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EXAMINING ROLE OF USEFULNESS, EASE OF USE AND SOCIAL INFLUENCE ON JORDANIAN CITIZEN'S INTENTION TO ADOPT E-GOVERNMENT

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Abstract

Electronic Government (eGov) offers several benefits to citizens (particularly in the context of developing countries) in terms of convenience, anytime, anywhere access to government services, transparency, reduced corruption and reduced bureaucracy. Despite it offering such benefits, citizens of many countries are reluctant in adopting eGov systems. This study developed and tested an extended technology acceptance model (TAM) that integrates social influence with perceived usefulness and perceived ease of use in order to investigate factors determining Jordanian citizens' intention to adopt eGov. The model was empirically tested using SPSS regression analysis by employing data collected from a survey of Jordanian citizens. Results of this research indicated that all three independent constructs significantly affected Jordanian citizens' behavioural intention to adopt eGov. The findings presented in this submission are likely to be useful for the Jordanian government in terms of developing user friendly system and encouraging citizens to promote widespread adoption.

Keywords: E-Government, Intention, Jordan, Citizens, Technology Acceptance Model

1.0 Introduction

Electronic Government (eGov) offers several benefits to citizens (particularly in the context of developing countries) in terms of convenience, anytime, anywhere access to government services, transparency, reduced corruption and reduced bureaucracy. As far as this study is concerned, eGov would be understood as the use of information technology to enable and advance the effectiveness, with which government services are made available to citizens, employees, businesses, and agencies (Carter and Belanger, 2005; McLure, 2001). To be more precise, eGov is nothing but the Jordanian government services provided to its citizens electronically. Despite it offering such benefits, citizens of many countries are reluctant in adopting eGov systems. Due to this, a number of studies have attempted to examine the factors affecting e-government adoption from both

the citizens' perspective (Al-Shafi and Weerakkody, 2007, 2009; Colesca and Dobrica, 2008; Dwivedi et al., 2007a, 2007b; Hamner and Al-Qahtani, 2009; Hussein et al., 2010; Kanat and Ozkan, 2009; Lau et al., 2008; Shareef et al., 2009, 2011) and the organisational perspective (Akpinar and Ondin, 2008; Hsu, 2005; Tung and Rieck, 2005). A detailed analysis of such existing studies revealed that the factors such as perceived benefits, management readiness, sensitivity to cost, external pressure, social influence (Tung and Rieck, 2005), and usability (Akpinar and Ondin, 2008) were found to be important from the organisational perspective. As far as citizen adoption of the eGov is concerned, primary influence, facilitating conditions, attitude, secondary influence, resources, cost, perceived knowledge, perceived ease of use, advanced awareness of usefulness, quality, trust, youth education, relative advantage, perceived reliability, perceived security, perceived privacy, perceived usefulness, perceived empathy, and compatibility (Colesca and Dobrica, 2008; Dwivedi et al., 2007ab; Hamner and Al-Qahtani, 2009, Shareef et al., 2009) were some of the factors affecting citizen's adoption of e-government. Trkman and Turk (2009) provided a comparative discussion on adoption and diffusion of broadband, e-government, and e-commerce services.

There are some studies (for example, Al-Shafi and Weerakkody, 2007; 2009; Hamner and Al-Qahtani, 2009) that have examined eGov related issues in the context of Middle East countries. However, literature review revealed that there has not been any study in the context of Jordan which has attempted to empirically examine either the citizens' or organisational perspectives of e-government adoption. Though, there are few initial studies (for example, Abu-Shanab *et al.*, 2010; Al Hujran and Chatfield, 2008; Alomari et al., 2009; Alryalat et al., 2012) that have attempted to build conceptual model based on literature review and theoretical arguments. Since socio-economic context of the Jordan is different from other countries, factors examined in existing studies (hence included in the conceptual models) may or may not be relevant in the Jordanian context. Realizing a lack of empirical research specifically to measure the citizen's intention toward e-government adoption, this study fills the specified gap by undertaking research in this direction.

Considering the discussion presented above, it was deemed appropriate to conduct this research, which aimed at developing and empirically testing an extended technology

acceptance model (TAM) that integrates social influence with the TAM constructs in order to investigate factors determining Jordanian citizens' intention to adopt eGov. The findings from this research are likely to be useful for the Jordanian government in terms of developing user friendly system and work accordingly to encourage citizen's and organisational involvement and participation toward e-government adoption.

