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Computer Security Self-Efficacy Effect

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Abstract

This article present the lack of uniformity in the field of information system with no consensus as to how security integrate the information systems usage, success, acceptance, and the impact of the use and/or performance such as satisfaction, effectiveness and efficiency. This study is an ongoing research project aimed at computer security by including Computer Security Self-Efficacy (CSSE) to expand the part of the Technology-to-Performance Chain (TPC). Technology-to-Performance Chain model expected to model and test the relationship between impact of the online banking system and computer security self-efficacy. This paper will attempt to answer the effectiveness of user perception of the security online banking that affect by the range of the computer security self-efficacy. After completion this study, the researchers believe that this study will provide the first step in understanding the applicability of social cognitive theory in the field of information system security.

1   Problem Solved

This study is done to see the significance and collision of computer security self-efficacy. However, the system is considered as difficult to influence users behavior. As we know that the poverty of security is one of the main obstacles in online banking. Other than that, this research have been identified the relationship between the computer security self-efficacy and information system effectiveness.

2   Related Work

2.1   Effectiveness of Information System

The result of the computer system have considered can be categorized as either related to fit or performance. Studies which will collect and analyze users perception of how well a technology usage will help user to accomplish specific task. Task-Technology-Fit is a key, which will understanding the effect technology on individual user performance (Al-Shawabkeh, Saudi, & Alwi, 2012). To measure the performance effect of computer system, the user evaluation is place on the task and technology to measure it.

2.2   Information System Utilization

The utilization of system modeled as a result that can be affect by the process of implementation. The utilization research is type of profiling that based on the users preference, interaction, attitude and behavior when perform some of action through online, for example online banking.

2.3 Technology-to-Performance Chain Model

Goodhue and Thompson (Goodhue & Thompson, 1995) suggested that a combination of Task-Technology fit and utilization into one model, which is Technology-to-Performance Chain model (TCP) shows in Figure 1. In order to have an impact of performance, Technology-to-Performance Chain model fit and utilize the task must made to support it. Moreover, gives an accurate image which are user task and technology that will affect the performance impact. To gain the positive performance impact, the technology must utilized and fit and Task-Technology Fit must be positive. Task-Technology Fit is very important in technology than the user interface, as if lacking on this, the performance impact will not be improve. Because of the inadequate of focus on task, technology acceptance model will not considered the base model for the research.
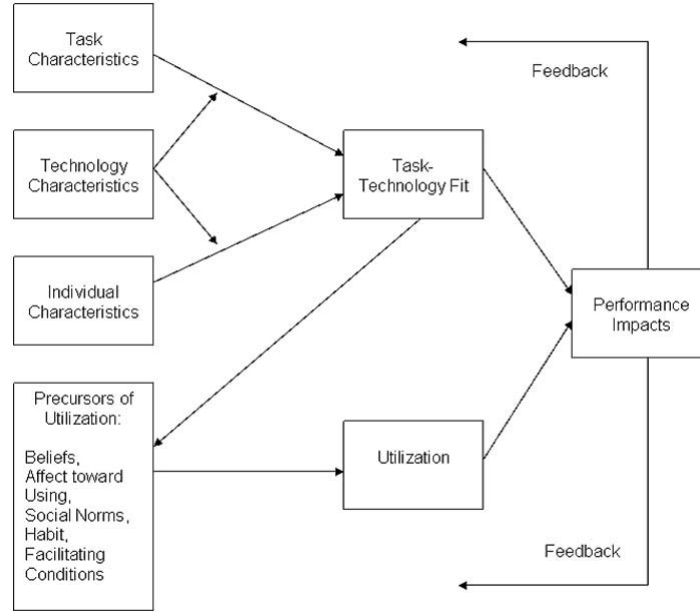

Figure 1: Technology-to-Performance Chain Model

2.4 Social Cognitive Theory

Self-efficacy is refers to an individual belief to express and produce specific performance and depends on the individual belief to perform a specific behavior with whatever things they want to do. Computer self-efficacy is a specific type of self-efficacy (Davis, Bagozzi, & Warshaw, 1989), Computer self-efficacy refer to a persons practice computer skills to accomplish the task. Computer self-efficacy have been involved in individual computing behavior to use computer to perform computer-based task, for example the use of information system and the individual perception regarding the security when perform online banking process.

3 Methodology

The key intention of this paper is to publish technology-to-performance chain model. However, computer security experts are interviewed to support literature and develop survey question that related to computer security self-efficacy. We constructed several questions in the questionnaire based on the objectives of the research. Therefore the quantitative research method used for current research data collection. During the data collection, Fit will not be collecting as it is an interaction. In this paper, validity and reliability are the two criteria used to test measure goodness. In order to do a data analysis, we will use the structural equation modelling of Analysis of Moment Structures (AMOS). For further empirical work, this research may be required for the purpose of validation as will increase or keep away the claims of other related studies. For theoretical work, this research wills contributions to the field of information system security.

4 Claimed Contributions

One of the solutions is the computer system technology use leads to improved outcomes, or motivation, or changes users behavior. Studies which gather and analyse users perception of how well a technology will help an individual to complete a specific task or set of tasks is defined as fit oriented. This research paper seeks to fulfill the security risk gap by integrating security stream of research into another system dominant stream. We found that the research paper result managed to investigate the constructs that has impact on usage of computer security system. To investigate the most important constructs that affects the Information System utilization and effectiveness.

5 Conclusion

This study shows that computer security self-efficacy observe usefulness, ease of use, user awareness and risk are the important determinants of online banking adoption. The system has successfully secured the computer security. Moreover, it is now possible to develop and validate a measurement instrument for measuring effect of computer security self-efficacy on secure information system effectiveness. This instrument will improve studies and list the suitability in similar secure information system contexts.

6 What we learned and future extension

We have learned the basic knowledge about the importance and impact of computer security self-efficacy that influence a users purpose to practice computer security. Through this paper, we know that the most important construct that affect the computer system utilization and effectiveness by including the Computer Security self-Efficacy (CSSE) construction in order to improve the Technology-to-Performance Chain (TPC) and then determine the relationship between the Information System utilization and Computer Security self-Efficacy (CSSE). For the future research, there are several important direction that this paper can be further explored such as extent computer system research into other established stream, social network and cloud computing.

References

Al-Shawabkeh, M., Saudi, M. M., & Alwi, N. H. M. (2012). Computer security self-efficacy effect: An extention of technology-to-performance chain model. In *Control and system graduate research colloquium (icsgrc), 2012 ieee* (pp. 64–69).

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science*, *35*(8), 982–1003.

Goodhue, D. L., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS quarterly*, 213–236.

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