



COST ACCOUNTING

(ACC 203)

LECTURE NOTE

By

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Accounting for Overhead Costs

Overhead

Overhead cost is '***expenditure on labour, materials or services that cannot be economically identified with a specific saleable cost unit***'

Overhead cost as defined by CIMA Official Terminology

Overhead cost – key points

- The total of all indirect costs
- Costs incurred that cannot be traced directly to a specific cost unit
- A ‘shared’ cost

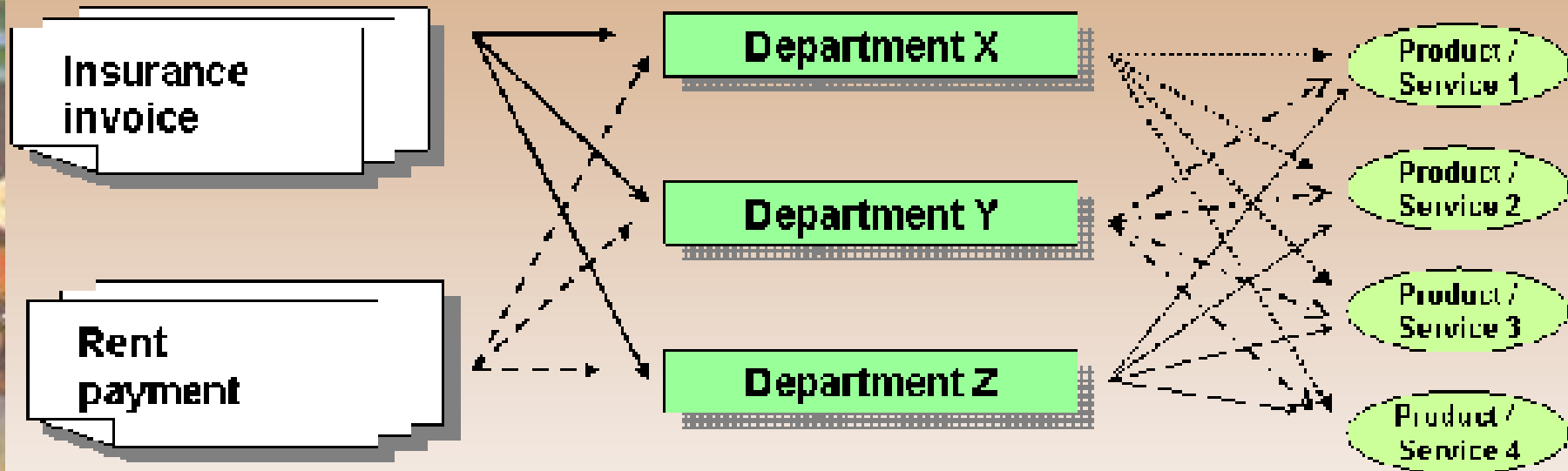
	Hospitality area	Retail area
Indirect materials	<i>Serviettes</i>	<i>Bags</i>
+		
Indirect labour	<i>Restaurant manager</i>	<i>Floor supervisor</i>
+		
Indirect expenses	<i>Electricity</i>	<i>Rent</i>

Why is overhead cost important?

Management need to be aware of the level of expenditure on overheads. If left uncontrolled, the amount spent can increase year in year out, eroding significant proportions of gross profit and reducing competitiveness. Managers need to know:

- Overhead expenditure per cost centre or department.
- Overhead costs per unit.

Dealing with overhead cost



Cost centres and cost units

Cost Centres

A cost centre can be explained as a location, a person, or an item of equipment for which costs can be ascertained.

Cost Units

A cost unit is a quantitative unit of product or service in relation to which costs are ascertained.

Hotel example

Restaurant



Meal served

Accommodation



Occupied bed night

Bar



Drink served

Overhead allotment

When an overhead cost can be identified with a particular cost centre, the whole cost is allotted to that cost centre

Overhead apportionment

The process by which overheads are divided between several cost centres in a 'fair' proportion is referred to as cost apportionment.

Each overhead type is examined and a suitable base for sharing out the cost is established.

Illustration – Apportioning overhead

The overhead cost in relation to rent is N10,000 and floor space was chosen as the most suitable basis for sharing or apportioning this cost. The total floor space available is 500 square metres (300 for department A and 200 for department B). You are required to compute the overhead apportioned to department A and department B.

Solution:

Dept A 300 m ²	Dept B 200 m ²	Total 500 m ²
60% x 10,000	40% x 10,000	100% x 10,000
N6,000	N4,000	N10,000

Basis for apportioning overhead

Examples of suitable basis could include:

- Number of employees (*used for supervision, employee benefits, canteen costs*).
- Floor space (*used for rent, rates, electricity*).
- Book value of assets (*used for depreciation of assets or contents insurance*).
- Value of material issues (*used for costs relating to material movements or stores and warehousing*).
- Number of material requisitions (*used for costs relating to material movements or stores and warehousing*).

Example 3.1: Apportioning overhead cost

ABC Ltd sells clothing from Lagos. Management has identified 4 departments. The following cost information is available. Other information:

	Men's Clothing	Women's Clothing	Children Clothing	Footwear	Total
	N	N	N	N	N
Direct materials	390,000	295,000	270,000	135,000	1090,000
Direct labour	120,000	96,000	195,000	69,000	480,000
Indirect labour	16,750	12,250	12,050	7,450	48,500
Electricity					50,000
Rent and rates					70,000
Personnel costs					35,000
Depreciation of assets					18,000
Insurance of assets					45,000

Example 3.1: Apportioning overhead cost

Other information:

	Men's Clothing	Women's Clothing	Children Clothing	Footwear	Total
Floor area (m²)	600	1,500	600	300	3,000
Number of staff	11	9	7	8	35
Fixed asset value	N1.5m	N3.5m	N0.9m	N0.1m	N6m

Prepare an overhead statement apportioning the overhead costs to each department.

