

Individual Personality Factors as Drivers for Electronic and Mobile-Shopping Acceptance in United Arab Emirates

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Abstract

Purpose: The purpose of this paper is to examine how individual personality factors including functionality factors interactivity, psychological factors, usability and technology factors, and product/service characteristics can influence Dubai Emiratis to adopt and use online shopping.

Methodology: Thirty six questionnaire items were administered to 180 adult Emiratis living in Dubai to examine the influence of personality factors on online shopping acceptance. The sample of 180 Emiratis was chosen through random sampling technique.

Results: The findings significantly improved the understanding of users in Dubai in terms of their E&M-Shopping acceptance. The factors could assist in achieving successful E&M-Shopping acceptance. Along a similar line of importance, the findings highlighted the low awareness of users concerning government regulations and product return policy.

Practical implications: The result of this study showed that usability and technology factors affected the consumers' acceptance of Electronic and Mobile shopping. Therefore, future technology in E&M-Shopping should be enhanced through government initiatives and such enhancements will be evidenced in the country's -GDP. This is also expected to achieve the target of the UAE vision 2021 to be among the top 20 countries that are in readiness to capture opportunities provided by information and communication technology to increase competitiveness.

Originality or Value: The findings of this study are expected to add knowledge to the behaviour of Dubai Emirati consumers with regard to electronic commerce. Emirati consumers who dwell in Dubai have been compared to international consumers.

Keywords: m-shopping, e-shopping, consumer behaviour, Dubai

1. Introduction

E-commerce has evolved into a popular and acknowledged way of conducting business (Ankar & D'Incau, 2002; Bhattacharjee, 2000) in the past two decades. Such rapid expansion produces extraordinary results for both businesses and consumers in online or in offline environments (Wei, Marthandan, Chong, Ooi, & Arumugam, 2009). Furthermore, it was revealed that e-commerce has several interrelated dimensions related to both business and government and it comprises a database of laws, regulations and government laws for industry sectors. Aside from the above, on-line application and submission of official forms (such as company and value added tax) and on-line payment facilities are also included. At a business level, e-commerce involves B2C and B2B e-commerce. B2C e-commerce enables consumers to empower, develop and create new products, and explains how products are customised and services delivered (Gefen & Straub, 2004). In contrast, B2B facilitates the form of organisation where companies rely on suppliers and product distribution to respond more effectively to the changing market and consumer demands and to achieve more efficient operation (Albrecht, Dean, & Hansen, 2005). E-commerce offers convenient shopping methods for products, information and services, electronic banking and personal finance management. It makes it easier for consumers to find the desired products and services that match with their requirements (Vulkan, Nir, 2003; O'Farrell, Levine, Algroy, Pearce, & Appelquist, 2008). This way of commerce or shopping helps in reducing the costs significantly by removing 'middlemen'

from the supply chain. Good examples of companies that employ this business model are Dell and Cisco (Guttmann, 2003; Laudon & Traver, 2002). Dell and Cisco are more successful in strengthening business relationships, eliminating inventory, operational and distributional costs as well as offering products directly to their customers at lower prices. Moreover, it has been found that the affordable tablets, smart-phones and portable computers are changing the way that consumers shop and pay, whether online or on the go. In this sense, the m-commerce (M-Shopping) is another emerging concept in e-commerce, which makes shopping more comprehensive, convenient, cost-effective and easily accessible to consumers and it allows them to fulfil their needs and requirements in very less time. The term m-commerce was initially originated by Duffey (1997) and defined as: *“The delivery of electronic commerce capabilities directly into the consumer’s hand, anywhere, via wireless technology”* (Duffey, 1997). The hand-device technology, especially for the shopping purpose, has been increasing day by day due to their affordability. Secured technology developments are driving the mobile commerce. Companies are making increasing use of consumer data to inform and guide their operations and added to this, electronic and mobile payments have been increasing (Fidelity Worldwide Investment, 2013).

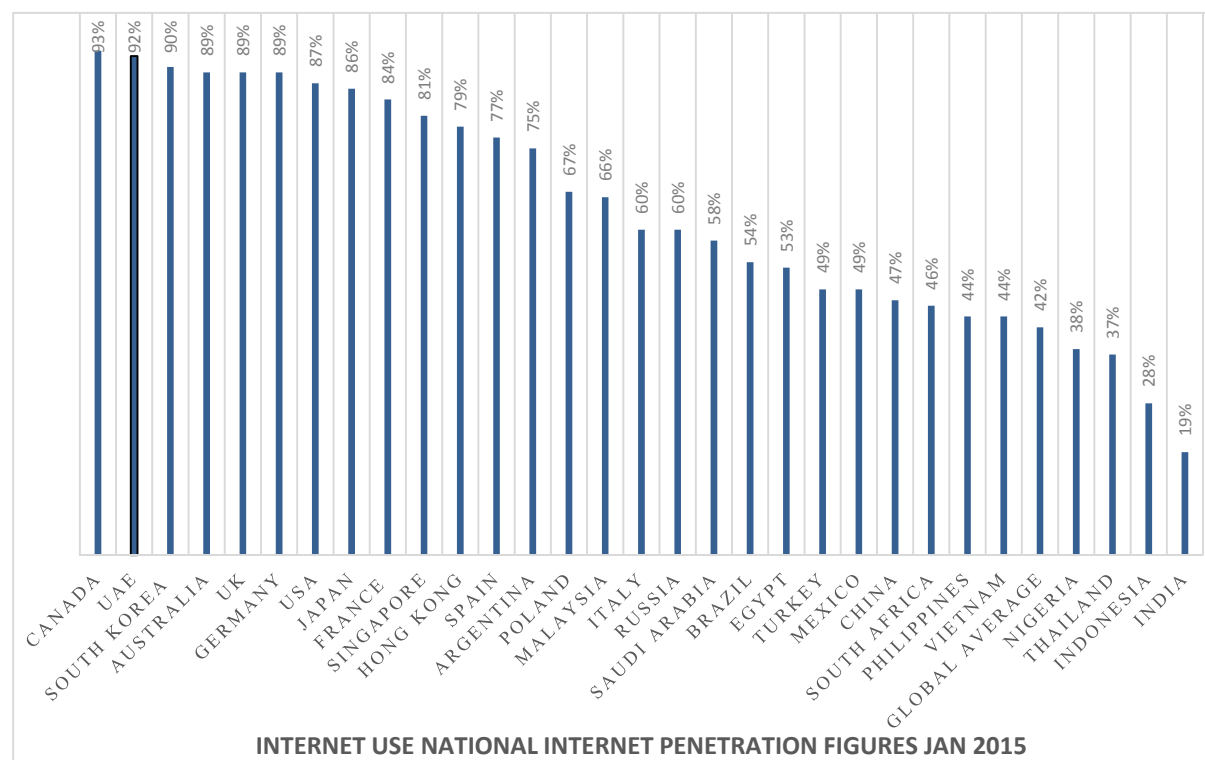


Figure 1. Internet users throughout the world (Kemp, 2015)

In Figure 1, it is illustrated that the Internet users has been increasing throughout the world and nations such as Canada, UK and USA lead nations in terms of the greatest the Internet penetration. Similarly, the UAE has been found to be the second largest nation in terms of using the Internet at a percentage of 92%.

