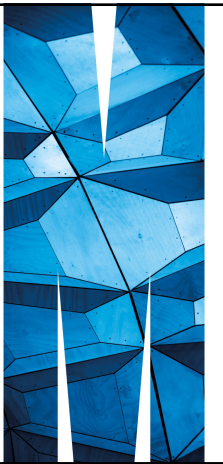


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Chapter 2

Management accounting: Cost terms and concepts

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For this topic you should be able to:



1. Understand why cost is important ☐
2. Recognise the differences between conventional (traditional) and contemporary (modern) costing systems ☐
3. Explain what is meant by ***different costs for different purposes*** ☐
4. Classify costs according to their behaviour, traceability, controllability, position in the value chain and timing ☐
5. Understand why cost classification is useful in practice ☐
6. Prepare a schedule of cost of goods manufactured, cost of goods sold and an income statement. ☐

Why is Cost Important?

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- Many short-term and long-term decisions require an understanding of costs
- Important source of information for decision-making, managing resources, and creating customer and shareholder value

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Traditional Approaches to Costing

- Monitors **financial** performance
- Controls what's going on **inside** the organisation
- Provides information to help managers **control** cost
- Looks at difference between actual & planned/budgeted costs
- Estimates costs of organisational units (e.g. departments) and/or products (goods and services)
- Assumes that production volume is the only factor that can cause costs to change
- Information is mainly obtained from financial accounting system

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Modern Approaches to Costing

- Developed in 1990s in response to changes in the business environment
- Pro-active and detailed in providing information to **manage** resources
- Emphasises **non-financial** and **qualitative** information
 - for example, quality, delivery, innovation, sustainability etc.
- Focuses on a broader range of costs
 - for example, costs of activities, products, customers, suppliers etc.
- Examines what's going on inside **and outside** the organisation
 - for example in relation to customers, competitors, suppliers etc.
- Focus is not only to control costs but to reduce them
- The real 'root' causes of costs are analysed, and wasteful activities are identified and eliminated

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Components of management accounting systems	Traditional systems	Modern systems
■ Costing systems	■ Focus on the costs of departments and products* ■ Assume production volume is the only factor that can cause costs to vary	■ Focus on the costs of activities, products, customers and suppliers ■ Recognise that a range of factors can cause costs to vary
■ Budgeting systems	■ Built around departments	■ Built around departments and activities
■ Performance measurement systems	■ Monitor <i>financial</i> performance ■ Control what's going on inside the organisation	■ Monitor performance <i>across a range of critical success factors</i>, such as quality, delivery and sustainability, not just financial performance ■ Also look at what's happening <i>outside</i> the organisation, for example at customers, competitors and broader stakeholders ■ Support the management of both customer value and shareholder wealth
■ Cost management	■ No separate system ■ Costs mainly controlled through the financial performance measurement system	■ Pro-active approaches to managing resources and reducing costs, rather than just controlling them ■ Analyse real causes of costs and eliminate wasteful activities

*Note that 'products' includes both goods and services.

Different Costs for Different Purposes

- Before we classify costs, we need to understand how managers intend to use the information
- Different costs and classifications are used for different purposes
- key point

The same cost can be classified in a number of ways depending on the intended use of the cost information

 - The total amount (\$) of cost does not change; only the way we look at it!**

Basis of classification	Cost classifications	Used to:
■ Behaviour (see Chapter 3)	■ Variable - Unit level - Engineered ■ Fixed - Committed - Discretionary	■ Plan (budget) costs ■ Control costs ■ Make decisions
■ Traceability	■ Direct ■ Indirect	■ Estimate the cost of goods and services ■ Estimate the cost of organisational units, such as departments or activities
■ Controllability (see Chapter 12)	■ Controllable ■ Uncontrollable	■ Measure managers' performance ■ Control costs
■ Value chain	■ Upstream: - Research and development - Design - Supply ■ Manufacturing/production ■ Downstream: - Marketing - Distribution - Customer service	■ Analyse cost structures and identify strategies ■ Measure performance ■ Control/manage costs
■ Manufacturing/product costs	■ Direct material ■ Direct labour ■ Manufacturing overhead	■ Estimate the cost of products ■ Estimate the cost of goods sold for the income statement, and inventory for the balance sheet
■ Timing of the expense	■ Product ■ Period	■ Prepare income statement and balance sheet

