

## Economics of business case questions

### Chapter 4

#### P80 Business insight

1. **A business buys 200 units of materials at £5 each on credit. It sells 40 of them for £9 each in cash. The labour cost per unit is £2 paid in cash.**

As a result of these transactions what is:

- The level of profits? Revenue =  $40 \times £9 = £360$ . Costs =  $40 \times £(2+5) = £280$ . Profit = revenue - costs =  $£360 - £280 = £80$
- The cash position of the business? Cash inflow =  $40 \times £9 = £360$ ; cash outflow =  $40 \times £2 = £80$ ; net cashflow =  $£360 - £80 = £280$
- The stock level of the business? 200 units purchase; 40 used; 160 left in stock

2. **A business buys 200 units of materials at £5 each in cash. It sells 40 of them for £9 each on credit. The labour cost per unit is £2 paid in cash.**

As a result of these transactions what is:

- The level of profits? Revenue =  $40 \times £9 = £360$ . Costs =  $40 \times £(2+5) = £280$ . Profit = revenue - costs =  $£360 - £280 = £80$
- The cash position of the business? Cash inflow =  $40 \times £9 = £360$ ; cash outflow =  $(40 \times £2) + (200 \times £5) = £1080$ ; net cashflow =  $£360 - £1080 = -£720$
- The stock level of the business? 200 units purchase; 40 used; 160 left in stock

#### P81 Quick questions

##### 4.1 Quick check

**For each of the following statements, say whether it is true or false.**

- A business buys 20 units of a product for £6 each on credit. The cash outflow is 0. TRUE
- A business buys 20 units of a product for £6 each on credit and uses them all up. The cost in accounting terms is 0. FALSE
- A business buys 20 units of a product for £6 each on credit and uses 5 of them up. The cost in accounting terms is £120. FALSE
- A business buys 20 units of a product for £6 each on credit and uses 5 of them up. The cost in accounting terms is £30. TRUE

#### P82 Business insight

To an economist A makes abnormal profit of £10, B makes a loss of -£10, C just covers its costs including opportunity cost so this is normal profit.

#### P83 Analysing the data

##### Questions

1. **Why do you think Marks and Spencer plc measures its costs in this way?**

To assess the performance of different divisions within the business.

2. **How might such data be useful to managers?**

Will help them assess how well a division is going ; this may determine the strategy of the business in the future

**P84 Doing the business maths**

Fixed costs are £100

Variable cost at 500 units are £1000

**P85 Quick questions**

**For each of the following statements, say whether it is true or false.**

- a. Fixed costs never change. FALSE
- b. When output is zero, total costs equal fixed costs. TRUE
- c. Total costs equals fixed costs plus variable costs. TRUE
- d. Profit equals total revenue minus total costs. TRUE

**P85 Business insight**

Questions

1. **What do you think will determine how suppliers respond to being asked to reduce their prices?**

Answers may include:

- scale of the order
- original price
- unit costs
- capacity
- alternative orders

2. **Should managers care about the effect that reducing the amount they pay to suppliers might have on those businesses?**

Answers may include:

- whether they have a sense of corporate social responsibility
- likely media reaction
- response of employees and investors

**P88 Doing the Business Maths**

Output	Revenue	Variable Costs	Fixed Costs	Total Costs	Profit/loss
10,000	200000	150000	150000	300000	-100000
20,000	400000	300000	150000	450000	-50000
30,000	600000	450000	150000	600000	0
40,000	800000	600000	150000	750000	50000
50,000	1000000	750000	150000	900000	100000

**P89 Doing the Business Maths**

Units	Price	VC per unit	Contribution	FC	Profit/loss
	£	£	£	£	£
10000	10	6	40000	120000	-80000
20000	10	6	80000	120000	-40000
30000	10	6	120000	120000	0
40000	10	6	160000	120000	40000
50000	10	6	200000	120000	80000

