

An Empirical Investigation of Electronic Shopping in Kuwait

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Abstract:

This study examines the effects of certain of demographic, social support, and technology variables on consumers' Electronic Shopping (e-shopping) attitudes and intentions in Kuwait. The analyses reveal that favorable attitudes towards e-shopping have a significant, positive influence on consumers' e-shopping intent. Moreover, the findings point to the fact that social support affects intentions to use e-shopping directly and indirectly through attitudes. The results also reveal that consumers having higher Internet experience show higher positive attitudes towards e-shopping than those who have less experience using the Internet. Further, the results show that perceived e-shopping benefits affect attitudes towards e-shopping only directly. Lastly, neither gender nor Internet accessibility has effect on the exogenous variables (i.e., attitudes towards e-shopping and intentions to use e-shopping). The author discusses the implications of these findings.

Introduction:

Many information systems studies point to the fact that understanding user demographics, social support, and technology variables is critical for understanding attitudes towards Internet applications (Liao and Cheung, 2001; Aladwani, 2000; Tan and Teo, 2000; Karahanna and Straub, 1999; Venkatesh, 1999). Previous information systems research, however, was generally based on surveys about several important Internet phenomena and has not tried to explore the role of the above mentioned variables in the context of Electronic Shopping (e-shopping), or the use of the Internet and WWW browsers

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to buy products and/or services. Since the work of some researchers (Venkatesh, 1999) suggests that application acceptance patterns could differ depending on application type, there is a need to examine the relationship between demographic, social support, and technology characteristics versus attitudes and intentions towards e-shopping.

The goal of this paper, then, is to shed light on e-shopping determinants in Kuwait, where there will be approximately 500,000 Internet users by 2005. Thus, the author will examine the pattern of relationships between intention to use e-shopping and attitudes towards e-shopping, and certain of demographic (e.g., gender and Internet experience), social support, and technology variables in Kuwait. To elaborate on these ideas, the remainder of the paper is divided into four sections. Section one discusses prior theory and literature that has guided the study and contributed to our understanding of some of the salient issues affecting e-shopping acceptance in Kuwait. Section two describes the sample and methods used to investigate these issues. Section three presents the results and section four discusses the implications of the findings.

Literature Review & Research Hypotheses

Information technology researchers have examined a number of issues relevant to the acceptance of Internet applications (Liao and Cheung, 2001; Aladwani, 2000; Tan and Teo, 2000; Venkatesh, 1999; Rose and Straub, 1998). Past studies, for example, have identified attitudes towards the Internet application as a very important predictor of its acceptance (Aladwani, 2000). Furthermore, the findings of the research by Aladwani (2001), Al-Jabri and Al-Khaldi (1997), and Liao and Cheung (2001), among many others, suggest that demographic variables can differentiate between those individuals who do develop favorable attitudes and intentions towards an application and those who do not. Moreover, the arguments advanced by Tan and Teo (2000) and Taylor and Todd (1995) suggest that understanding social support, or the perceived importance/value one puts on what

significant others think how one should act (Fishbein and Ajzen, 1975), may also be critical for understanding e-shopping practices. Moreover, technology attributes and benefits are said to influence the decision of potential adopters of the technology (Tan and Teo, 2000; Karahanna, Straub, and chervany, 1999; Rogers, 1983).

Based on the above arguments, the research model postulates that gender, Internet experience, Internet accessibility, social support, and perceived e-shopping benefits can influence attitudes towards e-shopping, which in turn can influence e-shopping intent. The reasoning for including the study variables in the model will be provided in the following paragraphs.

