

Proposed Research Model for Citizens Acceptance of E-government Services among Jordanian Citizen

¹Khaled Yousef Alshboul , ²Barjoyai Bardai, ³Mohammad Mahmoud Alzubi

^{1,2,3}Al Madinah International University

Abstract: E-Government offers services to those under its jurisdiction, where they can benefit from all the electronic transactions with the-government. This study intends to develop a theoretical model for explaining and predicting citizen acceptance and use of E-Government services in Jordan. Citizens' perspective is very important to investigate the use behavior of Government in the Jordan environment. The proposed research model for citizens' acceptance of e- Government services is constructed base on literature review. The model expands the belief concept in unified theory of acceptance and use of technology (UTAUT) by including five more constructs that are Trust factor (TF), Computer self-efficacy (CSE) and continued usage intention of (CUI). Findings of model's reliability show highly reliable.

Keywords: E-Government Services, E-Government Acceptance Model, E-Government in Jordan among citizen.

1. INTRODUCTION

According to these authors (Bélanger, &Carter, 2008; and Colesca, 2009; Dai et al., 2014), when the user has come to believe that the transaction and his personal data are safe, it will demonstrate higher tendency to experience a higher level of intention to use the online services. Also, in terms of computer self-efficacy, the empirical results showed that computer self-efficacy has a positive relationship with the intention to use e-Government services. The finding is harmonious with (Compeau, &Higgins, 1995; Carter & Belanger, 2005; Wangpipatwong,et al.,2008; Chatzoglou et al, 2015). State officials should make some extra efforts to fight against computer illiteracy (seminars, incentives, etc), since only self-efficient citizens will be the ones adopting e-Government So, one undeniable benefit is that the E-government model could assist its e-government project and facilitate the delivery of information and services to public and among government agencies efficiently in a short span of time. E-government is hoped to help mitigate corruptions among government employees as well (Majdalawi, et al., 2015).

At the initial stage of implementation (1990s), most government agencies have stressed on G-2-E implementation such as e-leave and e-employment. In the 2000s, due to the fact that the applications of e-government became more sophisticated, the focus on E- government to employee (G-2-E) applications had moved to E- government to business (G-2-B) and E-government to E- government (G-2-G) applications (Holden et al., 2003; Moon & Norris, 2005). E-government program upholds the aim of attaining greater efficiency in government performance, by way of improving the performance of services for beneficiaries and investors from various layers of the society. Ease, accuracy and efficiency, are the credible virtues of the performance of official governmental transactions. Online interactive services may boast off a number of facilities namely petitioning, rate paying, licensing or information queries. It is worthy of note that there has been a diversity of quality implementations and levels for such services (Middleton, 2007; Almarabeh & AbuAli, 2010).

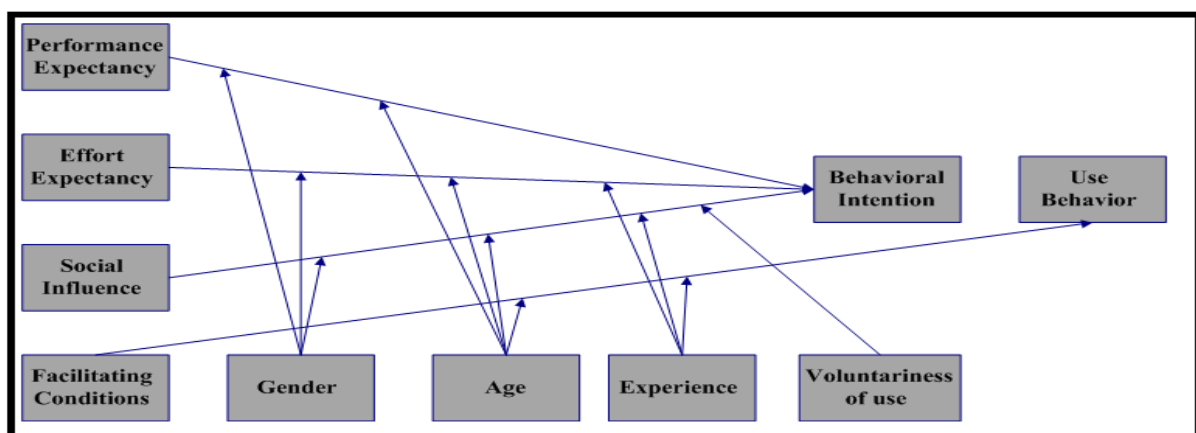
2. THEORETICAL FRAMEWORK AND HYPOTHESES

Venkatesh et al. (2003) had done a study to draw a comparison between the similarities and differences among prior theories and models of user acceptance to formulate the Unified Theory of Acceptance and Use Technology (UTAUT). This comparison included the technology acceptance model (TAM) (Davis et al., 1989), theory of planned behaviour