Example 3.1: Apportioning overhead cost

	Basis	Men's Clothing	Women's Clothing	Children Clothing	Footwear	Total
		N	N	N	N	N
Indirect labour	Provided	16,750	12,250	12,050	7,450	48,500
Electricity	Area	10,000	25,000	10,000	5,000	50,000
Rent and rates	Area	14,000	35,000	14,000	7,000	70,000
Personnel costs	Staff	11,000	9,000	7,000	8,000	35,000
Depreciation of assets	Value	4,500	10,500	2,700	300	18,000
Insurance of assets	Value	11,250	26,250	6,750	750	45,000
Total overhead		67,500	118,000	52,500	28,500	266,500



Absorption Costing

Absorption costing

- Absorption costing (overhead recovery) can be explained as the process whereby the overheads of the various cost centres are added to cost units or jobs.
- Absorption costing is the traditional approach to charging overhead costs to cost units.
- Absorption costing can be explained as a process for sharing out the overhead costs of each cost centre to each product or service that is provided by that cost centre.

Absorption costing steps

1. Apportion all overheads to cost centres.
2. Identify the support or service cost centres, and re-apportion the costs of these to the cost centres involved in producing the products or services.
3. Calculate the overhead absorption rate (OAR) for each cost centre involved in producing products or services, using the most appropriate base.
4. Use the OAR to establish the overhead cost per unit.

Step 1 – Apportion overhead to each cost centre

The first step involves the allocation and apportionment of overhead costs to each cost centre that has been identified.

(see example 3.1)

Step 2 – Re-apportion support or service centre costs

- Organisations may have service departments (canteen, maintenance and administration) which cannot be related to any income producing activity.
- To find the full cost of a cost unit this department's costs should also be absorbed into the unit cost.
- Therefore service departments must be apportioned to the various departments producing the products or services.

Example 3.2: Re-apportioning service centre costs

XYZ Ltd operates a busy complex providing ten pin bowling, snooker and an outdoor adventure maze. Cost centres have been established for each of the key activities provided. In addition to the three cost centres there are two support centres for administration and maintenance. Overhead cost has been apportioned to each of the cost Centres as follows:

Example 3.2: Example 3.2 (Cont.)

	Bowling	Snooker	Maze	Admin	Mainten ance	Total
Total overhead	N362,000	N187,000	N245,000	N96,000	N78,000	N968,000

It is policy to re-apportion the cost of maintenance using maintenance hours, and administration using revenue earned. The following is available for the period.

	Bowling	Snooker	Maze	Total
Maintenance time	2,600 hours	1,000 hours	1,400 hours	5,000 hours
Revenue earned	N450,000	N230,000	N320,000	N1,000,000

You are required to re-apportion the costs of the two service centres.

Example 3.2: Re-apportioning service centre costs

Overhead Re-apportionment

	Bowling	Snooker	Maze	Admin	Maint.	Total
Total OH	N362,000	N187,000	N245,000	N96,000	N78,000	N968,000
Admin	N43,200	N22,080	N30,720	N(N96,000)		N0
Maint.	N40,560	N15,600	N21,840		(N78,000)	N0
Total OH	N445,760	N224,680	N297,560	N0	N0	N968,000

Workings for re-apportionment of admin costs:

$$450,000/1,000,000 \times 96,000 = \text{N}43,200$$

$$230,000/1,000,000 \times 96,000 = \text{N}22,080$$

$$320,000/1,000,000 \times 96,000 = \text{N}30,720$$

Example 3.2: Re-apportioning service centre costs

Overhead Re-apportionment (Cont.)

Workings for re-apportionment of maintenance costs:

$$2,600/5,000 \times 78,000 = \text{N}40,560$$

$$1,000,000/5,000 \times 78,000 = \text{N}15,600$$

$$1,400,000/5,000 \times 78,000 = \text{N}21,840$$

Step 3 – Establishing an overhead absorption rate

- This step involves the establishment of an overhead absorption rate that allows the overhead cost of a product or service to be calculated.
- The calculation of an overhead absorption rate requires two variables:
 - ▶ The total overhead attributable to a cost centre.
 - ▶ The absorption base.

$$\frac{\text{Cost centre overhead}}{\text{Absorption base}} = \text{Overhead absorption rate (OAR)}$$

Absorption basis


- | | |
|-------------------------------------|--|
| 1. Number of units | <i>Should only be used if all products are similar or if the level of service is similar to all customers.</i> |
| 2. Direct machine (operating) hours | <i>May be more suitable than the number of units if there is a significant difference in the time taken to produce the various products or services.</i> |
| 3. Direct labour hours | <i>Can be used in labour intensive situations.</i> |
| 4. Percentage direct labour cost | <i>Can be used in labour intensive situations if all direct workers are paid similar wage rates.</i> |
| 5. Percentage direct material cost | <i>Can be used when direct material is a significant proportion of total cost and appears to drive the overhead cost.</i> |
| 6. Percentage prime cost | <i>Can be used when both direct material and direct labour are significant.</i> |

Example 3.3: Overhead absorption rates

MNO Ltd is a small retail organization selling protective clothing to builders. The company is currently making a loss and is reviewing accounting procedures. The following information relates to the three products sold by the company:

	Selling price	Purchase cost	Number sold
Hard hats	N16	N10	12,000
Shoes	N60	N35	10,000
Luminous vests	N5	N2	18,000
			40,000

Total overhead for the period in question amounted to N200,000. The owner considers that both the number of units, and a rate based on the percentage of material cost, are equally suitable as a basis to absorb overheads to the three products and is not sure which is the best to adopt.

- 
- a) Calculate an overhead absorption rate based on number of units.
 - b) Calculate an overhead absorption rate based on the percentage of material cost.

