www.irmbrjournal.com June 2017
International Review of Management and Business Research Vol. 6 Issue.2

Factors Impacting the Citizens' Intention to Use E-Government Services Among Jordanian Citizens

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Abstract

The current study aims at examining the factors that influences the citizens' intention to use e-government services in Jordan. what distinguishes this study compared to others is the fact that is gathered the 7 most influential factors on technology which are (trust, image, compatibility, ease of use, complexity and relative advantage and intention to use). Through a structure dquestionniare which was distributed on 500 citizens in Jordan as a convenience sample. (407) were retrevied for the sake of statistical analysis. The results of the study indicated that trust is among the most influential factor that encourages people to use e-governmetn services while the relative advantage appeared to be the lease influential.

Key Words: *E-Government, Intention to use, Governmental Transaction, Relative Advantage*.

Introduction

In recent years, the subject of adopting and accepting e-government has received a significant attention from researchers. Several researchers has explored and published literature on this issue of e-government and its acceptance and adoption in both developed and developing countries. This literature can be categorized into two: the demand side and supply side of e-government. The focus of research on the e-government's supply side has been on various aspects touching on the adoption of e-government, including organizational culture issues, managerial strategy and practice issues, and issues relating to how e-services are evaluated and measured. On the contrary, the focus on research on the e-government's demand side, which is also the focus on this study, has been on individual and organizational characteristics and their influence on the adoption and use of e-government.

One of the common themes in the steam of literature as far as the demand side of e-government has been factors influencing the intention of citizens to adopt and embrace e-government system. Different models including the Diffusion of Innovation (DOI), model, Theory of Planned Behavior (TPB), Trust framework model and Technological Acceptance Model (TAM) have widely used factors that are inform people's intention to embrace e-government (Sahraoui, Gharaibeh, & Al-Jboori, 2006; Alshehri, Drew, & Alfarraj, 2012; Rehman, & Esichaikul, 2011; Alomari, Woods, & Sandhu, 2012). TAM posits that user's intention to use and new e-system determine informs their decision to adopt it and that the intention informs users' belief about the new system.

The concept of E-government

According to Fang (2002. P. 1) E-government is defined as "a way for governments to use the most innovative information and communication technologies, particularly web-based Internet applications, to provide citizens and businesses with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in democratic institutions and processes".

However, E-government exhibits a colossal driving force to push ahead in the 21st century with higher quality, financially savvy, taxpayer supported organizations and a superior relationship amongst subjects and government. A standout amongst the most critical parts of e-government is the way it conveys nationals and organizations nearer to their administrations.

History of E-Government in Jordan

Despite overwhelming evidence that complexity, relative advantage, perceived usefulness, image, and perceived ease of use influence the intentions of citizens to use e-Government; limited studies have investigated collective all the five constructs within the Jordan context to determine whether they equally predict citizens' intention to embrace and use e-governemnt services in Jordan.

Utilizing TAM, Al-Jamal and Abu-Shanab (2015) only examined two constructs (i.e., perceived usefulness and perceived ease of use) as constructs proposed in TAM that to drive citizens to accept and use e-government services in Jordan. Data was collected using Google surveys using a sample of 300 Jordan citizens aged between 25 years and 46 years and analyzed quantitatively using SPSS Software. Results of this study confirmed a hypothesis that perceived ease of use of e-government and perceived usefulness of a technology predict the citizen's acceptance and adoption of e-government services in Jordan. Similarly, Al Khattab et al. (2015) only examined three constructs that is perceived usefulness, trust in electronic channels, perceived ease of use, perceived risks, and web trust, influence intentions of users of e-government services. Data was collected using self-administered questionnaires and analyzed using parametric statistics. A sample of 170 Jordan citizens was used. Results showed that trust in electronic channels, perceived ease of use, users' trust, and perceived usefulness are the key factors that influence intentions of users to adopt and use e-government services.

Problem Statement

To support this study, Shin 2015) used constructs acknowledged in TAM to examine the acceptance and adoption of cloud technology services. Usefulness and ease of use were found to be influenced by the accessibility and availability of the technology. On the other hand, perceived usefulness was influenced by perceived security. It was revealed that users' intention was driven by ease of use and perceived usefulness of cloud computing technology. Park and Kim (2014) examined factors that informed mobile cloud computing users' intention to adopt this technology. Perceived security and perceived usefulness were identified as key factors that influenced users' adoption and use of cloud computing**.**

Aims and Objectives

Based on the above argument, it can be seen that e-government transactions and tendencies are becoming more and more popular among customers due to its ability to save time and efforts.

The current research aims at understanding the influence of some factors in encouraging the Jordanian citizen to use the Jordanian e-government services and transactions.

Hypotheses of the Study

H1: There is a statistically significant influence of trust on the Jordanian Citizens' Intention to Use E-Government Services.
H2: There is a statistically significant influence of perceived usefulness on the Jordanian Citizens' Intention to Use E-Government Services.
H3: There is a statistically significant influence of Perceived Ease of Use on the Jordanian Citizens' Intention to Use E-Government Services.
H4: There is a statistically significant influence of Compatibility on the Jordanian Citizens' Intention to Use E-Government Services.
H5: There is a statistically significant influence of Relative Advantage on the Jordanian Citizens' Intention to Use E-Government Services.
H6: There is a statistically significant influence of Image on the Jordanian Citizens' Intention to Use E-Government Services.
H7: There is a statistically significant influence of Complexity on the Jordanian Citizens' Intention to Use E-Government Services.

