

## SANDERS, SUPPLY CHAIN MANAGEMENT

### CHAPTER 2: SUPPLY CHAIN STRATEGY

#### ***Learning Objectives:***

After completing this chapter, you should be able to:

1. Define supply chain strategy and explain how it supports the business strategy.
2. Explain how proper supply chain design can create a competitive advantage.
3. Identify and explain the building blocks of a supply chain strategy.
4. Explain differences in supply chain design based on organizational competitive priorities.
5. Explain how productivity can be used to measure competitiveness.

#### **What is Supply Chain Strategy?**

- **Business Strategy:** a plan for the company that defines the company's long term goals, how it plans to achieve these goals, and the way the company plans to differentiate itself from its competitors.
  - a long-range business strategy is necessary if a company hopes to compete in the long-term
- **Supply Chain Strategy:** a long-range plan for the design and ongoing management of all supply chain decisions that support the business strategy
  - changes based on how company means to compete within the market
  - supply chain must be aligned with business strategy
- **Strategic Alignment**
  - a company's supply chain strategy should be developed in an effort to support and enforce its business strategy
  - supply chain should not be designed to merely mirror its competitors or only focus on cutting costs
  - supply chains vary in design depending on their competitive focus
  - everything functions in order to support the business strategy: marketing, operations, purchasing, distribution, finance, and organization
    - functional support is imperative given the boundary spanning nature and high dependence on logistics, marketing, and operations of supply chain management (SCM).

#### **Achieving a Competitive Advantage**

Corporate success in the marketplace can result from two aspects:

- **Cost and/or productivity advantage**
  - advantage comes from offering the lowest cost product or service
- **Value advantage**
  - advantage comes from providing a product with the greatest perceived differential value compared with its competitors
- **Cost-Productivity Advantage**

- Typically each market has one competitor who is the low-cost producer and who has the greatest sales volume in the particular market
  - economies of scale is a contributor, as it enables companies to spread fixed costs over a greater volume
- Derived from the traditional learning curve, the **experience curve** asserts that workers become more skilled and efficient with experience
  - experience reduces organizational costs
  - processing at a larger volume also reduces organizational costs
- An efficient supply chain network can increase efficiency and improve productivity
- **Value advantage**
  - customers don't buy products, they buy the value or benefit provided by these products
  - the intangible benefits a product provides is a driving force behind a decision to buy a product
  - the possibility exists that a number of different products provide customer's value
  - **value segments**: different consumer groups place different value on different product benefits; a way to gain a value advantage
  - more and more companies are focusing on service as a way to add value
  - for companies to remain competitive they normally aim towards cost leadership or value leadership; if they are skilled enough, they attempt to reach both
- **SCM as a source of value**
  - SCM provides a powerful way for companies to achieve a cost-value advantage over their competitors-it is also a means to reach the coveted position of cost-value leadership
  - another way to reach cost-value leadership is to develop strategic differentiation based on service excellence, while yet another way is through the introduction of new supply chain technologies

### **Building Blocks of Supply Chain Strategy**

- The development of a supply chain strategy involves consideration of each of the traditional business functions and their impact on the supply chain. These include the following:
  - operations strategy
  - sourcing strategy
  - distribution strategy
  - customer service strategy
- Earlier, companies viewed these components as separate of one another; today, successful companies recognize these functions are interdependent
- **Operations strategy**
  - The operations strategy refers to the series of decisions made by companies about how it will produce goods and services

