

A MODEL OF IT-ENABLED INTEGRATED SUPPLY CHAIN CAPABILITY

Karthik N. S. Iyer, University of Northern Iowa, United States

ABSTRACT

Supply Chain Management (SCM) as a strategy for competitive advantage, focuses on developing sustainable capabilities through integrating and managing critical cross-firm business processes. The result is coordination of various flows (product, information, and cash) and functions between firms in the supply chain. Besides, modern SCM has become the new frontier for advances in information technology (IT) in developing process capabilities (Premkumar, Ramamurthy, and Saunders 2005). This research therefore advances the notion that supply chain firms rely on higher-order integrated process capabilities as intervening mechanisms to derive performance benefits from leveraging IT resources.

Based on the resource-based view and process perspective the paper develops a conceptual framework. The framework suggests a causal linkage between IT competencies and higher-order capabilities, for realizing financial performance improvements. We posit that 'leanness' and 'agility' supply chain capabilities capture the IT-enabled integrated process improvements at the end-customer interface, to provide critical sustainable competitive advantage and enhanced firm performance. Current literature implores investigation of such integrated process capabilities that create value in the marketplace (e.g., Rai, Patnayakuni and Seth 2006). Besides, contingency theory suggests that context interacts with strategy to influence capability development and ultimately predict performance. Uncertain and dynamic environmental contexts become even more critical for investigation in supply chains due to the complex interorganizational interactions. This research incorporates three key context variables, demand unpredictability, technological turbulence, and competitive intensity, to better explain the relationship between supply chain IT and the higher-order capabilities. The context variables in the model have well-documented influence on strategic decisions and performance (Kessler and Chakrabarti 1996).

The paper contributes towards filling a literature shortcoming, by proposing that integrated supply chain capabilities leverage on lower level IT competencies to build long-term competitive advantage under various contingency contexts. Relationships between variables in the framework are derived for future empirical investigation.

References Available Upon Request.