Model of the Study

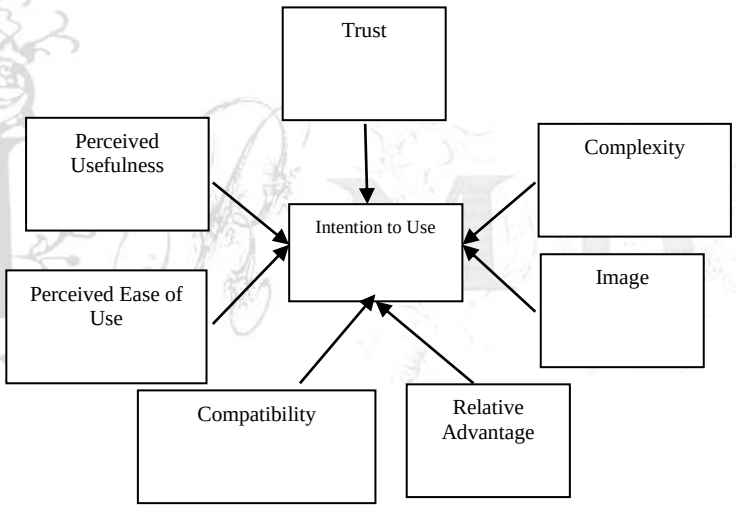

Figure 1 Model of the study

Literature Review

Technology in Governmenal Transactions

Several studies have used models such as TPB (Theory of Planned Behavior), TRA (Theory of Reasoned Action) and TAM (Theory of Technological Acceptance Model), DOI (Diffusion of Innovation) among others to investigate factors informing users to embrace e-government services (Carter, & Bélanger, 2005; Gilbert, 2004; Armitage, & Conner, 2001). These studies offer insights into users' intention to use and adopt e-government technologies by identified factors determining users' intention to embrace e-government services, namely complexity, relative advantage, perceived usefulness, image, and perceived ease of use.

TAM Model

TAM sees perceived ease of use and perceived usefulness as fundamental determinants of user acceptance. These two variables influence intention to use an e-government service, which, in turn, correlates with actual use. The model uses measurement scales for both ease of use and usefulness.

Similarly, Hung et al. (2006) explored factors identified in TPB (Theory of Planned Behavior) namely trust, compatibility, interpersonal influence, perceived risk, external influence, perceived ease of use, and self-efficacy as possible factors influence the utilization and adoption of e-government in Taiwan. It was confirmed that Taiwan citizens are influenced by trust, compatibility, perceived risk, and perceived ease of use to use e-government. However, limiting the study to online payment system limits this study as it cannot be generalized for e-government. In a similar study, Wangpipatwong et al. (2008) noted that the relationship between perceived usefulness and perceived ease of use and users' intention to embrace e-government technologies is mediated with Computer Self-efficacy factor among Thai citizens.

Lin et al. (2011) sought to validate factors identified in TAM in Gambia to influence individuals' use of e-government technologies. A sample of 167 e-government employees was used. Data used in the study was collected via structured questionnaire by distributed to participants via e-mail. Perceived ease of use was identified as the key factor influencing the Gambian citizens' attitudes towards adopting the e-government.

Colesca and Dobrica (2008) used a sample of 481 Romanian citizens to examine two constructs suggested in TAM that is perceived usefulness, trust and perceived ease of use as possible determinants of citizen's acceptance and adoption of e-government. The findings supported other study findings that the perceived usefulness, trust and ease of use predict the citizen's intention to use e-government. They noted that user's higher perception of ease of use, trust and perception of usefulness of e-government services influences them to adopt e-government.

Al-Adawi, and Yousafzai, and Pallister (2006) investigated constructs proposed in Technology Acceptance Model and in other models namely trust, perceived ease of use and perceived usefulness as factors motivating citizen's adoption of e-government. Their findings were in conformity with other studies that the three constructs (i.e., trust, perceived ease of use and perceived usefulness of e-government drive citizens to embrace e-government services. Using a questionnaire distributed to 130 participants in UAE, Hidi (2012) investigated usefulness and ease of use as possible factors influencing e-government acceptance by SME (Small & Medium Enterprises) in United Arab Emirate). Results of this study validated other study findings that usefulness and ease of use motivate citizen's acceptance of e-government services.

Wangpipatwong, Chutimaskul and Papasratorn (2008) sought to validate factors identified in TAM as influencing the continuous use of e-government government website by citizens. TAM model was used as the theoretical model with web-based survey used to empirically validate the TAM. The model was empirically tested using regression analysis. A sample of 614 Thai citizens with the experience in using e-Government was used. Results supported the TAM that perceived ease of use and perceived usefulness of e-government websites predicted the citizens' intention to continuously embrace the e-government websites in Thailand. It was concluded that for the government to motivate citizens to use the e-government websites, it should understand factors that influence their continuance intention to embrace e-Government websites, which include perceptions of ease of use and perceived usefulness of the website.