In Figure 2, it is illustrated that the users access the Internet by using different devices like laptops, desktop PCs, and mobile phones. In this regard, the UAE has been found to be the sixth largest nation in terms of using the Internet via laptops, desktop PCs, and mobile phones. Since, in the UAE, 5.1% of users access the Internet through laptops or desktop PCs while 38% of users access the Internet through mobile phone devices. Moreover, the use of mobile phones to access the Internet is high in the UAE.

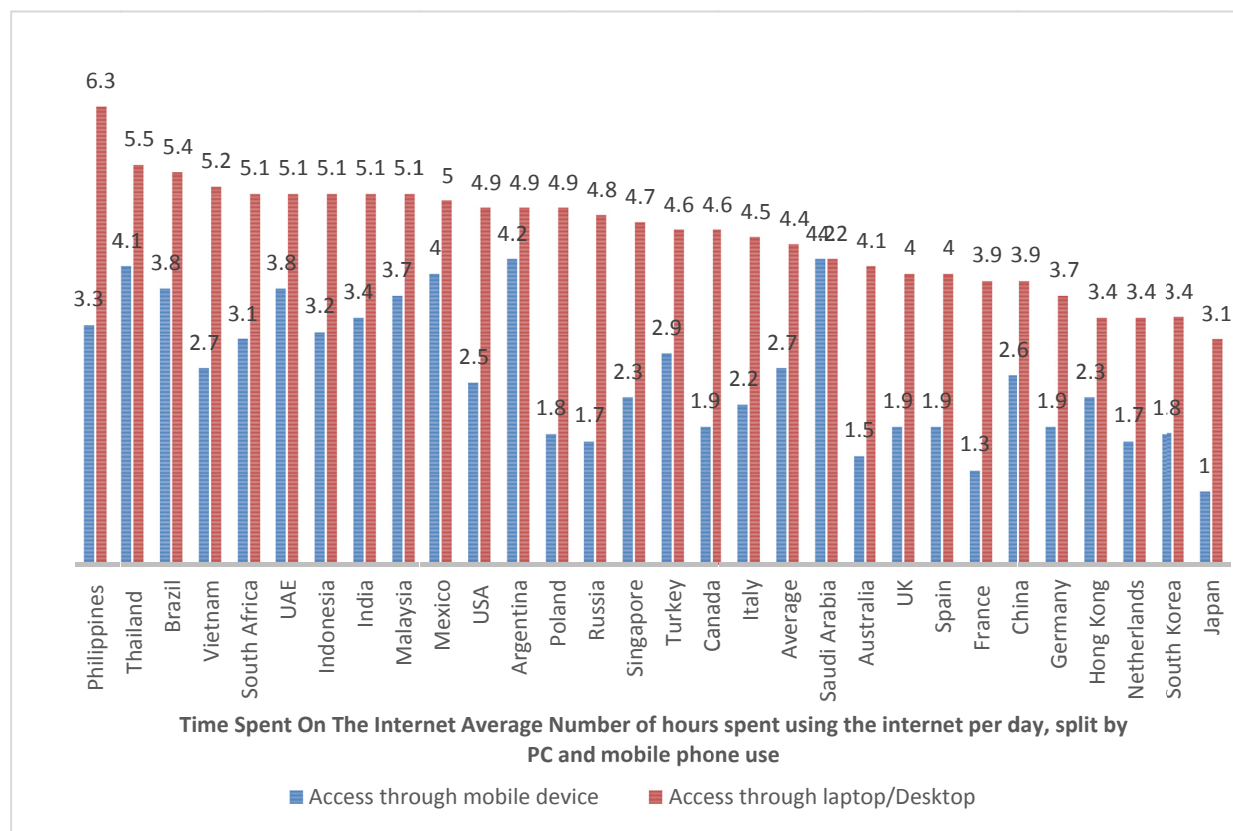


Figure 2. Time Spent on the Internet throughout the World (Kemp, 2015)

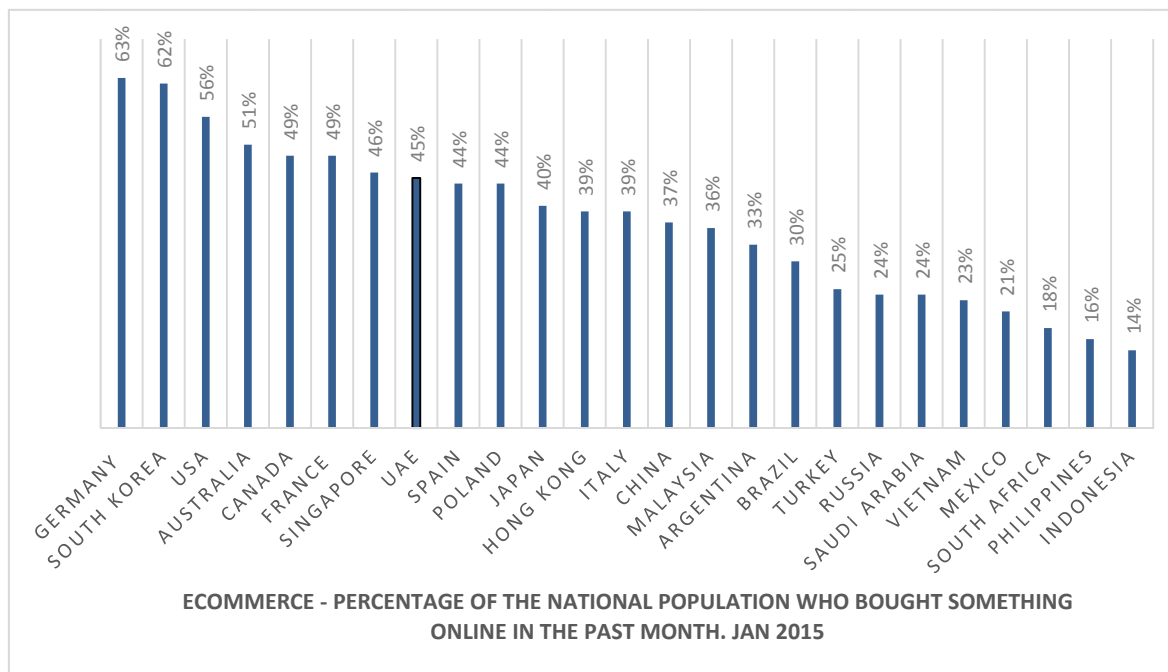


Figure 3. Ratio of e-commerce throughout the world (Kemp, 2015)

Figure 3 illustrates the ratio of e-commerce throughout the world. In this regard, UK, Germany, South Korea, and USA are the four largest nations. In contrast, the use of e-commerce in the UAE is relatively low. Since, in the UAE the ratio of e-commerce is only 45% indicating that the notion of e-commerce in the UAE is relatively low as compared to the other nations of the world.