The remaining sections of this paper are structured as follows: Section 2 provides a brief discussion on theoretical basis and develop a conceptual model. Section 3 then presents the research method employed to undertake empirical research. This was then followed by presentation of research findings in Section 4 and a brief discussion on it in Section 5. Finally, section 6 provides the conclusion, limitations and future research directions.

2.0 Theoretical Basis and Conceptual Model

An exploration of literature on IS theories and models (Dwivedi et al., 2011a; Rana et al., 2012; Schneberger and Wade, 2012; Williams et al., 2009) suggest that a number of alternative theories and models (for example, Technology Acceptance Model (TAM), Diffusion of Innovation (DOI), Unified Theory of Acceptance and Use of Technology (UTAUT), Theory of Planned Behaviour (TPB), Theory of Reasoned Action (TRA), the DeLone and McLean IS Success Model etc) exist that can be appropriately utilised to examine the adoption of IS/IT (including eGov) in various contexts. Amongst these, TAM is the most frequently utilised model and well tried and tested in various contexts and has performed consistently in a large number of studies. A further advantage of applying this theory is its parsimoniousness as it includes only two predictive constructs. Also, a number of studies (please see example in Table 1) have already used TAM as an appropriate model for explaining eGov adoption. Hence, it was deemed appropriate to utilise TAM for the purpose of this confirmatory study. TAM postulates that an individual's IS acceptance (i.e. intention and behaviour) can be explained by two major variables, namely perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989). A number of studies (e.g., Hsu and Lu, 2004, Irani et al. 2009; Lu and Gustafson, 1994) utilising different theoretical models have identified social influence (SI) as an important factor for explaining technology adoption. Further, a number of studies (see Table 1) have reported the role of SI for explaining eGov adoption (for example, Sahu

and Gupta, 2007, Susanto and Goodwin, 2011) in developing countries context. Hence, it was deemed appropriate to integrate SI with TAM constructs for conducting this study. Based on above discussion, the proposed conceptual model postulates that the perceived ease of use and social influence would affect citizen's perception on perceived usefulness of eGov systems. By doing so, both ease of use and social influence exerts indirect effect on behavioural intention via perceived usefulness. Also, ease of use as well as social influence along with perceived usefulness exerts direct effect on Jordanian citizen's intention to adopt eGov services. The proposed model is illustrated by Figure 1 and associated hypotheses that are formulated for testing are listed in Table 1.

IC	DC	Example (Existing) Studies with Significant Effect	Proposed Hypothesis for this Research
PEOU	PU	Al-Shafi and Weerakkody (2009), Chiang (2009), Kim and Holzer (2006), Lin <i>et al.</i> (2011), Phang <i>et al.</i> (2005), Sang <i>et al.</i> (2010), Seyal and Pijpers (2004), Vathanophas <i>et al.</i> (2008), Zhang <i>et al.</i> (2011)	H1: Perceived ease of use will have a significant influence on usefulness.
PEOU	INT	Dorasamy <i>et al.</i> (2010), Dwivedi <i>et al.</i> (2007b ; 2011b), Hussein <i>et al.</i> (2010), Hussein <i>et al.</i> (2011), Kim and Holzer (2006), Ojha <i>et al.</i> (2009), Phang <i>et al.</i> (2005), Vathanophas <i>et al.</i> (2008)	H2: Perceived ease of use will have a significant influence on intention to adopt eGov.
PU	INT	Al-Shafi and Weerakkody (2009), Hussein <i>et al.</i> (2010), Hussein <i>et al.</i> (2011), Lean <i>et al.</i> (2009), Phang <i>et al.</i> (2005), Sang <i>et al.</i> (2009), Vathanophas <i>et al.</i> (2008), Zhang <i>et al.</i> (2011)	H3: Perceived usefulness will have a significant influence on behavioural intention to adopt eGov.
SI	PU	Brewster (2010), Koh <i>et al.</i> (2010), Oeconomia <i>et al.</i> (2011), Or <i>et al.</i> (2011)	H4: Social Influence will have a significant influence on usefulness.
SI	INT	Hung <i>et al.</i> (2007), Sahu and Gupta (2007), Susanto and Goodwin (2011), Yeow and Loo (2009)	H5: Social Influence will have a significant influence on intention to adopt eGov.

