Culture Influence on the intention to use E-government System directly and through TAM's model during Employees: Through a Libyan Company

Dhwo Jubran

(Financial Department, Accountant, Allibya Company of Harbors)

E-mail address: D.N.Mgentle@gmail.com

Abstract

The e-government is a facility for providing the whole citizens, whether employed or unemployed in order to capture all the applications services online instead of standing in a long queue to have their request done. Therefore, this paper has been conducted through employees in a Libyan company by distributing a questionnaire survey over 100 respondents who has experience of using a new Information and communication Technology (ICT) in order to determine the most effective factors on the intention to use e-government system through the employees by using PLS software. The model has established according to such academic previous studies as well as TAM's model which including perceived ease of use, perceived usefulness then added culture construct. The sampling technique which has used is census method. However, this paper has demonstrated that the culture construct has a significant relationship directly with the intention to use e-government system and it also has a significant relationship with perceived usefulness and ease of use. In addition, the perceived usefulness and the perceived ease of use have non-significant relationship with the intention to use e-government system which it could relate to the effecting of the culture construct as a sensitive variable.

Key words: Culture, TAM's model, intention to use e-government, employees.

1. Introduction

The success of applying the e-government services relies on two aspects. The first is the supply of e-government services. This aspect is easy to control because it is related to the parties in the government. The second aspect is the use ratio of citizens to the e-government services (the willing of citizen to use the e-government) (Carter, 2005) which is influenced by many factors such as the demographic characteristic (gender, age, experience, education level and so on). Here mediating variables and other independent variables (latent variables) may also exist such as perceived usefulness, perceived ease of use and culture. This study is to examine whether those factors, have a significant impact on the intention to use of e-government services or not (Alhujran, 1998; Davis, 1989a).

It would be reasonable to predict that the successful introduction of information and communication technologies (ICTs) such as e-government would depend on many factors, including social and attitudinal factors. But are these factors similar for all countries? Can we say, e-government usage factors developed in the developed countries are similar factors which lead to successful e-government usage in the developing countries?. It is reasonably to think there are some other factors which can affect the intention to use of e-government but the factors under this investigation in this theme are more sensitive to the citizens of developing countries. They may be more important because they are in a close relationship to the citizenship and culture.

E-government is playing an important role as a tool or a material to achieve the business benefit which can be derived from the e-government such as e-procurement, easy filling of tax form by the taxpayer, easy auditing, easy checking of the financial reports which help the investors to reduce the asymmetric information in order to increase the probability of running an investment between the countries to increase the budget which all of that related to the accounting program (JANEVSKI, 2014). Furthermore, it is clear to see the close relationship between the e-government and accounting in terms of e-procurement, e-tax, e-transactions where e-commerce and e-banking is also kind of e-government. So, within the e-government the accounting process could be done quickly and accurately. That is why I am interested to see if there is a significant impact on the intention to use of e-government system.

Various models have been developed and used to understand the impact of some factors on the acceptance of using information technologies but in this research TAM's model will be the main model, because it has been captured the most attention of the information system community and that relates to its accuracy, and followed by another variable which is derived from a previous study which is culture as shown in the current model. The technology acceptance model developed by Fred Davis (1989) is actually a model used to discover how users come to accept and use technology.

Theories on information technology adoption are useful in comprehension client acknowledgment and utilization of e-government. To address this perspective, contemplates have been embraced to distinguish a few components that impact worker's eagerness to utilize e-taxpayer driven organizations. Some of the main factors examined in this study are perceived usefulness, perceived ease of use, culture and intention to use (AL Athmay, 2016). This research tries to focus on the demand aspect of e-government by developing countries employees in order to be aware about the e-government services to reach the positive side which is waited from the government. Obviously, some factors are difficult to control such as the culture because it is a habit which tough to remove the idea of the citizen but in this research we will try to analyze each factor

lonely to see its impact and try to sort it out. Perceived usefulness is one of the variables which has a high percent of effecting on the use of information technology which includes the use of e-government (Benbasat, 2007).

In my sight I figure that the e-government is very important field which has to be taken in account because by establishing e-government will give the facility to the employees to process their requests through their PC or laptop even smart devises during 24 hours, 7 days and also to avoid standing in a long queue and face to face interaction this obviously from the citizenship insight while the accountants (employees) insight includes all the accounting staffs who are interested, they look to the e-government as a method which give them the facility to have their transactions transferring quickly from department to the other for example the e-tax payer form, e-procurement, auditing and so on. But from the government insight is to reduce the cost and reduce the corruption as well as give a comfortable social life to the whole citizenship.