Zailani, Ramayah and Fernando (2009) explored factors that influence users' use e-government in Malaysia as suggested in the TAM and Diffusion of Innovation (DOI) model namely perceived image, perceived complexity, trust, perceived relative advantage and perceived usefulness. Data was obtained through questionnaire using a sample of 150 Malaysian citizens. Results indicate that perceived usefulness of e-government, trust in e-government services, perceived image, and perceived relative advantage of e-government are directly, positively and significantly related to users' intention to embrace e-government

service. It was further revealed that the relationship between perceived image, relative advantage and perceived of e-government is mediated by the uncertainty avoidance.

Jayashree et Al. (2016) used a sample of 132 Iran citizens to examine factors that influence Iranian citizen's intention to embrace e-government services notably trust in e-government, perceived ease of use, and compatibility. Data was collected using questionnaires and analyzed quantitatively using SPSS software. It was revealed that the Iranian citizens' intentions are influenced by the three constructs i.e., perceived ease of use, compatibility and trust in e-government to embrace e-government services. These three factors were identified as barriers to Iranian citizens to adopt and use of e-government services.

Ease of Using E-government

Perceived ease of use was recognized in the TAM as a factor that influence by users in choosing to use e-government services. It is conceptualized as the level or extent to which individuals or citizens see the use of a technology to be simple. It is also defined as the estimation of effort that citizens would be required to put in order to use and learn how to use a technology. This construct is believed to be particularly factor to early acceptors of a technology. It is also believed to be a key factor determining adoption of a new technology or innovation and its subsequent diffusion. It has been widely recognized as critical factor that drive citizens to accept a technology.

E-Government and Using Technology among Citizens

Researchers have investigate factors informing citizens' intention to embrace and adopt e-government services within different contexts, including U.S., Saudi Arabia, Iran, United Kingdom, Canada, and others. However, few studies have examined these factors within the Jordan context. More revealing is that these studies have found mixed results regarding complexity, relative advantage, perceived usefulness, image, and perceived ease of use as factors influencing the intentions of citizens to use e-Government.

Carter and Belanger (2004) theoretically examine critical factors that motivate citizens to embrace and adopt e-government in the U.S from. They investigated factors recognized in DIO theory using a sample of 140 U. S students. The study identified image, compatibility and relative advantage as significant predictor of individual's intention to embrace and use e-government in the U.S.

In a similar study involving Carter and Belanger (2005), three models, namely DOI, Web Trust Model and TAM were combined into one model containing factors influencing individuals' use and adoption of e-government. The study involved 140 undergraduate students. Results conformed to earlier study results that perceived usefulness, relative advantage and compatibility inform users' intention to embrace e-government. However, the use of undergraduate students brings into question the generalisability of findings of this study. In a 2006 study, Dimitrova and Chen hypothesized that the U.S., citizens were influenced by psychological characteristics, including variables identified in TAM and DOI namely perceived uncertainty and perceived usefulness to intent to adopt e-government services. Like other studies, the findings of this study confirmed that indeed perceived uncertainty and perceived usefulness predict individuals' intention to embrace e-government services.

Trust in Using E-Government

Trust in a technology or innovation is defined as people feeling confident and secure in using or adopting it. Trust is believed to predict the citizens' intention to embrace and use e-government services. It is suggested that citizens' trust in an innovation or e-government service is associated with privacy and security assurances offered to them by the owner of the technology.

There are two type of trust are thought to influence the intention of citizens to embrace and adopt an innovation: institutional-based trust and characteristic-based trust. The former is defined as citizens' belief that there are structural conditions that enhance the likelihood of realizing a successful outcome in a particular technology. Put in the context of adopting e-government services, institutional-based trust represents' individual's trust in using the internet as a reliable medium for interacting with the government. The later (i.e., characteristic-based trust is the citizens' belief that there are other parties with beneficial characteristics. Within the context of citizen preferring to adopt e-government, characteristic-based trust represents perceptions of citizens regarding the competence and integrity of government services.

Trust and other factors, including perceived risk, (TOG) trust of government, disposition to trust, and (TOI) Trust of the Internet were identified by Belanger and Carter (2008) as factors driving users' to adopt an innovation. In view of Belanger and Carter (2008, p.4) defined Disposition to Trust as an individual's propensity to trust other people and it is composes of trusting stance and faith in humanity. According to Belanger and Carter (2008) the faith that people towards nature and other issues makes them to be seen to trusted. However, McKnight et al. (2002) trust in other people makes an individual to cooperate with other them. It is argued that trust in an innovation reduces when perceived risk reduces. Trust of the internet is fundamentally influenced by how citizens' view it as a safe place and dependable medium for performing transactions (Belanger & Carter, 2008). According to Batenburg (2007) perceived risk and trust are interrelated. In view of Gefen (2002) when individuals trust other people, they tend to assume that such individuals will behave accordingly and reduce social complexity. Batenburg (2007) also believes that trust reduces perceived risk. Several studies have supported the perceived risk and trust relationship with regard to the adoption of e-government. Models that recognize trust as a predictor of people's intention to embrace and use an innovation posit that individual's disposition to trust positively impact the trust of the internet, trust of government and personal intention to embrace and use e-government services (Belanger & Carter, 2008).

