

Supply Chain Management

Course Code : MGMT4037

Unit - 2 & 4 : Key Process of Supply Chain
Management & SCM Administrator

Part-II

By:

Kamlesh Kumar

**Guest Faculty, Department of Management
Sciences**

**Mahatma Gandhi Central University
Motihari, Bihar**

❑ SCM – PRICING & REVENUE MANAGEMENT

Pricing is a factor that gears up profits in supply chain through an appropriate match of supply and demand. Revenue management can be defined as the application of pricing to increase the profit produced from a limited supply of supply chain assets.

Ideas from revenue management recommend that a company should first use pricing to maintain balance between the supply and demand and should think of further investing or eliminating assets only after the balance is maintained.

Revenue management plays a major role in supply chain and has a share of credit in the profitability of supply chain when one or more of the following conditions exist:

- The product value differs in different market segments
- The product is highly perishable or product tends to be defective.
- Demand has seasonal and other peaks.
- The product is sold both in bulk and the spot market.

□ REVENUE MANAGEMENT FOR MULTIPLE CUSTOMER SEGMENTS

- In the concept of revenue management, we need to take care of two fundamental issues.
- The first one is how to distinguish between two segments and design their pricing to make one segment pay more than the other. Secondly, how to control the demand so that the lower price segment does not use the complete asset that is available.
- To gain completely from revenue management, the manufacturer needs to minimize the volume of capacity devoted to lower price segment even if enough demand is available from the lower price segment to utilize the complete volume. Here, the general trade-off is in between placing an order from a lower price or waiting for a high price to arrive later on.
- These types of situations invite risks like spoilage and spill. Spoilage appears when volumes of goods are wasted due to demand from high rate that does not materialize. Similarly, spill appears if higher rate segments need to be rejected due to the commitment of volume goods given to the lower price segment.

To reduce the cost of spoilage and spill, the manufacturer can apply the formula given below to segments.

□ REVENUE MANAGEMENT FOR PERISHABLE ASSETS

Any asset that loses its value in due course of time is considered as a perishable item, for example, all fruits, vegetables and pharmaceuticals.

We can also include computers, cell phones, fashion apparels, etc.; whatever loses its value after the launch of new model is considered as perishable. We use two approaches for perishable assets in the revenue management.

These approaches are:

- Fluctuate cost over time to maximize expected revenue.
- Overbook sales of the assets to cope or deal with cancellations.

The first approach is highly recommended for goods like fashion apparels that have a precise date across which they lose a lot of their value; for example, apparel designed for particular season doesn't have much value in the end of the season.

The manufacturer should try using effective pricing strategy and predict the effect of rate on customer demand to increase total profit. Here the general trade-off is to demand high price initially and allow the remaining products to be sold later at lower price.

□ REVENUE MANAGEMENT FOR SEASONAL DEMANDS

- One of the major applications of revenue management can be seen in the seasonal demand. Here we see a demand shift from the peak to the off-peak duration; hence a better balance can be maintained between supply and demand.
- It also generates higher overall profit.
- The commonly used effective and efficient revenue management approach to cope with seasonal demand is to demand higher price during peak time duration and a lower price during off-peak time duration.
- This approach leads to transferring demand from peak to off-peak period.

□ REVENUE MANAGEMENT FOR BULK AND SPOT DEMANDS

- When we talk about managing revenue for bulk and spot demand, the basic trade-off is somewhat congruent to that of revenue management for multiple customer segments. The company has to make a decision regarding the quantity of asset to be booked for spot market, which is higher price.
- The booked quantity will depend upon the differences in order between the spot market and the bulk sale, along with the distribution of demand from the spot market. There is a similar situation for the client who tends to make the buying decision for production, warehousing and transportation assets.

❑ HR ISSUES IN SCM

Supply Chain Management is the process of development, executing, and monitoring the processes of the supply chain as professionally as possible.

Supply Chain Management extends to all activities of raw material storage, work-in-process inventory, and finished goods from point-of-origin to point-of-consumption and ensuring profit for the organization and delight for the customer.

A Supply Chain is driven and run by the people who operate the Supply Chain. It requires experts in process of the Chain.

The efficient running of a supply chain is solely dependent on the people who are involved in several operations.

❖ Main Human Resources issues facing the Supply Chain Management:

- **Job Attraction & Retention.**
- **Education and Training.**
- **Moving with technology; and**
- **Succession and career planning.**

□ PERFORMANCE MEASURES

Supply chain performance measure can be defined as an approach to judge the performance of supply chain system.

