Mobile Government Adoption: Citizen-Centric Approach

Emergent Research Forum (ERF)

Mohammad Kamel Alomari
Department of Accounting and Information Systems
College of Business and Economics
Qatar University
Doha, Qatar
m.alomari@qu.edu.qa

Abstract

Despite government attempts to increase citizens’ interaction with e-government services provided through governmental websites, to guarantee a high level of involvement by citizens in government services, more governmental initiatives are needed. This research paper presents the idea of smart government, particularly m-government, as a potential governmental initiative that would provide citizens with an easier approach to using government services. It is therefore necessary to explore citizens’ interactions with government and to articulate the main predictors that may affect their intentions to use m-government as a new way of using government services. This study proposes an m-government adoption model to introduce the main factors that would influence citizens’ intentions to use m-government services. By identifying these factors, the Jordanian government could build a plan for marketing and introducing m-government as a new method of using government services. This paper provides a foundation for future empirical studies on m-government and government 2.0 adoption.

Keywords

M-government, smart government, factors, citizens, adoption.

Introduction

Governments worldwide, including the Jordanian government, have been prompted to use various technological initiatives to increase citizens’ participation in government services (Alomari, 2016; Alomari et al., 2012; Baabdullah et al., 2017; Simonofski et al., 2017). Jordan is a Middle Eastern country with a population of 10,248,069 (Central Intelligence Agency, 2018). After launching some e-government services, the Jordanian government has recognized the main benefits of providing citizens with these services online. As is the case with many other governments, the Jordanian government has reached the conclusion that the involvement of citizens with the government needs to be facilitated by using other technological initiatives. One such initiative is known as mobile government (m-government). The Jordanian government has taken a step toward m-government by launching the e-government mobile portal in April 2011. In this initiative, the Jordanian government has recognized the necessity of implementing m-government, as the country has a high rate of mobile penetration.

Researchers have used different definitions and descriptions to define m-government. M-government has been described as “... a new delivery channel for governments to provide timely information and services ubiquitously to residents, businesses and other government departments through mobile devices.” (Almasaeed and LoveMobile, 2013). Based on this description, the current study uses the following definition:

M-government is a governmental delivery channel to provide citizens with timely information and services via mobile devices.
M-government, like other technological innovations (e-government, e-voting, etc.), has been developed and implemented by developed countries and most studies that have encompassed this technology have been within this context. Consequently, the implementation and adoption of this technology needs to be explored in developing countries, such as Jordan. In several studies, researchers have explored the implementation and adoption of m-government in Jordan, even though the Jordanian government has not yet fully implemented this (Al-masaeed and LoveMobile, 2013; Alomari et al., 2013). One of these studies has indicated that one main limitation and challenge of m-government in Jordan is that “… cooperation between the government and local mobile, network operators could raise problems due to security restrictions for sensitive information.” (Alomari et al., 2013). This type of challenge may therefore prompt trust issues, with these being investigated in the current study. With the study’s use of the unified theory of acceptance and use of technology (UTAUT) as its theoretical framework, this paper proposes a model of mobile government (m-government) adoption which comprises five constructs. These constructs are trust in the internet, trust in the government, performance expectancy, effort expectancy, and social influence. These factors are addressed based on socially and culturally based perceptions with an important emphasis being the acceptance of different technological innovations by a society’s citizens (Alomari 2014).

Mobile Government Adoption

The current study proposes a model of m-government adoption that is derived from two main sources, namely: trustworthiness (constructs such as trust in the internet and trust in government) and the unified theory of acceptance and use of technology (UTAUT) (constructs include performance expectancy, effort expectancy, and social influence). The following two sub-sections report the study’s findings on these factors.

