Topic 1:
Introduction to Cost Accounting

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School of Business Administration
Course: Cost Accounting and Management Control
Bachelor’s Degree in Management and Business Administration
1.1. Cost Accounting as a source of information for internal parties within the organization.

1.2. Costs and cost terminology.

1.3. Classifications of costs.

1.4. Relevant and irrelevant costs.
Accounting is a language that communicates economic information to people who have an interest in an organization. Its aim is to provide useful information to meet the needs of the various users that will assist them in their decision-making and control activities.

External users, who do not manage

Financial Accounting
(Balance Sheet and Income Statement)

Internal users, who manage

Management Accounting
(Costs and margins of products)
## EXTERNAL INCOME STATEMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>4,000</td>
</tr>
<tr>
<td>– Raw materials used</td>
<td>– 1,400</td>
</tr>
<tr>
<td>– Personnel expenses</td>
<td>– 500</td>
</tr>
<tr>
<td>– Other operating expenses</td>
<td>– 1,700</td>
</tr>
<tr>
<td><strong>RESULTS FROM OPERATING ACTIVITIES</strong></td>
<td>400</td>
</tr>
<tr>
<td>– Finance expenses</td>
<td>– 200</td>
</tr>
<tr>
<td><strong>PROFIT BEFORE INCOME TAX</strong></td>
<td>200 &gt; 0</td>
</tr>
</tbody>
</table>
# INTERNAL INCOME STATEMENT

<table>
<thead>
<tr>
<th>CONCEPT</th>
<th>TOTAL</th>
<th>PRODUCT A</th>
<th>PRODUCT B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>4,000</td>
<td>2,400</td>
<td>1,600</td>
</tr>
<tr>
<td>– Cost of goods sold</td>
<td>– 3,400</td>
<td>– 2,500</td>
<td>– 900</td>
</tr>
<tr>
<td>Gross profit</td>
<td>600</td>
<td>– 100 &lt; 0</td>
<td>700 &gt; 0</td>
</tr>
<tr>
<td>– Administration costs</td>
<td>– 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Financial costs</td>
<td>– 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net profit</td>
<td>200 &gt; 0</td>
<td></td>
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</table>
MANAGEMENT ACCOUNTING

The branch of Accounting concerned with providing information to people within the organization to help them make better decisions and improve the efficiency and effectiveness of existing operations:

- Measures and analyses those costs associated with producing goods and services. It also measures performance and productivity.

- Measures and analyses those costs associated with the company’s centres in order to evaluate their performance.
1.2: COSTS AND COST TERMINOLOGY.

COST MEASURES THE ECONOMIC SACRIFICE MADE TO ACHIEVE AN ORGANIZATION’S GOAL.

COST = QUANTITY x PRICE
1.3: CLASSIFICATIONS OF COSTS.

1.3.1: DIRECT AND INDIRECT COSTS.

COST OBJECT: Any activity for which a separate measurement of costs is necessary.

DIRECT COSTS

They can be specifically and exclusively identified with a particular cost object.

INDIRECT COSTS

They cannot be identified specifically and exclusively with a given cost object.
1.3.2: PRODUCT COSTS AND PERIOD COSTS.

**PRODUCT COSTS**
- Manufacturing costs
- They are included in the inventory valuation for both finished goods and work in progress:
  - Direct materials.
  - Direct labour.
  - Indirect manufacturing costs.

**PERIOD COSTS**
- Non-manufacturing costs
- They are not included in the inventory valuation for both finished products and work in progress:
  - Financial costs.
  - Selling and distribution costs.
  - Administration costs.
COST STRUCTURE:

COSTS

Direct material

Direct labour

Indirect costs

DIRECT OR PRIMARY COST

TOTAL MANUFACTURING COSTS

COST OF GOODS MANUFACTURED

COST OF GOODS SOLD

+/- BEGINNING/ENDING INVENTORIES

FINISHED GOODS

WORK IN PROGRESS

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Task: try to solve problem 1.1.
1.3.3: FIXED AND VARIABLE COSTS.