Pharmaceutical Company

Research Cost - \$1.5 million – Pharmaceutical Company



- Fixed
- Indirect
- Uncontrollable
- Upstream
- Period

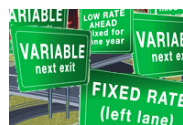
Different classification – exact same cost

1. Classifying Costs according to *Behaviour*

- **Costs change as the *level of activity* changes**
 - The level of activity is the level of work performed in the organisation
 - Units produced, kilometres driven, hours worked
- **Variable costs**
 - Change in total *in direct proportion* to a change in the level of activity
- **Fixed costs**  **Doesn't mean the cost itself can't change! But if it does change, this is usually unrelated to a change in the level of activity**
 - Remain unchanged in total despite changes in the level of activity

How to Classify a Cost according to Behaviour...

1. **Determine the level of activity** – usually this is what causes sales to go up or down



2. **Question whether the cost is impacted significantly by the level of activity or not** – is there a 'direct proportion' effect?
3. **If yes – variable; If no –fixed**

Research Cost - \$1.5 million – Pharmaceutical Company



• **Fixed** – Does not change in direct proportion to the number of pharmaceutical products sold

Different classification – exact same cost

Changing Cost Structures in Newspapers – Print Media

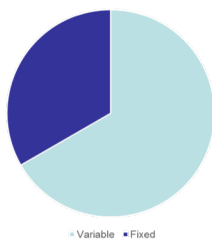


High variable costs in the New York Times:
 ✓ Raw materials (newsprint, ink, etc.) – \$230 million
 ✓ Labour running the presses and delivering the paper – \$414 million
 ✓ Total \$644 million (estimate)

Print Media



Cost structure



Changing Cost Structures in Newspapers – Online News

IN
REAL LIFE



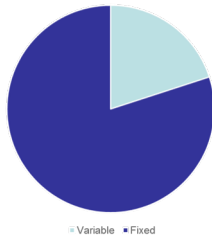
Higher fixed costs:

- ✓ installation and maintenance of satellite systems,
- ✓ cellular towers
- ✓ fiber-optic cables
- ✓ network switches
- ✓ advertising and “value-added” services – for example, editorials, rent, sensational news...

Online Media

IN
REAL LIFE

Cost structure



2. Classifying Costs according to *Traceability*

- Costs are **direct** or **indirect** depending on whether they can be traced to a cost object
- **Cost objects** are the items for which management wants a separate measure of costs
 - Traditional costing systems - products, projects, contracts and departments
 - Modern costing systems - activities, customers and suppliers as cost objects

Direct and Indirect Costs

- **Direct cost** - can be traced to a cost object in an economic manner
 - There is *clear and observable relationship* between the cost and the cost object
 - Easy to calculate the cost
- **Indirect cost** – cannot be traced to the cost object in an economic manner
 - Because the cost has no direct relationship with the cost object, it has to be apportioned or allocated

Direct and Indirect Costs of Your Textbook



- **Direct Costs**
 - Paper
 - Wages of factory workers
- **Indirect Costs**
 - Glue
 - Salary of forklift driver or production supervisor



How to Classify a Cost according to Traceability...

1. Identify the cost object – what do you want to know the cost of?

2. Is there a clear, observable and easily calculable relationship between the cost and this cost object? – do the benefits of tracing it outweigh the costs?

3. If yes – direct; If no – indirect



Therefore.....

Key Point

Whether a cost is classified as direct or indirect depends on the nature of the cost object

- Do we wish to know the cost of a department, a product, a project or an entire company?
- A cost can be a direct cost of one cost object and an indirect cost of another cost object

Research Cost - \$1.5 million – Pharmaceutical Company



Depends on the cost object:

- Research Department = direct cost
- Production Department= indirect cost

Different classification – exact same cost



Funding of Indirect Costs in USAID

Important to distinguish between
direct and indirect costs.



IN
REAL LIFE

Direct costs:

- ✓Labour
- ✓Travel
- ✓Materials and supplies

Indirect costs:

- ✓Staff development
- ✓Resource mobilization
- ✓Advertising
- ✓Financial audits
- ✓Information technology

Lecture Illustration 1: Cost Classifications



Classify the cost items in the following table as: a) fixed or variable with respect to production volume; b) direct or indirect in relation to the **product**.

