

## **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 1) 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 1 include Walmart, Texas Instruments, and HP (Hewlett-Packard).
- 2-3** Many possible examples would be correct here. Examples offered in chapter 1 include Tiffany, Bentley, Rolex, and Maytag.
- 2-4** The four strategic resources are 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. 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.
- 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. Instead, the management accountant should focus on 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, 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 processes, and learning & growth . 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 for profits.
- 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.

- 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 value chain analysis is in the manufacturing industry because it is relatively easy for students to visualize 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. The auto industry is a good additional example. 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** Value chain analysis 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 Tyson Foods and Hillshire Brands in August 2014 is a good example.

**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
- Ensure 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 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 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, a Los Angeles-based TV manufacturer, has done and the firm has become very successful in competing against some of the larger brands.

## BRIEF EXERCISES

**2-28** SWOT analysis is a useful tool for

- a. evaluating the performance of an organization.
- b. identifying the organization's critical success factors.
- c. developing the organization's strategy map.
- d. developing the organization's value chain.

Answer: b

Learning Objective: 02-01

Feedback: Answer b is correct. SWOT analysis is used to develop and implement an organization's strategy, and the key role played by the SWOT analysis is to help identify the organization's critical success factors that are then used in the BSC, strategy map, value chain analysis, and other cost management methods such as budgeting and performance evaluation..

**2-29** The following strategy implementation technique can be particularly enhanced by using benchmarking, as for example, participating in the Malcolm Baldrige National Quality award program

- a. the value chain.
- b. the balanced scorecard (BSC).
- c. the strategy map.
- d. Execution.

Answer d

Learning Objective: 02-02

Feedback: While all the above listed implementation methods can benefit from benchmarking, execution of goals is the one that most relies on benchmarking in setting goals and evaluating progress to meeting these goals.

**2-30** The balanced scorecard is related to the strategy map in a similar way as

- a. the value chain is related to product differentiation.
- b. SWOT analysis is related to execution.
- c. the organization's key activities are related to the value chain.
- d. sustainability can be related to financial reporting.

Answer c

Learning Objective: 02-04

Feedback: Answer c is correct because both provide linkages. The strategy map links the goals in the various BSC perspectives, while the value chain links the activities in the organization

**2-31** A company taking a strategic and customer-centered point of view can best address sustainability, a concern for environmental and social as well as economic performance, through

- a. annual financial reporting to the Securities and Exchange Commission.
- b. the use of a sustainability perspective in the balanced scorecard.
- c. reporting violations of company's human resources policy to the proper authorities.
- d. lobbying in Congress for stronger environmental regulations.

Answer: b

Learning Objective: 02-05

Feedback: Answer b is correct: most companies that report sustainability results have either a separate sustainability scorecard or include sustainability as a perspective of the BSC. (a) Answer (a) is incorrect because the SEC does not permit or require sustainability reporting as part of the annual financial report. (c) answer (c) is incorrect because reporting violations of company human resources policy may have no effect on sustainability, and (d) answer (d) is incorrect because lobbying in Congress may have an important long-term effect on sustainability, but taking action within the company through the use of a sustainability scorecard can have immediate and significant effects within the company.

**2-32** The implementation of the balanced scorecard (BSC) can involve all of the following **except**

- a. the strong support of top management.
- b. a strategy of differentiation.
- c. a link to reward and compensation systems.
- d. an accurate reflection of the organization's strategy.

Answer: b

Learning Objective: 02-04

Feedback: The BSC is useful for both cost leader and differentiator companies, and is implemented for both types of companies.

**2-33** What does it mean for the balanced scorecard to “reflect strategy”?

- a. One should be able to infer an organization's strategy from the balanced scorecard.
- b. The management accountant develops the balanced scorecard prior to developing a strategy.
- c. The balanced scorecard is one of the key methods for implementing strategy.

- d. You cannot have an effective strategy without an effective balanced scorecard.

Answer: a

Learning Objective: 02-04

Feedback: Answer a is correct. (b) the management accountant develops the BSC **after having** determined strategy; the BSC helps to align performance with the strategy, (c) this is a correct statement, but does not answer the question; (d) as in (b) above, this statement is backwards The effective BSC follows from a clear strategy.

**2-34** Opportunities and threats in Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis can be identified most readily by

- a. using value chain analysis
- b. analyzing the industry and the organization's competitors
- c. analyzing the organization's critical success factors
- d. using the strategy map

Answer: b

Learning Objective: 02-01

Feedback: Opportunities and threats are external to the organization, so the analysis to identify opportunities and threats is to target developments outside the company, that is, to the industry and the organization's competitors.

**2-35** Which of the following statements about the value-chain is correct?

- a. The two phases of the activities of the value-chain are the upstream activities and the downstream activities.
- b. A company need not operate in all activities of the value-chain.
- c. There are usually 6-8 activities in the value-chain.
- d. The value-chain is intended for manufacturers.

Answer: b

Learning Objective: 02-03

Feedback: a) is incorrect because there are three (not two) phases of the activities: upstream, operations, and downstream, c) is incorrect because there may be dozens of activities or more, and d) is incorrect because the value chain is applicable for service firms as well as manufacturers; this is why the second phase is entitled "operations".

**2-36** As opposed to identifying opportunities and threats, identifying a company's strengths and weaknesses requires all but which of the following:

- a. Careful analysis of the company's sustainability statement
- b. Analysis of the company's code of ethics
- c. Evaluation of the company's operations, strategy, and management competence
- d. Review of the company's industry and competitive environment

Answer: d

Learning Objective: 02-01

Feedback: d) the review of the industry and competitive environment is part of analyzing external opportunities and threats, not internal strengths and weaknesses

**2-37** The required resources for implementing a cost leadership strategy include which of the following?

- a. Strong marketing capability
- b. Substantial capital investment and access to capital
- c. Effective product engineering and process planning
- d. Reputation for high ethical standards

Answer: b

Learning Objective: 02-01

Feedback: See Exhibit 2.2. a) is a resource for a differentiation strategy, not a cost leadership strategy, c) is a resource for a differentiation strategy, not a cost leadership strategy. (d) applies equally to cost leadership and differentiation companies

**2-38** The World Resources Institute (WRI) is an organization that

- a. provides guidance for developing and benchmarking an organization's value chain
- b. provides resources for organizations that intend to expand globally
- c. provides guidance for organizations that want to develop indicators (ESGs) of the environmental component of sustainability
- d. assists companies in understanding the changing environment of financial and material resources world-wide

Answer: c

Learning Objective: 02-05

Feedback: c) is correct because the mission of the World Resources Institute is to provide indicators of the environmental component of ESGs, in three broad categories. a),b) and d) are incorrect because the World Resource Institute is not directly concerned with the value-chain, the balanced scorecard, or global financial/material resources

**2-39** Which of the following is an important method for implementing strategy?

- a. Sustainability
- b. Value chain analysis
- c. Cost leadership
- d. Differentiation

Answer: b

Learning Objective: 02-03

Feedback: a) sustainability is a strategic goal, and not a method to implement strategy; c) and d) (cost leadership and differentiation) are generic strategies, and not methods to implement strategy.

