

## Chapter 2

# Theoretical Foundations for Information Systems Success in Small- and Medium-Sized Enterprises

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### ABSTRACT

*Small and medium-sized enterprises (SMEs) adopt Information Technology (IT) and Information Systems (IS) in order to achieve business goals and obtain net benefits. However, adopting IT/IS into an existing organizational structure is a complex and risky task. Many investments in IT/IS, outsourced as well as in-sourced, never fully reach the intended objectives and are therefore considered as not being successful. In this chapter, the authors focused on IS success in small and medium sized-enterprises (SMEs) in order to find theoretical foundations. They explain four well-known theories, often used in IS research, which constitute the basics of their thinking. These theories are the technology acceptance model (TAM), the theory of planned behavior (TPB), the DeLone & McLean IS success model (D&M), and the transaction cost economy (TCE) model. The authors weaved the constructs of these theories into a compound framework that delivers explanatory and predicting power for the successful adoption of IT/IS in SMEs. This framework is also consistent with the nomological IS network established by Benbasat and Zmud (Benbasat & Zmud, 2003). In order to validate the framework, the authors examined the extent to which the theoretical model could provide support for the Cobit framework, often used by practitioners as an IT governance framework, and also suitable for SMEs. Findings show that the framework offers surprising coherence and proposes a strong theoretical foundation for the normative directions of the methods used in Cobit by IT practitioners.*

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## INTRODUCTION

Small- and medium-sized enterprises (SMEs) adopt information technology (IT) and information systems (IS) in order to achieve business goals and obtain net benefits. However, adopting IT/IS into an existing organizational structure with a lack of rigid business processes is a complex and risky task. Many investments in IT/IS, such as enterprise resource planning (ERP) or customer relation management (CRM), outsourced as well as in sourced, never fully reach the intended objectives and are therefore considered as not being successful. Despite our knowledge of IT/IS implementation, a lot of IT projects still fail (Avison, Gregor, & Wilson, 2006; Bartis & Mitev, 2008; Bharadwaj, Keil, & Mahring, 2009; Conboy, 2010; Devos, Van Landeghem, & Deschoolmeester, 2008; Group, 2004). Past and recent research has also revealed that SMEs tend to lean strongly on external IT/IS expertise for the adoption of IT (Dibbern & Heinzl, 2009; Thong, Yap, & Raman, 1996; Yap, Soh, & Raman, 1992). However, outsourcing IT/IS greatly increases the complexity of governing these endeavors and brings in new risks and burdens for IS success (Aubert, Patry, & Rivard, 2005; Aubert, Rivard, & Patry, 2004; Natovich, 2003).

In this chapter, we have focused on IS success in SMEs in order to find theoretical foundations. We have explained four well-known theories, often used in IS research, which constitute the basics of our thinking. These theories are the technology acceptance model (TAM), the theory of planned behavior (TPB), the DeLone & McLean IS success model (D&M) and the transaction cost economy (TCE) model. We have designed a nomological network for each theory and brought the constructs into concert, in a compound framework that delivers much more explanatory and predicting power for the successful adoption of IT/IS in SMEs than each theory could do separately. Our framework takes advantage of the symbiotic effect of combining the aforementioned theories, but is also

consistent with the existing IS network established by Benbasat and Zmud (Benbasat & Zmud, 2003).

This framework was empirically validated and tested by mapping the theoretical constructs with the relevant IT processes of the Cobit-model for SMEs (“Cobit Quickstart 2th Edition,” 2007; *Cobit v.4.1*, 2007). Cobit is a well-known IT governance model and is used by IT practitioners, even in SMEs (“Cobit Quickstart 2th Edition,” 2007).

The next section is an overview of the literature on the relationship between SMEs and IT/IS. This analysis reviews the conceptual foundations of small organizations and their behavior and actions towards information systems. Next, we give a short overview of the concept of IT governance and its relevance for SMEs. We then present an outline of our theoretical framework. Although the use of well-developed theories in IS research is now common practice, we conceptualize a compound theoretical model, woven out of existing IS and non-IS theories. We present the empirical findings in Section 5. Section 5 also includes our conclusions and a summary of the main points raised by this research.

## SMEs AND IT/IS

Although small- and medium-sized enterprises (SMEs) are a substantial part of the business environment and a major component of most economies throughout the world, IS research has primarily focused on large corporations (Lee, Kim, Choi, & Lee, 2009; Snider, da Silveira, & Balakrishnan, 2009; Wang & Ahmed, 2009). Research on IS success in small businesses has been largely disregarded and has mainly been conducted in manufacturing enterprises (Harland, Caldwell, Powell, & Zheng, 2007; Olsen & Saetre, 2007).

Although research and literature have highlighted the definitional problems of SMEs, it has greatly ignored the idiographic nature of a small business. Companies differ in size, location, ownership structure, financial performance, maturity,

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