CHAPTER 2: IMPLEMENTING STRATEGY: THE VALUE CHAIN, THE BALANCED SCORECARD, AND THE STRATEGY MAP

## QUESTIONS

**2-1** The two types of competitive strategy (per Michael Porter, as explained in chapter one) are cost leadership and differentiation. Cost leadership is the competitive strategy in which the firm succeeds by producing at the lowest cost in the industry. Differentiation is the competitive strategy in which a firm succeeds by developing and maintaining a unique value for the product, as perceived by consumers.

**2-2** Many possible examples would be correct here. Examples offered in chapter one include Walmart, Texas Instruments, and HP (Hewlett-Packard).

**2-3** Many possible examples would be correct here. Examples offered in chapter one include Tiffany, Bentley automobiles, Rolex, and Maytag.

**2-4** The four strategic resources are used as follows. First the firm determines the critical success factors using SWOT analysis, and then uses execution to excel on these CSFs. The value chain is used to provide a more detailed understanding of the strategy and CSFs, by activity. Finally, the balanced scorecard is used to monitor and reward achievement of the CSFs and to provide a means for continual feedback to SWOT analysis, for desired changes in the overall strategy.

**2-5** A strategy map is a framework for showing the relationships among the perspectives of the balanced scorecard. Typically, the scorecard has the following relationships; first, achievement in the learning and growth perspective contributes to successful performance in the internal processes perspective, which in turn leads to success at the customer perspective, and then finally the desired performance on the financial perspective.

**2-6** SWOT analysis is a systematic procedure for identifying a firm's critical success factors: its internal strengths and weaknesses, and its external opportunities and threats. It is used in the first of the three steps of identifying a competitive strategy. See Question 2-4.

**2-7** A management accountant is not focused on or limited to financial information only, as in the traditional view of cost and management accounting. In contrast, a strategic cost manager includes a consideration of the firm’s critical success factors, which might include such non-financial information as delivery speed and customer satisfaction.

**2-8** Critical success factors are strategic financial and non-financial measures of success. Critical success factors are used to define and measure the means by which a firm achieves a competitive advantage. Strategic cost management involves the development, understanding, and use of critical success factors to manage business firms and other organizations. Examples of CSFs are shown in Exhibits 2.1 and 2.5.

**2-9** Several potential critical success factors for an industrial chemical manufacturer might include:

1. cost and price, since most chemicals are commodities which compete principally on price

2. speed of delivery, since many applications for these chemicals require prompt delivery

3. quality of the chemicals, so that they meet the required specifications of the customers

4. location and cost of storage, to enhance customer service and reduce overall costs

5. modernization of production and processing facilities, to produce the highest quality chemicals at the lowest prices

6. research and development, to introduce new and improved products

**2-10** Several potential critical success factors for a large savings and loan institution might include:

1. Spread between the cost of funds and the earnings on investments and loans

2. Amount of total deposits, number of depositors, number of new offices, number of loans

3. Decrease in loan losses, number of bad loans, losses due to theft and fraud

4. Training hours per employee and employee turnover

5. Customer satisfaction as measured by phone survey or other means

**2-11** Several critical success factors for a small chain of retail jewelry stores might include:

1. Growth in sales, number of new customers, number of new products, number of branch stores

2. Operating costs, by category

3. Customer satisfaction as measured by phone survey or mail survey

4. Identification and introduction of new products

5. Effective promotion and advertising using a variety of media

6. Competitive service policies

7. Identification of attractive store locations

8. Effective control of inventory to prevent fraud and theft

**2-12** Several potential critical success factors for a large retail discount store might include:

1. Growth in sales, number of new branch stores

2. Operating costs, by category

3. Customer satisfaction, as measured by phone survey or mail survey

4. Identification and introduction of new products

5. Effective promotion and advertising using a variety of media

6. Competitive service policies

7. Identification of attractive store locations

8. Effective inventory management, both to reduce employee theft and also to reduce waste, overstocking and excessive out-of-stock conditions

9. Choice of merchandise mix, to attract customers

**2-13** Several potential critical success factors for an auto-repair shop might include:

1. reliability of service

2. fair pricing

3. warranty for service; and policies for satisfying customer complaints when they occur

4. inventory management to reduce loss, waste and to reduce the cost of carrying inventory of parts

5. proper location with sufficient parking and easy access

6. effective marketing using the appropriate media

**2-14** The balanced scorecard is an accounting report that includes the firm’s critical success factors in four groups or “perspectives”: customer satisfaction, financial performance, internal business processes, and learning & growth (human resources). The primary objective of the balanced scorecard is to serve as an action plan, a basis for implementing the strategy expressed in the CSFs, by aligning performance of managers and employees with the firm’s strategy.

**2-15** The balanced scorecard is important to integrate both financial and non-financial information into management reports. Financial measures reflect only a partial -- and short-term -- measure of the firm's progress. Without strategic non-financial information, the firm is likely to stray from its competitive course and to make strategically wrong product decisions -- to choose the wrong products, the wrong customers. The balanced scorecard provides a basis for a more complete analysis than is possible with financial data alone.

**2-16** Sustainability means the balancing of short- and long-term goals in all three dimensions of the company’s performance – economic, social and environmental. The concept is used by firms to expand their strategy to include social and environmental as well as economic goals. Some firms that have included sustainability have found that it is also good economics.

**2-17** Value-chain analysis is a strategic analysis tool used to identify where value to customers can be increased or costs reduced, and to better understand the firm’s linkages with suppliers, customers, and other firms in the industry.

**BRIEF EXERCISES**

**2-18** There are a number of possible examples here. If you have trouble getting a discussion going refer the class to chapter 1 and some of the firms that were discussed there as cost leaders. For example, Walmart, which has the strengths of size, operating efficiency through innovative supply chain, and low cost operations; weaknesses would include the recent negative publicity the firm has had for its labor practices and for the negative economic consequences to competing business in communities where a Walmart is located.

**2-19** There are a number of possible examples here. If you have trouble getting a discussion going refer the class to chapter 1 and some of the firms that were discussed there as differentiators, such as Target. A strength of Target is its customer loyalty and its success in developing customer appreciation for the style and quality of its products, and for the attractiveness of the stores. Survey results reported in chapter 1 show that particularly wealthy shoppers prefer Target. Weaknesses include smaller size relative to Walmart, Sears/Kmart, and other competitors, and to less efficient supply chain relative to Walmart.

**2-20** Perhaps the easiest illustration of the application of the value chain is in the manufacturing industry because it is relatively easy for the students to see or imagine the processes and steps that take place in a typical manufacturing plant, from raw materials to assembly and finishing. This is why the examples in the chapter use manufacturers. Ask the class to consider Walmart or Target (as large retailers) and consider the supply chain at Walmart as an example of a very effective value chain.

**2-21** The value chain is a detailed look at the processes within the firm to accomplish the ultimate strategic goals. Since the balanced scorecard represents the CSFs that lead to strategic success, the two are definitely related. The BSC is likely to be developed to the level of detail so that the CSFs of a given activity are represented as the balanced scorecard for that activity. For example, a hospital that uses the balanced scorecard will likely have a BSC for the admission function, which is one key link in the value chain, or similarly, the hospital will likely have a BSC for the housekeeping function, or the dietary function, each a key part of the hospital’s value chain.

**2-22** This is a potentially great application for value chain analysis. By identifying the two firms’ value chains and then comparing relative strengths and weaknesses across the two value chains, it would be possible to see how the combined firm might be more competitive than the two separate firms. For example, consider the merger of Disney and ABC; the combination brought together a great synergy - one firm (Disney) with great content, and the other (ABC) with the media network to distribute it most effectively.

**2-23** The answer should be the same. The merger of HP and Compaq is an example here.

**2-24** To be implemented effectively, the balanced scorecard should:

Have the strong support of top management

Accurately reflect the organization’s strategy

Communicate the organization’s strategy clearly to all managers and employees, who understand and accept the scorecard

Have a process that reviews and modifies the scorecard as the organization’s strategy and resources change

Be linked to reward and compensation systems; managers and employees have clear incentives linked to the scorecard

Include processes for assuring the accuracy and reliability of the information in the scorecard

Assure that the relevant portions of the scorecard are readily accessible to those responsible for the measures, but that the information is also secure, available only to those authorized to have the information

**2-25** Normally there are fewer than 100 measures, but sometimes more than 100. The median number of measures is between 20 and 50.

Source: Raef Lawson, Toby Hatch and Denis Desrouches, *Scorecard Best Practices*, Wiley, 2008.

**2-26** 1. Commodity producers are likely to compete as cost-leaders because the product is difficult to differentiate.

2. Professional service firms are usually differentiators, as consumers are likely to choose their doctors, lawyers, and accountants, etc, on the basis of proven expertise, licensure, and experience.

**2-27** The growth of the contract manufacturers in the electronics industry has had important effects in the competition within this industry. For example, in the TV business, it is now possible for a small firm to develop its own design and marketing organization and outsource all of its production to the contract manufacturers, thereby avoiding all of the manufacturing-related development costs that had represented a barrier to entry to the industry in prior years. Many of the contract manufactures also provide design and marketing services, so that a small firm can enter the market with a relatively small investment. This is what Vizio, Inc., a Los Angeles-based TV manufacturer, has done and the firm has become very successful in competing against some of the larger brands.