Example 3.3: Overhead absorption rates

a) **Overhead absorption rate based on the number of units.**

$$\text{Overhead } \text{N}200,000 / 40,000 \text{ units} = \text{N}5 \text{ per unit}$$

This approach is very simple as total overhead is divided by the total number of units sold.

b) **Overhead absorption rate based on a percentage of material cost.**

	Purchase cost	Numbers sold	
Hard hats	N10	12,000	N120,000
Shoes	N35	10,000	N350,000
Luminous vests	N2	18,000	N36,000
			N506,000

$$\text{Overhead } \text{N}200,000 / \text{Materials } \text{N}506,000 = 39.5\% \text{ of material cost}$$

Step 4 – Establishing the overhead cost per unit

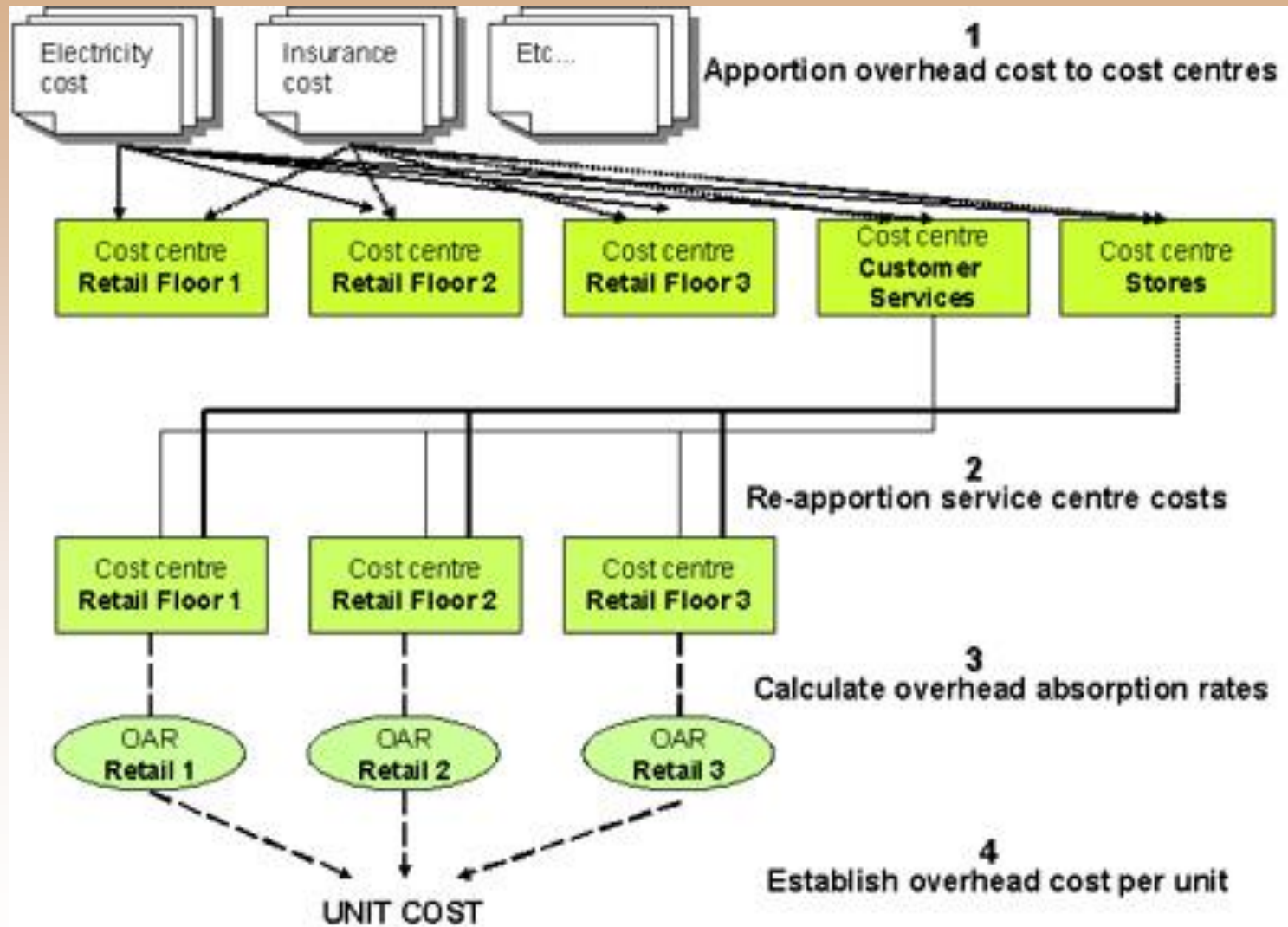
Once the overhead absorption rate is established then the total cost of a product or service can be calculated.

This can be demonstrated by using the data from example 3.3

Total cost and profit using OAR based on the number of units

	Hats	Shoes	Vests
Material cost	N10.00	N35.00	N2.00
Overhead cost	N5.00	N5.00	N5.00
Total cost	N15.00	N40.00	N7.00
Selling price	N16.00	N60.00	N5.00
Profit	N1.00	N20.00	(2.00)

The absorption process



Example 3.4: Absorption Costing

The Manor Country Lodge provides four star hotel accommodation with full amenities including a modern leisure complex. Six cost centres have been identified for accounting purposes comprising accommodation, restaurant, bar, leisure complex, administration and facilities management. Administration and facilities management are both treated as support service centres. Facilities management also provides a support to the administration department.