## EXERCISES

### **2-40 Execution; 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 a 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.

2. 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.

## 2-41 Value Chain; Currency Fluctuations (15 min)

Changes in the value of the Brazilian currency (the real) 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. An increase in the value of the Brazilian real (as in 2011-2013) 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 or materials will benefit, while those whose value chain involves the production of these parts and materials will suffer.

In contrast, the value of the real fell 120% relative to the yuan from January 2012 to January 2016. One reason was that Brazil began to cut its interest rates in late 2011 in order to stimulate economic recovery. Lower interest rates means, in part, that investors in savings will move their investments elsewhere to find the higher rates elsewhere. The fall in the Brazilian currency (the real) has limited Brazilians ability to purchase imported goods; exports from China to Brazil fell by 50% relative to the prior year, as a sign of the growing recession in Brazil and slowdown in China. The relatively low real has however helped to provide a small 6% boost in exports to China.

Brazil relies heavily on exports of raw materials (iron, beef,...) to China and imports of manufactured products from China. Economists say that future growth in China is less likely to be commodity-intensive in the coming years, meaning that Brazil could continue to suffer losses in exports to China.

Overall, the direction in 2017 would be for Brazilian producers to take advantage of the lower real to expand exports beyond its current dependency on China. The relatively low real would make goods and services from other countries more expensive in Brazil, but would also make Brazil's products and services less expensive abroad – a potential boost to exports.

Source: "Brazil Opts for Deeper Rate Cut to Stoke Recovery," Thomson Reuters, March 7, 2012; John Lyons, "Brazil Flexes Strong Arm to Reverse Slowdown," *The Wall Street Journal*, May 31, 2012, p A12. "Exports from China to Brazil Collapse as Recession Deepens," Joe Leahy, *Financial Times*, February 25, 2016. "Brazil Faces Lopsided Relationship with China as Demand for Commodities Slumps," Leslie Shaffer, CNBC, August 3, 2016.

## 2-42 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. 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 Bjarne Rugelsjoen, "Managing Alliances with the Balanced Scorecard," *Harvard Business Review*, January 2010, pp 114-120.

## 2-43 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 Levetsovit, 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 measures (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 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 perspective of the balanced 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.

## **2-44 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 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 Seventh Generation’s customers.

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

Consistent with Walmart’s sustainability strategy, the firm announced in September 2013 that it would no longer accept suppliers’ products that contained certain hazardous chemicals. Source: Wendy Koch, “Wal-Mart Announces Phase-out of Hazardous Chemicals,” *USA Today*, September 12, 2013.

## 2-45 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 special guidance on ethics. 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.

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

## PROBLEMS

### 2-46 Strategy; Health Care (25 min)

1. The Medical University of Greenbelt'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 payors, providers, and patients. A large hospital system tends to offer a greater breadth of services, which often increases the clinicians' 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. 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.

The value chain has been applied to the hospital setting by Robert Kaplan and David Norton ("How to Solve the Cost Crisis in Health Care, *Harvard Business Review*, September 2011, pp 47-64). The authors illustrate how the Care Delivery Value Chain (CDVC) can be used for process improvement and cost reduction at the MD Anderson Head and Neck Center of the MD Anderson Hospital in Houston, Texas. Kaplan and Norton also explain in this article how ABC costing can be used to identify opportunities for cost reduction and process improvement.

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

## 2-47 Strategic Positioning (20 min)

1. What is the competitive strategy for Fowler's Farm?
  - a) Cost leadership because of increased competition
  - b) Differentiation because of innovation in the farming industry
  - c) Differentiation because of unique products at Fowler's Farm
  - d) Cost leadership because of cost pressures in the industry

Answer: d

Learning Objective: 01-04, 02-01

Feedback: the case refers to price pressures, "Current price pressures on farm commodities have affected Fowler's Farm as well as others across the country. Jack has watched as many of his neighbors either have quit farming or have been consolidated into larger, more profitable farms." Also, farming is an inherently commodity business so that farming is not a differentiated business and farmers are for the most part price takers.

2. 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 some farms in the U.S. The Farm Aid concerts sponsored by Willie Nelson and others (<https://www.farmaid.org/concert/>) 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. Further, the growth in importance of agriculture competitors in other countries around the world has to be a concern for Kelly.

## 2-48 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's leadership  
More leisure time for Dad  
Export subsidies, tariffs, etc. in the U.S. and abroad that make farm products more competitive

Threats

New regulations and taxes have decreased smoking of tobacco  
The use of pesticides and herbicides  
Export subsidies, tariffs, etc. in the U.S. and abroad that make Fowler's farm products less competitive  
Growth of agriculture in other parts of the world, for example, In Argentina and Brazil

**2-49 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 of a value chain for the farm is as follows:

Activity in the Value Chain	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

## 2-50 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 Fowler Farm. This scorecard puts the operations (internal processes) 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 (Internal Processes)**

- crop rotation; number of fields in rotation
- inventory of supplies and parts, by type of equipment, cost and date purchased
- weather forecast in degrees relative to normal, 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 in sales
- 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 of employees; in both number and percent
- accidents; in number
- experience; years in farming experience
- efficiency; hours required for each well-defined task

## 2-50 (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 in amount and percent

### **Customer**

- orders shipped on time
- quality complaints

## 2-51 Strategic Positioning (20 min)

1. What is the competitive strategy for Tartan Corporation?
  - a) Cost leadership because of increased competition
  - b) Differentiation because of innovation
  - c) Differentiation because of unique products and high quality
  - d) Cost leadership because of cost pressures in the industry

Answer: c

Learning Objective: 02-01

Feedback: The description of the company in the question points to differentiation based on innovation and quality. Tartan products were “..made of the highest quality materials with features that other manufacturers did not attempt..” Also: “In developing and marketing the new styles, the company took advantage of the favorable reputation of the Classic line which was the foundation of the favorable image of the company overall and which also helped in the sales of the new lines.”

2. What recommendation would you make to the task force?
  - a) Delete the classic line for the cost savings
  - b) Continue the classic line because it supports the company's strategy
  - c) Delete the classic line because of its poor sales performance
  - d) Continue the classic line to save costs

Answer: b

Learning Objective: 01-04, 02-01

Feedback: 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.

3. 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 may not be profitable.

## **2-52 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 the Northeast states), 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?

## **2-53 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.

<b>Steps in the Value Chain: Value Activity (in sequence)</b>	<b>The Role of this Activity</b>
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 and 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

## 2-53 (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, or elsewhere?

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.).