Perceived usefulness

Perceived usefulness is conceptualized as the level to which individuals see the particular technology not complicated, and this compels them to acquire the service and information they require from the service with less effort. It can also be viewed as the degree to which person hold the view that a particular technology can enhance the individual's job performance or productivity. Ramayah et al. (2009) defines PU as the person's the extent to which a user of an individual or citizen believes that job performance would be enhanced by a particular system. Within the context of the e-government, perceived usefulness is conceptualized as the possibility that user will can use e-government to accomplish a certain task. This construct was captured in the TAM model. It is also the level to which individual see e-government website as useful in terms of enhancing life, saving time and for performing transactions. In view of TAM, the PEOU (perceived ease of use) and the PU (perceived usefulness) are identified as the beliefs that inform users' intention to adopt the new e-system and that these two beliefs explain variances in intention of the e-system users Terpsiadou, and Economides (2009) defines PEOU as the extent to which a citizen or individual expresses confidence in a particular system believing that it would be free of effort. Elsewhere, Lai and Fatt (2008) identified PU of e-government as the key predictor of user's intention to adopt e-government services. Results by Chen, and Huang (2009) further supported the view that PU is a predictor of user's intention to embrace e-government.

Image

Perceived image is defined as the degree to which the individual's social status is believed to be enhanced by an innovation. It is argued that an individual's likelihood of engaging in an innovation or use of a technology is influenced by others' approval of it (Batenburg, 2007).

Complexity and Relative Advantage

Other constructs thought to predict users' intentions embrace and adopt e-government are relative advantage and complexity of the system.

Methodology and Method

The current research study employes the quantitative approach in answering the main question of the study and either reject or accept the presented hypotheses.

Through the quantitative approach, the researcher will use a questionnaire that is devided into two main parts, the first part if the demographic variables, while the second part informs the factors of the study which were chosen in the model of the study.

The sample of the study was taken from the Jordanian citizens in order to form the participants. The total number of the sample reached (500) individual as a convenience sample from citizens. The total numer of properly filled questionnaire that are suitable for statistical analysis was (407) questionnaire.

Statystical Package for Social Research V 21.0 was used to analyzed the primary data of the study. the following statytical processes were used:

- Descriptive analysis
- Reliability test
- Multiple regression
- ANOVA test

Analysis and Discussion

Demographic Variables

Mean and standarad deviation were calculated for the sample's answers on the demographic part of the questionnaire.

The result of the analysis showed that 59% of the sample were males while 41% were females. which gives an indication that mostly males who follow the development of the e-government in Jordan and deals with its transactions. As for the age, it appeared through the analysis that most of the sample was of the young individuals in Jordan; it showed that 36.6% of the sample were of the age range of 28-33 follwed by the age group of 34-39 with a percentage of 32.4%.

As for the educational leve, it was shown through the analysis that 39.8% had a bachelor degree followed by 27.3% of people who had a high school diplom. And as for the amployment, the analysis showed that 59.2% of the total sample were individuals who were self-emplyed, followed by 37.8% of individuals who were house wives, this can be attributed to the fact that the sample was a convenient sample and it didn't target a certain sector of the Jordanian society.

The variable of computer literacy results showed that more than hapf of the sample (56.8%) appeared to be perfect when it comes to computer literact and they are aware gow to use a computer. This can indicate the prevalence of technology and development in Jordan. When asking the sample of the study within the questionnaire the questions of *"Have you ever completed a governmental service through the e-government portals?"* the answers came within 100% agreeing that they have done at least one governmental service

through the internet portal of the Jordanian government through their lives. This indicates that there is a certain level of acceotance of the e-governemnt services among individuals in Jordan.

Variables of the Study

Mean and standard deviation of the sample answers to the paragraphs of the questionnaire. See table (1) in appendencies. According to the analysis of the variables of the study, the following was reached to:

Trust

This notion appeared in studies by (Sahraoui, Gharaibeh, & Al-Jboori, 2006; Alshehri, Drew, & Alfarraj, 2012; Rehman, & Esichaikul, 2011; Alomari, Woods, & Sandhu, 2012). These authors noted to the fact that trust in the e-government portal plays a huge role in encouraging individuals to use the e-government services based on their feelings of trust and security towards the portals that are presented and the fact that trust was seen to be a motivator to enhance an individual's intention towards taking part in a certain activity.

Ease of Use

These results matched what Shin (2013) noted in his study, through investigating the core factors that compelled employees in the public organization to adopt the cloud computing technology. Results indicated that ease of use and perceived usefulness, informed users' behaviors and intentions to adopt the cloud computing technology in their organizations. Access and availability of the technology influence perceived ease of use. In another meaning, the ease of use has encouraged individual to step into the e-government services and find out more of what it can help in easing their life and save them efforts and time. Shin noted in his study that the ease of use appeared to be the most influential variable in terms of the intention to use e-government services.

