Supply management capabilities, routine bundles and their impact on firm performance

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Despite the generally positive contribution of supply management capabilities to firm performance their respective routines require more depth of assessment. Using the resource-based view we examine four routines bundles comprising ostensive and performative aspects of supply management capability – supply management integration, coordinated sourcing, collaboration management and performance assessment. Using structural equation modelling we measure supply management capability empirically as a second-order latent variable and estimate its effect on a series of financial and operational performance measures. The routines-based approach allows us to demonstrate a different, more fine-grained approach for assessing consistent bundles of homogeneous patterns of activity across firms. The results suggest supply management capability is formed of internally consistent routine bundles, which are significantly related to financial performance, mediated by operational performance. Our results confirm an indirect effect of firm performance for ‘core’ routines forming the architecture of a supply management capability. Supply management capability primarily improves the operational performance of the business, which is subsequently translated into improved financial performance. The study is significant for practice as it offers a different view about the face-valid rationale of supply management directly influencing firm financial performance. We confound this assumption, prompting caution when placing too much importance on directly assessing supply management capability using financial performance of the business.

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1. Introduction

The field of operations management increasingly uses the resource-based view (RBV) to explain how strategically managed interactions with suppliers contribute to competitive advantage (e.g., Hult et al., 2003; Chen et al., 2004; McIvor, 2009; Cao and Zhang, 2010; Allred et al., 2011; Squire et al., 2009). These studies share a core proposition of the RBV that firms augment their resource endowments by co-developing capabilities with suppliers, as well as engaging in sourcing. This study contributes differently to the existing stream of studies of supply management grounded in the RBV, most of which explore the pivotal role of dynamic capabilities between firms to develop what Helfat et al. (2007) term “evolutionary fitness” – a learning process by which firms change the way they use their resource base. Chen et al. (2004) identify a long-term orientation, limited numbers of key suppliers, and communication as key routines which contribute to the building of supply management capability. Despite the generally positive contributions identified for capability development between firms there is little detailed attention paid to empirically testing internal supply management routines. Das and Narasimhan (2000), Chen et al. (2004), and Lawson et al. (2009) argue that a more comprehensive understanding of internal as well as inter-firm supply management capabilities is required, whilst González-Benítez (2007) and Narasimhan and et al. (2001) conclude that alternative conceptual approaches should be explored to fully understand the detailed nature of firm capabilities. As research using a routines-based approach is still embryonic we seek to encourage research along two lines of inquiry: (1) How can routine supply management capabilities be conceptualised so repetitive organizational actions be separated from idiosyncratic practices? and (2) How do supply management routines and capabilities contribute to firm performance?
Helfat and Peteraf (2003), Winter (2003), and Zahra et al. (2006) note that firms must be technically fit to leverage “here and now” opportunities. If current capabilities for product or service delivery are mediocre then less of an advantage accrues. Prior research indicates carefully developed routines increase revenue (Peng and York, 2001), reduce the cost of providing services to customers (Kaleka, 2002), and postive overall contributions to performance at the process and firm level (Drnevich and Kriauciunas, 2011). In the context of supply management it is therefore useful to consider how a finely nuanced understanding of core capabilities and routine bundles will contribute to firm performance. This approach will therefore need to investigate the micro foundations of capabilities as, according to Peng et al. (2008), this approach contributes to opening up the black box of the RBV.

Our general approach is supported by Lawson et al. (2009), who argue that while strategic supply management can create alignment with long-term business strategy, it is the regularized deployment of appropriate routines which create the stability to exploit a competitive advantage. Compared with existing theoretical perspectives we disaggregate supply management capabilities into respective routines bundles, broadly similar to the approach used by Peng et al. (2008) in their study of innovation and improvement capabilities.

Taking a routines-based approach initially requires making clear the variety of definitions of purchasing capabilities, competences, and practices. Precision about the nature of a capability and routines lays the foundation for a clear-cut differentiation between antecedents to, descriptions of behavioural patterns, and strategic outcomes from the deployment of particular patterns of organizational activity.

