

Competitiveness Strategy Productivity

Prepared by Dr. Injy Nashaat

Lecture 2



**Better quality, higher productivity, lower costs, and the ability to
respond quickly to customer needs are more important than ever,
and...
the bar is getting higher**



**COLD HARD
FACTS**

Chapter Focus

- This chapter focuses on three separate but related ideas that are vitally important to business organizations
 1. Competitiveness
 2. Strategy
 3. Productivity



Competitiveness

- **Competitiveness:**

- How effectively an organization meets the wants and needs of customers relative to others that offer similar goods or services
- Organizations compete through some combination of their marketing and operations functions
 - What do customers want?
 - How can these customer needs best be satisfied?



Marketing's Influence

- Identifying consumer wants and/or needs
- Pricing and quality
- Advertising and promotion



Businesses Compete Using Operations

1. Product and service design
2. Cost
3. Location
4. Quality
5. Quick response
6. Flexibility
7. Inventory management
8. Supply chain management
9. Service
10. Managers and workers



Government statistics are a good source of data about productivity trends in the service & goods sectors.

Why Some Organizations Fail

1. Neglecting operations strategy
2. Failing to take advantage of strengths and opportunities and/or failing to recognize competitive threats
3. Too much emphasis on short-term financial performance at the expense of R&D
4. Too much emphasis on product and service design and not enough on process design and improvement
5. Neglecting investments in capital and human resources
6. Failing to establish good internal communications and cooperation
7. Failing to consider customer wants and needs