With the notable exception of the studies by Gefen (2000) and Liao and Cheung (2001), not much academic work exists that discusses attitudes towards e-shopping. Both studies highlight the importance of attitudes towards e-shopping to intentions to use the same. In a related information technology context, Aladwani (2001), after studying one hundred and fifty-eight end-users, concluded that if organizations want to influence end-user computing acceptance, then they must influence users' attitudes towards the same. The data collected from two hundred and seventy four users by Rose and Straub (1998) also supported the same conclusion regarding the importance of favorable attitudes towards information technology for securing acceptance. In a study of one hundred and eighty seven part-time MBA students, Guimaraes and Igbaria (1997) found that beliefs had a significant, positive association with technology usage. Davis (1989), based on a study involving one hundred and fifty two users, reported that attitudes towards the technology had a greater correlation with current usage and future usage behavior than did any other studied variable.

Little research exists that discusses the relationship between demographic variables and e-shopping. Nonetheless, demographic variables have been shown to influence attitudes and acceptance in the

context of other technology applications. In the case of gender, some information systems researchers suggest that gender of the user is important for understanding attitudes towards and acceptance of the different information technologies. Aladwani (2001), for example, reports that females generally show less technology acceptance than males in some usage categories. Moreover, Guimaraes and Igbaria (1997) report a significant relationship between gender and beliefs. The authors report that females show lower outcome in utilization categories. Gefen and Straub (1997) assert that perceptions toward Internet applications, e.g., e-mail use, can differ between genders.

Many information systems researchers maintain that experience is an important predictor of attitudes towards and acceptance of information technology. For instance, Liao and Cheugn (2001) report that user experience (as measured by education and training) in computers applications has a significant relationship with consumer willingness to use e-shopping. Moreover, Tan and Teo's study (2000), which is based on responses from four hundred and fifty four users, reveals that Internet experience is significantly related to the adoption of Internet banking. Gefen (2000) also reports a significant relationship between Internet experience (as measured by familiarity) and attitudes towards and intentions to use e-shopping. In the context of undergraduate business students in Saudi Arabia, Al-Jabri and Al-Khaldi (1997) found a strong significant relationship between computer experience and attitudes towards computers.

Some scholars also point to the fact that Internet accessibility is supportive of favorable attitudes towards information technology applications. Liao and Cheung (2001) found that level of Internet usage (as measured by the frequency of Internet access and the duration of Internet access) is significantly related to the willingness of the consumer to use e-shopping. Karahanna and Straub (1999) studied e-mail users in an organization and found that accessibility to the system is important for developing favorable attitudes towards the

same. In a similar vein, Al-Jabri and Al-Khaldi (1997) reported a strong significant correlation between computer accessibility and anxiety, confidence, liking, and usefulness.

Past empirical investigations identify social support as a very important determinant of attitudes towards and acceptance of many types of information technology applications. Karahana, Straub, and Chervany (1999) reported a significant relationship between peers and friends social support and behavioral intentions to adopt information technology applications. A similar conclusion was reached by the empirical investigation on e-mail acceptance by Karahanna and Straub (1999). Furthermore, Taylor and Todd (1995) found that social support variables such as the favorable adoption intentions expressed by significant referents could promote favorable attitudes towards information technology.

Perceived e-shopping benefits may play an important role in creating favorable intentions to purchase products over the Internet. According to Rogers (1983) there are several innovation attributes that comprise potential adopters perceptions of innovation benefit, among which are: (1) relative advantage or the extent to which the adopter views the innovation as to have an advantage over previous ways of performing the same task, (2) ease of use (complexity), and (3) compatibility or the extent to which the adopter views the innovation as compatible with his/her values and preferences. the importance of these, and other, innovation attributes is widely recognized in the literature. Tan and Teo (2000), for example, found that relative advantage and compatibility have significant positive impacts on the adoption of Internet banking. However, contrary to past research, e.g., (Karahanna et al., 1999), Tan & Teo did not find a relationship between complexity/ease of use and the adoption of Internet banking.