Capabilities are conceptualised as bundles of interrelated yet distinct routines which evolve over time (Helfat and Peteraf, 2003), and are recurrent processes by which firm resources get utilised to perform a particular activity (Amit and Schoemaker, 1993). An organizational capability therefore is a high-level routine which, together with the implementing inflows, confers upon an organization’s management a set of options for producing significant outcomes of a particular type (Felin et al., 2012). We define supply management capabilities as bundles of routines comprising ostensive and performative dimensions recurrently utilising resources, with the aim of creating value from supplier interaction. According to Parmigiani and Howard-Grenville (2011) the performative might be thought of as a routine in practice, whilst the ostensive is the routine in principle. Routines are defined by Teece et al. (1997) as the way things are done, or the patterns of activities and when bundled they form capabilities. They are “repetitive, recognizable patterns of interdependent actions, carried out by multiple actors” (Feldman and Pentland, 2003; 95).

Our study is the first to separate out ostensive and performative patterns of routine bundles with supply management capability as a second-order latent construct. This approach is different because of the focus on cross-functional, repetitive routines forming the core of supply management activity, rather than measuring groups of practices which, according to Parmigiani and Howard-Grenville (2011), may be too contextually dependent, idiosyncratic or too narrowly defined around observable practices alone. We seek to examine those routines “stitching together multiple participants and their actions forming patterns repeated across organizations that people can recognize and talk about” (Pentland and Feldman, 2005; p. 795). As these capabilities are likely to be path-dependent they justify ongoing managerial attention to avoid firm underperformance (Drnevich and Kriauciunas, 2011).

This paper is organised as follows. In the next section we specify the theoretical nature of a supply management capability enabling us to review and extend theory by specifying a second-order latent variable model and the associated measures. We then review and discuss the results of questionnaire survey research to test the model using structural equation modelling. The paper concludes with theoretical and managerial implications, this study’s limitations and future research directions.

2. Theoretical foundation

‘Routine’ and ‘capability’ get used inter changeably in supply management research to describe various internal practices and patterns of inter-firm interaction, but the field of strategic management is specific in their use to describe different units of analysis for organizational activity. The current lack of precision reflects in the breadth of conceptualisations for supply management capabilities. There is little evidence drawing together a more coherent conceptualisation making it difficult to compare the impact of supply management capabilities on a firm’s performance (see Table 1 for a summary of definitions of various constructs). Looking across the various studies two approaches predominate, with each influencing differently the way in which capabilities get measured.

González-Benito’s (2007) approach seeks to assess the impact of an outcomes-based competence on performance. This method of studying purchasing strategy conceptualises purchasing capabilities using a modified version of the Vickery (1991) theory of production competence. González-Benito (2007) conceptualises purchasing capabilities in a retrospective, output-based sense using proxies of performance such as quality, cost, flexibility, dependability, and delivery with the firm as the unit of analysis. Krause et al. (2001) advocate a similar approach, using the term “competitive priorities” to assess the key aims of supply management retrospectively. By assessing purchasing decisions through the impact of the level of strategic integration for the function, Carr and Smeltzer (1997) use a related means of evaluating the strategic involvement for purchasing in the firm in alignment with supplier strategies. The principal mechanism unifying these approaches is the measurement of the outcomes from a particular capability which is useful to test retrospectively for fit between the business unit and supply management strategy through measuring the firm’s operational performance objectives. Although useful for testing fit, such approaches treat capabilities as “black boxes”. Such an approach does not allow for assessing how particular routines form into capabilities, or how routines contribute to organizational goals. A more detailed unit of analysis at the routines-based level is therefore necessary so repeated and reliable patterns of action can be disentangled from those which are ad hoc or cause the firm to alter its resource base.

In contrast, the practice-based approach specifies explicit purchasing practices to establish a purchasing function’s task-focused performance. In a sample of manufacturing firms Das and Narasimhan (2000) empirically test 19 purchasing practices which are grouped into what they term competences (supply base rationalisation, buyer–supplier relationship development, and supplier evaluation), as measures to assess the impact of particular practices on business performance. Baier et al. (2008) extend this work by testing the interaction effect of strategic orientation on an extended group of purchasing practices. Both studies rely on specifying discrete activities which are implemented by the purchasing function, which is different to assessing generic objectives which result from practices. Although a number of studies (Narasimhan et al., 2001; Ellram et al., 2002; Chen et al., 2004; Das et al., 2006) adopt the practices-based approach, the results of the research are inconclusive.

Reflecting on the mixed results of their study, Ellram et al. (2002) question the specification of practices as a proxy taxonomic classification of supply management activities. They doubt if specifying one comprehensive set of specific practices is able to cover all supply management scenarios from firms across diverse sectors. Also, in order to discern patterns of behavior it will be
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