



# The influence of institutional norms and environmental uncertainty on supply chain integration in the Thai automotive industry

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## ABSTRACT

Supply chain integration has been recognised as one of the today's competitive advantages in a global marketplace; therefore it is essential to research factors that contribute to integration. In this paper, we review the literature of supply chain integration and then by means of multiple case studies in the Thai automotive industry explore the roles of environmental uncertainty and institutional norms in affecting supply chain integration. Results indicate that the implementation of supply chain integration is found to be associated with environmental uncertainty and institutional norms. This finding provides a new perspective of the implementation of supply chain integration under different levels of environmental uncertainty; and offers a framework for further empirical investigation of supply chain integration. Theoretical and managerial implications of the findings are discussed, along with future research issues.

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## 1. Introduction

The effective management of supply chains requires integration of business processes internally within an organisation and externally across suppliers and customers. Supply chain integration may be defined as a process of interaction and collaboration in which companies in a supply chain work together in a cooperative manner to arrive at mutually acceptable outcomes (Pagell, 2004). Benefits of supply chain integration have been confirmed by a lot of research results, including the maximisation of supply chain performance (Frohlich and Westbrook, 2001), and the reduction of ordering cost (Scanell et al., 2000), cycle time and inventory level (Stank et al., 1999), and business uncertainty (Childerhouse et al., 2003).

There is another stream of research that attempts to discover factors that may affect supply chain integration.

Environmental uncertainty has been identified as one of these factors by economic, manufacturing and supply chain literature. As explained by the Transaction Cost Theory, high level of business uncertainty tends to drive companies towards a vertical integration strategy (Williamson, 1983). In the manufacturing strategy literature, environmental uncertainty is proved to affect performances such as quality, dependability, and cost; thus, the literature suggests manufacturers to increase flexibility to cope with high level of environmental uncertainty (Swamidass and Newell, 1987; Pagell and Krause, 1999). Finally, the supply chain literature suggests a closer coordination or integration between supply chain members especially when there is high business uncertainty or the lack of supply and demand information (Lee and Billington, 1992, Lee et al., 1997). To summarise, clarification of the roles of environmental uncertainty will be useful in understanding means to achieve supply chain integration (Chang et al., 2002).

Another factor, though less researched, is institutional norms. Institutional norms refer to the expectations of behaviour or practice that are acceptable within an

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