Complexity

The term complexity appeared to be of a negative influence looking at the term itself, according to the study, complexity decreased the intention of the individuals to use the e-government services arguing that the concept of technology and internet is meant to make our lives easier and less complicated, the complexity of the e-government portals and website won't play a good role in encouraging people to use these services, this also appeared (Lean et al., 2009) as it was concluded that trust, perceived relative advantage, perceived usefulness and perceived image positively encouraged the intention of citizens to use e-government. However, perceived complexity of the e-government negatively impacts on the citizens' intention to embrace e-government technologies. While according to Warkentin et al. (2002) complexity was seen to be a goof influencer to the tax payers to encourage them to use e-government services as it has given them a feeling of security and trust to use the service itself and pay taxes.

Perceived Usefulness

According to the results, the participants saw that the idea of e-government is a useful approach to interact with the technological development that is booming in the world, the participants saw that encouraging the use of e-government and even reaching the status of depending completely on this idea is a great step to Jordan in terms of development and organizing the services that the government presents to its citizens. This appeared also by Al-Jamal and Abu-Shanab (2015) who examined two constructs (i.e., perceived usefulness and perceived ease of use) as constructs proposed in TAM that to drive citizens to accept and use e-government services in Jordan, they noted in their study that perceived ease of use of e-government and perceived usefulness of a technology predict the citizen's acceptance and adoption of e-government services in Jordan. Also, Al Khattab et al. (2015) examined the perceived usefulness in using e-government

services and the results also showed that usefulness is seen to be a key factor that influences intentions of users to adopt and use e-government services.

Compatibility

The results of the study indicated that compatibility is among the factors that influences the individuals' intention to use an e-service as it was found that the nature of the services that are presented by the Jordanian e-government is compatible to their needs and match what they are looking for. In another meaning, the Jordanian e-government services were found to be able to interact with the Jordanian citizen needs and that is what may encourage the citizen to act upon it.

Image

From the analysis of the paragraphs it can be seen that the image of the e-services in Jordan is already popular and people are pushing towards using internet and technology in mostly all of their daily life routines including education, health and purchasing. So, from that point, the concept of image is already there and people are accepting using it. The issue of image appeared in many studies, including (Lean et al., 2009; Warkentin et al. 2002; Hung et al. 2006) who agreed on the influence of image in increasing the intention to use e-government services to get governmental transactions done.

Relative advantage

The concept of relative advantage in the context of e-government might not appear as having a huge role. It mainly refers to the status of the degree of a services' ability to compete along with other brands and service provides. In the context of the e-government services in Jordan, there are no competitors in that field, which gives an indication that the relative advantage as a variable is somewhat not influential. However, according to other studies like Zailani, Ramayah and Fernando (2009) who saw that the ease of use, usefulness and the relative advantage are among the factors that influences the citizens intention to actual use e-governmental services.

However, the coefficient table showed the following:

- There is no statistically significant influence of trust on the Jordanian Citizens' Intention to Use E-Government Services, due to t value is not significant at 0.05 level
- There is a statistically significant influence of perceived usefulness on the Jordanian Citizens' Intention to Use E-Government Services, due to t value is significant at 0.05 level
- There is a statistically significant influence of Perceived Ease of Use on the Jordanian Citizens' Intention to Use E-Government Services, due to t value is significant at 0.05 level
- There is a statistically significant influence of Compatibility on the Jordanian Citizens' Intention to Use E-Government Services, due to t value is significant at 0.05 level
- There is no statistically significant influence of Relative Advantage on the Jordanian Citizens', due to t value is not significant at 0.05 level
- There is a statistically significant influence of Image on the Jordanian Citizens' Intention to Use E-Government Services, due to t value is significant at 0.05 level
- There is a statistically significant influence of Complexity on the Jordanian Citizens' Intention to Use E-Government Services, due to t value is significant at 0.05 level

Conclusion

The current research study ssought to understand the factors that influences the intention of citizens to use the e-government services. Through a structured questionnaire, (500) of them were distributed and the

researcher collected a total of (405) questionnaires which were properly filled for the statistical analysis process. The results of the study indicated that all of tha taken variables appeared to have a positive influence on the citizens' intention to use e-government services.

Multiple Regression is used to test above hypothesis, it is found that F value = 57.683 is significant at 0.01 so that There is a statistically significant impact of independent variables on the Jordanian Citizens' Intention to Use E-Government Services. With high level of correlation due to r = 0.709, whereas the independent variables explain 50.3% of the variance in the dependent variable.

Trust appeared to be the most influential variable among the factors that influences the intention to use governmental services through the online portals. Even though all the tackled variables (trust, complexity, compatibility, relative advantage, image, ease of use and usefulness) had an influence on the intention of citizens to use e-government, but trust is the most influential factors among them. On the other side, according to the results, the factor of relative advantage appeared to be the least influential factor noting that it appeared to be low because of the fact that there is no competitor and the Jordanian government is the only party who present such services online.

References

Al Khattab, A., Al-Shalabi, H., Al-Rawad, M., Al-Khattab, K., & Hamad, F. (2015). The Effect of Trust and Risk Perception on Citizen's Intention to Adopt and Use E-Government Services in Jordan. Journal of Service Science and Management, 8, 279-290.

