



COSTING OF SERVICE SECTORS



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Introduction

Operating costing or service costing is a method of a cost ascertainment used in those undertakings which are engaged in providing services.

Services could be of specialised nature where customised service is being provided to each customer. Here, job or contract costing is applied. But some services are generic in nature which are standardised. Here, service costing would be applicable.

Operating costing is applicable in:

- Road transport companies, Railways, Airways
- Shipping companies
- Electricity companies
- Water supply companies
- Hospitals and nursing home
- Cinemas
- Canteens and hotels
- Schools
- IT & ITES
- Financial Institutions
- Insurance

Features

- Services rendered to customers are of unique and standardised type.
- A large proportion of the total capital is invested in fixed assets and comparatively less working capital is required.
- The distinction between fixed cost and variable cost is of particular importance.
- The cost unit may be simple or composite.
- Total cost is averaged over the total amount of service rendered.
- Costs are usually computed period-wise. However, in case of utilization of vehicles, use of road rollers etc., costs are computed order wise.
- Service costing can be used for service performed internally or externally.

- Documents like daily log sheet, cost sheet etc. are used for collection of cost data.
- A daily log is a record written by project managers to keep track of the progress made on a job. It is used in different industries such as construction, transportation, and professional services.

Application of Service Costing

Service costing can be used both for internal and external services provided:

Internal: In-house services provided by a service cost centre to other responsibility centres as support services. E.g.,

- Canteen & hospital for staff
- Boiler house for supplying steam to production departments
- Captive power generation unit
- IT department services used by other departments
- Operation of fleet of vehicles for transport of raw material to factory or distribution of finished goods to market outlets, etc.

External: Services offered to outside customers as a profit centre. E.g.,

- Goods/passenger transport service provide by a transporter
- Hospitality services by hotel
- Provision of services by financial institutions, insurance & IT companies, etc.

Difference between Product and Service Costing

Product Costing	Service Costing
Products are tangible & can be stored.	Services are intangible & cannot be stored.
There can be inventory of products.	There is no inventory of services.
No composite cost units are being used under product costing.	Composite cost units are used under service costing.
Material cost constitutes a major cost element than labour cost.	Labour cost constitutes a major cost element than material cost.
Direct costs have higher proportion.	Indirect costs have higher proportion as service sector is dependent on many support services.

Service Cost Unit

Simple cost unit

transport - per km
water works - per 1000 litres
canteen - per meal

Composite cost unit

transport - per passenger km
hospital - per bed per day
electricity - per kilowatt hour

In service undertakings, generally a composite cost unit is used. Here, two units are rolled into one.

Examples of Cost Units in different Service Industries:

S.No.	Industry	Cost Unit
1.	Public transport	Passenger-km
2.	Goods transport	Ton-km, quintal-km
3.	Hotel	Per room per day (also called room days)
4.	Hospital	Per bed per day, patient per day
5.	Canteen	Per item, per meal
6.	Cinema	Per seat per show
7.	Water supply	Per 1000 litres
8.	Electricity	Per kilowatt hour
9.	Educational institutes	Per course, per batch, per student, per lecture

Computation of Composite Cost Unit

There are two factors: qualitative and quantitative.

Qualitative factors are those which does not affect variable cost, e.g. weight carried

Quantitative factors are those which affect variable cost, e.g. distance

There are two methods or bases for computation of composite cost unit:

- 1. Weighted average or absolute basis:** It is summation of products of qualitative and quantitative factors.

For example, in case of goods transport company,

Absolute ton-km = (weight carried * distance)₁ + (weight carried * distance)₂ + + (weight carried * distance)_n

2. **Simple average or commercial basis:** It is the product of average qualitative and total quantitative factors.

For example, in case of goods transport company,

$$\text{Commercial ton-km} = (\text{distance}_1 + \text{distance}_2 + \dots + \text{distance}_n) * \left(\frac{W_1 + W_2 + \dots + W_n}{n} \right)$$

where, W = weight carried

Equivalent Cost Unit

There are certain services in which there are different grades or qualities. For example, in a hotel, there are different grades of rooms like Standard Rooms, Deluxe Rooms, Luxury Rooms, etc. To convert these different grades into a common unit, different weights are being assigned to each grade.

For example, there is a hotel with three categories of rooms namely Standard, Deluxe and Luxury, Standard being the least expensive and Luxury being the most expensive.

