Journal Homepage: www.ijo-bs.com

International Journal of Business Society

Contents lists available at: https://www.ijo-bs.com/issue.html

Conceptual Research on Mobile Government Service Quality and its Impact on Jordanian Citizen Satisfaction

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Information of Article

Article history:
Received Feb 13, 2018
Accepted Feb 20, 2018
Available online Mar 1, 2018

Keywords:
Mobile Government
Service Quality
Citizen Satisfaction

ABSTRACT

The current research paper aims to identify the major dimensions of m-government adoption and its impact on citizen satisfaction. This paper will help in understanding the key issues surrounding mobile applications that may assist in the successful operation of m-government. A review of the literature covering these mobile government factors will be presented in the research. The article is conceptual in nature and provides a conceptual framework relating to the successful implementation of mobile government.

1. INTRODUCTION

After the widespread adoption of the Internet and mobile devices, mobile government is now being widely implemented for delivering government services electronically to the citizens and other relevant stakeholders. This m-government channel is designed to deliver a number of services such as: the results of exams in the education sector; weather forecasting; health issues and appointments in the health sector as well. M-Government will offer several advantages to citizens including: convenience; always on; access anywhere; as well as time and cost-saving. In addition, m-Government will promote transparency between government and its citizens by weakening bureaucratic structure and processes (Alsenaidy and Ahmad, 2012).

The Jordanian government has sought to accelerate the implementation and adoption of m-Government. This is due to the following two reasons. Firstly, Hashemite Kingdom of Jordan has experienced a growing rate of Internet adopters in the past few years. More specifically, the number of mobile Internet subscribers has surpassed the number of fixed mobile line subscribers since 2005 and this cannot be done without having an excellent infrastructure compared with other developing states. As Jordanian citizens constitute the largest group of mobile users all over the world according to the United Nations Conference on Trade and Development UNCTAD's report in 2012 with 1,800 mobiles for every 1,000 persons in Jordan (Alsenaidy and Ahmad, 2012).

However, despite a widespread adoption of internet and mobile devices, citizens still prefer the traditional channels for communicating and transacting with government. Indeed, existing studies state that citizen's adoption of m-Government service is still not equivalent to the ambition of the Hashemite Kingdom of Jordan government (Abanumy and Mayhew, 2005; Alhussain et al., 2010; Al-Khalifa, 2011; Almutairi, 2011; Alsenaidy and Ahmad, 2012). Despite the concerns regarding slow adoption and thin usage (Dwivedi and Irani, 2009), it is worth noting the scarcity of research in the Jordanian context for understanding adoption factors. In the existing conceptual and qualitative studies (such as Abanumy and Mayhew, 2005; Ahmad, et al., 2014; Alhussain and Drew, 2010, 2012; Alhussain et al., 2010; AlKhalifa, 2011; Almutairi, 2011; Alsenaidy and Ahmad, 2012; Al-Solbi and Mayhew, 2005), it has been argued and found that using m-Government in Jordan is not common because Jordanian citizens have not used it frequently.

Furthermore, in their explanations, they mentioned a number of reasons such as risks associated with using this technology and lack of Jordan infrastructure. However, due to the nature of existing work, generalization and validity of findings are limited. Considering the initial stages of implementation (Dwivedi et al., 2013), the low rate of adoption of m-Government services and the lack of rigorous studies on this emerging area.

In the same way, governments intend to provide their citizens with easily accessible, accurate, real-time, high-quality services and information with the use of smart devices, including high-speed wireless Internet connections. M-government (mobile-application-based government services) adds value to the smart government initiative, where citizens will be able to access government services using mobile technologies such as mobile phones, Wi-Fi-enabled devices and wireless networks (Ghyasi and Kushchu, 2004). For the purpose of this paper, the terms m-government, electronic

