of known "antecedents to consumer acceptance of online shopping" in the United Arab Emirates (UAE). A binary logistic regression analysis is performed to predict how consumer attitudes, perceptions of website quality, and gender influence consumer e-commerce intentions. A positive correlation is revealed between perceived ease of website navigation and increased consumer trust in using the website. Additionally, perceived quality of the site is statistically significant to online purchasing. Consumer attitude toward e-commerce also correlates positively to e-purchase intentions. This study also reveals that consumer gender was not an influencing factor with any of the variables examined and to purchase intentions. Results from this study suggest the important influential relationship between consumer behavior patterns and consumer e-shopping decisions.

Keywords: e-commerce, consumer attitudes, purchase intentions, online shopping acceptance

1. Introduction

The Internet has become an essential part of everyday life in the modern world. It has drastically improved sharing of thoughts, ideas, and beliefs between people in remote geographical locations across the globe, a feat previously considered impossible. In business, the Internet has revolutionized communication and information-sharing among stakeholders. manufacturers, trading partners, employees, and consumers reach across the borderless web through online relationship management systems to meet one another's needs [12]. Government agencies and Higher Learning Institutions (HLIs) also rely on the Internet for research-based activities, learning, tendering, and resource sharing. Assuredly, the majority of business entities that properly utilize the Internet have reaped lucrative benefits. Among these are improved organizational performance, increased revenue, and reduced communication expenses while increasing the number of people communicating, an exponentially growing phenomenon [11].

Despite these benefits, it is evident that many people are still reluctant to engage in e-commerce, due to various concerns such as trust and delivery issues [5,6]. Trust issues result from a lack of touch and feel of the product, which makes consumers uncertain as to whether they will get the product they ordered. Delivery issues result from of delayed deliveries, a challenging problem, especially in cases of emergency. Other factors contributing to consumer reluctance include culture, attitudes and perception of the people from a given region, economic and demographic factors [10].

Researchers, however, argue that consumer behavior is a critical determinant of online shopping habits [1,2]. Consumer behavior is defined as the study of processes used by people, groups, and organizations to select, acquire and dispose of products, experiences, and services for utility purposes, and how this behavior impacts both the consumer and the society as a whole [14]. Volumes of research have been published on consumer behavior, which focused on psychology, sociology, and economics, as well as how perceptions affect consumer inclination toward engaging in online shopping.

The United Arab Emirates (UAE) is generally regarded as a tourist hub. According to Vel and Rodrigues [16], e-commerce was introduced in the UAE in 2009. The country has since enthusiastically embraced online shopping, resulting in the UAE's rank among the region's top five nations participating in e-commerce [5,6]. This study examines the correlation between the advantages of online shopping and consumer intentions while web browsing. The results presented will provide clear consumer e-commerce behavioral patterns in the region, vital for effective policy formation.

2. Research Questions

The questions the study sought to answer include:
i. How does design quality of a website correlate with customer's trust in the website?
ii. How does consumer's attitude towards online purchases correlate with customer's purchasing intentions?
iii. How does gender correlate with website design quality, and to what extent does trust and consumer attitude determine purchasing intentions?

3. Hypotheses

The following hypotheses were derived from the research questions above:

Hl_0: There is no correlation between type of design quality of a website and user's/customer's trust.

Hl_a: The design quality of the website determines user's/customer's trust on the site.

$H2_0$: Online purchasing intentions are not determined by user's attitude.

$H2_a$: Customer's attitude in an online purchase determines online purchasing intentions.

$H3_0$: A consumer's gender does not affect his/her trust in the website, either by assessing the design quality, influencing a consumer's attitude or the purchasing intentions.

$H3_a$: A customer's gender affects his/her trust in a website from assessing the design quality, attitudes of customers as well as purchasing intentions.

4. Methodology

4.1. Data Collection

This study utilized data based on a cross-sectional study design. A previously designed questionnaire was used to collect data to trace out the patterns, attitudes, and perceptions of the UAE citizens about online shopping. The survey questionnaire was developed based on the previous literature review. A total of 125 participants took part in the study. The survey was divided into two parts: the demographic part of the questionnaire, which focused on the socio-demographic characteristics of the participants, and the second part of the questionnaire focused on the attitudes and the perceptions of the participants toward online shopping.