Hierarchical Planning

- Mission
- Goals
- Organizational strategies
- Functional strategies
- Tactics

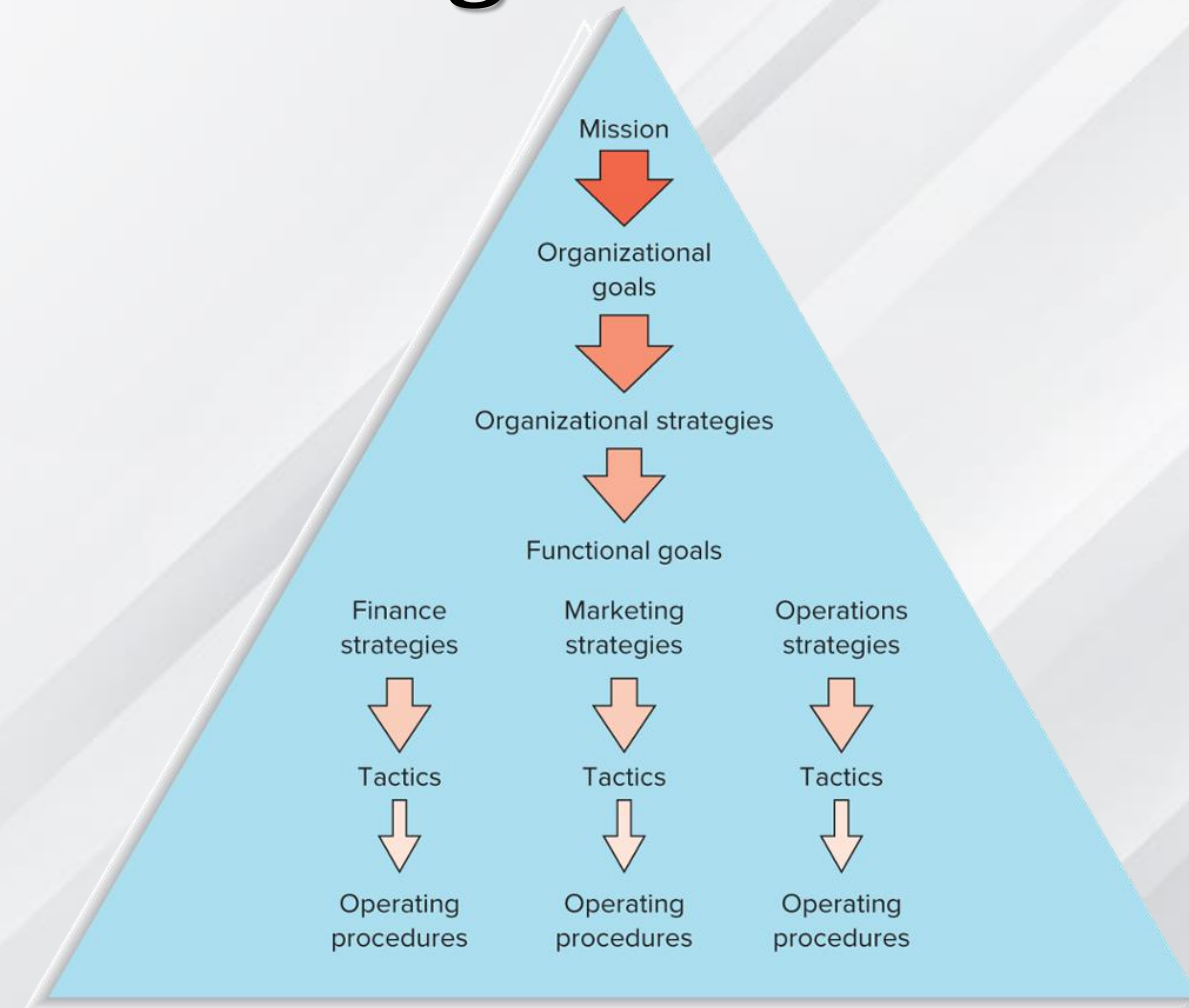


FIGURE 2.1

Planning and decision making are hierarchical in organizations

Mission

- **Mission**

- The reason for an organization's existence

- **Mission statement**

- States the purpose of the organization
- The mission statement should answer the question of “What business are we in?”



Mission Statement

TABLE 2.1

Selected portions
of company mission
statements

Microsoft	To help people and businesses throughout the world to realize their full potential.
Verizon	To help people and businesses communicate with each other.
Starbucks	To inspire and nurture the human spirit—one cup and one neighborhood at a time.
U.S. Dept. of Education	To promote student achievement and preparation for global competitiveness and fostering educational excellence and ensuring equal access.

Goals

The mission statement serves as the basis for organizational goals

- **Goals**

- Provide detail and the scope of the mission
- Goals can be viewed as organizational destinations
- Goals serve as the basis for organizational strategies



Strategies

- **Strategy**

- A plan for achieving organizational goals
 - Serves as a roadmap for reaching the organizational destinations
- Organizations have
 - *Organizational strategies*
 - Overall strategies that relate to the entire organization
 - Support the achievement of organizational goals and mission
 - *Functional level strategies*
 - Strategies that relate to each of the functional areas and that support achievement of the organizational strategy

✓ **Traditional strategies of business organizations have tended to emphasize cost minimization or product differentiation**

