DETERMINANTS INFLUENCING CITIZENS' INTENTION TO USE e-Gov IN THE STATE OF KUWAIT: APPLICATION OF UTAUT

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Abstract

Although Kuwait is known to be one of first countries to develop its information technology infrastructure among Arab countries, its e-government adoption and readiness still fell behind competitive countries in the Gulf region. The current study sheds light over determinants that influence citizens' intention to use e-government services. The study uses UTAUT model to measure the influence of external determinants over the intention to use. Structural Equation Modelling (SEM) is employed to examine the causal relationship between proposed constructs. A survey involving a total of 317 Kuwaiti citizens who e-government services is conducted and confirmatory factor analysis used to test the hypotheses. In line with previous research, the findings show that effort expectancy, facilitating conditions, social influence and performance expectancy are the factors that affect the citizens' intention to use e-government services in state of Kuwait. The findings of this research are useful for the decision-makers and service-designers to improve e-government services and their accessibility to citizens. The adopted model can be used as a guideline for the implementation of e-government services in state of Kuwait.

Keywords: Citizen, E-government services, intention, UTAUT model, States of Kuwait

INTRODUCTION

The term 'e-government' has been extensively applied to refer to the potential for information and communication technologies to help in network building and service delivery, and to increase the interactivity, transparency and efficiency of government (Yildiz, 2007). This revolution in information and communication technologies has changed the way of interaction between government and their citizens into a new form of government called e-government. E-government is defined as: the use of information and communication technologies and Internet to enhance the access to and delivery of all facets of government services and operations for the benefits of its stakeholder groups which includes citizens, businesses, and government itself (Srivastava and Teo, 2008). However, it can be defined more broadly as any way IT is used to simplify and improve transactions between governments and other actors, such as constituents, businesses, and other governmental agencies (Sprecher, 2000). The basic principle of e-government is that people can communicate with government officials and access government services via the Internet and other information technologies (Sharma et al., 2012).

Through an integrated web-portal, it will be possible for citizens and businesses to complete a transaction with government agencies without having to visit several separate ministries/departments in separate physical locations (Ebrahim and Irani, 2005). Based on those interactions, e-Government has been classified as interactions with Government-to-Citizen (G2C), Government-to-Business (G2B), Government-to-Employee (G2E), Government-to-Government (G2G), Citizen-to-Government (C2G) and Business-to-Government (B2G). Bonham et al., (2001) report that G2C initiatives are designed to facilitate citizen interaction with government, which is what some observers perceive to be the primary goal of e-government (Seifert, 2008; Carter and Bélanger, 2005). These initiatives attempt to make transactions, such as renewing licenses and certifications, paying taxes and applying for benefits, less time consuming and easier to carry out.

Government-to-Citizen (G2C) is the focus of this paper. The resulting benefits can be diverse and long lasting such as, among others, less corruption, increased transparency, better delivery of government services to citizens, improved interactions with business and industry, greater convenience, citizen empowerment through access to information, growth of revenues, cost reductions, and more efficient government management (Colesca and Dobrica, 2008).

E-government project in Kuwait stems from the global trends towards digital economies and knowledge societies. The international society is becoming more and more digitally connected. This was the aim of Kuwait Ministers cabinet to be in touch with the international community and to improve the local governmental performance. Ministers Cabin agreed in 2000 to establish committee that is assigned to supervise the implementation and adaptation of Kuwait e-

government national project. Accordingly, an official agency with the name of Central Body of Information Technology was established at that time seeking IT experts and to overlook after elevating Kuwait official transactions with IT infrastructure. Furthermore, the Central Body of Information Technology was the major body behind pushing officials to sign a memorandum of understanding with Singapore in 2004 to have close cooperation between two countries regarding e-government and IT issues. The agreement between two countries and cooperative job yielded Kuwait first e-government portal page. However, still Kuwait scores poorly on Global e-government ranking scale, the scale where ranks worldwide countries according to their e-government successful project. "In an annual survey of *Global e-government,* where various features of national government websites by 198 countries around the world were analyzed, Kuwait scored 28.9 on a scale of 100, whereas Taiwan scored 60.3" (AlWadhi and Morris, 2009, p. 586). This is why we think Kuwait is still in its beginning stages towards fully successful e-government project and needs extensive work (theoretically and practically) to encourage further usages of its portal page and digital services that are offered virtually through its official sites.