Al-Adawi, Z., Yousafzai, S., & Pallister, J., (2006). Conceptual Model Of Citizen Adoption Of E-Government. The second international conference on innovations in information technology.

Alateyah, S.A., Crowder, R. M., & Wills, G.B. (2013). Factors Affecting the Citizen's Intention to Adopt E-government in Saudi Arabia. World Academy of Science, Engineering and Technology, 81: 601-603.

Al-Jamal, N.Q., & Abu-Shanab, E.A. (2015). E-Government Adoption in Jordan: The Influence of Age. ICIT 2015 The 7th International Conference on Information Technology, 345-350.

Alkhater, N., Walters, R., & Wills, G. (2014, November). An investigation of factors influencing an organisation's intention to adopt cloud computing. In*Information Society (i-Society), 2014 International Conference on* (pp. 337-338). IEEE.

Alomari, M.K., Woods, P., & Sandhu, K. (2012). "Predictors for E-government Adoption in Jordan: Deployment of an Empirical Evaluation Based on a Citizen-centric Approach," Information Technology & People, 25: 4-4.

Alotaibi, M. B. (2014). Exploring Users' attitudes And Intentions Toward The Adoption Of Cloud Computing In Saudi Arabia: An Empirical Investigation. *Journal of Computer Science*, *10*(11), 2315-2329.

AL-Rababah, B., & Abu-Shanab, E. (2010). "E-Government and Gender Digital Divide: The Case of Jordan," *International Journal of Electronic Business Management (IJEBM)*, 8(1): 1-8.

Alsaif, M. (2013). Factors Affecting Citizens' Adoption of E-government Moderated by Socio-cultural Values in Saudi Arabia. *In ECEG2013 13th European Conference on eGovernment vol 2*. Como, Italy, 13-14 June 2013. England: Acpi. 578- 586.

Alshehri, M., Drew, S., & Alfarraj, O. (2012). "A Comprehensive Analysis of E-government services adoption in Saudi Arabia: Obstacles and Challenges," International Journal of Advanced Computer Science and Applications, 3:1-6.

Armitage, C.J., & Conner, M. (2001). "Efficacy of the theory of planned behaviour: A meta-analytic review," British journal of social psychology, vol. 40, pp. 471-499, 2001.

Batenburg, R. (2007). E-procurement Adoption by Firms: A Quantitative Analysis, Journal of Perception and Trust as determinants of Adoption of Purchasing and Supply Management, 13(3): 182-192.

Borgman, H. P., Bahli, B., Heier, H., & Schewski, F. (2013, January). Cloud rise: exploring cloud computing adoption and governance with the TOE framework. In *System Sciences (HICSS), 2013 46th Hawaii International Conference on* (pp. 4425-4435). IEEE.

Carter, L and Weerakkody, V. (2008). E-Government Adoption: A Cultural Comparison, Information Systems Frontiers, Springer, 10(4): 473-482.

Carter, L. and Belanger, F. (2004). 'Citizen Adoption of Electronic Government Initiatives (ETEGM03)'. Proceedings of the Annual Hawaii International Conference on System Sciences, 119.

Carter, L. and Campbell, R. (2011). The Impact of Trust and Relative Advantage on Internet Voting Diffusion. *Journal of theoretical and applied electronic commerce research*, 6(3), pp.7-8.

Carter, L., & Belanger, F. (2005). The utilization of e-government services: Citizen trust, innovation and acceptance factors. Information Systems Journal, 15(1), 5–25. Carter, L., and Belanger, F., (2002) The Influence of Perceived Characteristics of Innovating on e-Government Adoption, Electronic Journal of e-Government, 2 (1), 11-20.

Carter, L., & Bélanger, F. (2005). *The utilization of e-government services: citizen trust, innovation and acceptance factors. Information Systems Journal* 15, 5–25.

Carter, L., & Campbell, R. (2011). The impact of Trust and Relative Advantage on Internet Voting Diffusion. Journal of Theoretical and Applied Electronic Commerce Research, 6(3): 28.42.

Carter, L., Belanger, F. (2003). The Influence of Perceived Characteristics of Innovating on e-Government Adoption. Electronic Journal of e-Government, 2(1): 11-20.

Chen, C., & Huang, E. (2009). A Study on Taxpayers' 2002. Encouraging Citizens Adoption of eWillingness to Use Self-service Technology-based Government by Building Trust, Electronic Markets, Online Government Services, Journal of Electronic 12(3): 157-162.

Colesca1, S.E., & Dobrica, :L. (2008). Adoption And Use Of E-Government Services: The Case Of Romania, 6(3): 22-34.

Dimitrova, D. & Chen, Y. C. (2006). Profiling the adopters of e-government information services: the influence of psychological characteristics, civic mindedness, and information channels. Social Science Computer Review, 24(2), 172-188.