	Accommodation	Restaurant	Bar	Leisure complex	Admin	Facilities management
Indirect labour	N220,000	N99,000	N44,000	N110,000	N28,000	N49,000

Overheads yet to be apportioned:

Electricity and gas	N10,000
Building insurance	N55,000
Employee benefits	N50,000
Asset depreciation	N400,000

Other information available for use in apportioning overhead cost:

Example 3.4: Absorption Costing

	Floor space(m ²)	No of employ.	Value of assets	Admin split
Accommodation	3,000	5	N4.4m	50%
Restaurant	600	12	N0.8m	20%
Bar	300	6	N0.4m	5%
Leisure complex	900	7	N1.6m	25%
Admin	200	5	N0.6m	-
Facilities Manag	-	15	N0.2m	-
Total	5,000	50	N8.0m	100%

Cost unit

Occupied bed per night

23,445 bed night

Meals served

45,348 meals

Drinks purchased

136,280 drinks

Client hours

29,895 leisure hours

a) Calculate overhead absorption rates for the four main cost centres.

b) Establish the overhead cost to be involved in a quotation to a travel agent for a mid-week special that includes:

Three bed nights

Two evening meals

One glass of drink in the bar

Five hours in the leisure centre.

Example 3.4: Absorption Costing

Manor Country Lodge Overhead Statement

	Basis	Accom	Restauran t	Bar	Leisure	Admin	Facilities	Total
		N	N	N	N	N	N	N
Step 1: Apportion overhead to each cost centre								
OH App Given		220,000	99,000	44,000	110,000	28,000	49,000	550,000
Elect	Floor	6,000	1,200	600	1,800	400	0	10,000
Insur	Floor	33,000	6,600	3,300	9,900	2,200	0	55,000
Empl	Employ	5,000	12,000	6,000	7,000	5,000	15,000	50,000
Dep	Value	220,000	40,000	20,000	80,000	30,000	10,000	400,000
Total		484,000	158,800	73,900	208,700	65,600	74,000	1,065,000

Example 3.4: Absorption Costing

Step 2: Re-apportion support service centre cost:

	Basis	Accom	Restau rant	Bar	Leisure	Admin	Facilities	Total
Facilities Mgt	Floor	44,400	8,880	4,440	13,320	2,960	(74,000)	0
						68,560		
Admin	Percent	34,280	13,712	3,428	17,140	(68,560)	0	0
Total		562,680	181,392	81,768	239,160	0	0	1,065,000

Note: As the admin department provides services to facilities management, the overhead for facilities management is apportioned between the various departments including admin before the admin overheads are apportioned

Example 3.4: Absorption Costing

Step 3: Establish an overhead absorption rate

Calculating an overhead absorption rate requires the total overhead for each cost centre and an appropriate base for each cost centre. The total overhead for each cost centre was calculated in step 2 above. The details provided in the Manor Country Lodge example itemised the number of cost units produced by each cost centre. This can be used to calculate the overhead absorption rates for each area.

	Accommodation	Restaurant	Bar	Leisure complex
Cost centre OH	N562,680	N181,392	N81,786	N239,160
No of units	23,445 nights	45,348 meals	136,280 drinks	29,895 leisure hours
	= N24 per night	=N4 per meal	=N0.60/ per drink	=N8 per leisure hr

Example 3.4: Absorption Costing

Part b of example 3.4) Overhead cost for travel agents quotation.

		N
Three bed nights	3 x N24	72.00
Two evening meals	2 x N4	8.00
One glass of drink in the bar	1 x N0.60	0.60
Five hours in the leisure centre	5 x N8	40.00
Total overhead		120.60

Note: The N120.60 established above only covers overhead cost. Direct costs must be included in the quotations. Direct costs would include those associated with the room (cleaning and laundry), meals and the drink.

Predetermined overhead absorption rates

- A predetermined overhead absorption rate can help management estimate the full cost of a product or service during the year to provide more accurate information for pricing decisions.
- Predetermined overhead absorption rates are based on budgeted figures.
- If a predetermined rate is used, the overhead cost per unit is calculated prior to the accounting period, using budgeted figures for overheads and units of activity.

$$\text{Predetermined rate} = \frac{\text{Budgeted overhead}}{\text{Budgeted activity}} = \text{Budgeted cost per unit}$$

Example 3.5: Predetermined overhead absorption rates

City Guide Ltd is a successful business which provides professional tour guides to the tourist industry. Budgets for the coming year indicate that overhead will amount to N100,000. As the service is labour intensive, direct labour hours is considered to be the most appropriate absorption base and it is forecast that direct labour hours will total 20,000 in the year.

Calculate the predetermined overhead absorption rate.

The predetermined overhead absorption rate would be calculated as follows:

$$\begin{aligned} \text{Budgeted overhead/Budgeted labour hours} &= \text{N100,000/20,000} \\ &= \text{N5 per labour hour.} \end{aligned}$$

This means that in addition to direct costs, N5 per labour hour will be charged to each client.

Under / over absorption

- Because the overhead cost per unit is based on estimates, it is almost inevitable that at the end of the accounting year there will have been an under-absorption (recovery) or over-absorption (recovery) of the overhead actually incurred.
- The estimates for both overhead and activity level are unlikely to be the same as what actually occurred.
- In an absorption costing system where the predetermined cost per unit is charged in the accounting records, it is necessary to check the amount under- or over-absorbed (charged) and make an adjustment in the accounts.

Under / over absorption

Actual overhead cost for the period

N
XX

Compared to

Overhead charged for the period

(actual hours or units x predetermined rate)

XX

Difference is the under- or over- recovery

XX

Example 3.6: Under- or over-recovery of overhead

Actual overhead for City Guides Ltd amounted to N106,500 and the actual direct labour hours amounted to 21,000 hours. The company was absorbing overhead at a predetermined overhead rate of N5 per direct labour hour (3.5 above).

Calculate the amount of under- or over- recovery of overhead that occurred

Solution:

The amount of under- or over-absorbed is found by taking the absorbed overhead (the actual labour hours worked by the predetermined overhead rate) from the actual overhead cost.

