Factors Influencing the Intention to Buy From Online Stores: An Empirical Study in Jordan

Rasha Abu-Shamaa  
Management Information System Department  
Yarmouk University  
Irbid, Jordan  
Eng.rashas@yahoo.com

Dr. Emad Abu-Shanab  
Management Information System Department  
Yarmouk University  
Irbid, Jordan

Abstract - Online shopping stores are a new hype in Jordan, and consumers are still not used to buying products online without touching and testing these products, they are also not used to paying online. The intention to buy online is affected by both technology factors and socio-cultural factors specifically trust. This research has studied the factors influencing the consumers' intention to buy from online stores by extending the TAM model to include trust in Internet technology and trust in the online store and have tested the moderation effect of consumers' favorite payment methods on such factors. Results of this research have found both TAM constructs and trust constructs to be significant predictors of buying intention, and found also that favorite payment method is not a significant moderator of these relationships.

Keywords - E-commerce; Online stores; Jordan; Online Payments; TAM; Internet Trust; Online Stores Trust; Credit cards; Cash on Delivery.

I. INTRODUCTION

Regardless of the increase in online stores targeting Arabic consumers, the percentage of consumers shopping online is still very small compared to the total percentage of online population [1]. There are several issues that inhibit e-commerce progress in Middle East and Gulf Cooperation Council (GCC) countries, for example In Saudi Arabia these issues involve consumers buying habits, delivery and logistics barriers, limited online payment options, weakness of ICT infrastructure, lack of trust on IT and Internet in general [2].

This study proposed a model that tests the moderation of online payments options available in online stores on an extended TAM model in the context of Arabic consumers who has a different mindset about paying online than consumers in developed countries.

While many studies have considered trust as a mediator in the relationship influencing the buying intention [3] [4] or as a moderator of this relationship [5], it is important to measure the nature of trust as a direct factor influencing buying intention [6].

In this study the TAM antecedents were tested and analyzed to determine their influence on Jordanian consumers' intention to buy from online stores, to conclude to some implications that can be used by online shop owners to enhance the design and benefits of their websites to affect the intention to buy from online stores.

Online payment methods are considered a new and unsecured concept for Jordanian consumers; many consumers are not familiar with credit cards or electronic money (e-money) concepts and even if they are, they don't have enough trust to use them for online shopping. This fact has motivated many online shopping companies in Jordan to offer the cash on delivery option.

The proposed model assumed that perceived ease of use, perceived usefulness and perceived trust have a positive influence on the intention to buy from online stores. The integration of TAM antecedents and Trust to understand the behavioral intentions to buy from online stores has proved to be valid in previous studies [7].

The proposed model was validated through the development of a survey that covers both demographic measures, and the model independent variables measures. This research will continue to explore the literature and background of e-commerce and online shopping, after that the methodology will be described in more details. Results will be analyzed and presented followed by the implications and conclusions of the study.

II. LITERATURE REVIEW

Studies on e-commerce and online shopping can be traced back to late nineties of the previous century. It is noticeable that the factors of trust and security in developed countries were the focus of studies in the beginning of the millennium because e-commerce was somewhat a new concept for them [7], where it is a new concept for developing countries now a days [3].

i. E-commerce & Online Stores

Electronic commerce "describes the process of buying, selling, transferring, serving, or exchanging products, services, or information via computer networks, including the Internet" [8]. E-commerce represents a new low cost channel for both businesses and consumers to communicate and transform information [9], and many retail stores introduce an online front to reach new consumers [10]. The Internet is becoming the first destination for shoppers to choose the right products or services to meet their needs [11].

