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Understanding Continuance Usage Intention of Electronic Government Service from the Perspectives of UTAUT in the Context of Dangerous Region

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ABSTRACT

Electronic government means employed and usage of computer application in government actions and tasks, where both public and government agencies are empowered to interact and transact online. Additionally, the process of EG has not been broadly scout in the context of Iraq, paid to the incompatible activities that has been skilful in the previous few years. Investigating performance expectancy, social influence, facilitating conditions, and effort expectancy and their influence on EG services continues usage in a significant step in order to understand the factors affecting continued usage of EG services in a conflict area such as Iraq. This research project aims to provide such an understanding and get better awareness by applying Unified Theory of Acceptance and Use Technology (UTAUT). 75 questionnaires distributed to universities' staff and lecturers. Data collected was analysed with the help of correlation and multiple regression analysis to determine the factors prediction of the continued usage intention of EG service in an unstable county (Iraq). The results showed the positive and significant effect of Performance expectancy and effort expectancy on continued usage intention. While, facilitating conditions and social influence are not affecting continued usage intention. The study contributes to the academic understanding of the continued usage intention in the context of Iraq and to the practitioners and policy makers use of the effective strategy to encourage Iraqi citizens to use such technology.

Keywords: UTAUT; EG service; Continuance Usage Intention; Dangerous Region.

1. INTRODUCTION

The evolution of Information and Communication Technologies (ICTs) has witnessed the emergence of Electronic Government (EG) in the late 1990s (Mubarak Alruwaie, 2012 & Alsohybe, 2007). EG has become an important application used by government agencies worldwide to facilitate communication and interactions with employees, citizens, between agencies, and with businesses (AlShihi, 2006).

Given the importance of EG services in today's era of technology, relatively there is a little prior research that uses a UTAUT model to discuss the EG services antecedents. Wide numbers of studies have been applied UTAUT in different majors, but no study has engaged UTAUT to investigate EG adoption among Iraqi public sectors, spicily in the framework of republic of Iraq as an unsecure area.

1. Electronic Government (EG) in Iraq

Generally, in Iraq is such that the country is having a high rate of violence and is facing numerous problems in the fields of health, science, education, and e-services (J. James A. Wall, 1995). Moreover, Ministry Of Science and Technology (MOST) and the Iraq Commission for Computers and Informatics (ICCI) were the two main centres that worked together to link with public administration agencies with the aid of Wireless Broad Band Network (WBBN) which was used as the wireless network that serves as the backbone to integrate electronic government and Management Information System (MIS) (UN & ESCWA, 2007). Although EG service is still seen as being primitive in Iraq, the government agencies are still said to need a major investment to secure the administration, enhance a business reengineering process, achieve a licensed soft copy, and so on. Aside the EG projects, there are other benefits achievable from implementing EG services in Iraq. Examples are enhancement of good governance, transparency and accountability among the agencies, thus they increase the mutual trust between the government and the citizens. The EG reduces running cost of the government administration, thus it makes the government budget more reasonable and masses-friendly. Finally, the G-2-B service will enhance and strengthen the intra-agency communication within all levels of the government and the entire society as well (UN & ESCWA, 2007). Thus, the current study investigates the variables that determine the failure or the success of EG usage in republic of Iraq as unsecured region.

2. Unified Theory of Acceptance and Use of Technology in contact of Iraq

Venkatesh et. al., (2003) conducted a study to compare the similarities and differences among prior theories and models of user acceptance to formulate Unified Theory of Acceptance and Use Technology (UTAUT). This study of comparison included the technology acceptance model (Hong et. al., 2006 & Davis et. al., 1989) theory of planned behaviour (TPB) (Ajzen, 1991), theory of reasoned action (TRA) (Fishbein & Ajzen, 1975), the combination of TAM and TPB (C-TAM-TPB) (Taylor & Todd, 1995), model of PC utilization (MPCU) (Thompson et. al., 1991), innovation diffusion theory (IDT) (Rogers, 2003) social cognitive theory (SCT) (Compeau & Higgins, 1995) and motivational model (MM) (Davis et. al., 1992). Unified Theory Acceptance and Use Technology (UTAUT) have four constructs to predict users' behavioural intention and behaviour of use, namely: (a) performance expectancy, (b) effort expectancy, (c) social influence, and (d) facilitating conditions (Venkatesh et. al., 2003). This study adopted UTAUT theory as a guideline to achieve the study objectives and test the hypothesis.