## 2-54 The Balanced Scorecard (20 min)

An example of a balanced scorecard for Tartan Corp follows:

<b>Financial</b>
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

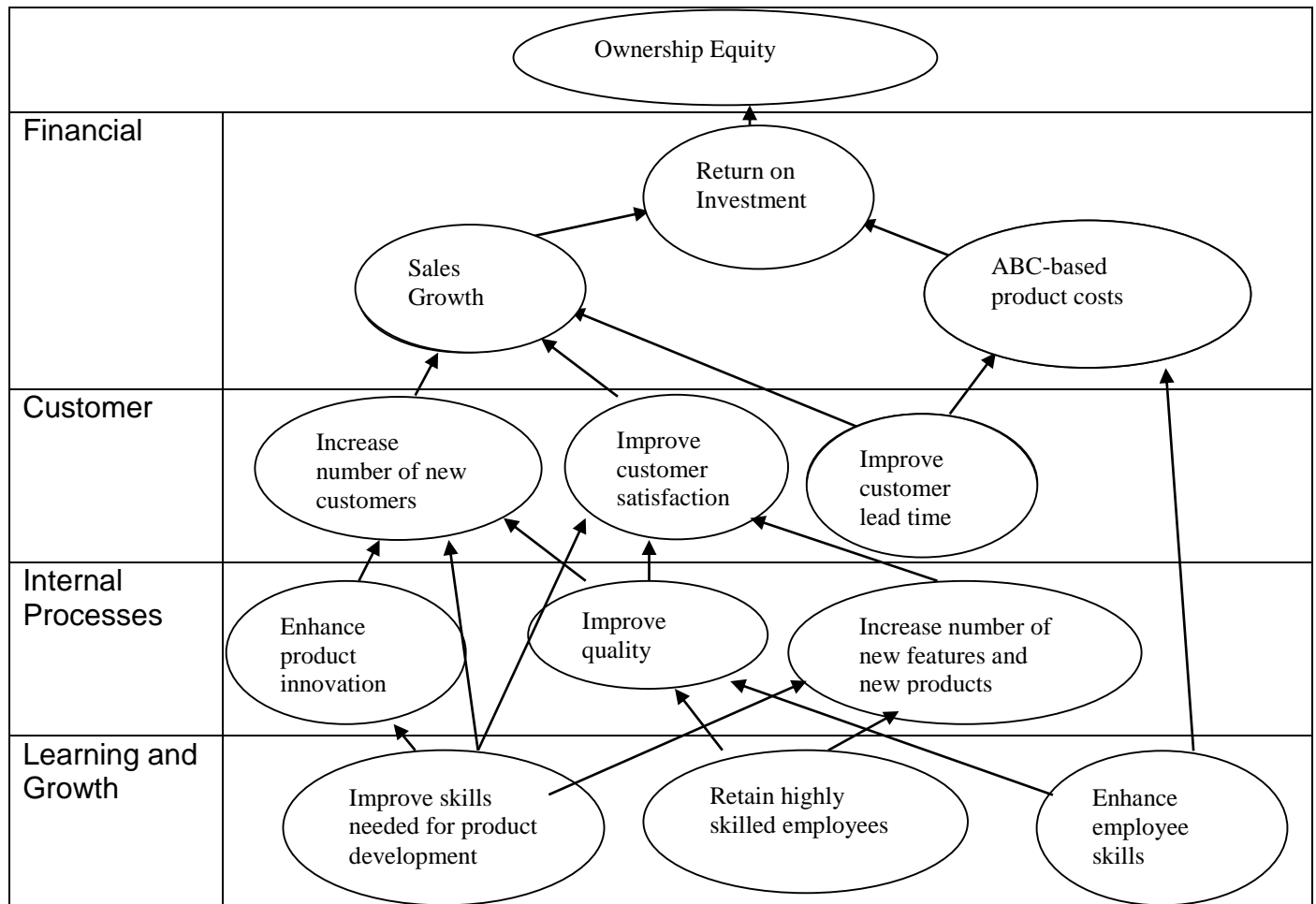
<b>Internal Processes</b>
Cycle time
Waste of materials
Rework
Productivity measures: hours per product, materials per product
Inventory levels

<b>Customer</b>
Lead time
Retention
Satisfaction in specific categories, quality
Number of new customers

<b>Employee</b>
Training hours
Retention
Satisfaction as measured by employee survey
New product development, as measured by number of new products or enhancements to existing products

## 2-55 Strategy Map (20 min)

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



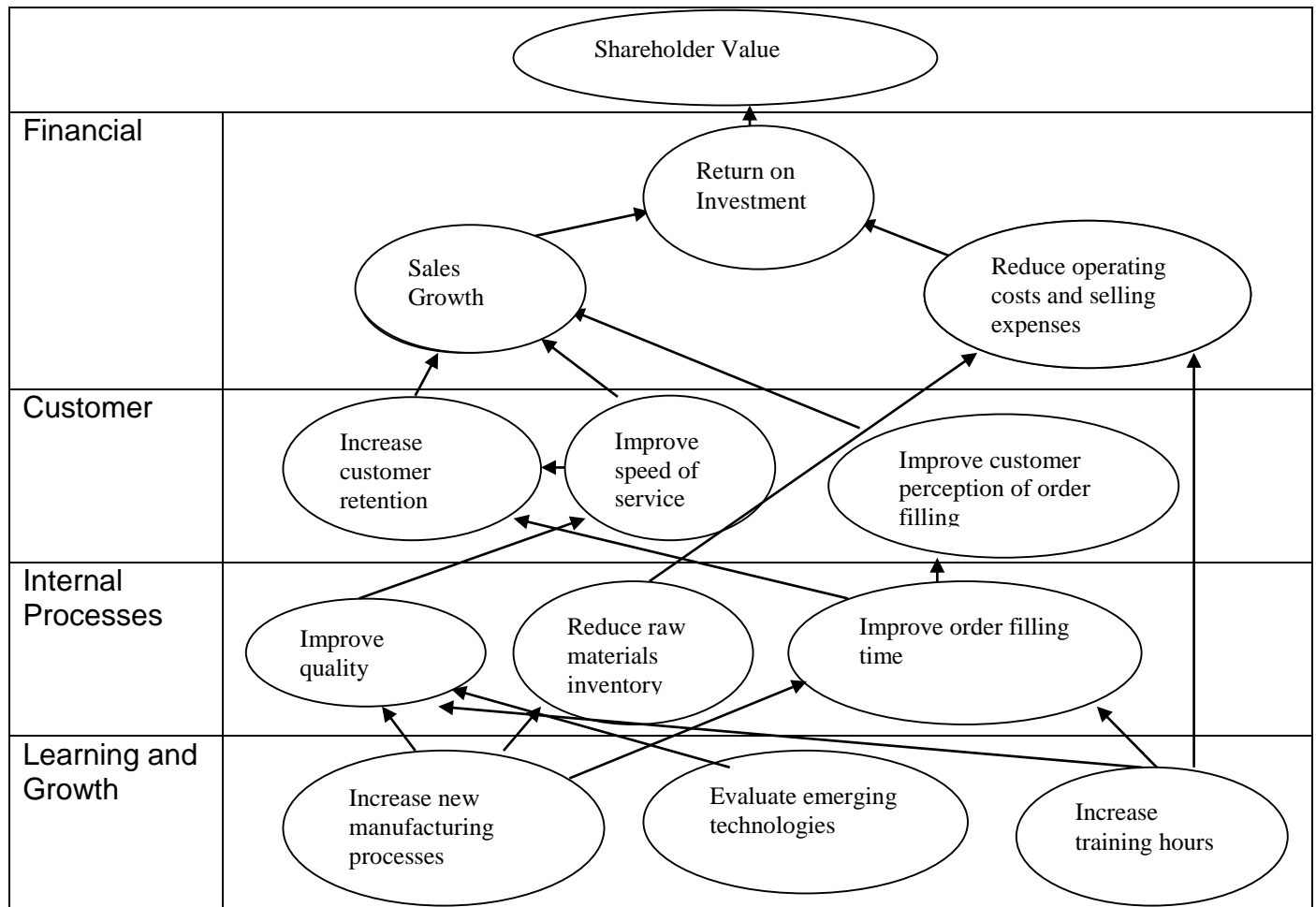
## 2-56 Strategy Map, Balanced Scorecard; Dell Inc. (25 min)

