

# Operations Management

## Lesson 5

### **2.2 Assess the impact of the tension between cost minimization and quality maximization in organizations**

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# Introduction

- ▶ Learning Objective 2: Understand the link between operations management and strategic planning
    1. Efficiency (thrift) versus effectiveness (quality)
    2. Cost minimisation in organizations
    3. Quality maximisation in organisations
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# Efficiency (thrift) versus Effectiveness (quality)

- ▶ Operations management includes the responsibility of ensuring that all business/organizational operations are:
    1. Efficient in terms of minimising costs by using as few resources as possible, and
    2. Effective in terms of maximising quality and meeting customer requirements.
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# Cost Minimization VS Quality Maximization

- ▶ Cost minimization and quality maximization in organizations means that:
    - The operation will have to produce the optimum quality products at minimum cost
    - Any attempts to further improve quality above optimum level will increase total cost
    - While product defects may decrease, prevention cost may increase.
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# COST MINIMIZATION

- ▶ Cost minimization implies an emphasis on:
  - a) efficiency,
  - b) high labor productivity, and
  - c) standardization
- ▶ Cost minimization or cost leadership is one of Michael Porter's three generic strategies for achieving competitive advantage.

# Cost Minimization Strategies

- ▶ Strategies includes:
    1. Increase asset turnover (which allows fixed costs to be spread over more units of production).
    2. Reduce direct costs (for example, by limiting differentiation and customization of projects and increase output of a product).
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## Cost Minimization Strategies Cont'd

3. Outsource non-core activities, such as payroll, call handling, and transaction processing;
  4. Aggressively control of overheads (such as banning first class travel on airlines); and
  5. Use company's bargaining power to negotiate better pricing with suppliers
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# Cost Minimization Problem

- ▶ Cost minimized where  $\frac{MP_L}{w} = \frac{MP_K}{r}$
- ▶
- ▶ Cost is minimized at the levels of capital and labor such that the marginal product of labor divided by the wage (w) is equal to the marginal product of capital divided by the rental price of capital (r).
- ▶ Cost being minimized (and, by extension, production being most efficient) when the additional output per dollar spent on each of the inputs is the same (or, in less formal terms, you get the same "bang for your buck" from each input).

# Benefits to Cost Minimization

- Benefits to cost minimization:
    1. Lower unit costs
    2. Higher profit margin
    3. Higher operating profits
    4. Improved cash flow
    5. Higher return on equity
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# Downside of Cost Minimization

- Downside of cost minimization:
    1. It can leave companies with insufficient capacity to handle unexpected increases in demand.
    2. Cost reductions by one department may also surprise other departments if they are not properly communicated.
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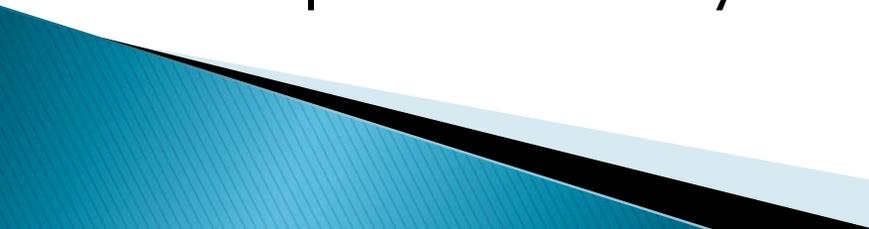
# QUALITY MAXIMIZATION

- ▶ Quality maximization is important for an organization to make their profit.
- ▶ Fedrick W. Taylor, the “Father of Scientific Management,” gave new emphasis to quality by including product inspection in his list of fundamental areas of manufacturing management.
- ▶ The tension between cost minimization and quality maximization in organizations is that the operation will have to produce the optimum quality products at minimum cost

## Quality Maximisation Cont'd

- ▶ Focus on maintaining or improving the quality of an organization's product or services to attract and retain customers.
  - ▶ Higher quality of organisation's products or services may be linked to cost reduction overtime, increased productivity, and time reduction in – planning, processing, delivery and response to complaints.
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# Cost of Quality

- Cost associated with the management of quality includes:
    1. Appraisal Costs: Cost of activities designed to ensure quality or uncover defects
    2. Prevention Costs: Costs of preventing defects from occurring
    3. Failure Costs: Costs caused by defective parts or products or by faulty services
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# Cost of Quality Cont'd

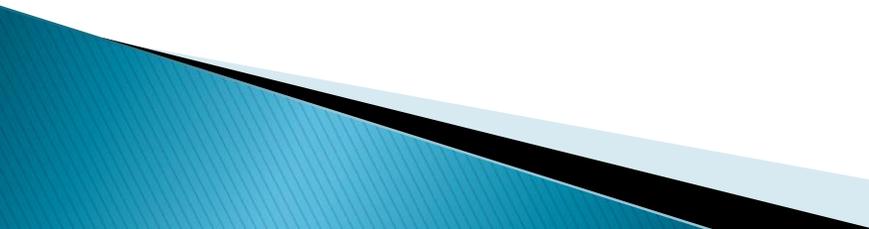
4. Internal Failures: Failures discovered during production.
  5. External Failures: Failures discovered after delivery to the customers.
  6. Return on Quality (ROQ): An approach that evaluates the financial return of investments in quality.
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# Objectives of Quality Control

Objectives of quality control includes:

1. To improve the companies income by making the production more acceptable to the customers *i.e.* by providing long life, greater usefulness, maintainability, etc.
  2. To reduce companies cost through reduction of losses due to defects.
  3. To achieve interchangeability of manufacture in large-scale production.
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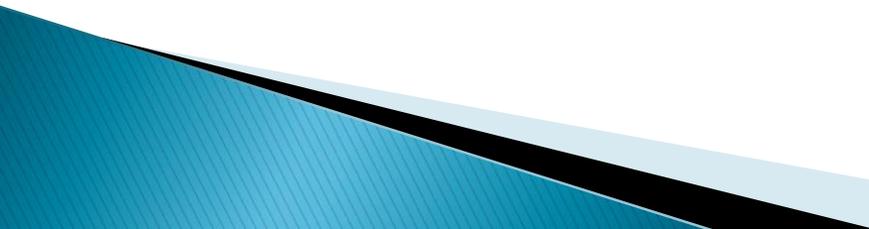
# Objectives of Quality Control Cont'd

4. To produce optimal quality at reduced Price.
  5. To ensure satisfaction of customers with productions or services or high quality level,
  6. To build customer good will, confidence and reputation of manufacturer.
  7. To make inspection prompt to ensure quality control.
  8. To check the variation during manufacturing.
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# Cost to Remedy a Problem

- ▶ Is a major consideration in quality management.
  - ▶ The earlier a problem is identified in the process, the cheaper the cost to fix it.
  - ▶ The cost to fix a problem at the customer end is about five times the cost to fix a problem at the design or production stages.
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# Exercise

1. In your own words explain efficiency (thrift) and effectiveness (quality)
  2. What are the benefits to cost minimization?
  3. List two cost minimization strategies and explain.
  4. Why is quality maximization important to an organization
  5. List some of the objects of quality control
  6. Explain why it is important to remedy a quality problem
  7. What are some of the cost associate with the management of quality includes?
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# References

1. Butler, J. E. & Jones, G. R. (1998). Costs, revenue and business-level strategy. *Academy of Management Review*, 13 (2), 202–213.
2. William J. Stevenson, Operations Management, McGraw-Hill Publishing Company Limited, 8th Edition, 2008.
3. <https://brainmass.com/business/cost-minimization-strategies>