# CHAPTER 1

# INTRODUCTION & BASICS OF COSTING

## COST

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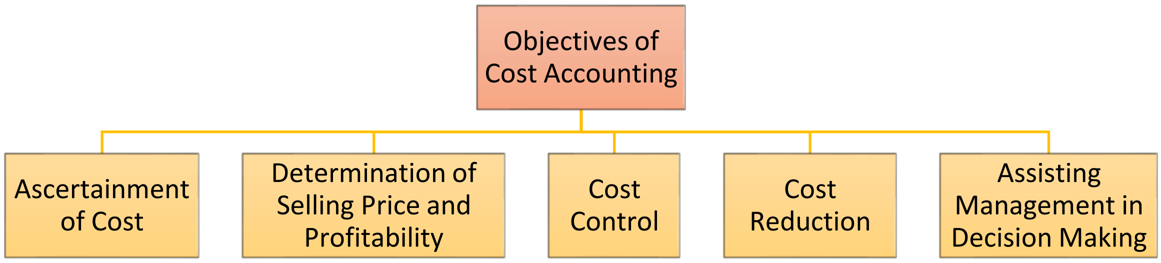
|---|---|
| Cost (Noun) | • Cost is the **amount of resource given up** in exchange of some goods or services. |
| Costing (Verb) | • the technique and process of **ascertaining costs** |
| Cost Leadership | • Cost Leadership implies producing goods or provision of services at **lowest cost** while maintaining **quality**<br>• Cost Leadership can be achieved if an entity has a robust Cost and Management Accounting system in place. |

## OBJECTIVES OF COST ACCOUNTING




<table>
<tr><td>Ascertainment of Cost</td><td>
<ul>
<li>The main objective of Cost Accounting is accumulation and ascertainment of cost.</li>
<li>Costs are accumulated, assigned, and ascertained for each cost object.</li>
<li>This cost object may be a unit, job, operation, process, department, or service.</li>
</ul>
<table>
<tr><td>Accumulate</td><td>Collection of all costs from records like financial accounts, invoices, other documents etc.</td></tr>
<tr><td>Assign</td><td>Assigning and apportioning cost to respective heads based on nature, normality etc.</td></tr>
<tr><td>Ascertain</td><td>Using arithmetical calculations of cost items in a defined format to calculate the cost of a cost object</td></tr>
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</td></tr>
<tr><td>Determination of Selling Price and Profitability</td><td>
<ul>
<li>The cost accounting system helps in determination of selling price and thus profitability of a cost object.</li>
<li>Though in a competitive business environment selling prices are determined by external factors but cost accounting system provides a basis for price fixation and rate negotiation.</li>
</ul>
<table>
<tr><td></td><td>Cost Price</td><td>xxx</td></tr>
<tr><td>Add:</td><td>Profit</td><td>xxx</td></tr>
<tr><td></td><td>Sales Price</td><td>xxx</td></tr>
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<table>
<tr><td></td><td>Sales Price</td><td>xxx</td></tr>
<tr><td>Less:</td><td>Profit</td><td>xxx</td></tr>
<tr><td></td><td>Sales Price</td><td>xxx</td></tr>
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<table>
<tr>
<td>Cost Control</td>
<td>
<ul>
<li>Maintaining discipline in expenditure is one of the main objectives of a good cost accounting system.</li>
<li>It ensures that expenditures are in line with predetermined set standard and</li>
<li>any variation from these set standards is noted and reported on continuous basis.</li>
<li>Steps of Cost Control</li>
</ul>
<table>
<tr><td>Set Standards</td><td><ul><li>This is set before initiation of production or service activity.</li><li>These are desired cost or result that needs to be achieved.</li></ul></td></tr>
<tr><td>Measure Actuals</td><td><ul><li>Performance should be measured in the same manner in which the targets are set to have a common basis for comparison.</li></ul></td></tr>
<tr><td>Compare both</td><td><ul><li>The actual performance so measured is compared against the set standard and desired target.</li><li>Any deviation (variance) between the two is noted and reported to the appropriate person or authority.</li></ul></td></tr>
<tr><td>Analyze Action</td><td><ul><li>The variance in results so noted are further analyzed to know the reasons for variance and appropriate action is taken to ensure compliance in future.</li><li>If necessary, the standards are further amended to take developments into account.</li></ul></td></tr>
</table>
Set Standards → Measure Actuals → Compare both → Analyze Action
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</tr>
<tr>
<td>Cost Reduction</td>
<td>
<table>
<tr><td>Definition</td><td><ul><li>It may be defined as the</li><li>achievement of real and permanent reduction</li><li>in the unit cost of goods manufactured or services</li><li>without impairing their suitability for the use intended or diminution in the quality of the product</li></ul></td></tr>
<tr><td>Approach</td><td>Cost reduction is an approach of management where it is believed that<ul><li>Cost of an object always have a scope of further reduction.</li><li>No cost is termed as lowest and every possibility of cost reduction is explored</li></ul></td></tr>
<tr><td>Value Chain Analysis</td><td><ul><li>Each activity within an entity is segmented to analyze and identify value added and non-value added activities.</li><li>All non-value added activities are eliminated without affecting the essential characteristics of the product or process.</li></ul></td></tr>
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| Assisting Management in Decision Making | • Cost and Management accounting by providing relevant **information**, assisting management in **planning, implementing, measuring, controlling and evaluation** of various activities.<br>• A robust cost and management accounting system not only provides information internal to industry but **external also**. |

