

# Cambridge National in Enterprise & Marketing (J819)

## R064 Enterprise & Marketing Concepts

### LEARNING OUTCOME 2

What makes a product or service financially viable?



## Introduction

This booklet introduces the theory you will need to revise for your R064 exam. The exam is worth 50% of your overall grade for this course. If you have not yet submitted your coursework for the other two required units, you may also find some of this theory useful for your project work. Links to the other two units, where applicable, are shown in green on the right-hand side of each section title.

R066 Task 1



Whether you're taking your exam (or resit) in the January or June series, try your best and good luck!

## Costs

R065 Task 5



Costs are the things businesses need to pay for. There are lots of things businesses need to pay for; some costs are directly related to manufacturing products, like raw materials, and some are more general bills like gas and electricity.

The costs businesses have to pay can be grouped as **fixed costs** or **variable costs**.

## Fixed Costs

R065 Task 5



Fixed costs are the costs businesses have to pay that do not change based on output; which means these costs stay the same no matter how much of a product or service the business makes or provides.

For example, factories often have to pay rent on their premises. This rent costs the same each month no matter how many products a factory produces. Rent, therefore, is considered to be a fixed cost. So, if a factory's rent is £1,000 per month, it will be £1,000 per month if they produce 15,000 products or if they produce nothing at all – the costs does not change based on the factory's output.

In addition to **rent**, other fixed costs can include:

- Loan repayments
- Insurance
- Advertising
- Salaries
- Utilities (gas, electricity, water, telephone, Internet)
- Website maintenance



**Tip:** Revise the difference between fixed and variable costs and learn some of the main examples off by heart.

## Variable Costs

R065 Task 5



Variable costs, on the other hand, do change based on the business's output. Some costs will change depending on how many products or services a business provides. These costs will increase when the business produces more.

For example, a factory that produces wooden furniture will be buying more wood (their raw material) if they produce more furniture. If they produce no furniture, the cost of their raw material would be £0 because they haven't used any! This cost varies depending on the output of the furniture factory so is classed as a variable cost.

In addition to **raw materials**, variable costs often include:

- Stock
- Packaging



Variable costs is usually given per unit. To get a total, multiply this by how many units the business makes/sells.

## Total Costs

A business's total costs are calculated by:

$$\text{Fixed Costs} + \text{Variable Costs}$$

In the case of the furniture factory mentioned earlier, they have the following costs per month:

### Fixed Costs

- Rent: £1,000 per month
- Insurance: £100 per month
- Salaries: £1200 per month
- Electricity: £150 per month
- Gas: £50 per month

**Total Fixed Costs:** £2,500 per month

### Variable Costs

- Wood: £12 per product
- Packaging: £4 per product
- Screws etc: £2 per product

So, variable costs of **£18 per product**

**Variable Costs for 500 products:** £9000

Therefore, their total costs are:  
 $£2,500 + £9000$   
**= £11,500**

The variable costs per product are multiplied by how many products are made.

## Revenue

Revenue is the name given to the money a business makes from selling its products or services. It is the total money coming in to the business from sales made – **it is not profit**, because the business still needs to deduct its costs from this money.

Revenue is calculated by:

$$\text{Selling Price} \times \text{Number of Sales}$$

So, in the case of the furniture factory, if it sells its products for £25 each and sells 500 per month, its revenue would be £25 multiplied by 500 giving a total revenue per month of £12,500.

## Profit

Profit is the money left over from the revenue a business has made after costs have been deducted (paid). Some businesses calculate their **profit per unit**, which means the profit it makes when it sells just one product. This is calculated by:

$$\text{Selling Price per Unit} - \text{Total Costs per Unit}$$

Businesses can also calculate their **total profit** for a given number of products. This can be calculated by:

$$\text{Sales Revenue} - \text{Total Costs}$$

## Break-even

Break-even is the term given to the level of output (amount of products) where total revenue is equal to total costs. So basically, it's the point at which a business does not make a profit, but doesn't make a loss either. The break-even point is shown as a number of products (units) and, if businesses calculate this number, they will understand the amount of products they need to produce/sell in order to start making a profit – it's a minimum target they will be aiming for - no businesses want to make a loss.

When total revenue matches total costs, the business will **break-even**.



In the example above, the break-even point for this business would 1000 units. They need to sell 1000 products in order to break-even and, when they do sell 1000, they won't be making a loss or a profit.