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

<b>Learning and Growth</b> <ul style="list-style-type: none"><li>• Training dollars per employee</li><li>• Number of emerging technologies evaluated</li><li>• Number of new manufacturing processes developed</li><li>• Number of new manufacturing processes under development</li></ul>
<b>Internal Processes</b> <ul style="list-style-type: none"><li>• Product manufacturing time</li><li>• Raw materials inventory</li><li>• Order processing time</li><li>• Manufacturing defects</li></ul>
<b>Customer</b> <ul style="list-style-type: none"><li>• customer perception of order taking convenience and accuracy</li><li>• \</li><li>• customer retention</li><li>• customer satisfaction with speed of service</li></ul>
<b>Financial Perspective</b> <ul style="list-style-type: none"><li>• revenue growth</li><li>• gross margin</li><li>• return on investment</li><li>• selling expense to sales ratio</li></ul>

2. Strategy Map for Dell Inc.  
This is one example of a possible strategy map, that can be inferred from the BSC in part 1 above.

2-56 (continued -1)



## 2-57 Strategic Analysis (30-40 min)

1. Performance Bicycles: The on-line retail industry is very competitive, so the competitive strategy is likely to be cost leadership (since catalog shoppers can readily find the lowest price) together with market standards for quality, speed of delivery, and quality of service such as flexible returns policy. 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 that 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 was one of differentiation (its 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 2-64.**

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, etc.), student/faculty ratio, achievement in sports, facilities management, etc.

## **2-58 Strategic Analysis; The Balanced Scorecard, and Value-Chain Analysis; The Packaging Industry (40-50 min)**

1. What is the **new** competitive strategy for Dana Packaging Company?
  - a) Cost leadership because of increased competition
  - b) Differentiation because of niche markets
  - c) Differentiation because of high technology and high quality
  - d) Cost leadership because of cost pressures in the industry

Answer: c

Learning Objective: 01-04, 02-01

Feedback: The description of the company in the question points to differentiation based on innovation, features, and quality. As stated in the question: "The market for Dana's products has become very competitive in recent years because of the entrance of two large European competitors. In response, Dana has decided to enter new markets where the competition is less severe. The new markets are principally the high end of the packaging business for products that require more technological sophistication and better materials."

Dana previously competed on the basis of cost leadership, and it was because of increased competitiveness in that part of the business that Dana has shifted to a differentiation strategy.

2. 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?

3. A value chain for Dana Packaging follows:

<b>STEPS IN THE VALUE CHAIN</b>	<b>ACTIVITIES AT EACH STEP OF THE VALUE CHAIN</b>	<b>EXPECTED OUTPUT OF EACH ACTIVITY</b>
<u>First Step</u> : Acquire the raw materials, which is primarily pulp paper	Produced in Dana's mills; also purchased from recycling operators	High quality, low cost materials
<u>Second Step</u> : Conversion	Converts the pulp into paperboard	High quality paperboard
<u>Third Step</u> : 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
<u>Fourth Step</u> : 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
<u>Fifth Step</u> : Packing and shipping	The filled containers are packed in cartons and shipped to customers	Focus here on speed and meeting targeted delivery dates
<u>Sixth Step</u> : Customer service	Process returns and inquiries	Focus here on exceptional customer service

## 2-58 (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. Outsource 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.

#### 4. 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

Learning and Growth:

Training hours

Productivity (learning) changes

Number of new features/products developed

**2-59 Strategy Requirements Under the Baldrige National Quality Award Program (30 min)**

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, the seven categories could be considered for an expanded balanced scorecard. As for the BSC, the Program focuses on the perspectives of customer, process, financial results, and workforce; the Baldrige program includes the additional perspectives: measurement and analysis, leadership, and strategic planning. 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.

The Baldrige Excellence Performance Program is based at and managed by the National Institute of Standards and Technology (NIST), and agency of the U.S. Department of Commerce. Unfunded as of 2016, the program is transitioning to one based on funding by the Baldrige Foundation. The new model is explained at <http://www.nist.gov/baldrige/transition/index.cfm>. The Baldrige Program for 2017-2018 is explained at <https://www.nist.gov/baldrige/publications/baldrige-excellence-framework/businessnonprofit>

**2-60 Economic Nationalism; Strategy; Global; Value Chain (40-50 min)**

1. All three of these companies are best described as differentiators because of the uniqueness of their products, and in the case of Harley-Davidson at least, the strength of its brand. It is likely that Harley-Davidson faces some cost pressure because of the strong competition in bikes from Japanese manufacturers, but on the other hand, Harley has been able to meet this competition successfully over the years by innovative products and programs (see for example problem 2-64). The companies' decision to locate overseas or to relocate to the U.S. is explained in the text of the problem. In each of these three cases, it appears that the location decision is clearly in line with the company's strategy. For Harley-Davidson, the goal of the Thailand project is to expand the reach of the brand, and it does not appear that the move will affect the differentiation of the brand in the U.S. or abroad.

In the case of GAM Enterprises, the decision to relocate to the U.S. will not likely affect the uniqueness of its products and therefore unlikely to affect its

strategy. It is the uniqueness of the company's products that is the source of its competitive advantage.

