Think About It 2.1

1. Many economic models assume we are rational and therefore that the 'principle of transitivity' holds. This principle states that if A is better than B and B is better than C, then A must be better than C. Is this true of our behaviour? If you prefer band X to band Y, and band Y to band Z, does this automatically mean you prefer X to Z? Or if football team A beats B and B beats C, will A always beat C?

Answers might include:
Unlikely to be true. However, the key is not necessarily whether one person is rational but whether as a whole people or markets behave rationally - even this is debated!

2. A 50 per cent increase in quantity offered to customers as a special offer is the same as a 33 per cent discount in price. A rational consumer would realize this. Which do you think most customers would choose?

Answers might include:
Most would probably choose the discount even though the overall effect in terms of value for money is the same.

Business Analysis 2.1

How do you think these skills can help you in your career?

Answers might include:
Look at the Jobs Watch feature in every chapter - it is clear how valued these skills are by employers. Use your time at university well and it should pay off later!

Data Analysis 2.1

1. Why is it useful to see spending on other items?

Answers might include:
To put the spending on education in context - how does it compare with the overall spending? With other elements? How much is education seen as a priority in terms of expenditure?

2. What else do you think you would want to know to decide whether the government was spending enough on education in this year?

Answers might include:
- The quality of the output
- The population size
- What other governments are spending per capita
- What it was spending in the past and plans to spend in the future
- How the money is to be allocated and the spending monitored
Data Analysis 2.2

Marks and Spencer plc. (M&S) is a leading UK retailer. For the financial year ending 2011: turnover (revenue) profit before tax number of employees capital invested in the business. To assess the profits of the business, you may want to compare it with other data such as the level of sales or investment.

1. Calculate its profit margin (i.e. the profit per sale). This shows the profit that M&S makes for every pound spent in its stores.
   
   Profit margin = (profit/turnover) * 100 = (780.6/9740.3)*100 = 8%

2. Calculate the profit per employee
   
   = profit/number of employee = (780,600,000/78169) = £9,986

3. Calculate the company’s ROI
   
   = (profit/capital invested)*100 = (780.6/7755) *100 = 10%

Data Analysis 2.3

1. Before making any final judgements it is important to consider the context of this performance. For example, was this part of an overall strategy to cut prices and boost sales?

2. How could a business have a lower profit margin but higher overall level of profit?

   The profit margin may be smaller but if sales are higher overall profits may increase.

P31. Business Analysis 2.2

Why do you think the profitability of manufacturing is typically lower than that of the service sector?

It may be that the UK is less successful in this sector; it may be that more investment is needed in assets (e.g. machinery and equipment) reducing the rate of return on investment.

P32. Data Analysis 2.4

What had to happen to the pay of employees to maintain their real earnings in Zimbabwe during 2008 and 2009?

Answers might include:
They would need their pay to rise at the same rate as prices to keep their real earnings the same. E.g. in January 2009 it would need to be 5 sextillion per cent higher than the year before.
1. If sales increase from £250 million to £300 million, what is the percentage increase in sales?

\[
\text{% change} = \frac{(300 - 250)}{250} \times 100 = 20\%
\]

2. If sales fall from £300 million to £250 million, what is the percentage fall in sales?

\[
\text{% change} = \frac{(300 - 250)}{300} = 16.6\%
\]

3. What is a 10 per cent change in sales of twenty units?

\[10\% \text{ of } 20 = \frac{10}{100} \times 20 = 2 \text{ units}\]

4. If the growth rate for your sales was –2 per cent last year, what does this mean?

Sales fell by 2%.

5. If the growth rate for your sales is predicted to be 5 per cent next year, and 2 per cent the year after, what is happening to your sales?

Increasing at a slower rate.

6. If the sales of a business have increased across three years from £200,000, to £220,000, to £230,000, calculate the growth rates over the three years.

- Year 1 to 2: \((20,000/200,000)\times 100 = 10\%\)
- Year 2 to 3: \((10,000/220,000)\times 100 = 4.5\%\)
- Over the three years as a whole: \((30,000/200,000)\times 100 = 15\%\)

Data Analysis 2.6

How can this be?

