

Chapter 1

Identifying Costs

In this chapter we will be looking at how financial and management accounting differs. We will be looking at costs and how to analyse them. We will look at the basic classifications and the difference between them. We will look at material costs, labour costs and expenses. We will look at direct and indirect costs. We will also look at variable and fixed costs and we will see how to identify each.

If you have completed the Level 2 Bookkeeping Units you will have concentrated on **financial accounting**. Financial accounts are an historical record of a business' performance over a past period - usually one year - for the benefit of external users such as shareholders, employees, suppliers, bankers and authorities. Figures are mostly accurate to the nearest penny and estimations are not usually given. Financial accounts are required by law. They are used mainly by outside authorities such as HMRC (Her Majesty's Revenue and Customs) particularly in the calculation of tax. Financial statements are used by shareholders, suppliers and banks to see the financial situation of a business to decide on whether to invest in the company or lend money to it.

However, financial statements are of limited use to managers who will want to plan for the future. The financial data is purely historical and only shows what 'has been'. **Management accounts** analyse recent historical performance and usually include forward-looking elements such as sales, cash flow and profit forecasts. We shall see how the information used to produce the financial statements is further broken down to allow managers to make decisions for the future.

Of course, management accounts must be suitable for the type of manager for whom it is intended. The production manager will have no use for how much the business rates are, but will certainly want to know how much the labour costs are. Because of this, and because they are not a legal requirement, management accounts vary from company to company and each company may produce different accounts for use by different managers. However, the principles of management accounts remain the same.



Financial accounting is primarily concerned with reporting for the company as a whole. By contrast, managerial accounting has much more emphasis on individual parts of a company. A manager may be interested in product lines, sales regions, company departments or any other section of a company's activities that management finds useful. Financial accounting does require breakdowns of revenues and cost into sections of a business, but this is of

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secondary importance. In management accounting, providing information for the manager is the primary function and so it must be specific to the manager's needs.



Timeliness is often more important to managers than precision. If a decision must be made, a manager would rather have a good estimate now than wait a week for a more precise answer. A decision involving tens of millions of pounds does not have to be based on estimates that are precise down to the penny, or even to the pound. It has been suggested that as a general rule, accuracy to 1% is sufficient to make most planning decisions. So a company which has sales of £100 million per year will only require information accurate to the nearest £1 million.

Precision can be costly. You may be able to get precise figures in 2 months, but by that time the usefulness of the information for future planning will probably have passed. Opportunities for investment in the business may have long gone. Therefore, management accounts place less emphasis on precision than financial accounting. In addition, managerial accounting places considerable weight on non-monetary data. For example, information about customer satisfaction is of tremendous importance even though it would be difficult to express such data in monetary form.

With regard to management accounting, a company is completely free to do as much or as little as it wishes. No rules or regulations specify what is to be done, or, for that matter, whether anything is to be done at all. Since management accounting is completely optional, you must always ask the question "Is it useful?", rather than "Is it required?"

Management accounts can be used for **planning**. This will be where the activities and costs will be forecasted for future time periods.

They will be used for **decision making**. Decisions will be made on whether projects should go ahead based on the information provided.

They are also used for **control**. Managers will compare the actual results with those that were forecast.



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The main differences between management accounts and financial accounts are summarised below.

Financial Accounts	Management Accounts
<i>Financial Accounts describe the performance of a business over a specific period of time (usually one year).</i>	Management accounts can be prepared for any period according to the needs of the business. For example, many companies prepare daily information on sales and profit margins.
<i>Limited Companies (those registered at Companies House) are required by law to prepare and publish financial accounts. Other companies (such as sole traders) are required by law to keep details of income and expenditure.</i>	There are no legal requirements to keep management accounts (although few businesses can survive without them).
<i>The published financial accounts must follow set formats set by different regulatory bodies.</i>	There is no set format of management accounts. They can be as brief or as detailed as management wishes.
<i>Financial Accounts concentrate on figures for the company as a whole. For example, sales will be collected from all departments and published as a single aggregated figure.</i>	Management Accounts focus on specific areas of a business's activities. For example, the costs of a single product.
<i>Financial Accounts report only monetary information.</i>	Management Accounts report monetary information but will usually include non-financial data. For example, there may be an analysis on the number of employees or the volume of sales.

