Chapter 2: Operations Strategy and Competitiveness

Overview

This chapter explains the role and development of a business strategy. It also explains the role and development of operations strategy, and how the operations and business strategies are interrelated. Next, the chapter describes the competitive priorities of the operations function, the strategic role of technology, and finally, productivity measures.

Teaching Tips and Strategies

I begin by listing and briefly describing each of the four competitive priorities listed below. For each one, I ask the students to give me an example.

- Cost
- Quality – consistency, high-performance design
- Time – rapid, on-time
- Flexibility – product, volume

Students often have the most difficulty grasping the last of these – Flexibility. Often companies competing on flexibility are smaller and not well known. The examples given in the book are, indeed, smaller companies than those used for Cost, Quality, and Time. I point out that these
operations are often what we call a *job shop*. We then discuss whether any student has visited a machine shop or done their own brake job where the discs or drums are needed to be turned. Often, a student has a family member who is a *shade tree mechanic* and can explain to the rest what we are talking about.

Then I ask students to give examples of successful companies. Together, we determine which competitive priorities each company has focused on. This leads to the point of the need to excel in a few priorities and be adequate in the rest. I continue by discussing the need to match business strategy with operations strategy and, for existing companies, current strengths, or core competencies. We discuss what operational strengths existing companies have and the core competencies that companies value.

**Productivity is not Profitability**

Of all the concepts in this chapter, often students have the most difficulty with productivity. Students often have trouble separating productivity from profitability.

It is important to stress that productivity is a measure of output vs. input, not price vs. cost. While students can usually grasp the difference when dealing with one input (such as number of pastries / hours of labor), they may get confused with multi-factor productivity where dollar values are used as a measure of quantities. It is important to stress that the dollar values are used so that we can weigh the impact of changes in the amount used of several inputs. So long as prices are stable, this works. If prices and quantities change at the same time, we will run into trouble.

They may also believe that if productivity is up then so is profitability. The airline industry can be used to show how they may not be related. Once airlines were deregulated, the switch to a “hub-and-spoke” operation allowed many airlines to increase outputs (revenue passenger miles) while maintaining inputs (crew, aircraft, fuel) at or near the previous levels. However, around the same time the airlines entered a price war. The result was that, while they were more productive, they were charging much less per revenue passenger mile and, therefore, were also much less profitable.

The formulas and sample problems in the book can exacerbate this problem. The measure of input used in the multi-factor cases is, indeed, dollars spent. I stress that this is done to allow us to add together dissimilar inputs. I also stress that it is only appropriate when the amounts purchased per dollar will be the same, such as two companies competing in the same market at the same time. When comparing a company’s current situation with the past or future, prices are likely to change, and not by the same amount for each input. Then, we would need to use a more robust method or adjust prices using producer price indexes for the inputs involved.
Finally, I describe some key information from articles by Skinner (1969) and Stalk et al. (1992). Skinner provides a helpful explanation about the need to link operations decisions to business strategy. Stalk et al. compare the strategies of Wal-Mart and Kmart. This is good to discuss since Wal-Mart manages its operations effectively. It discusses the use of cross-docking, information technology, and coordinated operations.

**War Stories**

**Wal-Mart’s Success**

Stalk et al. (1992) point out the reasons for Wal-Mart’s success. It chose to focus on everyday low prices and quality. Wal-Mart successfully matched its operations decisions to this strategy. Stalk et al. point out its remarkable success, compared to its competitors. The key to its success in achieving its goals was its replenishment system. Wal-Mart uses “cross-docking” as the method of replenishment. Goods are delivered to Wal-Mart’s warehouses, where they are selected, repacked, and then dispatched to stores, often without ever sitting in inventory. Instead of spending valuable time in the warehouse, goods just cross from one loading dock to another in 48 hours or less. Cross-docking allows Wal-Mart to reduce shipping costs by using full truckloads. The goods are purchased by the truckload from the manufacturers. Then, full truckloads are packed at the warehouse with a variety of items from different manufacturers, to be delivered to a logical sequence of stores. The use of everyday low prices causes the demand to be more predictable than when sales promotions are used. Wal-Mart uses data mining to analyze the demand data. Also, they electronically share sales (POS) information with their manufacturers so that the manufacturers can react to changes in the demand of their products. In addition, the use of cross-docking allows them to replenish twice a week in an industry where the average replenishments are twice a month. This allows them to react more quickly to changes in demand in order to decrease the chance of stockouts.

