

Chapter 16

A Model for Investigating E-Governance Adoption Using TAM and DOI

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ABSTRACT

As governments around the world move toward e-governance, a need exists to examine citizens' willingness to adopt e-governance services. In this paper, the authors identify the success factors of e-governance adoption by teachers in Greece, using the Technology Acceptance Model, the Diffusion of Innovation model and constructs of trust, risk and personal innovativeness. Two hundred thirty primary and secondary education teachers responded to an online survey. LISREL then analyzed the data. Model estimation used the maximum likelihood approach, with the item covariance matrix as input. A SEM validation of the proposed model reveals that personal innovativeness, compatibility and relative advantage are stronger predictors of intention to use, compared to trust, and perceived risk. Findings may enhance policymakers' capacities by presenting them with an understanding of citizens' attitudes.

INTRODUCTION

The pressure of globalization, changes in technology, the de-regulation in economic and social life are nowadays changing personal lives, business methods and relations between governments

and citizens (Gupta, 2004). Citizens expect from governments to deliver better, faster and cost-effective services, to become more transparent, to reduce discretionary decision making and introduce simpler methods and procedures (Singh, 2007). Democratic governments feel the tremendous pressures (Singh, 2007), the direct threat of being thrown out of power if they do

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not perform (Gupta, 2004), and the importance of implementing e-governance and are moving forward in e-governance development (Panagis et al., 2008). Governments need to understand that e-governance is much more than technical issues (Lau, 2004). A mix of technological, administrative, social, human, legal disciplines must be created (Biasiotti & Nannucci, 2004) and several organizational changes are required, in which skills in management, communication, and legal issues play a key role (Joia, 2006). Up to now governments' are driving the development agenda of e-governance and their investment in electronic services based on their understanding of what citizens need and without measuring what increases citizens' willingness to adopt e-governance services. Mofleh and Wanous (1999, p. 1) wrote "Governments must first understand variables that influence citizens' adoption of e-Government in order to take them into account when delivering services online".

The implementation of e-governance transforms theories and practices of public administration (Fang, 2002). Governments develop transaction-oriented application sites in order to allow interaction with citizens, offer information on services regulations, procedures, forms; perform public service electronically; and automate and execute administrative processes (Buckley, 2003; Elsas, 2003). The main advantages presented by e-governance to public administration are paper reduction; transaction efficiency; and improved governance (Joseph & Kitlan, 2008). Greek education system is centralized, by means that the Ministry of National Education lifelong learning and Religious Affairs formulates and implements the educational policy (Giamouridis, 2006; Massialas, 1981). The education system is also characterized by "intense bureaucratization, strict hierarchical structures, extensive legislation (polynomy) and "formalism" (Koutouzis et al., 2008, p.1). Effective development of educational e-governance websites and effective adoption by teachers in Greece may combat the common prob-

lem that bureaucratic systems address as the loss of paper, the destruction of data, and inconsistent data entry (Joseph & Kitlan, 2008). Regarding transaction efficiency savings of time and money are important factors to predict potential usage of e-governance services (Gilbert et al., 2004) and all sectors in public administration can benefit from reduced costs and time efficiencies. Improved governance requires an integrated, long-term strategy built upon cooperation between government and citizens (Johnston, n.d.). E-governance facilitates a more joined-up style of government (Gunter, 2006), involves citizens in the decision-making process (UNESCO, 2007), enhance decentralization, accountability and transparency (IDRC, 2007), and gain greater public confidence in the policymaking process (Norris, 2000). In Greece 150,798 teachers are permanent civil servants, according to Ministry of Education lifelong learning and Religious Affairs (<http://www.ypepth.gr>) and they represent a percentage of 40.69% of permanent civil servants in Greece. Adoption of e-governance websites by teachers is voluntary and can be viewed as evidence that teachers perceive them as a superior choice, extracting value from them, to the traditional paper-based, face-to-face and phone consultation services.

In order to explain and analyze the factors influencing the adoption and use of computer technologies several models have been proposed. They take into consideration attitudes, beliefs and intentions as these are important factors in the adoption of computer technologies (Bagozzi et al., 1992). The theory of reasoned action (TRA) (Fishbein & Ajzen, 1975); the Technology Acceptance Model (TAM) (Bagozzi et al., 1992; Davis, 1980) the theoretical extension of the TAM (TAM2) (Venkatesh & Davis, 2000); the Diffusion of Innovation (DOI) (Rogers, 1995) are well accepted models and have also been used to predict user acceptance in the field of e-governance.

The study investigates factors that determine the adoption of educational e-governance websites by teachers of primary and secondary

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