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Costing

One element of management accounts is costing (or 'cost accounting' to give it its full title). Management will need to know what it costs to produce something or to provide a certain service. They will need to know this so that they can make plans for the future. They will need to know at what price to sell the goods or services in order to make a profit. They will need to know what materials to buy and at what price. They will need to know how many staff they should employ. They will need to make decisions on which products to make and sell and which to stop making.

It may at first seem a simple exercise to find what it costs to make a certain product. It is easy to find the cost of a metre of wood or a tonne of steel. But what about paying the people who make the goods? We may have delivery costs to take into consideration. There will be the cost of rent and rates. There will be the cost of heating the factory or the cost of the electricity to run the machines. There may also be the cost of providing canteen facilities for the workforce. And so the list goes on.

All the elements are important. If we don't include all the elements, the result could be disastrous. Suppose we make a product with a tonne of steel at £150 per tonne. We decide to sell it for £200. On the face of it we can make £50 profit for each product. But then we get our electricity bill for £250. If we've only made one product, we will lose £200. We will need to know how many products we need to make and sell to cover the £250 electricity bill. We also need to know if the electricity we use will go up if we make more products and if so by how much. We need to know how long it will take to make so we can include the price of the labour. We need to know if there are other costs such as business rates, selling costs, buying costs etc. The bigger the business, the more information we will need.



If we have a large business, there will probably be managers for different areas of the business. However, the sales manager will not want to know the cost of the raw material, but he/she will need to know about delivery costs and selling price. The production manager, on the other hand will not be interested in the selling price, but he/she will be interested in the cost of raw material and labour costs.

For this reason, costs will need to be classified into those over which a manager has control and those which he does not.

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Cost classification

Costs are classified in several different ways

Classification by Element

Costs are firstly broken into three elements:

1. Materials
2. Labour
3. Expenses

Material costs are the costs involved in buying materials used in the business. It can be the raw material used in the production process. It can be the cost of the goods that are bought from the wholesaler. It can be the cost of the goods used within the business, such as stationery or the cost of the fuel for the delivery van. In general if it is tangible (touchable) it is a material cost.

Labour costs are the costs involved in paying your own staff. It may be the production staff who actually make the products or the staff in the administration office who produce the accounts or deal with invoicing. Your staff will probably get a basic wage or salary. Overtime is usually paid at a higher rate than basic and they may get a bonus from time to time as a reward for extra good work of some kind. Labour costs also include the extra costs involved in employing staff such as the employer's National Insurance contribution, or sick and maternity pay.

Remember that payments to people who are not your employees are not classed as labour costs. So, the person who comes once a year to maintain your factory machines or the person who comes to clean your windows each month is not classified under this heading (unless you actually employ them as part of your own staff).

Expenses are paid to keep the business running. This will include rent, telephone and heating. It can be payment for services such as cleaning and security. Basically, it is anything which does not fall into either of the other two categories.

LEARNING POINT!

Don't confuse 'expenses' in financial accounting with 'expenses' in costing. They have different meanings. For example, the cost of the photocopy paper is an 'expense' in financial accounting but can be a 'material cost' in costing.

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Income

The main source of income for a private business is usually the sale of the items or services. There are other sources of income but less common. These will include bank interest received, rent received from letting part of your premises, government grants, and private funds introduced.

Classification by nature

Costs may be divided by the nature of what the cost is for into **direct costs** and **indirect costs**.

Direct costs are those costs which can be directly associated with the product you are selling. If you are a business which makes and sells furniture the direct materials would include the wood to make the furniture. Direct labour would include the wages of the factory workers who actually make the furniture. Direct expenses are a little rarer but include maybe royalty payments to produce a particular design of goods, or maybe the design cost of a particular batch of tables. In any case the cost must be directly associated with each product.