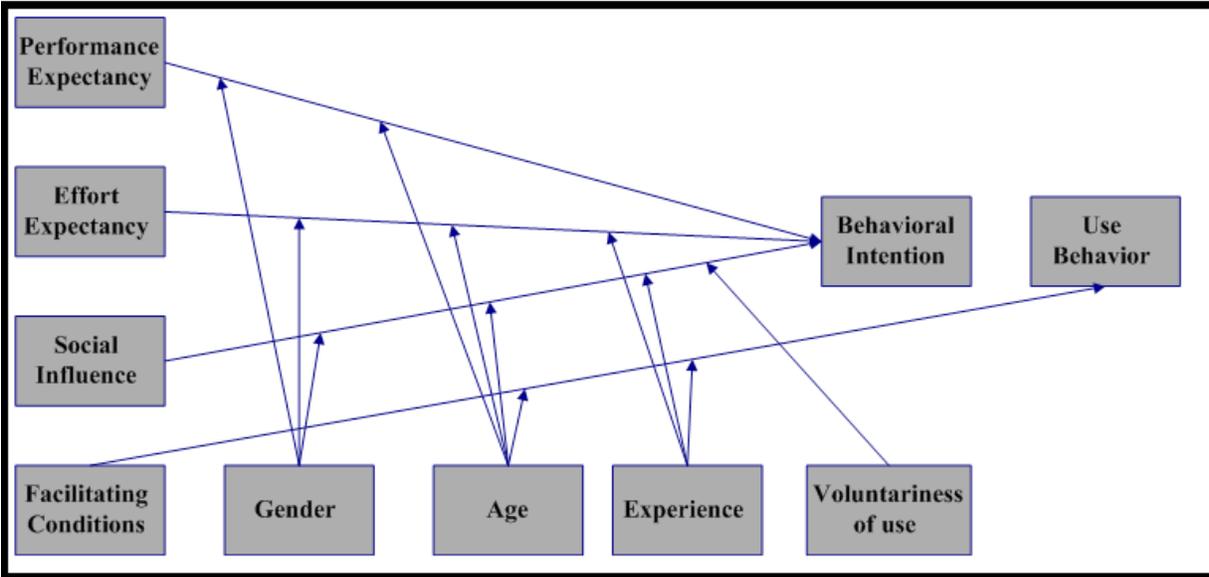


Figure 1: UTAUT Source: [6]

3. Continued Usage Intention of EG Services

In an effort to further grasp the matter of continued usage of EGS, previous literature has extensively worked on continued usage intention as applicable to different fields. The intention of a citizen to keep on using EG services is akin to the intention of the user to repurchase or revisit. In contrast, the intention to adopt a particular behaviour reflects the motivation factor that encapsulates the extent of the person's willingness to try performing the behavior (Teo et. al., 2009). Different attributes of EG services IT attributes have different roles to play in the continuance intention of the user (Teo et. al., 2009). In light of the empirically supported impact of continued usage upon IT success, determining the main factors affecting post-adoption behaviour of the user (continue or discontinue IT usage) becomes significant and critical (Hong et. al., 2006).

The majority of previous IT adoption research has failed to examine the difference in user's perceptions between the initial adoption and continued use (Hong et. al., 2006; Bhattacharjee, 2001 & Karahanna et. al., 1999). An information system generally reflects that its success hinges upon the continued use as opposed to first-time use (Bhattacharjee, 2001; Limayem et. al., 2003 & Wangpipatwong et. al., 2008). Similarly, the initial use of EG services is a significant indicator of EG success. Nevertheless, this does not always result in the desired outcome unless the majority of citizens' continuously uses EG services. Also, citizens may discontinue use following innovation if the system does not satisfy their needs despite the successful adoption (Limayem et. al., 2003; Wangpipatwong et. al., 2008 & Rogers, 1991).

Additionally, discontinuance may occur after the adoption of innovation if the system does not meet the user's needs regardless of its successful prior adoption (Limayem et. al., 2003; Wangpipatwong et. al., 2008). Therefore, the issue of EG usage and continued use must be carefully addressed not only from the technological perspective but also from social, political and environmental perspectives (Mubarak Alruwaie, 2012; Basu, 2004). This study explored and tested the factors influencing on continued usage intention of EG services in a conflict context that taking place in Iraq.