Consider the below hypothetical data:

Type of room	Number of rooms	Room Rent
Standard	200	---
Deluxe	100	2 times of Standard room
Luxury	60	1.5 times of Deluxe room

Ratio of rent of standard, deluxe and luxury = 1 : 2 : 3

Assume, we need to calculate cost per unit form the entire year and let us assume there are 360 days in a year.

First of all, we need to convert all the rooms in terms of Standard, Deluxe or Luxury.

Let us convert all the rooms in terms of Standard.

Type of room	Occupancy (room-days)	Equivalent units (in terms of Standard rooms)
Standard	72,000 (200*360)	72,000 (72,000 * 1)
Deluxe	36,000 (100*360)	72,000 (36,000 * 2)

Luxury	21,600 (60*360)	64,800 (21,600 * 3)
		2,08,800 standard room days

Statement of Costs for Service Sectors

Under service costing, costs are collected and accumulated for a particular period which could be a month, quarter, half year, etc. The costs can be classified either on functional basis (i.e. department-wise) or they can be classified on the basis of variability as follows:

1. Fixed costs or Standing charges
 2. Variable costs or Operating Expenses
 3. Semi-variable costs or Maintenance expenses
- Depreciation will be treated as a fixed cost if is calculated on the basis of time. However, it will be treated as variable cost if is calculated on the basis of usage or activity level (i.e. number of units produced).
 - Interest (or finance charges) are generally treated as fixed cost and shown separately.

Costing of Transport Services

In transport undertakings, the cost unit is normally the tonne-km or passenger-km; but according to the nature of the undertakings, the organisation may vary the cost unit. It is selected keeping in view the needs of each concern depending upon the weight, bulk and types of goods carried and distance covered in each trip.

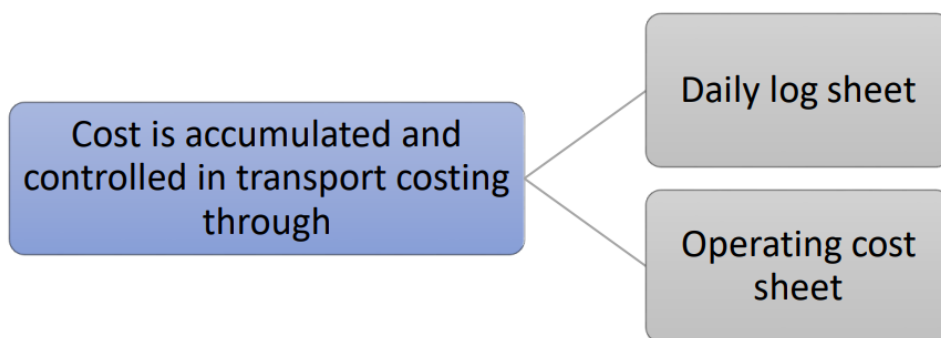
Composition of costs:

Standing Charges / Fixed costs	Variable costs / running costs	Semi-variable costs or maintenance costs
Insurance	Petrol and diesel	Repairs & maintenance

License fees	Lubricant oils / Grease	Cost of Tyres
Salary to driver, conductor, cleaners	Wages to driver, conductor, cleaners	Cost of tubes
Garage costs (rent)	Depreciation*	Cost of batteries
Depreciation*	Others	Spares
Taxes		Garage charges
Admin Expenses		Overhauling of vehicles

The number of cost units is calculated as follows in transport costing:

Number of vehicles * capacity * distance travelled * days * passengers or weight carried (in %)



Daily log report: A daily log report is prepared for each vehicle and filled in by the drivers. This is a document which contains information regarding each journey. The details shown in the log book enable the management to make suitable allocation of vehicles to avoid waste or idle running capacity.

Vehicle Log Book

Vehicle No. :

Date :

Make and Specification :

Driver :

Registration/Licence No.:

Route on which playing :

Date of Purchase :

PARTICULARS OF TRIPS

Trip No.	From	To	Dis-tance K.M.	Goods/ Passengers		Ton/ Kilometer	Time		Ac-tual	Stan-dard	Re-marks
				Out	En-route		Out	In			
Total											
Supplies:						Time:					
Petrol/Diesel:						Driver:					
Lubricating Oil:						Cleaner:					
						Mechanic:					
Details of Delays											

Operating Cost Sheet: It is the performance statement for each vehicle. It acts as a cost control device. The total and per unit cost calculated can be compared with past figures and performance can be evaluated.