Online stores represent an interactive information system between consumers and business owners with high information transactions [12]. Online stores provide consumers with a convenient shopping experience from the comfort of their homes enabling them to save time and effort required to satisfy their shopping needs. It also provides them with the ability to compare different products, reduce time and effort searching for products and prices, benefit from better availability across different times and geographic location, and some consumers find online shopping a way to save money on their purchases [5] [13] [14] [15] [12] [10].
ii. Applying TAM on Online Stores

Technology Acceptance Model (TAM) is a model proposed by Fred Davis in his doctoral thesis in 1985, which predicts users motivations and drivers to adopt different technologies and systems; Davis has proposed that user motivation is affected by three factors: perceived usefulness (PU), perceived ease of use (PEOU), and attitude towards using the technology [16].

Various studies have applied the Technology Acceptance Model (TAM) into online shopping to understand the factors influencing consumers buying intentions from online stores [7][5][17][13][18][19][20][21]. TAM has proved its validity for online services; however, there is still a lack of understanding of the technology adoption factors influencing the acceptance of this technology [18]; an online store is an online system this is why PU and PEOU are suitable to be applied on the intention to buy online [7].

TAM has two antecedents; perceived usefulness and perceived ease of use, both were found to be valid in the context of online shopping [22]. Perceived usefulness was defined by Davis (1989) as the degree to which an individual believes that using a particular system would enhance his or her job performance, while perceived ease of use was defined as the degree to which an individual believes that using a particular system would be free of physical and mental effort.

In the context of online shopping perceived usefulness (PU) relates to the expected benefits a consumer will gain by shopping online, while perceived ease of use (PEOU) is the expected usability of the online shopping experience. Many studies have found that PU has an impact on the intention to buy from online stores, while PEOU didn’t have a significant effect in the same context most of the times [17][13][18][19][22]. This result is compatible with the original TAM assumptions; which assumed that PU has a stronger influence on the behavioral intention than the effect of PEOU [16]. PU is a stronger predictor on the intention to buy than trust, and it would be improved by tailoring the shopping process to help consumers achieve the required task [7].

iii. Trust

Trust is an important factor affecting the success or failure of online shopping [4]. Trust is an expectation that the other party will not behave opportunistically by taking advantage of the situation; however, trusting an online store means having confidence that the store will offer fair prices, insert the right product information, reserve consumer's privacy, and handle credit card and transaction information securely [7][23].

Trust is also constructed of two components, trusting beliefs by the consumer that a specific online store is competent, the transaction will be benevolence, and that the store has integrity, while trusting intention is defined as the consumers' readiness to hold the transaction with a specific online shop [24].

Trust in technology is the belief that the available infrastructure is sufficient enough to hold transactions successfully, while trust in a specific online store is the belief that the specific trustee will be beneficial to the trustee [25]. The formation of trust in online stores assumes that the consumer already trusts the technology level in general, before trusting the specific level of online stores. Once the consumer has acceptance or trust in one online store, it will be easier for him to trust other online stores. In other words, consumers who trusts the Internet infrastructure and find it reliable and secure will be motivated to further trust online stores, thus the trust is transferred from the general to the specific [25][26]. Trust is as significant to the intention to buy from online stores as PU and PEOU, and in some studies has stronger effect on the purchase intention than the TAM antecedents [7]. This is because trust is a primary factor in developing a relationship between merchants and consumers and it affects the buying intention positively [24][25][23][27][26][28], and it allows consumers to handle transactions with the website in ease and increases exit constraints [29].

The reputation of the vendor or the online store is also an important factor that motivates consumers' trust towards a specific online store [30]. It is specifically important in first time shopping activity with the site as it can improve the trusting beliefs of consumers and thus motivating their buying intention [24]. Any negative reputation about an online store may affect consumers' trust and reduce it significantly [4].

Many studies have also considered integrating trust into TAM to study its effect on the buying intention, for example a study in Taiwan has integrated Trust and perceived risk into the TAM model to investigate their influence on the attitude and intention to purchase from a specific online shopping website; trust in this study had three antecedents; calculative based cognition, knowledge based familiarity, and institution based situational normality, their study has found that PEOU, PU, trust, and perceived risk to significantly affect the intention to buy from online shopping site [4].

