



Chapter IX

Evaluation of the SCM Performance in Using of Global Logistics Information Technologies: A Research Study in Hong Kong

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Abstract

This chapter explores and evaluates the performance of supply chain management (SCM) (i.e., effectiveness and efficiency) in using global logistics information technologies (GIST) (i.e., information technology [IT] and information systems [IS]) in Hong Kong firms. This chapter is organized as follows. First, previous research on the role of functional information systems for supply chain management is discussed. Next, the characteristics of information systems utilized for supply chain management are identified, based on factor analysis of sample data from 71 Hong Kong firms. Third,

a conceptual model and hypothesis relating to utilization of information systems, information technology, and SCM performance will be identified. Discussion and recommendations are explained, based on the results.

Introduction

General Background

Many firms today are effective in the management of logistics and supply chain activities both as a prerequisite to overall cost efficiency and as a key to ensuring their ability to competitively price their products and services. Information systems (IS) and information technology (IT) are being used by leading-edge firms to increase competitiveness and to develop a sustainable competitive advantage (Bowersox, Donald & Daugherty, 1995). Although capabilities relating to information systems and information technology traditionally have been regarded also as key strategic resources, expertise in these areas is now thought to be among the most valuable and essential of all corporate resources.

In previous studies, the introduction of information technology by a firm for integrated supply chain management could lead to better efficiency and effectiveness (Goldhar & Lei, 1991). Integrated supply chain management utilizing information systems can enable a company to identify optimal inventory levels, reduce warehouse space, and increase inventory turnover (Kaeli, 1990; Kaplan, 1986; Shull, 1987). Porter and Millar (1985) suggested that the utilization of IT has a significant influence on the relationship among value chain activities, and Porter and Millar believe that management of information systems focus on cost reduction.

IS must have a potential to be a strategic weapon for improving supply chain management performances. In Hong Kong, a great number of companies focus their efforts on value-added activities, such as international marketing, product planning, product R&D, so forth. Hong Kong companies also are concerned about how information technology/information systems can enhance the competitiveness and efficiency of the supply chain (Lee, 2000).

This chapter is organized as follows. First, previous research on the role of functional information systems for supply chain management is discussed. Next, the characteristics of information systems utilized for supply chain management are identified, based on factor analysis of sample data from 71 Hong Kong firms. Third, a conceptual model and hypothesis relating to utilization of information systems and supply chain management (SCM) performance are tested using path analysis. Discussions and recommendations are explained, based on the results.

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