



**Achieving time-based operational performance through
supply chain integration, knowledge management, and
information technology**

By

Ms. Yuwapan Chaturapitpornchai

**A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Management**

Information Systems

Faculty of Commerce and Accountancy

Thammasat University

2013

Abstract

This study has extended previous research on addressing the importance of information technology and knowledge management on supply chain integration, and subsequently the impact on time-based operational performance, namely manufacturing flexibility and customer delivery. The major focus is on a mediating role of supply chain integration on the relationship between information technology and manufacturing flexibility and between information technology and customer delivery, in order to explain mixed results existing in the previous literature. In addition, explicit exploration for empirical evidence of inter-firm knowledge management specifically among supply chain partners is apparently limited in the past studies.

This study has developed and empirically tested a theoretical model using SEM framework. The hypothesized propositions are largely confirmed by survey responses collected from 137 Thailand's manufacturing plants, in food, electronics, and automotive industries. The result reveals indirect positive effect of supply chain integration on the association between information technology and the two operational performances. Furthermore, through hypothesis testing, positive impact of knowledge management on supply chain integration is also confirmed.

This study contributes to operations management research and provides theory-proven explanation for Thai manufacturing firms to take into considerations the enhancement of information technology, knowledge management and supply chain integration, with ultimate aims of maximizing operational performances.