2. Literature Review & Hypothesis

Intention to Use E-government. Intention simply signifies a course of action that one proposes to follows and strong predictor of future behaviors (Zheng, Zhao, & Stylianou, 2013), Behavioral intention is an individual's subjective possibility of performing a specified behavior, and this is the major contributing factor of actual usage behavior(Ajzen, 2012). The perspective on technology adoption is aligned with the user initial behavioral intention to use a particular technology. Dies & McIntosh (2009) defined the intention to use or adoption intention as an individual's or organization's intention to use or adopt an innovation in the present and future. In sum, the IS adoption is the act of receiving information technology and use the technology willingly. User intention to adopt the IS are really the true success factors to such system which, depending on first-time use and subsequently, the continuing use (Lin, 2012).

The decision to readily adopt new information technology is influenced by users' initial perceptions of the technology and perceives significant risk and trust that associated with the technology (Li, 2008). In the study that conducted by Santhanamery and Ramayah (2012); Azmi and Bee (2010); and Ambali (2009) found that in Malaysia, the result of the studies found that e-filing systems drew a significant relationship between perceived risk and citizens intention to use e-filing applications which means that the higher the user perceived risk, the lower the intention to adopt and make use the e-filing in the future. The result leads to fewer citizens make use the e-Government web-based application these days where they did not have the initial intention to use it because of the accessibility and lead to discontinuance usage of the e-services.

Culture. A study has been conducted in the UK which concerned to compare between the intentions of use e-government in the both countries the USA and the UK by using the same model which includes salient predictor independent variables. The findings recognize that relative advantage and trust independent variables has a positive impact on the intention of using e-government in both countries. Whilst, the digital divide (computer skills and internet access) were like a barrier of using e-government in the USA but in the UK has a negative impact where they do not effect on the intention of using e-government. Therefore, this result guide the author to think that the main reason of this difference even under the same model is the culture(Carter, 2008). Thus, this study would use the culture construct as a useful variable because it has a hard connection with the individuals.

A study has been conducted in India about some factors tested to see if they have an impact on the use of a new technology (prepayment metering systems) where those

factors are performance expectancy, effort expectancy and social influence (direct effectiveness factors on intention) and all of them had a significant impact on using the new technology. In addition to that, the culture has been presented through the social influence construct. The researcher emphasized that all models of testing the acceptance of technology have a lack when they established in developing countries, in other side they present a good performance in the developed countries such as the USA and the UK which means this situation is related to the culture which is different from country to other where the last itself could be individual culture (the social pressure is lees because the user does not care about the others, just consider his own opinion) or collectivism culture (the social pressure is very high because the user concerns about the other group) (Bandyopadhyay, 2007). Thus, the culture construct embarked to be the most variable which is sensitive and could effect on the intention to use e-government system.

A deep study conducted by Nadi (2012) on the influence of culture on e-Government acceptance in Saudi Arabia. Based on the author's finding, there are several factors that have a significant positive influence on acceptance of e-Transactions. These elements are viewpoint around communication, protection values, aftereffect demonstrability, compatibility, Also trust in the web. Energy What's more trust for administration organizations need critical negative impact looking into acknowledgement from claiming e-transactions. The finding also indicated the non-significant factors that have less influence on the acceptance of e-Transactions, which are relative advantage, complexity, social influence, and the following cultural values: achievement, hedonism, stimulation, self-direction, and benevolence.

Another study conducted by Aldraehim (2012) highlighted the cultural impact of e-Services use in Saudi Arabia. Those examine centered once nepotism since it need a significant effect once Saudi culture. The authors identified nepotism as "the employment of relatives, whether in the same organization or even working or being supervised by their relatives in the same department". The authors stated several causes for nepotism, which are sociocultural, economic, educational and political structures. The survey result indicated that nepotism has a negative predictor of intention to use e-Services. There is a weak negative relationship between nepotism and intention to use. Furthermore, the culture hypothesis have been formulated and developed as shown below:

H1: the culture has a positive effect on the intention to use e-government system.

H2: the culture has a positive effect on the perceived usefulness construct.

H3: the culture has a positive effect on the perceived ease of use construct.

Perceived usefulness. The acknowledgment of utilizing the information and correspondence innovation (ICT) by the subjects will be affected by numerous variables toward to framework utilize. Such previous studies offered a few determinants which are totally vital to be set, the subjects would pay goal to utilize or reject to utilize the utilization of innovation will help them for playing out their assignment in the most ideal way. Where this is identified with the apparent helpfulness. Sometimes the professional user believe that this application is useful but in the same time he/she believes that using this application is very hard to process and this thing will lead to less performance benefit. The definition of perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job (Davis, 1989a). The perceived usefulness is actually considered as an important variable for

effecting on the intention to use of e-government (Horst, 2007). The perceived of usefulness is the more factor which has a strong effect on the intention to use of e-government service (Phang, 2005).