Vehicle Running Cost Sheet

Vehicle No. : Period : Total No. of Trips : Budgeted Actual
 Route No. : Total distance run :
 Total weight carried :
 Total units :
 Total hours operated :

Nature of Expenditure	Current		Last Month		Budgeted		Variance
	Amount	Per Unit	Amount	Per Unit	Amount	Per Unit	
	₹	₹	₹	₹	₹	₹	₹
Operating and Running Costs							
Fuel							
Lubricating oil							
Drivers' wages							
Cleaners' wages							
Mechanics' wages							
Sub-Total							
Maintenance Costs							
Tyres and tubes							
Spares							
Repairs							
Overheads							
Sub-Total							
Fixed Costs							
Insurance							
Licence and taxes							
Depreciation							
Establishment and General Charges							
Sub-total							
Total							

Costing of Hotels and Lodges

The cost unit can be Guest-day or Room day.

Estimation of occupancy rate at different point of time (peak or lean season) is very important.

Consider the below example,

Type of Room	Number of rooms	Occupancy percentage
Single room	200	90%
Double room	100	70%
Triple room	60	50%

The rent of a double room is fixed at 3 times that of a single room. The rent of a triple room is fixed at 5 times that of a single room. (Assume 360 days in a year)

Ratio of rent = 1 : 3 : 5

Now, we can convert all the rooms in terms of single, double or triple (equivalent cost unit).

Let us convert all the rooms in terms of single rooms.

Type of room	Occupancy (room-days)	Equivalent single rooms (room-days)
Single	64,800 (200*360*90%)	64,800 (64,800*1)
Double	25,200 (100*360*70%)	75,600 (25,200*3)
Triple	10,800 (60*360*50%)	54,000 (10,800*5)
		1,94,400

Costing of Hospitals

The main purpose of hospital costing is to ascertain the cost of providing medical services.

For costing purposes hospital service can be divided into the following categories:

- Out-patient department
- In-patient department
- Casualty or emergency
- Wards
- Medical service departments, such as, Radiotherapy, X-ray, Pathology etc.
- General service departments, such as, power, heating, lighting, catering, laundering, medical records and administration.
- Other service departments, such as, dispensary, transport etc.

Following units are used in hospital costing:

Out-patient department: per out-patient

In-patient department: per room day, per bed day

Casualty: per patient

Wards: per patient - bed per day

Radiotherapy: per course of treatment per day or per person.

Laundry: per 100 articles laundered.

For ascertaining cost figures, a hospital operating cost sheet is prepared.

Canteen costing

In most organisations, canteen facilities are provided at subsidy so that food and other items can be provided at minimum price. The costs are accumulated on a cost sheet which gives the total cost incurred.

From the total cost, the subsidy is deducted to arrive at the net-cost of operating the canteen. After comparing the net cost with the sales proceeds profit or loss is calculated.

Canteen Cost Sheet

Month.....

Items	Total Cost		Cost per meal
	Current Month	Previous Month	
(A) Provisions			
Bread			
Biscuits			
Cakes			
Eggs			
Meat			
Fish			
Vegetables			
Milk			
Fruits			
Others			
(B) Labour and Supervision			
Supervisor			
Cooks			
Helpers			
Counter clerks			
Cleaners			
Sweepers			
(C) Maintenance			
Crockery			
Glassware			
Towels			
Rent			
Light			
Gas			
Insurance			
Consumable store			
Total Cost			
Less: Subsidy			
Net Cost			
Total Cost			
Sales			
Profit/Loss			

Boiler House Costing

Operating costing is also applied in those undertakings engaged in steam production. In large firms, a boiler house is a service department providing services to production departments. The total costs are obtained for producing steam. A cost unit is generally in terms of kilograms.

