The Extension of TAM: The Effects of Social Media and Perceived Risk in Online Purchase

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Abstract-- This present study is designed to propose a conceptual framework extended from the previously advanced Theory of Acceptance Model (TAM). The framework makes it possible to examine the effects of social media, and perceived risk as the moderating effects between intention and actual purchase to be able to advance the Theory of Acceptance Model (TAM). 400 samples will be randomly selected among Saudi in Jeddah, Dammam and Riyadh. Data will be collected using questionnaire survey. As the research involves the analysis of numerical data, the assessment is carried out using Structural Equation Model (SEM). The hypothesis will be tested and the result is used to explain the proposed TAM. The findings from the present study will be beneficial for marketers to understand the intrinsic behavioral factors that influence consumers’ selection hence avoid trial and errors in their advertising drives.

Index Terms— Online purchase, online shopping, online transaction, Saudi consumer behavior

I. INTRODUCTION

The emergence of technology and Internet has not only allowed individuals to do shopping online without having to leave the comfort of their homes, but also improve the economy by promoting globalization through the rapid growth of international trade, global corporations and non-local consumption alternatives [1]. The Internet technology results in online shopping where the activities of buying and paying for items is done via shopping websites, from personal computers at anytime and anywhere.

Online shopping has shown an impressive scale in its growth. Reference [2] reported that more than 20% of the Internet users buy products and services online. In developed countries such as US, the annual growth of Internet shopping has increased by 45.9%. Countries in the Middle East and the Gulf States have also shown tremendous increase in online purchase. For example, the revenue generated from online transactions in Saudi Arabia from 2002 to 2005 increased by 100% from only $278 million to $556 million.

In a report by [3] regarding the ICT indicators in the Kingdom of Saudi Arabia, the numbers of Internet users has grown from around 1 million users in 2001 to an estimated 12.5 million at the end of the first half of 2011. This has shown an increased penetration to 44% of the population by the given time. However, irrespective with the rapid penetration of the Internet users in Saudi Arabia as the world’s largest oil producer as according to [4], its e-commerce is still underdeveloped. As the largest and fastest growing ICT marketplace in the Arab region [5], [6] and [7], the online purchase activities in Saudi Arabia are not progressing at the same speed [5], [8], [9], [10] and [11].

The users of the Internet have been utilizing the technology for the purpose of social networking which resulted in the increasingly popular social media webpages. The social media has created a new landscape for marketers to reach their potential buyers where in Korea and China, online shopping is actively executed at present. Nevertheless, according to [12], consumers in Hong Kong, Thailand and Japan are still slow in the intentions to make online purchase in the future. Saudi consumers, on the other hand, were reported to use social media only for making buying decisions [12].

The vast development of social media has added to the increasing importance of identifying possible factors to encourage more online purchase in the future. This present study is then designed to examine the effects of social media, facilitating condition and perceived risk as the moderating effects between intention and actual purchase to be able to advance the Theory of Acceptance Model (TAM). It is aimed to identify the factors affecting the adoption of online purchasing by consumers in Saudi Arabia in the light of the extended TAM.

II. LITERATURE REVIEW

A. Theory of Acceptance Model

The Technology of Acceptance Model (TAM) is reflected as the most significant and commonly employed theory to understand the electronic commerce [13]. The TAM has been greatly applied in the online purchase and is used as the foundation to the consumer acceptance of online stores.
Therefore, TAM is chosen in the present study as the base theory. Current observations indicate that although TAM is a highly cited model, researchers share mixed opinions regarding its theoretical assumptions, and practical effectiveness. It is concluded that future research in TAM will focus in developing new models that would exploit the strengths of the TAM model while discarding its weaknesses [14].

In TAM, there are two behavioral factors examined. In a study, [15] reported that some studies described online purchase based on the purchase behavior, whereas, other studies described this as the process of information gathering and purchasing. Online purchase intention, on the other hand, describes the willingness of an individual to try, or the strength of intended effort to perform a behavior [16]. Behavioral intention does not perfectly correlate with the actual behavior. An individual may engage in a less intended choice due to the presence of constraints (behavioral control factors).

Generally, however, behavioral intention tends to have a positive association with the actual choice of that behavior. That is, the stronger an individual’s behavioral intention, the more likely she is to perform the behavior. In most studies, either online shopping intention or actual behavior was chosen as the dependent variable of interest. A few studies investigated both jointly [36].

Independent Variables

Usefulness

In a robust TAM, perceived usefulness predicts IT use and intention to use. According to [17], 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. A website is useful if it delivers services to a customer but not if the customers’ delivery expectations are not met.

Similarly [18], also indicates that perceived usefulness reinforces an online shopper’s intention to continue using a website, such that when a person accepts a new information system, one may be more than willing to alter practices and expand time and effort to use it.

Consumers are likely to evaluate and consider product-related information prior to any purchase, and perceived usefulness which may be more important than the hedonic aspect of the shopping experience. However, consumers may continue using an online shopping service if they consider it useful even if they are dissatisfied with its prior use [19].

H1: There is positive and significant relationship between trust and e-shopping intention.

Enjoyment

“Enjoyment” reflects consumers’ perceptions regarding the potential entertainment of Internet shopping [20]. Enjoyment in using a website significantly affects intentions to use [21]; [17]. Shopping enjoyment, perceived entertainment value of the website, and perceived visual attractiveness have positive impacts on perceived enjoyment and continuance intentions.