For a cost to be a direct cost it must satisfy three criteria:

1. It must be essential for preparing the goods (or services) for sale. It will include the raw materials for making the product. It will include the labour costs involved in the production process (but see later). Basically, if you can produce the goods without this cost then it will **not** be direct. Remember that the direct cost is involved in getting the goods ready for sale; not just making them. Therefore items such as packaging will be included in direct costs as the goods will not be sold without packaging.

2. It must apply to each and every item produced. Overtime costs are therefore divided into two parts. There will be the basic element which will be the same as the regular time. This will be the direct cost as this cost applies to each and every product. The other part of the overtime is the **overtime premium**. This is the part over and above the basic time.



Overtime is usually paid at time and a quarter, time and a half, time and a third or even double time. Take an example of time and half with the regular pay at £10.00 per hour. Overtime will be paid at £15.00 per hour ($£10.00 \times 1\frac{1}{2} = £15.00$). The overtime premium will be the extra half ($£15.00 - £10.00 = £5.00$). If an employee works overtime, the £10.00 will be charged as a direct cost as this will apply to every item, while the overtime premium of £5.00 will be charged as indirect as this will apply to only some items.

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3. The cost must be identifiable in advance. For example, employees may be offered a bonus provided certain conditions are met. However, it is not certain in advance whether this bonus will be paid. Therefore, the bonus will be an indirect cost.

There is another condition which some businesses will apply.

4. The cost must be large enough to matter. Whether it is large enough will be determined by management. For example, if you supply food with a sprinkle of herbs, the herbs would ordinarily be a direct cost. But to measure the cost in a small business would be time consuming and probably cost more in buying the equipment to weigh such a small item than would be beneficial to the business in knowing what it cost per item.

Indirect costs are costs which are not associated with any particular product. Indirect materials may include paper to print the invoices, items of stationery and items of safety equipment. Small items as we saw in point 4 above will be indirect costs. This will include screws or glue, where the cost would be immaterial and probably too time consuming to allocate the costs as direct costs. What is classified as an indirect material cost because the cost is too small, will vary from company to company. You should always follow company policy on this.

Indirect labour will include payment to employees who do not actually make the products. This will include office staff and supervisors. The sales team and even the director's salary will come under indirect labour.

Indirect expenses include most other expenses. Electricity, water, telephone, rent, Council Tax, and insurance are some of the most common. It is any expense which is not directly associated with the production.

The total of the indirect costs is known as 'overheads'.

Classification by Behaviour

We can classify costs into **variable, semi-variable, stepped, or fixed.**

Variable costs vary in direct proportion to the number of products you make. In costing we call each item which is produced a **unit of output**. If we take an example of a furniture producer, the wood needed to produce the furniture is variable. We will need twice as much wood to produce two tables and 100 times as much to produce 100 tables.