Fang, Z. (2002). E-Government in Digital Era: Concept, Practice, and Development. *International Journal of The Computer, The Internet and Management*, 10(1), pp. 1-22

Gefen, D. (2002). Reflections on the Dimensions of System: Taxpayers' Perspectives, Seventh Wuhan Consumers, The DATA BASE for Advances in International Conference on E-Business, Volume s I-Information Systems, 333: 38-53.

Gilbert, D. (2004). "Barriers and benefits in the adoption of e-government," International Journal of Public Sector Management, 17: 286-301.

Gohary, M. M., Hussin, A, B, C., & Abdollahzadehgan, A., (2013). Human Factors' Impact Leveraging Cloud based Applications Adoption. *Journal of Information Systems Research and Innovation*

Güner, E., & Sneiders, E. (2014). Cloud Computing Adoption Factors in Turkish Large Scale Enterprises. In *Pacific Asia Conference on Information Systems*. AIS Electronic Library (AISeL).

Gupta, P., Seetharaman, A., & Raj, J. R. (2013). The usage and adoption of cloud computing by small and medium businesses. *International Journal of Information Management*, *33*(5), 861- 874.

Hassan, K., & Hashim, M. (2015). Factors Influence the Adoption of Cloud Computing: A Comprehensive Review. International Journal of Education and Research, 3(7): 295-306.

Hidi, A. (2012). User Acceptance and Motivation of E-Governance Services Based on Employees Levels of Experience in the UAE SME. American Journal of Economics, 2(6): 132-135.

Hung, S. Y., Chang, C. M., & Yu, T. J. (2006). Determinants of user acceptance of the eGovernment services: The case of online tax filing and payment system. Government Information Quarterly, 23(1), 97–122.

Jayashree, S., Salehi, F., Abdollahbeigi, B. and Agamudainambi Malarvizhi, C. (2016). Factors Influencing Intention to use E-Government Services among Iran Citizens. *Indian Journal of Science and Technology*, 9(34).

Jayashree, S., Salehi, F., Abdollahbeigi, B., Malarvizhi, C.A. (2016). Factors Influencing Intention to use E-Government Services among Iran Citizens. Indian Journal of Science and Technology, *l 9(34*): 1-15.

Keong, Y., Albadry, O. and Raad, W. (2014). Behavioral Intention of EFL Teachers to Apply E-Learning. *Journal of Applied Sciences*, 14(20), pp.2561-2569.

Lai, M.L. & Fatt, C.K. (2008). Electronic Tax Filing System: Taxpayers' Perspectives, Seventh Wuhan Consumers, International Conference on E-Business, Volume s I- III - Unlocking The Full Potential Of Global Technology, pp: 338-344.

Lean, O. Zailani, S. Ramayah, T. and Fernando, Y. (2009) Factors influencing intention to use e-government services among citizens in Malaysia. Int. J. Info. Manage., 29(6): 458 – 475.

Lean, O., Zailani, S., Ramayah, T. and Fernando, Y. (n.d.). Factors Influencing Intention to Use e-Government Services Among Citizens in Malaysia. *Citizens and E-Government*, pp.334-359.

Lean, O.K., Zailani, S., Ramayah, T., & Fernando, Y. (2010). *Factors Influencing Intention to Use E-Government Services Among Citizens in Malaysia*. IGI Global.

Lim, N., Grönlund, Å., & Andersson, A. (2015). Cloud computing: The beliefs and perceptions of Swedish school principals. *Computers & Education*, *84*, 90-100.

Lin, F., Fofanah, S., and Liang, D. (2011). Assessing citizen adoption of e-Government initiatives in Gambia: A validation of the technology acceptance model in information systems success. Government Information Quarterly, *28*(2), 271-279.

Ramayah, T., Y. Yusoff, N. Jamaludin, & Amlus, I. (2009). Applying the Theory of Planned Behavior (TPB) to Predict Internet Tax Filing Intentions, Journal of Management, 26(2): 272-284.

Rehman, M., & Esichaikul, E. (2011). "Factors influencing the adoption of egovernment in Pakistan," in E -Business and E -Government (ICEE), 2011 International Conference on, 1-4.

Sahraoui, S., Gharaibeh, G., & Al-Jboori, A. (2006). "E-Government In Saudi Arabia: Can It Overcome Its Challenges?," eGovernment Workshop '06.

Shin, D. (2015). Beyond user experience of cloud service: Implication for value sensitive approach. *Telematics and Informatics*, *32*(1), 33-44.

Shin, D. (2015). Beyond user experience of cloud service: Implication for value sensitive approach. *Telematics and Informatics*, *32*(1), 33-44.

Stieninger, M., & Nedbal, D. (2014). Diffusion and acceptance of cloud computing in SMEs: towards a valence model of relevant factors. In*System Sciences (HICSS), 2014 47th Hawaii International Conference on* (pp. 3307-3316). IEEE.

Terpsiadou, M., & Economides, A. (2009). Social Psychology, 49(1): 95-112. The Use of Information Systems in the Greek Public Financial Services: The Case of TAXIS, Government Information Quarterly, 26(3): 468-476.

Van der Schyff, K., & Krauss, K. E. (2014). Higher education cloud computing in South Africa: towards understanding trust and adoption issues. *South African Computer Journal*, *55*, 40-55.

