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The factors driving online shopping in Saudi Arabia: Gender differences and behavior

Version 1

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Abstract

Purpose—This study proposes a revised technology acceptance model that integrates expectation confirmation theory to measure gender differences with regard to continuance online shopping intentions in Saudi Arabia.

Design/Methodology—The 465-respondent sample consists of 68.8% women and 31.4% men. A structural equation model confirms model fit.

Findings—Perceived usefulness, enjoyment, and subjective norms are determinants of online shopping continuance in Saudi Arabia. Both male and female groups are equivalent. The structural weights are also largely equivalent, but the regression paths from perceived usefulness to subjective norms and to continuous intention are not invariant between men and women.

Originality—This research moves beyond online shopping intentions and includes factors affecting online shopping continuance. The research model explains 65% of the intention to continue shopping online.

Research Implications—This research suggests that online strategies cannot ignore either the direct and indirect gender differences on continuance intentions in Saudi Arabia. The model can be generalized across Saudi Arabia.

Keywords: internet shopping; e-shopping; technology acceptance; male and female examination; continuance online shopping; Saudi Arabia

Introduction

Globalization continues to drive the rapid growth of international trade, global corporations, and non-local consumption alternatives (Alden et al. 2006; Holt et al. 2004), and advances of the Internet and e-commerce have diminished trade boundaries. E-commerce and e-shopping create opportunities for businesses to reach to consumers globally and directly, and in turn, business and social science research now focuses specifically on cross-national and cross-cultural Internet marketing (Griffith et al. 2006).

The Internet had changed how businesses and customers customize, distribute, and consume products. Its low cost gives both businesses and consumers a new and powerful channel for information and communication. In 1991, the Internet had less than 3 million users worldwide and no e-commerce applications; by 1999, about 250 million users appeared online, and 63 million of them engaged in online transactions, which produced a total value of $110 billion (Coppel 2000). Business-to-consumer online sales in the United States grew by 120% between 1998 and 1999 (Shop.org and Boston Consulting Group, 2000). According to a U.K. payment association, the number of consumers who shop online has increased by more than 157%, from 11 million in 2001 to more than 28 million in 2006 (cited in Alsajjan and Dennis, 2009). E-commerce transactions also are growing in the Middle East (19.5 million Internet users) and in the Gulf States. In Saudi Arabia, online transactions have increased by 100%, from $278 million in 2002 to $556 million in 2005 (*Al Riyadh* 2006). In 2007, Internet sales increased to more than $1.2 billion worldwide and are expected to continue to rise (World Internet Users and Population Stats 2007).

Despite impressive online purchasing growth rates, compelling evidence indicates that many consumers who search different online retail sites abandon their purposes. This trend and the proliferation of business-to-consumer e-shopping activities require that online businesses understand which factors encourage consumers to complete their e-shopping behavior. Such continuance is critical, because acquiring new customers may cost as much as five times more than retaining existing ones (Bhattacherjee 2001b; Crego and Schiffrin 1995; Petrissans 1999).

Online customer retention is particularly difficult. Modern customers demand that their needs be met immediately, perfectly, and for free, and they are empowered with more information to make decisions (Bhattacherjee 2001b; Crego and Schiffrin 1995). They also have various online and offline options from which to choose, and without a compelling reason to choose one retailer over another, they experiment or rotate purchases among multiple firms.

Theoretical Background

Theoretical explanations of online shopping intentions consider several factors. Rogers (1995) suggests that consumers reevaluate acceptance decisions during a final confirmation stage and decide to continue or discontinue. Continuance may be an extension of acceptance behavior that covaries with acceptance (e.g., Bhattacherjee 2001a; Davis et al. 1989; Karahanna et al. 1999). We adopt the extended expectation confirmation theory (ECT; Bhattacherjee 2001b) and the technology acceptance model (TAM; Davis et al. 1989) as a theoretical basis, integrating ECT from consumer behavior literature to propose a model of e-shopping continuance intentions, similar to the way in which the TAM adapts the theory of reasoned action (TRA) from social psychology to postulate a model of technology acceptance.

The TAM, as expanded by Davis and colleagues (1992) and Gefen (2003), and the ECT (Bhattacherjee 2001a; Oliver 1980) have been used widely in research in the industrialized world, but they are less commonly applied to developing countries. Moreover, the TAM stops at intention and does not investigate continuance intentions or behavior.

As another issue in prior research, no widely acceptable definition for e-commerce exists. Coppel (2000) calls it doing business over the Internet, including both business-to-business and business-to-consumer markets. For the purpose of this research, we adopt the following definition: E-shopping, electronic shopping, online shopping, and Internet shopping are the same. All these activities include the activity of searching, buying, and selling products and services through the Internet. In recent years, the Internet has grown to include a wider range of potential commercial activities and information exchanges, such as the transaction and exchange of information between government agencies, governments and businesses, businesses and consumers, and among consumers. We

focus mainly on the business-to-consumer (B2C) arena, which has been the source of most online progress and development.