Suppose the cost of the wood is £50 per table. To make two tables would cost

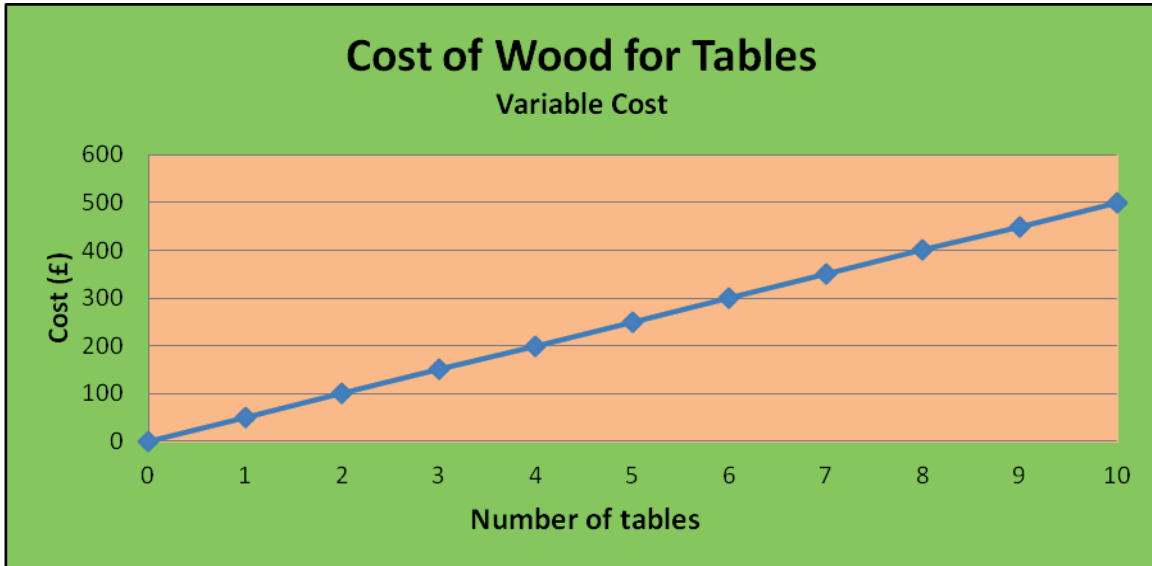
$$£50 \times 2 = £100$$

To make 100 tables would cost

$$£50 \times 100 = £5000$$

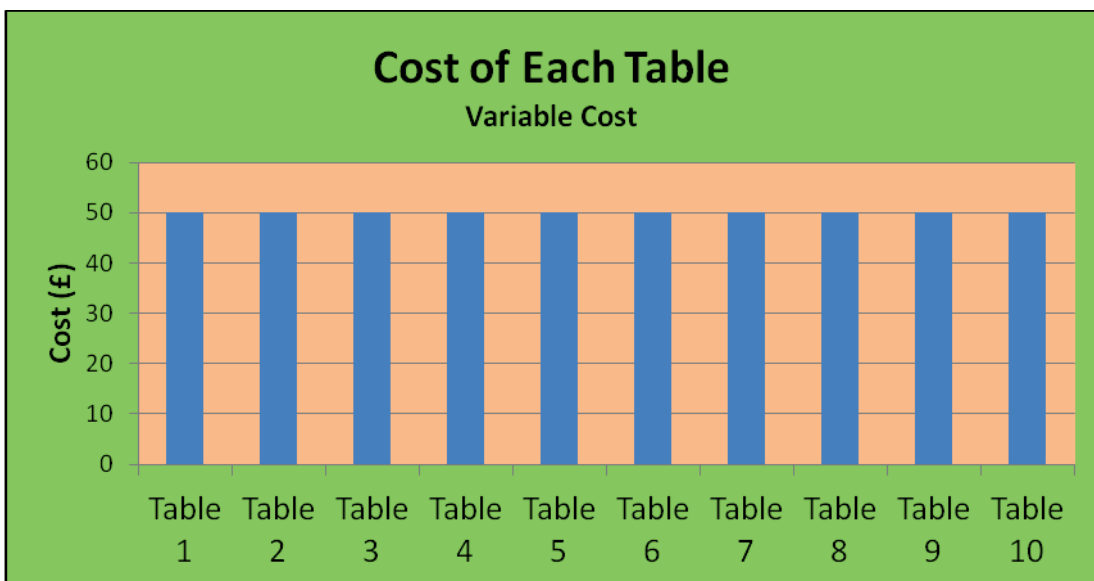
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If we put the costs on a graph you can see that the line starts with zero items costing zero pounds and the line increases with every unit of output.



The graph of a variable cost will always look like this with the starting point being zero cost for zero production and then a straight line showing exactly the same increase for every item.

You could use a chart to show the cost for each table. It would look like the chart below.