Trustworthiness

Previous research has demonstrated that to certify the successful adoption of technological systems by citizens, trustworthiness needs to be considered. Based on e-government studies, trustworthiness has been divided into two types: trust in enabling technologies (the internet as an example) and trust in government (Carter and Belanger, 2005). In both developed and developing countries, several studies have highlighted trust in the internet and trust in government to be essential constructs in predicting citizens’ intentions to use different technological innovations (Alomari, 2016; Gao and Waechter, 2017; Warkentina, et al, 2018). In an e-government study conducted in a developed country, the United States (USA), researchers found that trust in the internet and trust in government impact on citizens’ intentions to use e-government services (Carter and Belanger, 2005). These constructs were also significant predictors for e-government adoption in another study conducted in a developing country, Jordan (Alomari, et al., 2012). In an e-voting study conducted in a developed country, the USA, researchers found that trust in the internet and trust in government both had a significant impact on citizens’ intentions to use e-voting systems (Schaupp and Carter, 2005). On the other hand, in Jordan, a developing country, trust in government was the main factor influencing e-voting adoption by citizens (Alomari, 2016). In a mobile government adoption study conducted in Egypt, a developing country, researchers found that trust (in terms of security and privacy) was not a significant predictor of mobile government adoption (Abdelghaffar and Magdy, 2012). These researchers focused on young people in administering their study. On the other hand, Gao and Waechter (2017) has highlighted the significant role of initial trust in predicting the adoption of mobile payment services. The previous research has emphasized the importance of considering these factors in relation to technology adoption, including e-government, e-voting, and mobile government in developed and developing countries (Abdelghaffar and Magdy, 2012; Alomari, 2016; Alomari et al., 2012). This study therefore has extended other research by inspecting the effect of these two constructs in the adoption of mobile government in a developing and Middle Eastern country, Jordan. The following section presents the unified theory of acceptance and use of technology (UTAUT).

Unified Theory of Acceptance and Use of Technology (UTAUT)

This study uses the unified theory of acceptance and use of technology (UTAUT) as its theoretical framework. The Unified Theory of Acceptance and Use of Technology (UTAUT) is proposed to explain the acceptance of technology acceptance from the customer perspective in specific. Consequently, in quest of selecting an
appropriate model covering key constructs determining intention and adoption of Mobile government by Jordanian people, who are the main customers of government services, the UTAUT has been found as a theoretical foundation for proposing mobile government adoption framework utilized in the current research paper. Previous studies have confirmed the applicability of this model to the study of factors that influence citizens’ adoption of technological innovations, including mobile banking (Alalwana et al, 2017), mobile government (Sabraz and Samantha, 2015; Yong et al., 2014) and e-government (Rana et. al, 2017). By combining different models that have been widely used by information systems studies, Venkatesh et al. (2003) formulated the UTAUT model. An example of these combined models: theory of reasoned action (Fishbein & Ajzen, 1975), theory of planned behavior (Ajzen, 1991), technology acceptance model (Davis et al., 1989), diffusion of innovations theory (Rogers,1995), and social cognitive theory (Bandura, 1986).

The UTAUT has introduced four main constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions. This study uses three of these constructs, namely, performance expectancy, effort expectancy, and social influence, to study the adoption of m-government by the citizens of Jordan. Facilitating conditions was excluded, as the study’s participants will be experienced smartphone users and access mobile applications regularly. Performance expectancy has been described as “the degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh et al., 2003). Effort expectancy is defined as “the degree of ease associated with the use of the system” (Venkatesh et al., 2003). Social influence is defined as “… the degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al., 2003). This study proposes these three constructs for use in direct association with the dependent variable, m-government adoption. In summary, this section has delineated the literature that pinpoints the main predictors of mobile government adoption by citizens. A review of the literature has shown the lack of research examining the impact of these predictors on citizens’ intentions to use mobile government.

Mobile Government Adoption Framework

This study presents a framework of mobile government adoption. Fig. 1 below shows the main framework.