https://dx.doi.org/10.30566/ijo-bs/2018.2.2.3

government (e-government) and smart government are used interchangeably. Internet-enabled mobile devices' penetration rates are growing compared to those of traditional wired PCs (Abdelghaffar and Magdy, 2012). M-government refers to any transaction between government and citizen that occurs through mobile technologies (Al-hadidi and Rezgui, 2009). M-government is essential for the socio-economic development of a country; without such support, a government cannot operate efficiently (Kushchu and Kuscu, 2003). The organisations invests heavily in information and communication technologies (Islam et al., 2015; Jasimuddin et al., 2012; Jasimuddin and Zhang, 2011; Zhang and Jasimuddin, 2012; Jasimuddin and Zhang. 2009). Mobile technologies are one of the pillars of smart government. In other words, mobile technology is essential to support smart government initiatives (Abdelghaffar and Magdy, 2012). In this regard, Ziemba et al. (2014) suggest that high-quality, sophisticated web portals are needed for the successful adoption of e-government. However, for such smart government initiatives to be successful, citizens need to understand and accept m-Government services (Kaliannan et al., 2007). The successful implementation of smart government services depends on how end-users perceive the m-government initiative. The technologies available may not be welcomed by end-users. If m-government services are not effectively utilized by end-users then claims of the existence of a smart city are meaningless.

The success of m-Government projects depends on the citizens' acceptance and usage (Almuraqab et al. 2017). However, there has been limited research on factors that influence the adoption of m-government services from Western countries' perspectives. This article intends to fill the gap in the current literature by reviewing the existing literature to identify forces that may affect end-users' adoption of smart government services in the UAE context. The insights of Davis (1989) inspired the theoretical foundation of this study.

Due to the high penetration rate of smart phones among citizens, government of both (developed and developing) countries are moving from e-Government to m-Government to fulfill the strong demand by offering advanced, stable and developed services to citizens. (Al-Hujran, 2012). A report of a survey based study has indicated that 96% of the respondents have smart phones, while 65% they never use the m-Government services (Debusmann, 2015).

Therefore, it is important to know that implementing m-Government requires citizen to adopt and engage with these services, in order to achieve the intended plan (Kaliannan et al., 2007). A successful m-Government has two main parts: a successful implementation and an effective engagement (Almuraqab and Jasimuddin, 2016), so the aim of this paper is to identify the main factors of m-Government that influence HKJ citizen satisfaction. The paper will help to understand the key factors surrounding the mobile applications based government services which may help the successful operations of m-Government. This paper will attempt to provide a conceptual framework relating to the successful implementation of m-Government in the HKJ.

2. LITERATURE REVIEW

Mobile government stands for the group of services regarding the strategic employment of the services and utilization that are solely accessible by means of mobile phones (Al-Busaidi 2012; Hung et al., 2013; Yfantis et al., 2013). The service of m-Government can be regarded as being a strategy. Its application contains inter alia: the complete employment of all sorts of wireless and the technology of mobile phones; the implementations and the tools to improve the advantages pertaining to the parties participating in m- government involving the national people of the country; businesses and the units of the government; reduction of cost; effectiveness; transformation of the organizations of the public sector; adding convenience and flexibility; improving services for the citizens; and the capability of accessing more people via mobile phones compared to the wired Internet (Abdelghaffar and Magdy, 2012; Aloudat et al., 2014; Althunibat et al., 2011). The aforementioned advantages could be classified within three sets of advantages: advantages to the government, the national people and the industry (Alsenaidy and Ahmad, 2012; Madden et al., 2013). Employing m-Government within the context of developing countries has experienced various degrees of success according to the governments in each state and the level of infrastructure as well (Al-Busaidi, 2012; Alsenaidy and Ahmad, 2012).

However, the overall rate of using m- government was modest as has been investigated by a number of researchers. For example, the utilizations of m- government were investigated by Abanumy and Mayhew (2005) who made their study by means of analyzing the ways the public authorities made use of m-Government. Through that research, they were referred to the modest development in applying m- government. They attributed the weakness of using m- government to the overall weakness in all e- government services. They suggested that the government did not do too much in this field in order to increase the tendency of potential users to adopt m- government. Likewise, Al-Khalifa (2011) attested the fact that it was quite important to meet the public inclinations with regard to the types of mobile phones; i.e. what is current and new. To achieve that, they proposed a design approach that targets m- government websites in Saudi. In a similar fashion, the electronic readiness in the public and private organizations was investigated by Al-Solbi and Mayhew (2005). They concluded by recommending the government to go on a plan to raise the electronic readiness inside the organizations of the government in addition to increasing public awareness about such services in their everyday lives. Likewise, the preferable security methods of m- government from the viewpoint of the consumers were specified by Alhussain and Drew's (2010), the main impetus of the study was that when the intentions of consumers are identified, accepting m-Government would be higher.