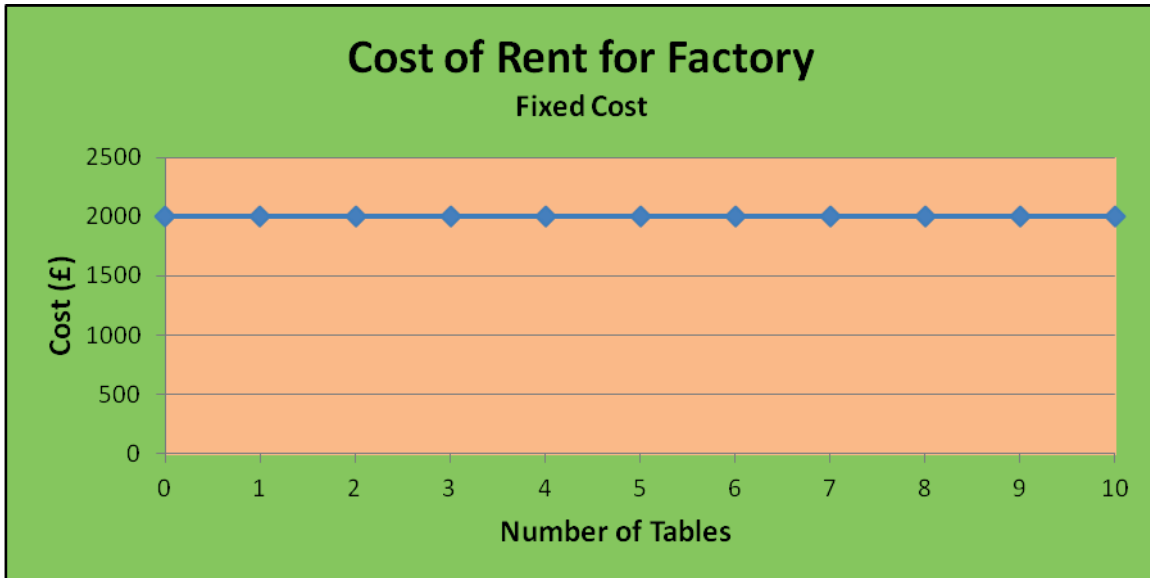


Each table will cost the same as any other table. Each table will cost £50. The variable cost **per table** remains the same.

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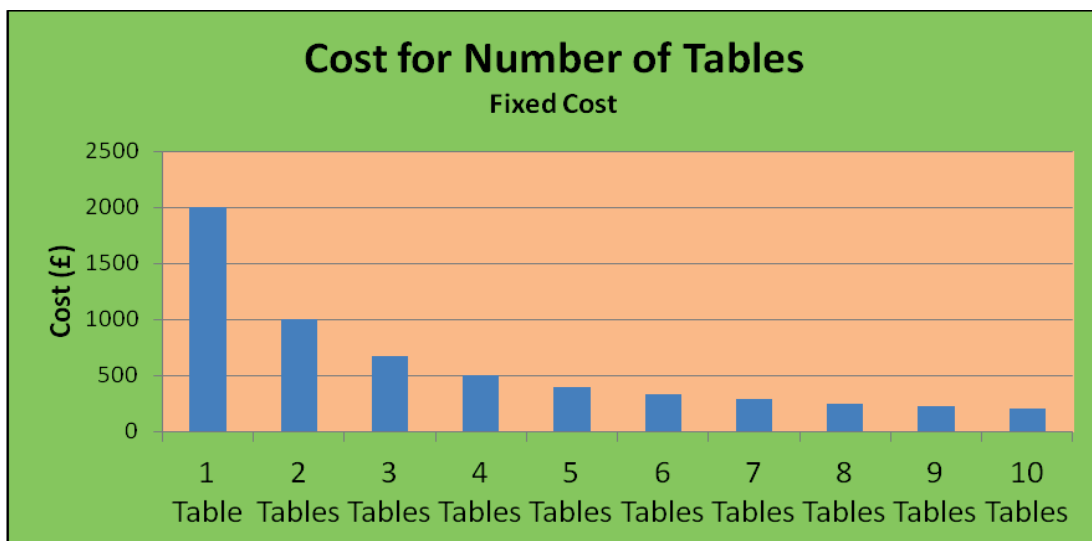
Fixed costs are costs which don't change however many items you produce. For example, the rent you pay for your workshop will not be any different if you make 1 item or 100 items. If the rent is £2,000 per month it will still be £2,000 whether you make 1 table 1,000 tables or even no tables at all.

