

## **EXCECUTIVE SUMMARY**

There is a growing interest in supply chain management in recent years. Businesses are recognizing that effective supply chain management leads to an overall success for all supply chain members. Under competitive pressures, supply chains need to find out ways to improve performance, of which customer service level is one important criteria for measuring the success of a supply chain. With the advent of electronic commerce, improvement in supply chain performance is made possible.

This study aims to find out the value of business-to-business electronic commerce in improving the service level of end-customers in the supply chain. A model is developed to investigate the different effects that business-to-business electronic commerce in supply chain has on service level. Three factors which serve as the effect that business-to-business electronic commerce brings on supply chain are included in the model, namely information sharing along the supply chain, supply chain integration, and supply chain restructuring. Two performance measures are taken as a measure to end-customer service level performance, namely fill rate and on-time delivery.

A simulation is developed based on the research model. Different scenarios are built into the simulation for testing the effect of the three factors on supply chain service level. The whole simulation is run with Microsoft Excel®, and the simulation is programmed with Visual Basic for Applications (VBA).

Findings from the simulation suggest that business-to-business electronic commerce in supply chain brings improvement to overall service level. Supply chain restructuring and supply chain integration brings significant positive impact on fill rate and on-time delivery performance. Information sharing along the supply chain brings slight positive influence to fill rate performance, but there is not sufficient proof to conclude that information sharing improves on-time delivery performance. A discussion on the findings, managerial insights and limitations is presented. Finally, some research directions are suggested for further research in this research area.