

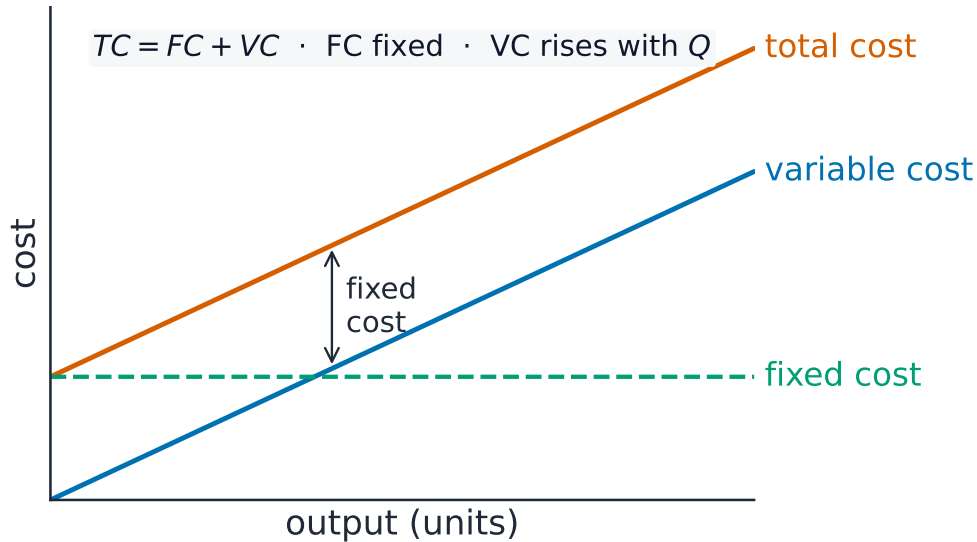
Exercise walk-through

5.4

Costs

A-Level Business

Costs



total cost = fixed + variable.

- **fixed** (rent) vs
- **variable** (materials)
- **direct** vs
- **indirect** (overheads)

How costs are classified, and why

a cost

money the business spends to make its product

fixed and variable

fixed do not change with output; variable rise with each unit made

direct costs

traceable to one product – the materials in it, the labour on it

indirect costs

overheads not linked to one product – manager salaries, rent, insurance

average cost

total cost divided by output – the figure that falls with economies of scale

why classify at all

cost information helps managers **set prices, choose what to make, and control spending**

The same cost can be fixed *and* indirect, or variable *and* direct. The two classifications answer different questions and are not alternatives.

Break-even analysis

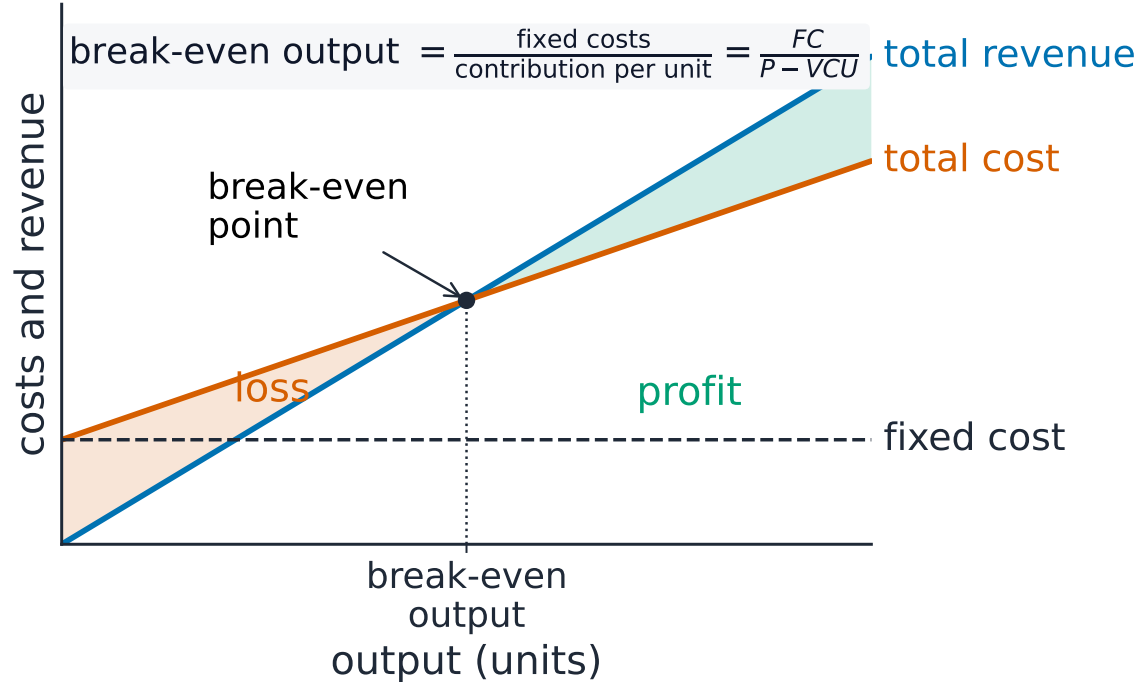
Contribution = price – variable cost.

