Chapter 17
Innovative Solutions for Implementing Global Supply Chains in Emerging Markets

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ABSTRACT

In a supply chain network, facilities are the primary components where a product is manufactured or stored. During the phase of design of a supply chain network, a company decides how to configure the supply chain over the next several years. Key driver of supply chain performance in terms of responsiveness and efficiency will be taken into consideration in the decision process and the decisions include the role assigned to each facility, its capacity to perform the assigned role, the number and location of the facilities. Since supply chain design decisions pertaining to facilities are typically made for the long term and are very expensive to alter on short notice, the decisions must take into account uncertainty in anticipated market conditions over the next few years. Decisions regarding facilities are therefore a crucial part of supply chain design. This chapter explains the practical application of theories, concepts and frameworks in the area of Supply Chain Design, Risk Mitigation and Social Networks. The practical application is based on a case study of ABC, one of the world's leading agribusiness companies with global operations that made a successful foray in emerging markets facilitated by sound decisions pertaining to the design of its global supply chain network. Certain names and other identifying information were disguised to protect confidentiality.

INTRODUCTION

Globalization is not a new phenomenon. The networking of the world's economy has been evolving for centuries, with companies gradually expanding beyond their national borders. What is new is the dramatic acceleration of the process. Global production provides an unparalleled opportunity for companies to grow into new markets while at the same time boosting their competitiveness. However, most of today's networks are legacy structures-only a fraction was strategically planned. As a result, there is

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huge potential to be captured from rethinking traditional structures, approaches, and supply relationships (Abele, et al., 2008). Supply chain design decisions are typically made for the long term and are very expensive to alter on short notice. These decisions must take into account uncertainty in anticipated market conditions over the next few years. As a result, managers must account for both opportunities and uncertainties over the long term when designing a global supply chain network (Chopra, et al., 2013). Melnyk, et al., 2013 say that global supply chain design presents managers and researchers with its own set of issues, concerns and obstacles since this concept is relatively new and the salient issues that define its content, scope and boundaries are still emerging.

In this chapter, the author explains how theories, concepts and frameworks in the area of Supply Chain Design, Risk Mitigation and Social Networks could be practically applied. The research is based on a case study of ABC, one of the world's leading agribusiness companies with global operations that made a successful foray in emerging markets facilitated by sound decisions pertaining to the design of its global supply chain network. Certain names and other identifying information were disguised to protect confidentiality.

The chapter is divided into four sections. In the next section, a literature review summarizes the theories, concepts and frameworks based on published research in supply chain design, risk mitigation and social networks. Third section presents the discussion and findings. Fourth section elucidates the conclusions and recommendations.

LITERATURE REVIEW

Supply Chain Design

Chopra, et al., 2013 state that a company's competitive strategy has a significant impact on network design decisions within the supply chain.

Melnyk, et al., 2014 propose a framework of supply chain design that comprehends three key levels of factors critical in understanding supply chain design: influencers, design decisions and building blocks. Influencers are higher-level considerations such as the business and political environment, the business model employed, the firm's desired outcomes and the supply chain life cycle. Design decisions include the social, behavioral and physical/structural design elements that define a supply chain. Building blocks include the inventory, transportation, capacity and technology decisions that are used to implement the supply chain. Supply chain design needs to comprehend these three levels of analysis.

Badenhorst-Weiss, et al., 2011 have developed a conceptual framework with which organisations can analyse their supply chain designs. They tested the framework empirically and found that framework is in fact a workable instrument to analyse supply chain designs. The framework encompasses the three basic phases of supply chain design (SCD): understanding end customer's needs and determining how to meet these needs, selecting a supply chain strategy and structuring the supply chain. The framework constitutes thirteen supply chain design elements as summarized in Figure 1.

Chopra et.al. 2013 cite supporting examples of companies that focus on cost leadership find the lowest cost location for their manufacturing facilities, even if that means locating far from the markets they serve and companies that focus on responsiveness tend to locate facilities closer to the market and may select a high-cost location if this choice allows the company to react quickly to changing market needs. Chopra et.al. 2013, further state that the global supply chain networks can best support their strategic objectives