This paper focuses on this type of relationship (G2C) to test the factors that would influence citizens to adopt e-government websites. The fundamental problem motivating this study is the need to know and understand the different factors that influence citizens' intention to use e-government services in the State of Kuwait. In order to know and understand the different factors that influence citizens' intention to use e-government services, there are various models proposed by various researchers, Theory of Reasoned Action (TRA) (Fishbein and Ajzen's (1975)), Theory of Planned Behavior (TPB) (Ajzen, 1991), Diffusion Of Innovation (DOI) (Moore & Benbasat, 1991), Technology Acceptance Model (TAM) (Davis, 1986) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), which explain users' acceptance of a technology. Among these models, UTAUT is the newest model accepted to predict and explain usage intention (Venkatesh et al., 2003). In this study, UTAUT model was used, as it was identified as a suitable model based on the literature on e-government adoption. The main objective of this research is to: develop and validate an e-Government adoption model for predicting and explaining citizens' intention to use e-government services in state of Kuwait, identify the factors that determine citizens' intention to use E- government services in state of Kuwait, and to illustrate and clarify the importance of each of these factors in explaining the intention to use E- government services in state of Kuwait.

This research is divided in six sections, including the introduction. The second section presents the current theories and models that can be used to explain citizens' acceptances of technology, and the proposed research model and hypotheses. Section three describes the

research method, encompassing data collection, and measurement of variables. Section four presents the main findings of this study. Section five presents the discussion. And finally, this research concludes with the conclusion, policy implications, limitations and future research

LITERATURE REVIEW AND RESEARCH MODEL

Information technology advancements critically effect the achievements of organization. Public administration took the advantage of IT innovations from its perspective and developed its e-government applications to help citizen overcome their official transactions online. Accordingly, scientists listed many benefits of adoption e-government applications such as speeding up procedures, services available 24 hours, decreasing administrative work loads, overcoming distance and time challenges, and relieving people from bureaucratic overcomes. In addition, e-government challenged long time governmental corruptions through incremental transparency and better degree of monitoring.

Scientists in the field developed many theories to study the acceptance of technologies in their environment. In the literature, a model known as theory of reasoned action (TRA) was developed by psychologists (Fishbein and Ajzen, 1975). Other scholars investigated various types of technology acceptance from different theory perspectives including: The Innovation Diffusion Theory (IDT) (Rogers, 1983; Moore and Benbasat, 1991; Tornatzky and Klein 1982), the Technology Acceptance Model (TAM) (Davis, 1989) and its extensions (e.g. Venkatesh and Davis, 2000; Venkatesh et al., 2003; Yi et al., 2006), Theory of Flow (TOF) (Csikszentmihalyi, 1990), and combined theories (Kim and Garrison, 2009), and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). Their goal was to find and explain user's intentions to use information systems. UTAUT introduces different constructs than factors found in TAM model. Mainly, it holds four key determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions.

In general, these studies were significant in identifying factors affecting the intention to use e-government such as perceived ease of use, perceived usefulness, perceived risk, perceived privacy, trustworthiness, safety, interpersonal influence, and many more (see for further factors Carter and Belanger, 2003; Hung et al., 2006; Rouibah, 2008).

Regarding technology acceptance per se, information systems scientists originally build their own extension of acceptance theories known in literature as "Technology Acceptance Model (TAM)". The aim of the theory is to measure how well the information and communication technologies (ICT) are used (or intention to be used) by end users (Davis, 1989).

Many variations of TAM (TAM 2, TAM 3) were developed since the initial version of Davis (1989) TAM theory. Since then, versions of TAM were developed to be taken into variety

of terms of technologies and to measure usages of different technologies such as e-commerce, e-government, m-banking, gaming, and so forth (Al-Gahtani, 2011).

It is well known in literature that publications e-government adoption in Arab world still rare compared to studies published about e-government in Western and Far Eastern countries (Abbas, 2013; Rouibah et al., 2011; Alawadhi and Morris, 2009; AlShihi, 2003). Rouibah et al. (2011) think that Arab publications is still far away behind number of publications of their partners in Western and Far East societies. Rouibah et al. (2011) claim that acceptance theories are relatively new in this part of the world. According to Al-Shihi (2003) and AlAwadhi and Morris (2009), there is still "little research exploring factors that affect the adoption of e-government services by citizens in developing world, especially in Arab world" (AlAwadhi and Morris, 2009, p. 585). In addition, what makes our project critical and important is the seldom publications using UTAUT model to test the intention to adopt e-government in Kuwait (AlAwadhi and Morris, 2008).

AlAwadhi and Morris (2008, 2009) explored adoption e-government in Kuwait through the use of UTAUT. They found usefulness, ease of use, reforming bureaucracy, and cultural and social influences the most influential factors affecting the adoption of e-government in Kuwait. Their findings were also confirmed by previous studies that been applied in different cultural and social environments such Western and Far Eastern societies (Bagchi et al., 2004; Chen et al., 2006). Group of studies researched the effect of cultural issues and found that gender play a role in e-government adoption (Chen et al., 2006; Venkatesh et al., 2003; Bagchi et al., 2004).