[22], also added that enjoyment can predict attitude towards online shopping behaviour, just as much as usefulness can. However, usefulness was the better predictor for grocery items, whereas enjoyment offered better results for hedonic purchases.

H2: There is positive and significant relationship between usefulness and e-shopping intention.

Trust

Trust refers to an expectation that others will not behave opportunistically. Trust therefore implies a belief that the vendor will provide what has been promised [17]. It can also be defined as a belief that one party can rely on a word or promise given by another party which can also help to develop or maintain a relationship between the two parties [23].

Previous studies have identified trust as an important factor influencing customer participation in web-based commerce [24]; [25] & [23]. Trust can help to mitigate the customers’ worries about the risks and uncertainties of conducting complicated businesses online and encourage them to participate in online activities [23]. Building trust with consumers is also another essential mission for retailers in the online shopping area, because purchasing decisions represent trust-related behaviours.

A person’s beliefs about what others think about the behaviour also should directly influence subjective norms. Therefore, if e-shopping is a socially desirable behavior, a person is more likely to do online shopping [26]. The empirical results suggest that the most important antecedent of behavioural intentions is trust [27]; [28] & [29].

H3: There is positive and significant relationship between enjoyment and e-shopping intention.

Dependent Variables

Actual e-Shopping Behavior and e-Shopping Intention
There are many definitions of e-shopping found from previous studies [30]. These researchers also found that some studies describe e-shopping based on the purchase behavior, whereas, other studies described this as the process of information gathering and purchasing. There are three dimensions included in the measure of actual e-shopping behavior; the adoption of e-shopping, the amount spent online, and the frequency of using e-shopping.

E-shopping, or online shopping as described earlier is the willingness of an individual to put his effort to perform a behavior. However, the presence of behavioral control factors may become the constraint to perform the behavior. Nevertheless, there is a direct relation between behavioral intention and the actual choice of the behavior. As concluded earlier, this direct relation means that the stronger an individual’s behavioral intention, the higher the potential for the behavior to be performed.

However, there are more previous studies discussing either e-shopping intention or actual online purchase as the dependent variables of interest, and fewer studies investigated both e-shopping intention and actual online purchase together.

**H4:** There is positive and significant relationship between e-shopping intention and actual online purchase.

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**B. The Online Purchasing Behavior Moderators and Hypothesis**

**Perceived Risks**

Perceived Risk was firstly originated from psychology research domain, which is defined as any consumer action that will lead to unexpected results which may be unpleasant, so consumer behaviour is a kind of risk bearing in itself [31]. Consumers perceive online purchase as more risky compared with traditional shopping and this considerably curbs consumers’ willingness to buy online [32].

When it is related to online shopping, the risk may then be defined as the subjectively-determined expectation of loss by an online purchaser in contemplating a particular online purchase [33]. Amongst the identified perceived risks are financial, product performances, social, psychological and time convenience loss [32] and [33].

Prior research examining risk perceptions in marketing has found that risk perceptions are negatively associated with willingness to buy [34]. As [32] mentioned, future studies may find it productive to examine the impact of perceived risks on shopping intentions of browsers and the role perceived risks plays in the adoption of the Internet as a new medium of purchase. Thus, we will examine:

**H5:** As perceived risk is greater, the relationship between intention and online purchasing will be weakened.

**Social Media**

Social media (Facebook, MySpace, Linkedin, etc.) have grown to be new truly significant new phenomena in human communication and interface patterns and may have a deep impact in the way people communicate and contact with each other [35].

However, this issue is still in the early stages of investigation. This study will also investigate the moderating effect of social media on the relationship between intention and actual behaviour thus:

**H6:** As social media is greater, the relationship between intention and actual online purchase will be stronger.

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**C. Proposed Modeling Online Purchase Framework in Saudi Arabia**

Although the number of internet users in Saudi Arabia is increasing, the actual percentage of consumers in online purchase is still at the minimal level. Considering this fact, this study aims to construct a framework of online purchase in Saudi Arabia.

![Fig. 1. Online Purchase Framework in Saudi Arabia](image_url)
quantitative method is adopted. A set of questionnaire is developed based on previous study to measure the variables involved, i.e., usefulness, enjoyment, trust, perceived risk, intention, online purchase and social influence. The analysis of the data is assessed using Structural Equation Model (SEM). 400 respondents aged 18 and above are randomly selected among Saudis in Jeddah, Damman and Riyadh.

IV. CONCLUSION

This research is in attempt to propose a new model extended from the previously advanced model where the independents variables stopped at e-shopping intention. Many previous researchers stopped at the e-shopping intention because they assumed that the intention would automatically direct to the actual purchasing action. In contrast, very few researchers studied both intention and actual action jointly. When behavioral intention and actual behavior are simultaneously included in an empirical study, attention should be given to the time precedence between intention and actual behavior [36].

V. REFERENCES


Areeg Al-Mowalad was born in Jeddah, Saudi Arabia, on December 5, 1976. She graduated from the King Abdul Aziz University in 2000 when she was awarded with the Bachelor Degree in Clothing and Textiles. In 2004, she was awarded with the Master Degree also in Clothing and Textiles.

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