E-Government Adoption Success Factors for Developing Countries

Anas Al-Aghbari[1], Othman Ibrahim[1], Faisal Saeed[1,2]

[1]Department of Computer Science, Faculty of Computing, Universiti Teknologi Malaysia, Malaysia

[2] Information Technology Department, Sanhan Community College, Yemen

*Corresponding Author: anasmma1981@hotmail.com

Abstract

Adoption has a key role in a successful implementation of E-government initiatives in the context of developing nations. Until the current times, little research has been done to explore determinant factors of the adoption of E-government services among developing countries citizens. It is pertinent to determine the factors influencing the e-government services adoption and the government should understand such factors. Therefore, for an E-government to reach its full potential there is a need to decrease the gap between what is offered and what is utilized for fruitful government investment. So, this paper reviewed the studies of E-government adoption in developing countries. The aim of this study is to come up with the important success factors that influence the citizens in developing countries. There are many studies mentioned that privacy, security, trust, awareness is very important factors that affect E-government in developing countries.

Keywords: E-government   Adoption;   Success   Factors   ;   Developing   Countries

1. Introduction

The success of E-government project is contingent upon users' willingness to adopt it. However, prior research has paid much attention to the citizens' adoption [1-6]. E-government success depends on the adoption of its system and its actual use by the citizens of the country [7]. Partaking of E-government benefits is among the primary goals of governments. In fact, benefits provided by E-government rather than traditional services have urged governments to invest in E-government service implementation. Following implementation, several governments face the problem of benefits falling short of their expectations, and hence, most of them fail. It can therefore be concluded that E-government initiatives success depends on support from government as well as its adoption by citizens[8]. Owing to the fact that it is significant for technology users to accept the technology first [9] therefore, this paper highlighted the success factors that affect the E-government adoption in developing countries.

2. Methodology

This paper started by reviewing the studies on E-government adoption using the following keywords (E-government adoption, E-government services and E-government to citizens). The review focused on the IEEE and Scopus database. There are many papers discussed E-government adoption (77 papers in Scopus and 29 in IEEE). After reviewing these papers, the authors found the main 11 papers explained the E-government adoption in developing countries.

3. E-government Adoption

The adoption and use of E-government services remain restricted in most countries due to being guided largely by supply side factors [10-11]. According to Carter & Belanger [2], it is pertinent for the government to keep in mind that E-government success depends on the supplier side as well as the demand side (inclination to adopt online service).

Adoption is divided by Daqing [12] into adoption of information systems (IS) and usage. The adoption of IS is related to the decision to implement information systems and the post-adoption research is related to the ongoing use and the process of diffusion.

E-government adoption has been referred to by Warkentin [13] as the intention of the citizen to participate in government activity via online, and to receive information and services from the government. On the other hand, other authors have different descriptions – Carter & Belanger [2] described it as the intent to use, while Balestrini et al.[14] defined it as the willingness to use E-government services. Although the phrases used to describe E-government are different, they have the same meaning behind them which is the simple decision to use or not to use E-government services. To this end, the next E-government challenge is to make the citizen use the services frequently as using E-government once a year would not be deemed as a meaningful use of its many applications [15]. And for adoption, direct technology experience is required following technology acceptance [17].

Warkentin [13] described E-government adoption as the citizen intention to participate in government activity electronically to receive information and request services from the government. According to [2], it is intent to use, while [14] measure it as willingness to use E-government services. Altogether it can be stated as a simple decision to use, or not to use, E-government services. The next level of challenge of E-government is to make it frequently used by the citizen. Adoption comes after "direct experience with the technology and after an individual has decided to accept the technology [16-17].

So, the authors can conclude that E-government adoption is the decision to use E-government, use E-government and continue using E-government.

4. E-government adoption challenges in developing countries

E-government has been developed and implemented for a considerable period of time in developed countries, while implemented and developed in most developing countries is still in its infancy. Therefore, governments, businesses and citizens in developed countries have many benefits from using E-government services.

Moreover, in developed nations, E-government has made considerable developments in light of its implementation but in developing ones, it is lagging behind. According to several researchers, although governments of developing nations are convinced of the benefits of E-government, implementation challenges still exist and these include, privacy, security, trust, culture, computer and information literacy and IT infrastructure. Other specific challenges that prevent e-government implementation include authentication, digital divide and shortage of funding [22].

Although majority of developed countries are enjoying the benefits of E-government, there is still a significant room for improvement on a global scale. Some studies findings are consistent with other studies in that they found access to E-government services, trust, security concerns and digital divide as the main challenges faced in e-government implementation [18-21]. But a different take was provided by Ahmad [8] who revealed that the oversight of the needs and requirements of citizens is one of the reasons for low-level of e-government services adoption.

Thus far, E-government's continuous expansion from North America to Asian countries are met with major challenges but taking benefit from the experiences of developed and developing nations, taking note of their successes and failures, and adapting such information to various environments is the basis of the E-government growth [1, 23].

In the past years, technology system has been expansively studies but the successful adoption of IT has largely been ignored [24]. E-government success hinges on the way governments encourage citizens to use online public services [12]. It is pertinent for decision makers to understand the factors that would boost citizens' use of e-delivery channels. However, to date, studies dedicated to E-government services have been confined to developed rather than developing nations, particularly the Arab countries [25].

In this regard, adoption is a crucial aspect for E-government initiatives success in developing nations [26] but as stated, E-government services adoption by citizens in this part of the world has largely been ignored [17][27].