(TPB) (Ajzen, 1991), theory of reasoned action (TRA) (Ajzen & Fishbein, 1975), and several others. In the result of this work is the model UTAUT which was made to overcome the difficulties first faced by information technology researchers in developing their study framework in order to understand the usage of technology among users (Venkatesh et al., 2003).

According to Davis et al. (1989), prior acceptance models had some successful records in an approximate estimate of 40 percent in their prediction of the adoption of information technology. By contrast, Venkatesh et al. (2003) indicated that the UTAUT prediction of the adoption of information technology is approximately 70 percent in the study of the variance in users' intention, and also suitable to predict equally the individual acceptance of information technology for a large range of groups further more Unified Theory Acceptance and Use Technology (UTAUT) uses 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). The link between these constructs, behaviour intention and behaviour of use is moderated by four key factors i.e. age, gender, voluntariness, and experience (Venkatesh et al., 2003).

Figure. 1 Unified Theory Acceptances and Use Technology



Source: Venkatesh et al. (2003)

3. RESEARCH MODEL FACTORS

E-government needs to tackle the obstacles that are preventing citizen's motivation to use such technology. This study takes the CSF approach to identify the key areas where things must go right for the e-government to flourish. Identifying CSFs is a well-accepted practice that allows businesses to focus on a limited number of areas in which satisfactory results ensure successful competitive performance (Digman, 1990).

i. Trust Factor

Trust in government had declined drastically in the mid-1960s, and has been all-time low ever since, despite some brief fluctuations, including a temporary break after the terrorist attacks dated September 11, 2011. In 1958 almost three-quarters of the people surveyed said they let the federal government "do what is right" most of the time or as frequently as possible. Only 40 percent admitted to have this level of confidence in 2002. In 1994, the proportion of the population trusting the federal government reached 21 percent, which was the lowest in the century, and has been hovering around 40 percent since the 1970s (Donovan and Bowler 2004). According to Al-Gahtani, S. (2011) Trust can be interpreted as allowing individuals to willingly use e-government services and behave socially responsibly for the fulfilment of trust after considering government characteristics. Trust as one important factor that could determine the usage of e-government application in a way that is more trustworthy of e-government application will decrease the fear of using it. To achieve this, important factors that affect Jordanians' intentions to use technology will need to be examined. (Khasawneh et al. 2013).

ii. Computer Self-Efficacy

Computer self-efficacy is considered by Wangpipatwong et al. (2008) as a fundamental factor that determines the adoption of e-government. Perceived behaviour control that affects an individual's intention to use is based upon TPB's

computer self-efficacy and facilitating condition. Compeau and Higgins (1995) made a comment that self-efficacy is an individual's self-confidence and their own ability to fulfil certain behaviour. Such a definition is connected to the concept of self-efficacy first introduced by Bandura (1989; p. 391) as people's judgments of their capabilities to organise and execute courses of action needed to attain designated types of performances.

iii. Use behaviour

The intention of a citizen to continue using E-Government services is parallel with the intention of the user to repurchase or revisit (Gefen et al., 2003; Xi, 2014). In contrast, the intention to adopt a particular behaviour reflects the motivation factor that encapsulates the extent to which a person is willing to try performing the behaviour (Teo et al., 2009; Jordaan, 2014). In the post-adoption phase, the intention of the user to keep on employing E-Government services stems (1) from the discussion previously held of using the services, indicating a mechanism of repeating behaviour, and (2) this is affected by the prior utilization of services evaluation which indicates a mechanism of feedback (Teo et al., 2009). Next, different attributes of E-Government services have different roles in the continuance intention of the user (Teo et al., 2009; Kim&Park, 2013). Concerning the empirically supported impact of continued usage upon IT success, determining the main factors that affect the post-adoption behaviour of the user (continue or discontinue IT usage) becomes significant and critical (Hong et al., 2006; Zhou, 2013).

