

# Individualist, Collectivist and Gender Moderated Differences toward Online Purchase Intentions in Jordan

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## Abstract

The purpose of this paper is to explore individualist and collectivist gender moderated differences toward online purchase intentions. Data were collected via questionnaires from 241 student in Al-Balqa' Applied University in Jordan. The collected data were analyzed using descriptive statistics. In addition, factor and cluster analysis were used to group the sample according to individualistic and collectivistic cultural factors. Two-way ANOVA test was used to test the study hypotheses. The results of this study depicted that there was a significant difference between male and female toward online purchase intentions. The study also depicted that, there was a significant difference in the intention to purchase online according to individualist, mixed and collectivist cultural factors. Furthermore, the two-way interaction between gender and individualist, mixed and collectivist groups was significant regarding intention to purchase online.

**Keywords:** individualism, collectivism, gender, online purchase intention

## 1. Introduction

### 1.1 The Context and Problem of This Research

Internet users nowadays, with various experiences, are considering the Internet technology to be the greatest new opportunity for trading in this century. What was formerly called information revolution is now called the Internet and e-commerce revolution (Henari & Mahboob, 2008).

The social and cultural aspects for many nations are considered to be major obstacles to the spread of e-commerce. Many studies have shown that the main reasons behind the delays in the wide spread of e-commerce in many countries are due to social and cultural reasons (Gong, 2009). E-commerce is being considered as a major indicator and support for the economic development and prosperity in the developed countries (Javalgi et al., 2005). Taking into consideration the escalating economic and marketing importance of e-commerce, businesses in the Middle east are considered to have a comparatively low contribution level in e-commerce due to the existence of communal and ecological factors inherent in the region that are affecting individuals using e-commerce. Moreover, the consumers' preferences in the Middle East to deal with a real and physical market reduce the consumer's confidence in e-commerce's transactions (comScore, 2010).

The problem of this research investigated the impact of cultural factors affecting technology growth that have been neglected when considering the use and dissemination of e-commerce in Jordan. The main objective of this study was to show the differences of the cultural dimensions (individualism and collectivism) toward the online purchase intentions in Jordan moderated by the gender factor.

### 1.2 The Research Importance

Research in the domain of online intention purchase has attained a great attention in literature; however, little was given to such topics in Jordan. The Ministry of information and communication technology reported (in its national e-commerce strategy) that despite the acceleration in technology growth in Jordan, the reasons for e-commerce not happening can be expressed in terms of Jordanian culture (National e-commerce strategy, 2007). A report distributed by comScore (2010) showed that the Middle East had 7 percent shares of the worldwide

Internet audience by December 2009, which was the lowest worldwide. This report also showed that retail online shopping in the Middle East was equal to 0.5 percent, and online business was equal to 0.4 percent by December 2009. These numbers were the lowest among all the regions in the world (comScore, 2010). In this sense, this research provides an excellent opportunity for researchers and practitioners to understand and resolve some of the important issues associated with the dissemination of e-commerce in Jordan.

### *1.3 Literature Review*

Hofstede (1980) argued that people carried mental programs that were developed and reinforced through their experience. These mental programs denoted the existence of four underlying value dimensions that could be used to position countries into culture areas. These were: power distance, uncertainty avoidance, individualism and collectivism, and masculinity and femininity. Each of the dimensions represents a different continuum, so that each country could be rated from high to low according to these dimensions. Hofstede's findings (1991) categorized South America and Asia with high-power distance, collectivist and masculine.

#### *1.3.1 Collectivism*

Collectivism reflects the way people live together (Hofstede, 1980). Chen and West (2008) suggested that collectivism appeared to be a function of social distance. They measured it with respect to parents, friends, and general others. Collectivist societies stress 'we' consciousness including: collective identity, emotional dependence, group solidarity, sharing duties and obligations, need for stable and predetermined friendship, group decision, and participation. Daniels, Radebaugh and Sullivan (2004) stated that the differences between individualism and collectivism could affect the business in several ways. For instance, purchasing decisions in collectivist groups might be more complicated (in comparison with individuals) because of the interrelated roles of family members.