**Wal-Mart continued**

The Stalk et al. (1992) paper also points out the logistic advantages of “low prices every day” over the use of price promotions. Low prices lead to more predictable demand. This makes ordering and coordinating shipments much easier. This makes it easier, and most likely less costly, to be a supplier to Wal-Mart. While Supply Chain Management will be discussed in a later chapter, it can be mentioned here that one of the most famous cases of an SCM concept, Vendor Managed Inventory, is the relationship between Wal-Mart and Proctor & Gamble for the stocking of Pampers.
The Stalk paper also describes cross docking and mentions that most companies are unable to implement it because of the high demands of coordination. Meeting these coordination demands is an example of the use of information technology.

**Answers to Discussion Questions in Textbook**

1. **Explain the importance of a business strategy.**

   It is important for a company to have a clear plan of action since we are in a highly competitive, global environment. A clear strategy allows the company to work toward common goals.

2. **Explain the role of operations strategy in a business.**

   The role of operations strategy is to provide a plan for the best usage of resources in order to achieve the objectives set in the business strategy. These resources include employees, machines, technology, and information.

3. **Describe how a business strategy is developed.**

   A business strategy is developed after the company’s mission, an understanding of the market (environmental scanning), and the core competencies of the company have been identified. The mission involves the determination of what business to be in, who the customers will be, and how the company’s beliefs will define the business. Environmental scanning includes an examination of the current trends in the market, economy, political environment, and society, resulting in an identification of opportunities and threats. Finally, core competencies are the strengths of the company. The company should match its strengths to its business strategy.

4. **Describe how an operations strategy is formulated from the business strategy.**

   The operations strategy is formulated by first determining the competitive priorities of the firm. Then, these priorities are translated into production requirements related to the structure and infrastructure of the firm. The structure involves the decisions related to the design of the production process, while the infrastructure involves decisions related to the planning and control of the operation.

5. **Explain what is meant by the term competitive priority and describe the four categories of competitive priorities discussed in the chapter.**
Competitive priorities are capabilities that the operations function can develop in order to give a company a competitive advantage in its market. The categories of competitive priorities are cost, quality, time, and flexibility. Cost involves a focus on keeping costs low. Quality focuses on the ability of the product or service to meet the specifications or requirements of the customer. The competitive priority of time focuses on speed of delivery and on-time delivery performance. Flexibility relates to the ability to offer a wide variety of goods or services.

6. Find an example of a company that makes quality its competitive priority. Find another company that makes flexibility its competitive priority. Compare these strategies.

Toyota focuses on producing a quality car. It has one of the lowest defect rates in the industry. Dell promises rapid delivery of whatever configuration customers order. So they have focused on the flexible customization and delivery for customers.

7. What is meant by the terms order qualifiers and order winners? Explain why they are important.

Order qualifiers are competitive priorities that we must meet in order to be qualified to sell in that market. Order winners are those competitive priorities that will help us win orders. It is important to understand whether competitive priorities are order qualifiers or order winners since our decisions about priorities will determine our level of success.

8. Describe the three types of technologies. Explain the strategic role of technology.

The three primary types of technologies are: product technology, process technology, and information technology. Product technology is any new technology developed by a firm, which allows the firm to offer improved products. New generations of cellular telephones are a current example. Process technology allows a firm to create goods and services more effectively. Cash register scanners are an example where supermarkets can process customers through the checkout line faster and keep better records of items sold. Information technology impacts communication, processing, and storage of information. An example of improved operations through this technology would be cross docking. These technologies improve products, processes, and coordination. Effective use of emerging technologies can give a firm a competitive advantage. Also, technology may require the company to rethink its strategy.

9. Describe the meaning of productivity. Why is it important?
Productivity measures how efficiently an organization converts inputs into outputs. For example, can one automobile manufacturer produce more cars of the same size per factory employee? Productivity is important because it determines the cost structure.

10. Explain the three types of productivity measures.

The three types of productivity measures are total productivity, partial productivity, and multifactor productivity. Total productivity utilizes all inputs and outputs in the calculation. Therefore, we are calculating the entire organization’s productivity. Partial productivity involves calculating the productivity for only one type of input, such as machines, labor, or materials. Finally, multifactor productivity is the ratio of outputs to several, but not all inputs.