## DIFFERENCE BETWEEN COST CONTROL AND COST REDUCTION

| COST CONTROL | COST REDUCTION |
|---|---|
| Cost control aims at **maintaining** the costs in accordance with the established **standards**. | Cost reduction is concerned with reducing costs. It **challenges** all standards and endeavors to **better them** continuously |
| Cost control seeks to attain **lowest possible** cost under **existing** conditions | Cost reduction recognizes **no condition as permanent**, since a change will result in lower cost. |
| In case of cost control, emphasis is on **past** and **present** | In case of cost reduction, it is on **present** and **future**. |
| Cost control is a **Preventive** Function | Cost reduction is a **Corrective** Function. It operates even when an efficient cost control system exists. |
| Cost control **ends** when targets are **achieved**. | Cost reduction has **no visible end** |

## BASIC TERMS OF COSTING

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|---|---|
| Cost Object | • Cost object is anything for which a **separate measurement** of cost is required.<br>• Cost object may be a product, a service, a project, a customer, a brand category, an activity, a department, or a programme etc.<br>• Examples<br>Product – Tata Ace for Tata Motors<br>Service – Chennai Express Train for Indian Railways<br>Project – Project of New Website of Income Tax for Infosys Ltd.<br>Process – Pig Iron Casting for an Steel Plant<br>Department – Research and Development Dept for a Company<br>• **Direct Costs**: Direct costs are costs that are readily identified and are traceable to a particular cost object<br>• **Indirect Costs**: Indirect costs are costs that are not traceable to a particular cost object. These costs may bear some functional relationship to production and may vary with output in some definite way. |
| Cost Units | • It is a unit of measurement of product, service or time (or combination of these) in relation to which costs may be ascertained or expressed.<br>• Examples<br>Cement – per ton, per bag<br>Chemicals – per litre, per gallon<br>Electricity – per kwH<br>Transport – per passenger-km<br>Education – per course, per batch |