There are different studies among Arab and Gulf region that focus attention towards applying information technology in private and public sectors. For example, in Gulf region there are plenty of studies that been published recently attacking various fields of e-commerce, e-government, e-business, and so forth (Enezi, 2008; Rishidi, 2008; Subaei, 2005; Omari, 2003; Shamarani, 2001; AlShihi, 2010; Darweesh, 2005; Hazemi, 2002; AlAdwani, 2013, 2012, 2003; Rouibah, 2008; Rouibah and Abbas, 2010; Alawadi and Morris, 2008, 2009). Those publications and many more discussed the applications of information technologies in various e-administration environments.

However, as we declared previously, the research in e-government through specific types of acceptance models such as UTAUT is very rare. We could not find enough publications in the field (Alawadhi and Morris, 2008; Alawadhi and Morris, 2009; Al-Gahtani et al., 2003; Riffai et al., 2012). Alawadhi and Morris, (2008, 2009) applied the UTAUT model and used Kuwait as their field study. Al-Gahtani et al. (2003) used UTAUT in Saudi Arabia and collected

data from 722 participants towards their usage of PC application software. Riffai et al. (2012) used UTAUT to study and identify factors affecting on-line banking in Oman.

Research Model and Hypotheses for E-government Adoption in Kuwait

In this research, the selection of this model is justified by its global and integrative approach, incorporating a wide variety of explanatory variables from the main theoretical models developed to explain technology acceptance and use (Martin and Herrero, 2012). The Unified Theory of Acceptance and Use of Technology (UTAUT) identify four key drivers of the adoption of information systems: performance expectancy, effort expectancy, social influence, and facilitating conditions.

Performance expectancy

Performance expectancy is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance (Venkatesh et al., 2003). Performance expectancy was found to be a strong predictor of intention to use information technology according to previous acceptance studies (Venkatesh et al., 2003; Davis, 1989; Taylor and Todd, 1995; Venkatesh and Davis, 2000). In the present research, performance expectancy is measured by the perceptions of using e-government services in terms of benefits, such as saving time, money and effort, facilitating communication with government, improving the quality of government services and by providing citizens with an equal basis on which to carry out their business with government (AlAwadhi and Morris, 2009). Therefore, we hypothesize that performance expectancy will exert a positive effect on the intention to use E-government services.

H1. Performance expectancy will have a positive effect on the intention to use E-government services.

Effort expectancy

Effort expectancy is defined as the degree of ease of use associated with use of the system (Venkatesh et al., 2003). According to Kijsanayotin et al., (2009), the concept is similar to the perceived ease of use construct in TAM and the IDT models and the complexity of technology construct in the MPCU model.

Many scholars (Davis, 1989; Moore and Benbasat, 1991; Chang et al., 2007; Agarwal and Prasad, 1998; Al-Gahtani et al., 2007) found that effort expectancy has a significant influence on intention to use behaviour. In the present research, effort expectancy is measured by the perceptions of ease of use of e-government services as well as ease of learning how to

use these services. Therefore, we hypothesize that effort expectancy will exert a positive effect on the intention to use E-government services.

H2. Effort expectancy will have a positive effect on the intention to use E-government services.

Social influence

Social influence is defined as the degree to which an individual perceives the importance of the beliefs of others that he or she should use the new system (Venkatesh et al., 2003). It is a very important factor in many aspects of the lives of citizens and is likely to be influential (Venkatesh et al., 2003). Relevant references, such as citizen's family, colleagues and friend's may have an influence on citizen's decisions (Tan and Teo, 2000). Many scholars like Rogers (1995), Taylor and Todd (1995), Lu et al., (2005) and Pavlou and Fygenson (2006) suggest that social influences are an important determinant of behaviour. This research assumes that if e-government users are influenced with by their social networks, they are more likely to have a strong behavioural intention to use the e-government services. Therefore, we hypothesize that social influence will exert a positive effect on the intention to use the particular E-government services.

H3. Social influence will have a positive effect on the intention to use E-government services.

Facilitating conditions

Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system (Venkatesh et al., 2003). Many scholars in the field of technology studies (Venkatesh et al., 2003; Moore and Benbasat, 1991; Taylor and Todd, 1995; Chau and Hu, 2002) found that the facilitating conditions construct has a positive effect on innovation use. They also found that it is a significant predictor of the technology use and it is considered to be directly related to usage behaviour (Venkatesh et al., 2003). Others studies found that facilitating conditions were significantly related to behavioral intention to use mobile phones, 3G mobile telecommunication, and e-government services in Kuwait (Zhou, 2008; Wu et al., 2009). In the present research, facilitating conditions was measured by the perception of being able to access required resources, as well as to obtain knowledge and the necessary support needed to use e-government services.   Therefore, we hypothesize that facilitating condition will exert a positive effect on the intention to use E-government services.