2. RESEARCH METHODOLOGY

Theoretically, there are many researches that applied UTAUT components and it was successfully implemented among technology and innovation usage. Therefore, this study involves UTAUT as a frame for the current study on EG services in Iraq. This section discusses in further details about the current study model. UTAUT used because it is a new generation of UTAUT (Venkatesh et. al., 2003) to the field of IS and new innovation. Moreover, Usage Behaviour of EG services was measured by four items adapted from (Raman et. al., 2008 & Al-Majali, 2011). PE was measured by six items adapted from (Adulwahab & Dahalin, 2011). SI was measure by five items adapted from (Adulwahab & Dahalin, 2011 & Venkatesh et. al., 2003). FC was measured by five items adapted from (Al-Awadhi & A. Morris, 2008), and EE was measured by five items adapted from (Adulwahab & Dahalin, 2011; Venkatesh et. al., 2003).

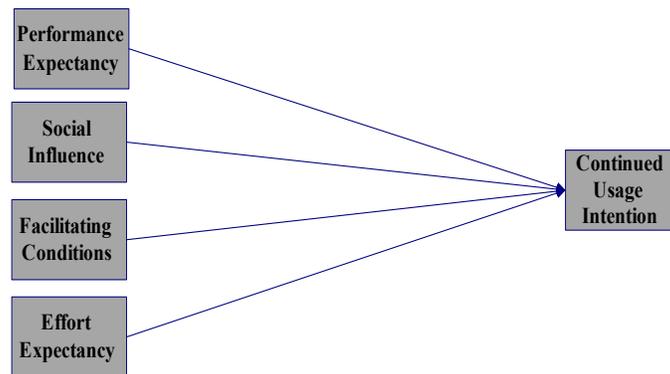


Figure 2: Research Framework of sustainability of EG.

3. RESEARCH HYPOTHESES DEVELOPMENT

The current research model was examined in this study was shown in Figure 2. According to the UTAUT2, performance expectancy, effort expectancy, social influence, facilitating condition and Habit are hypothesized to be the determinants of usage behavioural in the context of EG services in risky environment. The current research hypotheses are shown below. Moreover, all of the variables and hypotheses in the current model are proposed based on the UTAUT2.

H1: Performance expectancy has a positive effect on sustainable (usage behaviour) of EG services.

H2: Social influence has a positive effect on sustainable (usage behaviour) of EG services.

H3: Facilitating conditions have a positive influence on sustainable (usage behaviour) of EG services.

H4: Effort expectancy has a positive effect on sustainable (usage behaviour) of EG services.

4. POPULATION AND SAMPLING THAT PROPOSED TO IMPLEMENTATION UTAUT

The study will focus on the (G2C) services mainly, covering the range of all government services, such as social, economic, and the rest in the specific context of dangerous zone. Iraq citizenry from different levels of demographical features would therefore be surveyed for the purpose of this study. Additionally, this study included 75 valid questionnaires distributed to three regions in Iraq (south, middle and north) equally.

5. DATA ANALYSIS

Data was collected through systematic random sampling method from public universities lecturers and administrators via questionnaire. Items were measured through a seven-point Likert scale that ranged from 1 representing strongly disagree, and 7 representing strongly agree.

The result of the correlation test is presented in Table 1. According to the table, the result obtained for Facilitating conditions (FC) is ($r = 0.138, p > 0.05$), and social influence (SI) is ($r = 0.021, p > 0.05$) showing no correlation between FC, SI and continued usage intention.

Table 1
Pearson Correlations ($n = 75$)

	<i>CUIT</i>	<i>FC</i>	<i>PE</i>	<i>SI</i>	<i>EE</i>
<i>CUIT</i>	1				
<i>FC</i>	.138	1			
<i>PE</i>	.342**	.574**	1		
<i>SI</i>	.021	.432**	.409**	1	
<i>EE</i>	.563**	.323**	.441	.233*	1

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

While performance expectancy (PE) is ($r = -0.342, p < 0.05$), and effort expectancy (EE) is ($r = 0.563, p < 0.05$) indicating that PE and EE are significantly correlated with continued usage intention.

6. DISCUSSION

On the basis of this study's results, it is evident that performance expectancy predicts the Iraqi citizen will continue dealing with the EG services and that Iraqi citizens are concerned with the efficient delivery of this service.

The result showed that there is a significant relationship between PE and CUI at the 0.01 level of significance ($\beta = 0.226, p < 0.01$). Therefore, hypothesis H1 was supported. The finding suggests that individual performances in terms of life performances and accomplishments of transaction/task can be improved when the individual use the EG services the unstable and risky environment. This result is in line with previous empirical studies. Many previous empirical studies have shown that there is a positive relationship between PE and other variables (Shafi & Weerakkody, 2010; Al-Sobhi et. al., 2011).