Table 1. Constructs' relationships with existing sources and proposed hypotheses

[Legend: #: Number of Studies for a pair of relationships, DC: Dependent Construct, IC: Independent Construct, INT: Intention, PEOU: Perceived Ease of Use, PU: Perceived Usefulness, SI: Social Influence]

3.0 Research Methodology

Since this research was involve formulating and testing hypotheses (Choudrie and Dwivedi, 2005; Galliers, 1992), survey was considered as an appropriate method for this research. The selection

of data collection methods for a survey research should be based on various issues such as sampling, question form, question content, response rate, available facilities and length of data collection, which are distinctive to the context of a specific study (Fowler, 2002). For example, if questions of the survey are open-ended in nature, then it is more appropriate to apply face-to-face interviews than other methods. However, if questions are closed-ended in nature, the questionnaire would be the best suited choice than the other methods (Dwivedi et al., 2006; Fowler, 2002). Since questions for this survey were close-ended in nature, paper-based questionnaire was considered as the preferable data collection tool for this research.

The questions for measuring effect of utilised constructs were adapted from the original sources (Davis, 1989; Davis et al. 1992; Dwivedi et al. 2006; Irani et al., 2009; Venkatesh et al. 2003). The adapted survey measures were changed in such a way that they could easily reflect the context of citizen adoption of Jordanian e-Government. The original questionnaire was developed in English language but a translation into Arabic was conducted using a professional translator as some respondents did not speak English because of Arabic being their first language. Therefore, we provided the questionnaire in both languages (i.e., English and Arabic) to maximize the effectiveness of the data collection. Few experts (from a Jordanian university) with understanding of subject matter and the context pre-tested the designed instrument. This was done to identify confusing wordings or errors before the survey is widely distributed (Burns and Bush, 2002; Zikmund, 2000).

There were few minor suggestions (for example, more spacing between questions, slightly bigger font size and few typographical errors) from the pre-testing participants which were incorporated in the questionnaire before piloting it. A pilot survey was then conducted to ensure that the actual respondents (who are not the expert of the subject matter) understand the questions. The pilot study involved a total of 31 Jordanian citizens. The respondents found the survey simple to understand and quick to complete. There was no further suggestion from the pilot respondents for improvement, so the questionnaire was finalised at this point.

The validated survey questionnaire included following two types of questions: The first type was multiple-choice in nature, and aimed to capture data related to demographic characteristics (such as age, gender, education and occupation) of respondents and related to internet access, internet experience and internet use frequency as well. The second type consisted of a total of 12 Likert-scale questions for testing the proposed hypotheses and conceptual model. The respondents were asked to rate each question on a seven-point Likert-scale, as follows: 1=Extremely disagree 2= Quite disagree 3= Slightly disagree 4= Neutral 5= Slightly agree 6= Quite agree 7= Extremely agree. These 12 questions were utilised for measuring the effect of three constructs (i.e. perceived

usefulness, perceived ease of use and social influence) on behavioural intention to adopt eGov in Jordan. The survey items for each construct included in this survey are listed in Appendix 1.

The survey was distributed to employees of the four different campuses of a Jordanian University located in following four different cities: Salt, Irbid, Zarqa, and Aqaba. The reason for distributing the questionnaire to the university employees was to get the majority of the people at one place who were more likely to have the internet experience, hence, more likely to provide appropriate and valid responses to the questions. The questionnaire was distributed (in person) to a total of 1000 employees of the university during period between June and July 2012. The respondents were given time until mid-September 2012 to return the completed questionnaire.

A total of 203 responses were received by specified date which included 12 incomplete questionnaires. This resulted in 191 usable responses which form the response rate of 19.1%. In order to increase the response rate further, non-respondents were sent a further reminder to return the completed questionnaire by mid October 2012 which resulted in substantial increase in the response rate. However, such late response could not be included in this analysis due to time constraints and would be combined with existing sample in a future analysis.

4.0 Findings

4.1 Respondents' Profile

Table 2 presents the demographics of the survey respondents in terms of age, gender, educational qualifications, internet access, and internet experience and internet use frequency. The table illustrates that the largest proportion of respondents are 25-29 years old (27.2%), female (57.1%) and have an undergraduate degree (68.6%). The majority of respondents had internet access at home (60.7%) and work (45%) but some also visited the internet café (13.6%) to gain online access. More than 50% respondents had experience of using internet between 4 to 9 years. Table 2 also illustrates that majority of respondents use internet either very frequently or always.