	Fixed or Variable	Direct or Indirect
Seats used to produce motor vehicles		
Production manager's salary		
Hourly rates of labourers' assembling a product		
Electricity to operate production machines		
Cleaning wages		
Clay used to manufacture bricks		
Rent on a factory building		
Wood used to produce skis		
Glue used to produce furniture		
A production supervisor's salary		
Cloth used to make a suit		
Depreciation of cafeteria equipment		

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3. Classifying Costs According to Controllability

- Managers' performance evaluation can be enhanced by classifying responsibility centre costs as either controllable by the manager or uncontrollable
- Ideally, managers should be held responsible only for costs they can control or significantly influence
- Some costs are controllable in the long term but not in the short term



Responsibility Centres

- A responsibility centre is a unit of an organisation where the manager is held accountable for the unit's activities and performance
- The costing system may measure the costs of managers' individual areas of responsibility
- Responsibility accounting – holding managers accountable **only** for the costs that they are directly responsible for

Key Point

Examples of Controllable and Uncontrollable costs

Cost item	Manager	Classification
■ Cost of raw material used to produce circuit boards in an Asus factory	■ Supervisor of the production department for circuit boards	■ Controllable (quantity is controllable, but the price probably is not)
■ Cost of food used in a McDonald's restaurant	■ Restaurant manager	■ Controllable (quantity is controllable, but the price probably is not)
■ Cost of national advertising campaign for the Hertz car-rental company	■ Manager of the Hertz rental agency at Sydney airport	■ Uncontrollable (under the control of head office marketing manager)
■ Cost of national accounting and data-processing operations for the National Australia Bank	■ Manager of the National Australia Bank branch in Katherine, Northern Territory	■ Uncontrollable (under the control of head office managers)

Research Cost - \$1.5 million – Pharmaceutical Company



Depends on the manager:

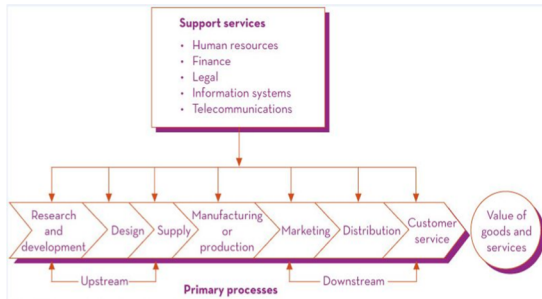
- Research Manager = controllable
- Maintenance manager = uncontrollable

Different classification – exact same cost

4. Classifying Costs according to their *Position in the Value Chain*

- **The value chain:**
 - A set of linked processes or activities that begins with acquiring resources and ends with providing and supporting products and services that customers value
- **Various cost classifications within the value chain:**
 - Upstream, downstream and manufacturing costs
 - Allows managers to focus on each stage of the organisation's activity separately and make decisions related to each stage, for example, whether to outsource.

Costs across the Value Chain



Upstream Costs

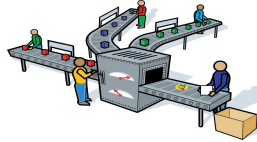
- **Research and development costs** include the costs involved in developing new products and processes
- **Design costs** include the costs associated with designing a product or production process
- **Supply costs** are the costs of sourcing and managing incoming parts, assemblies and supplies

Downstream Costs

- **Marketing costs** are the costs of selling products and the costs of advertising and promotion
- **Distribution costs** are the costs of storing, handling and shipping finished products
- **Customer service costs** are the costs of serving customers, including after-sales service

Manufacturing Costs

- Manufacturing costs are incurred *within* the factory area
- Traditional product costing - only manufacturing costs are included in product costs
- Modern costing systems - product costs include an allocation of upstream and downstream costs



Research Cost - \$1.5 million – Pharmaceutical Company



Upstream

Different classification – exact same cost

Direct Manufacturing Costs

- **Direct material:**
 - Physically incorporated into the finished products
 - Can be traced to products in an economic manner
 - A variable cost
- **Direct labour:**
 - The cost of wages and labour on-costs for personnel who work *directly* on the manufacture of a product
 - On-costs include payroll tax, insurance, superannuation etc.



