The Role of IS-enabled Capabilities in Corporate Sustainability: Evidence from China

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A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

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August 2011
ABSTRACT

As the natural environment deteriorates in recent years, many companies consider the practice of corporate sustainability as the best option of competitive strategies to help them not only to reduce global warming with complying local government regulations but also to achieve a competitive advantage for organizations. Information systems (IS), which integrates people, process and information technologies together, is said to serve as an enabler for organizational capabilities (we call it as IS-enabled capabilities) that has a direct impact on the practice of corporate sustainability. The aim of this thesis is to gain a better understanding of the role of IS-enabled capabilities in a company’s corporate sustainability practice. In particular, this study considers corporate sustainability is represented by three dimensions; namely, social, economic, and environmental developments.

This study examines the above objective in three procedural steps. The first step is to examine the prerequisite requirement of our proposed model, which is to verify if IS-enabled capabilities have direct relationships to each of the three dimensions of corporate sustainability. The second step is to decompose our proposed model into three separate sub-models – we label them as mediating models – with each one is to examine the “trade-off” effects between a pair of the three dimensions when the construct of IS-enabled capabilities is used as an influence factor on them. The third step is to verify our proposed model by using the outcome of mediating models to serve as our input components for our research models. Our research model is thus derived by combining the results from three mediating models so that we could examine the effects of IS-enabled capabilities on the three dimensions of corporate sustainability.

We verify our research model by using a data-set collected in China. A total of 314 questionnaires are collected from Chinese managers who enrolled their MBA classes in Nanjing University in the Southeast of China.

We develop the measurement items of our constructs through an extensive literature survey. All measurement items undergo vigorous tests of factor analysis and construct validity. At the end, we identify that the proposed construct of IS-enabled capabilities can be represented by two newly constructs; and we label them as IS-enabled innovative learning (ISEIL) and IS-enabled system competitiveness (ISESC).

We test our proposed model by using statistical technique of structural equation modelling (SEM). We confirm that IS-enabled capabilities – which are represented by ISEIL and ISESC – have direct effects on each of three dimensions of corporate sustainability. We also confirm that both social and environmental developments are two dimensions that mediate the relationship between IS-enabled capabilities and economic development.

To conclude, this thesis makes two main contributions. First, it is the first study confirming a set of measurement items for constructs of the IS-enabled capabilities and corporate sustainability. These refined measurement items render
as a useful measurement tool for future researches. Second, it is also the first study verifying empirically the influence of IS-enabled capabilities on the practice of corporate sustainability.
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