

# DISTRIBUTION MANAGEMENT

## *Marketing Logistics (Physical Distribution)*

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### ***Introduction***

In today's highly competitive global marketplace, the pressure on organizations to find new ways to create value and deliver it to their customers grows ever stronger. The increasing need for industry to compete with its products in a global market, across cost, quality and service dimensions, has given rise to the need to develop logistic systems that are more efficient than those traditionally employed. Therefore, in the last two decades, logistics has moved from an operational function to the corporate function level. There has been a growing recognition that effective logistics management throughout the firm and supply chain can greatly assist in the goal of cost reduction and service enhancement. The key to success in Logistics Management (LM) requires heavy emphasis on integration of activities, cooperation, coordination and information sharing throughout the entire supply chain, from suppliers to customers. To be able to respond to the challenge of integration, modern businesses need sophisticated decision support systems (DSS) based on powerful mathematical models and solution techniques, together with advances in information and communication technologies. There is no doubt that quantitative models and computer based tools for decision making have a major role to play in today's business environment. This is especially true in the rapidly growing area of logistics management. These computer-based logistics systems can make a significant impact on the decision process in organizations. That is why both industry and academia alike have become increasingly interested in using LM and logistics DSS as a means of responding to the problems and issues posed by changes in the area. Many well-known algorithmic advances in optimization have been made, but it turns out that most have not had the expected impact on decisions for designing and optimizing logistics problems. For example, some optimization techniques are of little help in solving complex real logistics problems in the short time needed to make decisions. Also, some techniques are highly problem-dependent and need high expertise. This leads to difficulties in the implementation of the decision support systems which contradicts the trend towards fast implementation in a rapidly changing world. In fact, some of the most popular commercial packages use heuristic methods or rules of thumb. The area of heuristic techniques has been the object of intensive studies in the last few decades, with new and powerful techniques, including many metaheuristic methods, being proposed to solve difficult problems.

There is therefore, on the one hand, the need for sophisticated logistics DSS to enable organizations to respond quickly to new issues and problems faced in LM, and, on the other, there are advances in the area of metaheuristics that can provide an effective response to complex problems. This provides a fertile ground for the application of these techniques in LM and, subsequently, the development of computer-based systems to help logistics decisions.

According to Council of logistics management:

*“Logistics is the process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from point of origin to point of consumption for the purpose of confirming the customer requirement”.*

*The Council of Logistics Management defines Logistics as follows: “Logistics is part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point of origin to the point of consumption in order to meet customers’ requirements”*

This definition clearly points out the inherent nature of logistics and it conveys that Logistics is concerned with getting products and services where they are needed whenever they are desired. In trade Logistics has been performed since the beginning of civilization, it is hardly new. However implementing best practice of logistics has become one of the most exciting and challenging operational areas of business and public sector management. Logistics is unique, it never stops! Logistics is happening around the globe 24 hours Seven days a week during fifty-two weeks a year. Few areas of business involve the complexity or span the geography typical of logistics.

### **SIGNIFICANCE OF MARKETING LOGISTICS**

The importance of logistics systems lies in the fact that it leads to ultimate consummation of the sales contract. The buyer is not interested in the promises of the seller that he can supply goods at competitive price but that he actually does so. Delivery according to the contract is essential to fulfilling the commercial and legal requirements. In the event of failure to comply with the stipulated supply of period, the seller may not only get his sale amount back, but may also be legally penalized, if the sales contract so specifies. There is no doubt that better delivery schedule is a good promotional strategy when buyers are reluctant to invest in warehousing and keeping higher level of inventories. Similarly, better and/or timely delivery helps in getting repeat orders through creation of goodwill for the supplier.

Thus, an effective logistics system contributes immensely to the achievements of the business and marketing objectives of a firm. It creates time and place utilities in the products and thereby helps in maximizing the value satisfaction to consumers. By ensuring quick deliveries in minimum time and cost, it relieves the customers of holding excess inventories. It also brings down the cost of carrying inventory, material handling, transportation and other related activities of distribution. In nutshell, an efficient system of physical distribution/logistics has a great potential for improving customer service and reducing costs.

*Logistics has gained importance due to the following trends*

- Raise in transportation cost.
- Production efficiency is reaching a peak
- Fundamental change in inventory philosophy
- Product line proliferated
- Computer technology
- Increased use of computers
- Increased public concern of products Growth of several new, large retail chains or mass merchandise with large demands & very sophisticated logistics services, by pass traditional channel & distribution.
- Reduction in economic regulation
- Growing power of retailers
- Globalization

As a result of these developments, the decision maker has a number of choices to work out the most ideal marketing logistics system. Essentially, this system implies that people at all levels of management think and act in terms of integrated capabilities and adoption of a total approach to achieve pre-determined logistics objectives.