Actual overhead cost	N106,500
Absorbed overhead (21,000 hours x N5)	N105,000
Under-absorbed (recovered)	N1,500

Both the actual overhead and actual activity level were higher than the estimates resulting in a lower charge against profit for overhead than what was required. An adjustment for the under-recovered amount of N1,500 should be charged in the profit statement, reducing the profit figure. The opposite would apply with over-absorbed overhead.

Arguments for absorption costing

- Absorption costing recognises that selling price must cover all costs incurred. If absorption costing is used, then organisations should ensure that all costs are included when setting selling prices.
- Production cannot be achieved without incurring overheads, therefore all such costs, should be included in stock valuations. This is in accordance with the requirements of the international accounting standard which requires that production cost should include all costs incurred (including fixed overhead) in bringing the product to its current condition and location.
- Absorption costing recognises the importance of working at full capacity. The under- and over-absorption (recovery) explained above can focus attention on the cost effect of actual activity being different from the budget or capacity levels established prior to the period. If an organisation fails to work to full capacity, then the overhead cost per unit may be higher than necessary. This is because overhead cost is charged out to fewer units.

Arguments against absorption costing

- Absorption costing involves the apportionment of overhead, which can be subjective. The resulting information can be misleading for management decision-making.
- Profits can be manipulated in a manufacturing organisation by simply increasing production without actually selling the additional items. Because fixed overhead is included in stock valuation, increasing production without increasing sales will result in a higher closing stock figure and hence a lower cost of sales and a higher profit figure. Fixed overhead is transferred from the current period's cost (reducing costs in the profit statements) to a future period. Although this approach complies with accounting concepts, it may encourage management to build excessive stock levels to achieve a short-term profit increase.

Blanket or single overhead absorption rate

A company can take the simplistic view of choosing a single overhead absorption base for the entire organisation, one which is most reflective of the organisations activity. This is known as using a blanket overhead absorption rate or a single factory-wide rate. This is a simplistic approach and not very accurate.



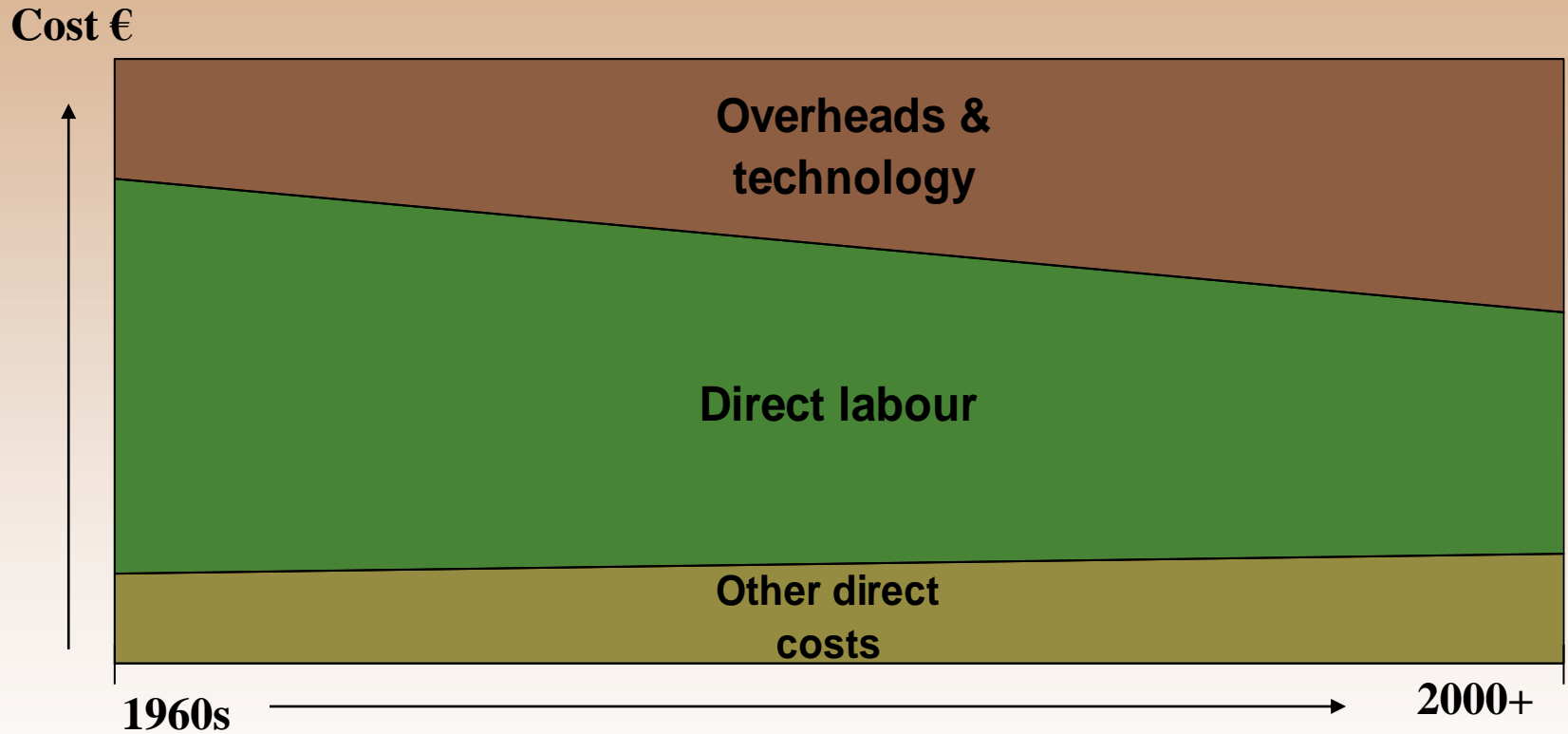
Activity Based Costing (ABC)

Activity based costing

An alternative method to absorption costing, called Activity Based Costing (ABC) has emerged.

