

Chapter 2: Logistics

Study Questions

1. Illustrate a common trade-off that occurs between the work areas of logistics.

Any illustration that demonstrates an inherent trade-off between information, inventory, transportation, warehousing, material handling or packaging is acceptable. The following are a few examples of such tradeoffs:

Information is increasingly being used as a substitute for inventory. For instance, a warehouse manager that is in constant contact with a supplier of his/her stocks need not hold traditional, high levels of inventory. By being “connected”, the supplier realizes when the warehouse is in need of product and can make accommodations of product processing and shipping accordingly. Improved, faster means of transportation also prevent manufacturers and merchandisers from holding high levels of inventory.

Poor packaging can lead to product damage in transit. Management should either improve packaging or seek a transportation mode that is more stable and less damage-inducing. Regardless, greater costs will be incurred upfront – though they are likely to be offset with reduced costs of product recollection and rework.

2. Discuss and elaborate the following statement: "The selection of a superior location network can create substantial competitive advantage."

The statement “The selection of Superior location network can create substantial competitive advantage” holds true with regard to logistical networks. The network design implies customer service and cost considerations. Added value (and perhaps a competitive advantage) may be derived from the “intimacy” of being located near customers. Networks that strive for the highest levels of effectiveness (superior service performance) often do so at significantly higher expense. Networks may also be designed for efficient product flows in order to lower transportation and inventory holding costs. Depending upon the competitive environment in which a firm operates, competitive advantage may result from either being located near the customers to provide superior service or through low cost service with the cost-efficient network design.

3. Why are customer operations typically more erratic than manufacturing support and procurement operations?

Market or physical distribution operations are typically more erratic because they are initiated by the customer, whose behavior cannot be controlled by the firm. Manufacturing and procurement operations, on the other hand, are initiated by the firm and considered to be within the firm’s span of control. However, better communications between the logistics organization and customers can reduce the uncertainty and erratic nature of market-distribution operations.

4. Describe the *logistics value proposition*. Be specific regarding specific customer accommodation and cost.

Logistical value proposition is a cost framework that aims to match of operating competency and commitment to meet the individual of selected groups of customers’ expectations and requirements. A well-designed

logistical network must have high customer response with low operational variance and minimum inventory commitment. However the combinations will be different for different groups. Well designed and operated logistical system can help firms to achieve competitive advantage.

5. Describe the fundamental similarities and differences between procurement, manufacturing support and customer-accommodation performance cycles as they relate to logistical control.

Procurement performance cycles consist of the many activities that maintain the flow of materials, parts, or finished goods into a manufacturing or distribution facility. The scope of procurement activities is limited. Although similar to the customer order processing cycle, shipments are generally larger and cycles often require much more time. Maintaining raw materials inventory is sometimes less expensive relative to finished goods, since time of delivery and material security is often less sensitive into facility than out to the customer. Another difference is that the number of suppliers of a firm is generally less than the number of customers, making the procurement cycle more direct.

Manufacturing support performance cycles serve as the logistics of production. These functions maintain orderly and economic flow of materials and work-in-process inventory to support production schedules. The goal is to support manufacturing requirements in the most efficient manner. These are internal cycles to the firm, thus they are rarely affected by behavioral uncertainty.

Customer-accommodation performance cycles are those associated with processing and delivering customer orders. They link the customers through timely and economical product availability. Physical distribution integrates marketing and manufacturing efforts. To improve the effectiveness of the distribution system, forecast accuracy must improve to reduce uncertainty. In addition to the value of sound forecasting methods, the firm must emphasize flexibility and responsiveness to deal with the uncertainty of customers in the physical distribution cycle.

6. Discuss uncertainty as it relates to the overall logistical performance cycle. Discuss and illustrate how performance cycle variance can be controlled.

One of the major objectives of logistical management is to reduce the uncertainty in performance cycles. Since the performance cycles are made up of many activities, each with its own volatility or variance, variance over the entire cycle can significantly impede the logistics organization's efficiency and effectiveness.

To control variance, the firm must conform expected cycle time to actual cycle time. If cycle time is less than expected, the delivered product becomes inventory to be stored. If the cycle time is longer than expected, then the firm must rely on safety stocks to satisfy customer demand. In either case there are costs associated with variance. The idea is to eliminate variance by equating actual cycle time to the expected cycle time. This may require adjustments in product flows into or out of the organization.

Challenge questions

1. How has transportation cost, as a percentage of total logistics cost, tracked since 1980, when transportation was deregulated? How did you explain this trend?

The transportation costs as a percentage of total logistics costs in US have increased over the last 20 years. In 1980, the percentage was approximately 47 percent and this has increased to over 63 percent in 2004. Therefore transportation represents a significant portion of the overall logistics cost. Students should recognize that during this time companies have made significant improvements in managing inventories and thus inventory as a percentage of total cost has decreased dramatically.

2. Why is least total cost performance not always what a customer prefers? Illustrate a situation that supports your answer?

With the increase in the global nature of the business today, the complexity of the logistics network and expectation from customer have increased tremendously. Cost is only one of the several parameters for evaluating the logistics options. Some of the other factors are speed of delivery, consistency, reliability and flexibility. The more significant the service failure impact upon a customer business, the greater the priority placed on error free logistical performance. For example, online retailer promises its customer a delivery with in 2 days. A substantial part of its success as an online retailer will depend on its ability to consistently keep its promise. Hence the logistic partner of Amazon needs to adhere to these customer requirements rather than concentrating on the reduction of cost alone.

3. What could be gained by “stapling yourself to an order”? Be specific and illustrate your answer.

Stapling yourself to an order helps the companies to improve their order management cycles. With the improvement in order management cycles, companies can improve their customer satisfaction by fulfilling the order faster and more accurately. Second, it helps all the departments in the organization to appreciate the interconnectedness of the all the other departments within the firm in fulfilling their ultimate goal, satisfying the customer. Most importantly, improving the order management cycle will help the companies to improve their financial performance.

4. What is the potential negative or downside to the long term Starbucks – OHL collaboration? Identify what you consider to be three major potential problems in such long-term relationships and suggest how these potential problems can be avoided or turned into a positive?

While long-term relationships have many positive features there are potential problems that students should be aware of. In the situation described, Starbucks potentially could become over-reliant on the service provider and ultimately become “hostage” to the firm. Also, there is the potential for complacency on the part of the service provider, ultimately leading to the possibility of lack of innovation. Of course, these are not certain to occur. Starbucks needs to be aware of the possibility and actively monitor performance.