Loch et al. (2003) examined cultural specific inducements and impediment to the use of Internet in the Arab World. Their findings suggested that culture could be a barrier to Internet usage in Arab countries due to the highly social and family oriented nature of the Arab culture. Hofstede's findings (1991) explained that the limited use of Internet was due to the threatening feeling created by how Internet would affect family and community life. It is evident from these findings that there is a link between the collectivist nature and the limited use of Internet.

#### *1.3.2 Individualism*

Chen and West (2008) concluded that individualism was a multidimensional construct. They assessed independence, competitiveness and uniqueness for individualism. In other words, the individualistic person behaves according to personal attitudes and preferences rather than being influenced by others' opinions or regulations.

Pavlou and Chai (2002) showed that the relationship between attitude and transaction intention was significant for collectivist culture, but insignificant for the individualistic culture. On the other hand some studies suggested that individualism and collectivism do not influence customer loyalty in business to consumer e-commerce. However, individualism and collectivism could explain differences between online and offline shoppers. It is possible that online shopping attracts individualists because the activity does not depend on interaction or social cooperation with others. However, it may be that users of online social networks are more collectivistic, because of apparent benefits to networked interaction (Frost, Goode & Hart, 2010).

#### *1.3.3 Gender*

Masculinity and femininity were described as the roles division between sexes to which people in a society put different emphasis on work goals and assertiveness as opposed to personal goals and nurturance (Hofstede, 1980). Gender difference could be explained by gender role theory; i.e. men and women are expected to fulfill different social roles and accordingly face different social pressures. For that reason males and females create differences between groups of individuals within countries. For example, previous studies showed that female participants were more dissatisfied in online shopping than male participants. In addition, men were more likely to buy online than women (Zhang, Mandl & Wang, 2011). Sangwan, Siguaw and Guan (2009) study showed that gender was significant indicator showing that overall male and female populations had different motivations toward online shopping. Sangwan, Siguaw and Guan (2009) study concluded that male buyers displayed significant higher motivation toward the following points:

- Shop online because of the reliable information they can obtain from online stores.

- Find online shopping more enjoyable than women.
- Serve as an influence on the online purchases of others.
- Feel a sense of belonging when making purchases from the some online stores as their friends.
- Identify with people with similar interest when shopping online.
- Enjoy knowing people while shopping online.
- Acquire a sense of fulfillment from their online experience.

#### 1.3.4 Online Purchase Intention

Intentions to use ICT are employed extensively in information systems research as a dependent variable that reflects the user's choice or as a surrogate for actual use (Weisberg, Te'eni & Arman, 2001). Consumers' intention to purchase online was proposed by Pavlou and Chai (2002) as the behavioral intention to get involved in online transactions (e.g. products, services, and information buying and selling) with online retailers. To be consist with literature, online purchase intention was employed as a dependent variable in the research model of this study (see figure 1).

#### 1.4 Hypotheses and the Research Model

Based on the previous literature, the model of this research was devised (see figure 1). Three hypotheses were formulated. (H1) formulated the effect of gender on online purchase intentions. (H2) formulated the effect of cultural differences (individualist, individualist and collectivist (mixed) and collectivist groups) on online purchase intentions. Finally, (H3) formulated the effect of cultural differences moderated by gender on online purchase intentions.