Previous research also finds that gender differences significantly affect new technology decision-making processes (Van Slyke et al. 2002; Venkatesh et al. 2000). Venkatesh and colleagues (2000) report that women tend to accept information technology when others have high opinions of it and are more influenced by ease of use. Men rely more on their evaluations of the usefulness of the technology. However, in many cultures, women represent the primary decision makers in families and households' main shoppers. Greater e-commerce exposure and decision-making power may imply that women can attain greater satisfaction from online shopping (Alreck and Settle 2002).

Research Objective

No previous research considers Internet shopping in Saudi Arabia or, specifically, continuance intentions for online shopping, nor do studies address differences in gender shopping behavior online in Saudi Arabia. This research attempts to provide a validated conceptual model that integrates different factors, including gender, and clarifies the theoretical problems of continuance intentions in the unique context of Saudi Arabia.

Proposed Model and Hypotheses

Site Quality

Initial trust forms quickly on the basis of available information (Meyerson et al. 1996). If consumers perceive a Web site as high quality, they trust it and will depend on that vendor (McKnight et al. 2002a). E-shoppers should perceive a Web site as more trustworthy if it appears more attractive because of its contents, layout, and colors, which represent site quality. We therefore predict:

> H1: Perceived site quality relates positively to (a) perceived usefulness and (b) customer trust in online shopping.

Trust

Trust refers to an expectation that others will not behave opportunistically (Gefen 2003). Trust therefore implies a belief that the vendor will provide what has been promised (Ganesan 1994). In turn, perceived usefulness should occur only for an e-vendor that can be trusted (Festinger 1975). Thus:

> H2. Perceived trust relates positively to perceived usefulness.

Perceived Usefulness

According to Burke (1997), perceived usefulness is the primary prerequisite for mass market technology acceptance, which depends on consumers' expectations about how technology can improve and simplify their lives (Peterson et al. 1997). Users may continue using an e-commerce service if they consider it useful, even if they may be dissatisfied with their prior use (Bhattacherjee 2001a). Consumers likely evaluate and consider product-related information prior to purchase, and perceived usefulness thus may be more important than the hedonic aspect of the shopping experience (Babin et al. 1994). In a robust TAM, perceived usefulness predicts IT use and intention to use (e.g., Adams et al. 1992; Agarwal and Prasad, 1999; Gefen and Keil 1998; Gefen and Straub 1997; Hendrickson et al. 1993; Igabaria et al. 1995; Subramanian 1994), including e-commerce adoption (Gefen and Straub 2000). Therefore:

> H3. Perceived usefulness relates positively to increased customer (a) subjective norms, (b) enjoyment, and (c) continuance intentions.

Subjective Norms

According to Venkatesh and colleagues (2003), social influences result from subject norms, which relate to individual consumers' perceptions of the beliefs of other consumers. Shim and colleagues (2001) consider subjective norms only marginally significant on e-shopping intentions, whereas Foucault and Scheufele (2005) confirm a

significant link between talking about e-shopping with friends and intention to e-shop. Enjoyment also is relevant to social norms, because involving Web sites facilitate e-friendship and enforce e-shopping as a subjective norm. Thus,

H4. Perceived subjective norms relate positively to increased customer (a) enjoyment and (b) continuance intentions.

Enjoyment

Enjoyment in using a Web site significantly affects intentions to use (Davis et al. 1992; Igbaria et al. 1995; Teo et al. 1999; Venkatesh et al. 2002). Shopping enjoyment (Koufaris 2002), perceived entertainment value of the Web site (O'Keefe et al. 1998), and perceived visual attractiveness have positive impacts on perceived enjoyment and continuance intentions (van der Heijden 2003). Thus:

H5. Perceived enjoyment relates positively to increased customer continuance intentions.

Methodology

To validate the conceptual model and the proposed research hypotheses, we developed an online survey, which is suitable for collecting data from large geographical areas.

Measures

The measures of the various constructs come from previous literature, adapted to the context of online shopping if necessary. All online survey items use 1–7 Likert scales, on which 1 indicates strongly disagree and 7 is strongly agree. Both Arabic and English language versions were available. The Arabic questionnaire employed Brislin's (1986) back-translation method to ensure that the questionnaires have the same meaning in both languages.

Data analysis

Survey respondents were people who were actively engaged in Internet and online shopping in Saudi Arabia. The sample consists of 465 participants in Saudi Arabia, 68.6% (319) of whom are women and 31.4% (146) of whom are men.