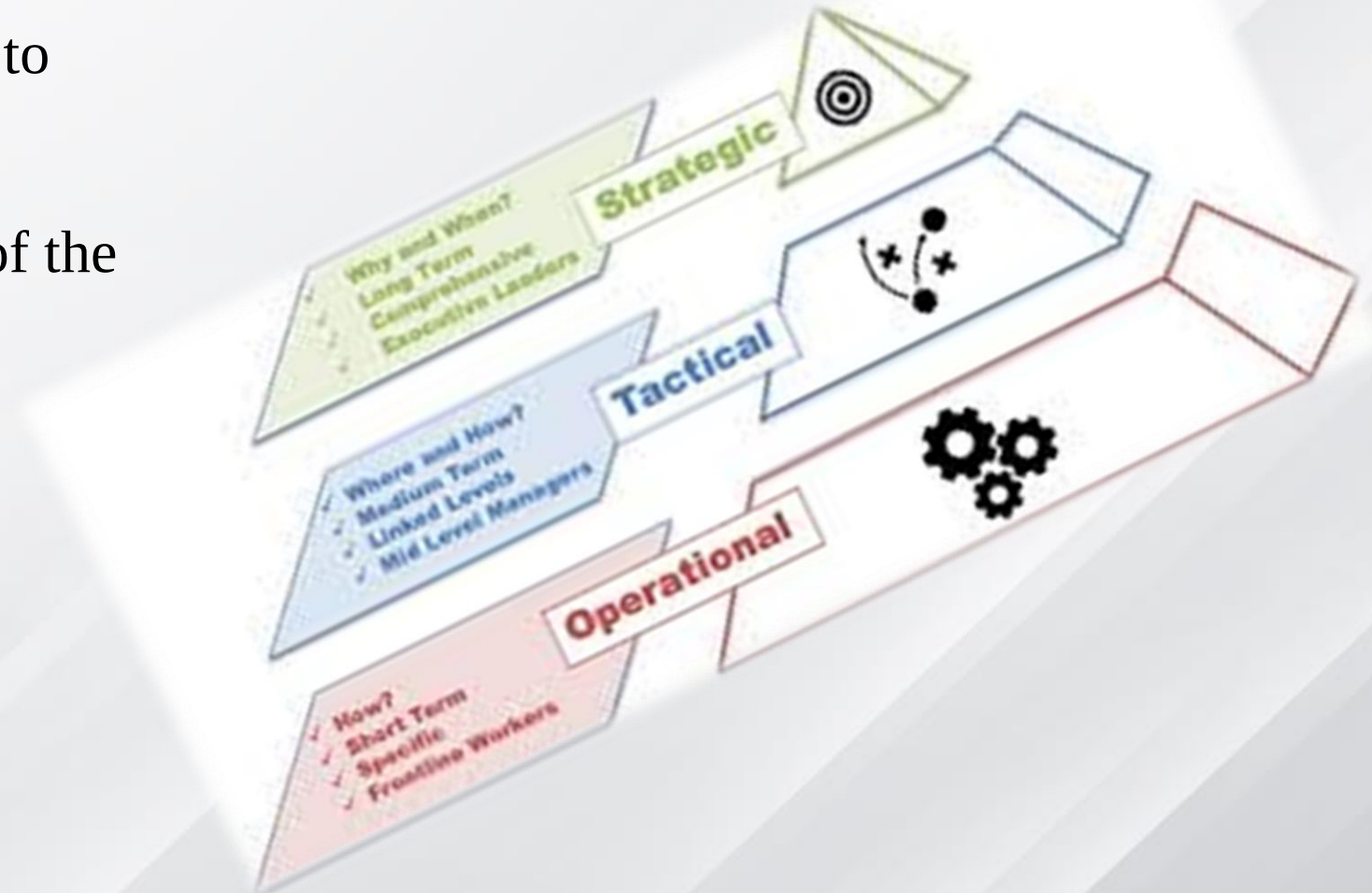
Tactics and Operations

- **Tactics**

- The methods and actions taken to accomplish strategies
- The “how to” & “ Who” parts of the process

- **Operations**

- The actual “doing” part of the process

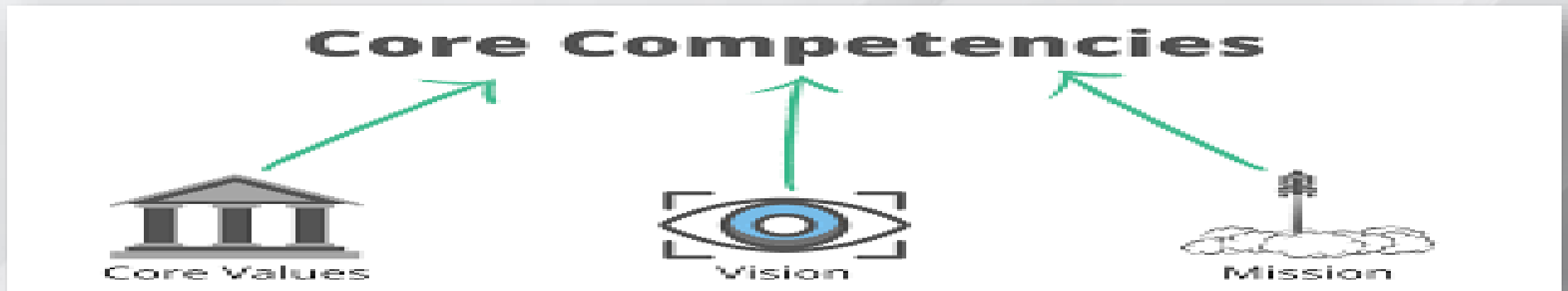


Core Competencies

- Core competencies

The special attributes or abilities that give an organization a *competitive edge*

