

Combining readiness and success constructs for exploring the information system implementation performance: A model development

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Abstract. This study explained how to combine the technology readiness and success model of information systems (IS) in the context of exploring the factors that influence the readiness and success of IS implementation performance. As explained by many studies of IS, that most IS research models are developed by adopting, combining, and adapting previous studies. The researchers developed this model based on the input-process-output logic and professional and causal models of the IS success model. The developed model was structured in twelve variables and 42 indicators. The path influences between variables were presented by 28 links. Researchers broke down the model to the level of the assessment instrument in relation to the implementation of the research. However, the model development study may have limited in the used assumptions and understanding of the researchers, the study may contribute theoretically in terms of new model propositions. In addition, the development of the proposed model and the instrument for data collection may be a practical consideration point for further study.

1. Introduction

Implementation of Information Systems (IS) [1], in an institution is to improve work [2-4], management effectiveness in order to improve the organization's competitive advantage [5]. However, the question of whether all are ready to implement IS as a way to achieve organizational goals has not been answered. The issue of IS implementation performance [6-7], has been one of the interesting themes for researchers and practitioners in this discipline five decades ago. People have discussed the subject in the construction of the efficiency and effectiveness of computer-based businesses during the first decade.

The researchers have investigated several different themes, for example, utilization, satisfaction, readiness [8-11], acceptance [12-14], and success [15,16] in building in the next period. It can be seen clearly that the constructs are interrelated between several constructs combined with others to produce new ones. Readiness is known as one of the most important aspects of achieving successful IS [17],



implementation [18], in an institution. Understanding the role of these factors can help management from an organization to implement effective and efficient IS. Even so, the success of information systems (IS) is an interesting topic, not only for scholars and practitioners but also for managers.

The findings show that methodologically, the idea of "success" is mainly represented through individual benefits, and the DeLone and McLean model is widely used during that time [19]. The researcher developed this model based on input-process-output logic [20-22]. and procession and causal models of the IS success model. In summary, this study produced findings that could contribute practically to IS stakeholders from sample institutions; maybe also theoretically for researchers in connection with the proposition of the new model by combining readiness and construction success to implement IS. The two important points of this research implementation are related to the methodological, and the practical contributions. In short, the implementation in this study may be one of the alternative guidance for the others, in regard to enliven its use in IS research area.

2. Method

This model development study is carried out through several main stages [17]. First, preliminary studies are conducted by reviewing organizations, and people in IS studies, for example, readiness [8,9,17], and success themes [17,23,24]. In addition to reviewing the literature, this was also done to formulate a research program. The stages are then followed by the second stage modeling works. The development phase of this model was started by the first sub-stage to develop a set of assumptions based on the theories initiated and selected as followed figure 1.

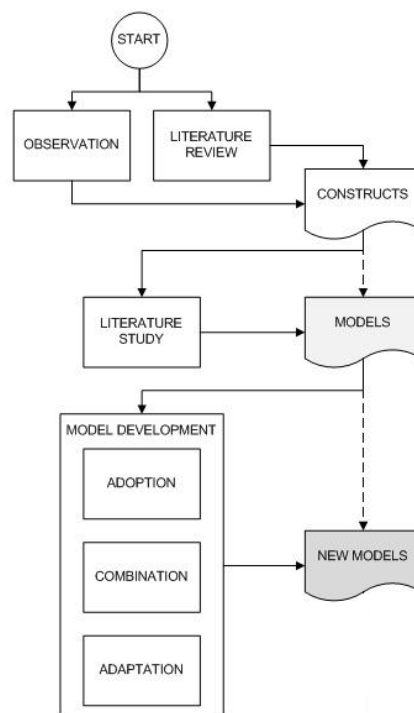


Figure 1. Model development stage.

Following the assumptions developed by the technology readiness model [8], from Parasuraman and Colby [25], and the IS success model from DeLone and McLean [26], were then adopted, combined and adapted in several sub-stages. The model that was developed was then broken down into instrument level research in the operationalization stage. Finally, the research model developed and the data collection instruments are then proposed in the reporting phase, in terms of implementation of the research.