It was developed in the Late 1980's to address the requirements of a more modern manufacturing environment.

The changing environment



The changing environment

	<u>1960's</u>	<u>2000's</u>
utilisation	Production	Market
processes	Simple	Complex
product range	Narrow	Wide
labour costs	High	Lower
fixed costs	Low	Higher

Key points on ABC

- Traditional overhead recovery basis (direct labour/cost particularly) may have little relevance to overhead and the complexity of the modern business environment.
- ABC is based on the concept that it is the activities involved in providing a product or service that incur cost.
- It is therefore more accurate to charge overhead cost based on the amount of activity consumed when the product or service is provided.
- The ABC approach is more reflective and accurate, as it identifies each activity that occurs in an organisation and charges overhead to each product on the basis of its consumption, or use, of each activity.

The objective of ABC

The objective of activity based costing is to arrive at a more accurate product cost. This is achieved by assigning overhead cost to the activities carried out within the organisation and then relating how often these activities occur for each product or service produced.

ABC implementation considerations

- Decision to implement is significant as generally ABC systems are more complex and sophisticated.
- A detailed cost benefit analysis should be carried out before a commitment to the introduction of ABC is given.
- It is important that senior management buy into the system from the onset and encourage its implementation throughout the organisation.
- It is essential that the resources necessary for implementation of the new system are made available.
- The implementation of an ABC approach requires a thorough examination of the organisation to identify every activity that occurs.
- A cost pool should be created for each activity and the most suitable cost driver is established.
- The terms 'cost pools' and 'cost drivers' are central in explaining the concept.

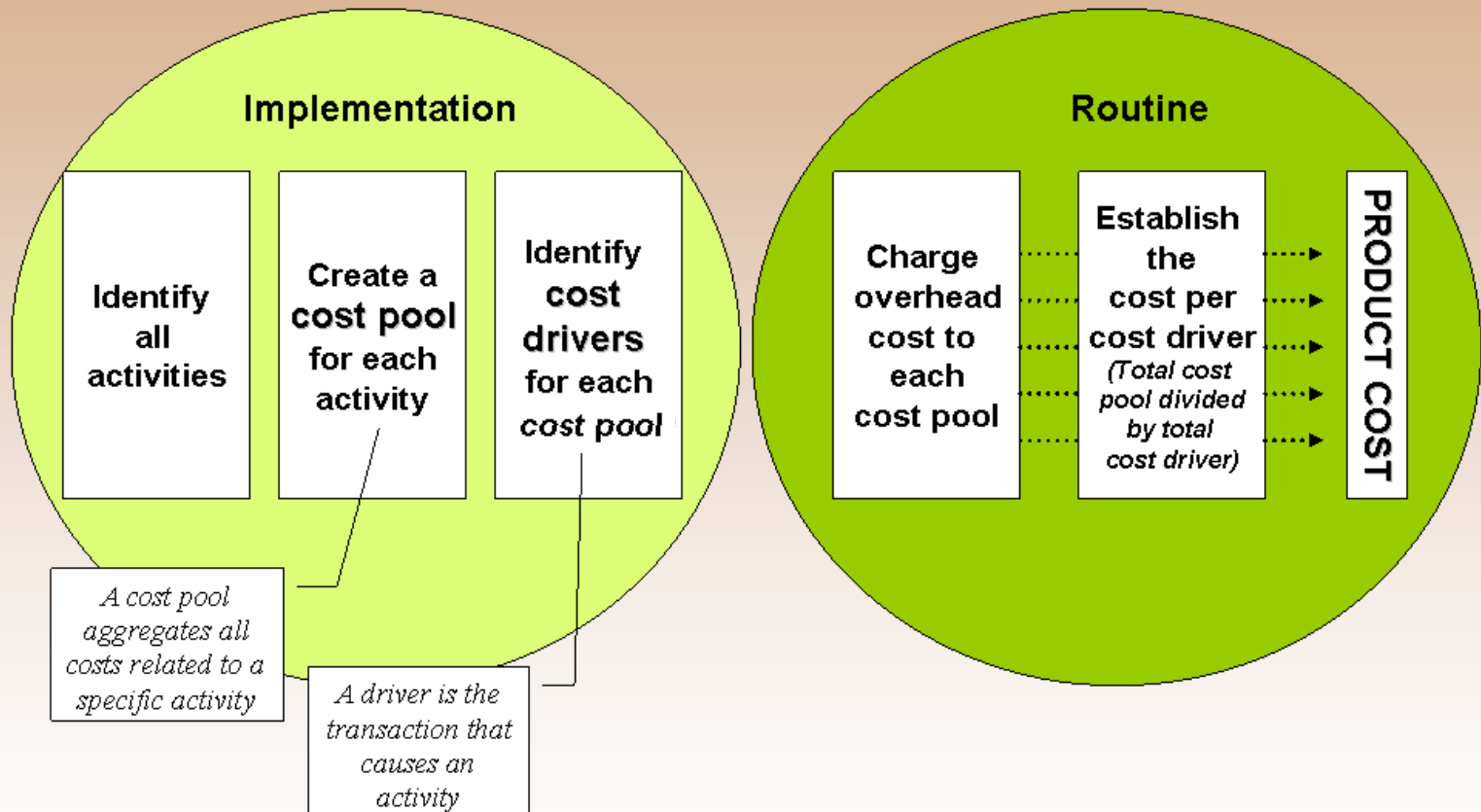
Cost pools

- Cost pools are similar in principle to cost centres in traditional systems, however, cost pools relate to activities regardless of conventional departmental boundaries.
- A cost pool should be created for each activity identified.
- The costs associated with each activity are pooled together accumulating the total cost of the activity

Cost drivers

- The key idea behind ABC is to focus attention on those factors that cause or drive costs.
- These factors are known as cost drivers.
- A cost driver is the event and factors, which cause an activity to occur and to consume resources.