In addition, based on the results of this study, effort expectancy is significantly related with continued usage intention at ($\beta = -0.531^{**}, p < 0.01$), which means hypothesis is supported. With these findings, previous studies have provided empirical evidence of the significant positive relation between EE and UB (Wu et. al., 2007). Based on previous works, it appears that EE is important among different innovations in the Middle East and non-Middle East countries (Sobhi et. al., 2011; Abdul-Rahman, 2011; Foon & Fah, 2011; Yahya et. al., 2011 & Ventakesh et. al., 2011).

In examining the hypothesis related to social influence the result showed that SI has no effect on continued usage intention ($\beta = -0.154, p > 0.1$) and, thus, this hypothesis is not supported. That indicated social influence (SI) could be one of the main reasons of low usage of E-Services (Al-Majali, 2011) in general and specifically in Iraq. Moreover, the few past studies in Iraq have neglected the examination of

the effects of social influence especially from family and peers, and empirical test have not been previously carried out in Iraq.

This study suggests that the EG services users do not have any influence from their pair group or anybody influencing their usage of EG services. The feedback further favour the non-significance of preserve social effect in estimate technology. More so, in technologies that are expanded to the presence as revealed by (Chiu & Wang, 2008).

Additionally, the current study is in line with social influence result in other studies, because it is not making any significant contribution to the prediction in the Saudi Arabia eG context (Alsheri et. al., 2012).

Finally, according to the statistic results, facilitating conditions showed no significant relation with continued usage intention CUI ($\beta = 0.096, p > 0.1$) this appears to recommend that FC has not positive effect on CUI. Thus hypothesis is not supported. This finding is not consistence with some previous studies such as (Adulwahab & Dahalin, 2011; Wang & Shih, 2009). In addition, several prior empirical studies shed light on Facilitating Conditions (FC) as an important key, in different countries (Foon & Fah, 2011 ; Wang & Shih, 2009). Furthermore, there is a lack of Facilitating Conditions (FC) in terms of Infrastructure (Dabbagh, 2011 & Portal Iraq, 2011) and of teeming challenges and barriers faced in Iraq. To overcome that challenges, the government of Iraq spent 20 million USD in an agreement between Iraq and Italy to achieve EG project (Tai, 2008).

Table 2
Summary of multiple regression results

<i>Variable</i>	<i>Standard Coefficient Beta (β)</i>	<i>P</i>
Facilitating Conditions	.096	.431
Performance Expectancy	.226	.077
Social Influence	.154	.161
Effort Expectancy	.531	.000
R ²	.360	
Adjusted R Square	.323	
Sig. F Change	.000	

7. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Although this study has produced interesting findings, it does, however, have certain limitations; first, this study reports a limitation with respect to sample size in the present study, which is relatively small. Additionally, this study targeted only the public universities employees in Iraq. Therefore, the findings of this study do not reflect the behaviour of other fields such as private universities, students, school teachers, agriculture sector, military sector and industrial sector. Also, this study focused on the investigations of the antecedents of continued usage intention in Iraq. Moreover, this study included other aspects such as the effects of infrastructure on public universities employees in a violent environment. Additionally, this study discussed a few antecedents of eG and neglected a lot of them, such as the motivations, trust, service quality, website features and others. Moreover, this study has concentrated on a single sector and in one country, which may result in our findings being context specific, considering the diversities in the

same sector across various states and difference in lifestyle. Furthermore, the researchers took responses from universities' staff and lecturers having centers in different states in Iraq, which might affect the generalization of our study. Therefore, future study has to use a larger representative sample of citizens who belong to different sectors.

8. CONCLUSION

This is the first study which attempts to gain an understanding of the EG technology continued usage intention in unsecure country. The findings provide several initial insights into the variables that influence continued usage intention. Performance expectancy and effort expectancy statistically have an impact on continued usage intention. While, facilitating conditions and social influence are not affecting continued usage intention. That's means the continued of usage depend on the performance that expected from the system or EG services and the quality of the services hanged on the quantity of the effort that should be spend to achieve the entire task. In terms of increasing our understanding of the use of UTAUT, the results of this research suggest that performance expectancy and effort expectancy highest priority variables on continued usage intention of electronic government. Therefore, this study can trigger both the Iraq's central and local governments in developing and implementing better EG services by identifying the factors that can help in providing good EG services and encourage people to deal with their transaction through the EG applications.

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