- To be effective, core competencies and strategies need to be aligned



Sample Operations Strategies

Organizational Strategy	Operations Strategy	Examples of Companies or Services
Low Price	Low cost	U.S. first-class postage Wal-Mart
Responsiveness	Short processing times On-time delivery	McDonald's restaurants FedEx
Differentiation: High Quality	High performance design and/or high-quality processing Consistent quality	Sony TV Coca-Cola
Differentiation: Newness	Innovation	3M, Apple
Differentiation: Variety	Flexibility Volume	Burger King (Have it your way") McDonald's ("Buses Welcome")
Differentiation: Service	Superior customer service	Disneyland IBM
Differentiation: Location	Convenience	Supermarkets; mall stores

Strategy Formulation

- Effective strategy formulation requires considering:
 - Core competencies
 - Environmental scanning
 - SWOT: Strengths, Weaknesses, Opportunities, and Threats
- Successful strategy formulation also requires considering:
 - Order qualifiers
 - Order winners

Strategy Formulation (cont.)

- **Order qualifiers**
 - Characteristics that customers perceive as minimum standards of acceptability for a product or service to be considered as a potential for purchase.
- **Order winners**
 - Characteristics of an organization's goods or services that cause it to be perceived as better than the competition

Standardization has the advantage of reducing variability

Environmental Scanning

- Environmental scanning is necessary to identify
 - Internal factors
 - Strengths and weaknesses
 - External factors
 - Opportunities and threats

Key External Factors

1. Economic conditions
2. Political conditions
3. Legal environment
4. Technology
5. Competition
6. Customers
7. Suppliers
8. Markets

Key Internal Factors

1. Human resources
2. Facilities and equipment
3. Financial resources
4. Customers
5. Products and services
6. Technology
7. Other

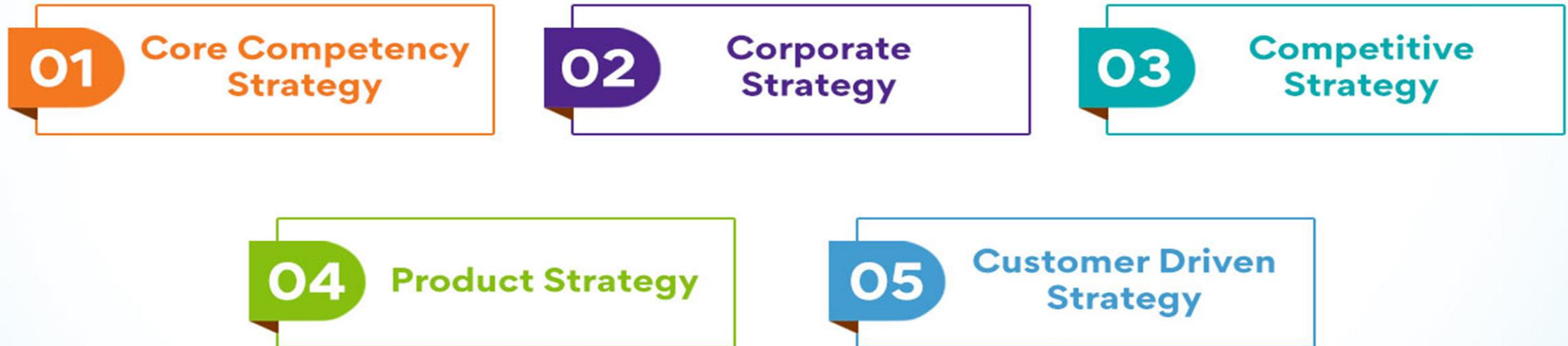
Mission and Strategies

- Supply Chain Strategy
 - How the organization should work with suppliers and policies relating to customer relationships and sustainability
- Sustainability Strategy
 - Work with governmental regulations and interest groups to achieve sustainability goals
- Global Strategy
 - Work with international suppliers/producers and also with countries where the products and services are sold

Operations Strategy

- **Operations strategy**

- The approach, consistent with organization strategy, that is used to guide the operations function



Strategic OM Decision Areas

Decision Area	What the Decisions Affect
Product and service design	Costs, quality, liability, and environmental issues
Capacity	Cost, structure, flexibility
Process selection and layout	Costs, flexibility, skill level needed, capacity
Work design	Quality of work life, employee safety, productivity
Location	Costs, visibility
Quality	Ability to meet or exceed customer expectations
Inventory	Costs, shortages
Maintenance	Costs, equipment reliability, productivity
Scheduling	Flexibility, efficiency
Supply chains	Costs, quality, agility, shortages, vendor relations
Projects	Costs, new products, services, or operating systems