Implementing ABC



ABC steps

1. Apportion all overheads to cost pools.
2. Calculate cost driver rates for each cost pool.
3. Establish the overhead cost per unit.

Example 3.7: ABC cost pools and cost drivers

The management team of Matthew Stores Ltd is investigating the feasibility of implementing ABC. The customer services area has been selected to pilot the approach. The overhead costs have already been apportioned to the cost pools identified. The following cost pools, costs and drivers have been established.

Example 3.7: ABC cost pools and cost drivers

Activity cost pool	Cost	Driver
Phone enquiries	N2,800	No of calls received = 3,240
Examining returned stock	N4,400	No of items examined =4,450
Returning stock to shelves	N3,900	No of items returned to shelves = 4,000
Processing refunds	N2,400	No of refunds generated = 2,300
Handling exchanges	N1,000	No of exchanges = 2,150
Investigating other complaints	N6,800	No of other complaints = 1,200
Total overhead	N21,300	

You are required to calculate cost driver rates for each cost pool using the drivers identified.

Example 3.8: ABC to establish unit cost

Ultimate Experience Ltd operates a chain of five star health farms offering a complete range of alternative health and relaxation experiences. The management accountant has used the massage room as a pilot for the development of a new ABC system. Each activity carried out in the area has been identified and a cost pool has been created for each. Suitable cost drivers have been identified. Overhead has been apportioned and the following rates established.

Example 3.8: ABC to establish unit cost

Processing bookings	35% per booking
Taking client details and consent	75% form
Preparing room	N1.20 per session
Applying detox materials	N2.30 per session
Massage	30% per minute
Remove detox material	N1.80 per session

Demonstrate how the system can be used to calculate the total overhead costs associated with offering a client three massage sessions. The actual massage time chosen by the client is 30 minutes for each session. The client details and consent are taken once during the stay and kept on file. Assume three separate bookings are made.

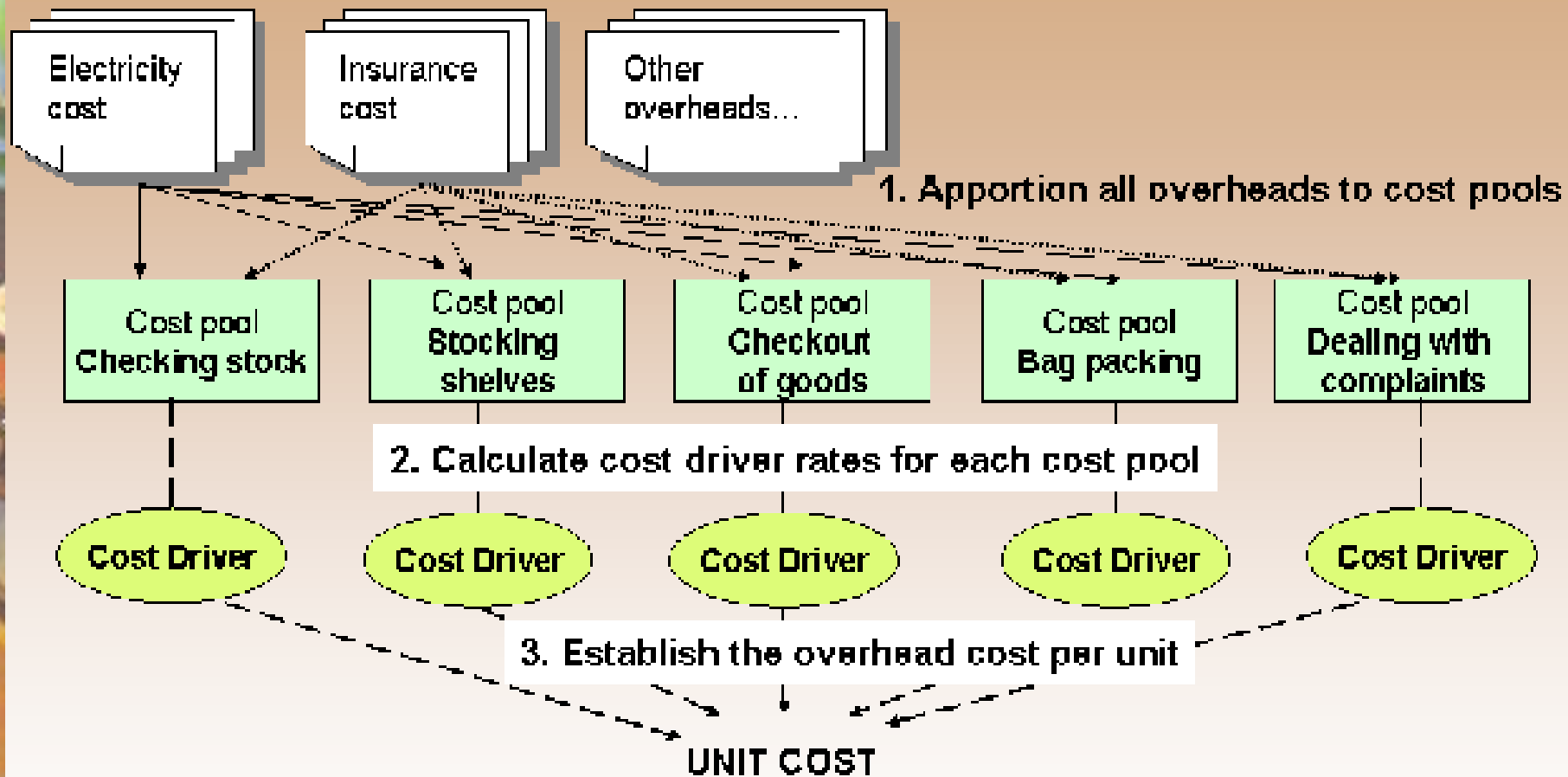
Example 3.8: ABC to establish unit cost

The client requires three sessions, so each activity is multiplied by three, except for taking client details. The cost of the massage is driven by the minutes of massage time.