The above arguments serve to formulate the following hypotheses:

- H1 : Attitudes towards e-shopping will influence the intention to use e-shopping.
- H2a : Gender will influence attitudes towards e-shopping.
- H2b : Gender will influence intentions to use e-shopping.
- H3a : Internet experience will influence attitudes towards e-shopping.
- H3b : Internet experience will influence intentions to use e-shopping.
- H4a : Internet accessibility will influence attitudes towards e-shopping.
- H4b : Internet accessibility will influence intentions to use e-shopping.
- H5a : Social support will influence attitudes towards e-shopping.
- H5b : Social support will influence intention to use e-shopping.
- H6a : Perceived e-shopping benefits will influence attitudes towards e-shopping.
- H6b : Perceived e-shopping benefits will influence e-shopping intent.

Methodology

Sample

Because there is no sampling frames for e-shopping users in Kuwait, a convenience sampling procedure was used to gather data required for the study. A questionnaire was distributed to a convenience sample of a hundred and twenty potential e-shopping users working for five organizations operating in Kuwait (three public organizations, a financial institution, a retail company). Of the hundred and twenty questionnaires distributed, eighty-nine usable questionnaires were received (approximately seventy-four percent response rate). Of the eighty-nine participants, sixty-two percent are males and thirty-five percent are females. The gender question for three questionnaires was not answered. The average age of the respondents is approximately thirty-four years and the standard deviation is

approximately six years. Eighty-two percent of the surveyed individuals own a computer at their homes. Fifty-one percent of the participants describe themselves as having some computer knowledge, forty-three percent say they have moderate knowledge of computers, and five percent of the participants say they have advanced knowledge of computers.

Operational Measures

The e-shopping intent scale assesses consumers' intentions to use e-shopping some time in the near future (Karahanna et al., 1999). Two items were used to tap intentions to use e-shopping: (1) I do not have an intention to use e-shopping any time in the near future (reverse coded), and (2) I will do e-shopping some time in the near future (during the coming six months). The two questions were anchored on a five-point scale: (1) strongly disagree, (2) disagree, (3) not sure, (4) agree, and (5) strongly agree. Factor analysis with varimax rotation on the two items revealed a single factor. Cronbach's alpha for the two-item scale was .91.

The predictor variables in this study include gender, Internet experience, Internet accessibility, social support, perceived e-shopping benefits, and attitudes towards e-shopping. Single item questions were used to ascertain participants' gender and Internet experience. Gender of respondents was coded (0) for males and (1) for females. The respondents were asked to indicate the extent of their Internet experience using a four point scale: (1) no experience (2) low experience, (3) moderate experience, and (4) high experience. Internet accessibility was measured using three items: (1) accessibility from home, (2) accessibility from work, and (3) accessibility from Internet cafés. For the purpose of the analysis a use/no-use format was adopted. The answers to the three items were summed up to come up with an indicator for Internet accessibility.

To measure perceived e-shopping benefits, the respondents were asked to indicate the extent to which e-shopping would be considered (Karahanna et al., 1999; Rogers, 1983): (1) a better shopping approach than conventional purchasing methods, (2) an easy to use/carry out task, and (3) compatible with the way they prefer to shop. A five-point scale was used to anchor the responses: 1) strongly disagree, (2) disagree, (3) not sure, (4) agree, and (5) strongly agree. Factor analysis with varimax rotation on the three items revealed a single factor (Cronbach's alpha = .83).

The social support measure has three items (Karahanna et al., 1999): (1) my close friends think that I must use e-shopping, (2) my colleagues think that I must use e-shopping, and (3) most people who I care about think that I must use e-shopping. The response options were (1) strongly disagree, (2) disagree, (3) not sure, (4) agree, and (5) strongly agree. Factor analysis with varimax rotation on the three items resulted in a single factor. Cronbach's alpha was used again to test for reliability. The result of this test for the three-item scale was .82.

