

## DISSERTATION INFORMATION

- Title: **The Information Systems Success from the Perspective of Information Technology Business Value**
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### **Abstract**

There are still “*phase differences*” between the IS and the business needs in organizations. According to DeLone & McLean (2016), there are still several relationships amongst components of IS success that have not been fully investigated. Nonetheless, numerous theoretical gaps of the IS' success in creating IT business values are not entirely exploited. On the other hand, the theory of IT business value needs to be customized in order to attain and sustain the IS' success. Hence, researching the IS success from the perspective of IT business value is a necessary study in the trend of modern IS. The research objectives of this topic are reviewing and investigating the IS success from the perspective of IT business values, and proposing and testing the relationships amongst components in a structural model of IS success from the aspect of IT business value within the context of the Enterprise Information Systems in organizations.

This work is designed by following these steps: (1) *Scale design*: from the theoretical basis and related works to form a draft scale. Qualitative preliminary research is effectuated via expert interviews and group discussions to adjust the draft scale. The draft scale is modified to form a temp scale for preliminary evaluation. (2) *Preliminary evaluation*: with quantitative preliminary research method: (i) *intraclass correlation coefficient*; (ii) *reliability analysis*; and (iii) *exploratory factor analysis*. The quantitative preliminary research is sampled by non-probability - quota sampling

methods. For each organization, the number of samples was taken at different levels (individual and organizational). (3) *Formal evaluation*: with formal quantitative research method, including (i) *intraclass correlation coefficient*; (ii) *exploratory factor analysis*; (iii) *reliability analysis*; (iv) *confirmatory factor analysis*; (v) *structural equation modeling*; (vi) *bootstrap analysis*; and (vii) *multi-group structure analysis*. A total of 3,330 survey samples of 450 organizations from 3,346 responders were obtained. The formal quantitative research is sampled by non-probability - quota sampling methods. For each organization, the number of samples was taken at different levels: end-user (individual); experts or management at the IT or IS department; management levels (low and middle); and senior managers (organization). In the exploratory factor analysis, two observed variables are excluded from the scale. In the confirmatory factor analysis, seven observed variables are excluded from the scale. All 44 observed variables of 10 factors are used for the structural equation modeling and bootstrap analysis. The research results revealed that 11 out of 13 hypothesis groups with 26 out of 28 hypotheses based on the structural equation modeling are supported, and they also show that one out of two hypothesis groups with two out of four hypotheses based on the multi-group analysis are supported.

### **Contribution**

The research results indicate in contributing to theory contributions and refreshing to the method as follows: (1) *Contributing to the theory*: (i) The research model of IS success from the perspective of IT business value is different from the D&M models of DeLone & McLean (1992; 2002; 2003), other extended models of IS success such as these models of Seddon (1997); Gable, Sedera & Chan (2008), and other related studies such as these studies of Petter, DeLone & McLean (2013) and Petter, Barber & Barber (2021). (ii) The conceptual components of the model are integrated and mapped via the theory of IT business value of Soh & Markus (1995) and Markus & Tanis (2000); Melville, Kraemer & Gurbaxani (2004), other extended models of IT business value such as these models of Schryen (2013); Sabherwal & Jeyaraj (2015), and other related theories such as these theories of Bharadwaj (2000); Aydiner et al.

(2019); Yoshikuni, Galvao & Albertin (2021). (iii) The difference in the *organizational characteristics* with *type of organization* in the role of mediator on the paths from other factors to firm performance is also a new contribution of this work. (iv) Research results also pointed out many new paths in the model that were previously theoretical gaps, and there are not many empirical studies. Specifically, for the component of *resources* in the IS success, these paths from *IT infrastructure* and *human capital* to *performance expectancy* and *knowledge integration*; these paths from *human capital* to *system quality*, *information quality* and *IT organization service quality*. For the component of *system initialization* in the IS success, the path from *performance expectancy* to *user satisfaction*; these paths from *knowledge integration* to *user satisfaction* and *IS continuance usage*; these intrinsic paths amongst quality factors include *system quality*, *information quality*, and *IT organization service quality*; these paths from *performance expectancy* and *knowledge integration* to *firm performance*. (2) *Refreshing to the method*: (i) The scale unit for a sample unit is calculated by taking the Likert average value of the individual samples, together with the Likert value of an organizational sample. (ii) Data collection and analysis are done at two distinct individual and organizational levels. Depending on each conceptual component of the research model, samples are conducted at different levels.

Furthermore, the research results help the author to propose factual solutions via administration implications that relate to the IS success from the perspective of IT business value. Finally, the topic limitations of the research and the future work directions are also presented in detail.

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