Source: “U.S. Upstart Takes on TV Giants in Price War,” *The Wall Street Journal*, April 15, 2008, p1.

## EXERCISES

**2-28 Execution; Competitive Strategy (20 min)**

1. The critical aspect of the analysis of this special order is how it will affect the brand image of Deaine’s clothing. Deaine appears to compete on the basis of product differentiation, that is, its clothing is perceived to be of higher quality, attractiveness, etc. DEI is thus able to sell its clothing in upscale designer clothing retail stores, probably at a premium price. Sale of the same or similar clothing to department stores could dilute the brand image, and thus hurt the sales in the upscale retail stores. Customers who are willing to pay the premium to purchase the clothing in the designer stores may not be willing to do so if the same or similar clothing is available in department stores. Thus, while the special order might be very profitable in the short run, in the long run it is potentially very damaging for the company.

The main point of this case, and a pervasive theme of strategic cost management, is that cost analysis from a strategic perspective can often provide a different answer from the cost analysis which has a short-term point of view. In practice, many cost systems have a short-term focus, and the strategic emphasis of strategic cost management is used to bring the firm’s operations and decision making back to consistency with the firm’s strategic objectives.

1. A SWOT analysis would be useful to Joel to help him more thoroughly understand the key critical success factors of his strategy and to therefore help him more effectively implement the strategy. Also, a value chain analysis would help him to understand his overall strategy and the linkages of the critical success factors in a more systematic and detailed manner. A balanced scorecard would provide Joel a means to organize these critical success factors and to regularly measure progress on each of them.

**2-29 Strategy; Execution (20 min)**

1. This question is designed for a good discussion of competitive strategy. In this case the firm moved outside its expertise, where it had become strategically sound and competitive, into an entirely different area of competition, where it faced different critical success factors.

BPI built its success on the basis of inventory control and efficient operations which contributed to its ability to satisfy customer demand for auto parts. BPI was able to supply the part quickly because of its state-of the-art inventory system. Early in the class discussion ask whether Best Parts follows a differentiation or a cost leadership strategy. Most answers say that BPI follows the differentiation strategy, obtaining customers based on fast delivery. Others argue the competition is based on cost leadership, as the business is basically a commodity (auto parts) which are available in equivalent quality from many suppliers, and that fast delivery is an important, but not critical success factor. I usually permit this discussion to go on briefly, as it is a good exercise in identifying generic strategy. Fairly quickly I will remind the class that to determine the strategy of BPI, they must determine what is the principal reason customers come to BPI -- is it fast service or is it low price? Would customers come to BPI if prices were higher to get the fast delivery? Since the case does not provide enough information to answer this point, I tell them to assume one strategy or the other and then study carefully the decision to invest in the craft store.

While the idea of craft stores might have some merit as an investment for BPI, the success of BPI’s management in providing auto parts quickly to its customers in no way prepared it for managing the craft type store. In fact, the craft-type store required a quite different type of inventory management. Rather than to be able to supply a standard type of part quickly, the craft-type store manager needed access to non-standard, unique types of items. Moreover, for the craft store to be successful, the inventory should not be replaced with identical items, but instead, diversity and variety are more important.

**2-29 (continued -1)**

The return customer looking for a gift or interesting decorative object expects to see new and different items on each visit. Thus, the quick replacement of standard parts was in direct conflict with the critical success factors for the craft and gift stores.

Notice that our analysis does not depend on whether BPI is a cost leadership or a differentiation firm for the auto parts business. Whatever the strategy for the auto parts business, the critical success factors for the craft store are quite different.

1. A SWOT analysis should be used, as it would have provided BPI with the insight it needed to see that the draft store required a much different set of operating competencies than that of the auto parts business; this would provide a basis for BPI to identify the critical success factors that would be needed in the crafts business. Also, a value chain analysis would have been useful in this case as it would have clearly shown the distinct differences between the value chains of the two businesses. The auto parts business was built on the success of the company in managing its supply chain, and the company needs to understand the significant differences in the supply chain for the craft store business.

**2-30 Value Chain; Currency Fluctuations (15 min)**

The increase in the value of the Brazilian currency relative to that of one of its chief trading partners, China, will likely have a significant impact on Brazilian companies, particularly those that require parts for products or other materials that are commonly sourced from China. The increase in the value of the Brazilian currency (theReal) will mean that these companies will find it increasingly cheaper to outsource production or purchase of these items from China, and the effect will be that local Brazilian producers of these items will not be able to compete with the lower (foreign exchange adjusted) products from China. Some Brazilian companies will benefit as the purchase of parts or materials at lower cost from China will bring the overall cost of their products down, and thus make the company more price competitive. On the other hand, the Brazilian companies that manufacture these parts will suffer the loss of the business. Thus those companies whose value chain requires the acquisition of the parts of materials will benefit, while those whose value chain involves the production of these parts and materials will suffer.

Note that the reverse would be true if the value of the Real were to fall relative to the Yuan or other currencies. Then, the advantage would be to local producers.

Source: “Brazil Opts for Deeper Rate Cut to Stoke Recovery,” Reuters, March 7, 2012; John Lyons and Tom Barkley, ”Brazil Leader Slams U.S. Money Policy,” *The Wall Street Journal*, April 10,2012, p.A8; Arnaldo Galvao and Iuri Dantas, “Brazil May Ask WTO About Possible Action on Weak Currencies, Official Says,” Bloomberg.com, January 18, 2011; Matthew Bristow, “Latin Currencies Keep Rising – Until They Don’t,” *Bloomberg Businessweek*, August 15, 2011, pp 12-13; Jeffrey T. Lewis, “Brazil’s Currency Unlikely to See Respite After Rate Cut,” *The Wall Street Journal*, September 1, 2011; Tom Lauricella, Alex Frangos and John Lyons, “Emerging Markets Tumble,” *The Wall Street Journal*, September 23, 2011, p. C1; John Lyons, “The Dark Side of Brazil’s Rise,” *The Wall Street Journal*, September 13, 2011.

**2-31 Value Chain; Strategy Map; Corporate Alliances (15 min)**

Because it specializes only in conducting and analyzing clinical trials for new drugs, Quintiles can perform this activity more efficiently and more effectively than Solvay. This means the two corporations both benefit from the collaboration. Quintiles provides the same service for many other pharmaceutical companies, providing the same joint benefits. The joint benefits arise because the industry value chain for pharmaceutical firms has a step, the testing of new drugs, which can be efficiently and effectively outsourced. Quintiles, founded in Chapel Hill, NC in 1974, saw the need for testing and analysis services in pharmaceutical companies, and from a single contract in 1974 has grown to a company operating in 60 countries with 22,000 employees. The collaboration between Solvay and Quintiles was a natural fit.

To recognize the importance of this collaboration and to enhance the joint benefits, the two companies developed a joint balanced scorecard and strategy map in 2006. The scorecard and strategy map enabled the companies to set jointly-beneficial goals, set targets, and monitor progress toward these targets. The two companies were already using the balanced scorecard, so the concept of extending the scorecard approach to their alliance made sense.

Source: Robert S. Kaplan, David P. Norton, and BjarneRugelsjoen, “Managing Alliances with the Balanced Scorecard,”  *Harvard Business Review*, January 2010, pp 114-120.

**2-32 Value Chain; Sustainability (15 min)**

The example of a hypothetical company, CleanTech, is based on an actual example reported by Julie Lockhart, Audrey Taylor, Karl Thomas, Brenda Levetsovitis, and Jason Wise, “When Higher Price Pays Off,” *Strategic Finance*, January 2011, pp 29-35.

1. The role of the value chain is to assist the company in identifying opportunities for adding value and reducing cost. In this case there is an opportunity for both adding value and reducing cost for both CleanTech and its customers. The complete value chain analysis for the new system illustrated in the article shows that the new system would save the cleaning company several thousand dollars per year. Moreover, it would avoid the disposal of harmful waste products, because the system is designed to simultaneously clean the tank and the waste fuel in the tank. Thus, there is no need to dispose of the waste fuel. This saves the cost of replacing the fuel, but perhaps more importantly, it avoids the environmental damage of having to dispose of the waste fuel, as would be required in CleanTech’s current cleaning system.
2. The sustainability issues associated with the disposal of the environmentally harmful waste fuel could be included both financially and non-financially. It could be included financially in cost measures (cost of replacing the waste fuel for example) and in non-financial measure (for example, gallons of fuel that were saved from disposal). The consequences of preventing waste fuel from being disposed of could be measured by environmental engineers, and these measures could also be included. Some consequences might be difficult to quantify, such as the long-term effect on plants and wildlife, but these consequences should also be included in the decision analysis.
3. Whether or not CleanTech purchases the new system, since it handles environmentally harmful materials, it would be a benefit to the company and its community for CleanTech to adopt the sustainability scorecard. In this way, the company can keep track of the environmental effects of different choices the company must make, including the potential purchase of the new cleaning system. Some examples of scorecard measures include gallons of fuel recycled, gallons of fuel disposed of in a waste facility, and carbon emissions.