Analysis

The Cronbach's alphas are all greater than 0.7 (Bagozzi and Yi 1988). The squared multiple correlation cut-off point is 0.7, and the average variance extracted cut off-point is 0.5 or higher (Bagozzi 1994; Byrne 2001; Hair et al. 2006). We thus confirm the convergent reliability and discriminant validity.

Structural Equation Model

As the first step in testing the proposed model, which operationalizes the hypotheses and the factors involved in continuance e-shopping intentions in Saudi Arabia, we estimate the goodness-of-fit indices (Figure 1). Bentler and Bonett (1980) suggest the Chi-square/Degrees-of-freedom (CMIN/DF) ratio as an appropriate measure of model fit, which should not exceed 5 (Bentler 1989).

As illustrated in Table 1, all paths are statistically significant, with critical ratios greater than 1.96 and thus indicate acceptable results (Hair et al. 2006; Holmes-Smith 2000). As illustrated in Table 2, the goodness-of-fit indices of the proposed model of continuance intentions fit the data reasonably well, as confirmed by the chi-square CMIN=764.381, df=236, CMIN/DF=3.239, RMR=0.248, GFI=0.886, CFI=0.960, RMSEA=0.069, NFI=0.943, IFI=0.960, and RFI=0.933.

Table 1: Regression Weights

Paths			Standardized Regression Weights *S.R.W (B)*	Standard Error S.E.	Critical Ratio C.R.	P Value
Trust	<---	SQ	.740	.044	17.261	***

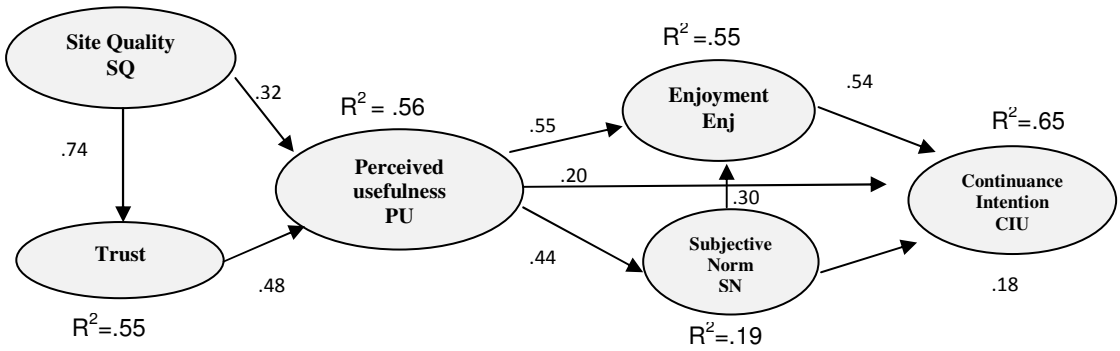
Paths			Standardized Regression Weights *S.R.W (B)*	Standard Error S.E.	Critical Ratio C.R.	P Value
PU	<---	SQ	.318	.059	5.796	***
PU	<---	Trust	.484	.058	8.673	***
SN	<---	PU	.440	.042	9.184	***
Enj	<---	PU	.553	.035	11.549	***
Enj	<---	SN	.303	.036	7.076	***
CIU	<---	SN	.182	.041	4.974	***
CIU	<---	Enj	.543	.072	10.244	***
CIU	<---	PU	.198	.043	4.594	***

Table 2: Goodness-of-Fit Indices

Confirmatory Factor Analysis CFA (Goodness-of-fit measure)	Value
Chi-Square CMIN	764.381
Degree of freedom	236
CMIN/DF	3.239
Root mean square residual (RMR)	0.248
Goodness-of-fit (GFI)	0.886
Comparative fit index (CFI)	0.960
(RMSEA)	0.069

Next, we examine the regression weights (path significance) of each relationship in our research model and the variance explained (R^2 value) by each path. The hypothesized associations are strongly significant at $p = 0.000$, see Table 2. Perceived enjoyment is the strongest predictor of continuance intention ($B = 0.543$), followed by perceived usefulness ($B = 0.198$), and then subjective norms ($B = 0.182$). The model explains 65% of the variance in continuance intentions (Figure 1).

Figure 1: Internet continuance intention shopping model



Invariance Analysis

The invariance analysis indicates whether any differences occur between genders. To compare the male and female samples, we use factorial invariance (metric equivalence) to assess the extent to which measures from both groups have the same meaning (Hair et al. 2006). The result indicates outstanding goodness-of-fit indices across the groups.

Assuming the unconstrained model is correct, compared with constraining all factorial paths, the result across groups indicates changes in df (Δdf)= 18, chi-square ($\Delta\chi^2$)=31.677, and $p = 0.024$, below Byrne's (2001) 0.05

cut-off. According to the results, changes in the chi-square and df are significant (p = 0.024). We therefore compared the partially constrained model with the fully constrained model (Lai and Li 2005). Subjective norms are the source of non-invariance between the two gender groups.