Furthermore, there are advantages of applying m- government such as increasing the effectiveness of governmental services; public information and services delivery; and a significant cost reduction in addition to the feasibility of using this service - these were pointed out by Alsenaidy and Ahmad (2012). However, they indicated that the obvious shortage of the awareness of people and the lack of trust were two of the basic obstacles when it came to the actual using of the

https://dx.doi.org/10.30566/ijo-bs/2018.2.2.3

service on a larger scale. Obviously, in two studies - one by Alhussain and Drew (2010) and another by Alsenaidy and Ahmad (2012) - the issue of actual usage was a major problem when it came to distributing m- government services. Consequently, this study focuses on the adoption of m-Government by potential users and will be explained in this paper.

Moreover, adding to the obstacle of awareness in Jordan, Almutairi (2011) pinpointed that making use of m-government is additionally confronted by 'mobile authentication, mobile payment, location-aware applications, and the content display management.' It is clear that because of the newly born Internet services in the HKJ, the matter of m-government has not, so far, been researched in a good way. It is evident that this issue needs additional research to investigate the lack of actual adoption of the m- government. As such, Alhussain et al. (2010) and Alhussain and Drew (2012) indicated the importance of using biometric technology in m- government in Jordan. Their study asserted that raising the actual use of m- government requires providing biometric technology. This technology would affect the willingness of accepting the actual use of m- government among potential users as it gives benefits, such as trust and privacy, among potential users. When Alhussain and Drew (2012) used the grounded theory, they discovered that PIN does not give that high security because PIN numbers can be guessed. They suggested in an attempt to give high security services to people, the use of the biometric authentication method. As discussed before, there was general acceptance among various writers that although the up-surging numbers of Jordanian citizens who use mobile, Internet subscribing and who constitute potential users of m- government, the actual adopting of m- government is still below the expectations. The findings of this current study will be as follow: this research will adopt UTAUT2 variables in addition to perceived risk (PR) and innovativeness (INN) in order to appoint exactly the factors that change the behavioral intention of Saudi potential users in order to adopt m- government. Furthermore, this study will consider the fact that there are no actual users of m- government and consequently it will not consider the actual usage variable and it will not consider the habit variable as there is no habit if there is no actual use.

M-government involves a multidimensional construct (Rana et al., 2015; Nfuka and Rusu, 2011; Pina et al., 2009). Most governments around the globe utilize the latest information and communication technology (ICT) to improve service delivery to citizens by introducing m-government (Mofleh and Wanous, 2008; Choudrie and Dwivedi, 2005). Recently, there has been rapid progression in wireless technologies and extensive use of Internet-enabled mobile devices in many countries (Hassan et al., 2009). The recent development of mobile technologies allows knowledge workers to engage in various stages of their work without the constraints of time and location (Zhang and Jasimuddin, 2015; Zhang and Jasimuddin, 2008). This encourages governments to move naturally towards m-government as a next phase to improve the quality and delivery of their services (Al-khamayseh et al., 2006; Antovski and Gusev, 2005) due to mobile device penetration, and the emergence of mobile Internet and mobile applications and also services (Hassan et al., 2009). Heeks (2008) argues that it is critical to understand the predictors of smart or m-government services. According to him, only 15% of e-government projects are successful, which indicates that the failure rate of e-government projects is very high. The key problem associated with the high failure rate of e-government projects is the lack of awareness of the potential factors that may help citizens to adopt m-government services (Sang and Lee, 2009).

Jahanshahi et al. (2011) reported the main benefits of m-Government which are improving the quality of service, improving the effectiveness and efficiency of public services, increasing profitability, as well as increase the government/public sectors performance. In addition, Deep and Sahoo (2011) argued that m-Government extend the delivery of public services to those who are unable to drive, access and reach the public services (departments/agencies) and those who are in areas where wired internet and communications or ICT infrastructures services do not exist, or who simply prefer to use mobile phones. M-Government services, such as SMS based services, has been argued by Abu-Shanab(2015) to study the adoption issue using a model based on TAM to investigate factors that influencing intention to use the m-Government services, the study proposed six factors, directly affecting the citizens‟ adoption, the data analysis of 458 respondents showed that all the proposed factors: perceived usefulness, social influence, perceived ease of use, perceived responsiveness, and perceived compatibility, are significant, however perceived cost of services was not significant.