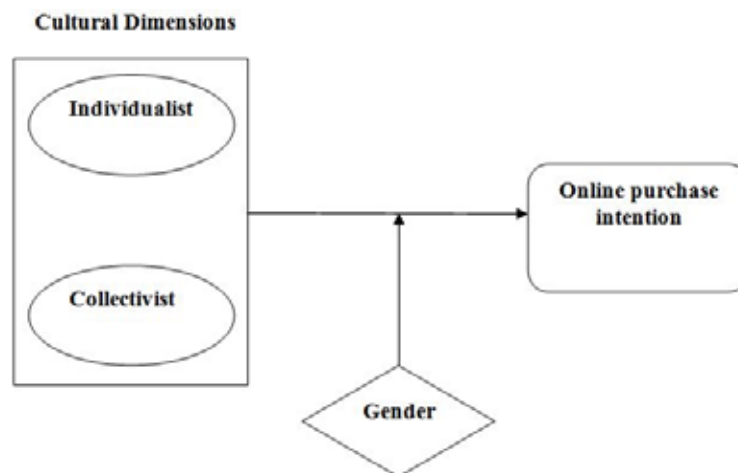


Figure 1. The research model (Authors, 2012)

H1: There is a significant difference between male and female toward online purchase intentions (from the perspective of university students).

H2: Individualist, mixed and collectivist cultural factors make a significant difference in the intention to purchase online (from the perspective of university students).

H3: Individualist, mixed and collectivist gender moderated cultural factors make a significant difference in the intention to purchase online (from the perspective of university students).

## 2. Method

### 2.1 Sample Characteristics

As shown in table 1, 224 respondents were composed of 80 male (35.7%) and 144 female (64.8%). Concerning the household annual income, the percentage of those who receive annual salaries between 2000 and 5000 JDs (Jordanian Dinar) is the highest (31.7 percent), followed by those whose annual salary was less than 2000 JDs (28.1 percent). At third place came those whose annual salary was between 5001 & 10000 JDs (21.4 percent). Finally the percentage of those receiving annual salaries greater than 10000 JDs was (18.8 percent).

Table 1. The Main Characteristics of the Sample

Category	Frequency	Percentage
<b>Gender</b>		
Male	80	35.7
Female	144	64.3
<b>Household Annual income</b>		
Less than 2000	63	28.1
2000-5000	71	31.7
5001-10000	48	21.4
More than 10000	42	18.8
<b>On average, how much time do you spend on the Internet per visit?</b>		
Less than 1 hour	46	20.5
1-2 Hours	109	48.7
More than 2 hours	69	30.8
<b>On average, how many times do you use the Internet per week?</b>		
Never	6	2.7
1-3 Times	85	37.9
4-6 Times	50	22.3
More than 7 times	83	37.1
<b>For how long do you know about shopping online</b>		
Less than 6 months	35	15.6
6 months to one year	21	9.4
More than one year	168	75.0

Regarding the average time spent on the Internet per visit, 20.5 percent of the respondents indicated that they spent less than 1 hour per visit. 48.7 percent of the respondents indicated that they spend between 1-2 hours per visit, and 30.8 percent spent more than 2 hours per visit.

According to the average weekly use of the Internet, 2.7 percent of the respondents indicated that they never used the Internet. While 37.9 percent on average access the Internet 1-3 times weekly, 22.3 percent accessed the Internet 4-6 times weekly. Finally, 37.1 percent of the respondents accessed the Internet more than 7 times per week.

Concerning the respondents' knowledge about online shopping, 75 percent indicated that they knew about shopping online for over one year. This was followed by those who knew about shopping online for less than six months (15.6 percent). Finally 9.4 percent of the respondents indicated that their knowledge of shopping online was between 6 months and one year.

## 2.2 Sample Size

A total of 240 undergraduate business majors, from Al-Balqa Applied University in Jordan, participated in the study. A total of 16 students failed to provide complete information. This sample resulted in a valid sample of 224 participants.

## 2.3 Sampling Procedure

Purposive sampling technique was used in this study. Questionnaires were distributed to students enrolled in undergraduate e-commerce classes. Their participation in the study was entirely voluntary. Furthermore, they received neither course credit nor monetary incentives for their participation. Participants were given surveys that examined a number of issues related to several demographic items, individualism, collectivism and their intention to purchase online.