5. Conclusion

This paper reviewed the studies of E-government in developing countries to come with the success factors that influence the citizens to use E-government services. The main finding is that we found there are important factors should be considered for E-government adoption in developing countries, for instance, security, privacy, trust and awareness.

References

1. worldbank, *World Development Report 2002.* World Development Reports, 2002.
2. Carter, L. and F. Bélanger, *The utilization of e-government services: citizen trust, innovation and acceptance factors*.* Information Systems Journal, 2005. **15**(1): p. 5-25.
3. Reddick, C.G., *Citizen interaction with e-government: From the streets to servers?* Government Information Quarterly, 2005. **22**(1): p. 38-57.
4. Tung, L.L. and O. Rieck, *Adoption of electronic government services among business organizations in Singapore.* The Journal of Strategic Information Systems, 2005. **14**(4): p. 417-440.
5. Lee, J., H.J. Kim, and M.J. Ahn, *The willingness of e-Government service adoption by business users: The role of offline service quality and trust in technology.* Government Information Quarterly, 2011. **28**(2): p. 222-230.
6. Zhan, Y., P. Wang, and S. Xia. *Exploring the drivers for ICT adoption in government organization in China.* in *Business Intelligence and Financial Engineering (BIFE), 2011 Fourth International Conference on.* 2011: IEEE.
7. Khanyako, E. and G. Maiga. *An information security model for e-government services adoption in Uganda.* in *IST-Africa Conference and Exhibition (IST-Africa), 2013.* 2013: IEEE.
8. Ahmad, M.O.M., Jouni Oivo, Markku, *Factors affecting e-government adoption in Pakistan: a citizen's perspective.* Transforming Government: People, Process and Policy, 2013. **7**(2): p. 225-239.
9. Al-Haderi, S.M.S., *The Effect of Self-Efficacy in the Acceptance of Information Technology in the Public Sector.* International Journal of Business and Social Science, 2013. **4**.
10. Verdegem, P. and G. Verleye, *User-centered E-Government in practice: A comprehensive model for measuring user satisfaction.* Government Information Quarterly, 2009. **26**(3): p. 487-497.
11. Kolsaker, A. and L. Lee-Kelley, *Citizens' attitudes towards e-government and e-governance: a UK study.* International Journal of Public Sector Management, 2008. **21**(7): p. 723-738.
12. Daqing, Z. *Chinese E-government systems Adoption: from Institutional theory.* in *E-Business and E-Government (ICEE), 2010 International Conference on.* 2010: IEEE.
13. Warkentin, M., et al., *Encouraging citizen adoption of e-government by building trust.* Electronic markets, 2002. **12**(3): p. 157-162.
14. Gilbert, D., P. Balestrini, and D. Littleboy, *Barriers and benefits in the adoption of e-government.* International Journal of Public Sector Management, 2004. **17**(4): p. 286-301.
15. Safeena, R. and A. Kammani, *E-Government Adoption: A Conceptual Demarcation*, in *Advances in Computing and Information Technology*. 2013, Springer. p. 67-76.
16. Venkatesh, V., et al., *Individual reactions to new technologies in the workplace: the role of gender as a psychological construct.* Journal of Applied Social Psychology, 2004. **34**(3): p. 445-467.
17. AlAwadhi, S. and A. Morris. *The Use of the UTAUT Model in the Adoption of E-government Services in Kuwait.* in *Hawaii International Conference on System Sciences, Proceedings of the 41st Annual.* 2008: IEEE.
18. Harby, F., R. Qahwaji, and M. Kamala, *End-Users' Acceptance of Biometrics Authentication to Secure E-Commerce within the Context of Saudi Culture: Applying the UTAUT Model.* Globalization, Technology Diffusion and Gender Disparity: Social Impacts of ICTs, 2012: p. 225-246.
19. UN, *E-Government for the People*. 2012.

20. Venkatesh, V., T.A. Sykes, and X. Zhang. *'Just what the doctor ordered': a revised UTAUT for EMR system adoption and use by doctors*. in *System Sciences (HICSS), 2011 44th Hawaii International Conference on*. 2011: IEEE.
21. Schaupp, L.C., L. Carter, and M.E. McBride, *E-file adoption: A study of US taxpayers' intentions.* Computers in Human Behavior, 2010. **26**(4): p. 636-644.
22. Alateyah, S., R.M. Crowder, and G.B. Wills. *Citizen Adoption of E-government services*. in *Information Society (i-Society), 2012 International Conference on*. 2012: IEEE.
23. AlKhatib, H., *E-government systems success and user acceptance in developing countries: The role of perceived support quality.* 2013.
24. Zailani, S. and R. Abd Salam. *The adoption of technology system in the Malaysian public sector*. in *Information and Communication Technologies, 2006. ICTTA'06. 2nd*. 2006: IEEE.
25. Titah, R. and H. Barki, *E-government adoption and acceptance: A literature review.* International Journal of Electronic Government Research (IJEGR), 2006. **2**(3): p. 23-57.
26. Yonazi, J., H. Sol, and A. Boonstra. *Exploring issues underlying citizen adoption of egovernment initiatives in developing countries: The case of tanzania*. in *Proceedings of the 10th European Conference on E-Government: National Center for Taxation Studies University of Limerick, Ireland*. 2010.
27. Alateyah, S.A., R.M. Crowder, and G.B. Wills. *Factors influencing citizen intention to adopt egovernment in Saudi Arabia*. in *Information Society (i-Society), 2013 International Conference on*. 2013: IEEE.