

Chapter 13

Making Sense of Information Technology Investment on Type of Supply Chain Governance

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ABSTRACT

This study makes sense of how information technology (IT) investment supports and relates to SCG and its conceptions (transactional and relational). The authors conducted a qualitative research using exploratory case studies in two large Brazilian companies and two major suppliers. Top supply chain executives of these companies were interviewed. We found differences in how these companies invest in IT to govern their supply chain. In the first case, we identified a more relational type of governance that was mainly based on the company's relationship with its suppliers which was driven by the desire to achieve a greater market share. Here IT investments were used to improve sales and enable operations planning projects where all systems were being integrated. In the second case, we identified transactional governance as the predominant form. This reflects the presence of a great number of suppliers, low partnership and low supply on time delivery rate. Thus, investments on e-procurement and ERP are being made to achieve more relational governance through integration with their suppliers.

INTRODUCTION

Information is the driver of corporate decision on all levels and activities (Kache and Seuring, 2017). However, to McAfee and Brynjolfsson (2012) the volume of information is growing at a fast pace. This situation is a challenge to companies to make sense the most relevant information required for managing the business and

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the supply chain. Thus, the development and continuous success of a supply chain is directly dependent on the IT used by companies (Ross, 2011). The use of these technologies often enables the creation, support and expansion of competitive advantages for these organizations (Sohal, Moss & Ng, 2001). IT becomes important for its ability to support an increase in communication changing the way supply chains operate, enhancing trust, collaboration and commitment among the members of the supply chain (Ghiassi & Spera, 2003).

Of key importance in the success of a supply chain are the global and long term benefits for all supply chain members. These may be achieved through collaboration and shared information, which may be facilitated by IT used in the supply chain (Gunasekaran & Ngai, 2004). IT use in the supply chain today goes beyond the operational aspects, a notion that is present in various studies of supply chains (Ketchen & Hult, 2007). Current studies embrace additional aspects such as trust, commitment, and power, among other features. Recent studies have highlighted the concept of supply chain governance (SCG) (Raynaud, Sauvee & Valceschini, 2005; Ruben, Boselie & Lu, 2007; Zhang & Aramyan, 2009; Bai, Sheng & Li, 2016; Shou, Zheng & Zhu, 2016; Wacker, Yang & Sheu, 2016).

SCG is viewed as covering more elements than those analyzed in supply chain management (SCM). Governance, an issue that has been more studied in the past several years, (Jain & Dubey, 2005), is considered one way to analyze inter-organizational relationships as a multidimensional phenomenon manifested in the structures and process of companies. The previous literature also implied there are several dimensions of governance, but none has precisely defined this concept as distinguishable multiple components (Wacker, Yang & Sheu, 2016). Chen and Paulraj (2004) pointed out the need for examining the elements of SCG interactively. This will enable the identification of the benefits common in the supply chain because too many studies analyze these elements in isolation (Fawcett, Ogden, Magnan & Cooper, 2006; Gereffi, Humphrey & Sturgeon, 2005; Veen-Dirks & Verdaasdonk, 2009; Wathne & Heide, 2004). Furthermore, there are many critical elements, such as IT, that are necessary for succeeding in the supply chain (Chen & Paulraj, 2004).

There are several studies analyzing IT in SCM (Zhang, Donk & Vaart, 2011). However, only a few studies combined SCG and IT (Bitran, Gurumurthi, & Sam, 2006; Gosh and Fedorowicz, 2008). Bitran, Gurumurthi and Sam (2006) argue that IT comes into play as an enabler and has led to fundamental changes in supply chain behavior and further to the changes in their governance. Gosh and Fedorowicz (2008) pointed out that IT is used for coordination activities and for information sharing among supply chain members, depending on the existence of a cohesive set of communication-enhancing governance processes. Kache and Seuring (2017) found some challenges to be considered of prime relevance from a supply chain perspective, namely “governance and compliance,” “integration and collaboration,” and “IT capabilities”. Thus, it is necessary to analyze and make sense of how IT investment is being used in SCG activities and processes.

According to Ruiz-Torres, Mahmoodi and Ayala-Cruz (2012) the last two decades have witnessed a change in the role of Latin American countries in the global economy. As a consequence their greater role, Latin American businesses and their supply chains have gained prominence. These authors carried out a review of the supply chain literature about Latin American countries identifying Brazil as the main subject of study. This could be explained by the fact that Brazil is experiencing its fastest economic growth in almost two decades (Businessweek, 2010), achieving sixth place in global economic ranking in 2011, overtaking the U.K (Forbes, 2011). Moreover, according to Forbes (2012), 33 companies from Brazil gained presence on its list the previous year. In emerging markets, like Brazil, companies may encounter contract ineffectiveness, thus the contracts are an important instrument to be considered in supply chain to help firms achieve efficient transaction outcomes and enhance the capability of joint problem solving (Shou, Zheng & Zhu, 2016). Thus, from a contract view, the aim of this study is to understand the most prominent SCG conception (relational

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