H4. Facilitating conditions will have a positive effect on the intention to use m-payment.

Figure 1. Proposed research model
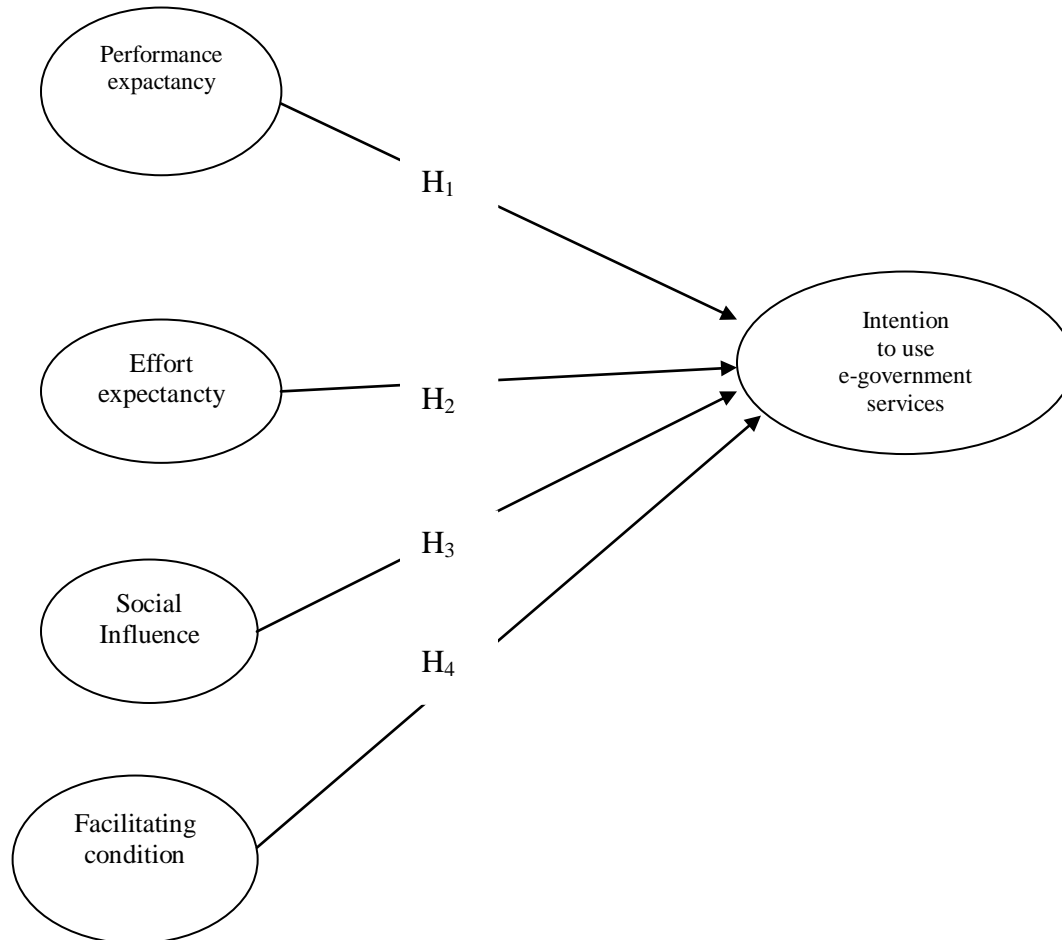
METHODOLOGY

The Study Design and Sampling

The population of this study comprising e-government users in general. We aim to investigate the opinion of every opinion and to represent all sectors of the society. The questionnaire initially written by the researchers and reviewed by two faculty members of College of Business Administration at Kuwait University. The questionnaire then tested using pilot study, which enabled the research team to refine the questionnaire and avoid any shortcomings.

The Data

To test the model, an electronic survey was disseminated to 500 citizens in the State of Kuwait, we received only 443 surveys; of the 443 questionnaires, 78 were excluded due to missing information, being incomplete, or being unreadable. 48 respondents do not use E-government

services. A total number of 317 responses were utilized in the analysis. The demographic profile of the respondents is shown in Table 1. According to the questionnaire results, 66.6% of the respondents were female, and 33.4% were male. In terms of age, the results revealed that the largest percentage of respondents were in the age group of 20-30 (58.4%), followed by the age group under 20 years constituting around (23.7%) of the total respondents. In terms of educational backgrounds, the majority of respondents (60.3%) hold undergraduate level qualifications degrees, (1.6%) hold postgraduate degrees (Masters and PhD) and (37.8%) hold either secondary school certificates or below. In term of income, 68.1% of the respondents' monthly incomes were below 1000 Kuwatian Dinars (KD) and 26.2% were between 1001 and 2000 (KD). In term of professional backgrounds the respondents were engaged in various occupations: (82.3%) of them were university/high school students, (30.0%) of them were employees in public organisations, (11.0%) of them were employees in private organisations, and (4.1%) of them were in home.