If we show this on a graph it will look as follows:



For a fixed cost the cost will always be a horizontal line across the graph. However, if we look at the cost for each table, we can see that the cost **per table made** will decrease. For example, the rent needed to make one table is £2000, but the rent for each table if we made 2 tables would be £1000 - £1000 for each table. Similarly, if we made 4 tables the rent would be £500 for each table.

We can see how this would look on the chart below.



Each table would cost less in rent **per table** the more tables that were made.

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Employees are usually paid a fixed amount each week or month. This will be a fixed cost. However, it will become a semi-variable cost (see below) if a commission is paid as well or if overtime is paid.

You may not have come across **depreciation** in your studies yet. Depreciation reduces the value of a business asset due to:

1. Wear and Tear. For example, a car will decrease in value because of mileage, wear on tyres and the engine, and other factors.
2. Obsolescence. For example, the car will have less value as there are newer models in the marketplace.

The precise calculations for this will be covered in detail at Level 3, but for now you should know that the amount of reduction is a set percentage every year. There are different methods of calculating depreciation, but almost all methods are based on the cost of the asset and not the number of units produced. Therefore, depreciation will almost always be a fixed cost.

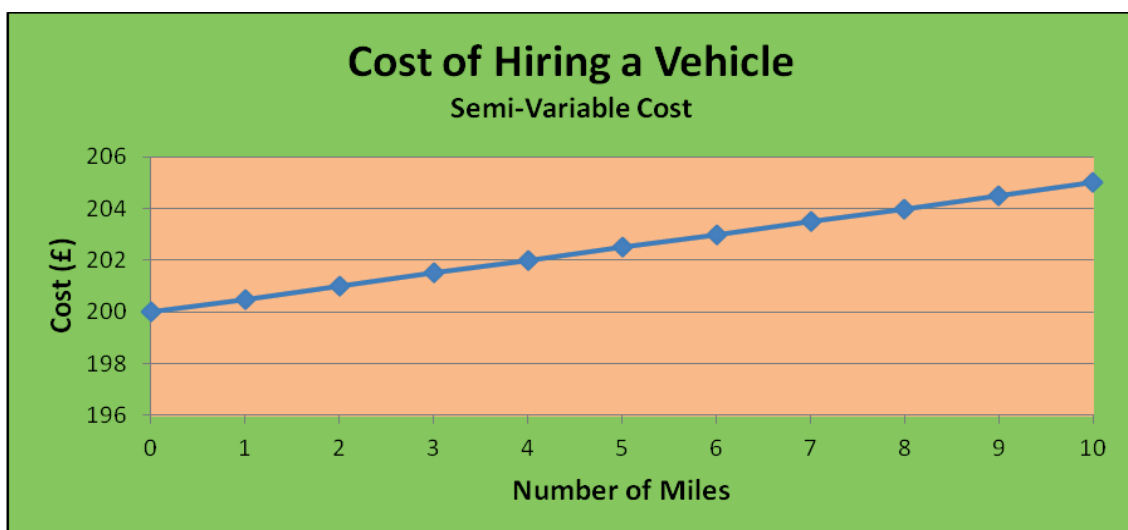
A **semi-variable cost** is a cost which has an element of both fixed and variable in it. You may rent a vehicle which has a basic cost or rental (the fixed element) and then a cost for each mile (the variable element).

Let us suppose that the fixed cost is £200 with an additional charge of 50p per mile. If you travelled zero miles it would cost £200. If you travelled 1 mile it would cost £200.50.

If you travelled 10 miles it would be

$$(10 \times £0.50) + £200 = £205$$

If we show this on a graph it will look as follows:



It looks very similar to the variable cost graph, but you will note that the zero miles does not start at zero cost.

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There are many examples of semi-variable costs. A mobile phone (on contract) will have a flat-rate monthly charge and a further charge for any usage which exceeds the agreed limit. The flat-rate is fixed in that you will be charged this amount whether or not you make any calls at all. The variable element will be a cost that changes, in that you will be charged for the minutes or data that you use over and above

the agreed limit.

