Cost Management Theory

Chapter-1: Introduction to cost & Management Accounting

1. Basic Terms

- cost
- costing
- Cost Accounting
- Cost Accountancy
- management Accounting

- Cost object
- Cost unit
- Cost driver

cost:-

→ Amount of resources consumed for production of goods or rendering of service.

→ Amount of expenditure (actual or notional) incurred for any product, service or activity.

Costing: Technique or process of ascertaining cost.

Cost Accounting:-

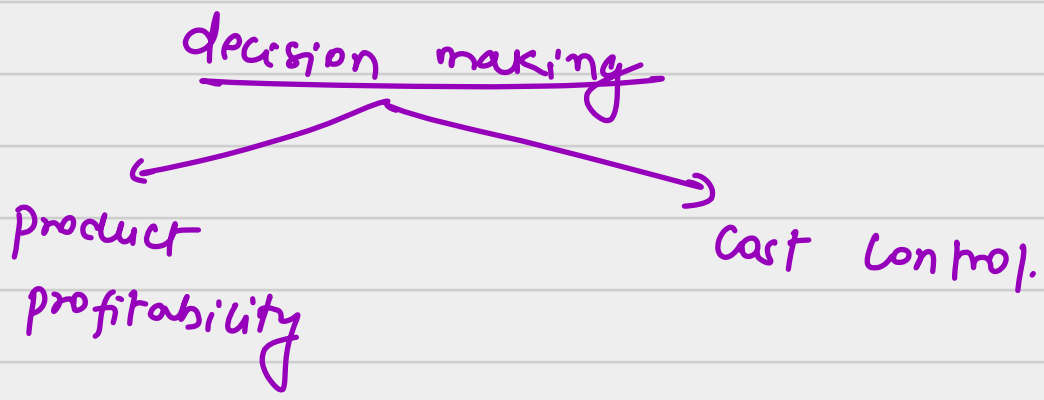
process

- **begins**
  - ① Recording items of revenue & cost
- Cost classification
- **ends with**
  - ① preparation of periodic statement

(III) controlling cost.

Cost Accountancy:

→ Application of costing and cost Accounting priciples. method & techniques for the purpose of decision making.



Management Accounting:-

Application of principle of:-

→ to create, preserve & increase value for Stakeholder
→ to help management to take sound decisions.

Cost object:- Anything for which seperate cost is ascertained. It can be goods, service, activity, process, department etc.

Examples of cost objct

(I) product:- Mobile, Tv, shoes, car, etc.
(II) Service:- Flight fare, course fee, bed charges, hotel room rent.

(III) Project:- Rail project, Road project etc.

(IV) Activity:- Quality Inspection, Ordering, set up etc.
(V) Department:- production, finance department etc.

Cost unit:- Unit in which cost of any object is expressed.

Industry or Product	Cost Unit Basis
Automobile	Number
Cement	Ton/ per bag etc.
Chemicals	Litre, gallon, kilogram, ton etc.
Power	Kilo-watt hour (kWh)
Steel/Sugar	Ton/Kg.
Transport	Passenger- kilometer
Gas	Cubic feet
Textile	Meters
Paper	Ream
Soft Drink	Per case of 24 Bottles
Timber	Cubic Foot
Nuts & Bolt	Per Gross
Ice Cream	Per Gallon

Industry Sector	Cost unit
Brewing	Barrel
Brick-making	1,000 bricks
Coal mining	Tonne/ton
Electricity	Kilowatt-hour (kWh)
Engineering	Contract, job
Oil	Barrel, tonne, litre
Hotel/Catering	Room/meal
Professional services	Chargeable hour, job, contract
Education	Course, enrolled student, successful student
Hospitals	Patient day

Activity	Cost unit
Credit control	Accounts maintained
Selling	Customer call, value of sales, orders taken
Materials storage/handling	Requisition unit issued/received, material

	movement, value issued/received
Personnel administration	Personnel record

Cost driver:- factor which affect level of cost

Order → Activity

Ordering cost = 100.000 → cost/overhead

No. of order → cost-driver.

2. Objectives of cost Accounting

- **Ascertain cost** → to calculate cost of any product, service, activity etc.
- **Determine selling price** → for product pricing & rate negotiation → helps to determine profitability
- **cost control & Cost Reduction** → discussed in detailed below
- **Decision making** → Helps to take various decision such as:-
  - → shut-down
  - → make or buy
  - → further processing
  - → key factor etc

3. Cost Control & Cost Reduction

Cost Control	Cost Reduction
→ maintaining cost in accordance with standard.	→ focus to reduce cost on continous manner (challenge all standards.
→ It is preventive function	→ It is corrective function.