In terms of computer experience, the results revealed that the majority of respondents (84.2%) were found in the computer experience group, over 5 years. In terms of Internet usage, the results revealed that the majority of respondents (83%) were found to use the Internet several times a day. This was followed by (6.9%) of respondents who use the Internet several times a week. In contrast, (3.5%) of the total respondents mentioned that they use the Internet about once a day. Finally, the Internet usage groups of several times a month and once a month together equalled (6.6%) of the total number of respondents.

In terms of E-government usage, the results revealed that the majority of respondents (44.8%) were found to use E-government services about once a month. This was followed by (36.9%) of respondents who use E-government services several times a month. In contrast, (13.9%) of the total respondents mentioned that they use E-government services several times a week. Finally, the internet usage groups of several times a day and once a day together equalled (4.4%) of the total number of respondents.

Instrument development

The survey items for performance expectancy, effort expectancy, social influence, facilitating condition and intention to use e-government services were adapted from various literatures and were modified for the adaptation to the e-Government context. The dependent variable, intention to use e-government services was measured using three items derived from Cheng et al (2006). Performance expectancy, social influence and facilitating condition were adapted from the measurements defined by Venkatesh et al. (2003), containing five items for each construct. The constructs of effort expectancy were adopted from Pikkaraienen et al, (2004), and included

seven items. The demographics characteristics were measured in terms of gender, age, education, occupation, and experience using online banking and were adapted from (Yang, 2005). All the items are measured by using a Five-point Likert scales with end points of "strongly disagree" and "strongly agree" were used to examine participant's responses to these statements.

Table 1: Sample demographics

Means	Value	Frequency	Percentage (%)
Gender	Male	106	33.4
	Female	211	66.6
Age	Under 20 years	75	23.7
	20 – 30 years	185	58.4
	31 – 40 years	21	6.6
	41 – 50 years	26	8.2
	50 and older	10	3.1
Education level	High school	120	37.8
	College degree	191	60.3
	Bachelor degree	1	0.3
	Postgraduate degree	5	1.6
Income	Less than 1000	216	68.1
	1001 – 2000	83	26.2
	2001 – 3000	11	3.5
	More than 3000	7	2.2
Occupation	Private employee	35	11.0
	Public employee	95	30.0
	Student	174	54.9
	Home daty	13	4.1
Computer	Under 3 years	9	2.8
	3 – 5 years	41	12.9
	More than 5 years	267	84.2
Internet	About once a month	3	0.9
	A few times a month	18	5.7
	A few times a week	22	6.9
	About once a day	11	3.5
	Several times a day	263	83.0
E-government	About once a month	142	44.8
	A few times a month	117	36.9
	A few times a week	44	13.9
	About once a day	2	0.6
	Several times a day	12	3.8

ANALYSIS AND FINDINGS

Measurement model

The test of the measurement model includes the estimation of the composite reliabilities, convergent validity, and discriminant validity of the multi-item measures.

The reliability of construct measurement was evaluated by examining the composite reliability and internal consistency reliability (Cronbach's alpha) as determined by PLS for each construct. Convergent validity of a set of items with respect to their associated construct is assessed by examining the factor loadings of the items on the model's constructs. In order to verify the construct validity, a factor analysis was conducted utilising Principal Component Analysis (PCA) with the Varimax rotation method. The results of the PCA are presented in Table 2. All factor loadings were highly acceptable (loading> 0.55) with the lowest factor loading equal to 0.550 and the highest equal to 0.800 and substantial, the construct reliabilities were large (composite reliability $\alpha > 0.750$ and Average Variance Extracted (AVE >0.65), and indicate good convergent and discriminant validity (Fornell & Larcker, 1981).

Table 2.Confirmatory Factor Analysis Results for Measurement Model

Constructs	Items	Factor loading	Cronbach alpha	Average variance extracted
Performance expectancy	PE1	0.651	0.916	75.184
	PE2	0.732		
	PE3	0.817		
	PE4	0.773		
	PE5	0.784		
Effort expectancy	EE1	0.575	0.876	61.927
	EE2	0.550		
	EE3	0.654		
	EE4	0.587		
	EE5	0.756		
	EE6	0.594		
Social influence	SI1	0.800	0.750	80.01
	SI2	0.800		
Facilitating condition	FC1	0.531	0.777	59.896
	FC2	0.550		
	FC3	0.625		
	FC4	0.689		
Intention	INT1	0.765	0.876	80.358
	INT2	0.865		
	INT3	0.780		

