

King Fahd University of Petroleum and Minerals

College of Industrial Management

Department of Accounting & MIS

ACCT 510: Managerial Accounting

MBA Program

Chapter 6 (Lecture Notes)

MBA Program Management Accounting Information for Activity and Process Decisions

Learning Objectives

- Discuss many issues related to how management accounting information is used when making decisions
- Explain what costs are relevant/or not relevant for decisions.
- Demonstrate the influence of qualitative factors in making decisions
- Analyze some decision-making situations
 - Make-or-Buy Decisions
 - Facility Layouts systems
- Demonstrate the value of just-in-time manufacturing systems
- Describe the concept of cost of quality
- Calculate the cost savings resulting from reductions in inventories, reduction in production cycle time, production yield improvements, and reductions in rework and defect rates

Evaluation of the financial implications

Managers must consider the financial consequences of decisions that require trade-off between the costs and the benefits of different alternatives, e.g:

- Whether to redesign an entire production process or replace existing machines
- To buy or make components
- Accepting an order/ contract
- Accepting a special price

Cost Concepts

- Relevant costs/revenues: those factors that are affected by a decision or future costs and revenues that will be changed by a decision
- Irrelevant cost/ revenues: those will not be affected by a decision
- Sometimes the terms avoidable and unavoidable costs are used instead of relevant and irrelevant cost.
- Sunk costs are not relevant costs: the costs of resources that already have been committed and cannot be changed by any current action or decision
- Incremental costs/ revenues (differential): additional costs and revenues that arise from the production or sale of a group of additional unit

Just-In-Time Manufacturing (JIT): a production process method in which products are manufactured only as needed

- It uses a product layout with a continuous flow (no delays)
- The processing system must be reliable
- It reduces cycle-times so that there are shorter lead times to fulfilling customer orders (production cycles)
- Many positive effects on the levels of work-in-process inventory, the costs of support activities of handling and storing work-in-process inventory

What conditions for the success of JIT strategy?

- A highly trained workforce to carry out activities using the highest standards of quality (e.g. reporting defects)
- Suppliers must be able to produce and deliver defect-free materials or components just when they are required (supply-chain management)
- Preventive maintenance to reduce/ minimize/prevent equipment and machinery failure
- Requires a major cultural change for the organization: because the central ideas behind JIT are the streamlining of operations and the reduction of waste, many people inside the organization are ill-prepared
- Requires altering the pace of work and the overall work discipline of the organization
- JIT relies on teamwork and teamwork environment

Just-In-Time Manufacturing and Management Accounting

Management accounting must support the move to JIT manufacturing by monitoring, identifying, and communicating to decision-makers the sources of delay, defects, errors, and waste in the system and associated costs.

Important measures of a JIT system's reliability include the following benchmarks of manufacturing cycle of effectiveness:

- Defects rates
- Cycle times
- Percent of time that deliveries are on time
- Order accuracy
- Actual production as a percent of planned production

- Actual machine time available compared with planned machine time available

Costs of Nonconformance and Quality Issues

- Cost reduction has become a significant factor in the management of most organizations
- Cost reduction involves much more than simply finding ways to cut product design costs or material costs
- The premise underlying cost reduction efforts today is to decrease costs while maintaining or improving product quality in order to be competitive

What happens when the organization produce the product or service without conforming to quality standards?

- ✓ The organization incurs a cost known as the cost of nonconformance

Costs of Nonconformance: The cost incurred when the quality of products and services does not conform to quality standards

Quality: means different things to different people. Viewed as depending on two factors

- Satisfying customer expectations regarding the attributes and performance of the product, such as is functionality and features, and
- Ensuring that the technical aspects of the product's design and performance, such as whether it performs to the standard expected, conform to the manufacturer's standards.

Quality Standards

- Global competition has led to the development of international quality standards
- Company certification and the indication to the customers that they will follow the procedures that will ensure the production of the highest-quality goods and services (conformance and compliance)

e.g ISO 9000 Standards – Exhibit 5-11see

Other new ISO Standards

Costs of Quality Control

- Prevention costs: costs incurred to ensure that companies produce products according to quality standards e.g. costs of quality engineering, training employees in methods designed to maintain quality, training and certifying suppliers (to deliver defect-free parts)
- Appraisal Costs: costs relate to inspecting products to make sure that they meet both internal and external customer's requirements e.g. costs of inspection of incoming materials, maintenance of test equipment, and process control monitoring
- Internal failure costs: the costs incurred when the manufacturing process detects a defective component or product before it is shipped to an external customer

e.g. cost of downtime in production, rework of defective components or services, waste

- External failure costs: costs incurred when customers discovered a defect e.g. product liability lawsuits, warranty claims, repair costs in the field, retained products, service calls.