Information Transparency and Citizens' Continuous Use Intention of e-Government Services

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Abstract

After more than two decades of development, e-Government services have become not only familiar to but also a significant part of citizens' life. However, as the needs of citizens in using e-Government services changes, an improved understanding of citizen's continuous use intention is warranted. This study therefore aims to explore the factors that influence citizens' continuous use intention of e-Government services.

Although, previous studies have identified several factors from a range of theories that explain the nature of continuous use intention of various technologies, they lack attention to factors that are specifically relevant to the e-Government context. In particular, the extant e-Government services literature highlights information transparency as an important factor for any governments but there is a lack of understanding about its impacts on citizen's perceptions of e-Government services (i.e. trust, empowerment, and satisfaction). Thus, this study focuses on examining the role of information transparency in citizen's continuous use intention of e-Government services by integrating DeLone and McLean's IS Success Model with the concept of information transparency, and theories of continuous trust and empowerment.

Keywords

E-government, information transparency, continuous use, continuous trust, empowerment, intention, D&M, citizens, satisfaction

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1. Introduction

E-government services have increasingly been adopted since the early 21st century. These systems can disseminate information, provide governmental functions and handle public administration processes (UN - HABITAT & Transparency International, 2004). Since then, governments have invested larger budgets for developing and promoting e-Government services. For most countries, using e-Government services has become more routine (United Nations, 2012). Similar to e-Commerce, citizens' adoption of e-Government services has moved to the post-adoption stage. Reddick (2004) stated that the use of these services after the initial adoption stage may potentially decrease or discontinue. Therefore, an understanding of what factors affect citizen's continuous use intention plays a vital role in e-Government development.

Meanwhile, adoption researchers suggest that determinants of continuous use intention are quite different from those for initial use intention. For instance, perceived ease of use is significant for initial use but becomes weaker for continuous use (Almahamid, McAdams, Taher Al, & Mo'Taz, 2010). Although satisfaction and trust are common factors determining continuous use intention, other characteristics that imply deeper use in e-government services also need to be investigated (Rana, Dwivedi, & Williams, 2013). From the extant e-government and broader government literature, it can be noted that transparency is one of the most important elements of every government system and among the main goals for e-Government developments (Colesca, 2009; Tung & Rieck, 2005; UN - HABITAT & Transparency International, 2004). Transparency, in this study refers to information transparency, which is achieved when governments provide their citizens accessible, timely, relevant, and reliable information through information technologies. Despite citizens' high demand for transparency in e-Government services and its importance for sustainable government (Piotrowski & Ryzin, 2007; United Nations, 2012), there is limited understanding of how transparency influences citizens' continuous use intention of these services. This research-in-progress paper therefore presents a research model describing these concepts and their potential relationships with factors influencing continuous use of e-Government services.

2. Theoretical background and Research Model

An investigation of the broad continuous use literature finds that most post-adoption e-Government services studies employ Technology Acceptance Model (TAM), Diffusion of Innovation (DOI), Theory of Planned Behavior (TPB) which are theories for explaining technology acceptance (Rana, Williams, Dwivedi, & Williams, 2012). However, these are limited in their capacity to explain post-adoption use types such as continuous use (Bhattacherjee & Barfar, 2011). On the other hand Expectancy Confirmation Theory (ECT) and DeLone and McLean's (D&M) Model have been shown to be more consistent with higher power, in explaining various mechanisms of continuous use intention for e-Commerce and e-Government systems (Hong, Thong, & Tam, 2006). Both theories consider satisfaction as central to their models but only the DeLone and McLean Model (2003) discusses the role of information quality, which is similar to this study's definition of information transparency (Granados, Gupta, & Kauffman, 2010; Neyland, 2007; Vishwanath & Kaufmann, 2001), and its impact on

satisfaction and system use. As the focus of this study is on the role of information transparency regarding citizens' continuous use intention of e-Government services, the D&M model is considered a suitable for framing key aspects of this study's underlying framework and study of information transparency.

The study's research model is presented in Figure 1. The model seeks to explain how information transparency influences citizens' continuous use intention through its impact on continuous trust, empowerment and satisfaction.
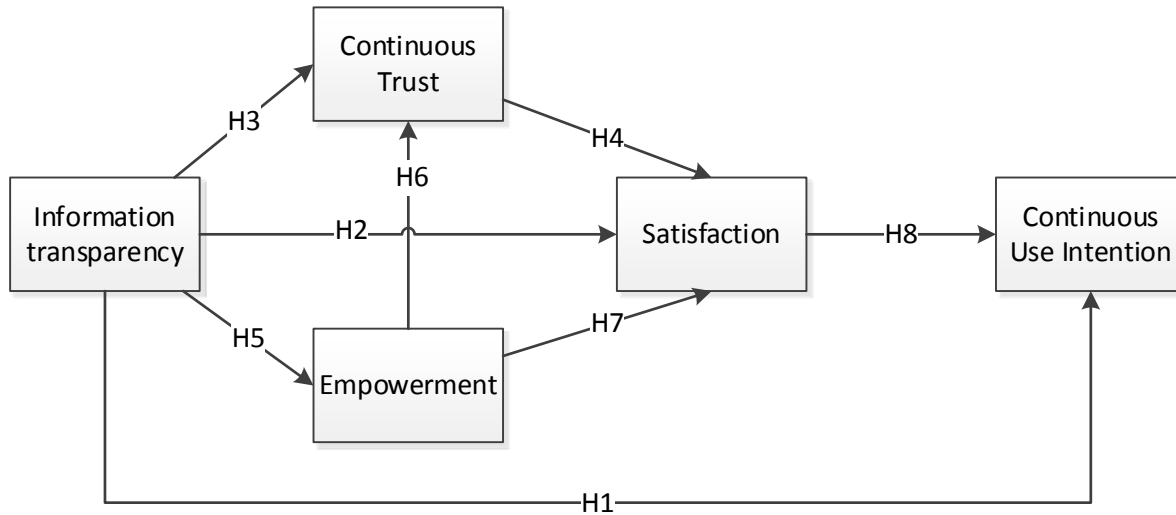