### P90 Quick questions

1. For each of the following statements, say whether it is true or false.
  - a. The break-even point occurs when total revenue equals total costs. TRUE
  - b. The break-even point occurs when price equals average costs. TRUE
  - c. The shut-down point occurs when total revenue equals fixed costs. FALSE
  - d. Profit equals total contribution minus variable costs. FALSE
  - e. Break-even can be calculated using the equation fixed costs / contribution per unit. TRUE

### P90 Doing the Business Maths

If the price per unit and the variable cost per unit are constant, the break-even output can be calculated using this formula:

break-even output = fixed costs / contribution per unit

Imagine the selling price per unit is £12 and the variable cost per unit is £8. This means the contribution per unit is:

price – variable cost per unit = £12 – £8 = £4

If fixed costs are £20,000, then £20,000/ £4 = 5,000 units need to be sold for the contribution to cover the fixed costs.

### Questions

1. **Imagine the selling price is now £15, the variable cost per unit is still £8, and fixed costs are still £20,000. What is the break-even output now that the price is higher?**

Contribution per unit = Price – variable cost per unit = £15 – £8 = £7  
Breakeven = fixed costs/ contribution per unit = £20,000/£7 = 2857.14 units
2. **Imagine the selling price remains at £15, the variable cost per unit is reduced to £5, and fixed costs are still £20,000. What is the break-even output now that the variable cost per unit is lower?**

Contribution per unit = Price – variable cost per unit = £15 – £5 = £10  
Breakeven = fixed costs/ contribution per unit = £20,000/£10 = 2000 units

### P92 Business Insight

#### Questions

1. **Why do you think managers have chosen to reduce costs in this way?**

May think customers won't notice any significant difference. May feel/hope it
2. **What do you think are the dangers of chocolate manufacturers reducing the cost per unit in this way?**

Lose customer goodwill

**P93 Doing the business maths**

Number of employees	Wage bill if wages £500 per week	Output per week	Labour productivity	Labour cost per unit
	£			£
20	1000	2000	100	0.50
20	1000	40000	2000	0.03
20	1000	80000	4000	0.01
20	1000	120000	6000	0.01

**P94 Business insight**

## Question

- a. **Why would managers in a business be concerned about labour productivity levels?**

Because this is likely to impact on unit costs. If wages stay the same and all other factors are constant, the unit costs fall when labour productivity increases.

**P96 Quick questions**

For each of the following statements, say whether it is true or false.

- Average cost is calculated using total costs/ number of units. TRUE
- Marginal costs are the extra fixed costs from producing another unit. FALSE
- If marginal cost is above average cost, average costs should rise. TRUE
- Marginal cost crosses the average cost at its minimum point. TRUE

**P97 Doing the business maths**

Number of employees	Output	Marginal output	Average output
2	20	n/a	10.0
3	40	20	13.3
4	90	50	22.5
5	120	30	24.0
6	140	20	23.3
7	150	10	21.4

**P102 Doing the business maths**

Number employees	Total cost	Average cost	Marginal cost	
1	10	10	n/a	
2	18	9	8	Marginal less than average, average falls
3	27	9	9	marginal equals average; average stays same

4	36	9	9	marginal equals average; average stays same
5	50	10	14	marginal above average; average rises
6	66	11	16	marginal above average; average rises
7	84	12	18	marginal above average; average rises

**P103 Quick questions**

**For each of the following statements, say whether it is true or false.**

- If total revenue equals total cost, abnormal profit is earned. FALSE
- If total revenue is greater than total cost, normal profit is earned. FALSE
- If total revenue is less than total cost, a loss is made. TRUE

**4.4 Business insight: Airbus costs and profit**

The cost per passenger of a flight on an airbus A320 (which has a capacity of 154 passengers) for a 260-mile flight from New York to Washington, DC has been estimated by Wendover Productions as follows:

- Fuel cost: \$2.50 (£1.72)
- Crew cost: \$1.50 (£1.03)
- Landing fees at two airports: \$13.50 (£9.27)
- Taxes: \$15.60 (£10.72)
- Price of the aircraft: \$11.50 (£7.90)
- Maintenance: \$14 (£9.62)
- Non flying cost: \$10 (£6.87)
- Insurance: \$0.25 (17p)
- Total \$68.50 (£47.06)

These figures assume the flight is full.