<table>
<tr>
<td>Responsibility Centres</td>
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<ul>
<li>Management delegates its responsibility and authority to various departments or people to have better control over the organization</li>
<li>These departments or people are known as responsibility centres</li>
<li>They are held responsible for performance in terms of expenditure, revenue, profitability and return on investment</li>
<li>Performance of these responsibility centres are measured against some set standards</li>
</ul>
TYPES OF RESPONSIBILITY CENTRES
<table>
<tr><td>Cost Centres</td><td><ul><li>The responsibility centre which is held accountable (answerable) for incurrence of costs which are under its control. Example: Material Management Dept</li></ul></td></tr>
<tr><td>Revenue Centres</td><td><ul><li>The responsibility centres which are accountable for generation of revenue for the entity.</li><li>Example: Ticket Counter for Indian Railways</li></ul></td></tr>
<tr><td>Profit Centres</td><td><ul><li>These are the responsibility centres which have both responsibility of generation of revenue and incurrence of expenditures.</li><li>Since managers of profit centres are accountable for both costs as well as revenue, profitability is the basis for measurement of performance of these responsibility centres.</li><li>Example: Commercial Vehicle Business Unit for Tata Motors</li></ul></td></tr>
<tr><td>Investment Centres</td><td><ul><li>These are the responsibility centres which are not only responsible for profitability but also has the authority to make capital investment decisions.</li><li>The performance of these responsibility centres are measured on the basis of Return on Investment (ROI) along with profit.</li><li>Examples: Google Inc. is an Investment Centre for Alphabet Inc.</li></ul></td></tr>
</table>
TYPES OF COST CENTRES
<table>
<tr><td>Standard Cost Centres</td><td><ul><li>Cost Centre where input-output ratio is clearly identifiable.</li><li>The actual cost for inputs is compared with the standard cost [cost that should be incurred for the given output].</li><li>Example: Raw Material cost in Production department.</li></ul></td></tr>
<tr><td>Discretionary Cost Centres</td><td><ul><li>The cost centre whose output cannot be measured in financial terms, thus input-output ratio cannot be defined.</li><li>The cost of input is compared with allocated budget for the activity.</li><li>Example: Research & Development department, Advertisement department where output of these departments cannot be measured with certainty and co-related with cost incurred on inputs.</li></ul></td></tr>
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## CLASSIFICATION OF COST

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| By Variability | Fixed Costs | • These are the costs which are incurred **for a period**, and<br>• which, within certain output and turnover limits, tend to be **unaffected by fluctuations** in the levels of activity (output or turnover).<br>• They do not tend to increase or decrease with the changes in output.<br>• For example, rent, insurance of factory building etc., remain the same for different levels of production |
| | Variable Costs | • These costs tend to **vary with the volume** of activity.<br>• Any increase in activity results in an increase in the variable cost and vice versa.<br>• For example: Chemical A is used at 2 kg p.u. of Finished Goods and is purchased at the rate of Rs. 42 per kg |
| | Semi Variable Costs | • These costs contain both fixed and variable components<br>• and are thus **partly affected by fluctuations** in the level of activity.<br>• Examples of semi variable costs are telephone bills, gas and electricity etc. |
| | Stair Step Variable Costs | • a cost that generally varies with the level of activity, but which tends to be incurred at **certain discrete points** and involve large changes in amounts when such a point is reached.<br>• Example: In a trip, cost of transportation by car is based on Rs. 6000 per vehicle up to 6 passengers per vehicle.<br>Number of Passengers – Cost<br>1 to 6 – Rs. 6000<br>7 to 12 – Rs. 12000 |
| By Controllability | Controllable Costs | • Cost that can be **controlled by a cost, profit or investment centre** manager is called controllable cost.<br>• Controllable costs incurred in a particular responsibility centre can be influenced by the action of the manager heading that responsibility centre.<br>• For example, direct costs comprising direct labour, direct material, direct expenses and some of the overheads are generally controllable by the shop floor supervisor or the factory manager. |
| | Uncontrollable Costs | • Costs which **cannot be influenced** by the action of a manager of a responsibility centre are known as uncontrollable costs.<br>• For example, Rental Cost of Factory is uncontrollable by floor supervisor as it cannot be influenced by his action |
| | Note: No cost is uncontrollable in itself. It is only in relation to a particular cost centre that we may specify a particular cost to be either controllable or uncontrollable | |