## 2.4 Measures

The questionnaires were used to collect information including: demographic characteristics, cultural dimensions (individualism, collectivism) and online purchase intention from the selected sample. The collected information is further explained below.

### 2.4.1 Individualism

Respondents' perceptions of individualism were measured using ten items adopted from Frost, Goode and Hart (2010). These items assessed respondents' degree of individualism via five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha of this scale was 0.73.

### 2.4.2 Collectivism

Respondent perceptions of collectivism were assessed using six items adopted from Frost, Goode and Hart (2010). These items assessed respondents degree of collectivism via five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha of this scale was 0.77.

### 2.4.3 Online Purchase Intention

Intention to purchase was assessed using seven items adopted from Frost, Goode and Hart (2010). Items assessed participant intention to purchase online via 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha was 0.84.

### 2.4.4 Gender (Moderating Variable)

The gender variable was chosen to have a moderating effect on cultural dimensions (individualism and collectivism). Values associated with gender were 1 to indicate male and 2 to indicate female.

## 2.5 Factor Analysis

In table 2 the items related to individualism and collectivism were factor analyzed to reduce their number and the degree of interdependence. Principal factor extraction with the varimax rotation method was used to analyze the responses to the sixteen items associated with individualistic and collectivistic factors. The number of factors retained was determined using Cattell's (1966) screen test. Recommendations varied as to the level at which a factor loading can be considered significant. Hair et al. (1987) reported that factor loadings with an absolute value greater than 0.30 can be considered significant. Stevens (1986) suggested that only loadings with an absolute value greater than 0.40 can be considered significant. In this research, it was decided to adopt Stevens' recommendation. Therefore, Items (8 and 9), which were designed to assess individualism, were excluded from further analyses due to their low loading on both factors. In addition, items (11, 12 and 14), which were designed to assess collectivism, were excluded from further analyses due to their low loading on both factors. The two factors retained accounted for 58 percent of total variance.

Table 2. Factor analysis results of Individualism and collectivism

Item No.	Items	Factor 1 (Individualism)	Factor 2 (Collectivism)
1	I do not like to rely on others	.661	.030
2	What happens to me is my business	.535	-.041
3	I like to behave independently and to have control over things	.645	-.023
4	I try to live independently as much as possible	.538	-.159
5	I depend on myself most of the time and rarely depend on others	.458	-.035
6	When having a difficult personal problem I prefer that I solve it on my own rather than follow the advice of others	.453	.040
7	My personal identity, independent of others is very important to me	.401	.048
8	Winning is everything for me	.305	.234
9	When another person does better than I do, I get tense	.110	.313
10	I often do "my own thing"	.573	.106
11	To me, pleasure is spending time with others	-.019	.372
12	It is important to me that I respect decisions made by groups of which I am a member	.125	.269
13	I feel the importance of staying together with my parents and my brothers as much as possible	-.058	.759
14	Competition is the law of nature	.293	.172
15	Family members should stick together, no matter what sacrifices are required.	-.082	.813
16	It is my duty to take care of my family, even when I have to sacrifice what I want	-.134	.763

## 2.6 Cluster Analysis

Subsequently, factor scores calculated for each respondent from factor scoring coefficients, were submitted for cluster analysis. In this research, hierarchical agglomerative cluster algorithms were used to determine strategic groupings among the sample of this study. Factor submeasure scores for each student were generated for input into the cluster algorithm. The students' sample was first clustered using Ward's method, which seeks to minimize the sum of squared within-cluster distance (Hair et al., 1987). This algorithm was chosen because it has shown to outperform other algorithms in many situations, and it is the most conceptually appealing for the

identification of strategic groups (Punj & Stewart, 1983). A three-cluster solution was chosen based on analysis of a plot of the number of clusters versus the standardized distance coefficient, because this number of clusters was the smallest that adequately differentiated the students as shown in table 3.

