



## Strategy and Competitiveness

- I. Classification of Processes
  - a. By Process Structure
    - i. Job Shop
      - 1. Similar resources grouped together
      - 2. Products move from resource to resource as needed – different products are routed differently
    - ii. Flow Shop
      - 1. Emphasis on products, not resources
      - 2. Break the operation into sub-operations
      - 3. Each product flows through its own assembly line
    - iii. Job shops are good when you need variety and flexibility but it takes longer to process a good and requires more skilled labor.
    - iv. Job shops tend to require less capital investment but carry higher variable costs
  - b. By Customer Interface
    - i. Make to Stock
      - 1. Customers expect to walk into a store and purchase the product with no delay
      - 2. Need to predict sales
    - ii. Package/Finish/Assemble to Order
      - 1. Some customization
      - 2. e.g. Dell
    - iii. Make or Design to Order
      - 1. Each product is made when an order is received
      - 2. Wait time can be very long
- II. Product Attributes
  - a. Firms compete on product attributes – what is it about the product that makes the customer prefer one over another
  - b. C (Cost) – Price plus future costs to be incurred over the product's lifetime
    - i. Maintenance Costs
    - ii. Shipping, taxes
  - c. T (Delivery-Response Time)
    - i. Time customer waits before receiving product
    - ii. Purchasing in store has  $T = 0$  (or very nearly)
    - iii. May have shipping / transportation time
    - iv. May have production time included for custom-order products
    - v. For services, response time includes time spent waiting for the service to begin and time spent performing the service
  - d. V (Variety)
    - i. Range of choices offered to the customer
    - ii. Different brands available at the store
    - iii. Volume Variety: Can you purchase 10,000 units as easily as one?
    - iv. Standard commodities have limited variety (stock to order)
    - v. Produce to Order: May have unlimited variety
  - e. Q (Quality)
    - i. This is the hardest to define and measure
    - ii. It includes subjective factors like aesthetics
    - iii. Depends on how well the product is designed and produced (consistently meets design requirements)
  - f. Order Qualifiers and Order Winners
    - i. Not all attributes weigh equally to the customer
    - ii. Order Qualifiers: The threshold for consideration (the minimum requirements)
    - iii. Order Winners
      - 1. An attribute that makes the product look better to the customer

- 2. The customer is actually making the choice based on order winners, not just getting consideration
    - iv. These will shift over time.
      - 1. What's an order winner now may just be an order qualifier next year.
      - 2. 10-year, 100,000 mile warranty today is normal, but wouldn't even have been offered in the past.
    - v. Some people say "service" is an attribute. Remember, all products are *bundles* of both goods and services.
  - g. Strategic Positioning: For what combination of the four attributes are you aiming?
- III. Strategic Framework for Operations
  - a. Corporate Strategy
    - i. In what businesses should the corporation be involved?
    - ii. How should resources be allocated?
  - b. Business Unit Strategy
    - i. Obviously this is at the top of the list if you're only in one business
    - ii. What products? What markets?
    - iii. How to achieve a competitive advantage?
  - c. Functional Strategies
    - i. For operations, marketing, IS, ...
    - ii. Each function needs its own strategy
    - iii. For Operations: What must we do well? What capabilities must we have?
  - d. Operations Structure: How to achieve those capabilities
  - e. Example: Wal-Mart
    - i. Corporate: Provide customers access to quality goods when and where they're needed at competitive prices
    - ii. Operations Strategy:
      - 1. Short flow times (delivery-response times)
      - 2. Low inventory levels
    - iii. Operations Structure
      - 1. Cross-docking: Don't use a warehouse. Put trucks from suppliers on one side of the dock and trucks going to stores on the other side; distribute goods directly from suppliers to all the stores' trucks.
      - 2. EDI: Electronic Data Interchange
      - 3. Fast transportation system. Everyone else was subcontracting transportation; Wal-Mart built its own fleet of vehicles.
      - 4. Focused locations: Monitor what people buy at each local store and stock each according to the local market
      - 5. Good communication among stores and with corporate
    - iv. Resulting Benefits
      - 1. Inventory turned over twice as fast
      - 2. Targeting of products to markets improved
      - 3. Sales per square foot increased dramatically
  - f. Structure includes both Brick & Mortar considerations and a managerial component
  - g. Operations Frontier
    - i. Looking at Responsiveness vs. Cost
    - ii. The Frontier is the curve that encompasses the entire industry
    - iii. Will have firms at or very close to the frontier.
    - iv. Will have other players off the frontier
    - v. This captures the industry at a particular point in time
    - vi. Firms on the frontier face a tradeoff
      - 1. They can't improve both effectiveness *and* costs
      - 2. Could move the frontier by adopting a new technology or a new production technique or something *new*
      - 3. So remember the frontier is useful only in a static sense
    - vii. A big firm offers a variety of products – they may not all fall in the same place on the graph of effectiveness vs. cost. They may cover a whole area as a firm