- **Product positioning strategy:** refers to the degree of product customization a company offers; composed of 3 strategies:
  - make-to-stock
    - produces products for immediate sale or delivery
  - assemble-to-order
    - product is partially completed and kept in a generic form, then completed when an order is received
  - make-to-order
    - a strategy utilized for customized products or products with infrequent demand
  - Operations strategies must change as product moves through life cycle of processing, assembly, shipping etc.
- **Distribution Strategy**
  - A distribution strategy refers to how a company plans to get its goods/services to its customers
  - Analyzing the perceived value, competition and profitability of each market segment is required as company's decide the best distribution strategy, depending on the market segment they are trying to reach
- **Sourcing Strategy**
  - Sourcing strategy relates to which aspects of a company's business it is going to outsource and which components it is going to retain internally
  - Outsourcing: hiring a third party or vendor to perform certain tasks or activities for a fee; enables companies to respond quickly to changes in demand, creates new products and gain a competitive position in the market
    - also enables companies to benefit from the expertise of another firm
  - **Loss of control** is a considerable risk involved in outsourcing, as is the **risk of dependency** on this third party
- **Customer Service Strategy**
  - The mechanism that customer service is achieved is a key component of SCM. The customer service strategy of a company should be based first on the overall volume and profitability of market segments
  - In developing such a strategy a company has to recognize the differing importance of customers and the best ways to approach these distinctives
  - It is imperative to recognize that not all customers expect or want the same level of service, therefore companies must segment the market carefully and effectively meet demands from there

### Supply Chain Strategic Design

- A lack of thought into the design of a supply chain may result in a chain that ultimately does not support the overall business strategy
- A **competitive priority** is the way in which a company competes in the market. There are 5 primary competitive priorities:
  - Cost
  - Time

- Innovation
- Quality
- Service

#### ■Competing on Cost

Companies that compete on cost offer products at the lowest possible price; this can lead to a poor supply chain strategy as it overlooks the other aspects of business. Wal-Mart, Dell are examples.

#### ■Competing on Time

To compete on time is to compete based on all time related dimensions, including rapid delivery and on time delivery.

When competing on time, a company will critically analyze the system in an effort to eliminate processes in order to save time. FedEx, UPS are examples.

#### ■Competing on Innovation

A company who operate on marketing its products as “must haves”, and therefore the product moves through the supply chain with significant demand.

Companies that compete this way normally have a very short window of opportunity before imitators make headway.

The supply chain of these types of companies typically rely on speed and product design.

Companies need to also have the capability to quickly raise production volumes should demand increase. Apple is an example.

#### ■Competing on Quality

Refers to companies who compete based on the premium and superior nature of their products.

**Product traceability** is an important attribute of competing on quality as it allows companies to expand their boundaries. Design houses of Europe, like LVMH, are an example.

#### ■Competing on Service

Competing on service refers to companies who operate based on their understood expectations of their customers; customer loyalty is an important aspect of this strategy.

Their target market is those willing to pay the extra cost for their services.

Nordstrom's is an example.

### • Why not compete on all dimensions?

- Successful companies realize this is impossible and instead choose to focus on a singular strategy
- Two important concepts that companies need to monitor are **order winners** and **order qualifiers**
  - Order winners are those characteristics that win the company orders in the marketplace
  - Order qualifiers are those characteristics that allow the company to be participant in a particular market
- an alignment between these two is imperative for a successful business strategy

## Strategic Considerations

- **Small versus Large Firms**
  - A large portion of a company's power relates to their size, and a company must play to its strengths
  - **"Supply Chain Masters"** is a reference to companies that have the ability to "strong-arm" their suppliers into compliance
    - Wal-Mart, Home Depot, Toyota are examples
  - A particular company's strategy has to address its own influence or power within the market
  - Large companies can impose the supply chain structure they want; smaller companies have to develop their own supply chain strategies
    - smaller companies can create co-operatives in order to aggregate its power
- **Adaptability**
  - Change is a natural part of the business environment and is to be expected; a company's supply chain strategy must quickly adapt in order to stay in sync with its business strategy
  - The rate of change and need for responsiveness varies by industry; it also depends on the scope of a company's business

## Productivity as a Measure of Competitiveness

- the purpose of a supply chain strategy to provide higher competitiveness to firms
- **Measuring Productivity**
  - Productivity is a measure of how well a company uses its resources
    - $\text{Productivity} = \text{Output} / \text{Input}$
- **Interpreting Productivity**
  - The more efficiently a company uses its resources the more productive it is and thus a higher ratio

## Discussion Questions

1. Find an example of a company whose product you like. Identify its business strategy and its supply chain strategy. Explain whether or not the supply chain strategy supports the business strategy.