The typical price of a flight on this route is \$80, suggesting that the profit per passenger is only \$12.50.

Source: [www.youtube.com/watch?v=6Oe8T3AvydU](http://www.youtube.com/watch?v=6Oe8T3AvydU)

**P108 Business insight**

Questions

- If these figures are accurate, what would the profit on this flight be for the airline?**

Depends on how many passengers there are. If the flight is full the profit would be  $\$12.50 \times 154 = \$1925$

**2. What would happen to these cost per flight figures if the flight was only half full?**

The cost per passenger would rise because some costs would have to be spread over less passengers e.g. landing fees per passenger would be twice as high because the fees would be spread over half as many people.

**P109 Business insight**

Question

**How can effective management of the supply chain reduce the costs of a business?**

Can lead to greater efficiency and less waste. The right products will arrive at the right time whereas if the supply chain was not managed as well it might mean:

- some products would need storing costing money
- on occasions some products might not arrive delaying production
- the production process may involve more wastage if the supplies are not exactly what is required

Questions

- 1. How is the airline described trying to reduce costs?**
- 2. Are there dangers with reducing costs in this way, do you think?**

Question

**How will the changes to the seats help the airlines?**

More seats mean potentially more passengers. This increases revenue but also fixed costs can be allocated to more passengers decreasing the cost per passenger.

**P111 Business insight Questions**

- 1. What is the productivity of a crew member in terms of number of containers?**  
 $11000/13 = 846.153846154$
- 2. How does the principle of increased dimensions apply to container ships?**  
Increase the dimensions of the ship and the volume that can be carried can increase more than proportionately. This will reduce transport costs per unit.

**P115 Quick questions**

4.6 Quick check

**For each of the following statements, say whether it is true or false.**

- Internal economies of scale occur when total costs fall with greater scale. FALSE
- Internal economies of scale occur when average costs fall with greater scale. TRUE
- Internal diseconomies of scale occur when average costs rise with greater scale. TRUE
- The minimum efficient scale is the first level of output at which the average cost is at its lowest. TRUE

**P115 Doing the Business Maths**

Output	Total costs £	Unit costs £
100	200000	2000.0
200	220000	1100.0
300	250000	833.3
400	280000	700.0
500	300000	600.0
600	350000	583.3
700	470000	67.1
800	600000	750.0

**P118 Quick end of chapter questions**

- 1. In what way is an economist's view of costs different from an accountant's?**

Economists include opportunity cost as a cost

- 2. What is the difference between fixed and variable costs?**

Fixed costs do not vary with output; variable costs do

- 3. What is meant by labour productivity and why does it matter?**

Measures output per employee. Affects the unit cost.

- 4. How might managers increase labour productivity?**

Possible ways: training, equipment, new technology, motivation

- 5. What are internal economies of scale and why do they matter?**

Lower unit costs as scale increases; may enable lower prices or higher profit margins

- 6. What are internal diseconomies of scale and why do they matter?**

Higher unit costs as scale increases; will affect profit margins and overall profitability

- 7. What is the difference between shut-down point and break-even point?**

Shutdown point occurs when the price covers the average variable cost; break-even occurs when price covers average cost

- 8. What is meant by the contribution per unit, and why is it important?**

Contribution per unit = price – variable cost per unit

- 9. Why might a focus on productivity lead to a reduction in quality?**

May focus on producing more and quality may suffer if there is a focus simply on how much is produced

- 10. What are external economies of scale and why do they matter?**