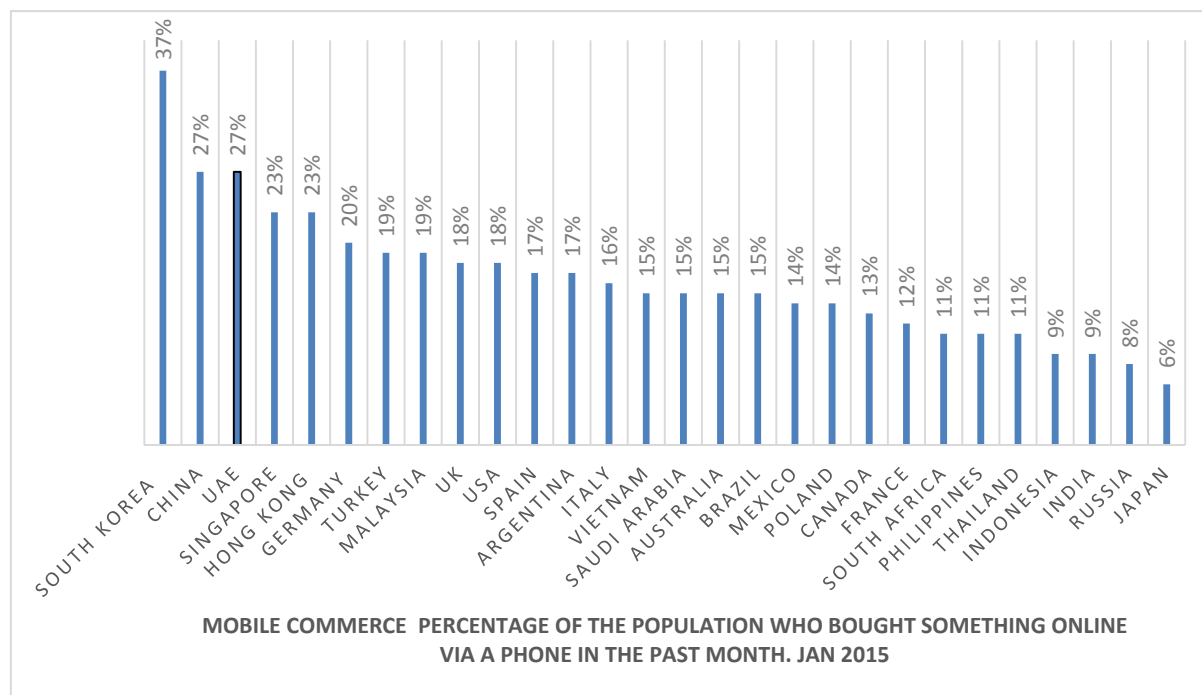


Figure 4. The ratio of M-commerce throughout the world (Kemp, 2015)

Figure 4 illustrates the ratio of m-commerce throughout the world. In this regard, South Korea and China are the two largest nations. In contrast, the use of m-commerce in the UAE is 27%. However, it is indicated that the notion of m-commerce in the UAE is relatively low as compared to the other nations of the world (Kemp, 2015).

The research was motivated by the low use of online shopping by the Emiratis in Dubai compared to other countries that have accepted and adopted online shopping. The UAE was recently ranked 23 among 143 countries in the Global Information Technology Report (GITRP) 2015 according to a study conducted by World Economic Forum (WEF) and (INSEAD). As per the UAE vision 2021, the target is to become one of the top 20 countries in this regard. This paper desires to establish personality factors, which modify the behaviour of Emiratis in Dubai towards the acceptance of online shopping, which is part of the main factors affecting the increase of competitiveness based the indicator defined in the National Key performance indicators "Use of ICT by individuals, businesses, and government" (The economic and social impact of information and communication technology).

2. Theoretical Background

This research focuses on the current E&M-shopping market situation in the UAE. The study framework investigates the research question constructed by a number of researchers in their studies to study the different aspects of the issue under consideration (Venkatesh; Davis, 2000).

2.1 Technology Acceptance Model (TAM)

TAM was first introduced by Davis (1986) and was developed by the use of TRA in psychology research, which worked as a well-developed and tested behavioural prediction model (Davis, 1989). The TRA model has been successfully utilized by the researchers of mid 1970s to predict consumers' behaviour towards technologies (Shih & Fang, 2004). On the other hand, TAM suggests how and when the different factors influence consumer's decision whenever new technology is introduced (Davis, 1989). Notably, these factors are divided into two categories, i.e. Perceived Usefulness (PU) and Perceived Ease-of-Use (PEOU) (Davis, 1989). Perceived usefulness (PU) shows the level to which an individual or user believes that the use of specific technology would improve his/her performance, while Perceived ease-of-use (PEOU) shows the level to which an individual or a user believes that the use of specific technology would be free from effort (Davis, 1989). The illustration of TAM is shown below:

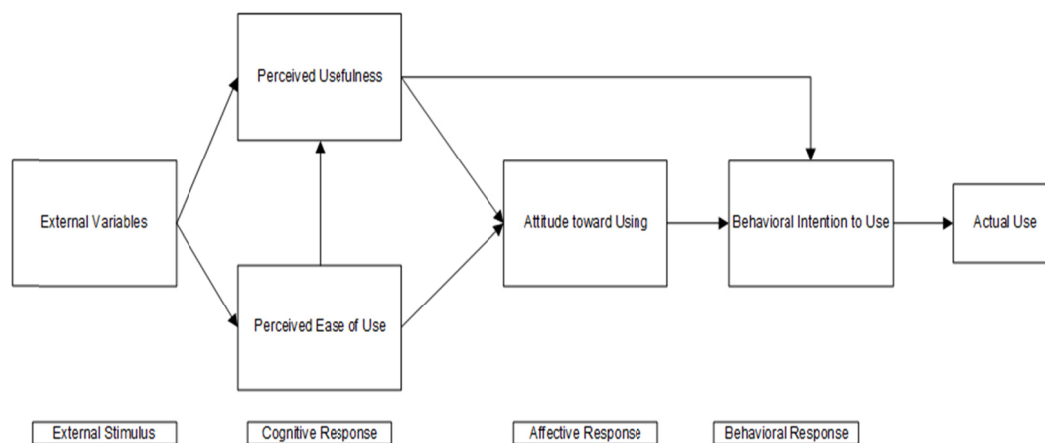


Figure 5. Technology Acceptance Model (Davis, 1989)

According to Bagozzi, Davis and Warshaw (1992), understanding the emerging technology is important because;

“New technologies such as personal computers are complex and an element of uncertainty exists in the minds of decision makers with respect to the successful adoption of them, people form attitudes and intentions towards trying to learn to use the new technology prior to initiating efforts directed at using. Attitudes towards usage and intentions to use may be ill-formed or lacking in conviction or else may occur only after preliminary strivings to learn to use the technology evolve. Thus, actual usage may not be a direct or immediate consequence of such attitudes and intentions.” (Bagozzi, Davis, & Warshaw, 1992, p. 667).

It has been found that the TAM is the most famous and essential approach in the area of E&M-Shopping adoption and acceptance of new technology (Kini, 2009; Yaseen & Zayed, 2010; Tarasewich, Nickersonl, & Warkentin, 2002; Wixom & Todd, 2005; Wu & Wang, 2005) and a number of benefits have been associated with the model in the literature. The model has been found to be effective enough to increase the acceptance of technology among the users and is able to assess the individual's opinion and intention about future use of certain technology (Yaseen & Zayed, 2010). Furthermore, the use of TRA in TAM has been identified to be effective in terms of understanding the different behaviours of technology users (Yang, 2005).

Nevertheless, there are several criticisms brought forward about TAM in the literature which highlight some of its limitations while motivating people towards the acceptance of new technology. According to Chuttur (2009), TAM has a limited explanatory and predictive power as well as it has a lack of practical value therefore it can be implemented in any practical setting (Chuttur, 2009). Similarly, Benbasat and Barki (2007) argued that the TAM diverts the attention of a researcher from the important research issue and creates an illusion of progression in building knowledge and awareness (Benbasat & Barki, 2007). Bagozzi (2007), on the other hand, they stated that TAM is a very general approach, which focuses on the individual users of a technology by covering only perceived usefulness and ease of use while the social processes of technological development and implementation have been ignored completely in the model (Bagozzi, 2007). Thus, it can be said that while adopting TAM as an approach to identify the behaviours of E&M-Shopping users, all limitations and lacking areas must be considered and addressed in this study so that authentic results can be acquired.