| | | |
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| By Normality | Normal Cost | • These are the normal or regular costs which are incurred in the **normal conditions** during the normal operations of the organization.<br>• Example: material cost, salaries, maintenance of machines etc. |
| | Abnormal Cost | • These are the costs which are **unusual or irregular** which are incurred due to **abnormal situations** of the operations or productions.<br>• Example: Cost of rescue work due to floods in the factory area, Cost of fine paid to Government for non-compliance of COVID protocols etc.<br>• Abnormal Cost are cost of organization but will not be added while calculating cost of any cost object, it will directly be debited to **Costing P&L** |
| By Elements | Direct Materials | • Materials which are **present** in the finished product (cost object) or can be **economically identified** in the product are termed as direct materials.<br>• For example, cloth in dress making; materials purchased for a specific job etc.<br>• However, in some cases a material may be direct but it is treated as indirect because it is used in small quantities, it is not economically feasible to identify that quantity.<br>• Those materials which are used for purposes ancillary to the business are also treated as Indirect Materials. |
| | Direct Labour | • Labour which can be **economically identified or attributed wholly** to a cost object is termed as direct labour.<br>• For example, employee engaged on the actual production of the product or in carrying out the necessary operations for converting the raw materials into finished product. |
| | Direct Expenses | • All expenses **other than direct material or direct labour** which are specially incurred for a **particular cost object** and can be identified in an economically feasible way are termed as Direct Expenses.<br>• For example, hire charges for some special machinery etc. |
| | Indirect Materials | • Materials which **do not normally form part** of the finished product (cost object) are known as indirect materials. These are —<br>• Stores used for maintaining machines and buildings (lubricants, cotton waste, bricks etc.)<br>• Stores used by service departments like power house, boiler house, canteen etc. |
| | Indirect Labour | • Labour cost which are **not traceable** to a particular cost object but apportioned to or absorbed by cost centres is known as indirect labour.<br>• Examples of indirect labour includes salary paid to foreman (leader) and supervisors (manager); maintenance workers; etc. |

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|---|---|---|
| | Indirect Expenses | • Expenses **other than direct** expenses are known as indirect expenses.<br>• These cannot be directly, conveniently, and wholly allocated to cost object.<br>• Factory rent and rates, insurance of plant and machinery, power, heating, repairing, telephone etc., are some examples of indirect expenses. |
| | Overheads | • It is the **aggregate of indirect material costs, indirect labour costs and indirect expenses**. It can be classified further as below:<br>− Production/ Manufacturing/ Works Overheads<br>− Administration Overheads<br>− Selling Overheads<br>− Distribution Overheads<br>(Detailed Discussion in Chp 4 OVERHEADS) |

## MCQS

**MCQ 1**

___________ is anything for which separate measurement of cost is required.

a. Cost Unit b. Cost Object c. Cost Driver d. Cost Centre

Ans: b

**MCQ 2**

Which of the following is true about Cost Control?

a. It's a corrective function
b. It challenges all the set standards
c. It ends when targets are achieved
d. It is concerned with future

Ans: c

**MCQ 3**

Cost unit used in Power Sector is

a. Kilometre b. Kilowatt-hour c. Electric Points d. Number of Hours

Ans: b

**MCQ 4**

A Taxi provider is charging min. Rs. 80 thereafter Rs. 12 per km of distance travelled, based on the behaviour, conveyance cost is

a. Fixed Cost b. Semi-Variable Cost c. Variable Cost d. Admin Cost

Ans: b

**MCQ 5**

Box office of a multiplex located 5 kms from cinema and near to a prime location of city is treated as

a. Cost Centre b. Epicentre c. Revenue Centre d. Investment Centre

Ans: c

**MCQ 6**

The cost reduction ends when _____________

a. Targets are exceeded
b. Targets are met
c. We become cost leader
d. No visible end

