Operations Management

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Operations Strategies

The scope of the operations management module includes manufacturing, purchasing/supply chain management, and services. Strategies for purchasing/supply chain management and manufacturing are discussed in this section while section 265 presents service strategies.

Manufacturing Strategy

Manufacturing (production) strategies include increasing productivity, decreasing costs, and improving quality by adding value to inputs through the transformation process and producing quality outputs. It fits with the concept that consumers purchase their products from the company that offers them the most value for their money. The manufacturing strategy should fit with the overall business strategy, such as less time-to-market new products, cost minimization, improved quality, and greater market share.

Purchasing/Supply Chain Strategy

Managers are familiar with many “buzzwords” that abound when the topic of business strategy is mentioned. Terms such as downsizing, reengineering, best-in-class, benchmarking, and many others reflect the fact that many organizations are in a state of dynamic change, which will continue throughout the twenty-first century. However, such terms often fail to capture the actual processes that occur when developing and implementing corporate strategies.

What is a corporate strategy? At its very roots, corporate strategy addresses the long-term mission of an organization, including long-term survival. The number of companies that have ceased operations or entered bankruptcy is not insignificant, even in periods of economic growth. Companies such as Studebaker, Packer, Eastern Airlines, PanAm, Kaiser Healthcare, and many other once-thriving companies were unable to withstand the market forces of competition. In many cases, this was due to poorly developed corporate strategies. A corporate strategy involves more than just survival. It requires a definition of how a company will compete in a changing competitive environment. We offer the following definition of corporate strategy. The strategy of an organization (or of a subunit of a larger organization) is a conceptualization of:

- Long-term objectives and purposes of the organization
- Broad constraints and policies that restrict activities
- A current set of action plans (also known as tactics) and near-term goals expected to help achieve an organization’s objectives

Executive management must have a specific plan outlining how the company will differentiate itself from its competitors, achieve growth objectives, manage costs, achieve customer satisfaction, and maintain continued profitability in order to meet or exceed the expectations of stakeholders.

An organization must take in more revenues than it spends on operating costs in the long term to grow and increase profits. As shown in Exhibit 200.1, there are two fundamental ways of balancing this equation: increase revenues or decrease costs. Increasing revenues involves either raising prices, or keeping prices stable and increasing

Exhibit 200.1  How Companies Make Money

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1. Increase revenues
   - Raise prices
   - Increase volume

2. Decrease costs
   - Reduce cost of employees (downsize)
   - Reduce cost of process and waste
   - Reduce cost of materials
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volume. Simultaneously, costs must be held steady or must increase at a rate smaller than the rate of increasing revenues. However, this option has become increasingly more difficult to realize over the last several years. Low inflation rates combined with increased productivity rates mean that prices cannot be raised without alienating customers. Customers also have a greater number of products and services to choose from, meaning that the number of lower-priced, higher-quality products is often increasing. Only a few markets in which a seller can increase or even hold prices steady exist today.

Reducing costs has become an area of intense interest. Faced with global competition, companies are constantly searching for ways to reduce costs and pass the savings on to customers while preserving their profit margins and maintaining a return to shareholders. Companies often begin addressing costs by reducing their workforce. This option was utilized extensively during the 1980s and 1990s when many larger organizations eliminated millions of jobs during corporate downsizing. To some extent, downsizing has reached its limits. Managers and workers today are required to perform more tasks and have greater responsibility with fewer resources and less time. The probability of obtaining significant cost savings through further downsizing is marginal.

Another way to reduce costs is through process reengineering. Any process contains a certain amount of non-value-added activity estimated to be as high as 80% to 90% of total process-cycle time. Companies such as Hewlett-Packard, Toyota, Ford, Nortel Networks, Motorola, and many others have mapped their processes, identified significant non-value-added activities, and developed ways of reducing the time required to complete these processes.

Reducing the cost of materials and services has become an attractive option to most managers. Today, more and more managers are looking to purchasing to improve corporate profit margins. To some extent, purchasing is the last major opportunity area for achieving significant improvements in return on assets. Unfortunately, many companies in the United States do not perform well the task of strategic purchasing planning. The result is often a limited focus on functional strategic planning with minimal or no linkages to the corporate strategic plan. In some cases, this is caused by purchasing’s limited understanding or awareness of company-wide strategies. In other cases, purchasing historically has not been included in the strategy development process. Perhaps the greatest problem is that executive management often fails to recognize the importance and contribution of supply-base management, and therefore has not focused on linking purchasing and corporate strategy. Without executive commitment to purchasing involvement in corporate strategy development, strategic sourcing results are unlikely to be successful.