3. Hypothesis Framework

3.1 Factors Affecting the Acceptance of E&M-Shopping

3.1.1 Functionality Factors Interactivity/Convenient Shopping Environment

The interactive nature of the Internet or E&M-Shopping environment allows online vendors to enhance the web experience of visitors by presenting more personalized services and by doing so, it facilitates the willingness to share experiences and suggestions that can be enhanced among online users.

Interactivity can be enhanced by underpinning two key elements namely personalization and networking. Thus, interactive elements contribute in increasing positive behaviour of consumers towards online shopping by reducing uncertainty associated with online transactions (Saariluoma & Isomäki, 2009). The interactive facility also allows consumers to interact with vendors to ask questions or share opinions while using the website. For this purpose, online vendors use online helpdesks or support services. Networking, on the other hand, helps in establishing contact between consumers and vendors by means of active interface like users' forums, chat rooms

or bulletin boards. Moreover, these two interactivity components are of two types; i.e. interactivity with the online vendor and interactivity with other web users (Okonkwo, 2007). Online consumers want convenient shopping and support so that they can communicate with the vendors in case of any problem with purchased products or services. This can be achieved only through interactive website design and associated components. In contrast, interactivity becomes a greater challenge for web designers as they need to organize online or offline helpdesks, efficient reverse logistics, rapid way to respond to e-mail complaints and inquiries. Thus, in this case, good knowledge of consumer profile and needs is important for designer and online vendors. In the literature, a study found that the users' forums, bulletin boards, chat rooms, guest books are the most essential web experience components (Constantinides, 2004). The new way of peer-to-peer interaction i.e. music files exchange and web-logging are the key interactive elements which are gaining popularity in the field of online commercial activities (Cravatts, 2014).

Additionally, Keisidou and Sarigiannidis (2011) argued that the interactivity aspects of an online vendor appear to have a significant effect on the online shoppers, where most of the consumers consider interactivity factors such as quick response, online representative availability, wide collection of products, promotional offers, and fastest ordering and delivering process, more important when it comes to choosing an online vendor. Therefore, the following hypothesis is proposed:

H1. Interactivity has a positive influence on attitudes towards E&M-Shopping.

H2. Convenient shopping environment has a positive influence on attitude towards E&M-Shopping.

3.2 Psychological Factors

3.2.1 Brand Reputation

Brand reputation also influences the online shopping behaviour of consumers. It is found that the firms with well-established reputation, brands and products quality usually have considerable benefit as compared to online novices and start-ups vendors or sellers. According to Lee and Park (2001), high levels of awareness about brands and brands' good reputation provides flexibility to consumers to trust the companies whether they are operating online or offline as well as to diminish the needs of online consumers' demands for credibility or integrity credentials (Lee & Park, 2001). Moreover, in psychological factors, particularly in brand reputation, online trust related to transaction security and consumer data safety are the two key elements, which could affect the online sales of the business and could prevent consumers to purchase products or services from a certain vendor.

In contrast, it is found that online sellers with lack of strong brand recognition and physical presence underestimate the importance of consumers' trusts and consumers' online experience (Constantinides, 2004). From the above discussion, the following hypothesis is postulated;

H3. The consumers' attitude towards E&M-Shopping acceptance has positive significant relationship with brand reputation.

3.2.2 Government Laws and Regulations

Government laws and regulations can be defined as the assessment of an organization regarding the preparation of the nation state and its assistance to support, facilitate and standardize e-commerce and its several needs (Molla & Licker, 2005). Moreover, it is found that the role of government is considerable in promoting and distributing the advantages of e-commerce (Ajzen, 1991). The findings of the study conducted by Kamel (2006) showed that the activities of government played significant role in accelerating e-commerce (Kamel, 2006). Argued that the government can provide a facilitating environment in which e-commerce can be executed to its full potential. Moreover, government can support online businesses by addressing all the problems and challenges related to awareness, infrastructure development, local content creation and culture concerns associated with the online environment by the integration of effective policies and regulations (Kamel, 2006). For this purpose, the following hypothesis is proposed to be tested;

H4. Government laws and regulations have a positive effect on consumers' attitude towards E&M-Shopping acceptance.

3.2.3 Subjective Norms

To become a successful retailer in online environment, it is necessary to understand the purchasing behaviour of consumers. To this end, retailers must have sufficient understanding regarding the website's design and support so that they can efficiently meet with the consumers' data gathering and online shopping behaviours. Thus, it can be said that the visual stimuli and communication with the help of text and sound can positively or negatively

affect the online needs and actions of consumers (Vijayasarathy & Jones, 2000). This statement is widely supported by the TRA as the theory posits that human behaviour is preceded by intentions based on consumers' attitude towards shopping behaviour and perceived subjective norms (Ajzen; Fishbein, 1980). Moreover, it is studied that the consumers' attitudes show their favourable or unfavourable feeling towards performing online shopping. In the same way, subjective norms confine the perception of consumers regarding the influence of significant elements such as family, peers, authority figures, and media.

In this area, consumers often act based on the thinking of what others perceive if they do so. Furthermore, Taylor and Todd (1995) stated that subjective norms tend to be more significant at the early stages of implementation of innovative technologies when consumers have inadequate direct experience from which to develop behaviours (Taylor & Todd, 1995). Thus, at the early stage of behavioural development, online retailers have to keep this thing in their mind that subjective norms can influence the shoppers' tendency towards online shopping behaviour (Yu & Wu, 2007). To achieve this purpose, the following hypothesis is proposed:

H5. Subjective norms have an impact on the perceived outcome of E&M-Shopping acceptance by consumers such that consumers with higher collectivism perceive better outcomes in Dubai.

3.2.4 Guarantees and Return Policies

Like in traditional businesses or markets, product guarantees offered by online vendors or businesses are potential tools for acquiring competitive advantages, increasing the level of consumer trust and diminishing the concerns associated with online transaction. Thus, clear policies implementation associated with product returning procedures and compensation have been found to have an optimistic influence on the credibility and integrity of online vendors (Grazioli, 2001). Therefore, the following hypothesis is proposed;

H6: Convenient product return policy and guarantees have positive effect on consumers' attitude towards E&M-Shopping acceptance.

3.3 Product /Service Characteristics

3.3.1 Marketing Mix

In literature, several researchers have argued that the impact of marketing mix elements (product, price, promotion, and place) on the behaviour of online shoppers is considerable when they come to buy products or services online. Authors are of the consensus that the 4P's of marketing mix including fulfilment are the significant components that contribute in either enhancing or lowering web experience of online shoppers. This ongoing debate on the significance of marketing mix, as an approach of conventional marketing, underlines the fact that more research needs to be conducted in this area in order to exactly define the role of these elements in online shopping environment (Goldsmith, 1999; Gummesson, 1997). Therefore; the following hypothesis can be proposed:

H7. The consumers' attitude towards E&M-Shopping acceptance has positive significant relationship with marketing mix.