Quality-Based Strategies

- **Quality-based strategy**
 - Strategy that focuses on quality in all phases of an organization
 - Pursuit of such a strategy is rooted in poor-quality factors:
 - Trying to overcome a poor-quality reputation
 - Desire to maintain a quality image
 - A desire to catch up with the competition
 - A part of a cost reduction strategy

Time-Based Strategies

- **Time-based strategies**

- Strategies that focus on the reduction of time needed to accomplish tasks.
 - It is believed that by reducing time, costs are lower, quality is higher, productivity is higher, time-to-market is faster, and customer service is improved

Time-Based Strategies (cont.)

- Areas where organizations have achieved time reductions:
 - Planning time
 - Product/service design time
 - Processing time
 - Changeover time
 - Delivery time
 - Response time for complaints



Agile Operations

- **Agile operations**

- A strategic approach for competitive advantage that emphasizes the use of flexibility to adapt and prosper in an environment of change
- Involves the blending of several core competencies:
 - Cost
 - Quality
 - Reliability
 - Flexibility

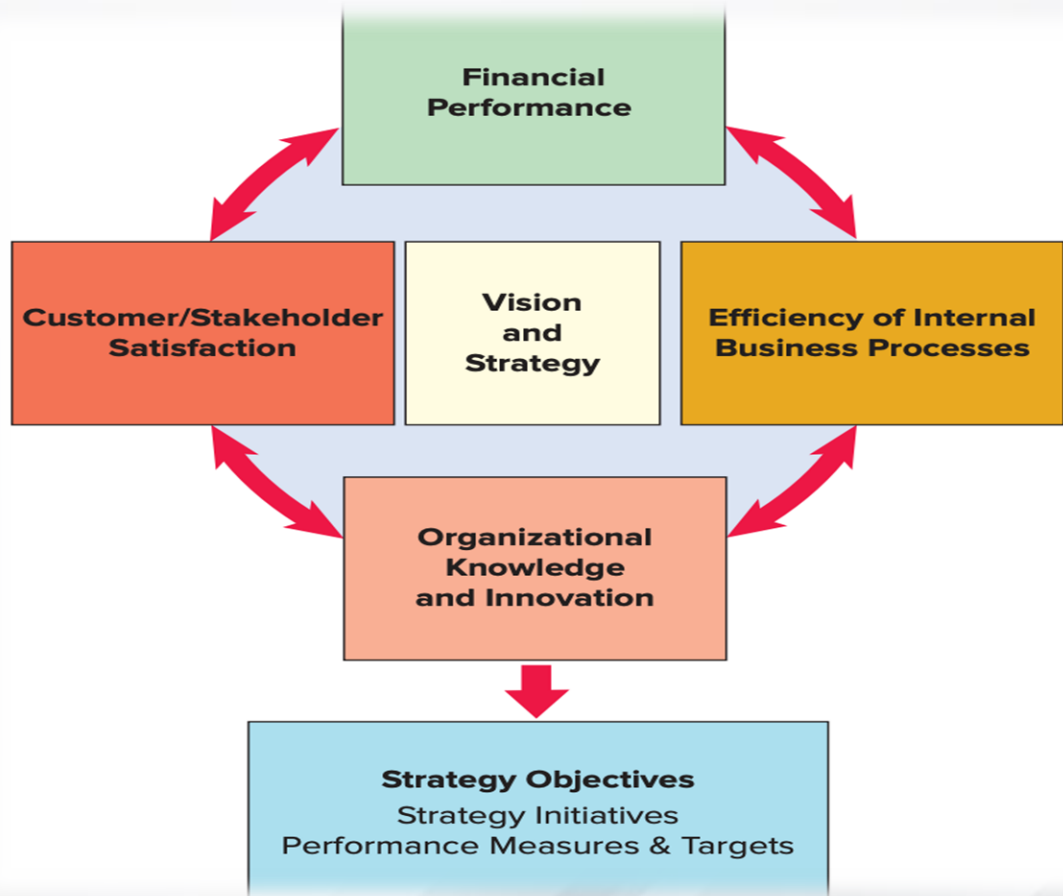


The Balanced Scorecard Approach

- A top-down *management system* that organizations can use to clarify their vision and strategy and transform them into action
 - Develop objectives
 - Develop metrics and targets for each objective
 - Develop initiatives to achieve objectives
 - Identify links among the various perspectives
 - Finance
 - Customer
 - Internal business processes
 - Learning and growth
- Monitor results



