Chapter 116
The Role of Trust in the Acceptance of Government Cloud:
An Empirical Study

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ABSTRACT

This study proposes and empirically examines a revised and extended Unified Theory of Acceptance and Use of Technology (UTAUT) model, while acknowledging the role of trust on government cloud (G-Cloud) acceptance. The study utilized a quantitative research approach to examine the research model with data collected from a survey administered to IT professionals at government agencies in Saudi Arabia. The model was tested using the partial least squares structural equation modeling (PLS-SEM). Results show that trust is a major predictor of behavioral intentions to use G-Cloud that reduces uncertainty associated with the cloud and mitigates risk perceptions on the one hand, and significantly increases the perceptions of usefulness on the other hand. Furthermore, results indicate that performance expectancy, social influence, and facilitating conditions are all significant determinants of G-Cloud acceptance. Based on the findings, the study highlights several implications for practice and suggests opportunities for future research in the field of government cloud.

INTRODUCTION

The emergence of cloud computing represents one of the most important and fundamental paradigm shifts in computing. Cloud computing has the potential to reshape the way enterprises provision and manage their computing resources. It made it possible to consolidate IT resources in a way that signifi-

cantly increases capacity utilization, flexibility, efficiency and responsiveness to business needs, for both private and government sectors, while also reducing costs (Khan et al., 2011). Studies show that governments will play a leading role in the adoption of cloud–based models for data storage, applications, and processing power as they seek to exploit the inherent advantages of the cloud, and to maximize their returns under economic pressures (Wyld, 2010).

The adoption of cutting edge technologies with innovative architecture and service models is key to achieve value in governments. Governments seek to make optimum use of advanced technologies across public sector organizations in order to improve their performance in providing best possible information and services to citizens, businesses and other government agencies (Ali, Soar & Yong, 2014). Moreover, it has pointed out that traditional e-government systems are facing a number of challenges, and are not powerful enough to meet public needs and governments' own demands (Liang, 2012). Therefore, e-government is in need to be redesigned and revised, which is mainly due to the inflation of data in government systems, complexity in operations, difficulties in resource sharing and business collaboration, and energy consumption concerns (Khan et al., 2011; Liang, 2012). In this regard, cloud computing has emerged at the right time to solve such challenges by achieving economies of scale to increase business agility and lower overhead costs. Governments, today, are considering the real value of incorporating the cloud into their practices and making full use of cloud computing potentials for higher working efficiency and better public services (Liang, 2012). This initiative refers to as government cloud (G-Cloud) (Liang, 2012; Zhang & Chen, 2010).

There is a growing body of research being done to study the determinants of cloud computing acceptance and usage behaviors. However, there is a lack of studies that investigate the realm of government cloud and in particular from adoption perspective. Moreover, despite the relatively extensive amount of research that has recognized the importance of trust in the cloud environment, only few studies have examined the effect of this factor on cloud computing adoption behaviors. To the best of the researcher knowledge there is limited research on the acceptance of government cloud, and no studies have considered trust as a key factor when investigating G-Cloud acceptance among government agencies. While the focal point of the majority of studies in relevant literature was on the benefits and concerns of moving e-government to the cloud (Chandra & Bhadoria, 2012; Liang, 2012), other studies focused on finding strategies and deployment models for government cloud (Zhang & Chen, 2010). Extant research on cloud computing primarily addresses issues of trust, and proposes approaches and frameworks to build trust in the cloud (Khan & Malluhi, 2010).

This study, therefore, proposes an extended UTAUT model to empirically examine users' behavioral intentions toward using government cloud in Saudi Arabia, while acknowledging trust and perceived risk as key constructs. The study brings trust to the fore as an imperative for government cloud adoption. The inclusion of trust is based on the important role of this factor in the online context, and its relevance to deal with uncertainty and the risk of vulnerability which are present in cloud computing environment (Belanche, Casalo & Flavian, 2012).

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