## Break-even Formula

The formula used to calculate the break-even point is:

$$\frac{\text{Fixed Costs}}{\text{Selling Price per Unit} - \text{Variable Cost per Unit}}$$

In the previous example, their break-even calculation would look like this:

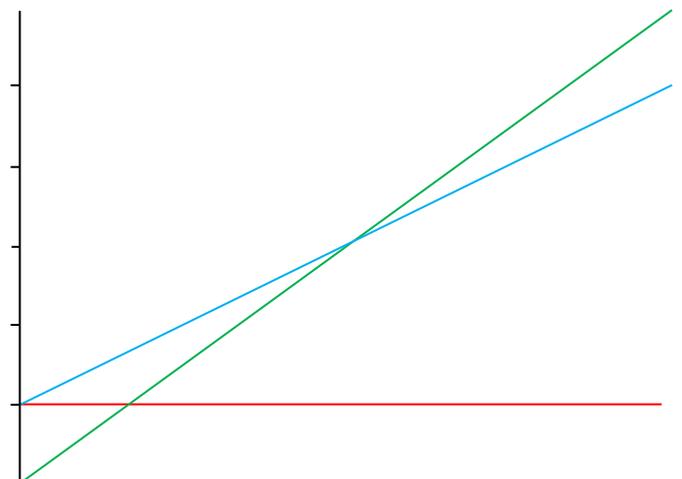
$$\frac{10,000}{50 - 40} \rightarrow \frac{10,000}{10} \rightarrow 1,000$$

## Break-even Graphs

Break-even can also be worked out and displayed using a graph. The graph has two axes. The X axis is pounds and the Y axis is number of products (output).

The graph will have three lines plotted. These are:

- **Fixed Costs** – this will be a straight line, as fixed costs do not change. Even when 0 products are made/sold, the fixed costs will still need to be paid.
- **Total Costs** – this line starts where the fixed costs line does (can't be lower than fixed costs).
- **Sales Revenue** – this line always starts at 0 because if you sell no products, you make no revenue.

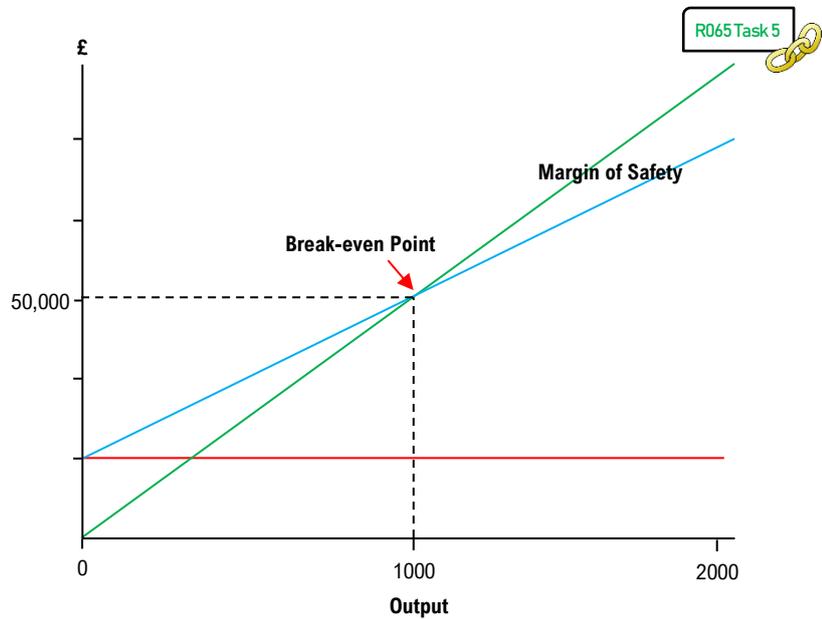


## Interpreting a Break-even Graph

The point at which the line for total costs and the line for total revenue crosses will be the business's break-even point.

Trace this point down to the output axis (using a dotted line) to highlight the business's break-even point, in this case 1000 units (products).

The zone on the graph after the break-even point is known as the **margin of safety**, where the business will be making a profit.



## How Break-even is Used

As previously mentioned, it is important for businesses to calculate their break-even point. If they don't know what to aim for in terms of unit sales, then they may find out at the end of a trading period (month/year) that they have made a loss. A loss is never a good thing for a business.

Businesses can set sales targets using their knowledge of their break-even point. They can also react and make changes if they think their break-even point is too high. For example, a business could try to cut its fixed costs in order to reduce its break-even point or trial a price change (if their selling price is higher, their break-even point will be lower, they will need to sell less in order to break-even).



## Time to Revise!



1. Explain the term revenue. How is revenue different to profit?
2. What is the formula to calculate a business's break-even point?

Fixed costs per month: £1,500	Variable cost per unit: £0.40
Units sold each month: 300	Selling price per unit: £1.90

3. Use the above information about a hot-dog stand to calculate their total costs per month, profit per unit, profit per month and monthly break-even point.

## L02 Revision List

- I can explain what fixed costs are and give examples.
- I can explain what a variable cost is and give examples.
- I know how to calculate total costs.
- I understand what revenue is and how to calculate it.
- I understand what profit is and how to calculate both profit per unit and profit for a given output.
- I know the formula for working out the break-even point.
- I can explain the contents of a break-even graph.