An Extended Model of E-Government Adoption by Civil Servants in Greece

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ABSTRACT

E-government in Greece lacks a customer-centric view in its implementation. Government is driving its development agenda and investment on electronic services without measuring what increases customers’ willingness to adopt offered services. The study has taken a lead in understanding the factors that affect e-government adoption by teachers in Greece. It uses constructs from the Technology Acceptance Model (TAM), the theoretical extension of the TAM (TAM2), Diffusion of Innovation (DOI) and integrates the constructs of perceived behavioral control, trust in e-government, perceived risk, personal innovativeness and awareness in a model. The validated model offers a starting point for the investigation of factors affecting the adoption of e-government services and can be extended by using domain-specific constructs to fit all Greek governmental organizations.

KEYWORDS

Awareness, DOI, E-Government Services, Perceived Behavioural Control, Perceived Risk, Personal Innovativeness, SEM, TAM, TAM2, Trust in Government

1. INTRODUCTION

Government is an ‘institutional superstructure that society uses to translate politics into policies and legislation’ (Kettl, 2002). It is actually ‘a dynamic mixture of goals, structures and functions’ (Pardo, 2000 p.2) and its ‘foremost job is to focus society on achieving the public interest’ (Riley, 2003). Nowadays, governments worldwide have heavily invested in e-government - the use of information and communication technologies and the internet to support their work processes, to improve the delivery of government services to citizens, businesses, and other government agencies, 24 hours a day, seven days a week and bring better governance (Alruwaie et al., 2012; Panagis et al., 2008). Despite huge investments, not all e-government programs and projects across the globe are successful. Their adoption, in developed and particularly in developing countries, has fallen far below expectations and a systematic discrepancy exits between the offered e-government services and facilities and actual citizens’ take up (Al-Zaabi et al., 2012; Akkaya et al., 2012; Odongo, 2009; UN 2010). Up to now governments drive their development agenda and investments on e-government based on their understanding (Mofleh & Wanous 1999). A user-centered e-government strategy is essential in case that e-government is to succeed (Schedler & Summermatter, 2007). By putting people first, governments may improve the quality of their services by making them more usable and useful. The lack of demand for e-government services and the under-estimated adoption of offered services have resulted in the need for research into understanding the factors that are influencing the adoption of e-government services.
of e-government (Dwivedi et al., 2011). As studies in e-government are “increasing in number, related models offered in the academic literature are mainly conceptual; while empirical studies are heavily ignored” noted Ahmed (2013). Thus, empirical research becomes critical in understanding the expectations of citizens; factors affecting adoption and diffusion of e-government services; and customers’ motivations and decision making mechanisms towards using electronic services (Akkaya et al., 2012). Moreover, the factors that are influencing the adoption and diffusion of e-government varies between countries across the globe (Heeks, 2005) and despite the fact that are being explored, “the nature of the use of existing theories and models of technology adoption and diffusion utilized in e-government adoption research has yet to be investigated” (Rana et al., 2012).

Potential users of e-government are also public servants that many times are forgotten and are simply expected to adopt e-government (Baldwin et al., 2012). For the moment, little research effort has been devoted at investigating government public servants attitudes on e-government adoption (Baldwin et al., 2012; Heeks & Bailur 2007), especially in Greece. During the investigation ‘Excluding users can lead to poor design, recalcitrance and refusal to adopt, even subversion, and ultimate user failure’ (Baldwin et al., 2012 p. 106), thus it is important to take into consideration their opinions and attitudes. This paper seeks to address this gap and investigates factors that determine the adoption of e-government services by public servants in Greece.

Teachers of primary and secondary education are internal customers of government as they are public servants and are expected to adopt e-government services. According to the Ministry of culture, education and Religious Affairs (http://www.minedu.gov.gr/) 150,798 teachers are permanent civil servants representing a percentage of 40.69% of permanent civil servants. This significant percentage implies that it is interesting to investigate their attitudes towards offered educational e-government services. E-government services are offered through the webpages of Greek Schools Network, the Ministry of Education and Religious affairs, websites of Regional Primary and Secondary Education Administrations, and websites of Primary and Secondary Education Administrations.

The paper uses constructs from the Technology Acceptance Model (TAM), the theoretical extension of the TAM (TAM2), Diffusion of Innovation (DOI) as they are well accepted models and have also been used to predict user acceptance in the field of e-government. Trust is central to daily practices interactions and transactions. Lack of trust brought on by uncertainty of the online environment, novelty, use of technology, security issues and the uncertainty and risk of using open infrastructures has inhibited the widespread acceptance of e-government services. Thus, trust is considered as a crucial enabler in e-government adoption (Al-adawi et al., 2005; Belanger &Carter, 2008; Colesca, 2009; Hung et al., 2006; Tan, 2008). It is perceived risk that gives the trust dilemma its basic character (Al-adawi et al., 2005). Perceived risk decreases when the individual trusts others that are involved in the transaction (Horst et al., 2007; Johnson-George & Swap, 1982) and has significant impact on electronic service acceptance (Rotchanakitumnuai, 2008). The paper integrates the constructs of trust in e-government, perceived risk, perceived behavioural control, personal innovativeness and awareness in the model. It measures intention-to-use e-government websites. Intention to-use has been found to be a strong predictor of actual system usage in the IS literature (Colesca & Dobrica, 2008). The study uses an online survey to record Greek teachers’ opinions and attitudes, nationwide. It analyses the data using a refinement procedure, controlling reliability and validity, and validates the proposed model using Structural Equation Modelling.

2. E-GOVERNMENT ADOPTION MODELS

Up to now, well established theories and models in the context of computer technologies have been used to explain and analyze the factors influencing the adoption and diffusion of e-government (Al-adawi et al., 2005; Alomari et al., 2012; Carter & Bélanger, 2005; Colesca & Dobrica, 2008; Dwivedi & Williams, 2008; Jaeger & Matteson, 2009; Patel & Jacobson, 2008; Rehman & Esichaikul, 2012; Sang et al. 2009a; Shareef et al. 2011; 2009; Teo et al., 2009). The technology adoption models
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