**VARIABLE COSTS**

Vary in direct proportion to the production level (doubling the level of activity will double the total variable cost).

**FIXED COSTS**

Remain constant over wide ranges of production level for a specified time period.

**SEMI-FIXED OR STEP-FIXED COSTS**

Within a given time period they are fixed within specified activity levels, but they eventually increase or decrease by a constant amount at various critical activity levels.
**BREAK-EVEN POINT:** Cost-volume-profit (CVP) analysis is based on the assumption that selling price and variable cost are constant per unit of output. In contrast, over a short-run period fixed costs are a constant total amount.

\[ P = \text{profit} \], \[ p = \text{selling price per unit} \], \[ X = \text{number of units} \], \[ FC = \text{total fixed cost} \], \[ vc = \text{variable cost per unit} \].

\[ P = pX - FC - vcX \]

The number of units that must be sold to break even (that is, the point at which there is neither a profit nor a loss):

\[ \frac{FC}{p - vc} \]

Break-even point in Euros:

\[ \frac{FC}{(p - vc)} \times p = \frac{FC}{p - vc} = \frac{FC}{CMR} \]

**Contribution margin per unit:** \( p - vc \)

**Contribution margin ratio (CMR):** \( \frac{p - vc}{p} \)
FORNITURE Ltd. manufactures tables:

- \( p = €150 \) per table (proposed selling price per table).
- \( vc = €100 \) per table.
- \( FC = €60,000 \) per month.

Break-even point = \( \frac{€60,000 \text{ per month}}{€(150 - 100) \text{ per table}} \) = 1,200 tables per month

CONTRIBUTION MARGIN PER UNIT:

\( p - vc = 150 - 100 = €50 \) per table

CONTRIBUTION MARGIN RATIO:

\[
\frac{p - vc}{vc} = \frac{150 - 100}{150} = 0.3
\]

BREAK-EVEN POINT (IN €):

1,200 tables per month \( \times €150 \) per table = €180,000 per month

ALSO:

\[
\frac{FC}{CMR} = \frac{€60,000}{0.3} = €180,000
\]
Separation of costs into their fixed and variable elements

There are different techniques that can be used to separate costs in this way:

1. **HIGH-LOW METHOD:** examining past costs and activity, selecting the highest and lowest activity levels and comparing the changes in costs that result from the two levels. Assume that the following activity levels and costs are extracted:

<table>
<thead>
<tr>
<th>Volume of production (units)</th>
<th>Total costs (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest activity</td>
<td>46</td>
</tr>
<tr>
<td>Highest activity</td>
<td>100</td>
</tr>
</tbody>
</table>

If variable costs are constant per unit and fixed costs remain unchanged, the increase in costs will be due entirely to an increase in variable costs:

\[
1,350 - 700 = (100-46) \times \text{vc}
\]

**Variable cost per unit:** €12.04 per unit

\[
700 = (46 \times 12.04) + \text{FC}
\]

**Fixed costs:** €146.30
2. REGRESSION ANALYSIS METHOD: statistical method that measures the average amount of change in the dependent variable associated with a unit change in one independent variable (the dependent variable is total costs and the independent variable is the volume of production).

The least-squares technique determines the regression line by minimizing the sum of the squared vertical differences from the data points to the regression line.

If the estimated cost function is: \( Y = 12.50 \times + 150.23 \)

- The estimate of the slope coefficient (b) indicates that costs vary at the average amount of €12.50 for every manufactured unit.
- The estimate of the constant indicates that FC = €150.23.

This method computes a formal measure of goodness of fit, called the coefficient of determination \( (R^2) \), which measures the percentage of variation in Y explained by the independent variable (X).

This method is more accurate than the high-low method because regression analysis estimates costs using information from all observations, whereas the high-low method uses information from only two observations.
For decision-making, costs and revenues can be classified according to whether they are relevant to a particular decision.

**RELEVANT COSTS**
They are future costs that will change because of a particular decision.

**IRRELEVANT COSTS**
They will not be affected by the decision.
Task: try to solve problem 1.2.