See Solutions Manual for Answers and Solutions to Problems
Answers to Textbook Case – Prime Bank of Massachusetts

1. Why is the operations function important in implementing the strategy of an organization? Explain why the changes put in place by Victoria Chen and her team can either hurt or help the bank.

The operations function is important in implementing the strategy of an organization because it will determine how well the strategy is implemented. For example, having the wrong staffing level for the 24-hour customer service department would either cause costs to increase or customers to become frustrated by the long waiting times. The operations decisions will affect both the costs and the level of customer service provided, which could affect growth in demand.

2. Develop a list of changes for the operations function that should be considered by the bank. Begin by identifying operations management decisions that would be involved in operating a bank, for example, layout of facility, staff, and drive-through service. Then identify ways that they can be improved at Prime Bank in order to support the strategy focused on customer service.

The operations management decisions that would be involved in operating a bank are the layout, staffing levels, and facilities. The bank should keep track of the waiting times during different time periods in order to improve the staffing levels. The design of the facility also affects waiting times. For example, the bank may want to add another drive-through lane in order to decrease waiting times. The case noted problems with the size of the parking lot. When the waiting times decrease, customers return quickly to their parking spot, thus freeing the spot for another customer.

3. Think of the improvements identified in answering question 2. How different would these improvements be if the bank had a strategy of cutting cost rather than supporting customer service?

These improvements would be different if the strategy was to cut costs rather than support customer service. In that case, the bank would try to push customers to use the ATM in order to reduce the number of tellers on staff.

Answers to Textbook Case – Boseman Oil and Petroleum (BOP)

1. Identify the potential strategic advantages and disadvantages for BOP in outsourcing the boat logistics service to Logistics-Offshore. Explain the strategic implications of each.
An advantage of outsourcing boat operations would be to allow BOP to concentrate on exploration and production activities. Since BOP had traditionally focused on these activities, they are assumed to be BOP’s core competencies and the source of their competitiveness. Logistics-Offshore specializes in boat operations. As this is their core competency, they may be able to offer these services more reliably and at a lower price than those offered by BOP. A disadvantage could be that BOP would no longer be in direct control of boat operations. While Logistics-Offshore would strive to keep its customers happy, BOP cannot expect to receive higher priority from other customers in the case of limited resources.

2. Identify the type of information Jeff Kessinger needs to gather and evaluate in order to make his decision.

Kessinger needs to assess the cost and reliability of the two alternatives. He needs to know the costs incurred in running the boat operations at BOP, and whether they have faced any problems. He will then need to obtain a quote from Logistics-Offshore that documents their charges and their promised level of service.

Complete Manuals for the Interactive Cases also are available on the companion site: www.wiley.com/college/reid.

Interactive Learning

The web links for chapter two include links to a large and small firm in aerospace, an association dealing with manufacturing, and links to two firms in air cargo.

While Boeing and Sensenich are aerospace companies, their market, products, resources, and mission are quite different. Is this information readily available on their websites?

An in-class visit to ame.org can highlight what the issues are in this field. Check the current stories’ titles in the Target magazine. The site also has a Career Center. Browse the current job openings to give students a feel for the jobs available in operations. Our students are usually quite motivated by the desire to land a well-paid, interesting job with a good firm.
In-Class Exercises

The following exercise takes approximately 45 minutes for the students to answer in class by forming teams. The operational decisions used to support the strategy may either be researched by the students or may involve educated guesses. The answers to the exercise will depend on the companies selected. I give it out at the end of class, while allowing enough time, so that students can finish and leave as soon as they have completed the exercise. I give the students the option of working individually or in teams of up to five students. When I hand out copies of the exercise, I ask the students to take one copy per person and one copy per team. This way each student will have a copy of the assignment. I only require one copy per team to be submitted for grading.
STRATEGY EXERCISE

HAND IN ONE CLEAN COPY

Please provide names and signatures (only for team members who are present today):

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The purpose of this exercise is to evaluate the strategies of several companies. Select two industries, such as restaurants or retailers, to evaluate for this exercise. For each industry, choose two companies to evaluate.

1. For the first industry, describe the strategy of the two companies you selected. What are their order winners?

2. Describe how the operational decisions of each company have been used to support the strategy.
3. For the second industry, describe the strategy of the two companies you selected. What are their order winners?

4. Describe how the operational decisions of each company have been used to support the strategy.
References


SOLUTIONS MANUAL Reid Sanders

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