Translating Corporate Objectives into Purchasing Goals

The need for purchasing to develop strategies that enhance an organization’s competitive position through supply-base management is greater than ever. From this perspective, an effective purchasing strategy means more than simply promising “maximum efficiency” or “lowest cost.” Given the diversity of available strategies, an effective purchasing strategy is one that fits the needs of the business and strives for consistency between the internal capabilities and the competitive advantage being sought, as defined in the overall business strategy. The term strategic alignment means that purchasing activities are consistent with the nature of the business strategy and make a proactive contribution to marketing effectiveness.

The concept of purchasing alignment with corporate strategy makes sense—but how does it happen? Before purchasing can align with corporate strategy, purchasing managers must be able to translate corporate objectives into purchasing goals. Goals and objectives differ across four major dimensions:

- **Time frame:** Objectives are timeless or open-ended, while goals are temporal or time phased and intended to be superseded by subsequent goals.
- **Measurement:** Quantified objectives are often stated in “relative terms” (i.e., with respect to another entity or organization). Goals are much more specific, stated in terms of a particular result that will be accomplished by a specified date. The objective that “we will be the top automotive company in quality” is relative to other automotive companies. The goal that “we will reduce defects to 1,000 parts per million” is an absolute metric, which is a goal.
- **Specificity:** Objectives are stated in broad, general terms while goals are stated in terms of a particular result that will be accomplished by a specified date. For instance, the statement that “we will be the best in customer satisfaction” is a very broad statement that is an objective. The statement that “we will reduce warranty costs by 3% on part number 333 by the third quarter” is more specific.
- **Focus:** Objectives are often stated in some relevant external environment. Goals are internally focused and imply how resources shall be utilized in the future. For instance, the statement that “we will be regarded by the public as an environmentally conscious company” is externally focused; the statement that “we will invest
10% of our revenues in new environmentally friendly technology” is internally focused and states how resources will be used.

Notice that each of these examples couples an objective with a goal. This is an important part of the strategy development process. Executives often develop very broad, sweeping statements regarding where a company is headed, what the broad mission is, and where it will be in the future. However, it is up to managers to “translate” these broad objectives into actionable, realizable goals.

**Integrative Strategy Development**

The process of aligning purchasing goals with corporate objectives is especially important for purchasing and supply chain managers. These managers often face some very broad directives from corporate management—for example, to reduce costs or to improve quality. The strategy development process takes place on four levels:

- **Corporate Strategies:** These strategies are concerned with (1) the definition of businesses in which the corporation wishes to participate and (2) the acquisition and allocation of resources to these business units.
- **Business Unit Strategies:** These strategies are concerned with (1) the scope or boundaries of each business and the links with corporate strategy and (2) the basis on which the business unit will achieve and maintain a competitive advantage within an industry.
- **Purchasing Strategies:** These strategies, which are part of a level of strategy development called functional strategies, specify how purchasing will (1) support the desired competitive business-level strategy and (2) complement other functional strategies (such as marketing and operations).
- **Commodity Strategies:** These strategies specify how a group tasked with developing the strategy for the specific commodity being purchased will achieve goals that in turn will support the purchasing-, business unit-, and finally the corporate-level strategies.

Companies that are successful in deploying supply chain strategies do so because the strategy development process is integrative. This means that the strategy is drafted (or has significant input) from those people responsible for implementation. Integrative supply chain strategies occur when corporate strategic plans are effectively “cascaded” into specific purchasing and commodity goals, through a series of iterative planning stages (shown in Exhibit 200.2). Corporate strategy evolves from corporate objectives, which effectively evolve from a corporate mission statement drafted by the chief executive officer (CEO), functional executives, and the board of directors. Corporate strategies are crafted by the CEO, taking into consideration the organization's competitive strengths, business unit and functional capabilities, market objectives, competitive pressures and customer requirements, and macro economic trends. What distinguishes an integrative strategy development process is that business unit executives, as well as corporate purchasing executives, provide direct input during the development of corporate strategy. Corporate mission statements are often at the top of the strategy development process—they influence the scope and direction of the corporate strategy.