→ It ends when target achieved.	→ No visible end and it is continous process.
→ Emphasis on past & present	→ Emphasis on present & future.
→ seeks to attain lowest cost at existing condition.	→ No such condition as permanent & focus on continous change.

a. **steps followed for cost control**

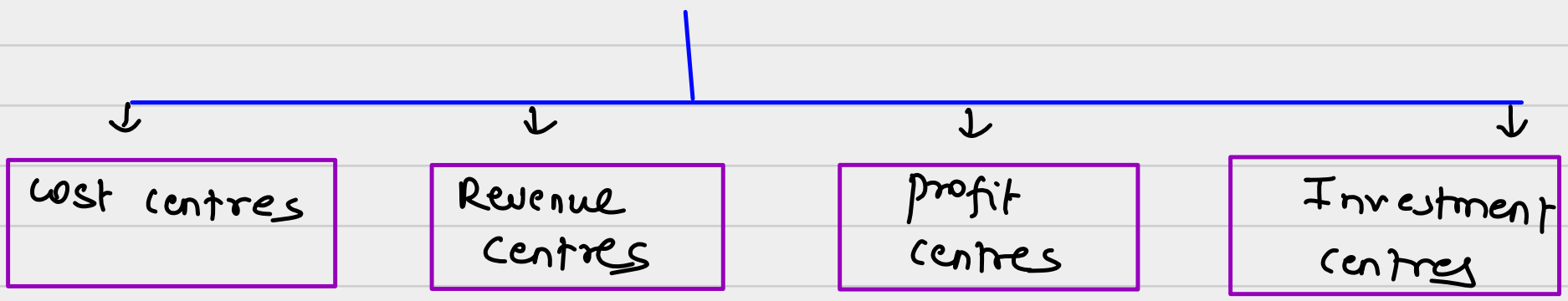
(i) Determine pre-determined standards or result.
(II) measurement of actual performance.
(III) Compare Actual performance with standard.
(IV) Analyse variances & take appropriate action.

b. **Assumptions for cost reduction**

(i) There is saving in unit cost.
(II) saving is permanent in nature
(III) utility & Quality remains unaffected.

4. **Responsibility Centre**

⇒ Department or persons held responsible for performance in terms of expenditure, revenue, profitability and Return on investment.



a. **Cost Centres**

→ Responsible for incurrence of cost which is under its control. Eg production department, R&D department etc.
→ Performance measured against pre-determined standard.

Types

Standard cost centres

→ output is measurable i/e input-output ratio defined.

→ Eg:- Production department

Discretionary cost centres

→ output is not measurable. Input-output ratio not defined.

→ R&D department.

(b) **Revenue centre**

→ Responsible for generating revenue
→ Eg:- Sales department, ticket counter etc.
→ Does not have control over cost but may incurr some selling expence.

(c) **profit centre :-**

→ Responsible for revenue as well as cost (they are responsible to increase profitability.)
→ Eg:- Decentralised branch, different brands of company etc.

(d) **Investment Centre**

→ Responsible to make profitable investment, generate higher ROI on investment
→ Eg:- Miniratna, Navratna & Maharatna companies of Central Goverment.

5. **Method of costing**

⇒ Depending upon nature of work, production process etc. different industry use different method of costing.

S. No.	Method of Costing	Examples of Product/Services
a.	Unit/output.	Brick, Cement, Coals, Flour Mills, etc
b.	Batch.	Nuts & Bolts, Medicines, Biscuits, Garments & Spear Parts and Components, Toys Making, etc
c.	Job.	Printing, Foundries, Work-shop, Advertising, Repair, Interior Decorating, etc
d.	Contract	Building, Ship, Bridge, etc

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e.	Process.	Textiles, Chemical, Oil Refineries, Soap Manufacturing, Paper Manufacturing, Cement Manufacturing etc
f.	Operating.	Transportation, Hospital, Hotel, Water Supply, Power Generation, Colleges, Airlines, Agents Services, etc
g.	Operation.	Welding.
h.	Multiple/Composite	Motorcar, Airplane, Machine Tools, Type-writer, Radio, Cycles, Sewing Machines, etc

Example 1:

	Industry	Method of Costing	Suggestive Unit of Cost
(a)	Transport	Operating Costing	Passenger k.m. or tonne k.m.
(b)	Power	Operating Costing	Kilo-watt (kw) hours
(c)	Hotel	Operating Costing	Room day
(d)	Hospital	Operating Costing	Patient-day
(e)	Steel	Process Costing/ Single Costing	Tonne
(f)	Coal	Single Costing	Tonne
(g)	Bicycles	Multiple Costing	Number
(h)	Bridge Construction	Contract Costing	Project/ Unit

Example 2:

Identify the methods of costing for the following:

(i) Where all costs are directly charged to a specific job.
(ii) Where all costs are directly charged to a group of products.
(iii) Where cost is ascertained for a single product.
(iv) Where the nature of the product is complex and method cannot be ascertained.

