Relationship between technical proficiency and continuance intention to use e-service in Malaysian setting

Fahmi Zaidi Abdul Razak¹ Azlina Abu Bakar² and Wan Salihin Wong Abdullah³

¹Faculty of Education and Social Science, Widad University College, BIM Point, Bandar Indera Mahkota, 25200 Kuantan, Pahang
²Faculty of Human Development, University Pendidikan Sultan Idris
³Quality Assurance and Accreditation Centre, University Malaysia Kelantan

Abstract. Today, it is important to consider the factors that influence users’ continued intention to use e-services. Current study explores the effects of technical proficiency on continuance intention to use e-services. A research model with data collected from 114 e-service users in Malaysia has been empirically examined. Results show that technical proficiency have significant and positive effects on continuance intention to use e-services. Implications for practice are discussed.

1 Introduction
In response to the rapid growth in Internet adoption, computer-assisted services have significantly increased. In modern economies, growth in e-services, also called web-based self-service, has further magnified [1–3]. However, information technology users must have some basic level of information technology (IT) proficiency which is termed as technical proficiency [4]. According to Weigel & Hazen [4], technical proficiency are the abilities needed to operate the information system and assess its quality (i.e., a computer hardware/software solution), such as one which a SME founder or middle manager would use in a large company. Although Weigel & Hazen [4] defined, conceptualized and developed the technical proficiency construct, Weigel & Hazen [4] does not take account of causal relationship between technical proficiency and continuance intention to use any particular system. This paper seeks to examines the significant causal effect between technical proficiency and continuance intention to use e-services.

2 Literature review and hypothesis development

2.1E-Government acceptance
A number of researchers have paid great attention to the adoption of e-government services [5–17]. For instance, Study by Witarsyah et al. [16] is aiming to find critical factor that influences e-government adoption and the final outcome has led to the modification of Unified theory of acceptance and use of technology (UTAUT) models by adding additional variables such as trust. In Malaysian context, study by Shuib et al. [9] found that compatibility, relative advantage, image, trust in the government, computer self efficacy, and customer satisfaction had significant impacts on the use of e-government applications.
2.2 Technical proficiency
Weigel & Hazen [4] developed the construct of technical proficiency, with an emphasis on how technical proficiency may be relevant to the information system success model which they believe that information system users must have some basic level of information technology (IT). We believe that technology proficiency has the same meaning with innovativeness. Since research by Lu, Yao, & Yu [18] shows clear causal relationships between personal innovativeness and perceived usefulness and ease of use, which in turn affects adoption intention. We therefore, proposed the following hypothesis:

H1. Technical proficiency will have a positive influence on continuance intention to use e-government services

![Figure 1. Research model](image)

3 Methodology
The questionnaire was established with multi-item measures for each construct based on a previous validated scale and distributed conveniently among 1000 government servant in Kuantan city of Pahang with 114 usable responses. Technical proficiency was derived from information system literature, with six items developed based on Weigel & Hazen [4]. Continuance intention was adapted from Bhattacherjee [19].

4 Data analysis
A regression analysis were performed to evaluate the hypotheses that included the direct relationship of technical proficiency on the continuance intention to use e-service. As shown in Table 1, the analysis revealed that technical proficiency had a significant relationship on the dependent variable which is continuance intention to use e-service. The overall model is capable of explaining about 7% of the variance. Data analysis revealed that the relationship between technical proficiency and continuance intention significant at β 0.27 (p = 0.05).

| Model | Std. Error | Standardized Coefficients | t | Sig. |
|-------|------------|---------------------------|----|------|
| TECH  | 0.110      | 0.269                     | 2.955 | 0.000 |

5 Discussion
The study results show that technical proficiency are strong predictors of the continuance intention to use e-service. With one predictor, 7% of the continuance intention variance is explained (R² = 0.072). Results of our study support the significant effect of technical proficiency which has a similar meaning with personal innovativeness. [20]–[25]. Current study provides practical implications for the government organization, which is that the government organization should improve its organizational learning processes. Jiménez-Jiménez & Sanz-Valle [26] claims that creativity is encouraged by organizational
learning. An organization that aims to develop and strengthen its employees' innovativeness should therefore also emphasize innovation opportunities and reward systems [27].

6 Conclusion

In order to identify the antecedents of the e-service continuance intention, we proposed and empirically validated a simple model in terms of technical proficiency. The data collected from 1000 respondents with 114 usable responses empirically support the proposed model. Our data analysis using SPSS shows that technical proficiency construct explains only 7% of the variance. Finally, a number of important limitations need to be considered. The first limitation is that this research is cross-sectional nature. Researchers should therefore be careful to interpret the causality between the constructs. Second limitation is the use of single variable to explain the research dependent variable. For future research, the limitation should be overcome by including several others other construct from relevant literature.

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