**2-33 Strategy; Sustainability (15 min)**

There are some good reasons to expect this strategy is a good one for both Walmart and for Seventh Generation (SGI). For Walmart, which initiated a “green” strategy in 2005 under CEO Lee Scott, and in 2009 published its first Sustainability Report, working with Seventh Generation will enhance its emphasis on and reputation for sustainability. Offering Seventh Generation Products is consistent with the firm’s overall strategy and should help in driving positive customer attitudes as well. Walmart is also likely to be aware that its shoppers are increasingly looking for “green” products, as more consumers are concerned about climate change, so the partnership should produce increased sales and perhaps new customers for Walmart.

Seventh Generation is potentially the big winner here, as its products are now available in the giant retailer’s stores, opening up a significant new access to shoppers for the company. Also, the growing awareness of the commitment of Walmart to sustainability should make the partnership look favorable to the Seventh Generation’s customers.

Source: Ellen Byron, “Adversary’s Clean Start with Walmart,” *The Wall Street Journal,* July 26, 2010, p B9.

**2-34 Ethics; Sustainability (15 min)**

This exercise is intended primarily for class discussion, and since ethical issues are addressed, the students’ answers must be treated with proper understanding of the student’s ethical position and perhaps the student’s looking for guidance. The answers for each case are based on actual responses from an academic study using 97 coffee drinkers (cases A and B), 84 different coffee drinkers (case C) and 218 participants (case D)

Case A: a)$9.71

b)$5.89

c)$8.31

Case B: a)$11.59

b)$6.92

Case C: a)$9.90

b)$8.44

Case D: a)$21.21

b)$20.44

c)$20.72

d)$17.33

e)$20.04

Taken together, the results suggest that the participants valued ethical standards and sustainable production methods. However, the premium paid for high ethical standards or for sustainability was not nearly as great as the penalty (lower price) for known unethical behavior or lack of sustainability. Note also the very small difference between the prices paid for the shirts with different levels of organic content, relative to the shirt with no organic content, suggesting that the consumers were rewarding an effort, even if a small one, to achieve sustainability.

**2-34 (continued -1)**

Each class will have different results, and these differences can be used for a discussion of the value to the consumer of ethical behavior and sustainability.

Source: RemiTrudel and June Cotte, “Does Being Ethical Pay?” *The Wall Street Journal*, May 12, 2008, p R4.

**PROBLEMS**

**2-35 Strategy; Health Care (25 min)**

1. Medical University’s strategy, a differentiation strategy, should encompass a focus on the quality of its clinical care, education, and research. The relative size of the healthcare system is important as a way to attract third party payers, providers, and patients. A large hospital system tends to offer a greater breadth of services, which often increases the clinician’s level of expertise. A physician at a larger institution will most likely have performed more procedures, i.e. open-heart surgeries, which tends to increase the probability of a favorable patient outcome. The healthcare system’s image to the public is very important. A renowned institution receives more walk-in patients and patient referrals because of its reputation. Thus, the University’s marketing and public relations departments are very crucial to its success. It is also essential that the healthcare system stay within its budget in order to continue operations.

2. The balanced scorecard goes beyond simply monitoring financial performance. Because the four areas: financial performance, customer satisfaction, internal processes, and learning and growth have critical success factors which are monitored, management can thus determine how well the firm is attaining its strategic goals based on the measurements of these critical success factors.

3.

* Financial: operating margin, cost per patient-day, percentage of overdue patient accounts, sales growth
* Customer: patient satisfaction, speed of service, number of referring physicians, measures of patient health (re-admits for complications,…)
* Internal Processes: patient complaints, percentage of procedures completed on time, infection rate, mortality rate

**2-35 (continued -1**)

* Learning & Growth: number of employee hours of training, number of employee suggestions, measures of absenteeism, employee satisfaction

4. One of the hardest challenges is convincing employees that the balanced scorecard is not simply a management tool. The reluctance of employees to implement the balanced scorecard may prevent the organization from achieving its strategic goals. In order to increase buy-in from employees, management needs to educate them on the relevance of the balanced scorecard. A hospital in the Southeast that implemented the balanced scorecard realized that the hospital needed to educate employees not only on how the balanced scorecard has the potential to improve the overall success of the organization, but also how it can help their employees reach their personal and professional goals. The hospital had to work hard to overcome the tendency employees had to dismiss the initiative as simply the “latest management tool.”

**2-36 Strategic Positioning (20 min)**

Farming is basically a commodity operation, and this is true of Fowler’s farm as well. The products are difficult to differentiate except by grade which can affect market prices to some degree. For this reason, the best description of the farm’s strategy is cost leadership. This strategy is also consistent with the financial problems facing farms in the U.S. The Farm Aid concerts sponsored by Willie Nelson and others are an illustration of the broad concern of the diminishing profits of farming. Also, the case notes price pressures facing the Fowler farm. Good cost management is becoming more critical for successful farming, and this appears to be at the top of Kelly’s agenda.

**2-37 SWOT Analysis (20 min)**

There are likely to be a wide variety of answers. Here are some representative items.

##### Strengths

Good sized farm in an established farming area

Automated milking equipment

Extensive experience

Significant capital investment

##### Weaknesses

Future of tobacco as a crop?

FDA regulations and compliance

Some unscientific farming methods used in the past

Varied terrain in the farm’s fields

##### Opportunities

More efficient farming operations, through Kelly

More leisure time for Dad

Export subsidies, tariffs, etc. in the U.S. and abroad that make

Fowler’s farm products more competitive

##### Threats

New regulations, taxes,…etc. re: tobacco

Export subsidies, tariffs, etc in the U.S. and abroad that make

Fowler’s farm products less competitive

**2-38 Value Chain Analysis (20 min)**

The value chain should identify the elements or activities in the value chain in enough detail that Kelly can identify potential areas for cost reduction. One representative example (only one possible example) of a value chain for the farm is as follows.

|  |  |
| --- | --- |
| **Value Activity** | **Timing** |
| Soil Preparation | February - March |
| Obtain seed, fertilizer and supplies | February-April |
| Planting | April |
| Weed control and irrigation | May – July |
| Harvesting | August – September |
| Sort, clean and package for sale | August – September |

**2-39 The Balanced Scorecard (20 min)**

There are a number of possibilities for determining both the number and types of perspectives for the balanced scorecard, and for determining the critical success factors which belong under each perspective. The answer below is representative of a balanced scorecard that would be a good fit for the Fowler farm. This scorecard puts the operations and financial perspectives first, to emphasize their importance to the farm. Note that each of the factors must have a quantitative measure; a concept is appropriate for strategic analysis, but the scorecard is intended to measure progress and performance – it requires a quantitative measure.

# Operations

crop rotation; number of fields in rotation

inventory of supplies and parts, by type of equipment, cost

and date purchased

weather forecast, days missed, important weather changes

irrigation schedule; % days on schedule

fuel used, by type of equipment

equipment breakdowns, by type of equipment; cost of

repair, length of time needed for repair

# Financial

sales; trend

monthly earnings trend

return on investment; compared to industry average for region

cost of materials; fertilizer, fuel, etc.

cost of labor; by type of employee

prices received for each major product

interest cost

# Employees

turnover (number and percent)

accidents (number )

experience; years in farming

efficiency; hours required for each well-defined task

**2-39 (continued -1)**

**Regulatory Compliance and Environmental**

compliance with local, state and federal laws on tobacco

farming

compliance with FDA regulations regarding handling raw milk

usage of restricted chemicals known to have negative

environmental effects (amount, percent)

# Customer

orders shipped on time (number and percent)

quality complaints (number, percent)

**2-40 Strategic Positioning (20 min)**

Because of the emphasis in the case information on product quality and craftsmanship, the strategy for Tartan (the reason it has been successful) is best described as differentiation on the basis of quality. While there are some cost concerns for the company, particularly with the Classic line, these are not critical to the company’s success. In contrast, the company is most likely to succeed if it can continue to appeal to those customers looking for up-scale, higher quality lamps and lighting fixtures. The Classic line is critical to this strategy since it is the original product line for the company, and the most identified with quality and craftsmanship.

When using differentiation as the Company’s strategy, it becomes clear that maintaining the Classic line is critical to the company’s success. Thus, elimination of the line could damage the firm’s quality and craftsmanship image, and thus hurt the company’s strategic competitive advantage. Even if the Classic line is losing money for the company, it is important to both retain it and to publicize it, because it is the product line which most supports the company’s quality image.

Since sales of the Classic line seem to be focused on the northeast states, it might be appropriate to obtain efficiencies by focusing manufacturing and distribution efforts in these states. However, the marketing of the Classic line should continue to be throughout all sales regions because of the strategic importance of the Classic line.

The Classic line can be considered an example of what is sometimes called a “loss leader,” a product or service that draws attention to the company, but which in itself is not profitable.

**2-41 SWOT Analysis (20 min)**

There are likely to be a wide variety of answers. Here are some representative items.

##### Strengths

90+ years of reputation for quality and innovation

Highly trained craftsmen (Classic Line)

Loyal work force

##### Weaknesses

Drop in demand for the Classic Line (except in Northeast),

the Modern line, and Contemporary line

Capacity problems in the plant

##### Opportunities

Growth in demand in the Western and Stewart lines

##### Threats

Ability to replace skilled workers in the Classic line?