Ans: d

**MCQ 7**

Assistant manager of a CA Firm is working only in one audit assignment of a particular client for a month. Salary of the month will be treated as ______________

a. Opportunity Cost
b. Variable Cost
c. Indirect Cost
d. Direct Cost

Ans: d

**MCQ 8**

Indirect Costs are treated in the below manner:

a. Ignored while calculating cost of cost object
b. Taken directly in the cost of cost object
c. Distributed/ Allocated by some pre decided basis
d. None of these

Ans: c

**MCQ 9**

Finance department of a company is treated as ___________ for the company

a. Cost Centre b. Finance Centre c. Profit Centre d. Investment Centre

Ans: a

**MCQ 10**

Innovation Lab set up by a Pharma Company is treated as ______________ for the company

a. Revenue Centre
b. Standard Cost Centre
c. Discretionary Cost Centre
d. Profit Centre

Ans: c

## Theory Questions

**QUESTION 1** (ICAI PYQ Dec 21, PYQ May 19, RTP Nov 21, RTP May 19, RTP Nov 18, MTP Apr 21, MTP Apr 19, MTP Aug 18)

Explain the difference between Cost Control and Cost Reduction.

ANSWER: Page 1.3

**QUESTION 2** (PYQ Jul 21)

Specify the types of Responsibility centres under the following situations:

i. Purchase of bonds, stocks, or real estate property.
ii. Ticket counter in a Railway station.
iii. Decentralized branches of an organization.
iv. Maharana, Navratna and Miniratna public sector undertaking (PSU) of Central Government.
v. Sales Department of an organization.

ANSWER:

| i. | ii. | iii. | iv. | v. |
|---|---|---|---|---|
| Investment Centre | Revenue Centre | Profit Centre | Investment Centre | Revenue Centre |

**QUESTION 3** (PYQ Nov 19)

Mention the Cost Unit of the following Industries:

| | | | |
|---|---|---|---|
| i. | Electricity | vi. | Brick Making |
| ii. | Automobile | vii. | Coal Mining |
| iii. | Cement | viii. | Engineering |

| | | | |
|---|---|---|---|
| iv. | Steel | ix. | Professional Services |
| v. | Gas | x. | Hospital |

ANSWER:

| | | | | | |
|---|---|---|---|---|---|
| i. | Electricity | Kilowatt-hour (kWh) | vi. | Brick Making | 1,000 bricks |
| ii. | Automobile | Number | vii. | Coal Mining | Tonne/ Ton |
| iii. | Cement | Ton/ per bag etc. | viii. | Engineering | Contract, job |
| iv. | Steel | Ton | ix. | Professional Services | Chargeable hour, job, contract |
| v. | Gas | Cubic feet | x. | Hospital | Patient day |

**QUESTION 4** (PYQ Nov 18)

Mention and explain types of responsibility centres.

ANSWER: Page 1.4 (First Table)

**QUESTION 5** (RTP May 22, RTP Nov 18, MTP Mar 19)

Explain the difference between controllable and uncontrollable costs?

ANSWER: Page 1.5

**QUESTION 6** (RTP May 21, RTP May 19, MTP Nov 21, MTP Mar 18)

Discuss the cost classification based on variability and controllability.

ANSWER: Page 1.5

**QUESTION 7** (RTP Nov 20, RTP May 18)

Discuss short notes on i) Discretionary Cost Centre ii) Investment Centre

ANSWER: Page 1.4

**QUESTION 8** (MTP Mar 21)

Discuss the Standard and Discretionary Cost Centres

ANSWER: Page 1.4

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**NOTE:** ALL THE REMAINING THEORY AND MCQS WILL BE TAKEN AT THE END OF THE BATCH AFTER ALL PRACTICAL CHAPTERS ARE DONE. THEORY IN THIS CHAPTER WAS NECESSARY BEFORE WE START PRACTICAL.