

AS ECONOMICS

Paper 1 The Operation of Markets and Market Failure

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DO NOT WRITE ANY ANSWERS IN THIS INSERT. YOU MUST ANSWER THE QUESTIONS IN THE ANSWER BOOKLET PROVIDED.

CONTEXT 1: WATER

Questions 21 to 26

- **Extract A:** Average annual water usage, in cubic metres, with and without a water meter
- **Extract B:** Water, water, everywhere?
- **Extract C:** How should water be paid for?

CONTEXT 2: ALCOHOL

Questions 27 to 32

- **Extract D:** Affordability of alcohol index, UK, 2008–2017 (1980 = 100)
- **Extract E:** Minimum unit pricing for alcohol in Scotland
- **Extract F:** Early indications of success?

Context 1

Total for this context: 50 marks

WATER

Extract A: Average annual water usage, in cubic metres, with and without a water meter

Number of people in the household	With meter (cubic metres)	Without meter (cubic metres)
1	54	66
2	101	110
3	134	136
4	164	165
5	191	182
6	216	200

Source: Consumer Council for Water, December 2019

Extract B: Water, water, everywhere?

Water is a basic human need. Although viewed by some as freely available, to make it fit for household and business use, it must be extracted and processed. Land, labour and capital are required, including reservoirs and pipe networks. Water is a scarce but vital resource used in a variety of industries, as well as for drinking, washing and cooking. 1

The water industry could be described as a pure monopoly and until 1989, it was run by the government. Ownership in England and Wales was then transferred to 10 private sector firms, each with a regional monopoly. These are regulated by Ofwat, the Water Services Regulation Authority. The regulator tries to prevent the firms from abusing their monopoly power by setting standards for the quality of service and restricting price rises to limit profit. Ofwat announced recently that water firms would have to cut the average customer bill by £50 over the next five years and improve their performance. In Scotland and Northern Ireland, water supplies are still publicly owned. 5 10

Most water (and sewerage) services are not provided by competitive markets, where firms compete using price or non-price methods. Only businesses can choose their water supplier. As with gas and electricity, business customers buy their water supply from a firm, which has bought that package from a water company. Household consumers have no choice. For example, if you live in Plymouth, South West Water provides your water. 15

Source: News reports, January 2020

Extract C: How should water be paid for?

Since 1990, all new houses have been fitted with a water meter. Customers in older houses can ask for a meter to be installed. Consumers' bills are then determined by the amount of water used and a fixed charge for treating the water and administration. In 2017, seven water companies in southern England were classified as in 'areas of serious water stress' and allowed to introduce compulsory metering. In non-metered houses, bills are based on the value of the property (rateable value) not on the amount of water used. Therefore, owners of more expensive houses usually pay more for their water, regardless of the number of occupants. In non-metered homes, there is no extra charge, for example, to water the garden. 1
5

When people pay according to quantity used, they are less likely to be wasteful. One report claims that homes with meters use on average 10% to 15% less water than those without. This saves money. For example, a bath may use 80 litres of water but a shower half as much. People who cut their water use may also save on energy bills, as less water is heated. 10

Although metering may be fairer, consumers may prefer a choice, both of pricing system and supplier. The National Campaign for Water Justice, a group that opposes metering, argues that the poorest could end up with higher bills if forced to have a meter, particularly large families who live in homes with a low rateable value. A number of problems could occur if they reduce their water use too much. Could there be an impact on health? It is often said that we should drink two litres of water a day. Tap water is cheaper and better for the environment than plastic bottles. 15

Perhaps a maximum price should be set for water and if competition can be introduced for gas and electricity, why not for water? 20

Source: News reports, January 2020

Turn over for Context 1 questions

Turn over ►

Context 1 – Questions 21 to 26

- | | |
|---|---|
| 2 | 1 |
|---|---|

 Define 'profit' **Extract B** (line 9). **[3 marks]**
- | | |
|---|---|
| 2 | 2 |
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Extract C (line 11) states: 'a bath may use 80 litres of water but a shower half as much'.
If a litre of water costs 0.4p, calculate how much money would be saved in a week if a family of four each had a shower every day instead of a bath. **[4 marks]**
- | | |
|---|---|
| 2 | 3 |
|---|---|

 Use **Extract A** to identify **two** significant points of comparison between the average annual water usage of households with and without a water meter. **[4 marks]**
- | | |
|---|---|
| 2 | 4 |
|---|---|

Extract C (line 20) states: 'Perhaps a maximum price should be set for water'.
Draw a diagram to show the impact on the market for water of setting a maximum price below the equilibrium. **[4 marks]**
- | | |
|---|---|
| 2 | 5 |
|---|---|

Extract B (lines 13–14) states: 'Most water (and sewerage) services are not provided by competitive markets... Only businesses can choose their water supplier'.
Explain how firms in the water industry could compete to attract businesses or other customers. **[10 marks]**
- | | |
|---|---|
| 2 | 6 |
|---|---|

Extract C (line 9) states: 'When people pay according to quantity used, they are less likely to be wasteful'.
Use the extracts and your knowledge of economics to assess whether all households should pay according to the amount of water they use. **[25 marks]**