Order backlog – effect on customer satisfaction?

**2-42 Value Chain Analysis (30 min)**

There are a large number of possible value chains for a company such as Tartan. The value chain provided below is a representative example. A solution such as this should include upstream, manufacturing, and downstream activities – all the way from product planning and research to customer service.

|  |  |
| --- | --- |
| **Value Activity (in sequence)** | **The Role of this Activity** |
| Market research | To benchmark and maintain our overall strategy |
| Product planning | Importance of developing new products |
| Advertising and Promotion | Stress the firm’s quality |
| Product design | Focus on innovation, quality |
| Develop bill of materials | May need long lead times to acquire the best quality materials |
| Source parts and skilled labor | Very important because of Tartan’s reputation for quality and craftsmanship |
| Scheduling production | A critical step because of long lead times and tight labor resources |
| Cutting and trimming materials | Importance of quality |
| Assembly | Importance of quality |
| Finish and painting | Importance of quality |
| Preparation for Shipment | Importance of quality |
| Invoice customer | Accuracy, customer service |
| Customer service | A key step in the differentiation strategy |
| Warranty returns and allowances | Treat these as opportunities for product redesign and improvement, i.e., on-going redesign |
| Customer satisfaction follow-up | Important to Tartan’s differentiation strategy |

**2-42 (continued -1)**

Here are some points that address why the value chain is important to profitability and overall competitiveness. Many of these point to questions about Tartan’s operations that go beyond the data available in the case; for these points, the role of the value chain is to help to identify the important questions.

1. The value chain provides a basis for identifying those activities for which the firm is very competitive and those for which it is not competitive. In this case, the upstream activities of design and manufacturing are probably at the heart of Tartan’s past success, as the firm has developed a reputation for products of high quality. Customer service is also a key to maintaining the firm’s differentiation strategy. The use of the value chain should highlight this important activity and draw the firm’s attention to its performance in that activity.

2. Since manufacturing capacity is overall pretty tight, the value chain can be used to help identify those activities where the capacity is especially tight and those where there is some slack, to draw appropriate attention where it is needed. Is the capacity problem primarily in cutting and trimming, assembly, shipping…?

3. The value chain can be used to benchmark specific activities, perhaps against industry figures for manufacturing productivity, and so on. Most industries, including the lighting manufacturer’s industry, collect and publish summarized information about operating performance of firms in the industry. As a member of the industry association, Tartan would have access to this type of information. Areas to benchmark would include manufacturing performance (productivity, rejects for production defects, sales order lead times, customer service response time, etc.).

**2-43 The Balanced Scorecard (20 min)**

An example of a balanced scorecard for Tartan Corp follows:

|  |
| --- |
| **Financial** |
| Sales, sales growth, by product and region |
| Earnings, as above |
| Activity-based product costs |
| Return on investment, by product line |
| New investment, by product line |

|  |
| --- |
| **Internal** |
| Cycle time |
| Waste of materials |
| Rework |
| Productivity measures; hours per product, materials per product |
| Inventory levels |

|  |
| --- |
| **Customer** |
| Lead time |
| Retention |
| Satisfaction, in specific categories: quality, etc |
| Number of new customers |
|  |

|  |
| --- |
| **Employee** |
| Training hours |
| Retention |
| Satisfaction |
| New product development |
| Employee suggestions |

**2-44 Strategy Map (20 min)**

There are a variety of possible answers to this question. Here is

an example.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
| Financial |  |  |  |  |
| Customer |  |  |  |  |
| Internal Processes |  |  |  |  |
| Learning and Growth |  |  |  |  |

**2-45 Strategy Map, Balanced Scorecard; Dell Computer (25 min)**

1. The following BSC was adapted from Peter Brewer, “Putting Strategy into the Balanced Scorecard,” *Strategic Finance,* January 2002, pp44-52.

|  |
| --- |
| **Learning and Growth**   * Training dollars per employee * Number of emerging technologies evaluated * Number of new manufacturing processes developed * Number of new manufacturing processes under development |
| **Internal Processes**   * Product manufacturing time * Raw materials inventory * Order processing time * Manufacturing defects |
| **Customer**   * customer perception of order taking convenience and accuracy * customer perception of product quality * customer retention * customer satisfaction with speed of service |
| **Financial Perspective**   * revenue growth * gross margin * operating cost ratio * selling expense to sales ratio |

1. Strategy Map for Dell Computer

This is one example of a possible strategy map, that can be

inferred from the BSC in part 1 above.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
| Financial |  |  |  |  |
| Customer |  |  |  |  |
| Internal Processes |  |  |  |  |
| Learning and Growth |  |  |  |  |

**2-46 Strategic Analysis (15 min)**.

Jim’s new business is likely to face great competition, as there are already a number of firms in this market. What Jim must do to have a successful business is differentiate his business from the other Internet firms. Since the current competition is successful at low cost and fast delivery, Jim must seek other ways to differentiate his business. Because of his experience, it is likely that he can differentiate his business by finding and developing unique products that are not available from competing sources. If Jim has been successful at racing, his racing credentials can serve as a critical success factor, in addition to the unique products.

The cost management information Jim is likely to need will be in planning and decision making, at least initially. He will need carefully developed expense budgets, to control his cash expenditures until a stable sales pattern emerges. He will also need cost management information for setting prices, evaluating product profitability, and evaluating potential new products. These cost management methods are explained in Part Two of the book.

**2-47 Strategic Analysis (30-40 min)**

1. Performance Bicycles: The on-line retail industry is very competitive, so the competitive strategy is likely to be both cost leadership (since catalog shoppers can readily find the lowest price) and differentiation (the mail order customers will differentiate on speed of delivery, quality of service such as flexible returns policy, and uniqueness of product offerings). The critical success factors are likely to be quality of service, credit terms, quality and uniqueness of products, speed of delivery, and cost.

2. Oxford Omni: Because the customers are primarily business and convention visitors, the Omni is likely to compete on differentiation, given a market-set price and therefore cost. The business traveler is not likely to look for the low-cost hotel, but is likely to be more interested in the features of the hotel, such as data and fax services and other conveniences. Critical success factors are likely to be quality of service and special features.

3. Orange County Public Health Clinic: A strategic goal for a public agency is compliance with the charter of the organization, including spending in approved ways. Thus, a critical success factor for the Clinic is accurate accounting of expenditures, and budget and management systems which ensure that expenditures are properly authorized. Also, cost management information is needed to assess the funding needs for increases in services or for offering any new services. The cost management information can be used as the basis for requests for increased funding from governmental agencies, or for donations from foundations and other donors.

4. Harley-Davidson Motorcycle Co.: With the introduction of Japanese motorcycles in the U.S. in the late 1960s and 1970s, Harley-Davidson found itself competing in a much more competitive market. The Japanese motorcycles were cheaper and of higher quality and performance. Harley-Davidson chose to meet this competition by staying with the style of cycle for which it had become famous, but to also work hard to increase quality and reduce costs. Harley-Davidson’s strategy thus became one of differentiation (its

**2-47 (continued -1)**

unique style of cycle) plus increased emphasis on cost reduction and quality, to retain the market share it had enjoyed into the 1960s.

Critical success factors are likely to be innovation, manufacturing efficiency, customer satisfaction, and market share. **See also problem 2-56.**

5. Merck Pharmaceutical Company: A manufacturer of pharmaceuticals such as Merck Company competes primarily on the basis of differentiation. Cost management is used to assist the company in managing the costs of developing new drugs. The process of researching, developing, testing, and introducing new drugs is a very long and costly one. The life cycle of a drug will depend on the nature of patent protection, if any, and the availability of competing products. Life cycle costing can be used to manage the costs of the drug over its entire life cycle. Critical success factors are likely to be research and development accomplishment (innovation), effective advertising, excellent results in clinical trials and reports, and recognition by key medical staff and institutions.

6. St. Sebastian’s College: A small liberal arts college is likely to compete primarily on the basis of differentiation. The differentiation might be the nature of the programs offered, religious affiliation, location, or some other attractive feature of the college. Cost leadership is not likely to be important, since colleges do not tend to compete directly on price (tuition and fees), though there is a certain range of prices within which all colleges must compete. Thus cost management is important primarily to facilitate the strategic objective of differentiation, by providing a basis for analyzing the best methods to attain and retain the differentiation. Also, cost management is used to control expenses, so that the college can be profitable at the prices given in the marketplace. Critical success factors are likely to be measures of recruiting effectiveness (number of applicants, quality of applicants…), student/faculty ratio, achievement in sports, facilities management, etc.

**2-48 Strategic Analysis; The Camera Industry (40-50 min)**

1. The objective of this problem is to have the students understand that the concept of competition is perhaps not as simple as set out in Porter’s framework. We use Porter’s framework because it provides a useful organizing theme for understanding how firms compete. But the context of the camera companies and how they compete at price points shows an understanding of competition that can be more complicated.