Similarly, another study based on UTAUT was in KSA by Babullah et al. (2015) trying to reveal the factors influence end-users towards using m-Government services, the descriptive analysis of 600 respondents showed that performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, and price value, are important factors influence the adoption of m-Government in Saudi Arabia.

Yong et al. (2014) discussed seven factors influence the intention of rural people to adopt mobile government, in China. All of the proposed factors were found to have a significant effect on intention to use, the study was based on 409 respondents, on a proposed model based on TAM: perceived long-term usefulness, perceived ease of use, social influence have significant, direct influences on adoption, while image, perceived near-term usefulness, benevolence and integrity have indirect effects. The findings showed that trust in m-Government is a result of both the social environment and technological ease of use. In India, an exploring study, to find out the adoption factors of mobile government services, by Mahmud et al. (2012) a developed model, adopted from TAM, DOI, TRA theories, furthermore , the model has been tested by quantitative based data, collected using a survey, of 100 respondents, furthermore, among the seven proposed factors, the analysis of the collected data, reflected that perceived ease of use, perceived security, perceived reliability, and relative advantage, were significant and influence the users‟ intention to use.

Abdelghaffar and Magdy (2012) argued that compatibility, perceived usefulness, social influence awareness, and face-to-face interactions significantly influence citizens' intention to use m-Government, in Egypt, the authors proposed a model, adopted from UTAUT, TAM theories, tested on a data collected from questionnaire based, of total 100 students,

https://dx.doi.org/10.30566/ijo-bs/2018.2.2.3

from universities in Egypt. Another research, where Althunibat et al. (2011) tried to explore the adoption factors of m-Government services in Malaysia, a model designed based on TAM, TRA, UTAUT and trust model, the data of survey-based study was collected from different groups of Malaysians. The analysis of 566 respondents showed that all the factors proposed: social influence, services quality, perceived usefulness, perceived risk, cost of service, perceived compatibility, trust in government, trust in technology and services quality are significant towards behavior intention to use the m-Government services.

Researchers indicate that while mobile government is a concept in embryonic stage and management of mobile based governance process requires understanding of a wide variety of factors affecting the same. Omar Al-Hujran (2012) made a quantitative study to enumerate the success factors in the implementation of m-Governance services in Jordon. The analysis indicated trust, public awareness, cost, infrastructural constraints, and the lack of an enabling legal framework as the main factors impeding the complete realization of the m-Governance services. Thunibat et al. (2011) conducted a exploratory study in Malaysia to investigate the potential needs of users of m-Government services and further find out various factors that have the potential to lead to the integration of the services provided with users' everyday practices. Their results indicated a high level of awareness of mobile government services but on the contrary a very low percentage of usage. The respondents were found to be stating problems relating to security, cost and quality of services, access speed, interface design and information updating.

On the other way, in order to measure citizen satisfaction, there must be the inclusion of the quality factor to provide important information regarding the quality of services (Wilkin and Hewett, 1999). This makes e-government and e-service quality a key to the success or failure of online organizations and institutions (Alanazi and Basri, 2010; Kim, Im and Park, 2005). Research on e-government service quality is still limited and at an early stage in its development (Yao and Zhao, 2010; Kasubiene and Vanagas, 2007).

A general definition of service quality by Parasuraman, Zeithaml and Berry (1985) is the direction and level of consistency between customers' perceptions and expectations. Service quality can also be defined as the difference between customers' expectations for service performance prior to a service encounter and their perception of the service received (Connolly and Ingle, 2006). Perceived service quality is, therefore, the gap between perceptions and expectations of a customer. In an e-government environment, quality can be achieved when citizens' expectations are met regarding the services delivered (Saha, 2008). Due to rapid development in technology, citizens' expectation of good quality e-government services is also increasing (Jinmei, 2011). This is supported by Kasubiene and Vanagas (2007) who state that in general, online customers expect higher levels of service quality compared to offline customers. In order to measure citizen satisfaction with e-government services or any other e-services quality factors are considered. Quality of e-government information services can be compromised if security, trust, communication, site aesthetics, design, and access are not addressed resulting in citizens being hesitant to use e-government (Kaisara and Pather, 2009).

