A Technology Adoption Model for Mobile-Enabled Government Services

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ABSTRACT

The article centers its argument on a lack of a comprehensive model to explain individuals' adoption of m-government services. Features peculiar to m-government due to mobility—mobile technology effect, choice over alternative channels, and service cost burden to citizens—are among the determining factors for service quality, and adoption is not captured in prior models. Consequently, this article proposes a model that extends UTAUT2 and incorporates aspects from other two knowledge domains, technology domestication, and technology use and gratification domain. The proposed model is evaluated for its validity and reliability through data collected using a questionnaire from 396 randomly sampled residents of Dar es Salaam. The study contributes both theoretically and empirically to knowledge regarding technology adoption by incorporating new variables and extending variable definition for a richer and versatile analysis.

KEYWORDS

Citizen Adoption, Citizen Adoption Model, M-Government Adoption, M-Government in Tanzania, Mobile Service Adoption

INTRODUCTION

The advancement in information and communication technology (ICT) has brought an array of innovation in public services delivery. The world has witnessed the penetration of computer, the Internet and recently the mobile technology in all aspects of life. Such technological revolutions in public service delivery have coined new terminologies, 'e-government' and 'm-government' in public sector debates. e-Government which denotes the use of computers and internet to perform government functions, it largely depends on the availability and accessibility of computer hardware, software and basic computer skills (Al-Hadid & Rezgui, 2010). Unfortunately Al-hadid & Rezguis' (ibid) set of requirements is a challenge to many, even the most advanced nations. m-Government on the other hand utilizes wireless and mobile technology devices (mobile phones, tablets and palmtops), services and applications to enhance governance and public services delivery (Kushchu & Kuscu, 2003; Munyoka & Manzira, 2014; Somani, 2012). m-Government rides on the high diffusion of mobile phone, which has literally out-diffused other technology advancements with over 80% of the world's population as subscribers of whom more than 600 million are in Africa alone (MDI, 2013).

According to Jotischky & Nye (2011) total Internet users in Africa by March 2011 were 118.8 millions of which 71.5% were mobile Internet users.

Tanzania, with over 34 million mobile phone subscribes and a 71% tele-density by September 2015 (TCRA Website) exhibits a high potential for mobile networks to revolutionize its public sector. Mobile networks provide the inexpensive alternative to Internet infrastructural access through wireless interconnectivity especially in developing countries where such infrastructures are scarce (Abdelghaffar & Magdy, 2012; Zmijewska et al., 2004). Simple mobile phone functions such as voice and text messaging have evolved into powerful tools, constantly re-defining the government - citizen interaction (Hellström, 2009). Moreover, while e-government is constrained by physical location, the mobility or 'on the go' aspect, provided by mobile phones makes m-government more desirable. On top of the 24/7 public service availability aspect of common to e-government, m-government adds the anywhere, anytime and on the move access. Nevertheless m-government merely extends or complements the already existing e-government services, of which its absence makes m-government implementation impossible.

The deployment of m-government has widely spread globally. Over 75% of the world governments, developing and developed have some investments in e-government and m-government initiatives (Capgemini, 2012a; 2012b). However, adoption of the said initiatives lags behind; for instance European countries' adoption estimates in 2012 slacked below 30% (ibid). Despite numerous initiatives (Hellström, 2009; Therkildsen, 2000; Yonazi, 2010) Tanzania ranked 130th among 193 countries on the e-Government Service Development (UN, 2016). The e-Government Development Index (EGDI) for Tanzania in 2016 was 0.3533, lower than the global average of 0.4922 (ibid). Exploring the statistical variability of e-government service benchmark for 2016, Tanzania had a high online presence, yet a lower EGDI (Figure 1). Furthermore, the 2012 e-government benchmarking report revealed that while e-government supply is high (over 75%), service demand index is low, below 30% (Capgemini, 2012a; Capgemini, 2012b; Savoldelli, Codagnone & Misuraca, 2014). Partly this is a result of implementation being based on assumed user needs, lacking the demand-side perspective, thus affecting its adoptability (Ibrahim & Mohammed, 2008; Reddick, 2008). Adoption remains a global challenge constantly undermining success and justification for continued support. To guarantee any real impact mass adoption is essential, for which understanding technology adoption is but the first step.

Figure 1. e-Government Development Index (EGDI) for 2016 (UN, 2016)
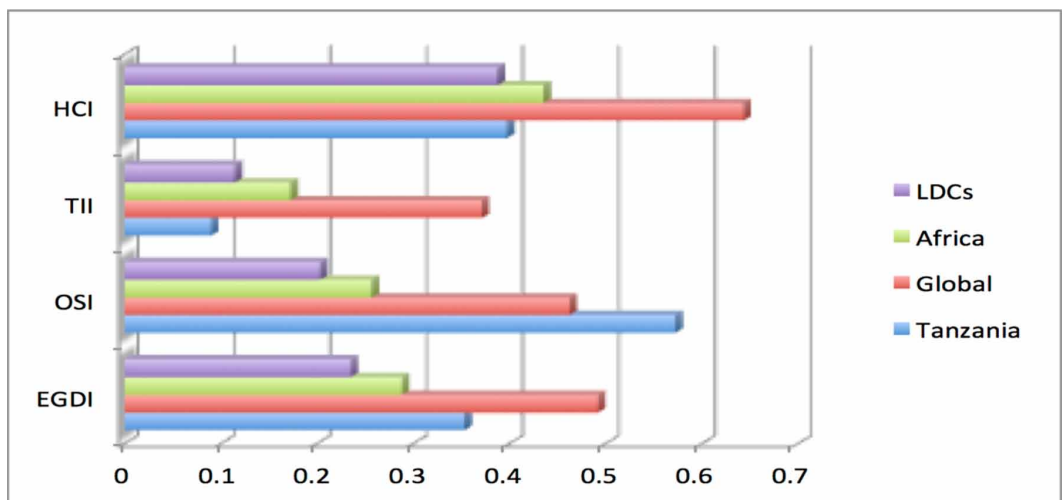
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