Some argue that Porter’s view of strategy and competition does not adequately describe the intensity of competition in certain industries, particular certain consumer products industries such as cameras. Porter’s concept, as well as that of the build and harvest concepts of the Boston Consulting Group, conceive of a competitive equilibrium in which the firms in an industry find a stable, relatively long-term mode of competition, often called “sustainable competitive advantage.” This might be cost leadership or product differentiation. The major point is that, by applying the cost leadership strategy for example, a firm remains competitive and successful as long as it remains the cost leader. Some argue that the competition in certain industries is far too intense to have any one firm achieve more than a temporary advantage, whether it be on cost or differentiation.

Instead, each firm must simultaneously compete on the three competitive factors: cost (low cost and low price), quality (conformance of the product with advertised features and specifications), and functionality (the product’s features; its ability to perform the desired task). Robin Cooper makes a persuasive case (*When Lean Enterprises Collide*, *Harvard Business School Press*, 1995) that most firms in the consumer products industries do not achieve a competitive advantage. In particular, the camera companies tend to compete simultaneously on price, quality and functionality. This happens because cameras are sold at a certain “price point” of $49 or $99, etc., and the consumer expects to get as many desirable features as possible at the targeted price.

**2-48 (continued -1)**

It is assumed that quality is near perfect, as is the consumer’s expectation. Thus, the camera firms work hard at identifying the key features (that is, functionality) which the consumer desires at each price point. What does the purchaser of the $99 camera really want in terms of features? At the $49 level? This type of competition is

characterized by frequent model changes (18 months is the life cycle of products in this industry) and intense efforts to identify consumer desires (Olympus hires sales agents to work in retail camera stores to identify customer preferences, for example).

**2-48 (continued -2)**

2. A value chain for Olympus Camera Company follows:

|  |  |  |
| --- | --- | --- |
| **STEPS IN THE VALUE CHAIN** | **ACTIVITIES AT EACH STEP OF THE VALUE CHAIN** | **EXPECTED OUTPUT OF EACH ACTIVITY** |
| First Step: Acquire raw materials | Purchase from appropriate vendors; maintain effective long-term relationships with the vendors; objectives: flexibility, low cost, and quality. | High quality, low cost parts and materials |
| Second Step: Assemble materials and parts into components of the camera. Some of the components may be manufactured, while others are purchased outside the firm. | Raw materials are converted to components and parts used in the manufacture of the camera | Desired components and parts |
| Third Step: Camera Manufacturing | Final assembly, packaging, and shipping the final product | Completed camera |
| Fourth Step:  Wholesaling, Warehousing and Distribution | As needed, move to retail locations and warehouses | Freighter, rail, truck, air |
| Fifth Step: Retail Sales | Retail sale |  |
| Sixth Step: Customer Service | Process returns, inquiries and repairs |  |

**2-48 (continued -3)**

The opportunities for cost reduction/value enhancement include:

redesign to reduce materials cost and to speed the manufacturing process

replace expensive materials with less expensive materials, e.g., metal parts for plastic, effective vendor relationships to reduce costs, improve quality and delivery, etc.

redesign the product to reduce service and warranty costs by making it simpler, more reliable, and easier to use

examine whether certain parts and components could be manufactured or purchased from an outside vendor; choose the low-cost method

improve the efficiency of the manufacturing process, using, for example, the theory of constraints

improve the efficiency of the workforce through training and proper incentives

improve quality as this will lower overall costs

reduce the cost of distributing the product

reduce the complexity of the product, so that it will still meet the desired functionality at the given price point

**2-49 Strategic Analysis; The Balanced Scorecard, and Value-Chain Analysis; The Packaging Industry (40-50 min)**

1. Dana’s strategy had previously been primarily a cost-leadership strategy, but with the new focus on high-end markets, the strategy has changed to differentiation. Can Dana compete as effectively as a differentiator as it can as a cost-leader? The change has required a change in operations, to accommodate the smaller batches and greater number of features added to the product, as noted in the case. The likelihood of success for the strategy depends on the firm’s ability to make the changes effectively. Can the plant be re-oriented to small batch production quickly and efficiently, so that Dana can compete effectively on cost and quality in the new markets? Has Dana done a careful strategic analysis of the new competitors in the new markets? How is competition in these new markets likely to change over the coming months?

**2-49 (continued -1)**

2. A value chain for Dana Packaging follows:

|  |  |  |
| --- | --- | --- |
| **STEPS IN THE VALUE CHAIN** | **ACTIVITIES AT EACH STEP OF THE VALUE CHAIN** | **EXPECTED OUTPUT OF EACH ACTIVITY** |
| First Step: Acquire the raw materials, which is primarily pulp paper | Produced in Dana’s mills; also purchased from recycling operators | High quality, low cost materials |
| Second Step: Conversion | Converts the pulp into paperboard | High quality paperboard |
| Third Step: Coating | When desired, to apply the required coating and color to the container | Increasing, Dana’s products include specialized, colorful products with new coating developed by Dana |
| Fourth Step: Filling and Sealing | The customer’s product is added to the container which is then sealed; done only in Dana’s own plants to ensure safety and quality and low cost | Focus here on cleanliness, safety, and reducing waste |
| Fifth Step: Packing and Shipping | The filled containers are packed in cartons and shipped to customers | Focus here on speed and meeting targeted delivery dates |
| Sixth Step: Customer Service | Process returns and inquiries |  |

**2-49 (continued -2)**

There are a number of opportunities for cost reduction/value enhancement: The value-chain analysis should motivate and facilitate make-or-buy types of analysis for each of the firm’s internal activities. Identify activities which might be more cheaply and efficiently done outside the company; for example, the coating process (which is now occasionally outsourced) might be effectively outsourced to a greater extent or entirely. The filling process is the most critical for Dana, as it is the step where the customer’s product is handled. For strategic reasons, then, Dana should retain the filling process entirely within its direct control.

For each activity at each step of the value chain, determine the outside price for the activity, and use this as a benchmark for identifying activities which need improvement.

Develop similar value chains for all key competitors, and compare each of these to Dana’s to identify how Dana fits in the competition in the industry. This should reveal competitive weaknesses and strengths, and perhaps opportunities for improvement.

Use the value chain to evaluate vendor relationships; are any suppliers causing internal processing problems because of quality problems or late delivery, etc.?

Use the value chain to identify the key cost drivers in the business; for example, it is likely that costs in the coating activity have increased significantly because of Dana’s move into the more colorful and innovative types of packaging; has the manufacturing process been changed to facilitate the increase in setups and product variety? It is likely that the firm will have to consider adding new production equipment, which will enable it to better handle the increased product complexity and variety. Are products being properly costed; do the more complex products bear the appropriate cost of their complexity? For example, if adding multiple colors to packaging material is very costly to manufacture, then the pricing should be higher to recapture these costs.

Identify those customers for which the cost of service and delivery is unusually high due to the care with which the material must be handled or to the weight, or distance, etc. Make sure that these costs are recaptured in the pricing of the products, or alternatively, the firm might seek more profitable customers.

3. Critical Success Factors for Dana might include:

Financial:

profit by product line

cost by product and production run

cost by type; by month

standard cost variances

Customer Satisfaction:

ship dates met/ un-met

survey of customer satisfaction

log of complaints and compliments

Internal Business Processes:

quality defects per million produced

cycle time

production run time

Innovation and Learning:

training hours

productivity (learning) changes

number of new features/products developed

**2-50 Strategy Requirements Under the Baldrige Quality Award Program (30 min)**

1. The Baldrige Award Program has a strong emphasis on strategy as evidenced by the emphasis on strategic planning. This topic is given 85 points of the total of 1,000 points awarded in the evaluation of proposals – almost 10% of total points. The section on strategic planning includes two subsections. The first is Strategy Development, worth 40 points. The organization preparing a proposal for the award uses this section to explain the strategy development process in their firms, including the development of strategic objectives, CSFs, and those in the firm who participated in the process.

The second section, titled “Strategy Deployment,” asks the organization to explain how it implements strategy. The topics from this chapter are relevant in this regard.

2. The Baldrige Program should be a good process for a firm not only in developing and revising its strategy, but also in strategy implementation. In particular, each of the four parts of the seventh category, business results, could be considered a perspective of a balanced scorecard for the firm: customer-focused results, financial and market results, human resources, and organizational effectiveness. By examining its own performance in these areas, and by showing how it measures progress in these areas, the organization is doing something very much like a balanced scorecard.

**2-51 Strategy; Value Chain (40-50 min)**

1. The following data is for July 25, 2011 (and August 26, 2008), for public companies in the sectors of the industry.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Measures of Size | | Measures of Profitability | |
| Sector | No. of Firms | Market Cap | ROE | Profit margin |
| Integrated Oil and Gas | 16  (10) | 40,833B  (1,608B) | 15.0%  (27.3) | 6.5%  (8.7) |
| Drilling and Exploration | 112  (146) | 3,856B  (522B) | 11.2  (22.2) | 11.8  (13.4) |
| Equipment and Services | 55  (71) | 13,733B (330B) | 8.7  (21.0) | 7.4  (13.6) |
| Pipelines | 42  (35) | 432B  (140B) | 11.1  (15.0) | 5.6  (6.2) |
| Refining and Marketing | 38  (32) | 8,513B (241B) | 12.7  (21.5) | 2.9  (4.7) |

For comparison, the airline industry:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Major Airlines | 12  (9) | 681.2  (16.8B) | 40.5%  (0) | 2.2%  (-15.5) |

Some key observations regarding the above information: (1) market capitalization has increased substantially for both the Oil & Gas and airline industries, as the stock market has recovered considerably since it began a steep plunge in the summer of 2008. Note that the price of gasoline was approximately $4.00 per gallon that summer (as of February 28, 2012, the price of gas is again just below $4.00). Also, the airline industry in particular has recovered, and is now profitable. The profitability measures for the Oil & Gas industries are lower than three years ago, for all sectors except for pipelines. Overall, the results above show that the oil and gas industry is profitable in each of its sectors. The largest firms are the integrated oil and gas producers where there is the bulk of the market cap.

