THE EFFECT OF SOCIAL INFLUENCE AND FACILITATING CONDITIONS ON E-GOVERNMENT ACCEPTANCE FROM THE INDIVIDUAL EMPLOYEES' PERSPECTIVE

Alraja M.N.*

Abstract: This study benefited from the Unified Theory of Acceptance and Use of Technology (UTAUT) model through choosing two constructs from this model (Social influence, and Facilitating Conditions) to investigate their impact on employees' intention to adopt electronic government in Sultanate of Oman. To collect the requested data, a manually administered questionnaire-based survey was used. The valid questionnaires for the analysis were 209 questionnaires which represent a rate of (83.6%) of the selected sample; this response rate is considered a very good rate in the field of Information Systems. To confirm the internal consistency of construct and measures validity, Factor analysis and Reliability test were used for this purpose. In addition to, the multiple linear regression was used to test the study hypotheses. Overall, the adopted model explained a small portion of the whole deviation in employees' Intention to adopt e-government. Meanwhile, both constructs social influence, and facilitating conditions have a significant effect on employees to adopt the electronic government. Government has to disseminate the awareness among groups of social influence about the benefits of using electronic government and clarify them that the transform to e-government does not mean that the government will abandon its employees. As well as, the government has to improve the organizational and technical infrastructure which will be used to perform the e-government tasks. The study originality derives from studying employees' perspective as individuals, not as representatives of government institutions. Which considered the first study attempted to investigate the employees' intention to adopt e-government. Furthermore, the study narrowed UTAUT model which focused only on two constructs of this model.

Key words: E-government, social influence, facilitating conditions, employees, UTAUT

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Introduction

In the era of information technology revolution, most governments have invested in the growth of the Internet technology to serve their citizens and businesses, using applications and websites that are accessible by citizens. E-government may defined as the use of Information and Communication Technology, and the Internet's ability to boost the delivery of, and access to, government services and operations for the benefit of employees, citizens, businesses, and other stakeholders (Srivastava and Teo, 2007). However, to develop and provide services

*Mansour Naser Alraja, Assistant Professor, PhD, Management Information Systems, Dhofar University
✉ Corresponding author: malraja@du.edu.om
that meet users’ expectations and needs, government should disseminate the knowledge of e-government among its employees, and help them to adopt information technology (Alraja et al., 2015; Heeks and Bailur, 2007). Therefore, e-government became a necessity to help employees in government work to provide high quality government services, which will meet the actual needs of users. Thereby, offering more saving time, efficient, provide services on real time, increase transparency in government ministries, faster access to government information by citizens and businesses, and provide lower administrative costs. As well as reducing the chances of corruption in governments, which it is a significant motivation to adopt e-government (Asogwa, 2013; Waller and Genius, 2015; Bertot et al., 2008; Al-Shafi, 2009). This study argues that the employees’ adoption of e-government depends on various perceptions related to the social influence, and facilitating conditions. Ideally, employees will adopt e-government, if they hold positive perceptions according to the said impacts. Relying on the mentioned argument, the main objective of this research is to investigate the impact of social influence, and facilitating conditions on employees’ adoption of e-government in Sultanate of Oman.

Literature Review

As internet technology became a significant tool for the delivery of government services (Shackleton et al., 2006; Irani et al., 2007; Kamal et al., 2009). Most governments over the world have a website, though that those websites are not perfect, and need more clear standards for service effectiveness, but the governments took this evidence to continue in obtaining the momentum for e-government (Davenport et al., 2008; Brown and Schelin, 2005). However, governments in initial stages of transformation to e-government were focused on transferring the existent material from hard (print) to electronic (soft) formats. Whereas, the level of personalizing transaction facilitation, information providing, needs more efforts to develop, as well as, accuracy and security of electronic records are limited (Pietersen et al., 2007; Heeks, 2006; Chatillon, 2005; Davenport et al., 2008). In a cross-countries study the respondents are ready to adopt e-government if they receive significant benefits (Deakins et al., 2010). In context of Oman, the main factors identify quality of e-Government services in Oman are responsiveness, efficiency, reliability, and security (Sharma et al., 2013). More, service quality has significant affect in the willingness to use e-government services (Sharma, 2015). Moreover, the acceptance of e-government service relies on availability and efficiency of public services (Al-Busaidy and Weerakkody, 2009). Furthermore, in Oman context but from government perspective, the government trying to address matters related to the transformation of public services from physical to electronic government (Al-Mamari et al., 2013). According to Al-Mamari et al., (2013) the Government of Oman motivated by driving forces, so the e-government is employed to enhance government operations. From another view, there are many challenges to enable e-government
services such as the maturity of e-government systems, e-government maturity models, the integration of process and information systems, differences in culture, political, technical, and organizational origin (Sarikas and Weerakkody, 2007; Lee et al., 2008; Shackleton et al., 2006).