The attitudes towards e-shopping scale taps user's deep beliefs about using e-shopping. The instrument consists of three items: (1) I like the idea of e-shopping, (2) Using the Internet to purchase products and services will be a good thing to do, and (3) I am not fully satisfied with the idea of using the Internet to purchase products and services (reverse coded). A likert-type response format was provided with five anchors: (1) strongly disagree, (2) disagree, (3) not sure, (4) agree, and (5) strongly agree. A principal component factor analysis (with varimax rotation) of the three items revealed one factor. A reliability test using Cronbach's alpha resulted in a score of .88.

Data Analysis & Results

Before testing the research model and hypotheses, summary charts relevant to the e-shopping phenomenon in Kuwait were constructed. Figures 1, 2, 3, and 4 summarize some of the general

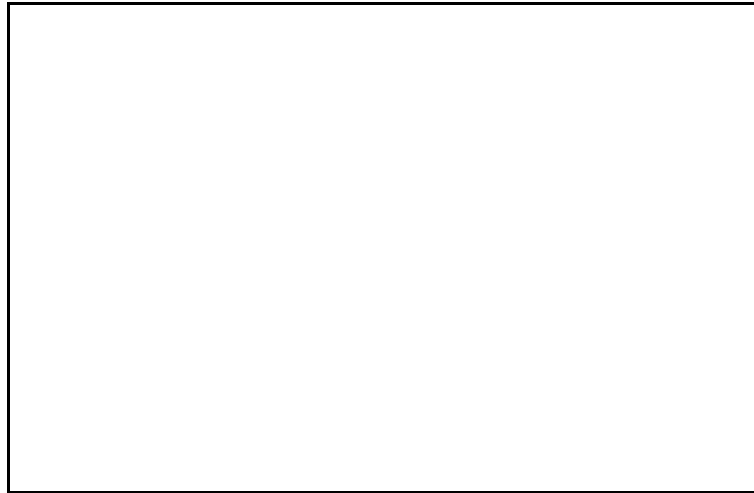


Figure 1: e-Shopping Intent in Kuwait

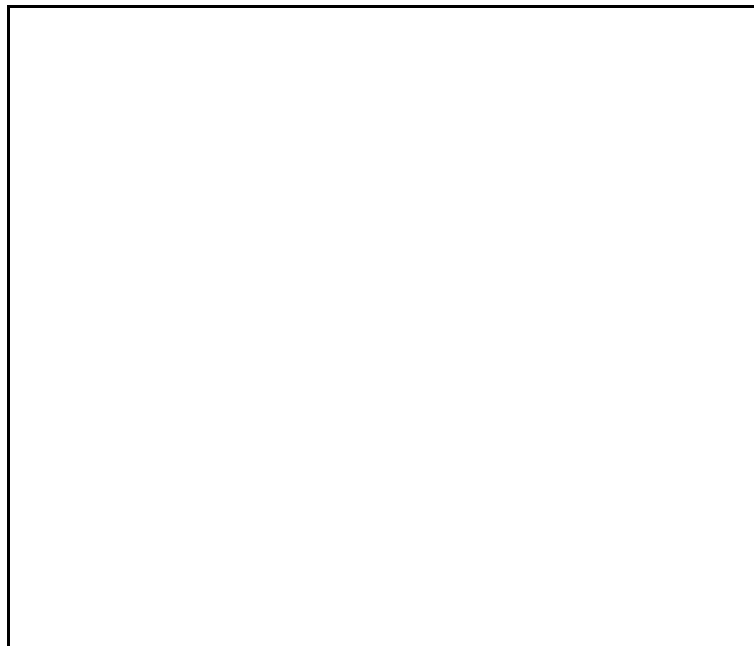


Figure 2: e-Shopping Intent by Age

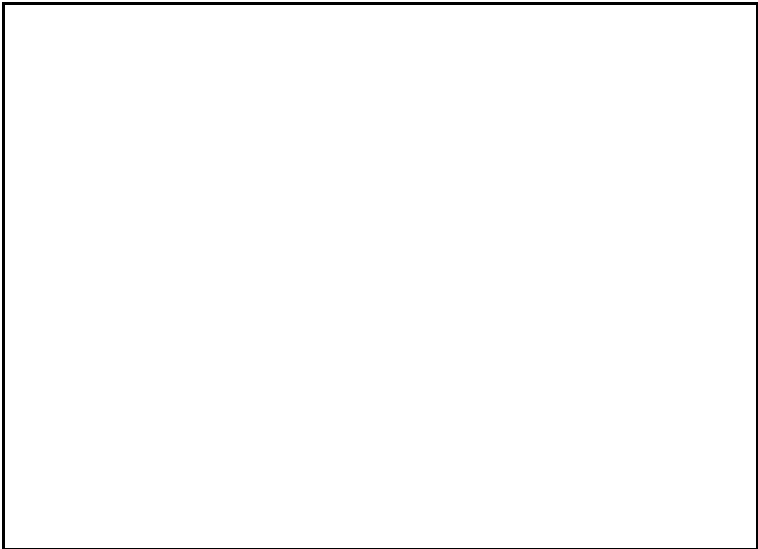


Figure 3: e-Shopping Intent by Computer Ownership

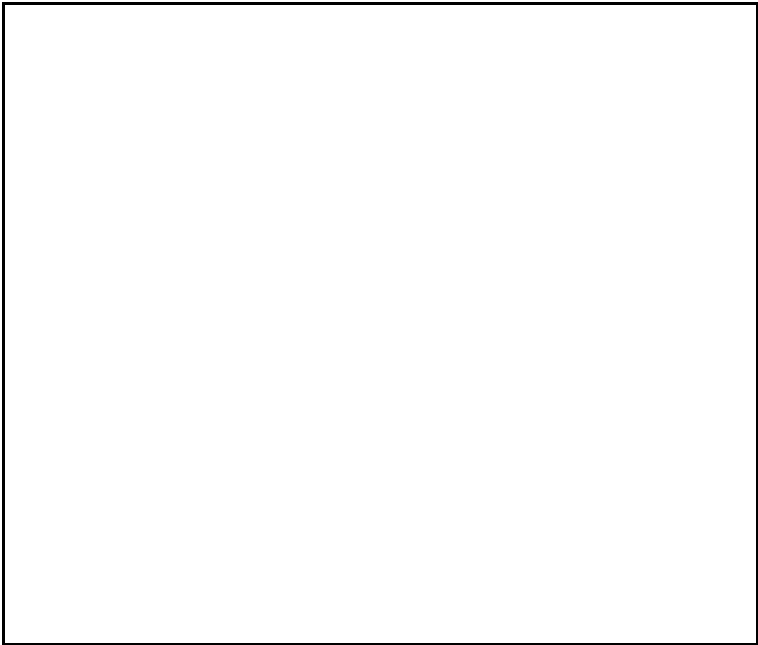


Figure 4: e-Shopping Intent by Computer Experience

patterns found in the sample data. Figure 1 reports the aggregate of respondents' intentions to use e-shopping sometime in the near future. It reveals that, in general, there are favorable intentions to use e-shopping among the participants in the investigation. The remaining three charts show that there are no notable differences between those who intend to use e-shopping and those who don't intend to along the different age (divided into two groups young, i.e., below the median, versus old, i.e., above the median), computer ownership, and computer expertise groups. Note that none of the young respondents in Figure 2 has developed intentions not to use e-shopping. Note also that in Figure 4 none of those respondents who have high computer experience has developed intentions not to use e-shopping. Moreover, the data show that approximately 83% of the respondents view e-shopping as a better approach than conventional purchasing methods, approximately 67% of the respondents view e-shopping as an easy to use-carry out task, approximately 62% of the respondents view e-shopping as compatible with the way they prefer to shop, and approximately 65% of the respondents are fully satisfied with the idea of using the Internet to purchase products and services.