After deleting items (EE6, SI3, SI4, SI5 and FC3), the confirmatory Factor Analysis model depicted acceptable model fit. Absolute fit measures evaluate the overall suitability of the model through Chi-square, and RMSEA (Root Mean Square Error of Approximation). Incremental fit measures evaluate the fitness of the research model via NFI (Normed Fit Index), NNFI (Non-Normed Fit Index), CFI (Comparative Fit Index), and IFI (Incremental Fit Index). Parsimonious fit measures evaluate the fitness level of the research model through AIC (Akaike Information Criterion), CAIC (consistent Akaike Information Criterion) and ECVI (Expected Cross-Validation Index). The results of the final confirmatory factor analysis are reported in Table 3 and suggest that our final measurement model provides a good fit to the data on the basis of a number of fit statistics ($\chi2/df$ = 1.74; RMSEA = 0.074; NFI=0.96; NNFI=0.96; CFI = 0.97; IFI=0.97; AIC = 533.71; CAIC = 790.69; and ECVI = 1.69).

Table 3. Measurement Model (Goodness of Fit)

Absolute indices	Estimated value	Expected value	Authors
χ^2/dl	1.74	<2	Satorra and Bentler (1994)
RMSEA	0.074	<0.08	Steiger et Lind (1980)
Incremental indices	Estimated value	Expected value	Authors
NFI	0.95	>0.9	Bentler and Bonett (1980)
NNFI	0.96	>0.9	Bentler (1989, 1990)
CFI	0.97	>0.9	Bentler (1989, 1990)
IFI	0.97	>0.9	Bentler (1989, 1990)
Parsimony indices	Estimated value	Expected value	Authors
AIC	533.71	The lower by comparison	(Akaike (1987)
CAIC	790.69	The lower by comparison	Bozdogan (1987)
EVCI	1.69	The lower by comparison	Browne et Cudeck (1989)

AIC of saturated and independent models is respectively 420 and 9076.22.

CAIC of saturated and independent models is respectively 1419.37 and 9171.40.

EVCI of saturated and independent models is respectively 1.33 and 28.72.

Structural model

The goodness of the fit for the structural model was tested using various absolute, incremental, and parsimony fit indices. The measures of overall goodness of- fit for the research model are shown in Table 4. The comparison of all fit indices with their corresponding recommended values provided evidence of acceptable model fit ($\chi2/df$ = 1.41; RMSEA = 0.074; NFI=0.95; NNFI=0.96; CFI = 0.97; IFI=0.97; AIC = 551.35; CAIC = 817.85; and ECVI = 1.74).

Table 4. Structural Model (Goodness of Fit)

Absolute indices	Estimated value	Expected value	Authors
χ^2/dl	1.41	<2	Satorra and Bentler (1994)
RMSEA	0.074	<0.08	Steiger et Lind (1980)
Incremental indices	Estimated value	Expected value	Authors
NFI	0.95	>0.9	Bentler and Bonett (1980)
NNFI	0.96	>0.9	Bentler (1989, 1990)
CFI	0.97	>0.9	Bentler (1989, 1990)
IFI	0.97	>0.9	Bentler (1989, 1990)
Parsimony indices	Estimated value	Expected value	Authors
AIC	551.35	The lower by comparison	(Akaike (1987)
CAIC	817.85	The lower by comparison	Bozdogan (1987)
EVCI	1.74	The lower by comparison	Browne et Cudeck (1989)

AIC of saturated and independent models is respectively 420 and 9076.22.

CAIC of saturated and independent models is respectively 1419.37 and 9171.40.

EVCI of saturated and independent models is respectively 2.82 and 28.72.

Thus, we move to the final step of the study, the test of the hypothesis.

Figure 2 presents the standardized path coefficients and associated t-values for all relationships in the structural model. All of the hypothesized paths in our model are significant at the pb.001and 0.05 level and in the expected direction. The results suggest that performance expectancy, effort expectancy, social influence, and facilitating condition all exert positive and significant effects on intention to use E-government services (see Figure 2).

Findings from this study provide evidence that the effort expectancy factor has the strongest effect on the behavioural intention to adopt e-government E-government services (β = 0.86, p < .01). The survey findings are consistent with the UTAUT model, which suggests that the presence of constraints might inhibit the behavioural intention to adopt e-government (Venkatesh et al., 2003). Although the findings of this research illustrate that the social influence (β = 0.45, p < .01), performance expectancy (β =0.16, p < .05) have a significant effect on behavioral intention in using E-government services. The survey findings are consistent with the UTAUT model. Facilitating condition (β =0.60, p < .05) is significantly and positively influencing behavioral intention in using E-government services. This is consistent with the study by Maldonado et al. (2009), who employed the UTAUT model to test students' acceptance of an educational portal and found that facilitating conditions had no statistically significant relationship with user behaviour and to be directly related to behavior intention. However, other

studies found that facilitating conditions were significantly related to behavioral intention to use mobile phones (Zhou, 2008), in the adoption of e-government services in Kuwait, and in the adoption of 3G mobile telecommunication (Wu et al., 2009). A study by Wang et al. (2010) found that facilitating conditions and behavioral intention were statistically related, and they concluded that facilitating conditions were a predictor of teachers' intention to implement distance learning.