Based on UTAUT model the researchers adopted only two constructs include: Social influence, and Facilitating Conditions. Figure 1 presents the research model. In following we will define each one of those constructs.

Social Influence

Social influence defined as the degree to which that others (family, friends, peers, and etc...) believes (either this believes are positive or negative) will affect someone to use the new system (Venkatesh et al., 2003; Alraja, 2015; Carter et al., 2011; Al-Shafi, 2009; Irani et al., 2009). Many studies showed the importance of the social influence in adopting and implementing e-government (Al-Busaidy, 2011; Al-Gahtani et al., 2007; Kim et al., 2009). Regarding to this study, the employees will have a strong intention to adopt the e-government if the influence of important people (family, friends, peers, and etc.) was positive. Therefore, the following hypothesis is proposed:

\[ H1: \text{Social influence will have a positive influence on employees' intention to adopt e-government.} \]

Facilitating Conditions

Facilitating conditions refers to which extent people believe that an organizational and technical infrastructure exists to support the system (Venkatesh et al., 2003). Many scholars (Chang et al., 2007; Chau and Hu, 2002) found that facilitating conditions have a positive effect on the use of innovation. Venkatesh et al. (2003) found that facilitating conditions without adding any moderator is not significant to predict intention to use system when the construct of effort expectancy is used in the same model, but when it is moderated by age and experience; it had a strong effect for older workers with increasing experience. In Al-Shafi (2009) study, facilitating conditions was correlated positively to e-government adoption but not significantly. According to our study, if employees able to access required resources, as well as to gain needed knowledge and having the necessary support to use information technology infrastructure, they will be more likely to adopt e-government.

\[ H2: \text{facilitating condition will has a positive influence on employees' intention to use e-government.} \]

Research Model

Two constructs from UTAUT model were selected include: Social influence, and Facilitating Conditions. Figure 1 presents the research model.
Methodology

A manually administered questionnaire-based survey was used to collect the proper data to produce quantitative statistics about the effect of social influence and facilitating conditions on the employees' intention to adopt e-government. Based on previous literature the questionnaire was developed taking into consider the literature that focused on information technology adoption such as (Venkatesh et al., 2003; Carter et al., 2011; Raaij and Schepers, 2008). To assure the ease of response the first page of the questionnaire contained very clear instructions, clarifying the purpose of the study, and assuring the confidentiality and privacy, so they were not asked to mention anything may reveal their identity. The main instrument in the questionnaire was five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was divided into two main divisions the first for demographic background-related viewpoint, the second for covering the constructs of adopted model. Before administering the actual survey, five individuals were selected for a pilot study to improve the questions, to test the clarity of the questions, and to test the respondents' understanding. All received comments were taken in consider in improving the questionnaire, so some statements removed, or amended. After completing the revision process of the questionnaire, the researchers distributed 250 questionnaires to the employees of Dhofar governorate, only 217 questionnaires were returned. A number of 8 questionnaires out of the completed questionnaires were rejected because some respondents gave the same answer to all questions, no answers for some questions, or/and others gave more than one answer to a question that must have only one answer. Therefore, the accepted and usable questionnaires for the subsequent analysis were 209 questionnaires with a rate of (83.6%); this response rate is considered a very good rate in the field of Information Systems. Factor analysis and reliability test are used to check the validity and reliability of the gathered data which obtained by questionnaire. The results of those aforesaid tests confirmed the internal consistency of construct and measures validity. As well as, multiple regression were used for hypotheses test.

Data Analysis

The exploratory factor analysis utilizing the Principal Component Analysis with Varimax rotation was used to examine the construct validity. According to (Straub et al., 2004; Dwivedi et al., 2006; Carter et al., 2008), the recommended value for constructs to be valid is the items loaded must be at least 0.40.
Table 1. Rotated Component Matrix

| Component | 1     | 2     |
|-----------|-------|-------|
| SI1       | 0.902 |       |
| SI2       | 0.894 |       |
| SI3       | 0.930 |       |
| FC1       |       | 0.603 |
| FC2       |       | 0.821 |
| FC3       |       | 0.849 |

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

As can be seen in Table 1 for the social influence all its underlying constructs are loaded at factor 1. The coefficients of this construct ranging from (0.894) to (0.930). Eventually, for the facilitating conditions, all its underlying constructs are loaded at factor 2. The coefficients of this construct ranging from (0.603) to (0.849). The results of factor analysis utilizing the Principal Component Analysis with Varimax rotation illustrate that the items loaded duly in the construct discriminate validity, which confirm that the collected data is valid.