The above summary charts and descriptions represent a broad and preliminary account of the e-shopping phenomenon in Kuwait. Next, the practices of e-shopping in the sample data set were examined in a detailed and more rigorous manner. To test the proposed research model and hypotheses, regression analysis was performed using SPSS. The use of regression analysis requires that all the used scales are reliable and that there are no data problems like multi-collinearity. A series of reliability tests were carried out on all multi-item interval scales in the study and found that all reliabilities exceed the rule of thumb suggested by Nunnally (1976) for exploratory research. The correlation matrix (Table 1) was also examined looking for a possible problem of multi-collinearity but found none.

Table 1: Descriptive Statistics and Correlation Matrix

	Mean	SD	1	2	3	4	5	6	7
1. Gender	---	---	---						
2. Internet experience	2.41	.80	-.11	---					
3. Internet accessibility	1.67	.64	.00	.00	---				
4. Social support	3.63	.96	.09	.23 ^b	.03	---			
5. Perceived e-shopping benefits	3.87	.84	-.04	.29 ^b	.07	.36 ^c	---		
6. Attitudes towards e-shopping	3.76	1.12	.03	.38 ^c	.07	.44 ^c	.39 ^c	---	
7. e-shopping intent	4.16	1.01	-.07	.32 ^c	.07	.37 ^c	.20 ^b	.46 ^c	---

^a = $p < 0.10$; ^b = $p < 0.05$; ^c = $p < 0.01$ (one-tailed)

Table 2 presents the results of regressing gender, Internet experience, Internet accessibility, social support, perceived e-shopping benefits, and attitudes towards e-shopping on e-shopping intent. The findings reveal that attitudes towards e-shopping (Beta = .36, $p < .01$) and social support (Beta = .22, $p < .05$) are significant correlates of e-shopping intent. These findings give only support for hypotheses H1 (attitudes - intentions) and H5b (social support - intentions). The R-square for the overall model is significant (R-square = .23; $p < .01$). Moreover, Table 2 reports the results of regressing gender, internet experience, Internet accessibility, social support, and perceived e-shopping benefits on attitudes towards e-shopping. The table reveals that only social support (Beta = .31, $p < .01$), Internet experience (Beta = .25, $p < .05$), and perceived benefits (Beta = .21, $p < .05$) had a significant influence on duration of use. These findings give support for only hypotheses H5a (social support - attitudes), H3a (experience - attitudes), and H6a (benefits - attitudes). The R-square for the overall model is also significant (R-square = .28; $p < .01$). Taken together with previous findings, social support is found to affect e-shopping intent indirectly through attitudes towards e-shopping. Table 3 summarizes hypotheses testing results.

Table 2: Determinants of e-shopping in Kuwait

	Attitudes towards e-Shopping		e-Shopping intent	
	Beta	t-value	Beta	t-value
Gender	.04	.41	-.10	-1.08
Internet experience	.25 ^b	2.60	.16	1.55
Internet accessibility	.05	.59	.04	.41
Social support	.31 ^c	3.12	.22 ^b	2.06
e-Shopping benefits	.21 ^b	2.06	-.02	-.20
Attitudes towards e-shopping			.36 ^c	3.47
Adjusted R square = .28 ^c	Adjusted R square = .23 ^c			

^a = $p < 0.10$; ^b = $p < 0.05$; ^c = $p < 0.01$

Table 3: A Summary of Hypotheses Testing results

Hypothesis	Accept?
H1: Attitudes - intention to use e-shopping	Yes
H2a: Gender-attitudes towards e-shopping	No
H2b: Gender-intentions to use e-shopping	No
H3a: Internet experience-attitudes towards e-shopping	Yes
H3b: Internet experience-intentions to use e-shopping	No
H4a: Internet accessibility-attitudes towards e-shopping	No
H4b: Internet accessibility-intentions to use e-shopping	No
H5a: Social support-attitudes towards e-shopping	Yes
H5b: Social support-intention to use e-shopping	Yes
H6a: e-shopping benefits-attitudes towards e-shopping	Yes
H6b: e-shopping benefits-intention to use e-shopping	No