3.3.2 Frequency of Purchase

In the literature, frequency of purchase is one of the measures that have been widely used to identify purchasing likelihood for products within specified times (Whitlar, Geurts, & Swenson, 1993). At the start, the good behaviour of consumers towards online shopping positively decides their purchasing intention. Furthermore, it has been revealed that a buying intention affects the consumers' final buying decision and their actual purchasing intention. This fact is also proved by literature (Goldsmith, 2002) where it was stated that online purchasing intention and consumer satisfaction are positively correlated with each other. According to Kim and Kim (2004), consumers' intention can be explained in terms of purchasing behaviour, intention to spend more time at online stores, and intent to suggest the online store to other people (Kim & Kim, 2004). Therefore, the following hypothesis is proposed;

H8. Increase of frequency of purchase has a positive effect on consumers' attitude towards E&M-Shopping acceptance in Dubai.

3.4 Usability & Technology Characteristics

3.4.1 Security

In TAM theory, perceived security (PS) is the only element which has not been extensively examined. However, in the literature, this element has been considered by several authors and its significant impact on the purchasing behaviour of online consumers have been evidenced by authors (Nysveen, Pedersen, & Thorbjørnsen, 2005).

These authors consider this aspect because at the time of using mobile phones as a platform of shopping, most of the consumers are unsure about the security aspects. Thus, this leads them to feel little satisfaction and pushes them to think whether or not they are safe. Hence, it would have a negative impact on their intention to use online shopping mode. Therefore, the following hypothesis is proposed;

H9. There is a positive relationship between the perceived security concerns of E&M-Shopping services and consumers' attitude towards E&M-Shopping acceptance in Dubai.

3.4.2 The Telecommunication Infrastructure

The supporting industry to E&M-Shopping such as telecommunications could affect the e-businesses because of their IT based activities and services (Molla & Licker, 2005). Therefore, e-businesses must have adequate infrastructure to take off and continue the development of e-commerce (Nysveen, Pedersen, & Thorbjørnsen, 2005). While e-businesses have to concentrate on the core competencies, it is equally important for them to be aware about the other organizational activities mainly associated with the provision of IT infrastructure and services. Therefore, the following hypothesis is proposed;

H10. The existence of telecommunication infrastructure for E&M-Shopping would positively impact towards E&M-Shopping acceptance of consumers in Dubai.

3.4.3 Web & App Design

The key aim of e-commerce businesses is to target the other countries by expanding their business activities as well as to acquire international users. To achieve this aim, online vendors need to obtain appropriate support of web design features to make it into an attractive shopping platform (Nguyen, Torlina, Peszynski, & Corbitt, 2006).

In addition, online vendors have to use appropriate language to target international consumers because the facility of translating web page is not solely adequate to deliver information in a proper manner (Chau, Au, & Tam, 2000). In this area, cultural boundaries may come into view, which could influence the purchasing behaviour of consumers belonging to different regions of the world (Constantinides, 2004). Therefore, online vendors must have adequate understanding about cultural differences and this should be reflected through their website design, web interface, and nature of payment method. Hence, based on the findings, it can be said that the web applications and interface is one of the key aspects of e-commerce (Corbitt & Al-Qirim, 2004) and as such, the following hypothesis is proposed;

H11. The consumers' attitude towards E&M-Shopping acceptance has positive significant relationship with web and app design.

3.4.4 Ease of Use

Davis (1986) stated that perceived ease of use has a significant influence on perceived usefulness. Perceived ease of use can be explained as the level to which an individual believes that using a specific system would require less or no effort. However, in this sense, the use of innovative technology comes into view. Since, innovative technology systems are considered to be easier to use and less complex, they have a higher likelihood of being accepted and used by potential consumers (Davis et al., 1989). Because innovative technology construct focuses on the perception of the individual regarding the level of efforts required using a particular system, perceived ease of use can be considered as a procedure of anticipation (Davis, 1989).

Personal innovativeness refers to the degree to which an individual relatively earlier adopts new ideas than other members in a society. However, the notion of personal innovativeness was first used by (Rogers, 1995) who defined the concept as a quality of individual towards being an early adopter of innovation. Moreover, Agarwal and Prasad (1998) defined personal innovativeness in the context of information technology as the willingness of an individual to experience any information technology advancement (Agarwal & Prasad, 1998). However, based on the notion of personal innovativeness, it can be said that there is significant relationship between innovativeness and adoption of E-shopping advancement. It is because the people interested in innovativeness are more likely to accept the risk and are more willing to become risk adventurous (Lee & Woonghee, 2003; Al-Gahtani & King, 1999). Therefore, the following hypothesis is proposed;

H12. Ease of use has positive significant effect on E&M-Shopping acceptance among consumers in Dubai.

3.4.5 Usefulness

A new product or service that does not support individuals in terms of performing their jobs and making their life easier, is considered as too abstract and easily eliminated (Liao & Cheung, 2001). However, the review of literature shows several numbers of ways and aspects through which a usefulness of a system can be evaluated.

According to Venkatesh and Davis (2000), perceived usefulness is one of the elements, which have a strong relationship with the usage intentions (Venkatesh.; Davis, 2000). Perceived usefulness is also widely recognized as performance expectancy.

It comes when an individual thinks that certain innovation will bring advantage for him/her and help in improving productivity and work performance (Davis, 1989). Moreover, in the wider context of E&M-shopping, the real meaning of perceived usefulness is associated with the system, which assists consumers at any time and at any place. Thus, it can be said that perceived usefulness can be taken as the inclusive capability of online consumers in integrating E&M-shopping into their daily life routines. In a different aspect, it can be considered as the awareness of views of key online shoppers regarding the system innovation when offering alternative options with the similar performing capabilities (Agarwal & Prasad, 1998). In other words, an innovative system must have high usefulness to meet the necessities of online consumers and connect closely the use, productivity, performance, effectiveness and satisfaction (Al-Gahtani & King, 1999). Although there are many conceptions of perceived usefulness, the notion of Davis et al. (1989) seems to be the most appropriate, where he stated that perceived usefulness is a level to which an individual believes that using a system would improve his/her performance (Davis, Bagozzi, & Warshaw, 1989). Hence, in the literature, the idea of Davis et al. (1989) has been applied by a number of research projects in the literature. Therefore, the following hypothesis can be proposed;

H13. Usefulness has a positive significant effect on E&M-Shopping acceptance by consumers in Dubai.

4. Methodology

4.1 Research Framework

The research framework developed for the present study is illustrated below, which contains five sections i.e. functionality factors of interactivity, consumer factors, psychological factors, usability and technology factors, and product/service characteristics. Each section further represents the factors that are expected to have an influence on the adoption of E&M-Shopping in the UAE. Each of these factors helped in developing the hypothesis for the study. For instance, from functionality factors of interactivity hypothesis 1 and 2 were developed; from psychological factors, hypothesis 3 to 6 were developed; from product/service characteristics, hypothesis 7 and 8 were developed; and finally from usability and technology factors, hypothesis 9 to 13 were developed.