Like any other new concept being introduced to consumers; online shopping needs to motivate trust so that it can prosper and grow as a business.

iv. Online payment methods

E-commerce and online stores in particular introduces a new channel for financial transactions over the internet; and payments have to adapt to the growing and changing nature of the e-commerce sector [11]. Payment systems are not simple and direct; they include different variables and should be supported by regulations, and stakeholders [31]. However; providing consumers with safe and easy to use payment methods will apply as an influential factor to encourage them to shop online [10][32]. The adoption of E-commerce in many countries is hindered by the availability of safe electronic payment systems, and the convenient infrastructure, and it is driven by the country's economy, technology, and social development [33][11]. A payment system needs two sides to function; the payer and the payee, and a successful payment method is one that can bring as much of consumers and merchants together, which should be accepted and functional for both sides [34].
Online credit cards providers are still looking for ways to overcome challenges of possible fraud and loss of security in online payments to make the experience similar to using the credit card in a brick and mortar store [35]. Credit cards are accessible to Middle Eastern consumers but they still prefer using it to withdraw money via ATM rather than shopping [11]. While online shopping sites in the Middle East accept credit card payments, the region is still considered to be cash driven [11]. This is why Payment on Delivery, an innovative payment method for online stores in developing countries, was introduced so that the consumer can order products online and pay the money when receiving the order.

Pay on delivery option has given the power to consumers and conquered many of their fears concerning trust and perceived risk related to shopping online. Using this option, consumers can avoid using their credit cards information online, and they can pay after receiving the order thus making sure they got it on time and that it meets the perceived quality [36]. However, a drawback for the payment on delivery is that merchants usually add an extra fee when selecting this method, and for the merchant side it may be perceived risky as some consumers may enter false data for the intention of not picking their order, resulting in a loss of costs on the merchant side.

There is no one rule that can be applied to all countries when talking about e-payments. Each country's culture, habits, infrastructure, and regulations guide its adoption or use of different e-payment methods. Merchants should be aware of this fact to tailor their offered payment methods to the size of their targeted consumers' conventions.

v. E-commerce in Jordan

Most of studies in online shopping are held in the context of developed countries with different cultures and infrastructures and the findings of these studies can't be applied or generalized in the context of developing countries [27]; this is why it is important to consider the characteristics and nature of Jordan in order to understand the factors influencing Jordanian consumers into online shopping.

The Middle East can be considered a youthful nation, with more users tickling the Internet for new purposes daily [11]. Jordan is known as the Middle East Silicon Valley; as regardless of its small size it has the largest number of online startups and entrepreneurs in the region [37] [38]. In a comparison between consumers from Jordan, USA, and India to test differences in their intentions to buy online Jordanians were found to have the highest uncertainty avoidance rate, the least readiness to adapt e-shopping, the highest perceived risk, and hence the lowest intention to buy online than other nations in the study [39].

In order to secure e-payments, Jordanian companies has to deal with third party international secure payments providers, because setting up a local secure payment gateway may cost millions [40]. And although several initiatives were taken to implement such services in Jordan since 2002, yet none of these projects have seen the light, however, Jordan technology infrastructure is robust and can hold more developments if initiatives are to be presented by the private sector [15].

Finally, Jordan is a promising country when it comes to e-commerce although it has some limitations relevant to e-commerce legislations, the cultural and social texture, and the availability of payment gateways.

III. METHODOLOGY

This research proposed a conceptual model that extends the original TAM to include trust as an antecedent of buying intention along with perceived usefulness (PU) and perceived ease of use (PEOU). The research will also test the moderation effect of payment method on the proposed extension of the TAM.

Research questions

RQ1: What are the factors that affect consumers' intention to buy from online stores?
RQ2: How does the “payment method” option moderate the relationship between the proposed factors and the buying intention?