Logistics is also important on the global scale. Efficient logistics systems throughout the world economy are a basis for trade and a high standard of living for all of us. Lands, as well as the people who occupy them, are not equally productive. That is, one region often has an advantage over all others in some production specialty. An efficient logistics system allows a geographical region to exploit its inherent advantage by specialising its productive efforts in those products in which it has been an advantage by specialising its productive to other regions. The system allows the products' landed cost (production plus logistics cost) and quality to be competitive with those from any other region.

### ***OBJECTIVES OF MARKETING LOGISTICS***

The General objectives of the logistics can be summarized as:

1. Cost reduction
2. Capital reduction
3. Service improvement

The specific objective of an ideal logistics system is to ensure the flow of supply to the buyer, the:

- right product
- right quantities and assortments
- right places
- right time
- right cost / price and,
- right condition

This implies that a firm will aim at having a logistics system which maximizes the customer service and minimizes the distribution cost. However, one can approximate the reality by defining the objective of logistics system as achieving a desired level of customer service i.e., the degree of

delivery support given by the seller to the buyer. Thus, logistics management starts with ascertaining customer need till its fulfilment through product supplies and, during this process of supplies, it considers all aspects of performance which include arranging the inputs, manufacturing the goods and the physical distribution of the products. However, there are some definite objectives to be achieved through a proper logistics system. These can be described as follows:

**1. Improving customer service:** As we know, the marketing concept assumes that the sure way to maximize profits in the long run is through maximizing the customer satisfaction. As such, an important objective of all marketing efforts, including the physical distribution activities, is to improve the customer service.

An efficient management of physical distribution can help in improving the level of customer service by developing an effective system of warehousing, quick and economic transportation, all maintaining optimum level of inventory. But, as discussed earlier, the level of service directly affects the cost of physical distribution. Therefore, while deciding the level of service, a careful analysis of the customers' wants and the policies of the competitors is necessary. The customers may be interested in several things like timely delivery, careful handling of merchandise, reliability of inventory, economy in operations, and so on. However, the relative importance of these factors in the minds of customers may vary. Hence, an effort should be made to ascertain whether they value timely delivery or economy in transportation, and so on. Once the relative weights are known, an analysis of what the competitors are offering in this regard should also be made. This, together with an estimate about the cost of providing a particular level of customer service, would help in deciding the level of customer service

**2. Rapid Response:**

Rapid response is concerned with a firm's ability to satisfy customer service requirements in a timely manner. Information technology has increased the capability to postpone logistical operations to the latest possible time and then accomplish rapid delivery of required inventory. The result is elimination of excessive inventories traditionally stocked in anticipation of customer requirements. Rapid response capability shifts operational emphasis from an anticipatory posture based on forecasting and inventory stocking to responding to customer requirements on a shipment-to-shipment basis. Because inventory is typically not moved in a time-based system until customer requirements are known and performance is committed, little tolerance exists for operational deficiencies

**3. Reduce total distribution costs:** Another most commonly stated objective is to minimize the cost of physical distribution of the products. As explained earlier, the cost of physical distribution consists of various elements such as transportation, warehousing and inventory maintenance, and any reduction in the cost of one element may result in an increase in the cost of the other elements. Thus, the objective of the firm should be to reduce the total cost of distribution and not just the cost incurred on any one element. For this purpose, the total cost of alternative distribution systems should be analyzed and the one which has the minimum total distribution cost should be selected.

**4. Generating additional sales:** Another important objective of the physical distribution/logistics system in a firm is to generate additional sales. A firm can attract additional customers by offering better services at lowest prices. For example, by decentralizing its warehousing operations or by

using economic and efficient modes of transportation, a firm can achieve larger market share. Also by avoiding the out-of-stock situation, the loss of loyal customers can be arrested.

**5. Creating time and place utilities:** The logistical system also aims at creating time and place utilities to the products. Unless the products are physically moved from the place of their origin to the place where they are required for consumption, they do not serve any purpose to the users. Similarly, the products have to be made available at the time they are needed for consumption. Both these purposes can be achieved by increasing the number of warehouses located at places from where the goods can be delivered quickly and where sufficient stocks are maintained so as to meet the emergency demands of the customers. Moreover, a quicker mode of transport should be selected to move the products from one place to another in the shortest possible time. Thus, time and place utilities can be created in the products through an efficient system of physical distribution.