Utility bills are often semi-variable. You will pay a standing charge. You will pay this whether you use any gas/electricity/water at all. Then there will be another (variable) charge for the actual amounts you have used.

A salesperson's salary will often be semi-variable. There will be the salaried component which will be a fixed amount each month, and then there will be a commission which will depend on the level of sales.

If we know the fixed costs of any semi-variable cost then we can find out the total variable costs by subtracting the fixed cost from the total cost.

$$\textit{Total cost - fixed cost = total variable cost}$$

Let us take an example. The total charge on a mobile phone bill was £50. The flat-rate charge is £30 per month. What is the total variable cost?

$$£50 - £30 = £20$$

We can then divide the £20 by the number of minutes to show the amount charged per minute.



We can work this the other way round. Suppose we know the charge for calls is 15p per minute and last month we made calls lasting 300 minutes. The total charge for the month is £65.

$$\textit{Total cost - total variable cost = fixed cost}$$

So in our example

$$300 \text{ minutes at } 15\text{p} = £45$$

$$£65 - £45 = £20$$

So the standing charge (fixed cost) is £20 per month.

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(Of course it's likely to be a little more complicated than this as there will be texts and data downloads at different rates as well as free minutes, but the example will show you the basic method.)

Finally, the **stepped cost** is one where the cost is fixed up to a certain level and then is fixed again up to another level. For example, suppose your company has a policy of employing one supervisor for every ten production workers, in which case the firm will need one supervisor for 1–10 employees, two supervisors for 11–20 employees, and so on. The cost will not increase between 1 and 10 workers, but will increase if 11 workers are used. Again, the cost will not increase between 11 and 20 workers, but should 21 workers be used, then the cost will go up again.

Suppose each supervisor is paid a £20,000 salary.



As you can see the costs go up in steps.

Identifying Cost Behaviour

It's important to recognise whether a cost is fixed, variable, semi-variable or stepped if it is to be useful in predicting costs. You would give a very inaccurate cost figure if you got it wrong.

It may help to give some examples of each. The list is endless but here are a few examples

Variable costs

- The materials used in making a product.
- For a delivery business, the cost of the fuel for the delivery vehicle.

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- For a bus company, the cost of the fuel.
- For a restaurant, the cost of the vegetables.
- For a restaurant, the number of serviettes.
- The packaging in which the product will be displayed.
- Commissions paid to sales staff.
- The cost of the wages paid to production staff.
- Credit card fees (a business will be charged a percentage of the sales value if it accepts credit cards as payment).

Fixed costs

- Rent.
- Council Tax.
- Advertising.
- Director's salaries.
- Electricity (usually).
- Leased equipment charges.
- Software
- Depreciation (in almost all cases)

Semi-variable costs

- Sales staff paid a commission plus a flat rate.
- In a delivery business, the cost of hiring a vehicle with a flat charge plus a price per mile.
- Telephone costs in a retail business. There will be a flat charge plus a cost for each call, so when the sales increase the phone calls will increase.

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- Metered electricity for the production machines. There will be a basic charge and then a cost per unit of electricity used.

Stepped Costs

- The cost of employing a supervisor where there will be (say) 1 supervisor for every 10 factory operatives.
- Warehouse storage, where a new storage unit is needed at (say) 1000 units, 2000 units, 3000 units etc.

LEARNING POINT!

Don't confuse 'direct costs' with 'variable costs' and 'indirect costs' with 'fixed costs'. It is true that many fixed costs will be indirect and many variable costs will be direct, but they are not always.

Classification by Function

As well as production, costs will be incurred in other areas of the business. This will be classification by function. There may be the **administration** department, the **distribution** department or the **finance** department. Costs must be taken into account in all areas, but those not involved in production will always be indirect costs.

Product Costs and Period Costs

There are two further categories of costs. A **product cost** is one which is directly linked to the production of a product or service. A manufacturer would include the raw materials and the cost of the staff who actually make the product as product costs. Any overheads which were linked directly to the production would be a product cost.

