volume produced. Each doubling of volume reduces cost by the amount of the experience rate. Competitive advantage can be gained, in some cases, by following the experience curve.

- Operations effectiveness can be described by the following four stages: internally neutral, externally neutral, internally supportive, or externally supportive. An operations strategy is required for a business to achieve stage 3 or 4 status.

QUESTIONS

1. What are the reasons for formulating and implementing an operations strategy?
2. Describe a possible mission for operations and some associated strategies that would fit the following business situations.
   a. Ambulance service
   b. Production of standard automobile batteries
   c. Production of electronics products that have a short product life cycle.
3. An operations manager was heard to be complaining, "The boss never listens to me—all the boss wants from me is to avoid making waves. I rarely get any capital to improve operations."
   a. What stage is operations probably in?
   b. What should be done about the situation?
4. Define the following terms: experience curve, focused operations, mission of operations, and distinctive competence.
5. How would you determine whether a company had an operations strategy or not? What specific questions would you ask, and what information would you gather?
6. What are some of the classic signs of an unfocused operation?
7. Describe the differences between a stage 1 and a stage 4 operation.
8. Evaluate your local hospital in terms of its emphasis on the four objectives of operations: cost, quality, delivery, and flexibility. Are all departments focused on the same objectives?
9. Define some of the strategic decisions that might be required in grocery store operations depending on whether the mission was emphasizing cost or quality.
10. What are the pros and cons of organizing a plant within a plant?
11. What kinds of external factors might affect the following types of operations:
    a. Airline
    b. Bank
    c. Semiconductor manufacturing
12. Using newspapers and magazines, find examples of operations strategies. Write a few paragraphs describing the situation and the strategies which are being pursued.
13. Suppose that you are producing calculators on an 85 percent experience curve and the eighth unit costs $100 to produce.
    a. How much did the first unit cost?
    b. How much will unit number 500 cost?
14. A 90 percent experience curve can be used for the production of aircraft. The first unit costs $100,000.
    a. How much will the tenth unit cost?
    b. How much will the hundredth unit cost?
15. Company A follows an 85 percent experience curve, and a competitor (Company B) follows an 80 percent experience curve in producing a similar product. Both companies start with a unit cost of $200 for the first unit.

   a. How much of a cost advantage does company B have by t
      produces 1000 units?
   b. What would you suggest that company A do about this
   c. What if company A produces 1000 units by the time tha
      units. Which company has the advantage in this case?
16. The Piper Cub aircraft company produced a new line of air
    for the first unit produced and $300,000 for the eighth unit
    a. What is the company's experience curve rate?
    b. What will the twentieth unit cost at the present rate of

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