There are no extracts printed on this page

Turn over for Context 2

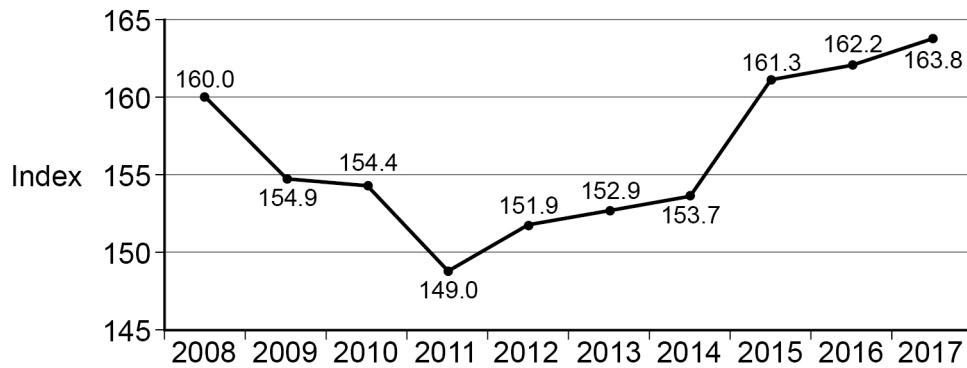
Turn over ►

Context 2

Total for this context: 50 marks

ALCOHOL

Extract D: Affordability of alcohol index, UK, 2008–2017 (1980 = 100)



Note: A higher figure indicates that alcohol has become more affordable

Source: NHS Digital, December 2019

Extract E: Minimum unit pricing for alcohol in Scotland

Throughout the UK, alcohol has traditionally been viewed as a demerit good, subject to high indirect taxes and regulation. The minimum age for buying alcohol is 18, although in some countries, such as the US, the minimum age is 21. 1

In May 2018, Scotland became the first country to introduce minimum unit pricing (MUP). Alcohol must now be sold for at least 50p per unit of alcohol. This means that a two-litre bottle of cider costs at least £5 and a standard (70cl) bottle of whisky a minimum of £14. A leading discount supermarket had previously charged £1.99 and £10 respectively. MUP is due to come into force in Wales in 2020 and has been under consideration in the Republic of Ireland. The Northern Ireland government discussed the issue but currently there are no plans to introduce MUP there or in England. 5 10

The misuse of alcohol has external as well as private costs. Before the introduction of MUP, alcohol misuse was estimated to cost Scotland £3.6 billion every year, averaging about £900 per adult. There were typically 22 alcohol-related deaths a week and it was hoped that 392 lives could be saved in the first five years. Alcohol-related crime was also a concern. For example, 46% of violent crime in Scotland in 2017/18 was reported to be alcohol-related. 15

Source: News reports, January 2020

Extract F: Early indications of success?

A study by NHS Health Scotland published in 2019 claims that MUP has been a success. 1
 The report found no increase in illegal activity such as smuggling. However, there was
 evidence of people crossing the border to shop in England and using the home delivery
 services of English stores, to avoid the higher prices. There had also been some stockpiling of
 alcohol before the law came into force. 5

Research suggests that, on average, Scottish adults have bought 1.2 fewer units of alcohol per
 week, equivalent to about half a pint of beer. This fall of 7.5% was more than double the figure
 expected. Not surprisingly, sales fell more significantly for previously cheap cider (36%)
 whereas wine sales fell by only 3.7%. It would appear that low-income households have cut
 back more than those with a high income, although on average, an extra 61p per adult per week 10
 was spent on alcohol.

However, another survey found that alcohol-related deaths rose by 16 in 2018 and claimed that
 even more alcohol was sold in the first nine months of minimum pricing. Critics believe it is too
 early to be sure of the full effects of MUP, including improvements to health. Furthermore, the
 research may not show the changes for some heavy drinkers, particularly the homeless. For 15
 those addicted to alcohol, price is unlikely to be the key factor.

An article in the British Medical Journal claimed: 'The need for effective interventions...is urgent
 not only in Scotland – which has among the highest levels of alcohol attributable harm in
 Europe, but also across the rest of the UK.' Speaking in 2018, the Chair of the Alcohol Health
 Alliance (AHA), a group of over 50 medical organisations, said: 'Cheap alcohol is wrecking lives 20
 and livelihoods in England as well as Scotland.' He went on to claim that the poorest and most
 vulnerable parts of society account for many of the 23 000 alcohol-related deaths a year in
 England, with the north east of England facing similar problems to Scotland.

Source: News reports, December 2019

Turn over for Context 2 questions

Turn over ►

Context 2 – Questions 27 to 32

- 2 7** Define 'income' **Extract F** (line 10). **[3 marks]**
- 2 8** According to **Extract E** (lines 6–7), the price of a standard bottle of whisky had to rise from £10 to £14 in a discount supermarket, as a result of minimum unit pricing (MUP).
If the demand for whisky fell by 6.3% in the first year as a result of the price change, calculate the price elasticity of demand for whisky, to **two** decimal places. **[4 marks]**
- 2 9** Use **Extract D** to identify **two** significant features of the affordability of alcohol index for the UK, over the period shown. **[4 marks]**
- 3 0** **Extract E** (lines 2–3) states: 'The minimum age for buying alcohol is 18, although in some countries, such as the US, the minimum age is 21'.
Draw a diagram to show the impact on the market for alcohol of raising the age for buying alcohol in the UK from 18 to 21. **[4 marks]**
- 3 1** **Extract E** (lines 1–2) states: 'alcohol has traditionally been viewed as a demerit good, subject to high indirect taxes'.
Explain the likely effects of imposing indirect taxes on alcohol. **[10 marks]**
- 3 2** **Extract F** (lines 20–21) states: 'Cheap alcohol is wrecking lives and livelihoods in England as well as Scotland'.
Use the extracts and your knowledge of economics to assess whether a minimum price for alcohol should be introduced in England and Northern Ireland. **[25 marks]**

END OF QUESTIONS

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