Most of the previous IT adoption research did not examine the difference in users' perceptions between the initial adoption and continued use (e.g. Bhattacharjee, 2001; Hong et al., 2006; Karahanna, 1999). An information system generally mirrors that its success hinges upon the continued use as opposed to first-time use (Bhattacharjee, 2001; Limayem et al., 2003; Wangpipatwong et al., 2008). In a similar manner, the initial use of E-Government services is a significant indicator of E-Government success. Nevertheless, this does not always result in the desired outcome unless most citizens continuously use E-Government services. Also, citizens may discontinue the use if the system does not cater for their needs however successful the adoption is (Roger, 1995; Limayem et al., 2003; Wangpipatwong et al., 2008; Detlor et al., 2013).

iv. Control Variable (Moderatos)

The major area that this literature review wishes to cover is the understanding of the demographic factors that can exert a big influence on the adoption of E-Government, especially concerning the E-Government Services. Through this review, this research seeks to evaluate and measure their influence. This study will be investigating four demographic factors, namely, education, experience, age and gender. Many previous researchers have chosen these factors as the main demographic factors (Phichitchaisopa, & Naenna, 2013; Khalil and Nasrallah 2014),

a. EDUCATION (EDU)

In Wu's (2007) study, education is added to the control variable group as it is thought to be a significant control variable in E-Government. Regarding education in general and to narrow the digital divide, governments could help the citizens by means of providing them particularly the elderly and young people, with computer education (Reffat, 2003 as cited by Al-Shafi & Weerakkody, 2010). Thomas and Streib (2003) revealed that ethnicity, education, can both play a role in discriminating Internet users from their non-users counterparts. They stated that among the above factors, ethnicity and education are significant predictors of internet users of government Web sites – with most users have better education. Educational level refers to a wide range of demographic education levels of the citizens (Venkatesh et al., 2000; Al-Shafi & Weerakkody, 2010). Al-Shafi and Weerakkody (2010) added that educated individuals and citizens are more prone to achieve superior professions and employ new, cutting-edge innovations.

b. Age

Age is also among the most significant demographic characteristics and is considered a significant factor in technological adoption in the universities among academic staff (Khasawneh & Ibrahim 2012). Young academic staff may be more or even most familiar with ICT in the education system especially those who use computers during their college studies or those who receive higher education degree from any developed country Notably, some studies only made use of part of UTAUT instead of using it in its entirety as they are very appropriate to the organization under study (Maldonado et al., 2011; Wang & Yang, 2005).

4. RESEARCH HYPOTHESES

The plan for this study is to set up a hypothetical model that could explain and predict citizen acceptance and usage of e-government services in the setting of website. In terms of the model formation, the (UTAUT), belief - intention – behavior relationship will be adopted. Specifically, this relationship postulates that Continued Usage Intention of e-government use is instantaneously controlled by their Use Behavior (Venkatesh et al., 2003). Thus, the following hypothesis is established:

H1: Use Behavior to use e government service has an effect on Continued Usage Intention of the e-government.

H2: The Performance Expectancy of e-government service has a direct effect on Use Behavior to use the e-government service.

H3: The Social Influence of E-Government service has a direct effect on Use Behavior to use the e-government service.

H4: The Facilitating Conditions of e-government service has a direct effect on Use Behavior to use the e-government service.

H5: The Effort Expectancy has a direct effect on Use Behavior to use the e-government service.

H6: The Trust Factor has a direct effect on Use Behavior to use the e-government service.

H7: Computer Self-Efficacy has a direct effect on Use Behavior to use the e-government service.

H8: The influence of performance expectancy (PE) on Use Behavior to use e-government service in Jordan is moderate by Education.

H9: The influence of Social Influence (SI) on Use Behavior to use e-government service in Jordan is moderate by Education.

H10: The influence of Facilitating conditions (FC) on Use Behavior to use e-government service in Jordan is moderate by Education.

H11: The influence of Effort Expectancy (EE) on Use Behavior to use e-government service in Jordan is moderate by Education.

H12: The influence of Trust Factor (TF) on Use Behavior to use e-government service in Jordan is moderate by Education.

H13: The influence of Computer Self-Efficacy (CSE) on Use Behavior to use e-government service in Jordan is moderate by Education.

H14: The influence of performance expectancy (PE) on Use Behavior to use e-government service in Jordan is moderate by Age.