The Balanced Scorecard



The balanced scorecard involves measuring four main aspects of a business: Learning and growth, business processes, customers, and finance

Productivity

- **Productivity**

- A measure of the effective use of resources, usually expressed as the ratio of output to input

- **Productivity measures are useful for**

- Tracking an operating unit's performance over time
- Judging the performance of an entire industry or country



Why Productivity Matters

- High productivity is linked to higher standards of living
 - As an economy replaces manufacturing jobs with lower productivity service jobs, it is more difficult to maintain high standards of living
- Higher productivity relative to the competition leads to competitive advantage in the marketplace
 - Pricing and profit effects
- For an industry, high relative productivity makes it less likely it will be supplanted by foreign industry

Productivity Measures

$$\text{Productivity} = \frac{\text{Output}}{\text{Input}}$$

$$\text{Partial Measures} \quad \frac{\text{Output}}{\text{Single Input}}; \quad \frac{\text{Output}}{\text{Labor}}; \quad \frac{\text{Output}}{\text{Capital}}$$

$$\text{Multifactor Measures} \quad \frac{\text{Output}}{\text{Multiple Inputs}}; \quad \frac{\text{Output}}{\text{Labor} + \text{Machine}}; \quad \frac{\text{Output}}{\text{Labor} + \text{Capital} + \text{Energy}}$$

$$\text{Total Measure} \quad \frac{\text{Goods or services produced}}{\text{All inputs used to produce them}}$$

Some examples of partial productivity measures

Labor productivity

Units of output per labor hour
Units of output per shift
Value-added per labor hour
Dollar value of output per labor hour

Machine productivity

Units of output per machine hour
Dollar value of output per machine hour

Capital productivity

Units of output per dollar input
Dollar value of output per dollar input

Energy productivity

Units of output per kilowatt-hour
Dollar value of output per kilowatt-hour

Productivity Calculation Example

Units produced: 5,000
Standard price: \$30/unit
Labor input: 500 hours
Cost of labor: \$25/hour
Cost of materials: \$5,000
Cost of overhead: $2 \times$ labor cost

***What is the
multifactor
productivity?***

Solution

$$\begin{aligned}\text{Multifactor Productivity} &= \frac{\text{Output}}{\text{Labor} + \text{Material} + \text{Overhead}} \\ &= \frac{5,000 \text{ units} \times \$30/\text{unit}}{(500 \text{ hours} \times \$25/\text{hour}) + \$5,000 + (2(500 \text{ hours} \times \$25/\text{hour}))} \\ &= \frac{\$150,000}{\$42,500} \\ &= 3.5294\end{aligned}$$

What is the implication of an unitless measure of productivity?

Productivity Growth

$$\text{Productivity Growth} = \frac{\text{Current productivity} - \text{Previous productivity}}{\text{Previous productivity}} \times 100\%$$

Example: Labor productivity on the ABC assembly line was 25 units per hour in 2014. In 2015, labor productivity was 23 units per hour. What was the productivity growth from 2014 to 2015?

$$\text{Productivity Growth} = \frac{23 - 25}{25} \times 100\% = -8\%$$

Service Sector Productivity

- Service sector productivity is difficult to measure and manage because
 - It involves intellectual activities
 - It has a high degree of variability
- A useful measure related to productivity is *process yield*
 - Where products are involved
 - Ratio of output of good product to the quantity of raw material input
 - Where services are involved, process yield measurement is often dependent on the process:
 - Ratio of cars rented to cars available for a given day
 - Ratio of student acceptances to the total number of students approved for admission

Factors Affecting Productivity



Improving Productivity

1. Develop productivity measures for all operations
2. Determine critical (bottleneck) operations
3. Develop methods for productivity improvements
4. Establish reasonable goals
5. Make it clear that management supports and encourages productivity improvement
6. Measure and publicize improvements
7. Don't confuse *productivity* with *efficiency*
8. Outsourcing tends to improve quality to increase the productivity



Thank You