Boiler House Cost Sheet

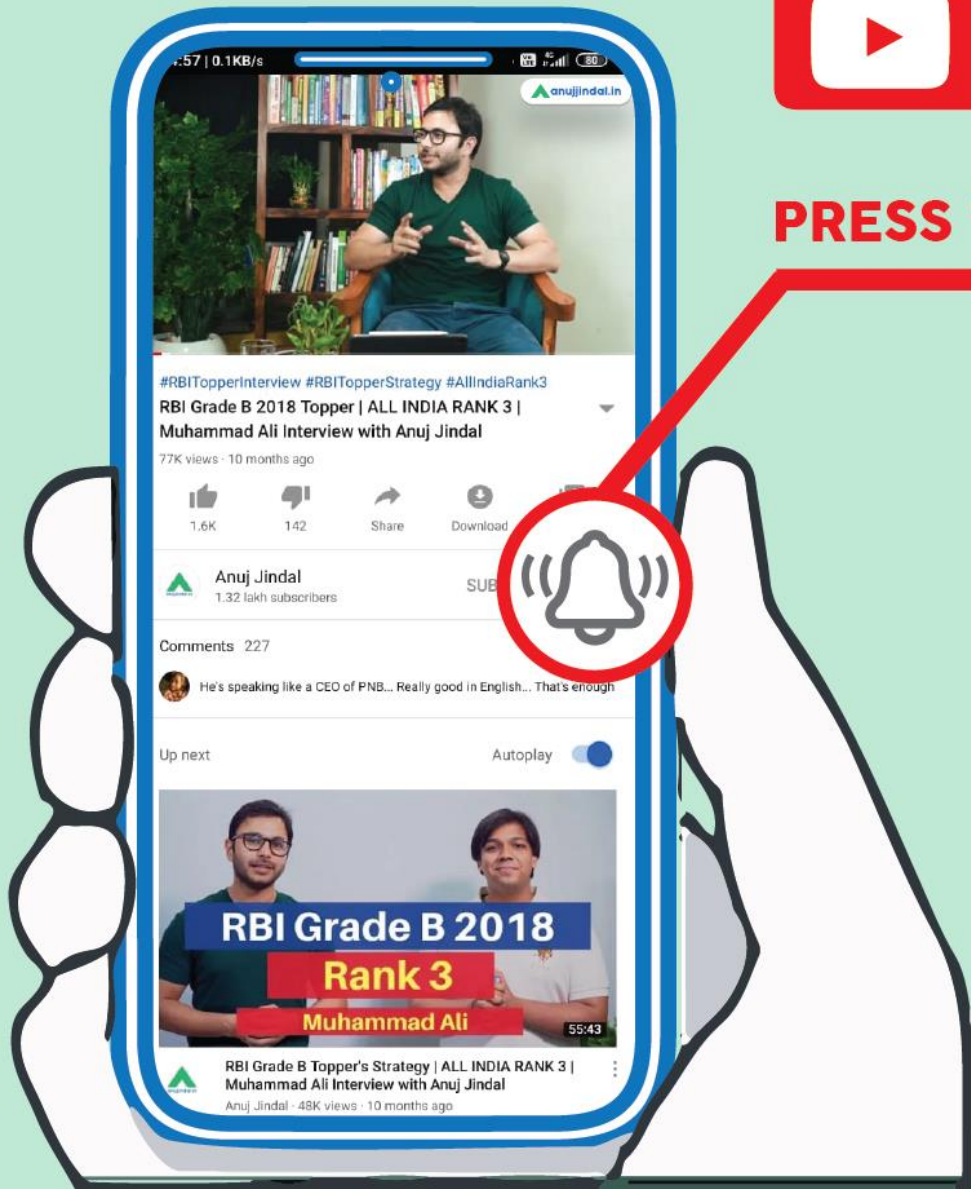
Month.....	Total Consumption.....	
Total Steam Produced.....		
Items	Total cost	Cost per 1000 kgs.
(A) Fixed Overheads		
Rent, rates etc.		
Depreciation of plant		
Depreciation of building		
Insurance		
(B) Maintenance		
Meters		
Furnace		
Service materials		
Tools and accessories		
(C) Labour Charges		
Coal handlers		
Ash removers		
(D) Fuel		
Fuel		
Power		
(E) Water Charges		
Water purchased		
Water softening		
(F) Supervision and other charges		
Foremen		
Engineers		
General labour		
Cleaners		
Total		