**6. Price stabilization:** Logistics also aim at achieving stabilization in the prices of the products. It can be achieved by regulating the flow of the products to the market through a judicious use of available transport facilities and compatible warehouse operations. For example, in the case of industries such market forces are allowed to operate freely, the raw material would be very cheap during harvesting season and very dear during off season. By stocking the raw material during the period of excess supply (harvest season) and made available during the periods of short supply, the prices can be stabilized.

**7. Quality improvement:** The long-term objective of the logistical system is to seek continuous quality improvement. Total quality management (TQM) has become a major commitment throughout all facets of industry. Overall commitment to TQM is one of the major forces contributing to the logistical renaissance. If a product becomes defective or if service promises are not kept, little, if any, value is added by the logistics. Logistical costs, once expended, cannot be reversed. In fact, when quality fails, the logistical performance typically needs to be reversed and then repeated. Logistics itself must perform to demanding quality standards. The management challenge of achieving zero defect logistical performance is magnified by the fact that logistical operations typically must be performed across a vast geographical area at all times of the day and night. The quality challenge is magnified by the fact that most logistical work is performed out of a supervisor's vision. Reworking a customer's order as a result of incorrect shipment or in-transit damage is far more costly than performing it right the first time. Logistics is a prime part of developing and maintaining continuous TQM improvement.

**8. Life-Cycle support:** A good logistical system helps to support the life cycle. Few items are sold without some guarantee that the product will perform as advertised over a specified period. In some situations, the normal value-added inventory flow toward customers must be reversed. Product recall is a critical competency resulting from increasingly rigid quality standards, product expiration dating and responsibility for hazardous consequences. Return logistics requirements also result from the increasing number of laws prohibiting disposal and encouraging recycling of beverage containers and packaging materials. The most significant aspect of reverse logistical operations is the need for maximum control when a potential health liability exists (i.e.. a contaminated product). In this sense, a recall program is similar to a strategy of maximum customer service that must be executed regardless of cost. Firestone classical response to the tyre crisis is an example of turning adversity into advantage. The operational requirements of reverse logistics range from lowest total cost, such as returning bottles for recycling, to maximum performance solutions for critical recalls. The

important point is that sound logistical strategy cannot be formulated without careful review of reverse logistical requirements.

## ***Major Logistics Functions***

Given a set of logistics objectives, the company designs a logistics system that will minimize the cost of attaining these objectives. The major logistics functions are warehousing, inventory management, transportation, and logistics information management.

### ***Warehousing***

Production and consumption cycles rarely match, so most companies must store their goods while they wait to be sold. For example, Snapper, Toro, and other lawn mower manufacturers run their factories all year long and store up products for the heavy spring and summer buying seasons. The storage function overcomes differences in needed quantities and timing, ensuring that products are available when customers are ready to buy them. A company must decide on how many and what types of warehouses it needs and where they will be located. The company might use either storage warehouses or distribution centres. Storage warehouses store goods for moderate to long periods.

### ***Inventory Management***

Inventory management also affects customer satisfaction. Here, managers must maintain the delicate balance between carrying too little inventory and carrying too much. With too little stock, the firm risks not having products when customers want to buy. To remedy this, the firm may need costly emergency shipments or production. Carrying too much inventory results in higher-than-necessary inventory-carrying costs and stock obsolescence. Thus, in managing inventory, firms must balance the costs of carrying larger inventories against resulting sales and profits. Many companies have greatly reduced their inventories and related costs through just-in-time logistics systems. With such systems, producers and retailers carry only small inventories of parts or merchandise, often enough for only a few days of operations. New stock arrives exactly when needed rather than being stored in inventory until being used. Just-in-time systems require accurate forecasting along with fast, frequent, and flexible delivery so that new supplies will be available when needed. However, these systems result in substantial savings in inventory-carrying and inventory-handling costs. Marketers are always looking for new ways to make inventory management more efficient. In the not-too-distant future, handling inventory might even become fully automated.

### ***Transportation***

The choice of transportation carriers affects the pricing of products, delivery performance, and the condition of goods when they arrive—all of which will affect customer satisfaction. In shipping goods to its warehouses, dealers, and customers, the company can choose among five main transportation modes: truck, rail, water, pipeline, and air along with an alternative mode for digital products—the internet.

***Logistics Information***

Management Companies manage their supply chains through information. Channel partners often link up to share information and make better joint logistics decisions. From a logistics perspective, flows of information, such as customer transactions, billing, shipment and inventory levels, and even customer data, are closely linked to channel performance. Companies need simple, accessible, fast, and accurate processes for capturing, processing, and sharing channel information. Information can be shared and managed in many ways, but most sharing takes place through electronic data interchange (EDI), the digital exchange of data between organizations, which primarily is transmitted via the internet.