Before getting the paper findings, our instrument was tested for internal consistency using Cronbach’s coefficient alpha.

Table 2. The result of Cronbach’s Alpha test

| Variables | # Items | Result |
|-----------|---------|--------|
| SI        | 3       | 0.908  |
| FC        | 3       | 0.614  |
| EIAeG     | 3       | 0.803  |

Table 2 presents the results of Cronbach’s coefficient alpha which varied between (0.604) for the facilitating conditions constructs, (0.803) for the employees’ intention to adopt e-government, and (0.908) for the constructs of social influence. Multiple linear regression analysis was performed with the social influence, facilitating conditions as the predictor variables, and employees’ intention to adopt e-government as a dependent variable.

Table 3. Results of regression analysis

| Adjusted R² | F     | Sig. |
|-------------|-------|------|
| 0.12        | 13.736| 0.000|

Predictors: (Constant), SI, FC
Dependent Variable: EIAeG

Table 4. Final results of hypotheses testing

| Suggested-Hypotheses | β   | T     | Sig. | Accepted |
|----------------------|-----|-------|------|----------|
| H:1 (SI)             | 0.237| 6.380 | 0.000| YES      |
| H:2 (FC)             | 0.210| 5.726 | 0.000| YES      |
A number of 209 cases have been analyzed. Relying on the results of regression analysis displayed in Table 3. The entire model was significant ($F (2, 209) = 13.736, P< 0.001$) with adjusted $R^2$ being (0.12) which explains only (12%) of the changes in the Intention to adopt e-government. Both constructs social influence, and facilitating conditions were significant (SI= 0.23, and FC=0.210).

**Discussion**

Two main constructs empirically investigated the employees’ intention to adopt electronic government. The total rate of response to the research instrument was (83.6%). This rate is between 5% and 95 % (Fowler, 2002), therefore, is considered satisfactory and acceptable. The instrument checked for validation pre and post data collection; this was for content and construct validity, and reliability. The two constructs of our adopted model significantly interpreted a part of the intention of employees to adopt an electronic government. Social influence contributed to the largest variance ($\beta = 0.237$) when explaining employees intention to adopt an electronic government. While the facilitating conditions contributed to the second largest variance ($\beta = 0.210$) when explaining employees intention to adopt an electronic government.

Social influence play significant role in intention to adopt and implement e-government (Al-Busaidy, 2011; Al-Gahtani et al., 2007; Kim et al., 2009). Therefore, the family, friends, peers, and etc. who are surrounding the employee will influence him positively or negatively to adopt electronic government (Venkatesh et al., 2003; Carter et al., 2011; Al-Shafi, 2009; Irani et al., 2009). This theoretical assumption is confirmed in the survey findings that are obtained in this research which suggest that the social influence has a positive influence on employees’ intentions to adopt electronic government. Hence, this study provides evidence that Social influence has a significant positive influence on the employees’ intention to adopt electronic government. this result leads to suggest that government have to do more efforts not only within the government organizations, but also in the external environment (outside of those organizations) In this context, governments should prepare awareness campaigns on all media especially using social media and the qualified government agencies websites, targeting all groups of social influence (the family, friends, peers, etc.), the campaign should clarify them about the benefits of using electronic government, and encourage those groups to influence employees who are still resisting to adopt the electronic method in providing government services to do so. In addition to, the campaigns should explain them that the use of information technology in providing the services does not mean that the government will abandon them. Facilitating conditions have varying effects depends on the reached phase of IT adoption in the organization. In initial stage, facilitating conditions have a positive effect on the use of innovation (Chang et al., 2007; Chau and Hu, 2002). While, Al-Shafi (2009) found that facilitating conditions was correlated positively to e-government adoption but not significantly. On the other hand,
during the advance of the experience of using the information technology, facilitating conditions had a strong effect for older workers with increasing experience (Venkatesh et al., 2003). The study theoretical proposition is confirmed in the survey findings that are gained in this research and provides evidence that facilitating conditions have a significant positive influence on the employees’ intention to adopt electronic government. This result leads to suggest that government have to provide assistance and the important resource to the employees to help them performing their job. More, employees should be trained on using all the available facilities and the designed electronic system to provide the government services effectively, e.g. may be employees trained on how to assist people online when those people face any difficulty in using the government website. Alongside, governments should improve various methods for providing its services such as an enquiry hotline, interactive service demos, and user instructions in plain text or over social media. Further, it should be taken in consider that Dhofar governorate still in the initial stage of adopting electronic government, thereby, it is very important to benefit from successful expertise to select the useful organizational and technical infrastructure, offering required resources, supplying needed knowledge, and providing the proper support to the employees especially in the initial phase of adoption of electronic government.