In the case of MO, it appears the firm is looking to find the best manufacturer for its product, home or abroad, and the decision to go abroad for the best manufacturer is likely only to increase the value of the brand.

2. For Harley-Davidson, the location of a plant in Thailand radically affects the downstream portion of the HD value chain as it relates to sales in Asia. This move will reduce tariffs and probably also other costs such as transportation, and therefore reduce the price of the bikes in southeast Asia, making them more competitive with local producers, such as Hero (made in India).

For GAM, the relocation to the U.S. is likely to improve the downstream portion of the value chain as it relates to customer service; GAM will now be closer to many customers. It may also help out downstream by making it easier to attract new customers in the U.S. It is not clear whether the move will improve the upstream portion of the firm's value chain since we do not know what amount of research and development and materials sourcing is facilitated by location in Germany versus the U.S.

For Mobile Outfitters, the move offshore for the product they needed will likely complicate the upstream value chain as it relates to dealing with the transportation, contracting, and foreign currency fluctuation issues related to foreign sourcing of product. This means there might be added costs for transportation, for hedging foreign exchange risk, etc.

Note: the coverage of global issues, as in this problem, is not comprehensive without the consideration of key issues in the decision to locate locally or in a foreign country. These issues include (among others) concerns about taxation in the different countries, the stability of exchange rates for the foreign country (volatility in the exchange rate would present problems in managing exchange rate risk), the political stability of the country (change for expropriation, or special fees, duties, or other regulations...), transportation availability and cost, presence (or not) of meaningful local markets, the nature of the firm's value chain, etc. Auto manufacturers are likely to subcontract for parts and assemblies of the auto from different countries, where there is a competitive advantage to cost and perhaps also design. Manufacturers such as Nike or Apple will likely continue to outsource all manufacturing to foreign contract manufacturers because of the cost advantage. Food processors will likely rely on local supply or well-established foreign suppliers.

Source: "An Overseas Kick-Start," Neil Gough, *The New York Times*, May 24, 2017, pB1; "Firms Struggle to Bring Jobs Back," Ruth Simon and Vipal Monga, *The Wall Street Journal*, April 15, 2017, p B4.

Note regarding Apple:

Apple's CEO recently (May 3, 2017) indicated the firm's interest in bringing some manufacturing back to the U.S. The firm pledged \$1B to an "advanced" manufacturing initiative that would return some manufacturing back to the U.S. It is not known how many jobs this initiative might create.

<http://www.cnn.com/2017/05/03/exclusive-apple-just-promised-to-give-us-manufacturing-a-1-billion-boost.html>

## **2-61 Strategy; Critical Success Factors: Martial Arts (20 min)**

1. George's strategy seems to be differentiation based on customer service and reputation for quality training. George also has to be concerned secondarily about keeping 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 learning and growth 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.

## **2-62 Balanced Scorecard; 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

**Source:** Chee W. Chow, Kamal M. Haddad, and James W. Williamson, "Applying the Balanced Scorecard to Small Companies," *Management Accounting*, August 1997, pp. 21–27.

**2-63 Value-Chain Analysis (30-40 min)**

1. The value chain for Sheldon Radio follows:

Steps in the Value Chain	Current Operation	Two Decision Alternatives
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:	Purchase of components: $\$130 \times 500 = \$65,000$	Unit costs for manufacture of components ( $\$80 \times 500$ ) + monthly cost of \$35,000 for labor and equipment = \$75,000 <b>The total cost of purchase is less than the cost of manufacture by \$10,000.</b>
	Monthly cost for marketing, distribution, and service: \$125,000	Monthly cost of Brashear contract: $\$105 \times 500 = \$52,500$ <b>The total cost of the Brashear contract is less than the cost of the inside service by \$72,500</b>

## 2-63 (continued -1)

2. The value-chain analysis shows that Sheldon can save \$10,000 by choosing to continue to purchase rather than to manufacture the parts, and Sheldon could save an additional \$72,500 by outsourcing the marketing, distribution, and service costs. Perhaps, on the basis of reducing costs, Sheldon should choose to continue to purchase the components and to 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, the decision to continue to purchase the parts should also consider the possibility that by manufacturing the parts, Sheldon could significantly improve the reliability and quality of the product. This would improve the competitiveness of the product and might be worth the lost savings of \$10,000.

## 2-64 Value Chain; Harley-Davidson (15 min)

The Riding Academy program fits best near the end of Harley-Davidson's value chain, near to the customer ([http://www.harley-davidson.com/content/h-d/en\\_US/home/learn-to-ride/new-rider-course.html](http://www.harley-davidson.com/content/h-d/en_US/home/learn-to-ride/new-rider-course.html)). 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.

Note: HD has recently simplified its downstream value chain. HD once owned a 98% share of Buell Motorcycle, a company known for its high-end and successful racing cycles. HD divested the Buell brand in 2009 to focus on its main brand after the recession of 2007-2008 caused motorcycle sales to drop by more than 50%. In the summer of 2013 Buell partnered with the Indian company, Hero MotoCorp, to design

low-cost bikes for the Indian market where price and durability are key. The Buell-Hero partnership was undone by bankruptcy in 2015. Buell and Hero at one time could have been described as extensions (downstream) of HD's value chain. Now HD is planning to expand its downstream value chain by building factories in Asia to support the growing market for bikes in those countries (see problem 2-60).

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; Kyle Stock, "Can Harley-Davidson Finally Woo Women?" [Businessweek.com](http://Businessweek.com), June 2, 2014. "An Overseas Kick-Start," Neil Gough, *The New York Times*, May 24, 2017, pB1.

## 2- 65 The Balanced Scorecard; Strategy Map (20 min)

1. Most students will argue that McDonald's is a cost leader based on its low cost menus. In a class discussion of the question, I would carefully distinguish the fast-food restaurant (which may or may not be a cost leader) from a cost leader type of restaurant. Fast-food restaurants can offer more than low prices, and convenience and comfort are important to many of them, especially the more high-end restaurants such as Chipotle Mexican Grill ("gourmet burritos and tacos"). McDonald's current emphasis on the dollar menu indicates that the company does succeed as a cost leader.

Taco Bell and Wendy's may be best described as cost leaders as well, especially since each of the firms has followed McDonald's in emphasizing a low cost menu. A recent *Wall Street Journal* article on these three companies notes that consumers have come to expect the \$1 offerings in the current tough economic times, even though the recession ended in 2009. This is particularly true for consumers who have been hardest hit by the recession. On this basis, it is fair to argue that Wendy's and Taco Bell are also cost leaders. It may have been true that sometime ago Wendy's or Taco Bell were differentiated in some way in the fast food market, but the current economic circumstances have changed that. As a Wendy's executive stated, "We are refining our promotional calendar for the rest of this year...with modestly more emphasis on price-value."

