

Effects of Supply Chain Quality Management on Quality Performance

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When reviewing the literature on supply chain quality management (SCQM), we found that most of the studies were conceptual work and case studies focusing on the definition and identifying components of SCQM, such as Robinson and Malhotra (2005), Foster (2008) and Kuei et al. (2011). Empirically testing the effectiveness of SCQM is very important to advance the development of the theory. In the literature, we can only find limited studies addressing this issue.

Moreover, due to the inconsistency of SCQM components identified by literature, researchers operationalize SCQM differently, which caused the empirical results are not comparable and can only provide limited implications for practices. The effectiveness of a comprehensive SCQM model should be investigated. In the previous study (Zhao, Flynn and Hu, 2012), six key components of SCQM—supply chain leadership on quality, strategic supply chain design for quality, internal quality integration, upstream quality management system, downstream quality management system and product recall system—were identified through in-depth case study. This study aims at investigating the effectiveness of this SCQM from manufacturer's

perspective. Investigating the effectiveness from manufacturer's perspective is reasonable, because the manufacturer has links with both the upstream and downstream partners. Therefore, the manufacturer has a better understanding about the supply chain than the supplier or the customer does.

In this study, the hypothesized relationship among SCQM components and the relationship between SCQM components and quality performance were proposed based on resource dependence theory, resource-based view, social capital theory, and organizational learning theory.

To test the hypotheses, we developed a questionnaire and collected 400 usable samples from manufacturing companies in automobile, toy, food, and pharmaceutical industry in Mainland China.

Structural equation modeling was employed to analyze the data. The results showed that: firstly, supply chain leadership on quality is a driving factor for the success of SCQM system; secondly, strategic supply chain design based on quality considerations helps companies to form the network of the supply chain, which will facilitate the upstream and downstream quality management system and product recalls system; thirdly, internal quality integration is a good structure to organize the internal resources to help company to generate capabilities to manage the upstream and downstream quality management system and product recalls system; fourthly, supply chain network and the relationship with supply chain partners (supplier and customer) are important source of social capital, which can help companies to generate competitive advantage, in terms of quality performance; fifthly, in the product recall

system, tracking and traceability and recall proactiveness will positively influence quality performance, because the effective tracking and traceability system and proactive recall provide the opportunity for organizational learning, which can help improve quality and prevent the quality problem in the future. However, compensation cannot improve the quality performance, because compensation cannot lead to much organizational learning in recalls. Moreover, top management commitment in product recalls does not improve quality directly, but it still has a positive indirect effect on quality by increasing recall proactiveness.

Finally, this study also has some implications for the practitioners to effectively manage their supply chain quality management system.