Indirect Manufacturing costs

- **Manufacturing overhead**

-or indirect manufacturing costs or factory burden

- ✓ indirect material
- ✓ indirect labour
- ✓ depreciation
- ✓ insurance on factory equipment
- ✓ utilities
- ✓ manufacturing support department costs
- ✓ overtime



Combining Manufacturing Costs

- **Conversion costs**

- The total of direct labour cost and manufacturing overhead cost
 - The cost of converting material into a product

- **Prime costs**

- The total of direct material cost and direct labour cost
 - The major cost associated with producing a product

$$\text{Manufacturing Cost} = \text{DM} + \text{DL} + \text{MOH}$$

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5. Classifying Costs according to *Timing*

- a) **Product costs:**

- A cost that is assigned to goods that were either manufactured or purchased for resale
 - Used to value inventory and cost of goods sold in the balance sheet and income statement
 - The product cost is regarded as an asset or inventoriable cost until the good is sold

- b) **Period costs**

- All costs that are not product costs
 - Selling and administrative expenses
 - Expensed in the period in which they are incurred rather than passing through various stages of inventory
 - In service firms, all costs are period costs

Research Cost - \$1.5 million – Pharmaceutical Company



Period

Different classification – exact same cost

Research Cost - \$1.5 million – Pharmaceutical Company



- Fixed
- Direct/Indirect
- Controllable/
Uncontrollable
- Upstream
- Period

Different classification – exact same cost

Illustration II: Cost Classifications

The cost data in the following page refers to 2017 and relates to Heartstrings Pty. Ltd., a greeting card manufacturer.

Required:

Calculate each of the following:

- a. Total prime costs;
- b. Total manufacturing overhead costs;
- c. Total conversion-costs;
- d. Total product costs;
- e. Total period costs.

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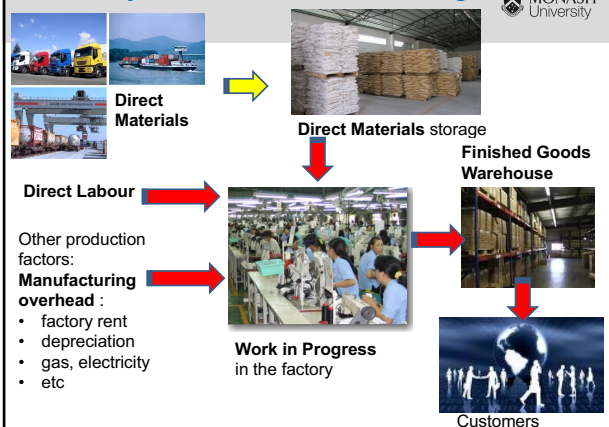
Lecture Illustration 2: Cost Classifications



		Prime costs	MOH costs	Conversion costs	Product costs	Period costs
Direct material used in production	\$550,000					
Advertising expense	\$60,000					
Depreciation on factory building	\$57,500					
Direct labour: wages	\$242,500					
Indirect labour: wages	\$70,000					
Production supervisor's salary	\$22,500					
Service-department costs	\$50,000					
Direct labour: fringe benefits	\$47,500					
Indirect labour: fringe benefits	\$15,000					
Fringe benefits for production supervisor	\$4,500					
Total overtime premiums paid	\$27,500					
Cost of idle time	\$20,000					
Administrative costs	\$75,000					
Rental of office space for sales personnel	\$7,500					
Sales commissions	\$2,500					
Promotion costs	\$5,000					
Total costs						

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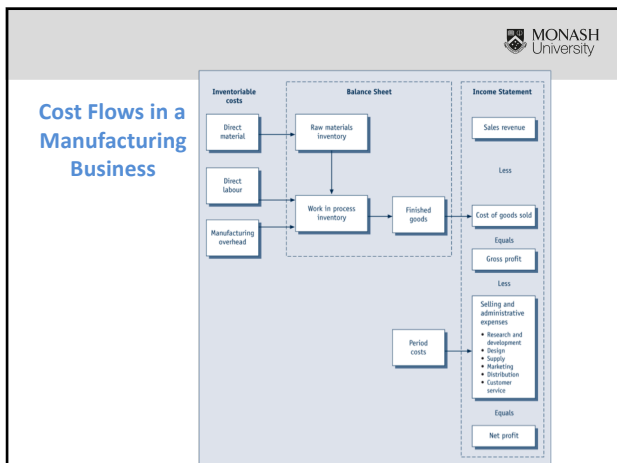
Physical Flows in Manufacturing