Fu (2006) has mentioned that the perceived usefulness is the major factor which influence the intention of tax payer toward use the tax filing method. Hung (2006) has developed theoretical model to examine the factors that effect on the intention to use of e-government in Taiwan and he found that the perceived usefulness is one of the effecting factors that has a significant impact on the intention to use of e-government as well as there is a conducting study has ensured that there is a significant correlation between the perceived usefulness and the intention to use of system (Baraghani, 2008), meanwhile, there were a study has confirmed that the perceived usefulness has a significant impact on the intention to use system (Hung, 2006). However, the perceived usefulness hypothesis has been built as shown in the following statement:

H4: the perceived usefulness has a positive effect on the intention to use e-government system.

Perceived Ease of Use. This variable has been defined as the degree to which an individual believes that using a particular system would be free of physical and mental effort (Davis, 1989a). The adoption of a new information system in general is the function of many factors where the perceived ease of use is one of them (Rogers, 1983). In addition to that also the perceived ease of use has defined as the degree where an application is easy to use as well as to understand could be recognized as ease of use (Zeithaml, 2002). By focusing in many previous studies findings that most of them even all of them showed that there is a significant effect on the adoption of e-government (Lean, 2009). In addition to that in the same study of Hung (2006) in Taiwan where he found that there is a significant impact of perceived ease of use on the adoption of e-government. The study has conducted in USA to examine the intention to vote online and they found that the perceived ease of use does not have a significant impact on the voting service (Schaupp, 2005). For instance, the perceived ease of use hypothesis has been formulated and developed as shown below:

H5: the perceived ease of use has a positive effect on the intention to use e-government system.

3. Methodology. This researcher is using a questionnaire method where every single question has been checked to be understandable and set in accurate formula and using an easy and common words to be understood. Therefore, this particular questionnaire has been sent through e-mail to the admission employees. However, I have waited until getting the targeted number of data (reaching a saturation point).

The questionnaire has been divided into five sections which one section has concerned about the demographic characteristics (age, gender, experience and education) and the other sections is just concern about such questions related to the intention to use of E-government, culture, perceived usefulness and perceived ease of use. The census method has been used as sampling technique to determine the sample size which was around 100 employees and the real respondents were just 87%. For instance, the statistical tool which has been used in this particular paper named as Partial Least Square (PLS) which it useful for exploring the predictive relationship between the independent variables and the dependent variable.

The pilot study has demonstrated that this research model is valid and reliable, where all statements are valid which is lower than Alpha (0.05). in addition, it is also reliable,

where all variables are more than Cronbach Alpha which has been stated to be at 0.70. However, the equation (statistical formula) which built for this research is explained down:

$$Y3 = \beta1\ X1\ Y1 + \beta2\ X1\ Y2 + \beta3\ X1 + \beta4\ Y1 + \beta5\ Y2 + e$$

Where:

X1 = Culture   Y1 = Perceived usefulness   Y2 = Perceived ease of use

Y3 = Intention to use   β = coefficient   e = error

4. Findings & Conclusion

4.1 Demographic Characteristics

Gender. This pattern is actually concern about how many of males or females who use the e-government system through the employees. However, as it showed in the following table, there are around 92 % of males who intended to use e-government and the other remaining 8 % is about the percentage of how many females intended to use e-government system.

Table (1) Gender Section

Demographic	Frequency	Percent	Cumulative Percent
Male	80	92.0	92.0
Female	7	8.0	100.0
Total	87	100.0	

Age. This section is focused on the age of all employees who work in this particular company, where the following table shows that the majority of them at around 35 years which could be a reason for less experience.

Table (2) Age Section

Demographic	N	Minimum	Maximum	Mean	Std. Deviation
Age	87	25	53	35.43	5.699

Education. This section considers the education level of the employees which has been shown in the following table. Where, the most employees has held bachelor degree and there are a little of who holding postgraduate degree, which, means the employees are at the requested level of the education where, the knowledge of the e-government is well enough.

Table (3) Education level

Education Levels	Frequency	Percent	Cumulative Percent
High School	10	11.5	11.5
Social college	8	9.2	20.7
Bachelor Degree	62	71.3	92.0
Postgraduate Degree	7	8.0	100.0

Experience. This pattern tries to explore the experience of using e-government system during the employees. Forever, the following table shows the experience of how many times the employees do shopping online per year. Where, it is around 46% of the employees do not do shopping online which is also cause less experience of operation such information system project like e-government system.