4.2. Variables Description

4.2.1. Outcome Variables

This study had two primary outcome variables meant to trace the influential factors in acceptance of online shopping in the U.A.E. The first factor was a polar question on whether the respondents ever bought any product online. This question required the respondents to answer using either "yes" or "no", coded as "1" and "0" respectively. The second factor focused on the number of products the respondents bought online in the last 30 days.

The reason for collecting the information in the last 30 days was to avoid the recall bias.

4.2.2. Dependent Variables

The other variables used in this study were age, marital status, educational level, work experience, household income as well as the attitudes and the perceptions. Each of these factors was categorized. Age of the respondents was categorized into three categories of 20-29 years, 30-39 years and those above 39 years old. Marital status of the respondents was split into married, unmarried and widowed class. Also, the education category was subdivided into high school, tertiary education, and degree level. Work experience was categorized into age brackets of 0-5 years, 6-10 years, and those above ten years. The monthly household income was categorized into 10,000-15,000 AED, 16,000-20,000 AED, and that above 20,000 AED. The researcher utilized a 3 point Likert scale to measure the customer attitudes and perceptions. The scale was meant to determine whether the customer agreed or disagreed with some implied nature of online shopping. The Likert scale included statements such as "online shopping saves time" and "proper website design is necessary for acceptance of online shopping." Others included, "website security is an essential factor in acceptance of online shopping," "24-hour accessibility," "price visibility," and "easy navigation and searches" to measure the variable's influenced on the acceptance of online shopping. The respondents were required to tick "1" if they agreed with each of the statements, "2" if they neither agreed nor disagreed or "3" if they did not agree with either of the statements.

4.3. Data Analysis

The data collected from 125 respondents was keyed into the dataset in STATA (13 version) for further analysis. The data was then cleaned for any inconsistencies, unusual outliers, and any inaccuracies which would have compromised the results. Bivariate statistical analysis for descriptive measures and cross tabulation were implemented. Chi-square test of association was performed to establish the relationship between dependent and independent variables. The t-test statistic was also used for testing the mean significant differences among the gender groups. The results were then presented in MS Excel, and the graphical representations were prepared using STATA (Version 13) and MS Excel. All the statistical analysis was done using statistical software package STATA (version 13), and a significance level of 5% was considered for significance tests.

5. Results

5.1. Background Characteristics

5.1.1. Age

According to Figure 1, the mean age of participants was 35 years (SD = 11.68), 41.60 percent were between the ages of 20-29, and 30.40 percent were older than 39.
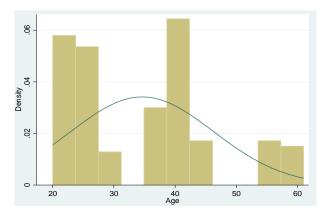
Figure 1. Histogram representing 'Age of the Participants' with the shape of the normal distribution

5.1.2. Gender

The analysis of the respondent's gender shown in Figure 2 below indicated that 67 percent of the participants in the study were male, while their female counterparts formed the rest of 33 percent.
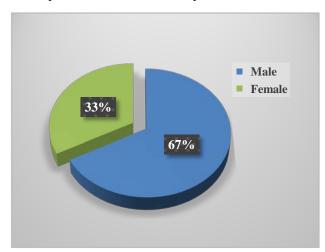

Figure 2. Gender of the study participants

5.1.3. Marital Status

Figure 3 below shows that 84 percent of the respondents were married, while 13.80 percent were unmarried.
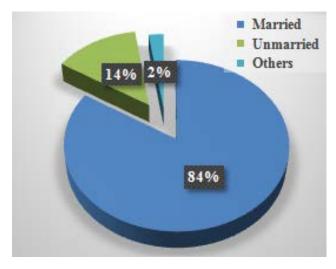

Figure 3. Marital status of the respondents

5.1.4. Highest Education Level Attained

Figure 4 below shows that 52 percent of respondents had a tertiary level of education, while 29 percent had high school education. Only 20 percent of the respondents had degree level education. The mean work experience was 10 years (SD = 8.70) with 40.80 percent of respondents having 0 – 5 years of experience, 15.20 percent having 6 – 10 years, and 44 percent having 11 or more years of experience.
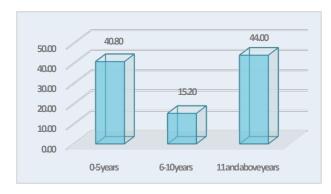

Figure 4. Work experience of the study participants

5.1.5. Household Income

The average household income as shown in Table 1 below was AED 18365 (SD = 4117.11). It is evident from Table 1 below that 54.92 percent of the respondents' average household income was between AED 16000 and AED 20000.