1. All of the sectors in the industry value chain are very capital intensive – it requires a lot of investment to enter and stay in the business. This is particularly true for the integrated firms, and for those in the pipeline and refining and marketing sectors. There is also a lot of risk involved in some of these sectors, particularly the drilling and exploration sector. Most of the sectors therefore must carefully manage capacity, as crude oil prices and consumer demand fluctuate.

**2-51 (continued -1)**

|  |  |
| --- | --- |
|  | Critical Success Factors |
| Integrated Oil and Gas | Customer: marketing expenditures; share of market, customer mix and profitability  Internal Processes: distribution costs, processing costs, safety incidents, refinery reliability, inventory level, quality index  Learning and growth: technology for oil and gas exploration, refining and distribution, hours trained in BSC and strategy map, community service projects, sustainability scorecard  Financial: return on investment, net profit margin, sales growth, cash flow |
| Drilling and Exploration | Customer: marketing expenditures; share of market  Internal Processes: drilling costs per site, exploration yield index, safety incidents, quality index  Learning and growth: technology for oil and gas exploration, hours trained in BSC and strategy map, community service projects, sustainability scorecard  Financial: return on investment, net profit margin, sales growth, cash flow |
| Equipment and Services | Customer: marketing expenditures; share of market, number of new customers,  Internal Processes: distribution costs, processing costs, safety incidents, refinery reliability, inventory level, quality index  Learning and growth: technology for new design in equipment, new products and types of services offered, hours trained in BSC and strategy map, community service projects, sustainability scorecard  Financial: return on investment, net profit margin, sales growth, cash flow |
| Pipelines | Customer: marketing expenditures; share of market, pipeline interruption incidents  Internal Processes: distribution costs, maintenance costs, safety incidents, quality index  Learning and growth: technology for oil and gas distribution, hours trained in BSC and strategy map, community service projects, sustainability scorecard  Financial: return on investment, net profit margin, sales growth, cash flow |
| Refining and Marketing | Customer: marketing expenditures; share of market,  Internal Processes: distribution costs, processing costs, safety incidents, refinery reliability, inventory level, quality index  Learning and growth: technology for oil and gas refining, hours trained in BSC and strategy map, community service projects, sustainability scorecard  Financial return on investment, net profit margin, sales growth, cash flow |
| Transport of Refined Product | Customer: marketing expenditures; share of market  Internal Processes: maintenance of equipment, equipment failures, distribution costs, on-time delivery index, safety incidents, inventory level, quality index  Learning and growth: hours trained in BSC and strategy map, community service projects, sustainability scorecard  Financial: net profit margin, sales growth, cash flow |

**2-51 (continued -2)**

1. Most students will be familiar with the Deepwater Horizon oil spill and its consequences. The purpose of the question is to identify operating risks in the industry (all sectors) and to discuss the potential role of the value chain in the analysis of the tragedy. There is also an opportunity to have a class discussion of the sustainability issues involved in the case;

Background: the oil spill of the Deepwater Horizon drilling rig in the Gulf of Mexico on April 20, 2010 caused an enormous financial and environmental catastrophe for the industry and for the Gulf Coast region – the largest oil spill in U.S. history.

Role of the Value Chain: three companies in three different sectors of the industry were involved. One company from the integrated sector, BP, leased the drilling rig from its owner, Transocean, a company in the drilling and exploration sector. A third company, Cameron International, in the equipment and services sector, produced that blowout preventer that failed to prevent the spill. An understanding of the complex operations of the drilling rig, using the value chain approach, can help to understand the different roles and responsibilities of the companies involved.

Investigating the Risks: further investigations since the oil spill have revealed a variety of risks that were involved in all three companies, including defects in design, failure to follow industry-approved maintenance practices, human error (in reading measurements), failure to monitor and follow up on critical warning signals

Some helpful links:

<http://www.oilspillcommission.gov/>

<http://en.wikipedia.org/wiki/Deepwater_Horizon_oil_spill>

<http://www.bp.com/sectiongenericarticle800.do?categoryId=3313&contentId=7067651>

**2-52 Strategy; Critical Success Factors; Martial Arts (20 min)**

1. George’s strategy seems to be a mix of differentiation (customer service, reputation for quality training) and cost leadership (keep prices low, lower than competitors, by locating in strip malls). What do his customers want? For this type of service (as for many types of personal services: personal trainers, hair stylist, etc) it is likely to be the quality of training as a priority, and the cost of the training has to be in line with competitors, but not the primary competitive advantage. This would suggest differentiation should be his strategy, and the pricing should not be a key issue. Rather the focus on selection locations should be the attractiveness and accessibility of the locations to his targeted customer groups.

2. The indicators seem to reflect pretty well what George is after, growth based on customer service. By watching his sales numbers, and the performance of his teachers, he is likely to build the priorities that are important to his business. Some refinement is possible. These indicators can be linked more closely to his strategy by gathering the sales numbers for each location so that the productivity of the different locations can be compared, to facilitate the choice of future locations and evaluate the closing of current locations. Also, the sales data might be gathered by type of course, for the same reason as above. Students are likely to have additional suggestions for measures that would be appropriate for a fast growing company.

As part of the class discussion, you might ask what the BSC for George’s business might look like, and would a BSC be appropriate for the business. Clearly the customer and human resources perspectives would be important to George, as well as the financial perspective. The operations perspective might be useful as well, to track operating costs, traffic or other factors in the vicinity of each location that help or hurt enrollments or customer service, and the like.

**2-53 Balanced Scorecard and Strategy: Food Ingredients Company (20 min)**

Answers will vary. A key point to be made in the discussion is that a food ingredients company, of the type described (though with limited information) is likely to be a cost leader. The products are commodities for the most part. Some students will observe that certain types of food, or certain restaurants, etc., are for the gourmet and very expensive customers/markets. However, the BSC shown in this problem seems to best describe a cost leadership type of company. Note the emphasis on growth, an indication of a commodity company that must emphasize volume for profitability. Also, the financial perspective is shown first, a further indication of the importance of sales volume, cost reduction and profitability for the business. Other CSFs in the scorecard point in different directions.

I have used the case a number of times, with class discussion sometimes of a few minutes up to several minutes, depending on my objectives for the class and the degree of student interest and involvement at that time.

**2-54 Value-Chain Analysis (20 min)**

|  |  |
| --- | --- |
| **STEPS IN THE VALUE CHAIN** | **ACTIVITIES AT EACH STEP OF THE VALUE CHAIN** |
| First Step: Obtaining and maintaining the right to provide public service | Licenses, fees, and compliance with regulatory requirements; obtaining gates at desired airports |
| Second Step: Marketing and promotion | Advertising, relationships with travel agents, resort chain, etc. |
| Third Step: Ticketing | Confirmation codes, payment acceptance, seat availability |
| Fourth Step: Airport operations | Gate activities for arrivals and departures, airport fees, security costs, baggage handling |
| Fifth Step: Aircraft operations | Maintenance, fueling, fleet operations (including purchase and repair) |
| Sixth Step: In-flight service | Safety regulation conformance, passenger request satisfaction, equipment functions, food and beverage service |

As to adding value and reducing cost, the airlines in recent years have added fees for inboard services and for checked baggage, and for other services which were once free. The added services have increased the profitability of the airlines, while passengers have complained and adapted. There is a much greater volume of carry-on luggage than before the fees were introduced.

To address higher fuel costs, the airlines typically use commodity futures, hedges, and other forms of derivatives to hedge against the increasing price of fuel. This is particularly important in the recent few years as gas prices have become more volatile, and additionally, there appears to be a long-term upward trend in gas prices.

**2-54 (continued -1)**

Regarding competitive developments in the airline industry:

Recent events in the airline industry indicate the industry as a whole may be moving to a cost leadership position. The bankruptcy of American Air, following that of Delta and United, has positioned the industry to complete as a set of large cost leaders (see, for example: Susan Carey and Jack Nicas, “Rivals Invade Southwest’s Air Space,” *The Wall Street Journal*, December 16, 2011, p. B8). This suggests that throughout the industry, companies will be looking to the value chain for ways to reduce costs.