H15: The influence of Social Influence (SI) on Use Behavior to use e-government service in Jordan is moderate by Age.

H16: The influence of Facilitating conditions (FC) on Use Behavior to use e-government service in Jordan is moderate by Age.

H17: The influence of Effort Expectancy (EE) on Use Behavior to use e-government service in Jordan is moderate by Age.

H18: The influence of Trust Factor (TF) on Use Behavior to use e-government service in Jordan is moderate by Age.

H19: The influence of Computer Self-Efficacy (CSE) on Use Behavior to use e-government service in Jordan is moderate by Age.

All hypotheses are intertwined and they are the building blocks of the model recommended in this current work. The model suggested by the study is the E-Government Acceptance Model and is illustrated in section figure 2.

CONCEPTUAL MODEL

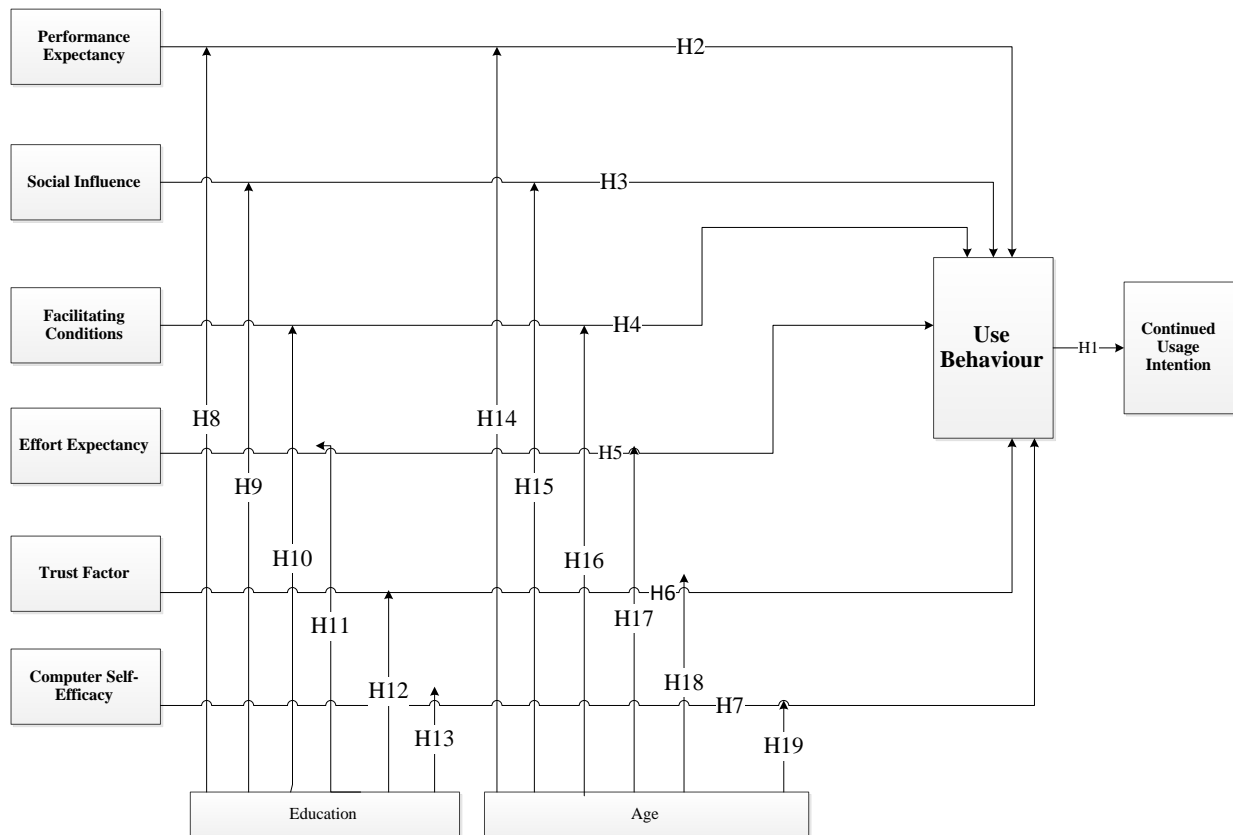


Figure 2. CONCEPTUAL FRAMEWORK

5. METHODOLOGY

Drafting clear and understandable instructions is a substantial before the survey questions are organized. On this note, a cover page with the title and a brief description of the research will be included in the questionnaire. Additionally, respondents will also be provided with a consent page that provides information concerning the anonymity and confidentiality, procedure and risks, respondent's rights, the expected time required to complete the questionnaire, the description which dwells into the offered incentive and also contact information. Overall, the instrument will be consisting of nine-sections as described below:

- Section 1 will contain the general information of the respondents namely, gender, age, Education, and experience.
- Section 2 will comprise of Subsection 1 through Subsection 8.
- Subsection 1 will include items formulated to measure the Performance Expectancy (PE) of e government services in Jordan. The five items in this subsection will be formulated specifically to assess the performance of using e government services in Jordan environment. In terms of the scale used, it is the five-point Likert scale which ranges from 1-5 denoting 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.
- Subsection 2 consists of items formulated to measure the Social Influence (SI) of e government services in Jordan. Again, there are five items in this subsection and they were specifically formulated to measure the performance of using e government services in Jordan environment. Concerning the scale used, it is the five point Likert scale ranging from 1-5 with 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.
- Subsection 3 consists of items which were formulated to measure the Facilitating Conditions (FC) of e-government services in Jordan. There are five items in this subsection which were specifically formulated to measure the performance

of using e government services in Jordan environment. For the scale, it is the five point Likert scale ranging from 1-5 where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.

- Subsection 4 consists of items formulated to measure the Effort Expectancy (EE) of e government services in Jordan. There are five items in this subsection and they were specifically formulated to measure the performance of using e government services in Jordan environment. Again, for the scale, it is the five point Likert scale ranging from 1-5 where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.

- Subsection 5 consists of items formulated to measure the Trust Factor (TF) of e government services in Jordan. There are eight items in this subsection which were specifically formulated to measure the performance of using e government services in Jordan environment. In terms of the scale used, it is the five point Likert scale that will range from 1-5 where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.

- Subsection 6 consists of items formulated to measure the Computer Self-Efficacy (CSE) of e government services in Jordan. There are four items in this subsection that were specifically formulated to assess the performance of using e government services in Jordan environment. Concerning the scale, it will be the five point Likert scale ranging from 1-5 where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.

- Subsection 7 consists of items formulated to measure the Use Behavior (UB) of e government services in Jordan. There are four items in this subsection and they were specifically formulated to assess the performance of using e government services in Jordan environment. Again, the five point Likert scale will be used ranging from 1-5 where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.

- Subsection 8 consists of items formulated to measure the Continued Usage Intention (CUI) of e government services in Jordan. There are four items in this subsection which were specifically formulated to assess the performance of using e government services in Jordan environment. The scale used will be the five point Likert scale ranging from 1-5 where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.

6. RELIABILITY AND VALIDITY RESULTS

Most of the items used to measure the variables have been adopted from the literature. Even though the adopted measurements have been confirmed of its discriminate and convergent validity, it is felt necessary to re-examine the validity of these measures. This is because this study is undertaken in the Jordanian context which may be different from other countries. The existing literatures on acceptance and diffusion of technology have been done in other countries, particularly in the euro-countries where the environment and culture are entirely different from Jordan. The questionnaire was pilot tested with 30 citizens.

As indicated by Hair et al. (1998), the coefficient of determination (R^2) is employed when the researcher wishes to measure the fraction of the total variance of the dependent variable with respect to its mean described by the independent variables or the predictor variables. If the R^2 value obtained is high, then, the regression model's explanatory power will be good. In this study, the regression model R^2 value obtained for the dependent variable use behavioral is 0.953. This indicates that 95.3 percent of the total variance in use behavioral of citizens is described by the regression model. Additionally, the value obtained (0.953) is regarded as high. As such, the regression model's power is considered as good. Further, the regression coefficients' values as well as their significance, establishes the factors comprised in the model.

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.950 ^a	.903	.851	2.30151

Predictors :(constant). Computer self, Effort Expectancy, Social influence, performance Expectancy, trust, facilitating condition

According to Henryson 1971 added that in the context of survey test, as to allow its inclusion, the value obtained for the "item-to-total-test" correlation should fall in the range of 0.3-0.7. This will be followed by a comprehensive analysis of reliability executed the complete dataset. For reliability coefficient with a high value, it denotes highly reliable instrument. Consequently, Devellis (1991) and Nunally (1978) mentioned that for a start, the minimum satisfactory reliability

coefficients should fall in the range of 0.70-0.80. In particular, the value proposed by Nunnally (1978) has to be higher than 0.7. For pilot test, concerning the sample size, it should be at least 30 (Hunt et al., 1982). Following this recommendation, a total of 30 randomly chosen citizens were solicited to partake in this study's pilot test. The citizens were all from Irbid National University. Accordingly, Table 2 shows the results generated from the test. The prerequisites discussed in this paragraph guide this study in its execution of reliability and factor analysis test.