Char/Category	Freq (C)	%	Char/Category	Freq (C)	%
Age			Internet Access		
20-24 Years	36	18.8	Home	116	60.7
25-29 Years	52	27.2	Office	86	45.0
30-34 Years	47	24.6	Internet Cafe	26	13.6
35-39 Years	24	12.6	College/University	43	22.5
40-44 Years	15	7.9	Internet Experience (in Years)		
45-49 Years	8	4.2	1-3 Years	15	7.9
50-54 Years	3	1.6	4-6 Years	43	22.5
55-59 Years	4	2.1	7-9 Years	56	29.3
Above 60 Years	2	1.0	>= 10 Years	76	39.8

Total	191	100	None	1	0.5
Education			Internet Use Frequency		
High School	11	5.8	Never	1	0.5
Undergraduate	131	68.6	Very Rarely	1	0.5
Masters	34	17.8	Rarely	11	5.8
Doctoral-PhD	15	7.9	Occasionally	44	23.0
Total	191	100	Very Frequently	61	31.9
Gender			Always	73	38.2
Male	81	42.4	Total	191	100
Female	109	57.1			
Missing	1	0.5			
Total	191	100			

Table 2. Respondents' Demographic Characteristics and Internet Experience
 [Legend: %: Percentage, C: Count, Char: Characteristics, Freq: Frequency]

4.2 Reliability of Survey Measures

In order to assess internal consistency of survey measures, reliability analysis was conducted using Cronbach's alpha. Reliability for all four constructs were either moderate (alpha values varies between 0.50-0.70) or high (alpha values varies between 0.70-0.90 indicates) which are acceptable for a confirmatory study such as this one (Hinton et al., 2004). Table 3 presents the Cronbach's alpha for all the four constructs.

Construct	Sample Size	# of Items	Cronbach's Alpha (α)	Reliability Type
Perceived Usefulness (PU)	191	4	0.784	High
Perceived Ease of Use (PEOU)	191	4	0.789	High
Social Influence (SI)	191	2	0.656	Moderate
Intention to Use (IU)	191	2	0.664	Moderate

Table 3. Cronbach's alpha (α) of constructs

4.3 Construct Validity

A factor analysis was conducted utilising Principal Component Analysis (PCA) with Varimax as an extraction method and Kaiser normalisation as a rotation method for assessing construct validity. The results from the factor analysis are illustrated in Tables 4 and 5.

CMP	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of VAR	CML %	Total	% of VAR	CML %	Total	% of VAR	CML %
1	3.950	39.502	39.502	3.950	39.502	39.502	2.437	24.369	24.369
2	1.487	14.873	54.375	1.487	14.873	54.375	2.392	23.917	48.285

3	1.064	10.637	65.012	1.064	10.637	65.012	1.673	16.726	65.012
4	0.802	8.020	73.032						
5	0.662	6.621	79.653						
6	0.568	5.680	85.333						
7	0.465	4.650	89.983						
Extraction Method: Principal Component Analysis.									

Table 4. Factor Analysis - Total Variance Explained

[Legend: CML: Cumulative %, CMP: Component, VAR: Variance]

According to existing literature (Hinton et al., 2004; Straub et al., 2004), factors with eigenvalues greater than 1 should be considered important for analysis purposes. Finding (See Table 4) shows that all three constructs included in factor analysis possess eigenvalues greater than 1, which meets the recommended standard. Also, the combination of constructs accounted for a total of 65.01% variance in data (Table 4). The largest variance (24.369%) was explained by the perceived ease of use construct, while the smallest amount of variation (16.726%) was accounted by social influence (Table 4).

The rotated component matrix (See Table 5) presents the factor loadings for all three independent constructs. All items assigned to each independent constructs loaded above 0.40, so it meets the minimum recommended standard in IS research (see Straub et al., 2004). Table also indicates no cross loading of the items above 0.40. All four items of the perceived ease of use (PEOU) construct loaded on component 1, hence, the first component represents the PEOU as underlying construct. Similarly all four items of the perceived usefulness (PU) construct loaded on component 2. The second component thus represents the PU as underlying. Finally, remaining two items of the social influence loaded on component 3, hence the third component represents the underlying construct of social influence (Table 5).