Table 3. Cluster analysis results of Individualism and collectivism

Factor dimension	Collectivist group (1) n= 77	Individualist and Collectivist (Mixed group) (2) n= 98	Individualist group (3) n= 49	F	P	Scheffe
Factor of individualism	-1.080	.585	.562	182.868	.000	(1)-(2), (1)-(3)
Factor of Collectivism	.2458	.401	-1.266	81.452	.000	(1)-(3), (2)-(3)

Based on the one way ANOVA test, three groups were identified according to the individualist and collectivist cultural dimensions. These groups were: Collectivist group (1), Individualist and Collectivist (mixed group) (2), and Individualist group (3). The study indicated that there were differences between groups (2 & 3) with group (1) related to the factor of individualism. Furthermore, the study showed that there were differences between groups (1 & 2) with group (3) related to the factor of collectivism. Moreover, the analysis showed group (2) as an overlapping of group (1) and group (3).

### 2.7 Data Analysis

Descriptive statistics (frequency, means, standard deviations, reliability, and inter correlations) were computed. The reliability of the scales for the constructs in this study was tested. The reliability of each construct in this study achieved an acceptable Cronbach alpha of over 0.7 (Nunnally, 1978). To achieve the objectives of this research, Univariate Analysis of variance were used; two independent sample tests were used to test the first and second hypotheses. Hierarchical regression was used to test the third hypothesis.

## 3. Results

### 3.1 Descriptive Analysis

Descriptive statistics, coefficient alpha reliabilities and correlations for the variables used in the present study were shown in table 4. All scale reliabilities exceeded the 0.70 value recommended by Nunnally (1978).

The results indicated that there was a significant and positive correlations between the individualism and intention to purchase online variables ( $r = .225$ ).

Table 4. Means, standard deviations, reliability coefficients, and intercorrelations of the study variables

Variables	Mean	Std deviation	Alpha	1	2
Collectivism	4.293	.560	.766		
Individualism	4.004	.550	.765	-.018	
Intention to purchase	2.824	.757	.84	-.126	.225*

Note: Sig < 0.05.

### 3.2 Hypotheses Testing

Hypotheses testing were represented based on the results of tables 5 and 6.

Table 5. Summary of Analysis of variance

Source	df	MS	F	Sig.
Gender	1	10.672	21.594*	.000
Group	2	4.532	9.171*	.000
Gender X Group	2	1.549	3.135*	.045
Error	218	.494		

Note: Sig < 0.05.

H1: There is a significant difference between male and female toward online purchase intentions (from the perspective of university students).

Table 5 presented the analysis of variance statistical results. Gender appeared to have a significant impact on intention to purchase online ( $F = 21.594$ ,  $P < 0.05$ ). Also, the results from the mean scores for the intention to

purchase online showed that males preferred to purchase online (mean = 3.125, Std = .081) more than females (mean = 2.652, Std = .061); Therefore, the first hypothesis (H1) was supported.

H2: Individualist, mixed and collectivist cultural factors make a significant difference in the intention to purchase online (from the perspective of university students).

The two way ANOVA results in table 5 showed that there was a statistical significant difference in the intention to purchase online according to individualist, mixed and collectivist cultural factors ( $F = 9.171$ ,  $P < .05$ ). Therefore, the second hypothesis (H2) was supported. However, the Sheffe test demonstrated that collectivist group (mean = 2.56) had less intention to purchase online in comparison with individualist (mean = 2.94) and mixed groups (mean = 2.98).

H3 Individualist, mixed and collectivist gender moderated cultural factors make a significant difference in the intention to purchase online (from the perspective of university students).

Table 6. Interaction mean scores

Variable	Collectivist Group	Mixed Group	Individualist Group
Male	2.722	3.168	3.484
Female	2.464	2.875	2.618

Research hypothesis (H3) related to whether there was an interaction effect between gender and individualist, mixed and collectivist groups on intention to purchase online. The two-way interaction between gender and individualist, mixed and collectivist groups was significant regarding intention to purchase online ( $F = 3.135$ ,  $P < .05$ ). Therefore, the third hypothesis (H3) was supported.