Research hypotheses

In order to answer the research questions, the following eight hypotheses were derived from the literature:

H1: PU has a positive impact on consumers' intention to buy from online stores.
H2: PEOU has a positive impact on consumers' intention to buy from online stores.
H3: Trust in Internet technology has a positive impact on consumers' intention to buy from online stores.
H4: Trust in online shopping sites has a positive impact on consumers' intention to buy from online stores.
H5a - d: Payment methods available in the online store have a significant moderation effect on the relationships between intention to buy online and the following predictors: PU, PEOU, technology trust and shopping site trust.

The payment method preference is measured through two options only; these two options were chosen among other payment methods because both are most common in online shopping stores targeting Jordanians.

Research Model

A convenient sample of Jordanian participants were selected for the purpose of this study, the sample was chosen to have
individuals who has an independent income, living in Jordan, and have moderate computer skills.
The response rate and validity of collected questionnaires was high, where 358 questionnaires were returned of 400 disseminated forms. Data was collected both electronically and through paper questionnaires.

IV. Data Analysis

A statistical application (SPSS 20) was used to test data. At first, Cronbach’s alpha was used to indicate the level of internal consistency of all instrument items and check the reliability, where all constructs have proved to be consistent and reliable. Descriptive statistics (such as means, standard deviations, frequencies and percentages) were used to summarize the factors influencing the intention to buy from online stores. A linear multiple regression analysis was used to examine if the claimed predictors are significantly related to individual’s intention to buy from online stores; and to indicate the moderation effect of payment method on other assumed relationships. Finally, Pearson correlations were used to investigate the relationship between each one of the predictors and the dependent variable.

The preference regarding payment method indicates that more preferences prefer the cash on delivery method (63.3%). This result can be explained through the fact that it’s less risky and more convenient for consumers to pay once they receive their order rather than paying in advance through credit card.

Descriptive statistics conducted resulted in high means regarding two major constructs and they are: Consumers buying intentions (mean = 4.02), and the perceived ease of use for online stores (mean = 4.13). The other constructs resulted in medium means as follows: Perceived usefulness of online stores (mean = 3.66), trust in Internet technology (mean = 3.20), and finally trust in online shopping sites (mean = 3.29). On the level of individual items used in the instrument, results indicated that the lowest item mean was for the statement “I trust online shopping sites in general” (mean = 3.03), and the highest item mean was for “Learning to shop online would be easy for me” (mean = 4.18).

Pearson’s correlations were used to investigate the bivariate relationships between each one of the variables (PU, PEOU, technology trust, online shopping trust, and the intention to buy from online shopping sites. The results are shown in the correlation matrix in Table 1.

Table 1: Correlations Table

<table>
<thead>
<tr>
<th></th>
<th>Buying Intention</th>
<th>PEOU</th>
<th>PU</th>
<th>Internet Trust</th>
<th>Online Stores Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying Intention</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEOU</td>
<td>.581**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU</td>
<td>.544**</td>
<td>.490**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet Trust</td>
<td>.495**</td>
<td>.362**</td>
<td>.491**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Online Stores Trust</td>
<td>.532**</td>
<td>.354**</td>
<td>.473**</td>
<td>.626**</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

To partially test the research model and answer the first research question, linear regression test was utilized using all variables as predictors of consumers’ intention to buy from online shopping sites. Results indicated that PEOU, PU, technology trust, and online shopping sites trust were all significant factors in predicting the Intention to buy from online shopping sites with varying significance degree. PU, PEOU, and online shopping sites trust were significant at the 0.001 level, while technology trust was significant at the 0.05 level. All factors are retained in the model after running the stepwise multiple regression analysis (coefficient of determination of the model $R^2 = 0.501$; $F = 88.188$; $p \leq 0.001$). The Intention to Buy from Online Shopping Sites was explained by the significant independent variables with 50.1%.

The equation for this model is:

$$BI = 0.550 + 0.356 \times PEOU + 0.198 \times PU + 0.121 \times TT + 237 \times ST$$

Where:

$BI$: Intention to buy from online Shopping sites

PEOU: Perceived Ease of Use, PU: Perceived Usefulness, TT: Internet Technology Trust, ST: Online Shopping Sites Trust.