Item	Component		
	1	2	3
PEOU2	0.791		
PEOU4	0.774		
PEOU3	0.751		
PEOU1	0.672		
PU3		0.863	
PU1		0.795	
PU2		0.766	
PU4		0.511	
SI1			0.826
SI2			0.794
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 4 iterations.			

Table 5. Factor Analysis - Rotated Component Matrix^a

The results described above (also illustrated in Tables 4 & 5) suggest that the factor analysis results satisfied the criteria of construct validity (as per Straub et al., 2004, p. 410) including both the convergent validity (eigenvalues of 1, loading of at least 0.40) and discriminant validity (no cross-loading of items above 0.40), which confirms the construct validity of the instrument measures employed to collect data.

Findings from both the reliability test and factor analysis suggest that utilised survey measures were reliable and represent distinct construct, hence, it was deemed appropriate to create aggregated measures by averaging the means of all items of each construct for purpose of conducting regression analysis.

4.4 Descriptive Statistics of Constructs and Survey Measures

Table 6 presents the mean and standard deviation (S.D.) values for each individual construct and their associated measures. The table shows that perceived usefulness is the construct with the highest average mean value of 5.03 closely followed by behavioural intention, perceived ease of use and social influence with comparatively lower average mean value of 4.40 (see Table 6).

Constructs/Items	N	Mean	S.D.
Behavioral Intention (BI)	191	4.88	1.559
BI1	191	4.93	1.811
BI3	191	4.84	1.792
Perceived Usefulness (PU)	191	5.03	1.366
PU1	191	5.16	1.750
PU2	191	5.28	1.772
PU3	191	4.97	1.713
PU4	191	4.71	1.779
Perceived Ease of Use (PEOU)	191	4.75	1.337
PEOU1	191	4.84	1.660
PEOU2	191	4.91	1.748
PEOU3	191	4.63	1.717
PEOU4	191	4.61	1.710
Social Influence (SI)	191	4.40	1.49
SI1	191	4.39	1.779
SI2	191	4.42	1.677

Table 6. Descriptive Statistics

4.5 Regression Analysis

Aligned with proposed hypotheses, following two sets of linear regression analyses were conducted in order to assess influence of independent variables on the dependent variable.

4.5.1 Regression analysis I: Influence of Perceived Ease of Use and Social Influence on Perceived Usefulness

The first regression analysis was conducted with perceived usefulness (PU) as the dependent variable, and perceived ease of use (PEOU) and social influence (SI) as predictor variables. A total of 191 cases were analysed, which resulted in a significant model ($F(2, 191) = 27.018, p < .001$) (Table 7). The adjusted R square was 0.315 (Table 7).

R	R ²	Adjusted R ²	Std. Error of the Estimate	F	Sig.
0.473 ^a	0.223	0.215	1.210	27.018	0.000 ^a
a. Predictors: (Constant), Social Influence and Perceived Ease of Use					
b. Dependent Variable: Perceived Usefulness					

Table 7. Regression Analysis I - Model Summary

Both predictor variables included in the analysis were found to be significant (see Table 8), with higher value of the β for PEOU than SI. This suggests that although (as per original TAM model) PEOU has strong impact in explaining variance of PU, the integrated new construct (i.e. SI) also exerts indirect influence on the behavioural intentions (BI) via PU in addition to its direct effect on the BI.

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.516	0.353		7.128	0.000
Perceived Ease of Use	0.357	0.072	0.350	4.930	0.000
Social Influence	0.185	0.065	0.202	2.849	0.005

a. Dependent Variable: Perceived Usefulness

Table 8. Regression Analysis I- Coefficients^a

4.5.2 Regression analysis II: Influence of Perceived Ease of Use, Social Influence and Perceived Usefulness on Behavioral Intention

The second regression analysis was conducted with the behavioural intentions (BI) as the dependent variable, and perceived usefulness (PU), perceived ease of use (PEOU) and social influence (SI) as predictor variables. A total of 191 cases were analysed, which once again

resulted in a significant model ($F(3, 191) = 53.88, p < 0.001$). The adjusted R-square was 0.455 (Table 9).