Citizen satisfaction is the core measurement of m-government service quality (Jinmei, 2011). M-government systems should provide services conveniently, sending and receiving information even when physical offices are not open. This is achieved when citizen satisfaction index (CSI) of e-government will assess the service performance from an external 12 publicity angle which reflects the overall quality and operational level of m-government and makes e-government user-centric (Hao, 2011; Horan, Abhichandani and Rayalu, 2006; Scott et al., 2005; Centre for Digital Government, 2005). Citizens are likely to trust m-Government services which satisfy them, are citizen centric and address their needs timeously (Kasubiene and Vanagas, 2007). Citizen satisfaction leads to trust in e-government and is when citizens prefer to use digital services rather than any other form such as mail or counter (Kasubiene and Vanagas, 2007). Citizens who are satisfied with m-government information services will recommend these services to others and have the confidence to continue using the same service in the future (Hao, 2011). Understanding the quality dimensions of m-government services improves citizen satisfaction and trust in e-government services and enables government organizations to work towards improving the areas of their e-government that are not working properly.

Hence, these problems need to be researched to reveal the critical factors influencing citizen satisfaction to use or accept m-government services in the HKJ. In the Middle East, especially Jordan, the mobile services such as m-payment and m-banking are available. But the adoption of m-government or smart government is not taken seriously by academicians and practitioners. By reviewing the existing literature relating to m-government adoption factors and citizen satisfaction, this paper is attempting to bridge the gap and propose a conceptual framework arguing the potential factors influencing citizens' adoption and acceptance of the m-Government services in the Hashemite Kingdom of Jordan.

3. METHODOLOGY

3.1 Proposed Framework

Based on literature, there is a scope of research to develop conceptual research on mobile government service quality and its impact on Jordanian citizen satisfaction. The following Fig. 1 indicates the research model based on the gap of literature:

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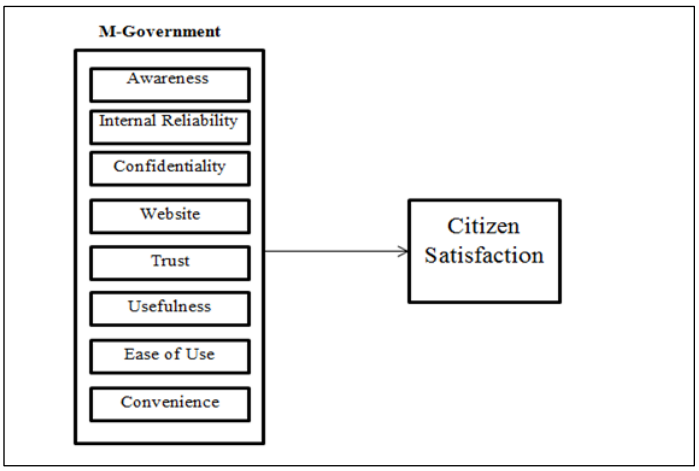

Fig. 1. Research conceptual model.

3.2 Hypotheses

Following hypotheses are raised based on the stated conceptual research model:

a. Awareness has influence on citizen satisfaction
b. Internal reliability has influence on citizen satisfaction
c. Confidentiality has influence on citizen satisfaction
d. Website has influence on citizen satisfaction
e. Trust has influence on citizen satisfaction
f. Usefulness has influence on citizen satisfaction
g. Ease of use has influence on citizen satisfaction
h. Convenience has influence on citizen satisfaction

4. CONCLUSION

It is to be noted that technology is advancing very fast, and governments around the globe, particularly in the HKJ, are managing to utilize the latest devices and technologies to provide their services to the public. For example, since smartphone penetration is high, it is critical to know which factors will encourage the public to use m-government services via smartphones. Accordingly, drawing on the existing literature, this article explored the relevant issues surrounding m-government adoption and its impact on citizen satisfaction. This paper will help in understanding the key issues surrounding mobile applications that may assist in the successful operation of m-government. The article identifies the determinants m-Government adoption to avoid failure in the implementation of smart government. The researchers reviewed the existing literature to identify the underlying key variables. A framework was developed to highlight the key factors that influence the successful implementation of m-government services. This paper provides a conceptual framework relating to the successful implementation of m-government and its impact on HKJ citizen satisfaction.