Solution:

Sl. No.	Method of Costing
(i)	Job Costing
(ii)	Batch Costing
(iii)	Unit Costing or Single or Output Costing
(iv)	Multiple Costing

6. Techniques of costing

[To ascertain cost, following different types of costing are followed.]

- marginal costing
- absorption costing
- uniform costing
- standard costing
- Historical costing
- Activity Based costing
- Direct costing

7. Classification of cost

- Natural Element
- Functions
- Behaviour/ volume
- Controllability
- Normality
- Time
- Traceability
- Decision making
- others

9. Based on nature / Element

- Cost
  - material
    - Direct material
    - Indirect material
  - Labour
    - Direct Labour
    - Indirect Labour
  - Expense
    - Direct Expence
    - Indirect Expense

Total Direct cost = prime cost

Total Indirect cost = Overhead

1. Production Overhead
2. Administrative Overhead
3. Selling & Distribution Overhead.

(b) Functional Classification

- production / manufacturing cost
  - → Direct cost
  - → production overhead
- Administrative cost
- selling cost
- Distribution cost
- Research & Development cost
- Pre-production cost
  - eg: Trial production run cost

(c) variability / Behaviour / volume / Activity

- **Fixed cost**
  - * fixed irrespective of volume of production
  - * Rent, depriciation, manager's salary etc.
  - * FC/unit declines as production increases
- **variable cost**
  - * Changes with volume of production
  - * Direct material, Direct labour, variable overhead etc.
  - * VC/unit is fixed
- **Semi-variable cost**
  - * contain both fixed & variable cost.
  - * Utility bills such as telephone, gas, electricity etc.
- **Semi-fixed cost.**
  - ① Type I (first fixed then variable
  - ② Type-2 (lot wise)

Fixed cost

- **committed cost**
  - To be incurred irrespective of level of production
- **Discretionary cost**
  - To be incurred on discretion of mana-
- **step cost**
  - Increases after increase in certain
- **slab fixed cost**
  - ⇓
  - eg. Rent = 100.000

⇓

Can be avoided only if we shut-down

⇓

Depriciation, rent, salary of top management

gement.

⇓

Advertisement, labour amenities, special machine for offer etc.

Capacity level.

Eg:-

at 50% Capacity cost = 200.000

for every 25% ↑ in Capacity, cost = 80.000

⇒ fixed for 100% Capacity level.

(d) **Controllability**

Controllable	Uncontrollable
* Cost that can be influenced by action of specific member of undertaking * Can be controlled. * Generally, variable cost are controllable in nature. * Eg. Tool-room expenditure can be controlled by foreman.	* Cannot be influenced by action of specific member of undertaking. * cannot be controlled by person in charge. * Apportionment of tool-room expenditure to machine shop.

e.

Normality

Normal Cost	Abnormal Cost
⇒ cost incurred normally at given level of output under condition at which normaly output is produced. ⇒ Part of cost of production	⇒ cost which is not normally incurred at given level of output under condition at which normally output is produced. ⇒ charged to Costing P/L.

F. **Based on time**

- Historical cost ⇓ — cost which is already incurred.
- Pre-determined cost ⇓ — It is estimated cost which are set on advance
  - Eg:- standard cost used for cost control

G. **Traceability**

- Direct cost ⇓ — cost per unit can be identified
- Indirect cost ⇓ — cost p.u cannot be identified.

H. **Cost relevant for decision making**

- opportunity cost
- Sunk cost
- Joint Cost
- Shut-down cost
- Differential cost
- Notional / Imputed cost
- Replacement cost
- Out of pocket Expense
- Product cost & period cost
- marginal cost
- Standard cost
- Absolute cost

opportunity cost

→ cost of next best alternative.

→ Eg:- withdrawal of money from bank deposite to buy assets. Here loss of interest is opportunity cost.

→ Relevant for decision making.

Sunk cost

→ Cost already incurred in past.
→ Irrelevant for decision making.
→ Eg:- WDV of existing machine

Joint cost

→ Common cost incurred to produce 2 or more joint product.
→ To be apportioned among joint product.

Shut-down cost

→ Fixed cost that continue to occur even if plant is temporarily shut-down. (i,e unavoidable Fixed cost)
→ Eg:- Rent, depriciation etc.

Differential cost (Incremental cost/ decremental cost)

→ Change in total cost due to change in level of production.

eg:

output		Total cost		
1000	100	80,000	5000	⇒ differential cost
1100		85,000		

⇒ Since fixed cost is fixed. So, differential cost is generally variable in nature.