*Amazon's service – Amazon's strategy is to be customer centric. The supply chain strategy is aligned with the business strategy. They have a seamless integration of operations, sourcing, distribution, and customer service. Their costs/productivity and value keep customers coming back.*

2. Identify ways a company can move from a "commodity" position to one of a cost and/or value advantage. Is a commodity position always bad and how can companies differentiate themselves in this position?

*(This is a subjective response, focused on how a low-cost provider can add services or features that would enhance value to the consumer. A commodity position is not always bad when margins can be protected and a need is met.)*

*A company can move from a “commodity” position to one of a cost and/or value advantage. This would be important for a long term strategy. The risk at staying with just a “commodity” is that sooner or later the competition will replicate the product at less cost and a perceived value.*

3. Explain the differences between vertical integration and outsourcing. Identify the strategic advantages of each and explain how each position can be used to help supply chain strategy.

*Vertical integration refers to a system of management in which companies are united through a common owner, while outsourcing refers to a system of contracting units of operation to a third party. Vertical integration can be beneficial as it means a company is in control of all aspects of production, while outsourcing allows certain tasks to be performed at a lower price, potentially saving a company a significant amount of money.*

4. Provide business examples of the three operations strategies: make-to-stock, assemble-to-order, and make-to-order. Explain what it would take for a company to move from a make-to-stock strategy to make-to-order, and vice versa. What are the advantages and disadvantages of each strategy?

*Make-to-stock –*

*High volume, commodity-type products for immediate sale or delivery.*

*Best for standardized products selling in a high volume.*

*Little or no customization on products.*

*Assemble-to-order –*

*Partially completed and kept in a generic form, then finished when an order is received.*

*Maintain parts inventory to assemble unique product based on consumer demand (customization).*

*Delivery time is longer than make-to-stock.*

*Make-to-order –*

*Customized products or products with less demand. Created when order is received.*

*Low Inventory, high-margin product.*

*Delivery time is long.*

*Movement from the former to the latter would follow the path from commodity product to value advantage but may change product/service delivered.*

5. Provide business examples of companies that compete on each one of the identified competitive priorities. Explain how their supply chain strategies are different based on their specific competitive priority. Select one of the business examples you provided and explain how the company would need to change its supply chain strategy if it shifted its competitive priority.

*Cost – WalMart*

*Provides lowest prices (no specialization of products).*

*WalMart pushes customers to buy what they want them to buy. WalMart would need to reevaluate the data they collect and truly look at the customer in a more individual manner. WalMart could offer a higher end and better quality product line to test this strategy out.*

*Time – UPS*

*Prides itself on exceeding time for every step in the SC.*

*Innovation – Apple*

*Provides products that they perceive the customer wants i.e.; iPad, iPhone*

*Quality – Bose*

*Bose uses innovation with technology to produce superior performance.*

*Service – Nordstrom*

*A fashion specialty retailer focused on the customer as an individual.*

### **Web Exercise**

It is stated above that there are 5 primary competitive priorities and at least one company given as an example of each. The competitive priorities are:

- Cost
- Time
- Innovation
- Quality
- Service

The companies are as follows: Walmart.com, Dell.com, FedEx.com, UPS.com, Apple.com, LVMH.com, and shop.Nordstrom.com.

Divide students into seven groups, or assign each of the companies individually. Explore the company assigned - how does this company illustrate the competitive priority it is paired with? Provide specific examples to support your claims.

### **Discuss Now!** (Application to Current Events)

UPS signed a new deal with Merck to manage aspects of its' strategic supply chain.