REFERENCES

Abanumy, A. and Mayhew, P., 2005. *M-government implications for e-government in developing countries: The case of Saudi Arabia*. EURO mGOV, 1-6.

Abdelghaffar, H. and Magdy, Y., 2012. The adoption of mobile government services in developing countries: The case of Egypt. *International Journal of Information, 2(4),* 333-341.

Abu-Shanab, E., 2015. Major factors influencing the adoption of m-government in Jordan. *Electronic Government an International Journal, 11(4),* pp. 223-240

Ahmad, T., Ansari, A. A., Akhtar, A. and Parveen, S., 2014. Current Review of ICT and M-Government Services in Saudi Arabia. *International Journal of Computer Engineering and Applications, 7(2)* August 14.

Al- khamayseh, S., Lawrence, E. and Zmijewska, A., 2006. *Towards understanding success factors in interactive mobile government*. Proceedings of Euro mGOV 2006: The Second European Conference on Mobile Government, Brighton,

Alanezi, M. A. and Basri, A. K. S. 2010. A proposed instrument dimensions for measuring e-government service quality. International journal of u- and e- service, *science and technology, 3(4*): 1-18.

Al-Busaidi, H. A. S., 2012. A model of intention to use mobile government services (Doctoral dissertation, Victoria University).

Al-Hadidi A., Rezgui Y., 2010. *Adoption and Diffusion of m-Government: Challenges and Future Directions for Research*. In: Camarinha-Matos L.M., Boucher X., Afsarmanesh H. (eds) Collaborative Networks for a Sustainable World. PRO-VE 2010. IFIP Advances in Information and Communication Technology, vol 336. Springer, Berlin, Heidelberg

Al-Hujran, O., 2012. Toward The Utilization Of M-Government Services In Developing Countries: A Qualitative Investigation, *International Journal of Business and Social Science, 3 (5*), pp. 155-160.

Alhussain, T. O. M. and Drew, S., 2010. *Towards Secure M-Government Applications: A survey study in the Kingdom of Saudi Arabia*. In International Conference on Intelligent Network and Computing (ICINC 2010). IEEE.

https://dx.doi.org/10.30566/ijo-bs/2018.2.2.3

Alhussain, T. O. M., Drew, S. and Von Hellens, L. A., 2010. *Qualitative Study on Implementing Biometric Technology in M-Government Security: a Grounded Theory Approach*. In 5th International Conference on Qualitative Research in IT & IT in Qualitative Research (QuallT2010).QUT, Griffith University and ANU.

Al-Khalifa, H. S., 2011. *Development of mobile government websites: a functional design approach*. In Proceedings of the 13th International Conference on Information Integration and Web-based Applications and Services (pp.455-458).

Almuraqab, N., Jasimuddin, S. M. & Mansoor, W., 2017.Mobile government (mGovernment) adoption factors in the UAE: A conceptual framework based on UTAUT, International Journal of Engineering Technology*, Management and Applied Sciences, 5(3),* pp. 14-19.

Almutairi, M. S., 2011. *M-government: Challenges and key success factors – Saudi Arabia case study*. In M. Almutairi, and L. A. Mohammed (Eds.), Cases on ICT Utilization, Practice and Solutions: Tools for Managing Day-to-Day Issues, IGI Global, Hershey, PA, USA, pp. 78-96.

Aloudat, A., Michael, K., Chen, X. and Al-Debei, M. M, 2014. Social acceptance of location-based mobile government services for emergency management. *Telematics and Informatics, 31(1)*, 153-171.

Alsenaidy, A. and Ahmad, T., 2012.*A review of current state m-government in Saudi Arabia*. Department of Biochemistry, King Saudi University.