As suggested by Hair and colleagues (2006), we also conducted partial metric analysis for the model without subjective norms. The result, as we show in Table 9, reveals changes across groups in df (Δdf)= 17, chi-square ($\Delta\chi^2$)=18.849, and p = 0.337. According to the results, the changes in chi-square and df are not significant (p = 0.337), and the goodness-of-fit indices are comparable, justifying the invariance of the unconstrained and constrained models.

The coefficient (regression paths) invariance analysis determines if male and female respondents have the same relationships with same variables in the research model. The findings in Table 9 suggest coefficient invariance between men and women across the research model with all regression paths constrained ($\Delta\chi^2$ = 13.683, Δdf = 9, p = 0.134). Despite the lack of real coefficient invariance, we consider the relationships between model constructs for any non-invariance. The findings indicate that men and women are non-invariant in relational paths of perceived usefulness → subjective norms (change in chi-square = 7.233, p = 0.007). For the men, this influence is greater than that for women. The difference in the coefficients of perceived → continuance intentions (change in chi-square = 4.976, p = 0.026) again indicates the influence is greater for the male sample than for the female sample.

Discussion

This research attempts to provide a validated conceptual model that integrates different factors and clarifies the theoretical problems of continuance e-shopping intentions and behavioral gender differences in Saudi Arabia. The findings validate the hypotheses and confirm that perceived enjoyment, perceived usefulness, and subjective norms are the main determinants of continuance intentions in Saudi Arabia, explaining 65% of continuance e-shopping intentions. However, enjoyment is more influential (srw = 0.543, cr = 10.244), followed by perceived usefulness (srw = 0.198, cr = 4.594), and then subjective norms (srw = 0.182, cr = 4.974). These findings are consistent with previous research (e.g., Bhattacherjee 2001a; Childers 2001; Davis et al. 1989; George 2002; Shih and Fang 2004; Taylor and Todd 1995; Teo et al. 1999; Venkatesh et al. 2003). Enjoyment, perceived usefulness, and subjective norms have positive influences (direct and indirect) on consumers' continuance e-shopping intentions.

The measurement weights of the male and female groups, based on partial metric invariance, are invariant. Testing for factorial regression paths invariance, we find that relationship paths are similar for both genders in Saudi Arabia. However, the perceived usefulness → subjective norms and perceived usefulness → continuance intentions relationship paths are non-invariant. That is, men are more influenced by evaluations of the utilitarian usefulness of technology, whereas women tend to accept technology based on their hedonic experiences and the opinions of others (Teo et al. 1999; Venkatesh et al. 2000).

The model factorial paths of site quality and trust are strong antecedents of perceived usefulness on the regression weights (site quality srw = 0.318, cr = 5.796; trust srw = 0.484, cr = 8.673).

Conclusion and Contributions

From a theoretical standpoint, these results contribute to existing literature in several ways. First, we enhance e-shopping literature by providing insights into the factors that seem to affect online shopping continuance intentions in Saudi Arabia. We also posit that enjoyment, subjective norms, and perceived usefulness have direct and indirect effects on continuance intention. The greater positive indirect effects of site quality on perceived usefulness, subjective norms, and enjoyment and that of trust on enjoyment and subjective norms suggest that online retailers should increase the positive perceptions of trust and site quality to make their e-shopping environment more useful and enjoyable.

Second, the results support previous research that shows perceived usefulness reflects the utilitarian aspects of online shopping, and perceived enjoyment reflects its hedonic aspects. In our study, enjoyment has the strongest effect on e-shopping continuance intentions, which confirms that enjoyment in an online shopping environment is important. Third, few prior studies use SEM as their methodological approach, and even fewer apply invariance analysis to verify behavioral gender differences with a sample obtained from Saudi Arabia. This study addresses this knowledge gap.

Managerial Implications

This study provides managers with useful and important information about planning their Web sites and marketing strategies. Managers and site developers should focus on the quality and informative content, which reflect usefulness and enjoyment. Managers should work to minimize churn, because customers who never return reduce the firm's customer base and revenues and require substantial expenditures to lure them back from competitors. To build sustainable, continued e-shopping relationships, managers cannot ignore either direct (perceived usefulness, enjoyment, subjective norms) or indirect (site quality, trust, perceived usefulness, subjective norms) influences on continuance intentions. Moreover, they should build positive word of mouth to enhance the perceptions of friends and family members of current customers about the Web site's usefulness, site quality, interactivity, and enjoyment, which can increase perceptions of the firm's trustworthiness.

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