

Supply chain order fulfillment efficiency: Its drivers, moderators and performance outcomes

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Summary Statement

We present the results of a study focusing on the role of knowledge resources and organizational learning as drivers of supply chain order fulfillment efficiency and its subsequent impact on financial performance. We also examine the moderating role of environmental uncertainty, technological turbulence and competitive intensity on these relationships. These associations are theoretical based on knowledge-based view, organizational learning and industrial organizational theory. All associations were confirmed leading to significant theoretical and managerial implications.

Competitive Short Paper

Competing in today's dynamic and volatile business environment, supply chains (SCs) need to capitalize on both knowledge and their learning competences to minimize risks to improve the efficiency of their operations (Yang et al., 2019). In fact, a number of scholars (e.g., Flothman et al., 2018; Kaur et al., 2019; Yang et al., 2019) have emphatically stressed the need to examine the strategic role of knowledge-based resources and capabilities in SCs to be able accommodate the challenges of the rapidly changing business environment and achieve superior performance outcomes, which is something missing from the extant literature.

In response, we present the results of a study that conceptualizes knowledge resources and organizational learning (OL) capability as higher-order construct, representing key factors driving supply chain (SC) order fulfillment efficiency (measured in terms of speed, quality, cost, and flexibility) that subsequently helps to improve financial performance. The relationship of both knowledge resources and OL, and order fulfillment efficiency is also hypothesized to be moderated by the level of environmental uncertainty, technological turbulence, and competitive intensity surrounding the SC.

This conceptualization is anchored on three theories, namely: (a) *Knowledge-based View*, which views knowledge as a foundational value-creating source since it enhances established and current resources and capabilities and helps to learn faster than rival firms (Grant, 1996; Hult et al., 2004); (b) *Organizational Learning Theory*, which posits that "organizational learning is the development of new knowledge or insights that have the potential to influence behavior" (Slater and Narver 1995: 63); and (c) *Industrial Organization Theory*, which suggests that a favorable strategic position of the firm depends on industry-specific elements that influence that way organizations adjust their structure to achieve superior performance (Mackelprang et al., 2017; Porter, 1980).

To test the hypothesized associations between constructs of our conceptual model and based on a randomly selected sample, we received 215 completed questionnaires (45.5% response rate). Data were analyzed using structural equation modeling, based on the EQS program. The results of the analysis gave support to most of the hypothesized relationships between

constructs of the conceptual model. Specifically, knowledge resources and OL were found to positively impact SC order fulfilment efficiency which in turn had a favorable effect on boosting SC's financial performance. Environmental uncertainty and competitive intensity strengthened the association between the driving forces and order fulfilment efficiency. Technological turbulence boosted the link between knowledge resources and order fulfilment efficiency, but had no significant effect on the relationship between OL and order fulfilment efficiency. Finally, SC age was found to have a control effect on financial performance.

Theoretically, our findings provide a holistic approach to understand the crucial role of knowledge and OL on SC chain order fulfilment efficiency, by combining complementary theories focusing on organizational resources/capabilities and external environment environmental conditions. *Managerially*, our study highlights the crucial role of investing in knowledge and OL to improve SC order fulfilment efficiency in an uncertain, technologically turbulent, and competitive environment, that will subsequently lead to improved financial results.