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Chapter XVI

The Critical Success Factors in Supply Chain Implementation

Panyaluck Udomleartprasert
Assumption University, Thailand

Chamnong Jungthirapanich
Assumption University, Thailand

Abstract

This chapter introduces critical success in supply chain implementation by empirical research. The widespread implementation of supply chain management induced companies to move beyond national borders and be enticed by the global competition in business. Applying supply chain management overall in organizations, companies generally considered it successful in managing their supply chains. However, some of them have not reached the magnitude of improvements or the desired results ascribed to supply chain management. With supply chain concerns and problems related to some basic companies' infrastructures, the supply chain knowledge and operational skill affected the effectiveness of supply chain practices and performances. In this research, we studied the infrastructures enhancing the success of supply chain implementation that influence supply chain performance. The author adopts three categories of infrastructure as the critical success factors of supply chain implementation: man, machines, and management. The EQS is used to analyze the data collection. A total of 114 pieces of data were completed, and the result shows the significant relationship of operational infrastructures and the success of supply chain management.

Introduction

In this chapter, we will discuss the global supply chain system in terms of operation and management. Higher competition is one of several reasons for implementing supply chain in organization. Maintaining the purchasing volume for higher purchasing power and negotiation, cost reduction in operation process, and customer satisfaction are the benefits of supply chain management. Companies that applied supply chain management considered it successful in managing their supply chain. However, while they have achieved improvement in organizational performance, they have not reached the magnitude of improvements as expectation. Supply chain concerns and problems were studied first in the year 2002. The results showed that the items of most concern were Supply Chain Coherence, such as lack of cooperation among supply chain members; Information Capability, such as lack of sophisticated information systems; and Geographical Proximity, such as customer and supplier geographical distances. All of these concerns related to some basic infrastructures of the company, the supply chain knowledge operational skill, which affected the effectiveness of supply chain practices and performances. In order to achieve the supply chain, the company needs to clearly identify the basic infrastructures and supply chain practices that will impact to the level of supply chain performance..

Supply Chain Revolutions

A supply chain company comprises geographically dispersed facilities in which raw materials, intermediate products, or finished products are acquired, transformed, stored, sold, and transported to the customers. These activities are the connected facilities along the products flow. The facilities may be operated by the company, vendors, customers, third-party providers, or other firms with which the company has business arrangements. The company's goal is to add value to the products through the supply chain and to transport them to geographically dispersed markets in the correct quantities.

In the 1950s and 1960s, most manufacturers emphasized mass production to minimize unit cost with low product flexibility. The information sharing with supplier or partnership was considered risky. In the period, there was little to find the cooperation and strategic buyer-supplier partnership, and it was rare to find the supply chain organization (Tan, 2002).

In the early 1970s, the emphasis on competitive strategy shifted from productivity and mass production to quality emphasis and cycle time reduction (Horvath, 2001). The material requirement planning (MRP) was developed, and managers realized the impact of huge WIP inventories on manufacturing cost as well as product quality, product development, and delivery lead time (Tan, 2002). All of these inconsist performances of the supplier or partnership directly and indirectly affected the company in terms of cost, customer satisfaction, and management. In this period, manufacturers resorted to new material management concepts to improve company performance.