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The Challenges of E-government Implementation in Developing Countries

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ABSTRACT

E-government has great potential to improve the way government works to provide public services and increase stakeholder involvement in public services. However, there are still many challenges in implementing e-government in many developing countries around the world. The purpose of this literature review is to summarize the challenges of e-government implementation in developing countries. The result show that e-government implementation in developing countries faced complex problems as following lack of ICT infrastructure, lack of security and privacy of information, lack of proper planning, public awareness, cultural resistance, institutional and political, and lack of budgeting. Therefore, in order to get benefit from e-government implementation, the government needs to overcome these challenges.

1. Introduction

The rapid growth in internet usage and the high development of e-commerce in the private sector has provided an increasingly encouragement to the public sector to serve citizens electronically, this is often known as e-government initiatives (Ho, 2002). This initiative aims to provide services and to empower citizens and communities through the use of information technology. The fact is that the internet has had more technological breakthroughs in the provision of public services. This has stimulated transformation in the structure and operation of the government. This means, one of the fundamental goals of implementing an e-government system is to change the work culture and mechanism for providing public services from conventional to modern. With the development of technology, the government began to adapt to renew the implementation of public services.

The term "e-government" has a broad definition. Not only limited to the use of internet-based applications in government but also includes all uses of information and communication technology (ICT) including all ICT platforms such as the use of the internet, telephone, fax, and cellular technology to help the government provide public services and information. Most researchers divide e-government into several categories. Some of these include relations between governments and business entities (government-to-business or G2B), between and within government agencies (government-to-government or G2G), between government agencies and their employees (government-to-government-employee or G2E), between government agencies and citizens (government-to-citizens or G2C), and between citizens and their government (C2G).

E-government has great potential to improve the way government works in order to provide public services and increase stakeholder involvement in public services. By providing public services through e-government systems, there are several benefits such as increasing the efficiency of public administration, increasing transparency, increasing the number of people who can access public services, increasing public trust in the government, open government capabilities, improving ethical behavior and professionalism, increasing trust , and increasing social values and welfare, and reducing corruption (Furuholt and Wahid, 2008; Twizeyimana

and Andersson, 2019; Waller and Genius, 2015). Therefore, by considering the benefits of e-government, countries in the world make significant investments in the ICT public sector.

Through the implementation of e-government, it is expected that the quality and effectiveness of public services will be better. Although it is clear that ICTs can improve the efficiency, effectiveness and delivery of government public services, there are still many challenges in implementing e-government in many developing countries around the world. In general, E-Government projects and programs in developing countries have failed to achieve many expected goals and results, and have failed to fully fall (Waller and Genius, 2015).

The failure of the implementation of e-government in developing countries has been discussed in several research. High e-government failure rates in developing countries have been identified with an estimate that 85% of e-government implementations have failed to achieve their primary goals, while 35% are classified as total failures and 50% are categorized as partial failure (Heeks, 2003). Moreover, total failure occurs when initiatives are never implemented or implemented but are immediately abandoned, while partial failures occur when the main objectives for e-government initiatives are not achieved and / or there are significant unwanted results (Waller and Genius, 2015). In addition, only 15% of e-government implementations observed were successfully developed and were able to achieve predetermined goals. Based on this analytical review, the process of implementing e-government in developing countries is still being considered at the initial level. The reality on the ground is that e-government initiatives in many developing countries are complex and multidimensional and suffer various challenges and obstacles in their implementation and management.

Nowadays, the implementation of e-government initiatives has become one of the main goals in several countries. However, implementing e-government is not an easy task. The e-government initiative has faced various problems in its implementation and as such this has not been fully implemented in developing countries. Therefore, this paper discusses the challenges of implementing e-government in developing countries, which are usually carried out by only adopting the experience of developed countries. The remains of the paper are structured as follows: section 2 describes research method, section 3 explains the findings, then, section 4 concludes this paper.

2. Research Method

This type of paper is study literature, in which used secondary data in the form of books, journals, articles, and other documents that can support the completeness of the data needed.

3. Results and discussion

The findings highlighted several issues about the challenges of e-government implementation in developing countries:

3.1 Lack of ICT infrastructure

Many citizens are unable to access government portals. Those who do have access to electricity often suffer from lack of access to technologies such as a PC, a slate/tablet or notebook computer or even smart phones to access e-Government services (Waller and Genius, 2015). ICT infrastructure is indeed a barrier to e-government in Jamaica. This may be a surprising statement given the island's advanced telecommunications sector and the wide availability and use of cellphones. Jamaica is more advanced than many other developing countries. But, as in many other developing countries, much of this infrastructure is concentrated in urban areas. In many villages, residents have not benefited from some of the most basic ICT infrastructure. In many areas, electricity access is not stable and the internet is not available. Thus, many citizens cannot access government information or conduct government related transactions digitally. However, those who have access to technology sometimes do not want to use access because of trust issues, as well as social and financial barriers.