Table 1. Background characteristics of the study participants

Variables	n	%
Age of participants		
20-29	52	41.60
30-39	35	28.00
40 and above	38	30.40
Mean age (mean ± S.D.)	34.62 ± 11.68	
Gender of participants		
Male	84	67.20
Female	41	32.80
Marital status		
Married	105	84.00
Unmarried	17	13.60
Others	3	2.40
Education status		
High school	36	28.80
Tertiary	64	51.20
Degree	25	20.00
Work experience		
0-5 years	51	40.80
6-10 years	19	15.20
11 and above years	55	44.00
Mean year of experience (mean ± S.D.)	9.84 ± 8.70	
Monthly household income (AED)		
10000-15000	26	21.31
16000-20000	67	54.92
21000 and above	29	23.77
Average hh income (mean ± S.D.)	18364.75 ± 4117.11	
Total (n=125)		

5.2. Perception and Attitudes on Online Shopping

Table 2 below indicates that 87 percent of the respondents in the study had made purchases online, while 13% had not.

Figure 5 below shows that the average online purchases in the last 30 days were 6.72 (SD = 3.14) with 47.22 percent of the respondents indicating that they had bought about 5 to 9 products online in the last 30 days.
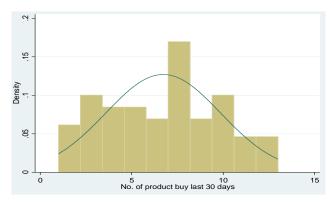

Figure 5. Histogram of the number of online purchases in the last 30 days

Table 2. Perception and attitudes towards online shopping acceptance among study participants

Variables	n	%
Did you ever purchase via online		
Yes	108	86.40
No	17	13.60
Number of online purchases (last 30 days)		
1-4	32	29.63
5-9	51	47.22
10 and above	25	23.15
Mean online transition (mean ± S.D.)	6.72 ± 3.14	
Online shopping save your valuable time		
Agree	92	73.60
Neutral	18	14.40
Disagree	15	12.00
Proper website design is necessary for online shopping acceptance		
Agree	95	76.00
Neutral	24	19.20
Disagree	6	4.80
Proper website security is necessary for online shopping acceptance		
Agree	113	90.40
Neutral	10	8.00
Disagree	2	1.60
24 hours accessibility is necessary for online shopping acceptance		
Agree	117	93.60
Neutral	8	6.40
Disagree	-	-
Price visibility is necessary for online shopping acceptance		
Agree	121	96.80
Neutral	3	2.40
Disagree	1	0.80
Easy searching products is necessary for online shopping acceptance		
Agree	109	87.20
Neutral	12	9.60
Disagree	4	3.20

According to the results presented in Table 2, 74 percent of the respondents agreed that online shopping saved them valuable time and only 12 percent did not agree with this statement. When responding to the statement as to whether proper website design was an important factor in acceptance of online shopping, 76 percent of the respondents agreed that proper website design was an important factor in the acceptance of online shopping, and only 19 percent disagreed with the statement. Regarding web security, 90 percent agreed that website security is an essential factor in the acceptance of online shopping. On accessibility, 94 percent of the respondents agreed with the statement that 24-hour accessibility in online shopping is necessary. Ninety-seven percent of the respondents agreed with the statement that price visibility is necessary in online shopping, while 87 percent of the respondents agreed with the statement that easy search for products is necessary in the acceptance of online shopping.

