AQA

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: FLOOD DEFENCES

Questions 21 to 26

- **Extract A:** **Capital expenditure on flood defences, by region in England (£m), 2015 to 2021**
- **Extract B:** **The rising cost of flooding**
- **Extract C:** **Who should pay for flood defences?**

CONTEXT 2: COFFEE

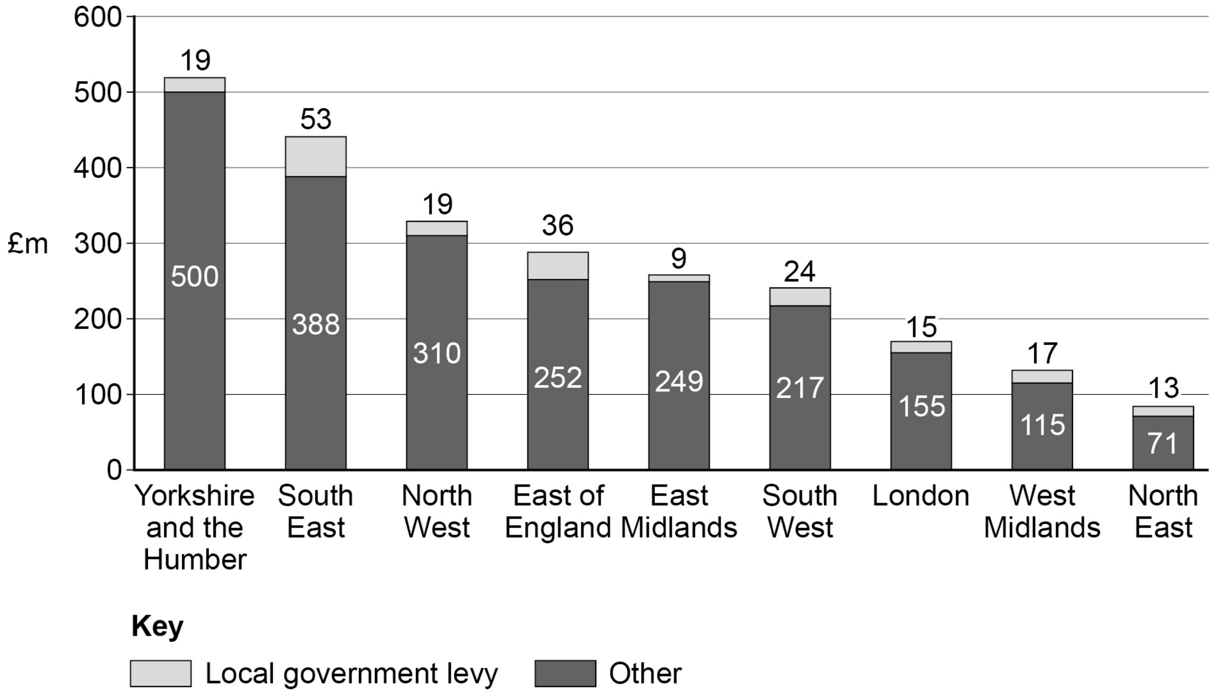
Questions 27 to 32

- **Extract D:** **Annual average coffee prices, forecast and actual ($/kg), 2016 to 2022**
- **Extract E:** **The rising popularity of coffee**
- **Extract F:** **Problems facing the coffee industry**

Context 1 **Total for this context: 50 marks**

FLOOD DEFENCES

Extract A: Capital expenditure on flood defences, by region in England (£m), 2015 to 2021



Note: Local authorities/government pay money (the levy) to the Environment Agency, which contributes to the total capital expenditure on flood defences. The remaining finance comes from a variety of other sources.

Source: Managing flood risk (nao.org.uk)

Extract B: The rising cost of flooding

In recent years, many people have blamed climate change for causing more extreme weather. In the UK, several areas have been affected by severe flooding, particularly near the coast or rivers. Flooding results in significant private and external costs. One estimate claimed that one in six people in England is at risk of flooding and total flood damage costs £1.1bn a year. About 40% of businesses are so badly affected that they do not reopen and many homeowners have found it difficult to insure their properties after a flood.

