The Impact of IT Resources on the IT Business Value: Evidence From a Systematic Literature Review

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ABSTRACT

Recently, the Resource-based View (RBV) attracts more attention in IT business value research, as it serves as a theoretical framework for the identification of IT resources impacting firm performance. Although numerous empirical studies applying the RBV can be found, systematic research structuring the obtained knowledge is hardly available. Therefore, the authors conduct an evidence-based literature review to structure and consolidate empirical evidence from studies using the RBV as a theoretical foundation. The authors illustrate how different IT resources can be distinguished and classified by considering their operationalization. With the means of a research map, they illustrate the findings and evidence, pointing out contradictory results of how different classes of IT resources affect the IT business value in terms of the competitive advantage. The authors then discuss direct effects of IT resources on the competitive advantage as well as research gaps. Finally, they present implications regarding the RBV in IT business value research.

Keywords: Competitive Advantage, Firm Performance, IT Business Value, IT Resources, Resource-Based View (RBV)

INTRODUCTION

The discussion on IT business value continues as a complex and widely branched discourse in the discipline of information systems research (ISR). The state of knowledge shows highly complex interdependencies between the deployment of IT and its effects on the business value which is essentially influenced by IT governance (Weill & Ross, 2004). However, nowadays it is quite evident that IT can deliver value to the business and that this value can be best observed indirectly (Kohli & Grover, 2008; Schryen, 2010). Nevertheless, there are only few approaches available explaining why IT and predicting whether a specific enterprise IT can create business value. This entails the challenge to find suitable explanations and appropriate theories to gather more comprehensive knowledge herein. Recently, the Resource-
based View (RBV), stemming from the area of strategic management research, increasingly attracts attention as a suitable tool to examine the value delivered by IT resources (Melville et al., 2004; Wade & Hulland, 2004). The RBV allows the identification of and prediction for IT resources which have the ability to create a competitive advantage for a specific firm. Regarding this Wade and Hulland (2004) notice: “The resource-based view of the firm is a useful tool for researchers to understand if, and how, particular parts of the firm affect the firm at large. […] the RBV provides a way for IS researchers to understand the role of information systems within the firm“. Since IT governance is a complex “[…] organizational capacity exercised by the Board, executive management and IT management […] (De Haes & van Grembergen, 2004), which is responsible to steer, coordinate, and control IT resources efficiently and effectively to generate value to the business, the RBV seems to be a promising approach in IT business value research as an important part of IT governance research as well as in enterprise governance of IT (Van Grembergen & de Haes, 2009) to get a deeper understanding how and why IT can generate a competitive advantage.

So far, several researchers have used the RBV to theorize about the IT business value, since it was developed and published by Barney in 1991. However, every good theory has to be empirically justified to show its usefulness (Hevner et al., 2004). While there are already numbers of quantitative empirical studies using the RBV as theoretical guidance, systematically consolidated evidence can hardly be found in this regard (Schryen, 2010). This is a major research gap, since a structured literature review concerning a certain domain, classifying its results, and compiling its evidence can be very valuable (vom Brocke et al., 2009; Webster & Watson, 2002). First, such a review supports the progress of scientific knowledge, as it serves as a presentation of the latest state of the art in the corresponding field of knowledge and helps to easily identify research gaps. Second, structured reviews usually have a major impact on applied disciplines like medicine (evidence-based medicine), for instance, as they help transferring scientific knowledge into practice more effectively (Fettke et al., 2010; Goeken & Patas, 2010). Third, the compilation of empirical evidence can support and inform the design process and its results within the design science paradigm (Fettke et al., 2010; Gehlert et al., 2009; Gregor, 2009; Hevner et al., 2004).

Based on these arguments, our research objective is to structure and analyze empirical evidence in IT business value research which is theoretically guided by the RBV to find out how different IT resources affect the IT business value in terms of a competitive advantage. By doing so, we will show which IT resources effecting directly the competitive advantage are most investigated and where research gaps can be found. To identify the desired empirical evidence, we perform a structured literature review. Against this background our work can be distinguished from other important literature reviews in the domain of IT business value research (e.g., Kohli & Grover, 2008; Melville et al., 2004; Schryen, 2010) for the following three reasons:

1. We use a theory, namely the RBV, as a guiding framework for our literature review.
2. Our approach goes beyond the analysis of IT resources serving as constructs, since we explicitly take the operationalization of all constructs into account to build classes of IT resources more accurately.
3. We use a structured review process adopted from evidence-based medicine as research approach to focus on available empirical evidence on the subject matter (Goeken & Patas, 2010).

The paper is structured as follows: In the next section we give a brief overview on the RBV and its adoption in ISR. Subsequently, we proceed with the description of our research process and describe its instantiation as well as the classes of IT resources. In the fourth
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