AN INVESTIGATION INTO THE RISKS OF OUTSOURCING OF KNOWLEDGE RICH, SUPPLY CRITICAL ELEMENTS WITHIN SUPPLY NETWORKS: A SRI LANKAN CONTEXT

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Declaration

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning, and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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Abstract

Outsourcing of supply network elements have been increased by companies as a potential solution to aid increasing competitive advantage. Companies are more dependent on their service providers, if the majority of their product or service elements are outsourced. This typically increases supply risk profiles. Outsourcing of knowledge rich, supply critical elements in supply networks creates substantial impact on a companies' network. Companies with high risk profiles can typically exhibit a knock on effect in revenue. It is essential for manufacturing companies to analyze the risks linked with outsourcing of knowledge rich, supply critical elements. This research study examines the probability of risk event occurrences associated with outsourcing of knowledge rich, supply critical elements on the long term sustainability of the network. A list of knowledge rich, supply critical elements in supply networks were determined to align to the industry study carried out. The methodology consists of the development of evaluating value at risk probabilities for listed supply network elements, through the formation of Bayesian networks and with use of basic probability concepts. Transferring of knowledge is determined as an uncertain process in outsourcing. Outsourcing of knowledge rich, supply critical elements was found to be limited within the Sri Lankan manufacturing sector. Probabilities of impact on monitory values relative to outsourcing in a company were investigated and it was determined that the impact on the long term sustainability of the network was substantial. The methodology directs manufacturers to make decisions on outsourcing of knowledge rich, supply critical elements and implement risk mitigation plans to maintain competitive advantage within their supply network.

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List of Abbreviations

3PL	Third Party Logistics Provider
IT	Information Technology
KPI	Key Performance Indicator
KRSC elements	Knowledge rich, supply critical elements
Q1	Question one
Q2	Question two
Q3	Question three
Q4	Question four
Q5	Question five
SC	Supply Chain
SCM	Supply Chain Management
SCOR model	Supply Chain Operation Reference Model