Al-Solbi, A. and Mayhew, P. J., 2005.*Measuring e-readiness assessment in saudi organisations preliminary results from a survey study From E-government to Mgovernment. Mobile Government Consortium* International LLC, Brighton, UK, 467- 475.

Althunibat, A., Zain, N. A. M. and Ashaari, N. S., 2011. Modelling the factors that influence mobile government services acceptance. *African Journal of Business Management, 5(34),* 13030-13043.

Antovski, L. and Gusev, M., 2005. *M-Government Framework. Proceeding of Euro mGOV 2005*: The First European Conference on Mobile Government, Brighton, UK.

Babullah, A., Dwivedi, Y., Williams, M., 2015. *Saudi Citizens" Perceptions on Mobile Government (mGov) Adoption Factors*. UK Academy for information systems conference proceedings 2015, Association for information systems AIS electronic library (AISeL)

Choudrie, J. and Dwivedi, Y., 2005. *A Survey of Citizens Adoption and Awareness of E-Government Initiatives, the 'Government Gateway': A United Kingdom Perspective. E-Government* Workshop Brunel University, London.

Connolly, R. and Ingle, S. 2006. *S-E-Qual and website service and quality in Ireland:an empirical study*, BAI International conference on business and information, singapore, 12-14 july.

Davis, F., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13(3),* pp. 319-339

Deep, M. and Sahoo, G., 2011. M-governance for better G2C service, *Journal of Internet Banking and Commerce, 16(1),* pp.1–5.

Dwivedi, Y. K. and Irani, Z., 2009. Understanding the adopters and non-adopters of broadband. *Communications of the ACM, 52(1),* 122-125.

Dwivedi, Y. K., Kapoor, K. K., Williams, M. D., and Williams, J., 2013. RFID systems in libraries: An empirical examination of factors affecting system use and user satisfaction. *International Journal of Information Management, 33(2)*, 367-377.

Ghyasi, F. and Kushchu, I., 2004. *M-Government: Cases of developing countries. Proceedings of the 4th European conference on E-Government*, Castle Dublin, Ireland

Hao, S. 2011. *From customer satisfaction index to service quality. International Conference on E-Business and E-Government (ICEE*), 2011. IEEE Publication.

Hassan, M., Jaber, T. and Hamdan, Z., 2009. *Adaptive Mobile- Government Framework. Proceedings of International Conference on Administrative Development*: Towards Excellence in Public Sector Performance, Riyadh, Saudi Arabia.

Heeks, R., 2008. *E-government for Development, Institute for Development Policy and Management*, University of Manchester, Manchester.

Horan, A.T. and Abhichandani, T. 2006. Evaluating user satisfaction in an e-government initiative: results of structural equation modelling and focus group discussions. *Journal of information technology management, 17(4):* 33-44.

Hung, S. Y., Chang, C. M. and Kuo, S. R., 2013. User acceptance of mobile e-government services: An empirical study. *Government Information Quarterly, 30(1*), 33-44.

Islam, Z, Jasimuddin, S.M., Hasan, A., 2015 Organizational Culture, Structure, Technology Infrastructure and Knowledge Sharing: Empirical evidence from MNCs based in Malaysia, VINE: *The Journal of Information and Knowledge Systems.45(1*), pp. 67-88.

Jahanshahi, A., Khaksar, S., Yaghoobi, N. and Nawaser, K., 2011. Comprehensive model of mobile government in Iran, *Indian Journal of Science and Technology, 4(9)*, pp.1188–1197.

Jasimuddin, S. M. & Zhang Z., 2009. The symbiosis mechanism for effective knowledge transfer, *Journal of the Operational Research Society, 60(5),* pp. 706-716.

Jasimuddin, S. M. & Zhang Z., 2011. Storing transferred knowledge and transferring stored knowledge, *Information Systems Management 28(1),* pp. 84-94.

Jasimuddin, S. M., Connell, N., & Klein, J. H., 2012. Knowledge transfer frameworks: An extension incorporating knowledge repositories and knowledge administration. *Information Systems Journal, 22(3),* pp. 195-209.

Jinmei, H. 2011. *Quality evaluation of e-government public service. International Conference on Management and Service Science (MASS*), 2011. IEEE publication.