Timing of Product Costs in Manufacturing Business



1. Material is purchased: the cost is added to *raw materials inventory*
2. Direct materials are consumed in production: cost is removed from *raw materials inventory* and added to *work in process inventory*
3. Direct labour and manufacturing overhead are accumulated in *work in process inventory*
4. Products are completed: costs are transferred from *work in process inventory* and added to *finished goods inventory*
5. Products are sold: costs are transferred from *finished goods inventory* to *cost of goods sold expense*
6. Cost of goods sold is deducted from sales revenue to determine gross profit



Costing the Flow of Manufacturing

- Raw materials, work in process and finished goods inventory balances are reported in the *balance sheet*
- Cost of goods sold expense can be found in the *income statement*
- The *schedule of cost of goods manufactured* and schedule of cost of goods sold summarise the flow of manufacturing costs

Rings Percussion Instruments Schedule of Cost of Goods Manufactured for the year ended 31 December			
Direct material:			
Raw material inventory, 1 January	\$ 10 000		
Add Purchases of raw material	100 000		
Raw material available for use	110 000		
Deduct Raw material inventory, 31 December	5 000		
Raw material used		105 000	
Direct labour		200 000	
Manufacturing overhead:			
Indirect material	8 000		
Indirect labour	17 000		
Depreciation on factory	50 000		
Depreciation on equipment	20 000		
Electricity	15 000		
Insurance	5 000		
Total manufacturing overhead		115 000	
Total manufacturing costs		420 000	
Work in process inventory, 1 January		25 000	
Subtotal		445 000	
Deduct Work in process inventory, 31 December		20 000	
Cost of goods manufactured		\$425 000	
Schedule of Cost of Goods Sold for the year ended 31 December			
Finished goods inventory, 1 January		\$ 80 000	
Add Cost of goods manufactured		425 000	
Cost of goods available for sale		505 000	
Deduct Finished goods inventory, 31 December		70 000	
Cost of goods sold		\$435 000	
Income Statement for the year ended 31 December			
Sales revenue		\$700 000	
Less Cost of goods sold		435 000	
Gross profit		275 000	
Selling and administrative expenses		100 000	
Profit before taxes		175 000	
Income tax expense		40 000	
Net profit		\$ 135 000	

Illustration 3: Cost Flows



The following accounting information is available for MedCo, Inc.. The information refers to January 2017.

Purchase of raw materials	\$90,000			
Raw materials inventory, January 1	10,000			
Raw materials inventory, January 31	17,000			
Depreciation, factory	42,000			
Insurance, factory	5,000			
Direct labour cost	60,000			
Maintenance, factory	30,000			
Administrative expenses	70,000			
Sales revenue	450,000			
Factory utilities	27,000			
Factory supplies	1,000			
Selling expenses	80,000			
Indirect labour	65,000			
Work in process inventory, January 1	7,000			
Work in process inventory, January 31	30,000			
Finished goods inventory, January 1	10,000			
Finished goods inventory, January 31	40,000			

Prepare the following information using the templates provided:

- Schedule of Cost of Good Manufactured;
- Schedule of Cost of Goods sold;
- Statement of Financial Performance.

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Illustration 3: Cost Flows



Schedule of Cost of Goods Manufactured

Direct material:	
Inventory, 1 January	
Add raw materials purchases	
Material available for use	
Less Inventory, 31 January	
Raw material used	
Direct Labour	
Manufacturing overhead:	
Indirect labour	
Depreciation, factory	
Maintenance, factory	
Utilities, factory	
Insurance, factory	
Supplies, factory	
Total manufacturing overhead	
Total manufacturing costs	
Add WIP inventory, 1 January	
Less WIP inventory, 31 January	
Cost of Goods Manufactured (COGM)	

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Illustration 3: Cost Flows



Schedule of Cost of Goods Sold

Finished Goods inventory, 1 January	
Add COGM	
Less Finished Goods inventory, 31 January	
Cost of Goods Sold (COGS)	

Statement of Financial Performance

Sales revenue	
Less COGS	
Gross profit	
Selling expenses	
Administrative expenses	
Net profit	

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Acknowledgement

Some slides contained in this presentation were adapted from:

Management Accounting: Information for managing and creating value 7e, Langfield-Smith, Thorne, Smith, Hilton
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