McDonald's 2016 Annual Report states: "We compete on the basis of product choice, quality, affordability, service and location. In particular, we believe our ability to compete successfully in the current market environment depends on our ability to improve existing products, develop new products, price our products appropriately, deliver a relevant customer experience, manage the complexity of our restaurant operations and respond effectively to our competitors' actions."

## 2-65 (continued -1)

2. Ray Kroc, the founder of McDonald's, chose as his founding strategy to produce a restaurant that would focus on high quality and consistency in all of its locations. He developed the concept into a widely-known pledge: "Quality, Service, Cleanliness, and Value." By reinforcing this pledge in training and evaluations throughout the company, he was able to achieve the success that McDonald's enjoys today.

QSVC was probably one of the first applications of the concept of the balanced scorecard – to identify critical success factors by customer, operations, financial, and learning and growth b, and to plan, measure and reward on the achievement of these critical success factors.

"If I had a brick for every time I've repeated the phrase *Quality, Service, Cleanliness and Value*, I think I'd probably be able to bridge the Atlantic Ocean with them." —Ray Kroc

3. Currency fluctuation is a significant matter for McDonald's which operates in more than 100 countries worldwide. Currency fluctuation can affect the company's profitability when the currencies of the foreign locations fall relative to the U.S. dollar. In that case, there is a foreign currency translation loss for McDonald's. The reverse is true when the foreign currency gains versus the dollar. McDonald's 2016 annual report states that the company works to mitigate the risk of foreign exchange exposure:

"A significant part of the Company's operating income is generated outside the U.S., and about 35% of its total debt is denominated in foreign currencies. Accordingly, earnings are affected by changes in foreign currency exchange rates, particularly the Euro, British Pound, Australian Dollar and Canadian Dollar. Collectively, these currencies represent approximately 70% of the Company's operating income outside the U.S. If all four of these currencies moved by 10% in the same direction, the Company's annual diluted earnings per share would change by about 25 cents."

McDonald's works to reduce the effect of currency fluctuation by purchasing goods and services in local currencies, financing in local currencies, and hedging certain foreign currency-denominated cash flows. Nevertheless, there was a \$ 692m loss in 2016 (15% of net income) due to the weakening of the British Pound following Brexit in June 2016 (Source: McDonald's 2016 annual report).

The effect of Brexit (the vote in the U.K. in June 2016 to leave the European Union) has complicated the picture of foreign exchange for global companies such as McDonalds. McDonald's 2016 Annual Report states:

"For example, as a result of the U.K.'s decision to leave the European Union through a negotiated exit over a period of time, it is possible that there will be increased regulatory complexities, as well as potential referenda in the U.K. and/or other European countries, that could cause uncertainty in European or

worldwide economic conditions. In the short term, the decision created volatility in certain foreign currency exchange rates, and the resulting depression in those exchange rates may continue.”

Source: Annie Gasparro, “McDonald’s, Wendy’s in Price Fight,” *The Wall Street Journal*, May 9, 2013, p B3, and McDonald’s 2016 Annual Report.

## 2-66 Value Chain(10 min)

The value chain for the Asda jeans, as described, is a three step process, beginning with manufacturing in Bangladesh and then shipping from Bangladesh to the UK, and then presentation and sale in the Asda store. A manager would consider how to improve quality and reduce cost throughout the value chain, perhaps by resourcing the manufacturing to reduce shipping costs or reducing in-store selling costs. Another approach might be to add cost and add value through a redesign of the jean. For example, Levi Strauss has developed a jean that requires much less water to produce. Called the Waste-Less jean, this product has a much reduced environmental impact relative to other jeans.

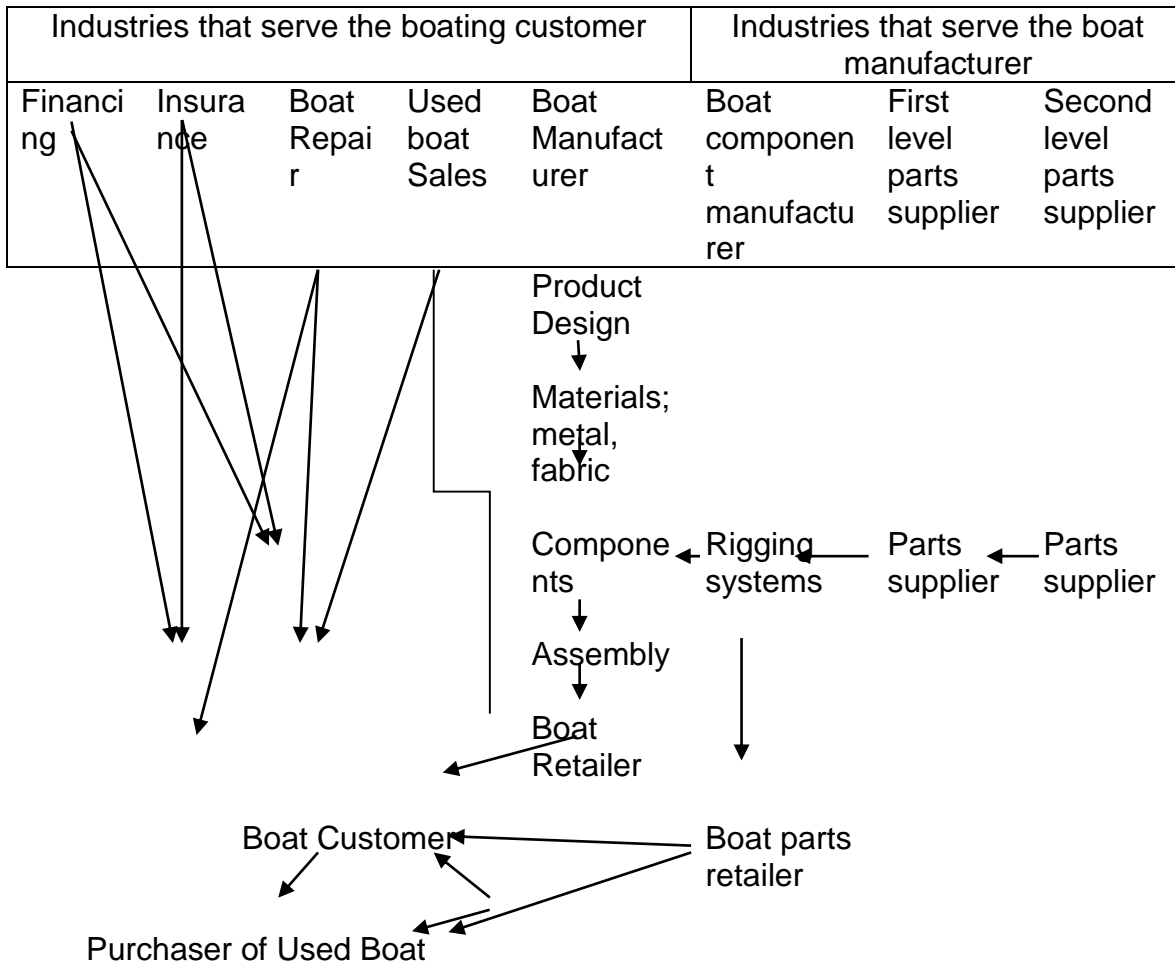
Note the **Real World Focus** item regarding sustainability at Patagonia in the text of the chapter.