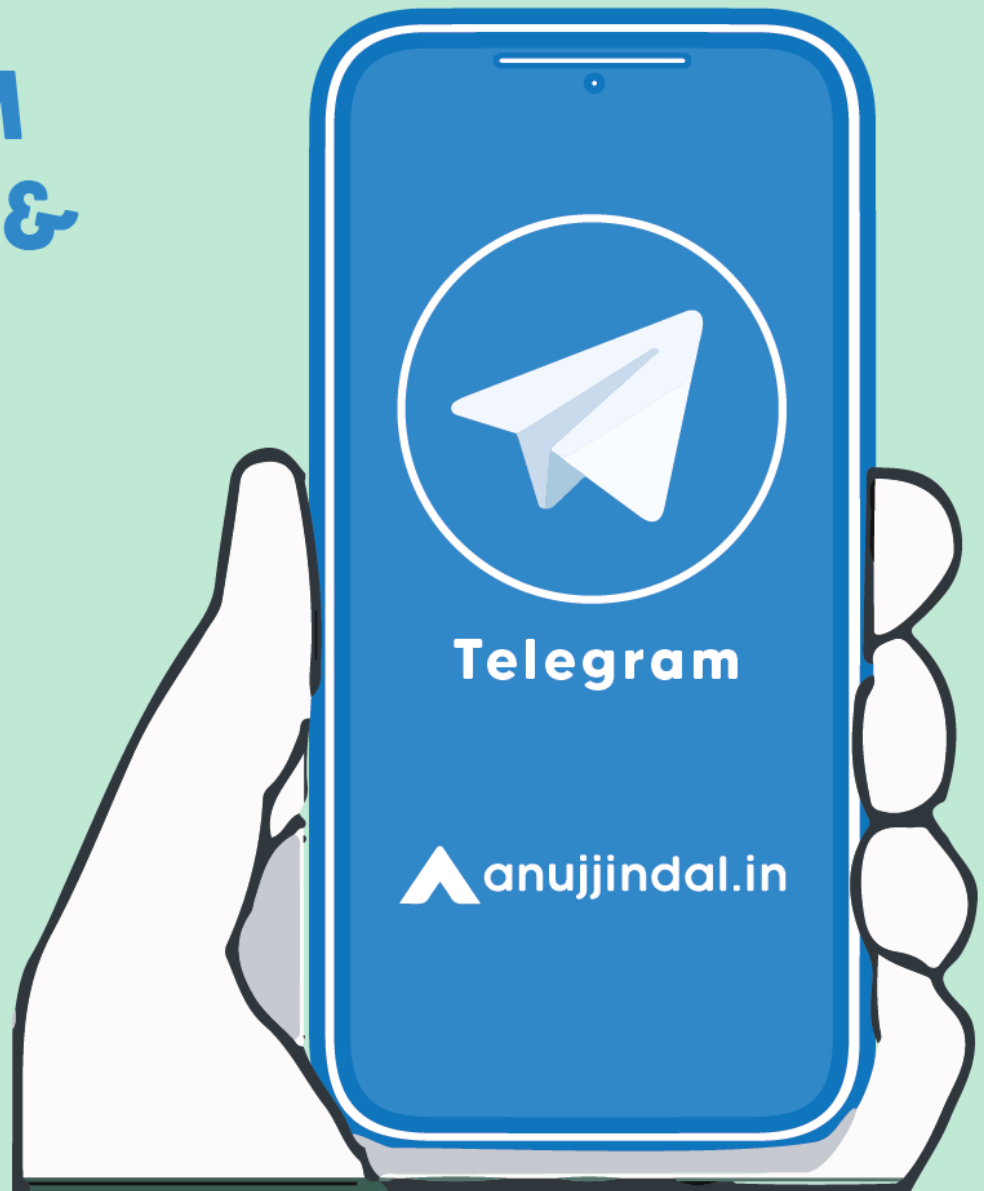
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RBI



Cleared RBI Grade B

Sanskar Vijay



Cleared RBI Grade B

Sanjay Meena



Cleared RBI Grade B

Yash Gupta



Cleared RBI Grade B

Ila Sahu



Cleared RBI Grade B

Argha Banerjee



Cleared RBI Grade B

Suchana Ghosh



Cleared NABARD

Vinay Verma



Cleared NABARD

Lal Chand Kumar



Cleared NABARD

Krishna Kumar Singh



Cleared NABARD

Anshu Goel



Cleared NABARD

Jatin Kumar



Cleared NABARD

Atul Yadav



Cleared SEBI

Abhishek Kumar



Cleared SEBI

Vishwanidh Singh



Cleared SEBI

Gopika Jayan



Cleared SEBI

Vasant Kesari



Cleared SEBI

Swetha Bodagala



NET with 98 Percentile

Anushka Keshri



JRF with 96.92 Percentile

Vaishali Jadon



NET with 89.27 Percentile

Srishti Gupta



JRF with 72 Percentage

Abhishek Mohanty



NET with 68 Percentage

Dinesh Mohan



JRF with 64.66 Percentage

Adhwaresh Pandey

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