

King Fahd University of Petroleum and Minerals
College of Industrial Management
Department of Accounting & MIS
ACCT 510: Managerial Accounting
MBA Program

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ACCT 5510

Chapters 3 & 4
(Lecture Notes)

Activity-Based Cost Management Systems

Readings:

Activity-Based Costing Systems, Atkinson, Banker and Kaplan, Ch. 4

Palmer and Vied “Could ABC Threaten the Survival of Your Company”, Management Accounting, November 1998, pp. 33-36.

D. D. Pattson and C. G. Arendt “ Activity-Based Costing: It Does Not Work All the Time”, Management Accounting, April, 1994, pp. 55-61.

ABC and ABM

Traditional Manufacturing Costing Systems

- Manufacturing companies operated for many years with the simple job order costing systems and process costing systems.
- These systems assigned direct labor and direct materials costs to products.
- Indirect costs, such as machine expense, scheduling, quality control, purchasing, maintenance, supervision and general factory expenses (for building, depreciation, insurance, utilities) were accumulated as support dept. expenses
- Then to production departments in simple proportion to the direct labor hours/other allocation bases worked in each department.

Limitations of traditional costing systems

- Traditional systems always use volume-related measures, such as direct labor hours or machine hours, to allocate overheads to products. Volume-related allocation bases accurately measure resources that are consumed in proportion to the number of units produced of the individual products such as direct labor, materials, energy and machine-related costs. However, many organizational resources (e.g. support activities such as material handling, material procurement, performing set-ups, production scheduling and inspection) exist for activities that are unrelated to physical volume.

e.g traditional costing systems, for example, allocate set-up and material handling as service support costs to production departments and then to products.

(note ABC systems allocate support costs directly to products. Therefore, traditional product cost systems, which assume that products consume all resources in proportion to their production volumes, thus report distorted product costs

- Product under-costing or over-costing:
 - ✓ Under-costing: a product consumes a high level of resources but is reported to have a low cost per unit
 - ✓ Product over-costing: a product consumes a low level of resources but is reported to have a high cost per unit

Companies that undercost products may make sales that actually result in losses, although they may have the impression that these sales are profitable.

Companies that overcost products may overprice their products, losing market share to competitors producing similar products.

- Product-cost cross subsidization: occurs when a cost is uniformly spread-meaning it is broadly averaged- across multiple products without recognizing which products require what resources in what amounts. If a company undercosts one of its products, then it will overcost at least one of its other products.
- Traditional systems were designed for a narrow range of products, and direct labor and materials costs were the dominants factory costs, Overhead costs were relatively small and the distortion arising from the inappropriate overhead allocations were not significant. Note for the information processing costs were high, and it was therefore difficult to justify more sophisticated cost allocation methods.
- Today companies are producing a wide range of products and services differ in volume and complexity, and direct labor represents only a small fraction of total costs, and overhead of considerable importance and information costs is no barrier to introducing sophisticated cost allocation models
- Omission of some support cost, e.g. selling and warranty costs, administrative and general costs.

- Traditional system often allocates costs to tangible products (manufactured) and exclude intangible (service products).

ABC Systems

- Emphasize the need to obtain a better understanding of the behavior of overhead costs, and thus ascertain what causes overhead costs and how they relate to products
- ABC assumes that activities cause costs and also that products/ services create demands for activities
- ABC seeks to understand the forces that cause overhead costs to change over time
- A link is made between activities and products by assigning costs of activities to products based on an individual product's consumption or demand for each activity
- ABC systems simply recognizes that businesses must understand the factors that drive each major activity, the costs of activities and how activities relate products
- Redesign or improve processes, e.g rationalize costs
- Eliminations of less value added activity or support services costs (strategic purpose)

The design of ABC systems involves the following stages:

- Identify the major activities that take place in an organizations;
- Create a cost pool/cost center for each activity;
- Determine the cost driver for each major activity;
- Assigning the cost activities to product's according to the product's demand for activities

Cost Hierarchies: categorizes costs into different cost pools of the different types of the cost drivers, or cost allocation bases

- Output unit-level costs: cost of activity increases with additional units of output produced (e.g machine hours used)
- Batch-level costs: are the costs of activities related to a group of units or services rather than to each individual unit of product or service e.g costs of set-up hours needed to produce batches of the product.
- Product-sustaining costs (or service sustaining costs): are the costs of activities undertaken to support individual products or services regardless of the number of units or batches in which the units are produced (design costs which depends on time of designers on designing the product).
- Facility sustaining costs: are the costs of activities that cannot be traced to individual products or services but support the organization as a whole (rent and security)

ABC an Implementation Issues: Some Common Pitfalls

- Lack of a business purpose
- ❖ Often designed by accounting or/and finance group and prescribed as "a more accurate cost system" and others may not be involved
- ❖ Should be designed with a specific purpose, e.g improve processes, to influence product design decisions, to rationalize product mix, or to better manage customer relationships.
- ❖ It is important not to oversell what the ABC system is capable of performing (ABC will solve all the company's problems.

Note: the ABC is a strategic costing system, but it cannot perform the role of operational control, of providing frequent feedback on process and departmental efficiencies.

- Lack of senior management commitment
- Delegating the ABC project to consultants

- ❖ Consultants may have considerable experience with the ABC but limited familiarity with a company's operations and business problems
- ❖ The issue of building management consensus and support within the organization
- ❖ ABC systems requires continuous refinement and improvement like an engineering project
 - Poor ABC model design
 - ❖ Too much details
 - ❖ Too much complex
 - ❖ ABC models may requires regular supply of data and information

- Individual and organizational resistance to change: arises because ABC model could reveal:
 - ❖ Unprofitable products
 - ❖ Unprofitable customers
 - ❖ Inefficient activities and processes
 - ❖ Substantial unused capacity

Managers responsible for these problems could be embarrassed and threatened by the revelation of apparent bad management.