As shown in Exhibit 200.2, a key feature of the strategy development process is the linkage, either directly or indirectly, between functional purchasing strategy development and other functional specialties. Business unit objectives
span multiple functions and provide clear directions so that all functional strategies (purchasing, marketing, operations, finance, human resources) are aligned. This linkage recognizes the need to remove the barriers of cross-functional integration. A system that promotes integrative strategy development between functional specialties supports focusing limited corporate resources toward specific company-wide objectives and performance goals.

**Translating Purchasing Objectives into Purchasing Goals**

A major output of the strategy development process is a set of functional strategic objectives, including purchasing strategic objectives. As purchasing managers interact with other members within their business, as well as with corporate executives, a major set of strategic directives should begin to emerge. These strategic objectives may or may not provide details concerning how they are to be achieved. However, the process is not yet complete. Unless purchasing executives can effectively translate broad-level objectives into specific purchasing goals, these strategies will never be realized. Purchasing must couple each objective with a specific goal that it can measure and act upon. These specific goals become the initial step for a detailed commodity strategy formulation process. Remember—objectives drive goals, whether at the highest levels of an organization or at the functional or department level. Examples of corporate-wide purchasing goals associated with various purchasing objectives are shown in the parentheses below.

**Cost-Reduction Objective**

- Be the low-cost producer within our industry. (*Goal:* Reduce material costs by 15% in one year.)
- Reduce the levels of inventory required to supply internal customers. (*Goal:* Reduce raw material inventory to 20 days’ supply or less.)

**Technology/New-Product Development Objective**

- Outsource non-core-competency activities. (*Goal:* Qualify two new suppliers for all major services by end of the fiscal year.)
- Reduce product development time. (*Goal:* Develop a formal supplier integration process manual by the end of the fiscal year.)

**Supply-Base Reduction Objective**

- Reduce the number of suppliers used. (*Goal:* Reduce the total supply base by 30% over the next six months.)
- Joint problem solve with remaining suppliers. (*Goal:* Identify $300,000 in potential cost savings opportunities with two suppliers by year end.)

**Supply Assurance Objective**

- Assure uninterrupted supply from those suppliers best suited to filling specific needs. (*Goal:* Reduce cycle time on key parts to one week or less within six months.)

**Quality Objective**

- Increase quality of services and products. (*Goal:* Reduce average defects by 200 ppm on all material receipts within one year.)

The next level of detail requires translating company-wide purchasing goals into specific commodity-level goals.

**Bringing Goals and Objectives Together—The Purchasing Strategy Development Process**

While not always the case, companies often use commodity teams to develop purchasing strategies. Purchasing strategies often apply to commodities—general categories or families of purchased items. Examples of major commodity classifications across different industries include body side moldings (automotive), microprocessors (computer), steel (metalworking), cotton (apparel), wood (pulp and paper), petroleum products (chemicals), and office supplies (all industries). A commodity team is often composed of personnel from manufacturing, product design, process engineering, marketing, finance, and purchasing. The personnel involved should be familiar with the commodity being evaluated. For instance, if the team is tasked with purchasing computers, then users from information systems should...
be included. If the team purchases vehicles and vehicle parts, then it would be a good idea to include maintenance managers who are familiar with the characteristics of these commodities. In general, the more important the commodity, the more likely that cross-functional members and user groups will be involved. Together, the commodity team will develop a commodity strategy that provides the specific details and outlines the actions to follow in managing the commodity. Exhibit 200.3 highlights the commodity strategy development process, which the following section explains.

### Types of Purchasing Strategies

Organizations can employ a variety of different strategies that may be unique to each commodity. While we cannot cover all of the possible variations of strategies that may emerge, we will briefly review some of the most common and important purchasing strategies. As we will see later, certain strategies are used more often than others, depending on how advanced an organization is at the purchasing strategy development process.

#### Supply-Base Optimization

Supply-base optimization is the process of determining the appropriate number and mix of suppliers to maintain. While this term has also been referred to as **right-sizing**, it usually relates to reducing the number of suppliers used. Moreover, suppliers who are not capable of achieving world-class performance, either currently or in the near future, may be eliminated from the supply base. This process is continuous because the needs of the business unit may always be changing. Optimization requires an analysis of the number of suppliers required currently and in the future for each purchased item.

