

## Chapter 1.15

# Strategic Decision Making in Global Supply Networks

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### INTRODUCTION

Globalization has inexorably affected the economies of many nations in both the developed and developing world. As a consequence, national boundaries are becoming less important to the large, multinational corporations who now operate on a global scale.

Corporate global networks range from short term outsourcing contracts to long term investments in developing countries that offer low cost operations and/or the promise of future market expansion. Today the Internet and high-speed data networks enable knowledge tasks to be completed practically anywhere in the world, allowing companies in the developed world to achieve cost savings or simply stay competitive enough to survive by shifting work offshore (Saunders, 2003; Schultz, 2004). As a result, an increasing shift of work to low-cost countries will continue for the foreseeable future.

Global supply networks decisions such as supplier selection and distribution assignments are strategic decisions that involve medium to long term commitment. These decisions in turn affect the organization's future business structure, competitiveness and market value. In the literature there are numerous studies dealing with global supply network decisions in the context of mathematical modeling, risk assessment and conceptual strategic evaluations. The literature can be divided into two categories with respect to the application of tools that are used to analyze and model the corporate decision making processes. One stream of literature extensively utilizes operations research techniques to model the supply networks and assess the profitability of production (or service) operations on the basis of quantitative variables. The other stream of literature concentrates on intangible determinants and evaluates the drivers and consequences of global operations by examining the business

conditions, risk factors, opportunities and many other qualitative as well as quantitative variables. In the next sections, a conceptual framework will be developed to examine the structure, determinants, and outcomes of global operations. A broad review of the literature will be presented, and novel modeling approaches will be summarized while discussing the complexity of global supply network decisions and the necessity for integrated methodologies.

## **GLOBAL SUPPLY NETWORKS AND OUTSOURCING**

The ever-increasing pace of information and communication technology allowed corporations to distribute their operations all over the world. Today the global supply network refers to a complex set of business relationships that consist of not only the distinct elements of the supply chain (i.e., supplier, distributor, and retailer) but also the operational divisions within a company, including accounting operations, human resources and customer service among others. The intense competition among many industries imposes pressure on corporations to elevate productivity and reduce costs by transferring activities to more efficient vendors that can add a competitive edge with their specialization. Offshore outsourcing (or simply “outsourcing”) especially is a growing trend leading to further transnational distribution of corporate activities. Research indicates that, when well designed and well managed, outsourcing reduces operating costs, enhances competitive strategy, and enlarges shareholder value (Bryce & Useem, 1998).

There are many reasons for companies to distribute their operations either in the form of outsourcing to different parties or by investments in different regions of the world. The primary objective is to reduce the costs of services and products by utilizing the low labor-rates in developing countries such as China and India. The initiative

towards improving the focus of core competences such as R&D and market research also plays an important role. According to Ferrell (2003), and more than 800 executives in the United States and Europe think that cost savings are still a key outsourcing benefit, but the additional business controls generated by outsourcing are driving the trend to external providers.

The determinants of global supply network decisions can be divided into two interrelated classes in terms of the elements of competitiveness: cost competitiveness and organizational competitiveness.

### **Cost Competitiveness**

Cost is usually the initial major determinant in global supply network decisions. The selection of supplier location, logistic structure, distribution network and many other components of decisions are based on the objective of minimizing the total cost. For a global supply network, the total cost accounts for the aggregation of product/service costs along with the costs of relocation, documentation and communication. Although in many cases, supply networks are designed based on calculations of projected variable and fixed costs, the actual practice of operations involves the hidden costs that are frequently overlooked. The cost of selecting a vendor, contracting costs, transfer costs and many other costs associated with organizational change and management are incurred over the lifetime of global operations. Vining and Globerman (1999) describe the cost of outsourcing as a function of three variables: Production costs, bargaining costs and opportunism costs, with the latter two being costs of governance. Bargaining costs include the costs arising from negotiating contract details, costs of negotiation changes to the contract in the post contract stage, the cost of monitoring whether performance is being adhered to by the other party, and the cost of disputes. Opportunism is defined as any behavior by a party to a transac-

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