Table 2 : Scale Reliability Alpha – Pilot Test of Model's Questionnaire (N=30)

Variable	N. of Items	Alpha (a)
Performance Expectancy	5	.869
Social Influence	5	.828
Facilitating Conditions	5	.807
Effort Expectancy	5	.956
Trust Factor	4	.876
Computer Self-Efficacy	4	.908
Use Behavior	4	.957
Continued Usage Intention	4	.928

7. SUMMARY

Nowadays, e-government services are interesting and very recent addition as a new vital platform by Jordanian government. Nevertheless, citizen's perspective is very important to investigate the use behavior of e-government in Jordan government. Combination of service channels and alternatives helps citizens to be in touch with their applications, anywhere and anytime. The present study suggests several factors as important determinants of the behavior intention to use e-government by Jordanian government. The future work focuses on the hypotheses testing to evaluate the proposed theoretical model among Jordanian citizens.

REFERENCES

- [1] Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior And Human Decision Processes*, 50, 179-211.
- [2] Ajzen, I., & Fishbein, M. A. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Addison-Wesley: Addison-Wesley publishing.
- [3] Al-Gahtani, S. (2011). Modeling the electronic transactions acceptance using an extended
- [4] Almarabeh, T., & AbuAli, A. (2010). A General Framework for E-Government: Definition Maturity Challenges, Opportunities, and Success. *European Journal of Scientific Research*, 39(1), 29-42.
- [5] Al-Shafi, S., & Weerakkody, V. (2010). Factors Affecting E-Government Adoption in The State Of Qatar. Paper presented at the European and Mediterranean Conference on Information Systems, 1-23.
- [6] Bandura, A. (1989). *Social cognitive theory (Vol. 6)*. Greenwich: Stanford University.
- [7] Bélanger, F., & Carter, L. (2008). Trust and risk in e-government adoption. *The Journal of Strategic Information Systems*, 17(2), 165-176.
- [8] Bhattacharjee, A. (2001). Understanding Information Systems Continuance: An Expectation-Confirmation Model. *MIS Quarterly*, 25(3), 351-370.
- [9] Carter, L., & Belanger, F. (2005). The utilization of e-government services: citizen trust, innovation and acceptance factors. *Information systems journal*, 15(1), 5-25. doi: 10.1111/j.1365-2575.2005.00183.x
- [10] Chatzoglou, P., Chatzoudes, D., & Symeonidis, S. (2015, September). Factors affecting the intention to use e-Government services. In *Computer Science and Information Systems (FedCSIS), 2015 Federated Conference on* (pp. 1489-1498). IEEE.