By contrast there are **period costs**. These costs are not linked directly to production. Advertising and administration costs would fall into this category. Audit fees and office rent would also be classed as period costs.

As a guide to remembering which is which, consider a company factory and a separate company headquarters. The product costs will be incurred in the factory (direct materials, direct labour and manufacturing overheads), while the period costs would be incurred in the headquarters (marketing costs, administration costs and indirect staff costs).

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Chapter Summary

- Management accounting is different from financial accounting.
- Costs are analysed as materials, labour or expenses.
- Costs can be analysed as direct or indirect
- Costs can be analysed as variable, fixed, semi-variable or stepped.
- Variable costs increase in proportion to the number of units produced
- Fixed costs remain the same no matter how many units are produced.
- Fixed costs **per unit** decrease as the same costs are spread between more and more units.
- Semi-variable costs can be split into their fixed and variable elements by using the high/low method.

Practice Questions

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1.1

Briefly explain the difference between financial accounting and management accounting.

Answer

1.2

Which of the following are you likely to see in management accounts and which in financial accounts

- a) A record of all the sales made in a particular day.
- b) Calculating all of last year's material costs.
- c) Calculating the cost of a new product due to be launched next month.
- d) Estimating the number of products which will be sold next month.
- e) Recording the number of products sold last month.
- f) Allocating costs to different parts of the business.

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1.3

By completing the table below, say whether the following expenditure is:

- a) Material Cost.
- b) Labour Cost.
- c) Expenses.

	Material Cost	Labour Cost	Expenses
Gross wages paid to the administration office staff			
Payment to the repairs and maintenance company for their staff to maintain the production machines			
Fuel for the delivery van used to deliver the goods to the customer			
The shampoo used by the hair stylist			
The production supervisor's wages			
The cost of the train fare to attend an important meeting in Liverpool			
The cost of the herb sprinkle on the ready meals which will be sold frozen to the supermarket			
The cost of heating the administration offices			
Sick pay paid to the production staff			
The cost of the cleaning solution used in your trade as an office cleaning company			
The cost of the cleaning solution used in your trade as a car salesman			
The cost of hiring a special machine to fulfil a special order			

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1.4

Complete the table again, this time identifying the cost as

- a) Direct
- b) Indirect

	Direct Cost	Indirect Cost
Gross wages paid to the administration office staff		
Payment to the repairs and maintenance company for their staff to maintain the production machines		
Fuel for the delivery van used to deliver the goods to the customer		
The shampoo used by the hair stylist		
The production supervisor's wages		
The cost of the train fare to attend an important meeting in Liverpool		
The cost of the herb sprinkle on the ready meals which will be sold frozen to the supermarket		
The cost of heating the administration offices		
Sick pay paid to the production staff		
The cost of the cleaning solution used in your trade as an office cleaning company		
The cost of hiring a special machine to fulfil a special order		

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1.5

Identify the following costs as variable, semi-variable, stepped or fixed.

	Variable	Semi-variable	Stepped	Fixed
The factory workers are paid a basic weekly wage. Overtime is paid most weeks according to the production required				
Supervision of factory staff is one supervisor for every 10 staff. Staff levels vary throughout the year and supervisors are hired on a monthly contract				
The raw material for the production department is bought according to production requirements. All products use the same amount of raw material				
A contract has been given to a local company to maintain the production machines. The monthly payment is the same each month and covers a monthly check and any spare parts needed				
The phone bill is paid monthly. There is a standard charge for the line and a charge depending on the number of calls				
The business rate is paid in equal monthly instalments				

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	Variable	Semi-variable	Stepped	Fixed
Stock is stored at a local warehouse. Space at the warehouse is rented per 100 cubic metres. We can store up to 100 units in 100 cubic metres. Stock levels vary between 1000 and 2000 units throughout the year				
Administration staff are paid a basic wage. Overtime is not offered to these staff				
The directors have just been awarded a 2% pay rise. They are paid their salary in 12 equal instalments				
Paint is bought at 1000 litres at a time. It is used in equal quantities on the products				