R	R ²	Adjusted R ²	Std. Error of the Estimate	F	Sig.
0.681 ^a	0.464	0.455	1.151	53.887	0.000 ^a

^a Predictors: (Constant), Social Influence, Perceived Usefulness, Perceived Ease of Use

^b Dependent Variable: Behavioral Intention

Table 9. Regression Analysis II - Model Summary

Table 10 illustrates that all three predictor variables included in the second regression analysis were found to be significant, with highest value of the β for PU followed by PEOU then SI with the least impact.

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.351	0.378		0.927	0.355
Perceived Usefulness	0.602	0.069	0.528	8.687	0.000
Perceived Ease of Use	0.186	0.073	0.159	2.538	0.012
Social Influence	0.141	0.063	0.135	2.232	0.027

^a Dependent Variable: Behavioral Intention

Table 10. Regression Analysis II - Coefficients^a

5.0 Discussion

5.1 Hypothesis Test

A total of five research hypotheses were tested to examine if the predictive constructs significantly explained the dependent constructs. All proposed hypotheses were supported by the data, which suggests that all predictive constructs (i.e. perceived usefulness, perceived ease of use and social influence) significantly explained the behavioural intentions to adopt eGov in Jordanian context (Table 11).

HN	Research Hypotheses	Results
H1	Perceived ease of use will have a significant influence on perceived usefulness.	Supported
H2	Perceived ease of use will have a significant influence on intention to adopt eGov	Supported
H3	Perceived usefulness will have a significant influence on behavioural intention to adopt eGov	Supported
H4	Social Influence will have a significant influence on perceived usefulness	Supported
H5	Social Influence will have a significant influence on intention to adopt eGov	Supported

Table 11. Summary of Research Hypotheses Testing

5.2 Validated Conceptual Model of eGov Adoption in Jordanian Context

Figure 1 illustrates the validated conceptual model utilised for examining Jordanian citizen's intention to adopt eGov. Figure 1 depicts the paths from independent constructs (i.e. perceived usefulness, perceived ease of use and social influence) towards the dependent variables (i.e. perceived usefulness and behavioural intentions) as being significant. The comparison of previous studies for the adjusted R^2 obtained for behavioural intentions indicated appropriate performance for the validated conceptual model of eGov adoption in Jordanian context. Irani et al. (2009, p. 1331) noted that "the adjusted R^2 varied between 0.20 (Gefen and Straub, 2000) and 0.57 (Taylor and Todd, 1995)" for behavioural intentions as dependent variable. Since the adjusted R^2 for this study is found to be 0.455, it can be considered as the appropriate and acceptable level of explained variance. This means that the included predictive constructs are appropriate for understanding Jordanian citizen's behavioural intentions to adopt eGov.

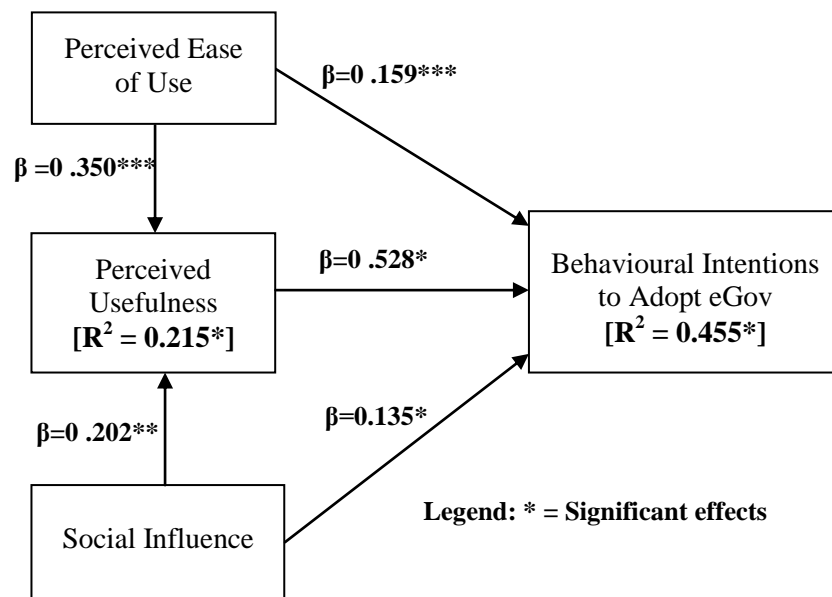


Figure 1. Validated Conceptual Model for Examining eGov Adoption in a Jordanian Context
[Source: Adapted from Davis et al., 1992]

5.3 Research Contributions and Implications

This research contributes to IS/IT adoption literature in general by developing and validating an extended technology adoption model for examining citizen's adoption of eGov. More specifically the findings will contribute to both theory and practice of eGov in Middle Eastern (particularly Jordanian) context. One of the unique contributions of this research is that it illustrated indirect (in addition to direct) effect of social influence via perceived usefulness on behavioural intention.