Table (4) Experience Section

NO of Times	Frequency	Percent	Cumulative Percent
0	40	46.0	46.0
1	21	24.1	70.1
10	1	1.1	71.3
2	8	9.2	80.5
3	7	8.0	88.5
4	3	3.4	92.0
5	3	3.4	95.4
6	2	2.3	97.7
8	2	2.3	100.0

4.2 Testing Hypothesis

Doing hypothesis test can be operated by using the statistical tool which PLS software in order to have the t-statistic and compare it with the fixed amount of the one tail curve

which is stated to be 1.645. If it was greater than that then the hypothesis is accepted otherwise is rejected. For instance, the following figure (1) will show the correlation between the instruments and the variables and how they are valid.
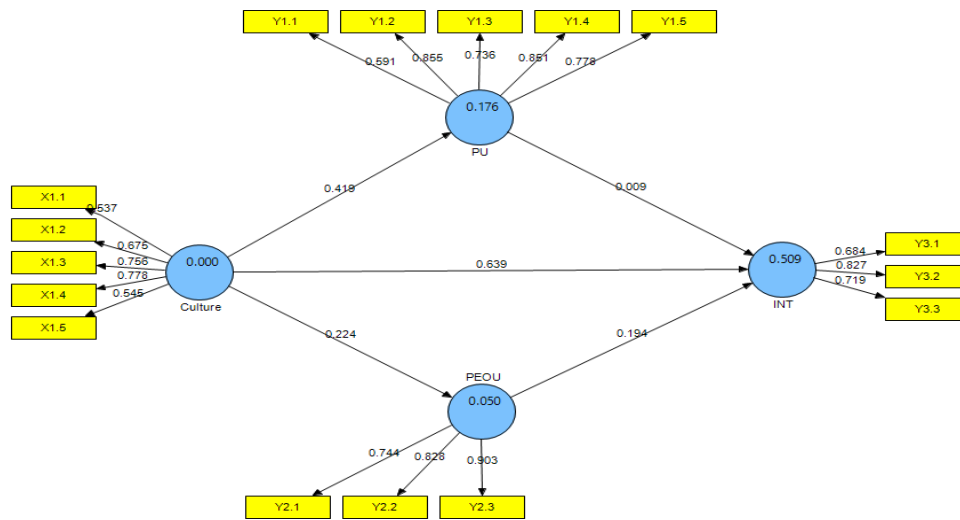

Figure (1) Research Model Analyzing

In addition the following table will explain whether the relationships are rejected or accepted, where the above of 1.645 is accepted and the lowest is rejected.

Table (5) Testing Hypothesis Results

Hypothesis	Variables	Original Sample (O)	T Statistics (|O/STERR|)	Result
H1	Culture -> INT	0.639319	7.532767	Accepted
H2	Culture -> PU	0.419365	4.552675	Accepted
H3	Culture -> PEOU	0.224467	2.171594	Accepted
H4	PU -> INT	0.009168	0.08166	Rejected
H5	PEOU -> INT	0.194386	1.62193	Rejected

By focusing on the table **(5)** we can recognize that the following hypothesis have been accepted which are (**H1, H2 & H3**). According to the previous table we can recognize that the culture effected on the intention use e-government as well as on the TAM's model (perceived usefulness & perceived ease of use). But the intervening variables

which are perceived usefulness and perceived ease of use (**H4 & H5**) have been rejected which means both intervening variables could not effect on the intention to use e-government system. For rejecting the perceived usefulness as an effecting variable could be related to unknown of the benefit of e-government by employees, which the last due to the weakness advertisement during seminar, magazine, workshop and so on. Even the culture could be the reason of lack level of using e-government system. For instance, the perceived ease of use has also rejected and that could be related to the low skills of the employees of connecting and operating with the information system and also can be related to the low experience, where they see every single step of processing is quite difficult. For instance, the R-square was approximately 0.509 which means the powerful percentage of the discriminant validity is 50.9% where this pattern demonstrated that the independent variables capable to explain this phenomena by 50.9% and the other 49.1% can be explained by another independent variable where excluding in this research.

4.3 Conclusion

Basing on many previous studies which concern on the intention to use e-system, most of them do not have same outcome which means that due to the environment where the data collected in. Furthermore, in this paper determined that the culture construct has an effect on the intention to use, perceived usefulness and perceived ease of use. For instance, the TAM's model as an intervening model could not effect on the intention to use e-government which guide us to think that the culture can effect negatively on the relationship between TAM's model and the intention to use e-government system. Thus, the majority of developed world these days are trying to adopt the culture through the whole citizens included employees because it is sensitive variable.

4.4 Recommendations

Related to my daily experience and to what I have got from observing this research I would like to recommend such important points as shown below:

1- Trying to improve the experience of the employees of using the new technology such using computer in order to have the simplicity of adopting the E-government system.

2- Provide such training course of using a new system (E-government) toward pay more intention to use it and show its benefit as well.

3- Implementing a huge advertisement about the E-government through the TV screen show, magazines, seminars, workshop and so on toward having a wide knowing about this system.

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