The role of the value chain is to provide a basis for identifying where in the life cycle of the product it might be possible to reduce cost, increase value, or become more competitive. It is pretty clear from the example that the downstream activities of shipping and sales together generate the greatest cost. Do they also generate the greatest value?

Source: “Correlations: Perilous Arithmetic,” *Bloomberg Businessweek*, June 10, 2013, p 25; Susan Berfield, “Levi’s Has a New Color for Blue Jeans: Green,” *Bloomberg Businessweek*, October 22, 2012, pp 26-28.

## 2-67 Value Chain: Multiple Industries (20 min)

An example for the boating industry is shown below, and is based upon the illustration in the text of this problem. The example in the text refers to the auto industry, while the example here refers to the boating industry.



**2-68 Follow up to Problem 2-67; Value Chain for Financing Auto Purchases (30 min)**

See below for the 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.

Steps in the Value Chain	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. <b><i>The following assumes the loan has been approved:</i></b>
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.

Note (re: problem 2-67), the same value chain shown above for the auto industry would also be applicable to the finance function in the boating industry.

## 2-69 Foreign Exchange Rates (20 min)

(The most recent currency data for this problem is from the time of writing, June 2017)

1. For 2008 through February 2015, many Asian currencies have been generally stable relative to the U.S. dollar, particularly the South Korean won, the Indian rupee and Taiwanese dollar. The Chinese yuan was slowly appreciating relative to the dollar earlier in this period, but since 2014 yuan has fallen against the dollar by about 6%. The Taiwan dollar fell against dollar in 2015 to 2016 but has since (June 2017) risen to pre-2015 levels. Japan's yen has been falling against the dollar during this period.

Stable exchange rates 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 foreign competitors become less price competitive in the U.S. U.S. manufacturers benefit when the dollar falls as the U.S. products are in effect cheaper in the foreign country, and vice-versa when the dollar rises. One way that General Motors has adapted to this is to build factories in China to satisfy the demand there.

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 mid-2014. However, the euro began to fall against the dollar in August 2014; in March 2015, the euro was at the lowest level versus the dollar for many years. It has stayed at that level since March 2015.

The British pound has stayed relatively stable against the dollar until the Brexit vote in June 2016, after which time it fell about 10% against the dollar. The fall of the pound reflects the uncertainty about the UK economy following the Brexit vote and the moves by Prime Minister May to begin the process of separation from the European Union. The uncertainty was aggravated by the losses in the recent election (June 9, 2017) by Prime Minister May's Conservative Party.

A fall in the dollar against the euro helps U.S. exporters 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. The reverse is true when the euro falls relative to the dollar as it did in late 2014 and early 2015.

3. In the 2011-2014 period, Mexico's peso was stable relative to the U.S. dollar. In 2015 the peso began to fall against the dollar and is now 50% off the 2014 exchange rate. The Canadian dollar also has been relatively stable to the U.S. dollar until 2014 when it began to fall and is now 20% off the 2014 exchange rate.

Relatively stable exchange rates support trade, while strong currency fluctuations can have a large effect on bilateral trade. This is the focus of such trade agreements as the North American Trade Agreement (NAFTA). Relatively stable exchange rates support, in part, the strong bilateral trade relationships among these three 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 countries less attractive for a U.S. firm, because the foreign product would be more expensive. At this writing, in June 2017, the U.S. was considering seeking an amendment to NAFTA that would protect against fluctuating exchange rates

(<http://globalnews.ca/news/3458565/nafta-trade-deal-currency-clause/>)

While not addressed in the question, the instructor might note that some key South American countries, including Brazil, Argentina, and Venezuela, have had a significant decline in the value of their currencies in the 2012-2017 period. Venezuela had a devaluation in February 2013 and again in February 2016. These currency problems lead to financial instability and to shrinking economies, as investors retreat.

## 2-70 Value Chain; Innovation (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:
  - a. Market analysis
  - b. Product development and design
  - c. Sales and marketing
  - d. Procurement, production, and distribution
  - e. 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 replacing "Procurement, Production and Distribution," with "Operations."

3. 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.

4. 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.
5. 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.
6. 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 analytics (see chapter 8).
7. 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.
8. 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.

## **2-71 Measuring the Impact of Sustainability Efforts (20 min)**

### Advantages of the Comprehensive Sustainability Report

#### For Countries (GDP)

- The more comprehensive reporting would provide a basis for more informed decision making about the use of natural resources. For example, the government of Malaysia recently was considering a project to build a tourist resort; the construction would require the destruction of a mangrove forest. A consultant to the Malaysian government advised that the forest had a value of \$30 million a year; the tourist hotel was not built.
- As a Puma executive explained, “Once you start measuring things you realize something and start managing for it.”

#### For Companies (like Puma)

- The more comprehensive reporting would provide a basis for improved strategic analysis of the company's existing and planned products and

- services, to determine the current and likely future sustainability issues, compliance issues, and shareholder concerns
- The reporting framework helps the company move ahead with a sustainable strategy that is welcomed by customers and shareholders

### Disadvantages of Comprehensive Sustainability Reporting

#### For Countries (GDP)

- The sustainability calculations can be costly to develop
- The sustainability measures may lack credibility because of the assumptions that must be made in the calculations
- Since there is no legal framework, it is unlikely that the reporting will produce results; results will come when countries and companies act on their own self-interest

#### For Companies (like Puma)

- As above for countries, the cost and extent of assumptions needed for the sustainability reporting as well as the limitations of no legal framework.
- For global companies with suppliers in different countries, under different laws and regulations, the comprehensive framework may be difficult to implement

Also, in an article in *Strategic Finance*, Marc Epstein and Kristi Yuthas present a practical approach for measuring the monetary value of sustainability efforts.