Notional / Imputed cost

→ Do not involve cash outlay.
→ Eg Interest on capital, notional rent, notional salary etc.

Replacement cost

→ Cost of similar assets in market.
→ cost need to be incurred to replace old assets.
→ It is different from realisable value of old assets.

out of pocket Expense

→ portion of total cost that involve cash outflow
→ Eg:- salary, rent etc.
→ used for ST decision making such as new offer, make or buy decision.

Product cost

Raw material ⟶ Finished goods.

conversion cost
① labour
② overhead

product cost

= acquisition of raw material + conversion into finished goods

Types of costing

a. Marginal costing

b. Absorption costing

Product Cost

Variable cost is product cost.
& Fc is period cost.
(charged against revenue)

variable & Fixed cost both are product cost (i.e total cost)

Marginal Cost

→ cost of 1 additional units.

Units	Cost	
100	50,000	3000 ⇒ marginal cost
101	53,000	

Standard Cost

→ Example of pre-determined cost / estimated cost used for cost control
→ Actual cost compared with standard cost to identify variance and take appropriate action.

Absolute Cost

→ cost of product, process or unit expressed in totality.

Cost can be expressed

- In totality (Absolute cost)
- as % of
- per unit

Explicit & Implicit cost

Explicit cost

→ Requires immediate payment of cash.
→ Eg:- out of pocket expense
→ Recorded in books of account

Implicit cost

→ Do not involve any immediate cash payment
→ Do not actually occur & not recorded in books of account (eg:- estimated cost)
→ Also known as economic costs.

Value Added cost

= Sale value - Cost of Raw material

= conversion cost + profit

Abandonment cost

→ cost incurred for closure of business.

I Cost Accounting & Cost Accounting System (CAS)

Scope of Cost Accounting

→ Costing
→ Cost Analysis
→ Cost comparison
→ Cost Control
→ Cost Reports.
→ Statutory Compliance

Uses of CAS

a. Internal Users
- Manager
→ Operational staff
→ Employee

b. External
- Auditor
- Creditor
- Regulatory Authorities

Essentials of good Cost Acc. System (CAS)

→ Simple & Informative
→ Accurate
→ Uniform & consistency
→ flexible & adoptive
→ Integrated
→ Trust

Installation of CAS

→ objective
→ Nature of business
→ product
→ production process
→ method of maintaining cost record.
→ statutory compliance.

limitation of Cost Accounting

→ Expensive
→ Duplication of work
→ Requires reconciliation
→ Inefficiency

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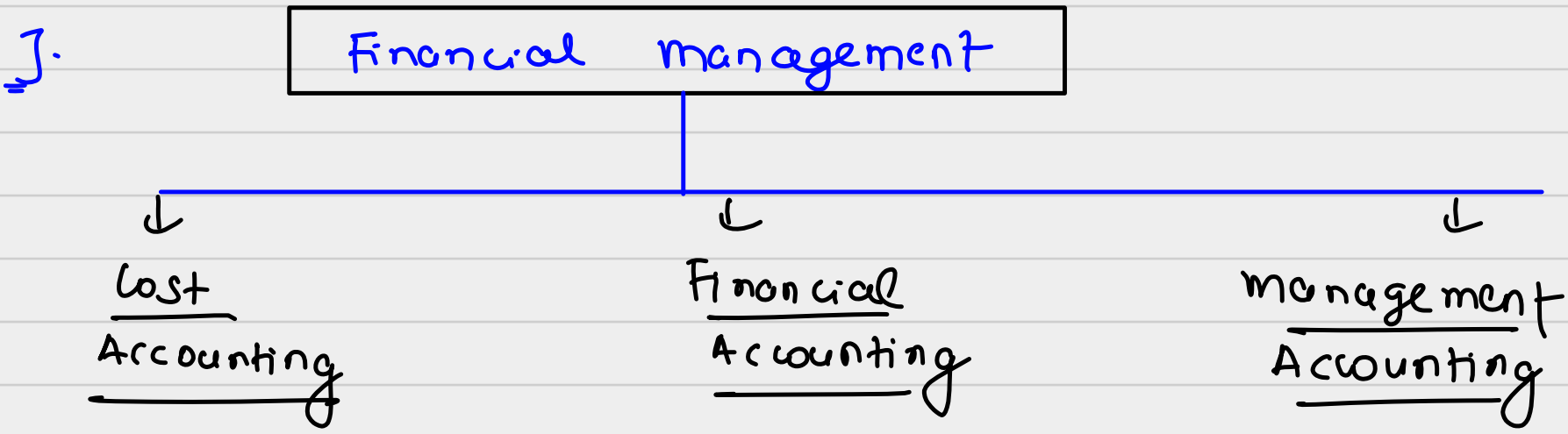
Financial management
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