Chapter 13

ICT Adoption in Malaysian Public Sector: A Modified-Extended Unified Theory of Acceptance and Use of Technology (UTAUT)

ABSTRACT

In this chapter, a modified-extended unified theory of acceptance and use of technology model is applied to one of the government agencies to assess the behavioural intention of the staff and the actual use of ICT. The findings of the study show a positive relationship between performance-expectancy, effort expectancy, facilitating condition, and behavioural intention to use ICT except for social influence, which showed a negative relationship with behavioural intention to use ICT. In addition, the findings show the impact of gender difference on the causal links between the various predictors studied and behavioural intention as well as the actual use of ICT. There were two additional contributions to the theoretical framework in this chapter. Additionally, the moderating effect of gender difference on causal links between facilitating condition (predictor) and the actual use behaviour of ICT among the staff is addressed. Implications of these findings are discussed.

INTRODUCTION

Nowadays, information and communication technologies are widely used in the most government agencies and become very important in organization to improve job performance, productivity, increase knowledge of workers, improve quality of job and improve collaboration and networking among employees by removing the barrier to real-time communication and effective information sharing. Through ICT, the organization can cross geographical and time zone boundaries to meet the demand of a world community and ICT is contributing to environmental responsibility. By using ICT in an organization, it helps the organizations fast respond to their tasks and to their stakeholders by improving quality of services, accountability and efficiency. Knowledge and information are
recognized as two most important strategic resources in any organization. In this chapter, we are investigating factors contributing to usage of ICT using Unified Theory of Acceptance and Use of Technology (UTAUT).

The rapid growth of technology in the developing world has made the agency committed to use of ICT to satisfy the stakeholders on various matters. For example, improve the dissemination technology for weather forecast, weather warning, earthquake information and tsunami warning. Basically the agency provides the forecast information and warning in Malaysia in order to make the people well prepared upon alerted. Hence, the agency is a public organization that communicates to their stakeholders and the government machinery directly. To ensure the satisfaction among the stakeholders, the agency widely uses the ICT in its daily works. For example, Decisions and Dissemination Support System (DDADS) system is reducing the time in delivery of information or warning. DDADS system is a system that uploads all the final information or warning through the Internet and sends the messages to other government related agencies by using SMS Gateway System that provides fastest delivery of information or warning via a Short Sending Messages Service (SSMS) technology.

PROBLEM STATEMENT OF THE STUDY

Agarwal (1999) believes that “acquiring appropriate IT is a necessary but not sufficient condition for utilizing it effectively,” (p.85). Therefore, it has been noted that user’s interventions attitudes towards and acceptance of a new information system have a critical impact on successful information system adoption (Davis, 1989; Venkatesh & Davis, 1996; Succi & Walter, 1999). Malaysia is still at a developing stage but striving to become a developed country by advancing its service delivery system by harnessing advantage of ICT usage to achieve its objectives. More importantly, staff of the agency have adopted the use of ICT and believed in its usefulness to the organizations and staffs but admitted that not all the technologies applied in organizations are easy to use for the users. There are various problems regarding the acceptance and use of the technology among agency’s staffs (preliminary interview with some officers in July, 2013). Therefore, it is important to determine the factors contributing to usage of ICT using a modified UTAUT among staffs.

There are many problems about contributing factors to the usage of ICT among the staffs. For example, staffs feel that the new human resources management information system (HRMIS) sometimes inconvenient and burden themselves although the technology is good in databases aspect. It was highly pronounced that “People feel the HRMIS technology is inconvenient because the system can’t be accessed if too much people are accessing it in the same time due to server limitation of the certain amount of users at one time.” Other than that, the technology itself bring problems to staffs when the technologies is not well maintained in terms of too much cookies and bugs in the server that contribute to select false information of the users. For example, it is normally happen at the early and end of the year, the HRMIS system will capture other user databases not the user based on the ID-key-in.

The main focus of attention in this study is about the VSAT (Very Small Aperture Terminal) technology used to transmit data from the sensor equipment at site to PC at the Headquarters through Telekom Malaysia in Cyberjaya. Prior to distribution of real questionnaires, a focus group interview was conducted among six representatives from the agency to pinpoint the most pertinent issues related to VSAT technology used. The result of our interview is line with effort expectancy and performance expectancy. In this study, while performance expectancy is the degree to which a person believes that using a technology system would improve his or her job performance and