Since this is one of the first empirical studies to examine eGov adoption in Jordanian context, it will form the foundation for future research on this topic as researcher may extend validated model by integrating constructs of their interest in order to explore various aspects of eGov adoption in Jordanian context.

The findings also have implications for Jordanian government. eGov services if implemented effectively has lot to offer in terms of achieving the anywhere, anytime access to government services, increasing transparency in government processes, reducing corruption and bureaucracy. However, such benefits can only be realised if emerging electronic services would be adopted widely. Both usefulness and ease of use were emerged as significant determinants, which suggest that Jordanian government needs to add as much functionality as possible in order to enhance usefulness but such portals should also be made simple and easy to use in terms of organisation, navigation and operation.

A large proportion of Jordanian population may still not have experienced internet and e-commerce services, which makes it even more important to build an easy to use portal so that majority of citizens would be able to adopt and use if they wish so. Since social influence was found to have significant impact it would be useful to promote eGov site via early adopters to those who have not adopted yet. Some of early adopters can be selected as champion or change agent to promote eGov service in their local community.

6.0 Conclusion

The research presented in this paper forms one of the initial attempts towards empirically understanding influence of selected constructs from a well-established IS/IT adoption model on the Jordanian citizens' intention to adopt eGov. The following are the key conclusions drawn from this research:

- If the eGov system is easy to use, it would develop stronger perception of usefulness and would influence (both directly and indirectly) Jordanian citizens' intention to adopt such systems.
- Social influence also has a significant positive influence on perceived usefulness and behavioral intention.
- Perceived usefulness of the eGov system has a significant positive influence on Jordanian citizen's intention to adopt it.

6.1 Limitations and Future Research Directions

As far as the limitations and the scope for future research are concerned, only employees of a Jordanian university having experience of using internet were targeted. eGov services are generally designed for all segments of society including people with no access to and experience with computer and internet technology. Perhaps they are most challenging segments of society to be encouraged to use eGov service. Hence, future studies should conduct survey to capture perception of such people. The findings of this study is based on relatively small sample size (C=191), which is a limitation of this study. The researchers are currently collecting further responses to increase the sample size which will then help to confirm the validity of the findings. The data from remaining responses along with existing one would be reported in a future study. In this study, only three constructs (namely, perceived usefulness, ease of use and social influence) were considered as predictive constructs which may have limited total variance explained. Future studies should consider incorporating other relevant constructs (such as Trust, Risk, Privacy, Security, and Self-efficacy) with TAM based constructs in order to gain further understanding of the factors affecting eGov adoption in Jordanian context. Also, this study has only examined citizen's intention to adopt eGov. Future studies should also consider examining effect of various predictive factors on actual adoption/usage both directly and indirectly via behavioral intention.

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Appendix: Survey Measures [**Source:** Davis, 1989; Davis et al., 1992; Dwivedi et al., 2006; Irani et al., 2009; Venkatesh et al., 2003]

(Note: 1-7 points Likert scale anchor for all survey measures listed below)

BI1. I intend to use the e-government services

BI2. I plan to use the e-government services in the near future

PU1. I would find the e-government services useful in day-to-day life (or my job)

PU2. Using the e-government services enables me to accomplish tasks more quickly

PU3. Using the e-government services increases my productivity

PU4. If I use the e-government services, I will increase my chances of getting recognized

PEOU1. My interaction with the e-government services would be clear and understandable

PEOU2. It would be easy for me to become skilful at using the e-government services

PEOU3. I would find the e-government services easy to use

PEOU4. Learning to operate the e-government services is easy for me

SI1. People who influence my behaviour think that I should use the e-government services

SI2. People who are important to me think that I should use the e-government services