#### Total Quality Management of Suppliers

Total quality management (TQM) requires suppliers to initiate statistical process control (SPC), design of experiments, process capability studies, and quality audits to focus on the elimination of process variability, improve immediate problem identification, and demonstrate corrective action capabilities. TQM also requires that suppliers develop a philosophy of zero defects while endorsing continuous improvement. Moreover, TQM emphasizes the need to meet and exceed the requirements of the customer (which in this case is the buying organization). In order to drive this change within the supply base, a purchaser must communicate to the supplier any expectations regarding quality. In particular, supplier evaluation and selection becomes crucial because of the need to select world-class suppliers. In some cases, a team from the buying company may have to work with a supplier to assess process capability, evaluate their quality philosophy, and recommend specific quality control techniques.

#### Global Sourcing

Global sourcing is an approach that requires purchasing to view the entire world as a potential source for components, services, and finished goods. It can be used to access new markets or to gain access to the same suppliers that are helping global companies become more competitive. Although true global sourcing is somewhat limited in most industries, more and more companies are beginning to view the world as both a market and a source of supply.

The major objective of global sourcing is to provide immediate and dramatic improvements in cost and quality as determined through the commodity research process. Global sourcing is also an opportunity to gain exposure to product and process technology, increase the number of available sources, satisfy countertrade requirements, and establish a presence in foreign markets. This strategy is not contradictory to supply-base optimization since it involves
locating the best-in-class suppliers in the world for a given commodity. Some buyers also source globally to introduce competition to domestic suppliers.

There are several major barriers to global sourcing that must be overcome. Inexperience with global business processes and practices, along with few personnel qualified to develop and negotiate with global suppliers or manage long material pipelines, are serious issues. In addition, more complex logistics and currency fluctuations require measuring all relevant costs before committing to a worldwide source. Finally, organizations may not be prepared to deal with the different negotiating styles practiced by different cultures, and they may have to work through a foreign host national in order to establish contacts and an agreement.

**Longer-Term Supplier Relationships**

Longer-term supplier relationships involve the selection of and continuous involvement with suppliers viewed as critical over an extended period of time (e.g., three years and beyond). In general, the use of longer-term supplier relationships is growing in importance, and there will probably be greater pursuit of these relationships through longer-term contracts. Some purchasers are familiar with the practice, while for others it represents a radical departure from traditional short-term approaches to supply-base management.

Longer-term relationships are sought with suppliers who have exceptional performance or unique technological expertise. Within the portfolio matrix, this would involve the few suppliers that provide items and services that are critical or of higher value. A longer-term relationship may include a joint product development relationship with shared development costs and intellectual property. In other cases, it may simply be an informal process of identifying suppliers who receive preferential treatment.

**Early Supplier Design Involvement**

Early supplier design involvement and selection requires key suppliers to participate at the concept or predesign phase of new-product development. Supplier involvement may be informal, although the supplier may already have a purchase contract for the production of an existing item. Early involvement will increasingly take place through participation on cross-functional product development teams. This strategy recognizes that qualified suppliers have more to offer than simply the basic production of items that meet engineered specifications. Early supplier design involvement is a simultaneous engineering approach that occurs between buyer and seller, and seeks to maximize the benefits received by taking advantage of the supplier’s design capabilities.

**Supplier Development**

In some cases, purchasers may find that suppliers’ capabilities are not high enough to meet current or future expectations, yet they do not want to eliminate the supplier from the supply base. (Switching costs may be high or the supplier has performance potential.) A solution in such cases is to work directly with a supplier to facilitate improvement in a designated functional or activity area. Buyer-seller consulting teams working jointly may accelerate overall supplier improvement at a faster rate than will actions taken independently by the supplier. The basic motivation behind this strategy is that supplier improvement and success lead to longer-term benefits to both buyer and seller. This approach supports the development of world-class suppliers in new areas of product and process technology.

**Total Cost of Ownership**

Total cost of ownership is the process of identifying cost considerations beyond unit price, transport, and tooling. It requires the business unit to define and measure the various cost components associated with a purchased item. In many cases, this includes costs associated with late delivery, poor quality, or other forms of supplier nonperformance. Total cost of ownership can lead to better decision making since it identifies all costs associated with a purchasing decision and the costs associated with supplier nonperformance. Cost variances from planned results can be analyzed to determine the cause of the variance. Corrective action can then prevent further problems.