

FACTORS AFFECTING E-GOVERNMENT SERVICES ADOPTION: FIELD STUDY

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ABSTRACT

Electronic government provides a diversity of services to citizens using website, which include carrying out a range of transactions that will increase the accessibility of information and government services by citizens. The aim of this study is to determine the critical factors that affect citizen adoption of e-government services. Constructs from the Trust models and Diffusion of Innovation (DOI), were integrated into an insightful model of electronic government adoption. The study was organized by surveying a group of citizens at Dhofar governorate Sultanate of Oman. The results point out that Trust in Internet and Relative Advantage are significant indicators of citizens' intention to use government services.

Keywords: *Technology Adoption, DOI, Trust, E-Government.*

1. INTRODUCTION

The rapid development in internet technology changed the way how people and business interacting with their government (Tucker, 2012). Utilizing this technology in government will lead to simplify administrative procedures, increase the decentralization and making decision makers closer to citizens (Mansour, 2102; Freire, Fortes, & Barbosa, 2014). E-government is a method for government to use information and communications technology particularly using internet to provide people with appropriate access to the services of government (Alghamdi, Goodwin, & Ra, 2011; Tucker, 2012). Many studies had explored the intention to use electronic government services by citizens in different countries, to the best of our knowledge, very limited empirical research has been performed to identify the critical factors that affect e-government adoption among Gulf Council Countries (GCC) especially Oman. In this study we strive to fill this gap by adopting very specific model which integrate variables from different models such trust in internet and (DOI).

This study focuses on Omani citizens, as they are the main beneficiaries of the government services. Therefore, any development in services providing will increase the satisfaction of citizens. Especially in Oman, which is Spread over vast geographical areas, so more efforts are needed to provide services instantly. Hence, citizens need to find new tools to reduce costs and save time in attain government services. Consequently, it is essential to identify the critical factors that affect e-government adoption among citizens in Oman.

The main objective of this study is to identify the extent to which the adopted factors (Relative Advantage and Trust in Internet) affect e-government adoption by Omani citizens, and to subsequently fill this gap. An instrument was developed and conducted in Dhofar region.

2. BACKGROUND AND LITERATURE

In addition to the difference in e-government functional characteristics at different levels of service maturity, also, the e-government adoption factors at different levels of service maturity are potentially different (Shareef, Kumar, Kumar, &



Dwivedi, 2014). For the factors that enable citizen to adopt e-government services Ahmad, Markkula, & Oivo (2013) employed the Unified Theory of Acceptance and Use of Technology (UTAUT) model to examine the influential factors of the adoption and use of e-government services in Pakistan from a citizen perspective and they found that performance expectancy, effort expectancy, facilitating conditions and social influence are the factors that affect the user's adoption of e-government services in Pakistan. Furthermore, the results show that lack of awareness, user data privacy, lack of appropriate support and assistance hamper the process. Rehman, Esichaikul, & Kamal (2012) they identified critical factors that enable citizens to adopt e-Government services, so they found that factors influencing citizens' intention to use e-government services and getting information from the government website are awareness, and Information quality, while the factors influencing citizens' intention to perform transactions with the government are Transaction security, perceived ease of use, and service quality. Boone (2012) studied the impact of beliefs about how user-friendly the system is, how beneficial using the system is to them, users' computer competence, and service cost by specifically controlling for demographic factors, hence, he found that those factors are appropriate underlying framework for assessing the factors influencing adoption of e-government services in Canada.

Diffusion of Innovation: it is a theory seeks to explain the adoption of new technology by individuals (Rogers, 2003). According to the theory of Rogers (2003) he explain how new technology disseminate into society. Five constructs has been determined in Rogers theory (observability, trialability, compatibility, complexity, and relative advantage) which used to examine the potential effect on adopter's decision.

Trust: trust is very important factor that influence the behavior of electronic services adopters (Carter & Bélanger, 2005). According to literature reviewed by Carter & Weerakkody (2008) the objects of trust are the trust of service provider (trust of the government) and the trust of the mechanism through which the service is provided (trust of the internet). Trust is constantly evolving as a result of the changes in different aspects especially in information technology (Giustiniano & Bolici, 2012) Trust is necessary element of innovation and knowledge management (Boussouara & Deakins, 2000) ,trust positively affects individuals behavior (Kenning, 2008). Trust

became an vital variable in success of IT in business utilization such as electronic commerce. Trust can do more for long-term stability and is conveyed through confidence in the business partner. The same can be said of e-government as when citizens want to adopt e-government in their life, a citizen that trusts his/her government is more likely to reach consensus about benefits provided by e-government (Ratnasingam, 2005; chong & ooi, 2009).

3. METHODOLOGY

3.1. Data Collection

The study purpose is to develop an integrated framework for assessing citizens' readiness to interact with government. To investigate whether citizens are ready or not, it is important to validate relative advantages and trust in internet, and identifying the level to which they are accomplished. To do this a survey used for measuring (relative advantages, Trust, and CR). The survey was administered in Dhofar region in south Oman. The targeted citizens age 20 and above. The purpose of the study and the procedures that participants had to follow was explained on the first page, this process took less than 5 min to complete.