- [11] Colesca, S. E. (2009). Increasing e-trust: A solution to minimize risk in e-government adoption. *Journal of applied quantitative methods*, 4(1), 31-44.
- [12] Compeau, D. R., & Higgins, C. A. (1995). Computer Self-Efficacy: Development of a Measure and Initial Test. *MIS Quarterly*, 19(2), 189-211.
- [13] Dai, B., Forsythe, S., & Kwon, W. S. (2014). The impact of online shopping experience on risk perceptions and online purchase intentions: does product category matter?. *Journal of Electronic Commerce Research*, 15(1), 13.
- [14] Detlor, B., Hupfer, M. E., Ruhi, U., & Zhao, L. (2013). Information quality and community municipal portal use. *Government Information Quarterly*, 30(1), 23-32.
- [15] Devellis, R. (1991). *Scale development: Theory and applications*. Newbury Park, CA: Sage.
- [16] Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in Online Shopping: An Integrated Model. *MIS Quarterly*, 27(1), 51-90. doi: 10.2307/30036519
- [17] Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*. New York: Macmillan.
- [18] Henryson, S. G. (1971) analysis and using data on test items. In R. L. Thorndike (Ed.), *Educational Measurement* (2nd ed., pp. 153). Washington, D.C: Council on Education.
- [19] Holden, S. H., Norris, D. F., & Fletcher, P. D. (2003). Electronic government at the local level: Progress to date and future issues. *Public Performance & Management Review*, 325-344.
- [20] Hong, S., Thong, J. Y. L., & Tam, K. Y. (2006). Understanding continued information technology usage behavior: A comparison of three models in the context of mobile internet. *Decision Support Systems*, 42(3), 1819-1834. doi:<http://dx.doi.org/10.1016/j.dss.2006.03.009>.
- [21] Hunt, S., Sparkman Jr, R., & Wilcox, J. (1982). The pretest in survey research: Issues and preliminary findings. *Journal of Marketing Research*, 19(2), 269-273.
- [22] Jordaan, A. J. (2014). Entrepreneurial self-efficacy, intrinsic motivation, and entrepreneurial intention as antecedents of nascent necessity-entrepreneur business start-up behaviour in South Africa: a longitudinal study.
- [23] Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information Technology Adoption Across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs. *MIS Quarterly*, 23(2), 183-213. doi: 10.2307/249751
- [24] Khalil O and Nasrallah A "The Adoption of the Traffic Violation E-payment System (TVEPS) of Kuwait" *The Electronic Journal of Knowledge Management* 2014, pp (3-22).
- [25] Khasawneh, M., & Ibrahim, H. (2012). A model for Adoption of ICT in Jordanian Higher Education Institutions: An Empirical Study. *Journal of e-Learning & Higher Education*, 2012, c1-10.
- [26] Khasawneh, R., Rabayah, W., & Abu-Shanab, E. (2013, May). E-Government Acceptance Factors: Trust And Risk. In *The 6th International Conference on Information Technology (ICIT 2013)* (pp. 8-10).
- [27] Kim, S., & Park, H. (2013). Effects of various characteristics of social commerce (s-commerce) on consumers' trust and trust performance. *International Journal of Information Management*, 33(2), 318-332.
- [28] Limayem, M., Hirt, S. G., & M.K.Cheung, C. (2003). Habit in the Context of IS Continuance: Theory Extension and Scale Development. Paper presented at the ECIS.
- [29] Majdalawi, Y. K., Almarabeh, T., Mohammad, H., & Quteshate, W. (2015). E-Government Strategy and Plans in Jordan. *Journal of Software Engineering and Applications*, 8(04), 211.
- [30] Maldonado, U. P. T., Khan, G. F., Moon, J., & Rho, J. J. (2011). E-learning motivation and educational portal acceptance in developing countries. *Online Information Review*, 35(1), 66-85.
- [31] Middleton, M. (2007). 'Evaluation instrument for e-government websites. *Electronic Government, an International Journal* 4(2), 204-226.

- [32] Moon, M. J., & Norris, D. F. (2005). Does managerial orientation matter? The adoption of reinventing government and e-government at the municipal level. *Information Systems Journal*, 15(1), 43-60. doi: 10.1111/j.1365-2575.2005.00185.x
- [33] Nunnally, J. (1978). *Psychometric methods*.
- [34] Phichitchaisopa, N., & Naenna, T. (2013). Factors affecting the adoption of healthcare information technology. *Excli J*, 12, 413-436.
- [35] Reffat, R. M. (2003). *Developing a Successful E-Government*. University Of Sydney, Australia. 1-10.
- [36] Teo, T. S. H., Srivastava, S. C., & Jiang, L. (2009). Trust and Electronic Government Success: An Empirical Study. *Management Information Systems*, 25(3), 99-131.
- [37] Thomas, J. C., & Streib, G. (2003). The New Face of Government: Citizen-Initiated Contacts in the Era of E-government. *Journal of Public Administration Research and Theory*, 13(1), 83-102.
- [38] Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal Field Studies. *Management Science*, 46(2), 186-204.
- [39] Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- [40] Wang, H.-I., & Yang, H.-L. (2005). The Role of Personality Traits in UTAUT Model under Online Stocking. *Contemporary Management Research*, 01(01), 69-82.
- [41] Wangpipatwong, S., Chutimaskul, W., & Papisratorn, 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.
- [42] Xi, L. (2014). *Readiness assessment of cloud-computing adoption within a provincial government of South Africa* (Doctoral dissertation, University of the Western Cape).
- [43] Zhou, T. (2013). Examining continuance usage of mobile Internet services from the perspective of resistance to change. *Information Development*, 0266666912468762.