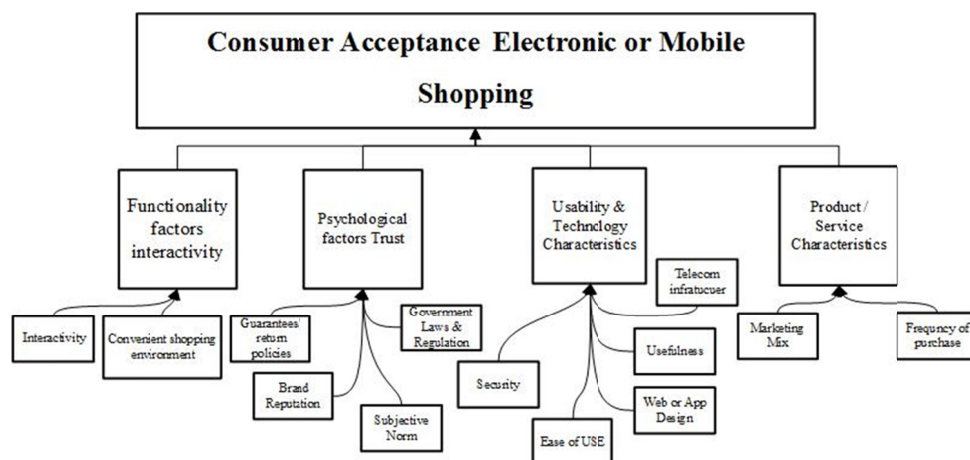


Figure 6. Research framework

The above framework is developed from the literature to obtain the answers to the following research questions;

Q1. What is the current scope of E&M-Shopping in the UAE?

Q2. Which factors affect the Emiratis attitudes towards the acceptance of E&M-Shopping in terms of TAM?

Q3. Are the consumers in the UAE motivated towards the acceptance of E&M-Shopping?

Aside from answering the above questions, the developed research framework is expected to help in testing the research hypotheses.

4.2 Research Method

The present study used the quantitative research study, using survey methods to test the factors, which influence

the adoption of E&M-Shopping in Dubai. A correlational/cross-sectional design were employed of this study, this is a quantitative research method based on findings for hypotheses testing. This research was selected to explore the phenomenon under investigation. Hence, this way of conducting research helps in providing the detailed examination of the study (Morse, 2003; Alise & Teddlie, 2010; Feilzer, 2010).

4.3 Data Collection

Relevant data was collected by using survey approach since authors suggested that survey is the best approach of collecting statistical or numerical data (Flick et al., 2007). Therefore, by using the survey approach, the researcher gathered the numerical data relevant for this research. For the survey, the researcher selected Emirati consumers residing in Dubai respectively. Furthermore, for the survey, the researcher selected 180 users or E & M-shoppers living in Dubai. There were 180 distributed surveys and the minimum number required as a sample is five times the number of the survey questions according to (Hair, Anderson, Tatham, & Black, 2010) 36 number of questions * 5= 180 samples. However, it is sufficient if it is more than 202 in Dubai.

This sample was selected randomly through convenience sampling. The sample size is appropriate for the exact identification of the factors that affect the E&M-Shopping behaviour of consumers in the UAE. The questionnaire helped in answering the research questions and in testing the research hypothesis. In questionnaire, the responses are measured by using five points Likert Scale comprising (a) strongly agree, (b) agree (c) neither agree nor disagree (d) disagree and (e) strongly disagree (Kumar, 2008; Flick et al., 2007). The targeted respondents of the study's questionnaire were the internet users in the UAE, therefore questionnaire survey were distributed through emails and other social media, for whom are using online services.

The variables' measurements were adapted and adopted from different resources. Items in the questionnaire of Functionality and interactivity factors were employed from (Joines, Scherer, & Scheufele, 2003), Psychological factors were employed from Limayem, Khalifa, and Frini (2000), the product/service characteristics employed from (Vijayasathya & Jones, 2000) and usability and technology factors employed from (Chau, Au, & Tam, 2000; Nysveen, Pedersen, & Thorbjørnsen, 2005; Molla & Licker, 2005).

5. Data Analysis

The gathered data is analysed via statistical analysis approach using SPSS software version 20. With the help of SPSS, several statistical measures are obtained such as descriptive statistics, factor analysis, reliability testing, and hypothesis testing. The developed hypotheses were tested at a significant rate, which is less than 5 percent ($P = 0.05$). Moreover, Cronbach's Alpha was calculated to check the reliability of the questionnaire, where reliability is considered acceptable when Cronbach's alpha is 0.60. Furthermore, factor analysis was conducted to examine the relevancy and dependency of the research variables on each other. Finally, the numerical results are presented in the form of appropriate tables.

5.1 The Reliability and the Factor Analysis

According to Table 1, Cronbach alpha range from 0.724 to 0.833 which confirmed the reliability of the construct in addition the result of Table 2 shows high loading of items that range from 0.607 to 0.899. According to Hair et al. (2010), the acceptable value for an item is more than (0.5). Therefore, the factor loads of the constructs were tested and found that the value is above the target.

Table 1. Reliability analysis

Construct	Cronbach Alpha	No of Items	Cronbach If item deleted
Technology Acceptance	0.820	4	0.820
Usability & Technology Factors	0.833	5	0.833
Psychological Factors	0.724	4	0.724
Product /Service Characteristics	0.728	2	0.728
Functionality factors Interactivity	0.748	2	0.748

Table 2. Factor analysis

Construct	Cronbach Alpha	No of Items	Loading	KMO	% of Variance	Eigenvalues
Technology acceptance	0.820	4	0.825 0.881 0.822 0.734	0.710	66.792	2.672
Usability &	0.833	5	0.812 0.762 0.809 0.891	0.767	61.133	3.057

Technology Factors			0.607						
Psychological Factors	0.724	4	0.834	0.438	0.848	0.841	0.641	58.865	2.355
Product /Service Characteristics	0.728	2	0.891	0.891			0.500	79.346	1.587
Functionality Factors Interactivity	0.748	2	0.899	0.899			0.500	80.828	1.617

Table 3. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.829
Approx. Chi-Square		2966.100
Bartlett's Test of Sphericity	Df	253
	Sig.	.000

5.2 Data Analysis Results

Data is collected through questionnaires distributed to respondents. The demographic variables included at the end of the questionnaire include: gender, age, education, income, and experience-variables that are also considered to be relevant to motivating the consumers towards Electronic & Mobile Shopping.

The summary of demographic statistics was obtained of the respondents in terms of frequency and percentage through descriptive analysis. The total respondents is 202, with majority of respondents being male (136 or 67%) and aged between 31-35 (59 or 29%), and where a vast majority are Bachelor degree holders or holders of higher degrees (74 or 36%). Most of respondents have good experience in online shopping (168 or 83%) and majority of them spend surfing the Internet 1 to 5 hours daily (140 or 69%). The number of respondents who believe that the kind of an online shopper they are: price oriented are significant (49 or 24.3%), and the result shows that (20% or 41) of respondents believe themselves to be brand-oriented and (44 or 21.8%), respondents believed that the wide selection is the top factor that motivates them to avail of the online shopping environment. Furthermore, majority of Emirati respondents' incomes range from 20,000 to 35,000 AED (77 or 38%).

The results of the descriptive statistics, which evaluated and presented the questionnaire variables of the respondents, are shown in Table 4. The table presents the perception of the respondents in terms of the consumer aspects. The mean score of this variable is 3.930 with the standard deviation of 0.873. There are 14 items (questions), and the "security" item has the highest mean score of 4.430 and standard deviation of 0.857. The minimum score for this question is 1 i.e. "Strongly disagree" and maximum score is 5 "strongly agree". The question "Subjective Norm" has the lowest mean score of 3.450 and the standard deviation of 0.997.

In Table 4, the mean score of the overall perception aspects is close to 4 (3.931). So, it can conclude that consumer aspects generally lie on the level of "agree". In terms of standard deviation (S.D.), majority of the S.D values are accepted. The results indicate very good scores as the difference among results are not considerable.