Conclusion
This paper used social influence, and facilitating conditions to investigate employees’ intention to electronic government. The study illustrates that both social influence, and facilitating conditions can be considered as indicators for the adoption of electronic government. We have to take in consideration that this study implemented in a country still in its initial stages of the adoption of electronic government, also the data was collected using hand administered questionnaire, so that rise the potential of having self-report bias. For future studies it is recommended that there should be a try to validate the results of this study by implementing its model in a different environment, from the perspective e-services receivers (citizens and businesses, and moderate all the constructs by other constructs like age, gender, culture or by adding new constructs like performance expectancy, effort expectancy, and trust. However, it is even better to use multiple methods to collect data in the future studies.

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EFEKT WpływU SpołecznEGO ORAZ WarUNKÓW UŁATWIAJĄCYCH AKCEPTACJĘ E-ADMINISTRACJI Z PUNKTU WIDZENIA INDYWIDUALNYCH PRACOWNIKÓW

Streszczenie: W artykule wykorzystano model Jednolitej Teorii Akceptacji i Wykorzystania Technologii (ang. UTAUT) dostosowany do potrzeb badawczych poprzez wybranie dwóch elementów: wpływu społecznego oraz warunków ułatwiających w celu zbadania ich wpływu na gotowość pracowników do przyjęcia elektronicznej administracji w Omanie. Aby zebrać wymagane dane wykorzystano bezpośrednie badanie ankietowe. Do analizy wykorzystano 209 poprawnych kwestionariuszy, które stanowią 83,6% wybranej próby badawczej. Taki udział odpowiedzi uważany jest za bardzo dobry w zakresie badań systemów informatycznych. Aby potwierdzić wewnętrzną spójność budowy oraz istotność elementów, wykorzystano analizę czynnikową i test niezawodności. Dodatkowo, w celu potwierdzenia hipotez badawczych, wykorzystano wieloraką regresję liniową. Należy zauważyć, że przyjęty model objaśnia niewielką część zachowań w kontekście akceptacji e-administracji przez pracowników. Tymczasem oba elementy, wpływ społeczny i warunki ułatwiające akceptację, mają znaczący wpływ na pracowników odnośnie przyjęcia elektronicznej administracji. Rząd ma na celu rozpowszechnianie świadomości na temat korzyści płynących z korzystania z elektronicznej administracji wśród grup społecznych i wyjaśnienia im, że wprowadzenie e-administracji nie oznacza, że rząd będzie zrezygnować ze swoich pracowników. Rząd także podjąć kampanię informacyjną, że rząd ma na celu poprawę infrastruktury organizacyjnej i technicznej, które zostaną wykorzystane do realizacji zadań związanych z e-administracją. Oryginalność badania wynika z analiz prowadzonych z perspektywy pracowników jako jednostek, a nie jako przedstawicieli instytucji rządowych. Niniejsze badanie jest jednym z nielicznych, w którym próbowało zbadać akceptację pracowników dla wdrażania e-administracji. Ponadto, badania zawęziły model UTAUT, który skupił się wyłącznie na dwóch jego elementach.

Słowa kluczowe: E-administracja, wpływ społeczny, warunki ułatwiające, pracownicy, model UTAUT

社会影響和便利條件對電子政務接受個人僱員觀點的影響

摘要：本研究通過從該模型（社會影響和促進條件）中選擇兩個構造來研究它們對僱員在阿曼蘇丹國採用電子政府的意圖的影響，從統一理論接受和使用技術（UTAUT）。為了收集所請求的數據，使用了手動管理的基於問卷的調查。分析的有效問卷是209份問卷，其代表選定樣本的（83.6%）的比率，這種答复率在信息系統領域被認為是非常好的比率。為了確認構建體的內部一致性和測量的有效性，使用因子分析和可靠性測試用於此目的。此外，多元線性回歸歸於測試研究假設。總的來說，採用的模式解釋了僱員意圖採用電子政務的整體偏差的一小部分。同時，兩者都構成社會影響力和促進條件對僱員採用電子政府有重大影響。政府必須傳播社會影響群體對使用電子政府的好處的認識，並澄清他們認為電子政府的轉變並不意味著政府將放棄其僱員。此外，政府必須改進將用於執行電子政務任務的組織和技術基礎設施。研究的原創性來源於從個人的角度研究僱員的觀點，而不是政府機構的代表。它認為第一個研究試圖調查僱員的採取電子政務的意圖。此外，該研究縮小了僅關注該模型的兩個構造的UTAUT模型。

關鍵詞：電子政務，社會影響，促進條件，僱員，UTAUT