Figure 2. Results of structural model testing
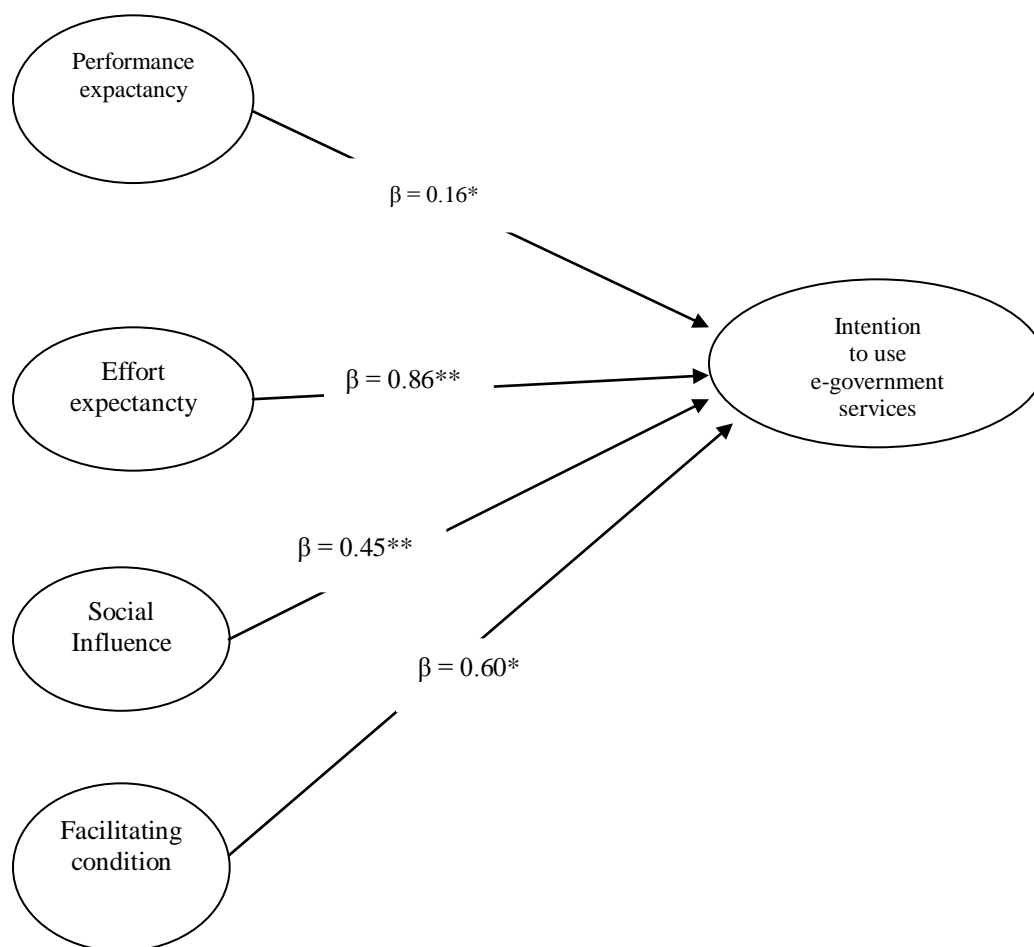
* Indicates that the variable is significant at the 5%.

** Indicates that the variable is significant at the 1%.

CONCLUSION AND IMPLICATIONS

This research aims to explore the psychological variables that lead individuals to use E-government services not only to search for information but also to make their services. Based on the Unified Theory of Acceptance and Use of Technology, this study proposes a model for explaining the behavioral intention to use E-government services in Kuwait. This model incorporates the explanatory variables from the UTAUT (performance expectancy, effort expectancy, social influence, and facilitating conditions) as the main drivers of the behavioral intention to use E-government services in State of Kuwait. The results show that behavioral intention to use E-government services can be predicted by performance expectancy, effort expectancy, social influence, and facilitating condition. Effort expectancy appeared to be an important predictor of behavioral intention to use E-government services in State of Kuwait.

Based on the Unified Theory of Acceptance and Use of Technology, this study proposes a model for explaining the online purchase intention in rural tourism. This model incorporates the explanatory variables from the UTAUT (performance expectancy, effort expectancy, social influence, and facilitating conditions) as the main drivers of the behavioral intention to use E-government services in State of Kuwait.