The income of China is high but so is the population therefore their ranking in terms of income per person is not as high as the ranking of total income.

Data Analysis 2.7

Calculate the weighted index for the increases in prices shown in Table 2.4

\[
\text{Weighted index} = \left[ \left(110 \times 10\right) + \left(105 \times 40\right) + \left(95 \times 50\right) \right] / 100 = \left(1100 + 4200 + 4750\right) / 100 = 100.5
\]
Data Analysis 2.8

1. Complete Table 2.5

<table>
<thead>
<tr>
<th>Output</th>
<th>MB</th>
<th>MC</th>
<th>MB-MC</th>
<th>Total utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
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<td>0</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
<td>17</td>
<td>-5</td>
<td>16</td>
</tr>
</tbody>
</table>

2. At what level is welfare maximized and why?

Total utility is maximized at outputs 3 and 4; unit 4 adds no extra additional welfare.

3. What is the total relationship between the extra increase in welfare obtained by consuming a unit and the total welfare?

The extra increase in welfare adds to the total; when there is no extra increase total welfare is maximized.

Think About It 2.2

1. When you are deciding where to go on holiday, how logical is your decision-making process? Do you do lots of research to choose the location and resort?
2. What about when you chose the university at which you are studying: did you do a high level of research to ensure that a logical decision was made?
3. What about when you decided which car to buy?
4. If your decision-making was not rational, does this undermine the study of economics?

The answers will vary from person to person but depend on the risk involved, how much you fear or care about getting it wrong, what sort of decision maker you are. It may be you are not rational but if in general people are then rational theories still have some validity.

Think About It 2.3

Which elements of the different views stated above are positive economics and which are normative?

Less spending in itself reduces the deficit and is good for long term growth is a positive statement. Making the reduction of spending a priority is a normative statement.
Think About It 2.4

1. Is the debate over bankers’ pay an example of normative or positive economics?

If the debate is simply whether the government should intervene this is normative.

2. Why might high pay for bankers be efficient but unfair? Which do you think is more important?

Answers might include:
May be the workings of the market mechanism- if they generate high profits and their supply is relatively limited this will lead to high pay. This may be efficient even if it is perceived as unfair because they earn so much relative to others; What is most important depends on your own views of your priorities.

Think About It 2.5

1. There are more shark attacks on people when the weather is hot. Does this mean that hot weather causes more sharks to attack people?

No, correlation shows an apparent relationship not cause and effect; more likely to be that more people swim when the weather is hot and so get attacked.

2. There are often more people employed at the government’s Treasury (that is, the department that controls its finances) when the economic situation is poor. Does this mean that these economists cause the poor economic situation?

Again the cause and effect are not shown; more likely to be that when the economy is doing badly more economists are needed!

Business analysis 2.4

Based on the data in Table 2.6, should all politics students become economists? Should all economists become medics?

Answers might include:
If the market mechanism was working and resources were fully mobile people may well switch jobs and careers based on differences in earnings. However:
- people may lack the skills needed to move easily from one career to another
- there is likely to be a long time lag as people re-skill
- people may not like the other options
- there are other factors that lead people to choose a career apart from the pay.

Suggested Answers to Short Answer Questions

1. Depends on whether prices have risen by more than 10%; if so you are worse off in real terms.
2. Percentage increase in sales is \(\frac{20,000}{200,000} \times 100\) 10%; sales fall is \(\frac{20,000}{220,000} \times 100\) 9%.

3. This is positive economics; we can study changes in the interest rate to see if this relationship actually occurs.

4. This means the share price is 14% lower than it was in 2011.

5. 340,200 units.

6. Year 1 to 2: \(\frac{0.4}{2} \times 100\) = 20%; year 2 to 3: \(\frac{0.2}{2.4} \times 100\) = 8.3%.

7. Increase; the extra profit from the next unit would be £3.

8. It means there is no extra profit to be made and therefore profit is maximized.

9. A model is a simplified framework that is used to analyze a complicated issue; it is a simplification of reality created by economists to help describe a situation and identify the impact of changing variables; helps analyze cause and effect.

10. You would need to know e.g. what was expected, what was promised, what you have made in the past, what others are making and how big the business is to give the figure a context.