3.2. Sample

From the total 250 citizens approached for this study only 204 questionnaires were completed and used in the analyses. The percentage of participants who use internet at least 4 times per week is around 67%. The respondents who aware that internet can be use to interact with government are 40 %, but less than 5% are using it to do that. Majority of respondents did not know and use any web or mobile applications of e-government.

3.3. Instrument Development

In this study Items were adapted from validated instruments on e-government (Zafropoulos, Karavasilis, & Vrana, 2012; Choudrie, Weerakkody, & Jones, 2005; Schaupp & Carter, 2005; Carter & Bélanger, 2005; McKnight, Choudhur, & Kacmar, 2002; Warkentin, Gefen, Pavlou, & Rose, 2002). The main aim of the items is to check respondents aware about the online access to the government, and is it will be easier to access government and get needed information. Also, aimed to identify respondents trust in internet and it's important to adopt e-government. Instrument Items are tested for reliability using Chronbach's alpha. All items values were above suggested cut-off (0.70).

Table (1) Reliability Analysis

| VARIABLES | # ITEMS | RELIABILITY |
|--------------------------|---------|-------------|
| RELATIVE ADVANTAGE RA | 5 | 0.798 |
| TRUST IN INTERNET TI | 3 | 0.746 |
| INTENTION TO USE IU | 4 | 0.714 |

3.4. Data Analysis

The study model was tested using multiple linear regression analysis technique. Two independent variable (Relative Advantage, Trust in Internet), and one dependent variable (intention to use electronic government). The study objective is to set the extent to which the relative advantages and trust in internet (independent variables) affects in their intention to interact with government using information technology (dependent variable).

4. RESULTS

Table (2) multiple linear regression analysis result

| ADJUSTED R SQUARE | F | SIG. |
|-------------------|---------|-------|
| 0.732 | 276.863 | 0.000 |

Predictors: (Constant), TI, RA
Dependent Variable: IU

Table (2) illustrates the results of multiple linear regression analysis. The adjusted $R^2 = 0.73$ that mean 73% of the variance in participants intention to use electronic government was explained by adapted model. The whole model was significant ($F = 276.863$, $P = 0.00$). We tested significance for each variable. Relative Advantage and Trust in Internet are significant. Table (3) shows the significance of constructs, and supported hypotheses.

Table (3) Hypotheses test

| HYPOTHESES | COEF. | T VALUE | SIG. | SUPPORTED |
|------------|-------|---------|-------|-----------|
| H1 (RA) | 0.586 | 11.297 | 0.000 | YES |
| H2 (TI) | 0.334 | 6.438 | 0.000 | YES |

5. DISCUSSION AND IMPLICATIONS

This study examined the extent to which Omani citizens are ready to electronically receive government services using two main constructs (Relative Advantage and Trust in Internet) and clarified that those factors should be taken in consider by government to increase citizen adoption of e-government. Moreover, we collected and analyzed data from a diverse pool of citizens that are more representative of the population than college students are. Also, this study suggested a model according the local context of Oman.

The model of this study incorporates constructs from DOI and trust. This model interpreted 73% of the variance in participants' intention to use electronic government. Relative advantages and trust both of them are critical factors for citizens to use e-government, this agree with the result of Carter & Weerakkody (2008) study. For relative advantages, citizens' intention to use electronic government will increase if they expected that using the internet would: enhance their efficiency in gathering information from the government, enhance their efficiency in interacting with the government, make it easier to interact with the government and give them greater control over their interaction with the government. Before citizens assessing electronic government services, government should increase their awareness about those services that they can receive online, advantages and benefits of those services. That mean government should adopt an awareness initiative to do that. Also government should take in consider nowadays technology, particularly social media, so government should strive to reduce all traditional mediums and transform to modern to provide citizen with real time information.

The high trust in internet is associated with increased intention to use electronic government. This indicates that if there are legal and technological structures and enough safeguards in internet, citizens will feel comfortable to use it to interact with the government online. Hence, set of the measures must be taken to protect citizens during the use of the Internet and providing personal and financial information. Here, the Government should adopt an initiative with two aspects, the first: adopt adequate legal and technological structures to protect citizens and ensure their privacy; the second inform citizens of the right sources and ways to use the Internet to interact with government.



Future research should attempt to integrate our model with other constructs, such as information and communication technology divide. Because our sample was selected from one region, future studies should try to obtain respondents from other regions in Oman.

Overall, then, this study contributes by validating a Relative Advantage (RA) and Trust in Internet (TI) measures and by showing how these measures relate to e-government construct. We believe the model and the measures hold significant promise to help practitioners and researchers better understand the dimensions, antecedents, and consequences of trust in the e-government domain.

6. CONCLUSION

This study proposes a framework of e-government services adoption and determined the variables that affect the citizen intention to use electronic government services, through integrating variables from the Trust models and DOI. The results point out that Trust in Internet and Relative Advantage are critical factors of respondents' intention to use electronic government services.

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