Table 4. Descriptive statistics of Dubai respondents

Description	Dubai	
	Min=1; Max =5	
	Mean	Std. Deviation
H1. Interactivity	3.701	0.739
H2. Convenient shopping environment	4.141	1.017
H3. Service Brand	4.000	0.837
H4. Government, Laws, Regulations	3.970	0.967
H5. Subject Norm	3.470	1.003
H6. Guarantee Policy	4.056	0.837
H7. Marketing Mix	4.000	0.713
H8. Frequency To Purchase	3.610	1.041
H9. Security	4.450	0.892

H10. Telecommunication infrastructure	3.600	1.033
H11. Web or App Design	3.789	0.747
H12. Ease of Use	4.220	0.889
H13. Usefulness	4.060	0.832
DV. Acceptable shopping	3.955	0.686
Total	3.930	0.873

To test the structural relationships in the model, it employed the path analysis using TAM and examined other factors' effect towards E & M-shopping acceptance where all the paths and values of the modification indices were carefully examined with the help of t-test. Only one hypothesis was rejected due to significant = 0.111 above 0.05, whereas the rest of hypotheses were all acceptable (P-value lower than 0.05) with the t-values higher than 1.980 Regression analysis results of E&M-Shopping acceptance are presented below.

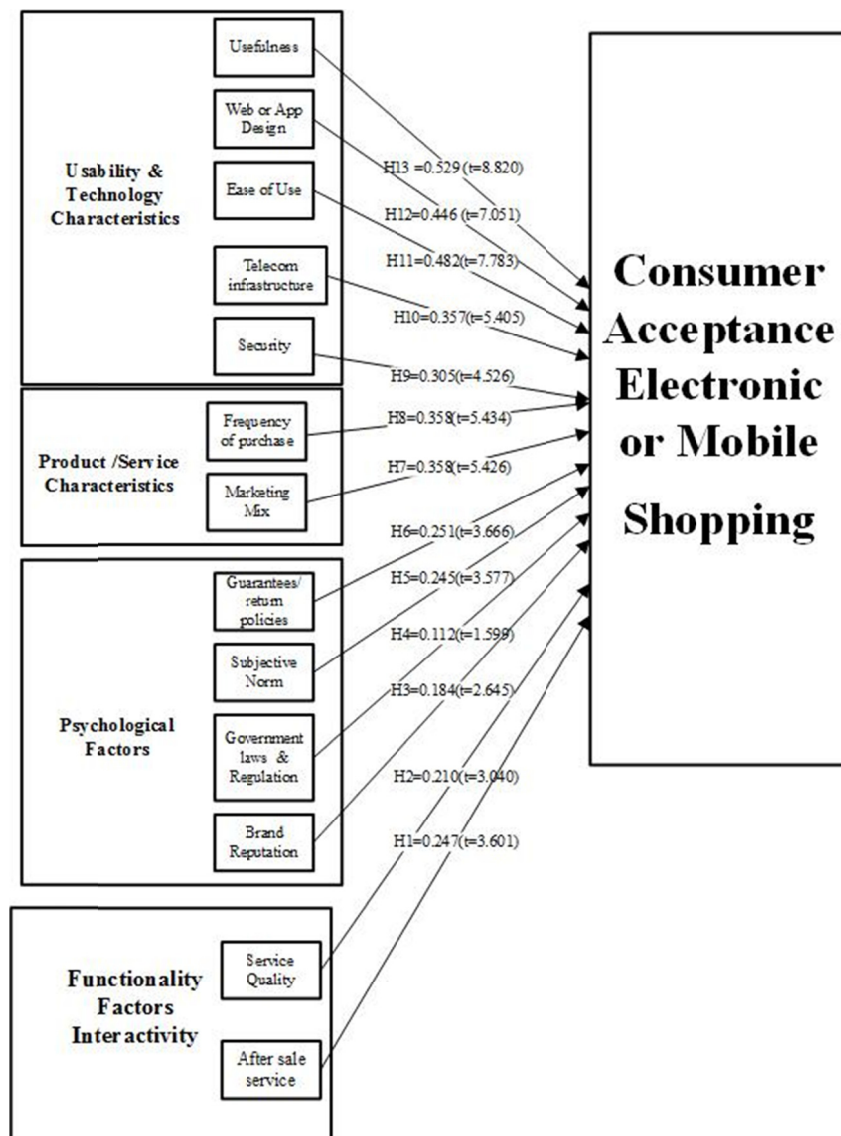


Figure 7. Conceptual model (Dubai)

5.3 Results

H1. Interactivity accounts only for 6.1% of the variance of the E&M-Shopping acceptance while the rest is explained by other factors. Interactivity has positive significant relationship with attitude towards

E&M-Shopping acceptance [$t = 3.601$, $p < 0.000$].

H2. Convenient shopping environment accounts only for 4% of the variance in the E&M-Shopping acceptance the rest is explained by other factors. Convenient shopping environment has a positive significant relationship with attitude towards E&M-Shopping acceptance. [$t = 3.040$, $p < 0.003$].

H3. Brand of the services accounts only for 3% of the variance in the E&M-Shopping acceptance the rest explained by other factors. Service Brand has a positive relationship towards E&M-Shopping acceptance in Dubai [$t = 2.645$, $p < 0.009$],

H4. Government laws and regulations account only for 1% of the variance of the E&M-Shopping acceptance the rest explained by other factors. The p value shows that no linear relationship exists between government laws & regulations and consumer attitude towards E&M-Shopping acceptance [$t = 1.599$, $p > 0.111$]; the hypothesis is rejected.

H5. Subjective norm accounts only for 6% of the variance of the E&M-Shopping acceptance while the rest is explained by other factors. Subjective Norm has a positive significant relationship with perceived outcome of E&M-Shopping acceptance [$t = 3.577$, $p < 0.000$].

H6. Product return policy and guarantees account only for 6% of the variance of the E&M-Shopping acceptance while the rest is explained by other factors. Convenient product return policy and guarantee has a positive significant relationship with consumer's attitude towards E&M-Shopping acceptance [$t = 3.666$, $p < 0.000$].

H7. Marketing Mix factors account only for 13% of the variance of the E&M-Shopping acceptance while the rest is explained by other factors. Marketing Mix has a positive significant relationship with consumers attitude towards E&M-Shopping acceptance [$t = 5.426$, $p < 0.000$].

H8. Frequency to purchase accounts only for 13% of the variance of the E&M-Shopping acceptance while the rest explained by other factors. Increase of Frequency to purchase has a positive significant relationship with consumers attitude towards E&M-Shopping acceptance in Dubai [$t = 5.434$, $p < 0.000$].

H9. Security accounts only for 9% of the variance of the E&M-Shopping acceptance while the rest is explained by other factors. Perceived security of E&M-Shopping service has a positive significant relationship with consumers attitude towards E&M-Shopping acceptance in Dubai [$t = 4.526$, $p < 0.000$].

H10. Telecommunication infrastructure accounts only for 13% of the variance of the E&M-Shopping acceptance while the rest is explained by other factors. Telecommunication infrastructure has a positive significant relationship with E&M-Shopping acceptance of consumers in Dubai [$t = 5.405$, $p < 0.000$].

H11. Web or application design accounts only for 23% of the variance of the E&M-Shopping acceptance while the rest explained by other factors. Web or application design has a positive significant relationship with consumers attitude towards E&M-Shopping acceptance [$t = 7.783$, $p < 0.000$].

H12. Ease of use accounts only for 20% of the variance of the E&M-Shopping acceptance whereas the rest is explained by other factors. Ease of use has a positive significant relationship towards E&M-Shopping acceptance [$t = 7.051$, $p < 0.000$].