Kaisara, G. and Pather, S. 2009. *E-government in South Africa: e-service quality access and adoption factors*. Proceedings of the 11th annual conference on world wide web applications,2-4 September 2009 Port Elizabeth South Africa.

Kaliannan, M., Awang, H., and Raman, M., 2007. *Technology adoption in the public sector: An exploratory study of e-government in Malaysia*. Proceedings of the 1st International Conference on Theory and Practice of Electronic Governance, ACM International Conference Proceeding Series, 232, pp. 221-224.

Kasubiene, L. and Vanagas, P. 2007. Assumptions of e-government services quality evaluation. Engineering economics, 5(55): 1392-2785.

Kim, T. M., Im, K. H. and Park, S. C. 2005. *Intelligent measuring and improving model for customer satisfaction level in e-government. In*: Wimmer M. A. et al (Eds). Proceedings of egov 2005. LNCS 3591, 38-48.

https://dx.doi.org/10.30566/ijo-bs/2018.2.2.3

Kushchu, I. and, Kuscu, H., 2003. *From E-government to M-government: Facing the Inevitable? Proceeding of European Conference on E-Government (ECEG 2003*), Trinity College, Dublin.

Madden, G., Bohlin, E., Oniki, H. and Tran, T., 2013. Potential demand for m-government services in Japan. *Applied Economics Letters, 20(8),* 732-736.

Mahmud, S., Norm A., Dwivedi Y., 2012. Examining Adoption Behavior of Mobile Government. *The Journal of Computer Information Systems, 53(2*), p.39

Mofleh, S., and Wanous, M., 2008. Understanding Factors Influencing Citizens' Adoption of e-Government Services in the Developing World: Jordan as a Case Study. *Journal of Computer Science, 7(2),* pp.1-11

Nfuka, N. and Rusu, L., 2011. The effect of critical success factors on IT governance performance. *Industrial Management & data systems, 111(9),* pp. 1418-1448

Parasuraman, A., Zeithaml, V. A. and Berry, L. L 1985. A conceptual model of service quality and its implications for future research. *Journal of marketing, 49(4*): 41-50.

Pina, V. Torres, L. and Royo, S., 2009. E-government evolution in EU local government: a comparative perspective. *Online information review, 33(6),* pp. 1137-1168.

Rana N., Dwivedi Y., Lal B., 2015. *Factors Influencing Citizen's Adoption of an E-Government System: Validation of the Decomposed Theory of Planned Behavior*. UK Academy for Information Systems Conference Proceedings 2015. pp. 14

Saha, P. 2008. *Government e-service delivery identification of success factors from citizens' perspectives*. Doctoral Thesis, Luleå University of Technology

Sang, S., and Lee, J., 2009. *A conceptual model of e-government acceptance in public sector*. Proceedings of the 3rd International Conference on Digital Society

Scott, M., Golden, W. and Haughes, N. 2005. *The implementation of citizen-centred e-government: A stakeholder viewpoint*. Available: http://www.nuigalway.ie/cisc/ papers/ UK.

Wilkin, C. and Hewett, B. 1999. *Quality in a respecification of Delone and McLean's IS success model, managing it resources in organizations in the next millennium*, IRMA international conference, USA.

Yao, J., Lin, Y. and Zhao, P. 2010. E-government evaluation based on citizen satisfaction and its implementation. International conference on e-business and e-government, IEEE.

Yfantis, V., Vassilopoulou, K., Pateli, A. and Usoro, A., 2013. The Influential Factors of MGovernment's Adoption in the Developing Countries. *In Mobile Web Information* Systems, pp. 157-171. Springer Berlin Heidelberg.

Yong, L., Hongxiu, B., Vassilis, K., Jorge G., Simo H., and Feng H., 2014. An empirical investigation of mobile government adoption in rural China: A case study in Zhejiang province. *Government Information Quarterly 31*, pp. 432-442

Ziemba, E., Papaj, T. and Descours, D., 2014. *Assessing the quality of e-government portals* – the Polish experience, in: Proceedings of the 2014 Federated Conference on Computer Science and Information Systems, September 7-10, 2014.

https://dx.doi.org/10.30566/ijo-bs/2018.2.2.3