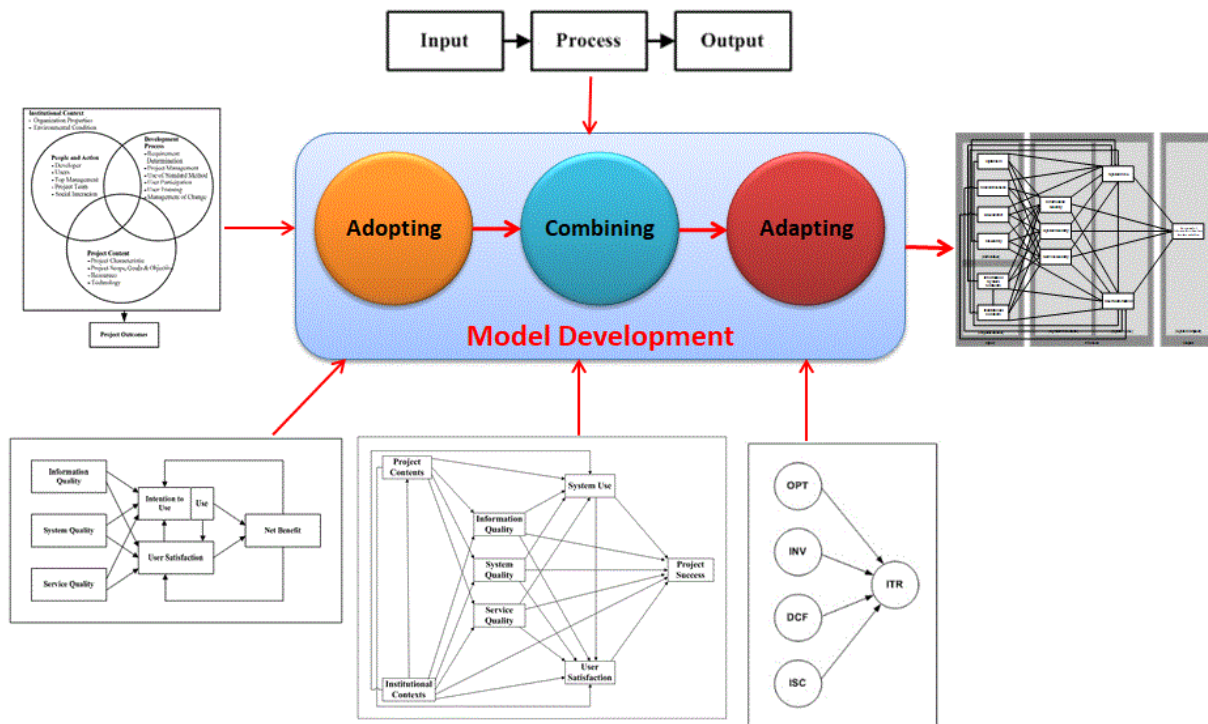


Figure 2. Model development.

3. Result and discussion

The developed model Luftman et al. [27], Putra et al. [28], was structured in twelve variables and 42 indicators. The path influences between variables were presented by 28 links. Researchers broke down the model to the level of the assessment instrument [4,17,26] in relation to the implementation of the research. However, the model development study may have limited in the used assumptions and understanding of the researchers, the study may contribute theoretically in terms of new model propositions [17]. In addition, the development of the proposed model and the instrument for data collection may be a practical consideration point for further study.