H13. Usefulness accounts only for 28% of the variance of the E&M-Shopping acceptance while the rest is explained by other factors. Usefulness has a positive significant relationship with E&M-Shopping acceptance [$t = 8.820$, $p < 0.000$],

Table 5. Summary of the tested hypotheses (Dubai)

Summary of the Tested Hypotheses Dubai					
Factors category	Hypothesis	Mean	Sig.	R	Results
Functionality Factors Interactivity	H1	3.701	0.000	0.247	Accept
	H2	4.141	0.003	0.210	Accept
Psychological Factors	H3	4.000	0.009	0.184	Accept
	H4	3.970	0.111	0.112	Reject
	H5	3.470	0.000	0.245	Accept
	H6	4.056	0.000	0.251	Accept
Product /Service Characteristics	H7	4.000	0.000	0.358	Accept
	H8	3.610	0.000	0.359	Accept

Usability & Technology Factors	H9	4.450	0.000	0.305	Accept
	H10	3.600	0.000	0.357	Accept
	H11	3.789	0.000	0.482	Accept
	H12	4.220	0.000	0.446	Accept
	H13	4.060	0.000	0.529	Accept

Table 6. The research results compared with other references (Dubai)

Factor	R	Similar factor	R based on other references	
H1. Interactivity	0.247	Concerns over delivery & return	0.180	(Cho, 2004)
		Communication	0.341	(Jun, 2003)
		Interactivity (consumer support & personal choice of helper, suffer posting)	0.189	(Dubinsky Heejin, 2004)
H2. Convenient shopping environment	0.210	Control in the information search	0.240	(Cho, 2004)
		Prompt/reliable service	0.346	(Jun, 2003)
		Merchandise (product info, brand selection, price)	0.254	(Dubinsky Heejin, 2004)
H3. Service-Brand	0.184	Trust	0.470	(Jun, 2003)
		Reliability (good reputation)	0.004	(Dubinsky Heejin, 2004)
		Contributors to trust in government (Government Regulation)	0.510	(Welch, 2002)
H4. Gov-laws –Regulations	0.112	Government e-readiness	-	
		Market forces e-readiness	0.068	(Molla & Licker, 2005)
		Social escapism	0.274	(Molla & Licker, 2005)
H5. Subject-Norm	0.245	Subjective Norms	0.070	(Scheufele, 2003)
		Social influence	0.174	(Limayem, M.; Khalifa, M., 2000)
		Effect of the Assurance Mechanisms and Deception on Perceived Risk	0.134	(Wei, Marthandan, Chong, Ooi, & Arumugam, 2009)
H6. Guarantee-Policy	0.251		0.728	(Grazioli, 2001)
H7. Marketing-Mix	0.358	Product offering	0.200	(Cho, 2004)
		Frequency of purchasing from catalogues to likelihood to abort an intended transaction	-0.14	(Cho, 2004)
		Desired consequences directly influence consumer	0	
H8. Frequency To Purchase	0.359	Purchase frequency.	0.379	(Soonhong, 2012)
		Trust	0.279	(Wei, Marthandan, Chong, Ooi, & Arumugam, 2009)
		Perceived security	0.240	(Vega Juan, 2009)
H9. Security	0.305	Trust	0.350	(Pavloii, 2003)
		Compatibility	0.174	(Sanz-Blas, 2009)
		Technology Resources	0.267	(Molla & Licker, 2005)
H10. Telecommunication-infrastructure	0.357	support industries e-readiness	0.034	(Molla & Licker, 2005)
		Web site design/CONTENT	0.406	(Jun, 2003)
		Behavioural control (site, design)	0.351	(Limayem, M.; Khalifa, M., 2000)
H11. Web-or-App-Design	0.482	Navigation (web & Design)	0.078	(Dubinsky Heejin, 2004)
		Perceived ease of use	0.007	(Wei, Marthandan, Chong, Ooi, & Arumugam, 2009)
H12. Ease-Of-Use	0.446			

Factor	R	Similar factor	R based on other references	
H13. Usefulness	0.529	Perceived ease of use	0.280	(Vega Juan, 2009)
		Perceived ease of use	0.120	(Pavlou, 2001)
		Ease of use	0.223	(Sanz-Blas, 2009)
		Usefulness	0.540	(Tong, 2010)
		Perceived usefulness	0.441	(Wei, Marthandan, Chong, Ooi, & Arumugam, 2009)
		Perceived usefulness	0.190	(Vega Juan, 2009)
		Perceived usefulness	0.330	(Pavloii, 2003)
		Usefulness	0.510	(Sanz-Blas, 2009)

6. Discussion

Service characteristics, usability & technology factors influence the technology acceptance behaviour of E & M-shoppers when it comes to making a decision about online shopping (Saariluoma & Isomäki, 2009). Therefore some results confirm the findings in the literature while some are against them. Similarly, some factors are positively correlated with the E&M-Shopping acceptance while others are negatively correlated. It was revealed that in functionality factors interactivity, H1 & H2, are accepted indicating that interactivity, convenient shopping environment, and consumers' attitude have positive impacts on the E&M-Shopping acceptance behaviour of the people, supporting the findings of prior studies (Saariluoma & Isomäki, 2009; Keisidou & Sarigiannidis, 2011; Constantinides, 2004).

Moreover, in psychological factors, H4 is rejected, while H3, H5 and H6 are accepted. It means that government laws and regulations have negative impacts on the E&M-Shopping acceptance behaviour of the people a finding that goes against the findings of (Kamel, 2006). In contrast, subjective norm and convenient product return policy and guarantees have positive impacts on the E&M-Shopping acceptance behaviour of the people, which confirms the findings of (Taylor & Todd, 1995; Yu & Wu, 2007; Grazioli, 2001).

In addition to this, in terms of product/service characteristics, H7 and H8 are accepted, which means that marketing mix and increase of frequency of purchase have positive impacts on the E&M-Shopping acceptance behaviour of the people this finding confirms the findings of (Goldsmith, 1999; Kim & Kim, 2004; Gummesson, 1997; Goldsmith, 2002). Moreover, in terms of usability and technology characteristics, H9, H10, H11, H12 and H13 are accepted. Which means that security of E&M-Shopping services, telecommunication infrastructure, web & app design, ease of use and usefulness have positive impacts on the E&M-Shopping acceptance behaviour of the people. Which confirms the findings of earlier studies (Schaupp & Bélanger, 2005; Corbitt & Al-Qirim, 2004; Davis, 1989; Lee & Woonghee, 2003; Venkatesh.; Davis, 2000; Nysveen, Pedersen, & Thorbjørnsen, 2005).

7. Conclusion and Recommendations

This paper examined the relationship between selected functionality factors interactivity, psychological factors, product/service characteristics and usability & technology factors and M-Shopping acceptance. The results showed that usability & technology Factors (ease of use, usefulness, security and telecommunication infrastructure) significantly affected the consumers' acceptance of E&M-Shopping acceptance. Majority of things considered, the current findings significantly enhanced the understanding of users in Dubai in terms of acceptance of E&M-Shopping. Consideration of the factors identified should lead to more successful adoption of E&M-Shopping. Furthermore, the results highlighted the low awareness of the Government regulations and product return policy. Future research can further evaluate and analyse the technology infrastructure (platform of the devices) and their effect on the consumers' perception towards online shopping from a larger perspective of technology experts' viewpoint.

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