Wangpipatwong, S. Chutimaskul, W. and Papasratorn, B (2008). "Understanding Citizen's Continuance Intention to Use e-Government Website: a Composite View of Technology Acceptance Model and Computer Self-Efficacy" *The Electronic Journal of e-Government, 6(1):* 55 – 64.

Wangpipatwong, S., Chutimaskul, W., & Papasraton, B. (2008). "understanding citizen's continuance intention to use e-government website: a composite view of technology acceptance model and computer self-efficacy", The electronic journal of e-government, 6(1):55-64.

Warkentin, M., David, G., Pavlou, P. A. and Rose, G. M. (2002). 'Encouraging Citizen Adoption e-government by Building Trust. *Electronic Markets*, 12, 3.

Wu, W. W. (2011). Developing an explorative model for SaaS adoption. *Expert systems with applications*, *38*(12), 15057-15064.

Yang, Z., Sun, J., Zhang, Y., & Wang, Y. (2015). Understanding SaaS adoption from the perspective of organizational users: A tripod readiness model.*Computers in Human Behavior*, *45*, 254-264.

Zailani, S., Ramayah, T., & Fernando, Y. (2009). Factors Influencing Intention To Use E-Government Services Among Citizens In Malaysia. International Journal of Information Management, 13: 1-24.

Appendix

Table (1): Mean and standard deviation of the sample answers to the paragraphs of the questionnaire

Descriptive Statistics					
Paragraph	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Intetnion to Use					
I prefer e-government portal to complete their governmental transactions	407	1	5	3.58	1.078
E-government is somewhat new but is it popular and can help in saving time and efforts	407	1	5	3.57	1.067
I prefer to complete my official transactions through the official offices	407	1	5	3.48	1.053
Employees are aware of the e-government and encourage people to use	407	1	5	3.23	1.112
I recommend to perform official transactions through the e-government	407	1	5	3.13	1.242
E-government is a form of development and I am welling to use its services	407	1	5	3.09	1.215
Trust					
The performance of the Jordanian e-government is reliable	407	1	5	3.39	1.200
Jordanian e-government sticks to its promises in the future	407	1	5	3.22	1.060
There is a good degree of integrity in the online service through the e-government program	407	1	5	3.17	1.020
I believe in the performance of the Jordanian e-government	407	1	5	3.23	1.070
Jordanian e-government applications have failed us as citizens	407	1	5	3.04	1.051
Jordanian e-government services enjoys a good reputation	407	1	5	3.14	1.024
Perceived Ease of Use					
Using the e-service is easy for me	407	1	5	3.48	1.029
I know what to do to get an e-government service just following the instructions	407	1	5	3.79	1.043
I don't need a lot of efforts to understand the procedures	407	1	5	3.76	1.017
I am skillful in using e-government services	407	1	5	3.97	.980
I find e-government services in Jordan easy to use	407	1	4	2.65	.948
Perceived Usefulness					
Using e-government services enables me to accomplish tasks more quickly	407	1	5	4.15	1.103
e-government services increase my performance in completing transactions	407	1	5	4.15	1.071
e-government decreases the amount of time needed to complete a governmental transaction	407	1	5	4.11	1.137
E-government services are effective in citizens lives	407	1	5	4.04	1.112
Compatibility					
The promises of the e-government program is compatible with its IT infrastructure	407	1	5	4.21	1.107
Higher compatibility leads to better performance	407	1	5	4.05	1.106
I use e-government services if it was compatible with my IT tools	407	1	5	4.08	1.196
Jordan must develop its IT infrastructure if it wants a successful e-government initiative	407	1	5	3.72	1.171
E-government needs an internet connection which not everyone has	407	1	5	3.85	1.111

Relative Advantage					
The current governmental services are better that they are online	407	1	5	4.09	1.135
There is a match between the usual e-government services and its appearance online	407	1	5	4.14	1.154
E-government program gives a better status for Jordan among other countries in middle east	407	1	5	4.12	1.111
The governmental transactions are now superior compared to the previous years	407	1	5	4.05	1.135
The overall performance of the Jordanian government is getting better	407	1	5	4.00	1.097
People are now more enthusiastic to perform governmental actions online	407	1	5	4.11	1.132
The current status of e-government encourages me to use it	407	1	5	4.02	1.092
I understand my governmental needs in a better way now	407	1	5	3.97	1.037
Image					
Jordan is known for a good e-government orientation	407	1	5	3.97	1.049
All departments are willing to provide help if I needed one	407	1	5	4.06	1.098
Jordan is known to have a good internet infrastructure which supports its e-government initiative	407	1	5	3.70	1.160
The fact that Jordan applies an e-government program is something unique compared to other Arab countries	407	1	5	3.48	1.052
Jordan enjoys good expertise in e-government	407	1	5	3.49	.923
Complexity					
The way the e-government website designed is friendly and easy to understand	407	1	5	3.45	.897
The process of doing a governmental transaction online is very smooth	407	1	5	3.36	.856
I don't understand online transactions as they are multiple and complicated	407	1	5	3.11	.906
Internet makes everything more complex and complicated	407	1	5	3.01	1.047
Valid N (listwise)	407				