An interesting case study reported in the *Harvard Business Review* (Loizos Heracleous and Jochen Wirtz, “Singapore Airlines’ Balancing Act,” July-August 2010, pp. 145-149.) shows an example of an airline that appears to be applying both cost leadership and differentiation. Singapore Airlines does this by using target costing and careful investment strategies, so that its expenditures are target very precisely to customer requirements. For example, Singapore Airlines spends a good deal on employee training, knowing that these expenditures have a direct and positive effect on customer satisfaction. The case is explained in the article as a departure from the Michael Porter concept that a firm needs to compete on either cost leadership or differentiation, but not both. The authors note that the “combined competition” is more common in Asian countries. See chapter 13 for a further development of this idea, in Robin Cooper’s study of Japanese companies that, relying on target costing, seemed to be applying simultaneously the cost leadership and differentiation strategies.

In Michael Porter’s earliest writing, he offered the idea of a type of competitive strategy based on finding a “niche,” that is, an area of the industry business that other firm’s neglected or avoided. In the context of airlines, a recent exam fits this “niche” strategy. A small airline, Seaport Airlines, located in Portland, Oregon, succeeds by supplying customer demand for the short flights that the larger airlines have abandoned. It provides service to the smaller cities and towns in Oregon and Washington state. See, Joel Millman, “Tiny Airline Cashes In on Small Cities,” *The Wall Street Journal,* January 25, 2012, p. B10.

**2-55 Value-Chain Analysis (30-40 min)**

1. The value chain for Sheldon Radio follows:

|  |  |  |
| --- | --- | --- |
| Value Activity | **Option One** | **Option Two** |
| First: Raw Materials | Sheldon not involved at this step in the value chain | Sheldon not involved at this step in the value chain |
| Second: Manufacture of parts for the radio | Sheldon not involved at this step in the value chain; the cost is $120 to Sheldon | Sheldon not involved at this step in the value chain; the cost of these parts is $120 to Sheldon (Note: $120 is the $250 total less $130 for purchased parts that could be manufactured) |
| Third: Manufacture of components | Sheldon purchases $130 of these parts | Sheldon manufactures these parts for $80 each plus monthly costs of $35,000 |
| Fourth: Assembly | Sheldon’s costs are $110 | Sheldon’s costs are $110 |
| Fifth: Marketing, distribution and service | Sheldon’s costs are $125,000 per month | Sheldon contracts these services out to Brashear Enterprises for $105 each |
| Costs Summary**:** Costs which *differ between the two options* | Purchase of components:  $130 x 500 = $65,000 | Unit costs for manufacture of components ($80 x 500) + monthly cost of $35,000 for labor and equipment= $75,000  **The total cost of purchase is less than the cost of manufacture by $10,000.** |
|  | Monthly cost for marketing, distribution and service: $125,000 | Monthly cost of Brashear contract:  $105 x 500 =$52,500  **The total cost of the Brashear contract is less than the cost of the inside service by $72,500** |

**2-55 (continued -1)**

2. The value-chain analysis shows that Sheldon can save $62,500 per month ([$65,000 + $125,000 = $190,000] and [$75,000 + $52,500 = $127,500] so that the saving is $190,000 - $127,500) by choosing option two, and thus from a cost advantage option two is preferred. The benefit of outsourcing the marketing, distribution and service costs is $72,500, which is offset to a small degree by the loss in manufacturing rather than purchasing ($10,000). Perhaps Sheldon should choose to continue to purchase the components, but outsource the marketing, service and distribution function. However, Sheldon also needs to consider its strategic competitive position. If its customers rely upon Sheldon primarily for its service and reliability, then the contracting-out of the marketing, distribution, and service functions could be unwise. Moreover, by making rather than buying the components, Sheldon is moving in the direction of competing on cost leadership with other manufacturers. The question then is whether Sheldon can compete effectively in the cost leadership segment of the market.

# 2-56 Strategy; Value Chain; Harley-Davidson (15 min)

The Rider’s Edge program fits best near the end of Harley-Davidson’s value chain, near to the customer. In this program the firm provides a customer service that is unique in the industry, and potentially an important way to attract new customers. Moreover, the program can be an important new source of income for Harley-Davidson. As new riders, and perhaps some of the veterans, find they can improve their cycling skills, the program could become a popular and a significant source of new income for the firm.

The women’s program fits both the upstream and downstream ends of the HD value chain. The program involves both a design approach to develop a product for women, and also a customer service effort involving the magazine and other programs directed to increase the interest of women in the product.

Both programs fit the HD strategy of broadening its customer base beyond the loyal but dwindling HD customer base.

Another aspect of value chain for HD is its financing unit. As for many manufacturers, including the auto companies, General Electric, and the large software firms such as Oracle, Harley-Davidson has a finance unit that finances the sale of its motorcycles for many of its customers. As for many companies, the finance unit can be a source of profit; sometimes the finance unit is more profitable than the sales unit, as in the case in recent years in the domestic auto industry. However, while the decline in the economy during 2008 left Harley-Davidson and its finance unit struggling in the fall of 2008, both the sales and financing sides of the business are profitable in July 2011.

Source: James R. Hagerty, “Harley, With Macho Intact, Tries to Court More Women,” *The Wall Street Journal*, October 31, 2011, p B1’ “Harley Shows Its Feminine Side,” *Bloomberg Businessweek*, October 4, 2010, p 25; James R. Hagerty, “Harley Roars On U.S. Rebound,” *The Wall Street Journal,* July 20, 2011, p B4; “Harley Just Keeps on Cruisin’,” *Business Week*, November 6, 2006, p 71-72.

**2-57 The Balanced Scorecard; Strategy Map; Banking (20 min)**

1. An illustration of a BSC that could be used as a basis for discussion is as follows. It is adapted from Chee W. Chow, Kamal M. Haddad, and James W. Williamson, “Applying the Balanced Scorecard to Small Companies,” *Management Accounting*, August 1997, pp 21-27.

This problem is intended primarily to provide a basis for class discussion of the application of the BSC in a service industry such as banking, so answers will vary and different students will have different arguments. Note that the measures provided below are not quantitative; the ultimate scorecard measures would have to be translated from these measures to numerical measures.

|  |
| --- |
| Measures |
| **Shareholders – Financial Perspective** |
| Net interest income; noninterest income; noninterest expense. |
| Overhead expenses. |
| Asset growth. |
| Number of problem loans |
| Number of loan delinquencies. |
| **Customer Perspective** |
| Number of complaints; amount spent on training; number of rewards and recognitions; customer satisfaction |
| Sales volume; number of customers; number of products offered a year; extent products are “user friendly” compared to competition; degree of use of technology |
| Cost of doing business; price of products and services. |
| Customer surveys of customer satisfaction |
| **Employee Perspective** |
| Bonuses based on corporate and personal performance; sales incentives; recognition of achievement by top management. |
| Training; coaching. |
| Performance standards; job descriptions. |
| Number of promotions from within; posting of most open positions. |
| **Community Perspective** |
| Extent of employee participation in community activities |
| Extent of financial support for community organizations |

**2-57 (continued -1)**

Note that the scorecard shown above does not include a perspective on internal processes. To a certain extent, the process perspective is captured by the CSFs shown under the customer perspective in the scorecard. The students are likely to come up with a variety of perspectives and CSFs, and these differences can provide a useful basis for looking at the different ways a BSC could be used in a commercial bank.

2. The strategy map could be very helpful for Carlos in this project. The strategy map can help him show his client how performance in each perspective can contribute to success in other perspectives, and to the overall success of the firm. As for the other examples of the strategy map illustrated by Kaplan and Norton in *Strategy Maps* (Harvard Business School Press, 2007), the foundation for this map is likely to be the employees. High morale and effective training for the employees should contribute directly to customer satisfaction. Similarly, the community perspective is likely to contribute directly to customer satisfaction. Good performance on the customer perspective should then lead to good financial performance.

3. Carlos could recommend that the strategy map and balanced scorecard be linked to an employee incentive compensation plan in order to more effectively align the bank’s strategy and its performance. The bank’s employees would have a clear incentive to work towards strategic goals. An actual example of how this was done in a medium sized Texas bank follows. The bank determined an incentive compensation amount for each eligible employee based on an assessment of the bank’s performance on the BSC at the four decreasing levels of aggregation: the level of the bank itself, the business unit, the department, and finally the employee. The employee’s compensation pay depended on performance at all of these levels, thus providing an incentive for each employee to not only support his department, but to look for ways to also support the business unit and the whole bank. The bank used the familiar four perspectives, with a weighting (for compensation purposes) as follows:

**2-57 (continued -2)**

Weighting

Financial 40%

Customer 30%

Processes 15%

People 15%

The bank’s approach and the weighting’s used could provide a useful basis for broad-based class discussion about how the BSC can be linked to incentive compensation in any type of firm.