Figure 3 presents the proposed SISI (Success Information System Implementation) model. Model, the development was inspired by the research and development of previous models following the model the tendency of Mertz [29] and development Study of Belout and Gauvreau [30], which indicates that most IS research models tend to be developed practically using the previous model rather than based empirical study. In general, this model was developed by adopting, combining, and adapting technology readiness [8], IS project success [31,32], and success model IS [26], with twelve variables, namely, Optimism (OPT), Innovation (INV), Discomfort (DCF), Insecurity (ISC), Information Quality (INQ), System Quality (SYQ), Service Quality (SVQ), User Satisfaction (USF), Intention to Use (SYU), Institutional Context (ICO), Information System Content (ISO) and Success of Information System Implementation (SISI). The first four variables were adopted from The Technology Readiness Model, two variables adopted from the success model of the IS project and the other from the IS success model.

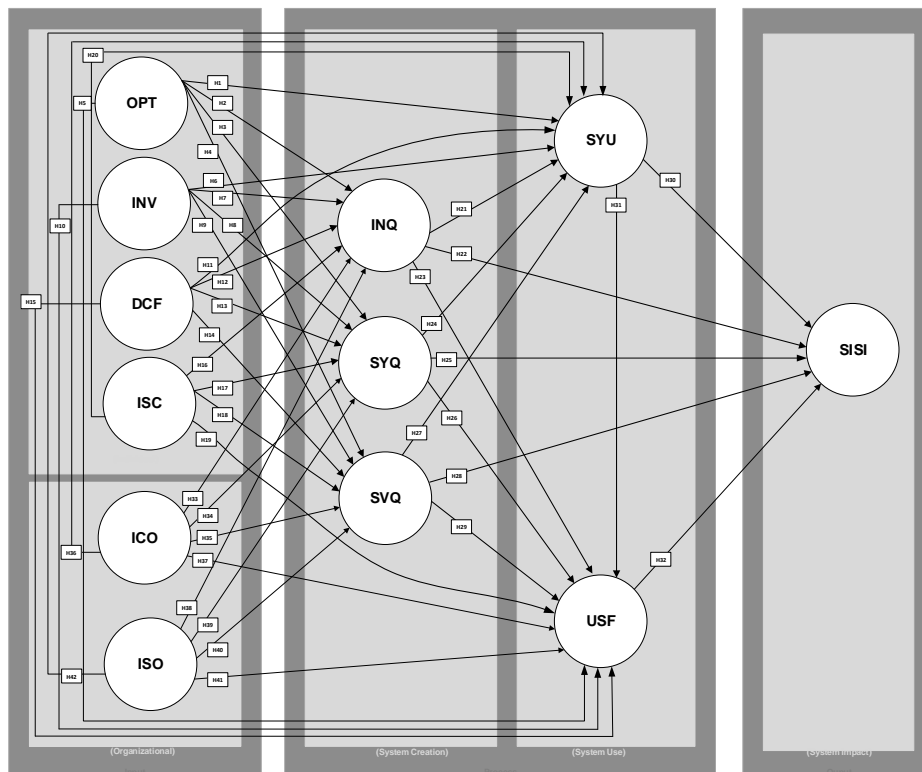


Figure 3. Proposed model.

4. Conclusion

The findings highlighted from this study are how explained by many IS studies, that most IS research models are developed by adopting, combining, and adapting previous studies. The researcher developed this model based on input-process-output logic and procession and causal models of the IS success model. First, the results of the descriptive analysis of six readiness and success profiles of IS present clearly that; readiness problems are thought to affect performance. In addition to the availability of resources, institutional factors can also be factors that influence IS implementation. Second, the overall results show a significant sequential influence between the readiness variable dimensions on the success variable dimension. The proposed model consists of twelve variables with 42 indicators.

In short, it can be seen that the two points mentioned above show a consistent tendency. In addition, these findings can contribute practically to IS stakeholders from sample institutions; maybe also theoretically for researchers in connection with the proposition of the new model by combining readiness and construction success to implement IS. On the other hand, even though efforts to implement the use of samples, data, methods, techniques, procedures, and tools inherent in this study may be a limitation of the research. Other studies with different limitations can also reveal findings that are different from this study, which is beyond the control of the researchers. Therefore, future research can use the research findings presented here taking into account the limitations of this study.

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