5.3. Bivariate Analysis for the Test of Association

Bivariate statistical analysis for the test of association was presented in Table 3. It was established that participant's age, gender, marital status and monthly household income were significantly associated with online purchasing patterns. From the analysis, it is evident that comparatively aged respondents exhibit a higher trend of online purchasing, and based on the chi-square association test, there is a significant association between age and online purchasing. 95 percent of the respondents aged 40 years old and above had made purchases online compared to the 76.92 percent recorded for the respondents aged between 20 and 29 years. When comparing the gender of the respondents based on their prevalence to online shopping, it is evident that 86.90 percent of the male respondents made online purchases as compared to 82.37 percent of the women who did online shopping. In the analysis based on the respondent's marital status, it was observed that 90.48 percent of the married respondents made online purchases as compared to 64.71 percent of the unmarried respondents. Furthermore, it was observed that 97.22 percent of the respondents with high school education had done online shopping. However, it is clear that the prevalence of online shopping decreased with increasing level of respondents' education. Therefore, the level of education had a significant association with online acceptance based on the chi-2 test of association. Household monthly income was also found to be a statistically significant factor in acceptance of online shopping in the UAE. Comparatively, wealthier households bought more products online as compared to those from poor income households.

6. Conclusion and Recommendations

The objectives of this study were to explore the associations of several possible influential factors in acceptance of e-commerce to other variables that determine intentions of online purchasing in the UAE. In

this study, the researcher tried to find out how consumer behavior is affected by different demographic factors such as education, gender, age, household income and so on. The researcher also established an association between consumer attitudes and the acceptance of online shopping in the UAE. It was, therefore, established that there is a significant association between the age of the consumer and on acceptance of online shopping.

Table 3. Bi-variate analysis of online purchasing among the study participants

Variables	Online purchasing		Chi-2 value P-value	
	Yes	**No**		
Socio-demographic characteristics				
Age of participants				
20-29	76.92	23.08		
30-39	91.43	8.57	6.975	**0.031**
40 and above	94.74	5.26		
Gender of participants				
Male	86.90	13.10	4.814	**0.056**
Female	82.37	17.63		
Marital status				
Married	90.48	9.52		
Unmarried	64.71	35.29	9.288	**0.010**
Others	66.67	33.33		
Education status				
High school	97.22	2.78		
Tertiary	85.94	14.06	8.012	**0.018**
Degree	72.00	28.00		
Work experience				
0-5 years	82.35	17.65		
6-10 years	89.47	10.53	1.203	0.548
11 and above years	89.09	10.91		
Monthly household income (AED)				
10000-15000	78.46	21.54		
16000-20000	89.55	10.45	5.935	**0.038**
21000 and above	91.31	8.69		
Attitude and perception				
Online shopping save your valuable time				
Agree	93.48	6.52		
Neutral	94.44	5.56	40.863	**0.000**
Disagree	33.33	66.67		
Proper website design is necessary for online shopping acceptance				
Agree	88.42	11.58		
Neutral	83.33	16.67	2.511	0.285
Disagree	66.67	33.33		
Proper website security is necessary for online shopping acceptance				
Agree	86.73	13.27		
Neutral	80.00	20.00	6.674	**0.014**
Disagree	72.21	27.79		
24 hours accessibility is necessary for online shopping acceptance				
Agree	86.32	13.68	0.009	0.925
Neutal	87.50	12.50		
Price visibility is necessary for online shopping acceptance				
Agree	86.78	13.22		
Neutral	100.00	0.00	6.84	**0.033**
Disagree	0.00	100.00		
Easy searching products is necessary for online shopping acceptance				
Agree	88.07	11.93		
Neutral	75.00	25.00	2.029	0.363
Disagree	75.00	25.00		

These study findings were similar to the recent online consumer behavior study conducted by [15]. One significant conclusion of this study is that gender significantly correlates with consumer behavior in online shopping and online purchasing intentions. Married consumers are more likely to make online purchases when compared to unmarried consumers. However, the study concluded that possible reason for this is that married consumers typically must buy more products for their family members than unmarried consumers [15]. There is also a significant association between household income and acceptance of online shopping. The respondents' attitudes toward e-commerce, measured by a positive response to some of its benefits, including saving valuable time, website security, and price visibility proved to be important factors associated with the acceptance of e-commerce or online shopping in the UAE.

This study was based on a cross-sectional study design with the small sample size of 125 respondents. Therefore, further research on consumer behavior about e-commerce and the acceptance of online shopping using a much larger sample size should be conducted in the UAE. The small sample size used in this study is likely to be not accurately representative of the UAE population. This study, however, can help policy-makers make more effective decisions involving e-commerce.

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