Massage cost

Processing bookings	3 x N0.35	N1.05
Taking client details and consent	1 x N0.75	N0.75
Prepare room	3 x N1.20	N3.60
Apply detox material	3 x N2.30	N6.90
Massage	3 x 30 minutes x N0.30	N27.00
Remove detox material	3 x N1.80	N5.40
Total		N44.70

The ABC process



Example 3.9: The ABC approach

Quality Pictures Ltd operates a successful retail outlet providing framed, high quality reproductions of original paintings by leading artists. The customers chooses from a range of pictures and has a choice of three frame sizes. An activity based costing system is in operation.

The apportionment of overhead costs to each cost pool has already been carried out producing the following costs:

Activity cost pools	N
Order processing	22,500
Material movement	34,200
Set-up time	33,000
Printing	28,512
Framing	60,000
Quality checks	10,325
	88,537

The following cost driver details have been accumulated for the period under review:

	Total
No of pictures ordered	2,500
Direct material cost	N57,000
No of set-ups	6,000
Printing time (minutes)	35,640
No of frames	2,500
Quality checking time (minutes)	7,375

Example 3.9: The ABC approach

The following details have been established for each frame size:

	Size 1	Size 2	Size 3
Sales price	N80,000	N130,000	N180,000
Number of orders per picture	1	1	1
Direct material cost per picture	N15	N24	N30
Number of set-ups per picture	1	3	3
Printing time (minutes)	10	15	18
Number of frames	1	1	1
Minutes spent checking quality	2	3	4

Example 3.9: The ABC approach

Step 1: Apportion overhead cost to cost pools.

This has been completed and given in the example, so it is necessary to start at the second step.

Step 2: Calculate the cost driver rates for each cost pool.

The total cost of each cost pool is divided by the total for each driver.

Order processing	$N22,500 / 2,500 = N9$ per order
Material movement	$N34,200 / N57,000 = N0.60$ per N
Set-up time	$N33,000 / 6,000 = N5.50$ per set-up
Printing	$N28,512 / 35,640 = N0.80$ per minute
Framing	$N60,000 / 2,500 = N24$ per frame
Quality testing	$N10,325 / 7,375 = N1.40$ per minute

Example 3.9: The ABC approach

Step 3: Establish the overhead cost per unit.

This is achieved by multiplying the unit data for each frame by the cost driver rates established in step 2 above.

Overhead cost details

		N	N	N
Order processing	(N9 per order)	9.00	9.00	9.00
Material movement	(N0.60 per N material cost)	9.00	14.40	18.00
Set-up time	(N5.50 per set-up)	5.50	16.50	16.50
Printing	(N0.80 per minute)	8.00	12.00	14.40
Framing	(N24 per frame)	24.00	24.00	24.00
Quality testing	(N1.40 per minute)	2.80	4.20	5.60
Total overhead cost		58.30	80.10	87.50

Example 3.9: The ABC approach

	Size 1	Size 2	Size 3
	N	N	N
Sales price	80.00	130.00	180.00
Direct material cost	15.00	24.00	30.00
Overhead cost	58.30	80.10	87.50
Profit	6.70	25.90	62.50
Profit margin	8.4%	19.9%	34.7%

More than a product costing system

- ABC provides a revolutionary approach to cost control by analysing costs based on activities rather than traditional departmental boundaries.
- Management attention focuses now on the activities required and their cost.
- Unnecessary activities can be eliminated and costly activities examined with a view to significantly reducing costs.
- While ABC was initially popular in manufacturing due to its provision of superior product costs and stock valuations, the cost control aspect has resulted in many service organisations also implementing ABC systems.

Advantages of ABC

- Product costs produced by an ABC system should be more accurate than those produced by an absorption costing system.
- ABC is approved as a method of valuing stock in accordance with accounting standards.
- ABC systems produce useful information for decision-making.
- As ABC systems focus on identifying activities in an organisation, unnecessary activities or activities that do not add value can be identified, adjusted, or eliminated.
- The ABC approach provides a new emphasis on cost control by focusing attention on the cost of each activity.
- The ABC approach is useful in cost reduction programmes.

Criticisms of ABC

- ABC systems are generally complex, difficult and expensive to implement.
- ABC systems can be time consuming and expensive to administer.
- An ABC system should not be introduced unless it can provide additional information which management can use.
- Where an organisation deals in similar products or provides a similar service level to all clients, ABC will provide little benefit as a costing system, because it produces similar costs to other simpler approaches.
- Some argue the merits of implementing ABC, questioning if it actually contributes to company profit or merely moves overhead costs from one product to another. They argue that total overhead is unlikely to change in the short-term.
- It does not solve the problem of allocating all overhead. Overhead costs like electricity, insurance and rent still need to be apportioned. The process of sharing overhead costs to cost pools can be subjective.
- Complex situations may have multiple cost drivers. When establishing what drives the cost of an activity there may be more than one cost driver. If the approach is not applied properly it can result in a costly exercise with no significant benefits achieved.
- Developing appropriate cost pools and cost drivers can be difficult. If the design is flawed or the gathering of necessary data inaccurate, the outputs (product costs) will be misleading.

ABC

While ABC provides a more accurate and reflective product cost, it should be remembered that it does not provide the 'true' cost of a product or service. This is because overheads are shared costs that require apportionment. Apportioning this overhead is always a subjective process no matter how sophisticated the system. ABC provides a more accurate reflection of total cost compared to absorption costing. However, like absorption costing, the cost provided includes a significant proportion of fixed cost which will remain, despite a decision to discontinue a specific product or service. Management should fully consider this when making such decisions.