$$\text{BEP} = \frac{\text{fixed costs}}{\text{contribution}}.$$

Price £20, VC £12, FC £40,000

contribution £8 $\Rightarrow$ BEP = 5000 units

Break-even analysis, in detail



The break-even point is where total revenue equals total cost – left of it is loss, right of it is profit

Costs, and what break-even cannot tell you

Variable costs

Variable costs rise and fall with output – raw materials, piece-rate wages.

Marginal cost

Marginal cost : the cost of making *one more* unit, which is what a pricing decision at the margin turns on.

Favourable variance

A **favourable variance** is better for profit – costs lower, or revenue higher, than the budget planned.

Limitations

Break-even's **limitations** : it assumes the selling price and the costs stay the same, and that everything made is sold.

It is a planning tool, not a forecast. Its answer is exactly as good as the two straight lines it draws.

Exercises 2.1-2.3

2.1 Define the term *fixed cost*.

[2]

2.2 A product sells for \$18 and has a variable cost of \$11. Calculate the contribution per unit.

[2]

2.3 State the difference between a *direct* and an *indirect* cost.

[2]

Exercises 2.1-2.3

2.1 Define the term *fixed cost*.

[2]

2.1

- a cost that does not change with the level of output, such as rent (2 for a clear definition; 1 for a partial idea)

2.2 A product sells for \$18 and has a variable cost of \$11. Calculate the contribution per unit.

[2]

2.2

- $\$18 - \$11 = \$7$ per unit (2; award 1 for a correct method with the wrong figure)

2.3 State the difference between a *direct* and an *indirect* cost.

[2]

2.3

- a direct cost can be clearly linked to one product (its materials); an indirect cost (overhead) cannot, e.g. a manager's salary (2 for a clear difference; 1 for a partial idea)

Exercise 3.1

3.1 Explain one limitation of break-even analysis.

[3]

Exercise 3.1

3.1 Explain one limitation of break-even analysis.

[3]

3.1

- [3] **AO1** 1 – state a limitation (assumes price and costs stay constant; assumes all output is sold; costs are not always neatly fixed/variable). **AO2** up to 2 – develop it, e.g. it assumes every unit made is sold
- but unsold stock means real profit is lower than the chart shows
- decisions can be misled (2 developed / 1 limited)

Exercise 3.2

3.2 A firm sells a product for \$25. The variable cost is \$15 per unit and fixed costs are \$50,000.

(a) Calculate the contribution per unit. [2]

(b) Calculate the break-even output. [2]

(c) The firm produces 7,000 units. Calculate the margin of safety. [2]

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3.2

(a)

Full solution 3.2

3.2

(a)

- $\$25 - \$15 = \$10$ contribution per unit (2)

(b)

- break-even = $\frac{50000}{10} = 5,000$ units (2; allow follow-through from

(a)

-)

(c)

- margin of safety = $7000 - 5000 = 2,000$ units (2; allow follow-through from

(b)

-)

Exercise 3.3

3.3 Evaluate the usefulness of break-even analysis to a small business.

[12]

Exercise 3.3

3.3 Evaluate the usefulness of break-even analysis to a small business. [12]

3.3

- [12] **AO1** 2 / **AO2** 2 / **AO3** 2 / **AO4** up to 6. **Useful:** quick and simple, shows the break-even point and margin of safety, helps set output and price targets, supports a loan application. **Limited:** assumes constant price and costs and that all output is sold; real markets change; it ignores quality and competition. **Judgement:** a useful planning tool for a small firm, especially at start-up, but its assumptions are unrealistic, so it should guide decisions, not make them alone – its value depends on how stable the firm's prices and costs are