The new deal expands the relationship to include aspects of Merck's global supply chain in certain markets in Asia and Latin America, including the emerging markets of China and Brazil. UPS also is providing transportation services in Europe. Read the recent article, published in "Business First" at [UPS Manages Merck's Logistics](#)

How is UPS helping Merck develop a competitive advantage, and more specifically, which ones? Why would Merck give up this responsibility to an outside company? (Which of the Strategic Designs does this reflect?)

*Merck is using the sourcing strategy by outsourcing to UPS a significant portion of its U.S. distribution of pharmaceuticals and vaccines as well as to provide package transportation services. UPS can leverage the new facilities for other healthcare customers. Merck can take advantage of UPS's existing healthcare distribution network. Merck can utilize a broad spectrum of UPS services to gain additional supply chain flexibility needed for initiatives such as new product launches. Through this arrangement with UPS, Merck will be able to improve its cost structure while providing enhanced customer service.*

### Problems:

1. Mario's Pizzeria is a local pizza shop. Mario is trying to evaluate the productivity of his operation. One worker can make approximately three pizzas in 30 minutes, whereas another four pizzas in 20 minutes. Which worker is more productive?

$$3 / 30 = .1$$

$$4 / 20 = .2 \text{ is more productive (partial)}$$

2. An automated packaging machine used in warehousing can sort and pack six large boxes in 15 minutes. A new machine that is being considered can sort and pack four boxes in 8 minutes. How much more productive is the new machine?

$$6 \text{ lg boxes} / 15 \text{ min} = .4$$

$$4 \text{ boxes} / 8 \text{ min} = .5$$

*One would assume the second is more productive. However, the machine is producing "boxes" vs "large boxes". The machine producing large boxes could be considered more productive.*

3. The diagnostic department at Saints Memorial Hospital provides medical tests and evaluations for patients, ranging from analyzing blood samples to performing magnetic resonance imaging (MRI). Average cost to patients is \$60 per patient. Labor costs average \$15 per patient, materials costs are \$20 per patient, and overhead costs are averaged at \$20 per patient.

- a. What is the multifactor productivity ratio for the diagnostic department? What does this finding mean?

$$\text{Output} / \text{labor} + \text{Capital} + \text{Overhead} = \\ \$60 / \$15 + \$20 + \$20 = \$60 / \$55 = 1.09$$

*One would need to look at the ratio over time to get a better idea of how efficient a company is at using its resources. A high productivity ratio is good.*

- b. If the average lab worker spends three hours for each patient, what is the labor productivity ratio?

$$1 \text{ patient} / 3 \text{ hours} = .33 \text{ patients per hour}$$

*This is a very low productivity ratio.*

### Case Questions:

1. Identify the steps that Derick should take to solve his problem.

*Derick should be building relationships throughout his SC. Since the business strategy is changed, he needs to work out the alignment with the SC strategy. Derick needs to research competition, vendors, and costs with other chemical suppliers. Although they have been focused on costs in the pasts, they are now resetting priorities for their SC design.*



2. Should Derick ask for the required changes from the current suppliers? If they do not comply, should he solicit new suppliers? How might he do this?

*Yes, this is a part of building relationships in the SC. If they do not comply, Derick will need to seek out other vendors. He has done bids for 1 year contracts and could continue to do so with the new specifications.*

3. Should Derick go through a competitive bid in the future? If so, should he do it for all purchased products or just some products?

*This is a strategy that has worked for Derick and company. He should continue in order to keep any of the priorities (cost, time, innovation, quality, service) as part of the SC strategy.*

4. What are the differences when looking for suppliers to meet cost standards versus quality standards?

*If a supplier is only focused on costs they more than likely have a poor supply chain themselves. Quality is usually a major priority that will lack in products if costs is the only thing a company is focused on. Quality is also a factor in consumers perceived "value" of the product/service being delivered.*