**2-58 Value Chain: Multiple Industries (20 min)**

An example for the boating industry is shown below, and is taken directly from the example in the text.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Industries that serve the boating customer | | | | | | Industries that serve the boat manufacturer | | |
| Financing | Insurance | Boat Repair | Used boat Sales | | Boat Manufacturer | Boat component  manufacturer | First level parts supplier | Second level parts supplier |
|  |  |  |  | | Product Design |  |  |  |
|  |  |  |  | | Materials; metal, fabric |  |  |  |
|  |  |  |  | | Components | Rigging  systems | Parts supplier | Parts supplier |
|  |  |  |  | | Assembly |  |  |  |
|  |  |  |  | | Boat Retailer |  |  |  |
| Boat Customer | | | | | | Boat parts retailer |  |  |
|  |  |  |  |  | |  |  |  |
| Purchaser of Used Boat | | | |  | |  |  |  |
|  |  |  |  |  | |  |  |  |

**2-59 Follow up to Problem 2-58: Value Chain for Financing Auto Purchases (30 min)**

Steps in the value chain for obtaining a loan for a car purchase. This is a short example, and other variations would be acceptable. Emphasize the importance of both speed and comprehensive analysis in this process. Speed is necessary to compete effectively for the loan with other financial institutions, and is desirable for the auto dealer, a related party in the transaction. Also, the comprehensive analysis is necessary to avoid the risk of loan default and therefore loan losses in the coming months and years; make sure the applicant is credit worthy.

|  |  |
| --- | --- |
| Step | Description of the step |
| Receive application | Log in the application and file it appropriately into the loan application database |
| Research credit | Research the credit worthiness of the applicant by using the FICO® score produced by Fair Issac Corp or by using one of the credit reporting systems - Experian, Equifax or TransUnion -- the three national credit bureaus that maintain and sell credit reports and profiles. |
| Evaluate credit | Determine whether the credit score determined in the above step meets the criteria for granting a loan of the type and terms (number of years, amount of down payment,…) requested by the borrower |
| Respond to the applicant | If credit is OK, inform the applicant and begin the process of disbursing the loan amount and creating the loan documents; If credit is not OK, inform the applicant and indicate what is lacking; encourage the applicant to reapply when conditions are changed, if appropriate.  ***The following assumes the loan has been approved:*** |
| Prepare loan documents | Usually from the software system used to log in and maintain the applicant’s information |
| Prepare cashier’s check made out to auto dealer | Use careful cash controls in this step to avoid employee fraud |
| Deliver loan documents and cashier check to auto dealer | Make sure loan documents are properly signed, dated, and returned promptly to the finance office. |

**2-60 Foreign Exchange Rates (20 min)**

1. For 2008 through January 2012, many Asian currencies have been generally stable relative to the U.S.$, particularly the Korean won, India’s rupee and Taiwan’ dollars. The Chinese Yuan was slowly appreciating relative to the dollar during the period as was Japan’s yen. The New Zealand and Australian currencies were also increasing in value relative to the dollar during this period.

The generally stable exchange rates in the Asian countries (except Japan, Australia, and New Zealand) are favorable for manufacturers such as General Motors, making it simpler to manage its global sales and product sourcing operations. It also removes the uncertainty about exchange rate fluctuations that might have a damaging effect on consumer confidence in these countries. For countries where the dollar is falling, General Motors’ products become more competitive abroad, while the products of its Asian competitors become less price competitive in the U.S.

2. Since falling against the dollar in late 2008, the Euro rose against the dollar in mid-2009 and since then has fluctuated less than 5% up and down versus the U.S. dollar into early 2012. The fall in the dollar against the Euro helps U.S. companies as the effective cost of U.S. products and services fall in the Euro countries. A retailer such as Walmart benefits potentially in two ways: (1) sales in Euro countries are converted to U.S. dollars at a higher rate, resulting in exchange rate gains, (2) to the extent that Walmart products are made in the U.S., these products become more price –competitive and thus more attractive to the Euro-country consumer. The changing exchange rates would affect Walmart’s value chain analysis; For Walmart there is the trade-off between the low-cost U.S. supplier versus the cost of transporting the product to its global markets. The overall effect on Walmart might be a shift in sources of supply and an increase in transportation costs.

**2-60 (continued -1)**

3. Mexico’s peso, stable relative to the U.S. $; Canadian dollar also relatively stable to the U.S.$

These relatively stable exchange rates support, in part, the strong trade relationships among these countries. Ford Motor Company benefits through its ability to purchase parts and components for its vehicle from low-cost suppliers in Mexico, and to sell its products throughout the region under the terms of the NAFTA agreement. The down-side for U.S. job seekers is that the agreement has resulted in some jobs moving to these other countries. A debate about the benefits and costs of free trade is beyond the scope of this question, but the instructor can touch on some of the issues that are involved, and the role that currency fluctuations can play. For example, a falling dollar relative to these currencies would make the decision to outsource parts production to these countriesless attractive for a U.S. firm, because the foreign product would be more expensive.

See Also: Chana R. Schoenberger, “Weak Dollar Boosting Quarterly Earnings,” *The Wall Street Journal*, May 4, 2011, p B7; James R. Hagerty, “A Falling Dollar Pushes Exports, Draws Risks,” *The Wall Street Journal*, July 11, 2011, p A2; William Kazer and Andrew Browne, “China Moves in to Calm Market’s Nerves,” *The Wall Street Journal*, August 12, 2011, p A10.

**2-61 Research Assignment: Value Chain (30 min)**

1. Disruptive innovation changes completely the nature of the market or business. Examples include the iPhone or iPad. Sustaining innovation involves significant improvements in existing products and services. Sustaining innovation could involve added features, improved quality, lower cost, etc.
2. The five value chain activities mentioned in the article are:
   1. Market analysis
   2. Product development and design
   3. Sales and marketing
   4. Procurement, production and distribution
   5. After-sale customer service

The five activities are broadly representative of many organizations, especially manufacturers. It could be readily adapted to apply more specifically to a service organization, by for example replacing “Product Development and Design” with “Assess Current and Potential New Services,” and replace “Procurement, Production and Distribution,” with “Operations.”

1. While not mentioned in the article, strategy plays a key role in the review of the activities for opportunities for innovation. Depending on the firm’s strategy, cost leadership or differentiation, the management accountant will find that some of the activities will be more or less important in innovation. For example, a company that succeeds on differentiation will likely spend more effort on innovation in the market analysis and product development activities. In contrast, a firm that succeeds on cost leadership will likely spend more effort to innovate in the operations areas – procurement, production, and distribution.
2. Innovation in the market analysis activity can be attained by surveying customers to determine how they are using the product or service, what features or services they value or do not value, etc.A technique called Maximum Difference Scaling (MaxDiff) can be used to determine which product or service features are most important.
3. Innovation in the product development and design activity can be aided by encouraging everyone in the company to consider and provide their own ideas. Also, strategic alliances and joint ventures with other companies can help broaden the reach of the company’s own R&D efforts.

**2-61 (continued -1)**

1. Innovation in sales and marketing might use for example, integrated marketing efforts in which the firm partners with media firms or the firm uses social media to help the company market its products and services. The key is to think “out of the box” about how to get the message out about the firm’s products and services. This might include such ideas as iPhone apps, web sites, and the use of predictive analytics and business intelligence (see chapter 8).
2. Innovation in procurement, production, and distribution is an area wherein many firms can benefit significantly from innovation, particularly for manufacturing and retail firms for which much of the value-added activities occur in the production-distribution activity. The opportunities here are potentially very large, with lean manufacturing, use of technology, sustainability, and product and business process improvement some of the techniques commonly used.
3. Innovation in the after-sale customer service activity could also benefit from the application of web-based resources and business intelligence techniques. The idea is to extend the company’s ability to identify and react to customer needs quickly and cost effectively.

**2-62 Research Assignment; Sustainability (30 min)**

1. The three options are:
   1. Adding a fifth perspective to the BSC
   2. Developing a separate sustainability balanced scorecard
   3. Integrating the measures throughout the four perspectives: financial, customer, internal business processes, and learning and growth.

As noted in the chapter, all of these are common. Nike and Ford Motor use a combination of (b) and (c), while Shell and Exxon-Mobil use (b), and many software vendors such as SAS and Oracle offer software that provides either (a), (b) or (c).

The article notes that approach (a) might not provide the amount of visibility for sustainability efforts that firms such as Ford, Shell and Nike are looking for. So for these firms, a separate scorecard is more desirable. For other firms, that wish to show a comprehensive single BSC, approach (a) works well since it puts all of the firms goals in a single, comprehensive system.

1. The seven BSC measurement selection considerations for a sustainability scorecard are:
   1. There is an underlying objective for the measurement. That is, the measure reflects an important goal for the company.
   2. Measurement terminology is defined and used consistently throughout the organization. This step provides the needed comparability, so that measures from different units within the firm can be compared usefully.
   3. Information needed for the measurement is obtainable. This consideration makes it clear that the BSC requires a quantitative metric, not a qualitative statement. Moreover, the measures should be reliable and produced from a system that can be audited to insure the accuracy of the information.
   4. The measurement will create behavior that is in agreement with the organizational goals and objectives. This means that the measures are chosen based upon the strategy, goals, and objectives of the firm. As for other elements of the BSC, all of the sustainability measures can be linked to strategy and goals.
   5. While there will likely be a combination of lagging and leading indicators, leading indicators are more appropriate to help predict how the organization will perform in the future. Likely a

**2-62 (continued -1)**

* 1. firm will choose to use a combination of both leading and lagging indicators.
  2. The measurements should be used to track performance trends. The comparisons can be both trends, and where appropriate, comparisons across units within the firm.
  3. Appropriate benchmarks and targets are set.