Introduction to Management Accounting

1. What is Management Accounting?

- Purpose is to provide information to allow users to make better decisions
- Users are management within the firm
- Types of decisions based (at least partially) on management accounting information
  - Determination of performance, profitability, and productivity of products, processes, departments, and employees
  - Pricing of products and services
  - Product mix
  - Capital investment

2. Topics Within Management Accounting

Cost Accounting: Determining the cost of providing a service or product, of running a department, etc. This aspect of management accounting has the most overlap with financial accounting, providing the numbers for Inventory on the balance sheet and the Cost of Goods Sold on the income statement.

Planning and Control: Setting goals and quantifying them with budgets and standards. Comparing actual results to budgeted results and taking actions on the basis of this feedback.

Motivation: Measuring and rewarding effort. Compensation and promotion often are contingent on performance as measured by management accounting procedures.
3. Conceptual Framework

- Information is costly
- Allocations arise because markets are absent
- Different costs apply for different purposes
- What gets measured gets attention

4. Financial vs. Managerial Accounting

Accounting is a systematic collection and processing of financial, as well as non-financial, data for decision-making.

<table>
<thead>
<tr>
<th>Financial Accounting</th>
<th>Management Accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASB &amp; GAAP</td>
<td>no authoritative rule-making body</td>
</tr>
<tr>
<td>mandatory for public companies</td>
<td>mostly optional</td>
</tr>
<tr>
<td>almost exclusively $</td>
<td>many non-financial elements</td>
</tr>
<tr>
<td>historical cost basis</td>
<td>future cost basis</td>
</tr>
<tr>
<td>bias for verifiability and objectivity over relevance</td>
<td>bias for relevance</td>
</tr>
<tr>
<td>outputs are financial statements</td>
<td>outputs are financial and operating decisions</td>
</tr>
<tr>
<td>overall summary of business activity</td>
<td>disaggregated analysis of business segments</td>
</tr>
<tr>
<td>general purpose statements</td>
<td>specific purpose reports</td>
</tr>
<tr>
<td>external users</td>
<td>internal users</td>
</tr>
<tr>
<td>retrospective</td>
<td>prospective</td>
</tr>
</tbody>
</table>
5. Types of Costs in the “Value Chain”

- Research and Development
- Product Design
- Manufacturing
  - labor
  - material
  - machinery
- Distribution
- Marketing
- Customer Service
- General Administration

6. Accounting Terminology and Conventions

6.1 Cost vs. Expense vs. Cash Flow

Cost: the value of the resources sacrificed to achieve a specific objective

Expense: the cost charged to the income statement in a particular accounting period

Cash Flow: the dollars received or paid at a point in time

The main difference is one of timing. Accrual accounting re-arranges cash flows so that revenues are matched with related expenses. Cost measures cash and non-cash resources sacrificed currently and in the future to achieve an objective.
6.2 Direct vs. Indirect Costs

Direct Cost: a cost that can be directly traced (in a cost-effective manner) to a given object

Indirect Cost: a cost that cannot be directly traced (in a cost-effective manner) to a given object

A cost may be direct for some objects (e.g., a department), but indirect for other objects (e.g., a unit of production).

6.3 Inventoriable vs. Period Costs

For financial accounting purposes it is helpful to keep the following cost categories in mind:

Inventoriable Cost: a cost that is directly associated with purchasing merchandise or manufacturing products that will later be sold. These costs are assigned to inventory as the units are being produced (or purchased) and awaiting sale. They enter the income statement (through the cost of goods sold) only when the units are sold. In this way, the cost of producing the units is matched directly against the revenue that is obtained from the sale of the units. Inventoriable costs are often called product costs.

Period Cost: a cost that is not directly associated with product. They are generally viewed as costs of being in business for the period or costs that are too hard to match to the future revenues that they may help to produce. Period costs are expensed in the period with which they are associated.
6.4 Types of Inventoriable Costs for a Manufacturing Firm

Direct Material: All material costs that can be traced to a specific cost objective in a cost-effective manner.

Direct Labor: All labor costs that can be traced to a specific cost objective in a cost-effective manner.

Factory (Manufacturing) Overhead: All costs associated with manufacturing that cannot be traced to a specific objective in a cost-effective manner.

Prime Cost: usually refers to direct materials plus direct labor costs

Conversion Cost: usually refers to direct labor plus factory overhead costs

Overhead typically includes:

- Indirect Material
- Indirect Labor
- Depreciation on the Factory Buildings and Equipment
- Insurance and Property Taxes
6.5 Flow of Costs through the Manufacturing Process

*Manufacturing costs:* cost of inputs to the production process this period (regardless of whether the production is finished at the end of the period)

*Cost of goods manufactured:* cost of the outputs of the production process this period (regardless of whether the production was begun this period or a prior period)

*Cost of goods sold:* cost of the units sold this period (regardless of when the units were started and when the units were completed)

6.6 Cost Models and Cost Behavior

*Cost Object:* an activity or item for which a measurement of costs is desired

*Cost Driver:* any factor whose change leads to a change in costs

*Variable Cost:* a cost that varies in direct proportion to changes in an underlying cost driver

*Fixed Cost:* a cost that is not affected by changes in an underlying cost driver

*Average Cost:* total cost divided by some measure of activity of a cost driver

The most common measure of activity is units of production. In this case, average cost is also called unit cost.
6.7 Decision Making

*Irrelevant Cost:* A cost that is constant across, or unaffected by, the selection of a decision alternative.

*Differential Costs:* Costs that change in response to a particular course of action.

*Sunk Cost:* A cost item that has already been incurred and which is irreversible. For example, the purchase price of specialized machinery without an alternative use or material disposal value is a sunk cost.

*Opportunity Cost:* The value of an asset in its best alternative use. If you use an asset to fulfill one objective, you forgo the opportunity to use the asset to fulfill other objectives. The opportunity cost is the value of the best of these forgone alternative uses.

*Controllable Cost:* This term is often used in the context of performance evaluation. The idea is that a manager should be evaluated on, among other things, the costs that the manager can control or influence.

7. Linearity Assumption

Accountants often model the cost of producing $q$ units of output, $C(q)$, with the linear approximation:

$$C(q) \approx \alpha + \beta q.$$ 

The approximation is regarded as sufficiently accurate in $q_1 \leq q \leq q_2$ for some $q_1$ and $q_2$. The interval defined by $q_1$ and $q_2$ is often referred to as the *relevant range*. The term $\alpha$ is the intercept of this approximation and $\beta$ is its slope. If the approximation is exact, then $\alpha$ is the fixed cost and $\beta$ is the per-unit variable cost (i.e., the marginal cost).