

## Chapter 8

# Exploring the Effects of Trust, Perceived Risk, and E-Services Systems on Public Services in E-Government

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### ABSTRACT

*This chapter is an attempt to better understand government perceptions on the adoption of technology-based service channels, in particular, digitalized administration processes. A model is proposed that combines the effect of behavioral beliefs and intentions together with research variables, perceived usefulness of e-services, subjective norms, self-efficacy, technology facilitating conditions, trust and perceived risk, as well as individual characteristics. The research method uses a questionnaire to query the intentions of government civil service employees towards adopting digitalized services. Structural Equation Modeling is applied to further analyze the data and to design a theoretical model predicting the intention to accept e-services in e-government. Results from 216 civil servants working in five cities and counties reveal trust as the most influential factor directly affecting behavioral intention towards administering digitalized services. The high trust of civil servants towards these digitalized e-government services unfortunately results in low risk perception, which is an issue to be addressed to limit exposure.*

### INTRODUCTION

In recent decades, the growing importance of digitalization, the adoption of Information Technologies (IT) as new communication channels and the opportunities afforded to citizens have led governments to consider electronic customer-based services approach. According to the Taiwan Broadband Internet Use Survey reported by Taiwan Network Information Center in mid 2011,

there are 16,950,000 online users. Half of Taiwan's population over age twelve has used the Internet for social interactions, including chatting, searching or shopping. Dimitriadis and Kyrezis (2010) point out that information technology has been recognized as one of the most important factors to shape the trends of public e-services, provoking changes in both the structure of public services and customer behaviors in e-government. E-services are interactive software-based information systems

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accessed via the Internet for e-government services (Featherman & Pavlou, 2003:451). Nowadays, the e-government portal provides three main e-services such as information, network applications, and two-way communications between citizens and various arms of the government. This one-stop portal offers points of access for citizens to connect to 90 public agencies which provide over 4,840 online public services, such as taxes, tuition payment, household registration, parking fees, official regulations and public policies. From the digital divide survey done by the Research, Development and Evaluation Commission in November 2010, 65.10% of online users have accessed government information from the government portal, 36.7% of online users inquired about public policies or announcements, and 23.9% of online users applied for official documents via the Internet. In a practical way, e-services provide on demand solutions to citizens, strengthening the relationship between citizens and civil servants, creating transactional efficiencies and improving service satisfaction (Featherman & Pavlou, 2003; Ruyter et al., 2001).

The purpose of e-government is to utilize the Internet to provide an efficient, timely and accessible means of linking the government to the public sectors when citizens need public services. Successfully maintaining online access to e-government for providing public services is the responsibility of the government, especially those civil servants who are charged with the implementation of public services. Civil servants are defined as members employed by a government department or agency to administer the public affairs or services and to provide policy suggestions due to their expertise, position, and routines (Xu & Weller, 2008). Civil servants are seen as active members in e-Government because they are accountable to administer e-services for citizens. Civil servants values and perceptions influence their attitudes and behaviors in successfully executing e-service delivery (Chou, Chen, & Pu, 2008). Therefore, civil servant per-

ceptions of public e-services may influence the performance of e-government towards citizens. In order to explore civil servants perceptions of e-services delivery, literature and case studies related to civil servants beliefs and acceptance of e-services delivery are examined in this chapter, such as Brown, Chervany, and Reinicke (2007) and Wu and Chen (2005).

As increasing numbers of paper-based processes are digitized and moved to computer environments, it has become more important to study end-user perceptions of these new user interfaces. Therefore, when exploring public servants intention to administer e-services for citizens, the chapter addresses the research question: what factors affect civil servant perceptions and behaviors to administer digitalized services for citizens?

In this chapter, two crucial objectives are (1) to illustrate the relationship between key factors and civil servant perceptions to administer e-services for public services delivery, and (2) to clarify the variables concerning online service delivery, which may provide a framework for policies cultivating information pertaining to trust and perceived risks for e-governments. Based on literature review, this study is used questionnaires to explore civil servant perceptions on providing online services delivery for e-governments while measuring perceived ease of use, perceived usefulness, subjective norms, self-efficacy, technology facilitating conditions, trust of information system and perceived risks. The questionnaires were designed based on the integrated research structure and analyzed by the Structural Equation Model (SEM). These questionnaires are sent to civil servants of five local governments in Taiwan, namely Hsinchu County, Chiayi County, Tainan City, Great Tainan County, and Kaoshiung County, to explore their perceptions of online services delivery and to better understand their intention towards administering online services. The research results are expected to illuminate the relationships among the aforementioned influence factors for e-services.

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