

# Chapter 6

## Distribution and Logistics Modeling

### ABSTRACT

*The distribution channels include logistics, inventory, and communication services essential to marketing firms and consumers. Firms take help of the advanced technologies towards homogenization of time and distribution locations. This chapter emphasizes various models of distribution and suggests how existing firms and entrepreneurs can perform their distribution functions more efficiently. Developing efficient distribution strategies are emphasized with reference to the systems thinking approaches in the chapter. Discussions in the following text also look at systems thinking approach as a tool to develop distribution strategies for leveraging the process dynamics in distribution system and managing warehouses and inventories at lower costs. It is argued that distribution channels are formed to solve critical distribution problems including functional performance, reduced complexity, and specialization.*

### INTRODUCTION

*...in high-growth emerging markets, distribution channels are still malleable providing manufacturers with the opportunity to shape and mold the way distribution takes place. Firms should lay aside their dysfunctional patterns of dealing with distributors regain control over their products and operations in international markets...*

*Thomas and Wilkinson (2005)*

Distribution strategies are concerned with the channels that a company may engage to make its goods and services available to consumers. Channels are the organized structures of buyers and sellers that bridge the gap of time and space between manufacturer and the customer. There are many ways goods and services can be distributed to customer. These may be identified from direct bulk shipments in railcars or pipelines to the use of complex arrangements of brokers, wholesalers, and retailers. No single distribution satisfies

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the needs of every firm, and many organizations use several channels to reach different market segments.

The distribution channels include logistics, inventory, and communication services essential to producers, retailers and consumers. However, companies take help of the advanced technologies towards homogenization of time and distribution locations. The matrix model of distribution suggests how existing firms and entrepreneurs can perform their distribution functions more efficiently. It enables identification of competitors poised to use the media to change the rules of the marketplace and helps managers brainstorm the ways in which an existing industry can be vulnerable and a totally new one defined (Pitt et al, 1999).

Channel design affects the market strength of a company. Designing multiple channels is a contemporary strategy followed by many multinational companies, whereby firms employ different combinations of company sales forces, distributors, sales representatives, catalogs, and the Internet to reach to their customers. Firms operating within highly dynamic, complex, and munificent environments should combine a differentiation strategy with a multiple channel system in which a large number of independently owned channels is augmented with a relatively larger number of company-owned channels and in which formal rules and authority are used sparingly (Kabadayi et al, 2007). Distribution channels help conquer the time and distance intervals that divide users from the merchandise they need. The channel responsibilities are exhibited in Figure Channel members initiate and complete many of the following vital activities:

- **Communication:** Dispense product information to customers and report on market potentials, competitors, and market conditions
- **Bargaining:** Negotiate agreements on prices and terms with potential

- **Reordering:** Transmit orders for merchandising back to manufacturers
- **Financing:** Acquire funds to finance inventories and distribution facilities
- **Maintain inventories:** Assume the risk of storage and movement of the channel.
- **Cash settlements:** Collect money from buyers and deliver it to sellers.
- **Ownership:** Transfer title for goods and services from one firm to another

Some of these activities flow forward (title, inventories) and some move backward (ordering, market data). All of them need to be performed by someone who does the work of distribution depending on the costs of different channels and the efficiencies of specialization. If the manufacturer assumes these functions, the selling prices must be adjusted to cover the costs. The cost incurred to the manufacturer declines whenever, the functions are shifted to intermediaries, but such shift increases the cost at the dealer's end. Sometimes distribution activities are transferred to the consumer (like self service gasoline) and prices to the buyer are lowered. The distribution planning may invariably be based on the market survey carried out at the time of preparing the business plan. The distribution planning should be done to make the products available to a larger number of consumers at lower marketing costs. To reduce the cost of marketing, it is required to determine the most feasible channel. The product characteristics and the operational area are the major factors to be considered while selecting a distribution channel. In any channel, different distribution approaches can be adopted to deliver the products more economically to the ultimate user. The important factor to be assessed in this process is the cost-effectiveness. It is observed that, the longer the chain of intermediaries in product distribution, the higher is the cost of marketing. Since cost is one of the determinants of profit, it should also be viewed from the angle of product distribution. The exclusive distribution approach

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