![Figure 1. M-government Adoption Framework](image)

The framework consists of five independent variables (trust in the internet, trust in government, social influence, performance expectancy, and effort expectancy) and a dependent variable (mobile government adoption). The framework proposes a direct association between the independent variables and the dependent variable. M-government adoption will be measured in the current research paper as intention to use. Previous research examining the technology adoption model used terminology relating to the intention or willingness to use (Alomari et al, 2012; Carter and Bélanger, 2005; Van Slyke et al., 2004).

Methodology & Analysis

This research will use questionnaire (Self-Administered Questionnaire) to collect information on citizens’ perspectives toward mobile government adoption. Purposive sampling will be followed in this study to collect data from at least 460 Jordanian citizens who are smartphone users and have regular access to the internet and mobile applications. The current study will use a survey to examine different factors proposed in the M-government adoption framework (see Figure 1) in the most practical way possible. Most of the survey items were adapted from previous studies (Carter and Bélanger,2005; Venkatesh et al. , 2003; Yong et al. 2014).
The five-point Likert Scale (interval scale) will be used to measure responses to the statements in the research questionnaire on a scale of 1 (strongly agree) to 5 (strongly disagree). Because English is not the first language of Jordan, the questionnaire will be translated into Arabic. Back translation will be used, with the questionnaire translated from English to Arabic first and then from Arabic to English. To first analyze the results of the survey, exploratory factor analysis will be conducted. The survey’s items of the Likert Scale will be subjected to axial components analysis using SPSS version 24.0. As the main purpose of this research was to determine the relationship between mobile government adoption (dependent variable) and the factors (independent variables), multiple regression technique will be used. “Multiple regression analysis” is: “a statistical technique that can be used to analyse the relationship between a single dependent (criterion) variable and several independent (predictor) variables” (Hair et al., 1998).

Discussion, Implications & Future Research Recommendations

It has been claimed that “developing countries have a higher mobile penetration rate than the fixed line internet rates which opens doors of opportunities for these countries to bridge the digital gap and gain a better reach through M-government.” (Al-masaeed and LoveMobile, 2013). Jordan is one of the developing countries that has taken the necessary step toward implementing m-government to serve a higher proportion of its citizens. On the other hand, the current study has also taken a necessary step in exploring the extent to which Jordanian citizens would use m-government services to accomplish their transactions.

This paper fulfills three main functions: it plays the role of research facilitator to define the factors and problems that require additional consideration in the adoption of m-government. It also brings to the Jordanian government’s attention the need to consider m-government as an approach to reach people who are on the other side of the digital divide. The study has underlined that m-government is one of the essential initiatives that would assist the Jordanian government to ensure its citizens’ high involvement and interaction with its services. Mobile government has an impact on government–citizens interactions as do many other governmental technological initiatives, such as e-government and e-voting (Alomari, 2016; Reddick, 2011). This research paper introduces the main issues and challenges that would deter the citizens of Jordan from involvement and interaction with government services provided over mobile devices. By addressing these issues and challenges, the Jordanian government can take an important step in formulating the main strategies to resolve these issues and, therefore, take advantage of the solid mobile penetration in Jordan. The current study is a valuable resource for researchers and practitioners who are investigating factors that influence the adoption of mobile government as well as other technological innovations, such as e-government, e-voting, and t-government. This paper proposes a framework which might be applicable for use in m-government research conducted in developing countries, in general, and Middle Eastern countries, in particular, the Gulf Cooperation Council (GCC) countries. Finally, the current research paper will be conducted by surveying people who are smartphone users and have regular access to the internet. Therefore, it is necessary in another study to include citizens who are smart-phone users but do not have regular access to the internet as that would increase the generalizability of the results.

Conclusion

In conclusion, this study presents a proposed framework for mobile government (m-government) adoption. The framework’s purpose is to examine the impact of five factors on citizens’ intentions to use mobile government services. This research paper has taken a substantial step in investigating the factors that affect mobile government adoption in Jordan by establishing a framework for in-depth analysis of the specific factors. On other hand, the current study has focused primarily on Jordan: future research should take into consideration other Middle Eastern countries, with the GCC countries as an example.

REFERENCES