The previous regression analysis has considered the multiple regressions model without the moderation effect of the payment method, to consider the moderation effect on previous relationships further analysis should take place. Moderator and moderated variables (PEOU, PU, Technology Trust, and Shopping Sites Trust) values where first standardized and then each independent variable standardized variable where multiplied with the moderator values to create a new moderation variables.

Multiple regression analysis were repeated considering the new moderation variables as new independent variables in the model, the results of these analysis indicated that the payment method moderator is not significant in relation to consumers buying intention from online stores, keeping.

To further explore the differences among results for the two different payment methods an ANOVA test was conducted. ANOVA test shows that for credit card payment options the respective means for the model predictors and dependant variables are higher than those for the cash on delivery payment option. This result indicates that consumers who are willing to pay using their credit cards has higher intention to shop online, as well as higher understanding of the online shopping site mechanism and possible benefits, and more trust in both technology and online stores.

This result may relate to cultural and social concepts, where consumers' who has an open mind for using credit cards to shop online have a better tendency towards trusting technology and accepting new innovative ideas, than other consumers who insist into sticking to classical and regular methods they are used to.

The largest difference in means is for the intention to buy online where it ranges from (3.6) to (4.6) indicating a real difference in intention between both groups, where users preferring credit cards has higher intention to shop online. The lowest differences is for PEOU with higher mean (4.4) and lower one (3.9), this indicates that both groups do
perceive online shopping sites as easy to use, but consumers who prefers credit cards perceives them to be even easier.

V. Discussion

Considering the Jordanian nature, this research has proposed the consumer's favorite payment method as moderator for the relationship between previous factors and the intention to buy from online stores. Results indicated that payment method choice is not a significant moderator and doesn't really affect all other relationships. The model has proved to be robust and significant, and the findings are compatible with previous studies in the literature. The results show that Jordanians intention to buy from online shopping stores is influenced by the TAM antecedents [41] [42] [43], and by the technology and Store trust which is compatible with the findings of previous research [7] [41]. Such results support hypotheses H1 through H4. However, PEOU was the most influencing factor of all other predictors (Standardized beta coefficient = 0.345), which comes in alignment with some studies [42] but contradicts with the findings of most studies that utilized the TAM and online shopping. The majority of previous research concluded that PU had always has a higher influence on the intention to use the technology than PEOU [17] [13] [18] [22] [41], and with the assumptions of the original TAM as well [16]. Shopping sites trust comes next with a standardized coefficient of (0.237) which is higher than the PU coefficient of (0.195) which also contradicts with the findings of previous research [7], which had found PU to have higher influence on the intention to shop online. The lowest influencing effect is for Technology trust with the standardized coefficient of (0.134). As for the moderation effect of the payment method preference, results failed to support our assumption for all assumed moderation effects, which results in rejecting hypotheses H5a through H5d. However, the ANOVA test has shown that the average means for participants who has selected the credit card method are higher than for those who had selected to buy cash on delivery indicating that consumers who has enough trust and capabilities to use the credit card to buy online have higher intentions to use online stores for shopping.

Conclusions

Online shopping is a booming phenomenon in the Arab world and it's important to understand the factors that will contribute to its success and buy in by consumers. The results of this study have indicated that Jordanian consumers should be studied individually for the adoption of any new technology rather than applying global strategies inside Jordan. Perceived easiness of use (PEOU) was the most influencing factor on the intention to buy online indicating the importance of usability of the applications and websites for the Jordanian consumer. Trust in website owners comes next, indicating that consumers evaluate online shopping site as individual cases where they look at each online store features and trustworthiness exclusively before thinking of doing transactions with it. They also care more about trust in online stores than any other added value they will perceive by shopping online. Finally, the intention to buy from online stores in Jordan is influenced by the PEOU, trust in online stores, PU, and trust in the Internet technology respectively. However, most Jordanians prefer to use cash on delivery method for shopping online rather than credit cards although the preferred payment method doesn't affect their influence by the other previous factors.

VI. References