Discussion and Conclusions

The goal of this study was to examine electronic shopping in Kuwait. More specifically, it tried to provide the first account of the effects of certain of demographic, social support, and technology variables on attitudes towards e-shopping and on e-shopping intent in Kuwait. The results reveal that: (1) attitudes towards e-shopping have a significant,

positive influence on e-shopping intent, (2) social support impacts e-shopping directly and indirectly through attitudes, (3) Internet experience and perceived e-shopping benefits influence e-shopping intent indirectly through attitudes, and (4) there are no differences between the two genders and between user with different levels of Internet access in terms of attitudes towards e-shopping and e-shopping intent.

The analyses show that attitudes towards e-shopping had significant, positive influence on e-shopping intent. This finding corroborates the findings of previous research (Liao and Cheung, 2001; Gefen, 2000; Tan and Teo, 2000; Karahanna and Straub, 1999). The result suggests that favorable attitudes towards e-shopping are important to secure higher e-shopping usage. The findings also reveal that social support affects e-shopping intent directly and indirectly through attitudes towards e-shopping. This finding strongly corroborates the findings of past research (Karahanna et al., 1999; Karahanna and Straub, 1999). Internet experience is also found to influence attitudes towards e-shopping only. The more Internet experience the users enjoy, the more they are likely to develop favorable e-shopping attitudes. This finding is consistent with the finding of Gefen (2000) and Liao and Cheung (2001). Moreover, the perceived e-shopping benefits variable is found to impact attitudes towards e-shopping only. This finding is in line with that of Tan and Teo (2000).

In the collected sample, male and female users reported similar e-shopping beliefs and intent patterns. This result confirms the findings of Aladwani (2001) in the context of end-user computing usage. Furthermore, the differences between males and females were tested along the two variables using a series of t-tests and found support for the similarity assertion.

What managerial implications do the findings point to? Taken together, these findings point to the importance of attitudes towards e-shopping, social support, Internet experience, and e-shopping benefits in securing success for the e-shopping initiative. The managerial implication

here is that organizations must find ways to cultivate positive intentions to use e-shopping. For example, one thing an organization having an e-shopping site can do is to encourage users to try out the offered e-shopping services in order to help the users develop positive intentions to use e-shopping. Assigning demo (not actual) e-shopping modules within the web site to allow shoppers live the actual e-shopping experience without any obligation from the user to commit a shopping transaction (i.e., actually paying for a purchase) could do this. Yet another thing an organization can do is to develop marketing campaigns targeted towards developing social networks via behavior modeling techniques in the context of e-shopping. Moreover, since the analysis shows that perceived e-shopping benefits is an important predictor of e-shopping attitudes, the organization may want to develop special marketing campaigns to highlight the benefits of use e-shopping as opposed to doing traditional shopping; and to improve the easiness of their e-shopping site. Furthermore, the lack of differences between males and females in terms of attitudes towards and intentions to e-shopping suggest that there may be no need for a specific managerial action.

A final note. Every scientific investigation has limitations and this study is not an exception. Future research may need to collect a larger data set to re-examine the patterns of e-shopping experiences reported in this study. Gathering a sample set of data randomly from all potential e-shoppers in Kuwait could be an important step to be taken by future research endeavors. Moreover, other predictor variables may be included in future studies to shed further light on e-shopping issues and practices in Kuwait, e.g., the role of personality attributes and the differences between Kuwaiti and non-Kuwaiti e-shoppers, to name a couple. Finally, in this study, e-shopping intent was operationalized in general terms. In future research, this construct may be operationalized to reflect certain dimensions of e-shopping such as products versus services and information gathering versus actual purchasing.

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