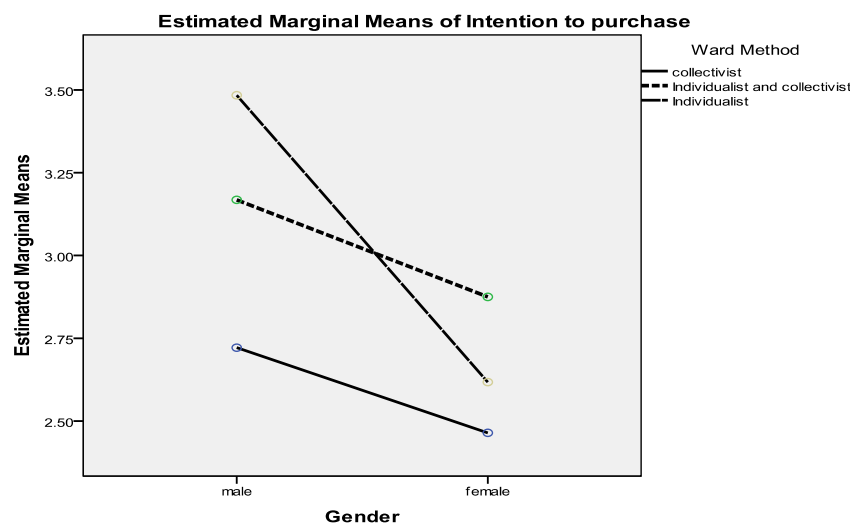


Figure 2. Means plot of intention to purchase online based on gender, individualist and collectivist groups

In figure 2 and table 6, which represents the mean of intention to purchase online for each combination of gender, collectivist, mixed, and individualist groups, it was observed that the two lines representing collectivist and mixed groups are roughly parallel. On the other hand, there was an intersection between the lines representing the individualist and mixed groups indicating that there was an interaction between these two groups.

#### 4. Conclusions, Limitations and Future Research

The main objective of this study was to show the differences of the cultural dimensions toward the online purchase intentions in Jordan moderated by the gender factor.

The study found a significant difference in intention to purchase online based on gender. The results showed that males preferred online purchase more than females. This result was in accordance with Hui and Wan (2007) study which justified this behavior to the inability of female consumers to enjoy online shopping experience. According to a home survey conducted by the department of statistics in Jordan (2010) about information technology use, it was found that the use of e-commerce services among males was higher than females. The

study found significant differences related to individualist, mixed and collectivist groups. These results could be explained in terms of the psychological concepts of individualism and collectivism that direct the personality regardless of the gender. The results of the study found that collectivist groups had the lowest intention to purchase online. Despite Jordan being considered a collectivist culture (Hofstede, 2011), students preferred the response that mixed both collectivistic and individualistic orientations for purchasing online. Furthermore, the study indicated that there was a significant interaction effect between gender and collectivist, mixed and individualist groups on the intention to purchase online. Initially, the gender variable had the same effect on the collectivistic and mixed groups toward the intention to purchase online. Whereas, there was an interaction effect between the individualistic and mixed groups. It was noticed that the individualistic group males had a higher intention to purchase online than mixed group males. On the other hand, individualistic group females had a lower intention to purchase online than mixed group females. This concluded that male individualistic group scored the highest intention toward purchasing online. Based on (authors') experience and observations, such a phenomenon could be explained by the fact that Jordanian society supports the decisions generally made by male individuals. This eventually would empower male individuals and may explain their increasing intention to online purchasing

The main limitation of this study was related to the difficulty of reaching online customers other than students which limited the generalizability of results from this study. Another limitation of this study was undertaken in a developing country where the IT infrastructure and knowledge is still evolving.

A detailed and more comprehensive research related to online shopping behavior and cross cultural studies in the Middle East in general and Jordan in specific needs to be conducted in the future.

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