An Empirical Investigation of Factors that Influence Government Apps Usage/Adoption

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ABSTRACT

Governments worldwide are using technology to provide effective and efficient services; and to improve the lives of all citizens. To date, there are few studies relating to unstructured text data that investigate the factors that influence government and mobile apps' usage and adoption. To address this issue, we conducted our research and developed the Natural Language Processing Model to sequentially analyze our unstructured text data, which we collected from MetricsCat's website. Our results from text analysis show that some of the most influential factors in why users adopt and use government apps are the quality of the app, the app's usefulness, whether or not the app is informative, and whether or not the app remains up to date. Our research contains practical and research implications for key government officials and designers of mobile apps.

KEYWORDS

Application, Apps, Good Apps, Government, Great Apps, Store

INTRODUCTION

As in the business industry, advancement in Information and Communication Technology (ICT) has revolutionized how governments deliver services to the citizenry. Governmental bodies have also adopted various modes of electronic platforms to build internal efficiency, deliver services and build relationships with citizens, businesses and other/inter-government bodies. This government use of technology is known as electronic government (e-government). Chen et al. (2009) defined e-government as the use of IT by governmental institutions to enhance operational efficiency and effectiveness in service delivery and in meeting citizens' needs. The importance of e-government as a platform to develop people's social life and create knowledgeable society has been recognized by Governments all over the world (Quataishat, 2013), and as such governments have invested in e-government development as technology advances. E-government implementation started with the use of web-based applications, but recently, government bodies have also begun to take advantage of the ubiquitous nature of mobile devices to provide services to citizens by implementing mobile apps. Government institutions, like other service industries, such as the banking industry, are deploying mobile applications (mobile apps) to provide information and services to the people.

Prior research has ascertained that e-government is not just about technology; technology is an enabler, not a solution, to meeting citizens' need. That government deploys electronic means to deliver services does not mean that government employees and citizens are going to use it (Quataishat,

2013; AlMahamid et al., 2010) or be satisfied with the services provided on the electronic platforms. Studies have shown that citizens' intention to use e-government services factors dominantly into the success of e-government (Rehman et al., 2012; Khan & Ahmed, 2015). According to Carter and Belanger (2005), adoption of government electronic services by users is dependent on its human, social, cultural and organizational factors. Sayin and Okursoy (2013), on the other hand, opined that the most important drive to improve e-government services is to deliver better services to the citizens.

Most studies on e-government service delivery investigate web-based e-government applications (Quataishat, 2013; Cilingir & Kushchu, 2004) and SMS applications (Susanto and Godwin, 2010). Researchers have not given due attention to the emerging trend of governments' deployment of mobile apps and its citizens' usage. Understanding users' satisfaction and usage of mobile apps is important because mobile apps possess their own unique characteristics. Mobile apps are usually pre-loaded, sometimes require updates, and operate on pay-per-use services. Research efforts have not made in-depth attempts to investigate the constructs of m-government service and its various dimensions. This is important because users' perception of context-bound concepts can vary from one domain to another (Parasuraman *et al.,* 2005; Yang & Fang, 2004; Cronin & Taylor, 1992).

This exploratory research seeks to extend the body of knowledge relating to technology adoption and usage by uncovering what factors influence the adoption of m-government services and its dimensions. The following research questions will be addressed: What are the key characteristics of mobile m-government applications that influence users' adoption and usage? What can be recommended to improve m-government services and users' satisfaction with these services? To address these research questions, this research carried out systematic content analysis of 1520 reviews of 63 mobile apps offered by 10 United State government agencies.

LITERATURE REVIEW

Conceptual Development

The sporadic adoption of mobile technology is due to the ubiquitous nature of its increasing computing capability. Mobile technology has found relevance in all professions and institutions, and public institutions are no exception. Technological advances after the 90s, have enabled new developments in which citizens, the main recipients of government services, no longer need to visit government buildings for every demand. At the beginning of IT adoption, e-government services were predominantly web-based applications used for various functions such as filling out application forms and receiving electronic messages. Now, e-governments are transforming their activities according to the demand of convenience that mobile and wireless technology offers, thereby metamorphosing e-government services to a new direction; mobile government (m-government).

Technology usage and adoption issues have been prominently discussed among academic researchers. For the past three decades, academic researchers in different domains, such as banking, commerce/marketing, gaming and web accessibility, have been examining technology adoption and use in predominantly web-based platforms. Few among such studies include the work of Adesina and Ayo (2010); Ayo et al. (2011); Hanudin (2007); Jahangir and Begum (2008); Pikkarainen et al. (2004). These studies indeed provide deep understanding of information system adoption and usage dimensions but the research approach is primarily based on e-commerce context and web applications (web apps). Researchers have not attended to the relationship between the quality of mobile apps and user satisfaction, especially in public service. The unique features of mobile apps are our motivation to re-examine whether the reasons for adoption in e-commerce and web apps are applicable to mobile

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