Figure 1: Research Model

The literature on transparency shows that most of its definitions or concepts are information-related. For example, Granados et al. (2010) define "information transparency as the level of availability and accessibility of market information to its participants". Vishwanath and Kaufmann (2001) in examining banking/accounting policies identified five dimensions of transparency, namely comprehensiveness, access, relevance, quality, and reliability of information. In this study, we refer to the qualities of the information which government provides to citizens as key dimensions of information transparency i.e. availability, accessibility, timeliness, relevance and reliability of the information provided.

Even though, information transparency has not been discussed much in relation to citizen's use intention of e-Government research, e-Commerce research has contributed to our understanding of the relationship. For example, prior studies suggest that if users (e.g. customers, citizens) have access to information about a firm, products, or a partnership, they are more likely to engage in actions such as purchasing products, being profiled online, or booking a hotel (Dapko, 2012; Miao & Mattila, 2007; Su, Fang, & Young, 2013). For example, Dapko (2012) empirically showed the significant role of information transparency regarding intention to purchase online products. Thus, we propose that:

H1: *Information transparency is positively related to continuous use intention towards e-Government services*

The e-Commerce and e-Government literature suggests that transparency has a strong influence on trust and satisfaction of customers/citizens (Dapko, 2012; Park & Blenkinsopp, 2011). Here, trust in this study of continuous use refers to continuous or knowledge based trust which is rooted in a user's direct

experiences/knowledge and familiarity with the stimuli (Gefen, Karahanna, & Straub, 2003), in this case, use of e-Government services. Hence:

H2:   Information transparency is positively related to continuous trust in e-Government services

Prior research also suggests that information transparency is related to satisfaction with e-Government services. For example, Park and Blenkinsopp (2011) who treated transparency as an open flow of information observed that transparency has positive effects on satisfaction with governmental services. Similarly, Teo et al. (2009) identified positive links between information quality and satisfaction with an e-Government website. Thus, we hypothesize that:

H3:   Information transparency is positively related to satisfaction with e-Government services

Park and Blenkinsopp (2011) empirically showed the mediator role of trust between transparency and satisfaction. Moreover, users who trust the system tend to be more satisfied. Therefore, we propose that:

H4: Continuous trust is positively related to satisfaction with e-Government services

Transparency not only impacts trust and satisfaction, it also empowers citizens. According to Okot-Uma (2000) citizens want to have power and control over their lives. By offering access to resources and information, organizations such as governments can empower citizens. Several scholars believe that transparency is a key factor to empowering citizens through e-government services (Scholtes, 2012; Wong & Welch, 2004). Hence, this study hypothesizes that:

H5:   Information transparency is positively related to empowering citizens

Psychological Empowerment (PE) and its consequences such as enhancing trust and satisfaction of employees has been widely studied in human resources management (Carina, Timothy, & Gian, 2007; Conger & Kanungo, 1988). However, based on the transparency literature, studies suggest that citizens can be empowered by being informed about transparent e-Government services and because of that, they will trust the system and services more as well as feel satisfied. Thus, we propose that:

H6:   Empowerment is positively related to continuous trust in e-Government services

H7:   Empowerment is positively related to satisfaction with e-Government services

As a central construct in the D&M Model and Bhattacherjee (2001) model of continuous use, satisfaction has been shown to be important to determining willingness to continuously use e-Government services (Teo, Srivastava, & Jiang, 2009; Wangpipatwong, Chutimaskul, & Papasratorn, 2009). Therefore, we hypothesize that:

H8:   Satisfaction is positively related to continuous use intention towards e-Government services

3. Research methodology

This study adopts a quantitative approach and survey as a method to collect data. The survey will be conducted in New Zealand targeting use of e-Government services. According to the United Nations (2012) report, New Zealand ranks 13th in terms of the most mature in e-Government development and 1st in terms of the least corrupt country in the world. This means that in New Zealand, most persons in general, have passed the stage of initial acceptance of e-government services and are at the post-adoption use stage which is suitable to the study's aim. The sample will focus on persons who have experience with using e-Government services. The research instruments will be a pilot tested The main

survey will be conducted using questionnaires and an online survey and the data analyzed using Structural Equation Model (SEM), which is an appropriate technique for assessing the research model.

4. Conclusion

After successful implementation of e-Government services, it is important for government not only to maintain but also improve the usage by its citizens. It is therefore significant to understand how citizens perceive information transparency through e-Government services, which is one of the main goals of e-Government developments. In the public sector, transparency has been widely discussed in previous research which provides a conceptual understanding of the concept, but its role in determining use of e-Government systems has not been empirically examined in a post-adoption context. This study integrates the concept of information transparency with DeLone and McLean's Model of IS Success with theories of continuous trust, psychological empowerment, and satisfaction to develop a model explaining how information transparency affects continuous use intention of e-Government services. The study findings are therefore expected to fill a knowledge gap in the e-Government literature and enhance understanding of transparency concept in relation to continuous use intention.

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