Source: Randall Smith, "Investor Demand Leads Analysts to Focus on Stocks' Social and Environmental Risks," *The New York Times*, December 15, 2016, p B1; Tamara Bekefi and Marc. J. Epstein, "21<sup>st</sup> Century Sustainability," *Strategic Finance*, November 2016, pp 29-37; Andrew Ross Sorkin, "Seeking Financial and Social Returns," *The New York Times*, December 20, 2016, p B1; Marc J. Epstein and Kristi Yuthas, "Sustainability Impacts," *Strategic Finance*, January 2012, pp 27-33; Alex Morales, Eric Roston, and Chisaki Watanabe, "A Kinder, Gentler – and Greener - GDP Number," *Bloomberg Businessweek*, June 25, 2012, pp 12-14; Jenny Barchfield, "Puma, How Big is a Sneaker's Carbon Footprint?" [Manufactring.net](http://Manufactring.net), July 2, 2012.

## 2-72 Sustainability; The Balanced Scorecard (30 min)

1. The three options are:

- a. Adding a fifth perspective to the BSC
- b. Developing a separate sustainability balanced scorecard
- c. Integrating the measures throughout the four perspectives: financial, customer, internal 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.

2. The seven BSC measurement selection considerations for a sustainability scorecard are:

- a. There is an underlying objective for the measurement. That is, the measure reflects an important goal for the company.
- b. 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.
- c. 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.
- d. 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.
- e. 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 firm will choose to use a combination of both leading and lagging indicators.
- f. The measurements should be used to track performance trends. The comparisons can be both trends, and where appropriate, comparisons across units within the firm.
- g. Appropriate benchmarks and targets are set.

## 2-73 Strategy; Global; Value Chain (30 min)

This problem is similar to 2-60; 2-60 looks at 3 specific companies, while 2-73 looks at 2 industries.

1. **The textile industry** overall is best described as a cost leadership industry, as many of the products are hard to differentiate. There are some exceptions, for example, for fabrics that provide very long wear, sun or water protection, etc., but the industry is largely cost leadership. So moving abroad is a natural strategy for textile firms or manufacturers to locate textile production overseas, mainly in Asia, as suggested by the reference to India, Pakistan, and China in the text of the problem. Moreover, as the U.S. has not been active in textile manufacturing for some time, there is not the pipeline of skilled labor for engineering and management positions in the textile industry coming from U.S. colleges and universities. As noted in the *Wall Street Journal*, April, 2017: "In India, China, and Pakistan, there are still tons of students graduating with skills in how to create constructions of fabric for specific needs and desires." Decisions by firms in the textile industry to relocate manufacturing operations to the U.S. would probably not fit the cost leadership strategies for these firms because of the low cost and access to trained textile engineers and managers in the Asian countries where many of them are now located.

In contrast, the **pharmaceutical industry** could be considered as having largely differentiated firms, which compete on the research for and development of new drugs. While many of these firms choose low cost manufacturing, their focus on upstream (research and development) and downstream (marketing) investments indicates they compete on differentiation. The manufacturing operations are often in Asian countries; Samsung, a South Korean conglomerate, is investing heavily in contract manufacturing for pharmaceuticals, with a specialization in biologics.

Relocating the manufacturing operations for these firms might not affect these firms dramatically since their strategy is differentiation, and they do not compete on price. However, a shift of manufacturing to a higher cost country would likely hurt the profitability of these companies and perhaps cause them to be more aggressive in pricing.

2. For firms in the textile industry, a relocation of manufacturing would likely be a significant change in the value chain. This would cause these firms to revamp their focus on cost leadership competition. Which firms would be their new competitors were this to happen? How would these textile firms most effectively compete in this new environment?

For firms in the pharmaceutical industry, it is not likely that the relocation of manufacturing would have such a significant effect on the value chain, since manufacturing is not a critical link in the value chain for most of these firms. There would be a continued emphasis on the upstream investment in research and development and a continued investment in the downstream investment in marketing, though these investments might be tweaked some to help the firms recover the lost profits due to the higher manufacturing costs.

Note: the coverage of global issues, as in this problem, is not comprehensive without the consideration of key issues in the decision to locate locally or in a foreign country. These issues include (among others) taxation rates and policies in the different countries, the stability of exchange rates for the foreign country (volatility in the exchange rate would present problems in managing exchange rate risk), the political stability of the country (risk of expropriation, or special fees, duties, or other regulations, etc.), transportation availability and cost, presence (or not) of meaningful local markets, the nature of the firm's value chain, etc

Source: "Pharma's Worst Nightmare," Doni Bloomfield and Hui Li, *Bloomberg Businessweek*, January 23, 2017, pp 18-19; "Firms Struggle to Bring Jobs Back," Ruth Simon and Vipal Monga, *The Wall Street Journal*, April 15, 2017, p B4; "Are Drugs Samsung's Next Big Thing?" by Natasha Khan and Sam Kim, *Bloomberg Businessweek*, May 22, 2017, p 23.

## 2-74 Sustainability (15-25 min)

This question is best used for class discussion. The issue is how the management accountant can help to make renewable energy accessible to smaller firms that cannot afford the investment in solar panels or wind turbines. If the smaller companies cannot adopt cheap renewable energy, it will slow the growth of renewable energy generally.

I would start by asking the class to identify the obstacles that smaller companies face in adopting renewable energy. If the points are slow in coming, then I would start with one or two of my own examples. I would write them down on the board or overhead as you list them. Here are some possible items:

- The cost of investment in the solar panels and turbines can be quite high, requiring energy providers to seek very long term contracts to cover the investment.
- Regulations at the local or state level might hinder some smaller firms from making an investment, for example, regulations that require large buffers between the solar panels and certain buildings.
- Regulations at the federal level might hinder some smaller firms from making an investment, <http://www.nrel.gov/docs/fy16osti/66724.pdf>
- State and local governments can differ significantly on the nature of the incentive for renewable energy that they might offer, <https://energy.gov/eere/solarpoweringamerica/database-state-incentives-renewables-efficiency>

Then I would look at each item with the class and determine how the management accountant might work to remove these obstacles. For example:

## **2-74 (continued -1)**

- The main job of the management accountant is to develop and analyze cost and other information to assist management in achieving its strategy, so that a good starting place would be to clarify the firm's strategy and how renewable energy fits that strategy. For many smaller firms, it is likely to be a combination of expected cost savings and the potential benefit to the firm's reputation, as well as other factors.
- Relative to the cost of investment, one piece of good news is that not only is the cost of renewable energy falling, but the required investment is also falling, as the cost of solar panels and other renewable energy sources is coming down. This means that the companies who are preparing the solar panels for wider use will be able to accept shorter term contracts, which would be more attractive to smaller firms.
- Relative to the cost of investment, consider how your company might be able to partner with other organizations to invest in and share the renewable energy resources
- Look for ways to partner with other firms to work with legislatures to improve regulations so that the regulations are more supportive of renewable energy for smaller companies
- Join joint ventures with other firms, both large and small, to promote renewable energy in the company's area

Source: "Why It's Mainly Big Companies Buying Green Power," Brian Baskin, *The Wall Street Journal*, May 22, 2017, p R3.