The results of this study present both theoretical and practical contributions. This study contributes to the literature by providing evidence on the most influential psychological factors influencing behavioral intention to use E-government services in State of Kuwait..

For practical implications, understanding adoption factors would able to lead government policy decision makers design and implement policies and strategies to formulate and execute better strategies in their E-government portal and website. There are many ways in which government agencies can increase effort expectancy. A good site not only contains sufficient information but also designed to be user friendly for all level of users (Lean et al, 2009). As an example, the government services users should be able to locate information on the websites with less effort.

In terms of facilitating condition or technical infrastructure, the Kuwaiti government can also helps citizens to use E-government services by providing internet infrastructure and internet bandwidth in State of Kuwait. It is vital to develop capabilities to provide a secure information and communication technologies infrastructure and make investments to address cyber security.

In terms of this research, social influence has a positive influence on citizens'behavioral intention to use E-government services. Thus, governments should encourage citizens to influence their family and relatives who have still not use the e-government services. Moreover, the advertisement and awareness campaigns on television, newspapers and government

agencies websites, that offer better quality services, are more likely to convince the citizens to use E-government services

In terms of performance expectancy, the information in the E-government portal and website has to be accurate, timely, informative, updated and relevant to citizens' needs.

Therefore, the government in State of Kuwait should ensure that the websites are free of technical problems in order to ensure the usefulness of the services and information provided online. Government policy decision makers design must make an effort to communicate this value in terms of both performance and effort to the potential users. This communication must be made on the main website, which is traditionally used to search for information about the accommodation, but is not as relevant as a reservation channel. Thus, the website itself must appeal to and invite potential users to try the use of E-government system, highlighting its advantages in comparison to traditional channels. Similarly, other communication and advertising initiatives should encourage potential users to use the web to make reservations, transmitting and reinforcing the efficiency, ease of use, and convenience of E-government portal and website. This would improve the effort expectancy and the performance expectancy of users with regard to the E-government services.

LIMITATIONS AND FUTURE RESEARCH

There are limitations to this research that should be addressed in future studies. First, this study did not incorporate actual usage behavior into the proposed model. Second, the factors selected in this study may not cover all factors that could influence the behavioral intention to use E-government services in Kuwait. Therefore future studies could further extend the UTAUT model to include other variables which might have an influence in the intention to use E-government services. Third, this study does not measure the moderator variables in UTAUT model. Therefore, considering the moderator variables could further explains the main constructs that determine behavioral intention to use e-government services and usage behavior.

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APPENDIX 1

Measurement scales for Model

Constructs		Measures
Performance expectancy statements	PE1	Using e-Government websites enable me to access government services more quickly.
(PE)	PE2	Using e-Government websites would enhance my effectiveness on the access government services.
Adopted from Venkatesh et al. (**2003)**	PE3	Using e-Government websites would make it easier to access government services.
	PE4	I would find e-Government websites useful to access government services.
	PE5	If I use e-Government websites, I will spend less time to access government services.
Effort expectancy statements	EE1	Learning to operate e-Government websites to access government services would be easy for me.
(EE)	EE2	My interaction with e-Government websites to access government services would be clear and understandable.
	EE3	I would find e-Government websites flexible to interact with.
Adopted from Venkatesh et al. (**2003)**	EE4	It would be easy for me to become skilful at using e-Government websites.
	EE5	I would find e-Government websites easy to use.
	EE6	Using the e-Government websites takes too much time from my normal duties.
	EE7	Overall, I believe that e-Government websites is easy to use.
Social Influence Statements	SI1	My friends and colleagues think that I should use the e-government websites.
(SI)	SI2	My family members and relatives think that I should use the e-government websites.
Adopted from Venkatesh et al. (**2003)**	SI3	People around me who use the e-government websites have more prestige.
	SI4	I find it difficult to use the e-government services due to lack of information and awareness campaigns.
	SI5	Overall, I am not satisfied with the awareness campaign's (TV, radio, newspapers, banners in government agencies websites, and in shopping malls) level obtained from e-government officials.
Facilitating conditions statements	FC1	I have the resources necessary to use e-Government websites.
	FC2	I have the knowledge necessary to use e-Government websites.
(FC)	FC3	Given the resources, opportunities and knowledge it takes to use e-Government websites to access government services, it would be easy for me to use the system.
Adopted from Venkatesh et al. (**2003)**	FC4	I think that using e-Government websites fits well with the way I like to access government services.
	FC5	Using e-Government websites to access government services fits into my work style.
Intention to use (INT)	INT1	I will use e-Government websites to access government services on regular basis in the future.
	INT2	I expect my use e-Government websites to access government services to continue in the future.
Adopted from Cheng et al.2006	INT3	I will strongly recommend others to use e-Government websites to access government services.