Problems regarding infrastructure also happen in Nigeria (Okunola et al., 2017). This is because they do not have access to land-based computers or because the access they have is significantly affected by disjointed electricity supplies. This shows that Nigeria needs to prioritize investment in infrastructure (and power supply) infrastructure in rural areas, perhaps through increasing the quality of cybercafes, which while not having some speed of access at home, must benefit from the availability of support in working with computing technology. Without such developments, e-government services have the potential to enlarge existing social inequalities. More specifically, it is suggested that in investing and developing their e-government policies and infrastructure, it is important that there is further consideration of the development of cellular-based e-government services. Currently users typically access services that are designed to be accessed via landline computers through cellular technology.

3.2 Lack of security and privacy of information

Research by Waller and Genius (2015) in Jamaica explain that collecting and managing information about citizens (name, address, work history, tax information or medical records) has always been the main function of the government. In general, citizens demand that government services are safe, secure, and their privacy is protected. Such privacy and security issues are always associated with the use of ICTs and problems around the government and government. The antecedents of privacy and security generally concern ICT-related discourses in many different spaces and places around the world.

This also happens in Oman. The result of study by Sarrayrih and Sriram (2015) describe that basic fears about data security, personal information security and other resource security need to be removed from the public mind. ICT and IT staff members need to be trained to meet local requirements. Competent human resources are very important for e-government since then they indicate the readiness of citizens to conduct transactions electronically and the capacity and skills of those involved service provision (Faroqi and Siddiquee, 2011). More employment opportunities need to be created to provide optimal service to the public. The main concern for implementing e-government is a security issue, because it is a costly affair, proper care and steps need to be taken to ensure high data security.

3.3 Lack of proper planning

The research conducted by Sarrayrih and Sriram (2015) in Oman explained that the government had invested enough in infrastructure development. The main challenge facing every government in implementing e-government is proper planning and management. The Sultanate of Oman has planned and developed the vision of e-Oman, along with various government e-portals developed and managed by ICT. The complexity and development of technology makes various developing countries face uncertainty in providing various e-governance services. The government needs to develop a system that reflects the requirements and values of stakeholders.

3.4 Public awareness

Based on research in Mauritian (Lallmahomed et al., 2017), if the government wants to increase the use of their services, appropriate marketing and communication mechanisms must be carried out. Simply relying on having the necessary infrastructure will not contribute to the adoption of e-government services. Then, if citizens are not aware of available e-government services, they will not be able to determine the value that these services will provide (Lallmahomed et al., 2017). So that most of them tend to reject e-government services. In addition, communities need to be trained to use ICT resources, and at the same time they must be motivated and educated with regard to the importance of using e-government techniques (Sarrayrih and Sriram, 2015).

3.5 Cultural resistance

Conservative attitudes towards innovation and change can be a barrier to the adoption and success of cross-border e-government information systems. This cultural resistance has been shown to hinder the adoption and implementation of government-to-government information systems.

In addition, Lallmahomed et al. (2017) state that the use of the Mauritius e-government website among populations is very limited. Therefore, very few people use e-government websites and those who complete online transactions comment on the difficulty of using the website. Citizens may be reluctant to adopt e-government services if the website is too complicated to use, wrong design principles are used and the information provided is not up-to-date. This in turn can cause resistance to change. This means that the wrong website design, the difficulty of using a website, the lack of quality systems, and the quality of information contribute to the refusal to switch to using online services

3.6 Institutional and political

Institutional and political barriers are one of the main factors that explain the lack of e-government adoption (Savoldelli A. et al., 2014). Moreover, the decision-making process that is still unstructured, unreliable, and does not fully utilize available evidence disrupts the perception of public value and citizen trust in the government, which contributes to the low level of e-government adoption.

3.7 Lack of budgeting

The problem begins with poor financial planning down to the implementation which does not meet the real requirements. Moreover, some of the successful e-government projects were financed by external donors. Due to the termination of donor funding, many e-government projects have been discontinued midway through. In addition, many senior managers in are frustrated by the lack of funds for e-government initiatives at the local authority level (Weerakkody, et al., 2009).

4. Conclusion

The findings conclude that there are challenges of e-government implementation: lack of ICT infrastructure, lack of security and privacy of information, lack of proper planning, public awareness, cultural resistance, institutional and political, and lack of budgeting. These challenges already have been identified by many e-government initiatives in developing countries. Therefore, the government needs to deal with these problems to get benefit from e-government implementation.

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