Supply chain performance measures can broadly be classified into two categories:

- Qualitative measures: For example, customer satisfaction and product quality.
- Quantitative measures: For example, order-to-delivery lead time, supply chain response time, flexibility, resource utilization, delivery performance.

• Quantitative Measures

Mostly the measures taken for measuring the performance may be somewhat similar to each other, but the objective behind each segment is very different from the other.

• Quantitative measures

It is the assessments used to measure the performance, and compare or track the performance or products. We can further divide the quantitative measures of supply chain performance into two types. They are:

1. **Non-financial measures**
2. **Financial measures**

□ PERFORMANCE MEASURES CONT...

1. Non-financial measures

The metrics of non-financial measures comprise cycle time, customer service level, inventory levels, resource utilization ability to perform, flexibility, and quality. In this section, we will discuss the first four dimensions of the metrics:

Cycle Time

Cycle time is often called the lead time. It can be simply defined as the end-to-end delay in a business process. For supply chains, cycle time can be defined as the business processes of interest, supply chain process and the order-to-delivery process. In the cycle time, we should learn about two types of lead times. **They are as follows:**

- **Supply chain lead time**
- **Order-to-delivery lead time**

The order-to-delivery lead time can be defined as the time of delay in the middle of the placement of order by a customer and the delivery of products to the customer.

In case the item is in stock, it would be similar to the distribution lead time and order management time. If the ordered item needs to be produced, it would be the summation of supplier lead time, manufacturing lead time, distribution lead time and order management time.

1. Non-financial measures Cont...

- Customer Service Level

The customer service level in a supply chain is marked as an operation of multiple unique performance indices. Here we have three measures to gauge performance.

They are as follows:

- **Order fill rate:** The order fill rate is the portion of customer demands that can be easily satisfied from the stock available. For this portion of customer demands, there is no need to consider the supplier lead time and the manufacturing lead time. The order fill rate could be with respect to a central warehouse or a field warehouse or stock at any level in the system.
- **Stock out rate:** It is the reverse of order fill rate and marks the portion of orders lost because of a stock out.
- **Order level:** This is yet another measure, which is the gauge of total number of orders waiting to be filled.
- **Probability of on-time delivery:** It is the portion of customer orders that are completed on-time, i.e., within the agreed-upon due date. In order to maximize the Customer service level, it is important to maximize order fill rate, minimize stock out rate, and minimize backorder levels.

1. Non-financial measures Cont...

- **Inventory Levels**

As the inventory-carrying costs increase the total costs significantly, it is essential to carry sufficient inventory to meet the customer demands.

In a supply chain system, inventories can be further divided into four categories:

- Raw materials.
- Work-in-process, i.e., unfinished and semi-finished sections Finished goods.
- Inventory.
- Spare parts

Every inventory is held for a different reason. It's a must to maintain optimal levels of each type of inventory.

Hence gauging the actual inventory levels will supply a better scenario of system efficiency.

1. Non-financial measures Cont...

- **Resource Utilization**

In a supply chain network, huge variety of resources is used. These different types of resources available for different applications are mentioned below.

- **Manufacturing resources:** Include the machines, material handlers, tools, etc.
- **Storage resources:** Comprise warehouses, automated storage and retrieval systems.
- **Logistics resources:** Engage trucks, rail transport, air-cargo carriers, etc.
- **Human resources:** Consist of labor, scientific and technical personnel
- **Financial resources:** Include working capital, stocks, etc.

In the resource utilization paradigm, the main motto is to utilize all the assets or resources efficiently in order to maximize customer service levels, reduce lead times and optimize inventory levels.

2. Financial Measures

The measures taken for gauging different fixed and operational costs related to a supply chain are considered the financial measures. Finally, the key objective to be achieved is to maximize the revenue by maintaining low supply chain costs.

There is a hike in prices because of the inventories, transportation, facilities, operations, technology, materials, and labor.

Generally, the financial performance of a supply chain is assessed by considering the following items:

- **Cost of raw materials.**
- **Revenue from goods sold.**
- **Activity-based costs like the material handling, manufacturing, assembling rates etc.**
- **Inventory holding costs.**
- **Transportation costs**
- **Cost of expired perishable goods**
- **Penalties for incorrectly filled or late orders delivered to customers.**
- **Credits for incorrectly filled or late deliveries from suppliers.**
- **Cost of goods returned by customers.**
- **Credits for goods returned to suppliers.**

Thank You