Between 2010 and 2015, the UK government spent over £1.7bn to protect about 250 000 homes, 28 000 business properties and 800 000 acres of farmland. The current investment programme, running from 2021 to 2027, is expected to involve spending of £5.2bn on around 2000 flood defence schemes. Hopefully, this will prevent £32bn of potential damage.

Flood defence methods range from planting trees and digging water channels to more expensive projects including building dams, sea walls and other barriers. For example, the Thames Barrier consists of ten steel gates which can be closed to stop very high tides or storms flooding parts of London. This project cost the Greater London Council, London’s local government at the time, over £1.5bn at today’s prices to build. However, this is much less than the potential costs of flooding. The Barrier protects over a million people and without it, many areas could be badly affected including the financial district, the Houses of Parliament and the London Underground.

Source: News reports, November 2023

Extract C: Who should pay for flood defences?

Flood defences are often quoted as an example of a public good. This suggests that most individuals will not choose to pay for them, so how can they be provided? At present, most of the money comes from central government, out of general taxation, but not everyone benefits from flood defences. Local government also contributes funds, both through a local levy and sometimes in partnership with local communities or other infrastructure providers. These include Network Rail, whose services may be affected by flooding. Private sector water companies and landowners can also play a part in improving drainage. However, from 2015 to 2021, only 7% of finance came from the private sector.

Spending varies considerably between regions. According to the Environment Agency (EA), money is allocated according to the level of risk. Between 2015 and 2021, the EA spent £5942 on flood defences for each property at risk of flooding in the North East, but only £1937 in the South West. Each region is due to receive more funding in the 2021 to 2027 investment programme but some projects will need additional contributions from local organisations.

Meanwhile, Britain is facing a housing crisis. The UK House Price Index was 152.6 in August 2023, up 52.6% since January 2015. With a growing population, and more people living alone, there is a need for more affordable homes. With fewer restrictions on where houses can be built, some homes are being built where there are inadequate flood defences or not built to be resistant to flooding. Land may be flatter and cheaper on floodplains, making it more attractive to developers. Maybe those who build in these areas should be required to make new homes safe from floods? Nevertheless, whoever pays, there is an opportunity cost.

Source: News reports, November 2023

Turn over for Context 1 questions

Context 1 – Questions 21 to 26

2 1 Define ‘opportunity cost’ **Extract C** (line 20).

[3 marks]

2 2 **Extract A** shows the capital expenditure on flood defences by region in England, 2015 to 2021, split between ‘Local government levy’ and ‘Other.’

Calculate the difference between the mean and median amounts of capital expenditure paid for by the local government levy in the regions of England for the period 2015 to 2021.

Give your answer in £m to **one** decimal place.

[4 marks]

2 3 Use **Extract A** to identify **two** significant points of comparison between the amount of capital expenditure on flood defences that is financed by the local government levy and the amount that is financed by other sources.

[4 marks]

2 4 **Extract C** (lines 16–17) states: ‘With fewer restrictions on where houses can be built, some homes are being built where there are inadequate flood defences’.

Draw a supply and demand diagram showing the impact on the market for new houses if restrictions are removed on where houses can be built.

[4 marks]

2 5 **Extract C** (lines 14–15) states: ‘The UK House Price Index was 152.6 in August 2023, up 52.6% since January 2015.’

Explain possible reasons why the price of houses has increased in recent years.

[10 marks]

2 6 **Extract B** (lines 7–8) states: ‘Between 2010 and 2015, the UK government spent over £1.7bn to protect about 250 000 homes, 28 000 business properties and 800 000 acres of farmland.’

Use the extracts and your knowledge of economics to evaluate whether government should be solely responsible for paying for flood defences.

[25 marks]

There are no extracts printed on this page

Turn over for Context 2

Context 2 **Total for this context: 50 marks**

COFFEE

Extract D: Annual average coffee prices, forecast and actual ($/kg), 2016 to 2022

Year	Forecast price ($/kg)	Actual price ($/kg)
2016	3.68	3.61
2017	3.66	3.32
2018	3.64	2.93
2019	3.62	2.88
2020	3.60	3.32
2021	3.58	4.51
2022	3.56	5.63

Note: The data relate to arabica coffee with the forecast prices released in July 2015.

Source: Worldbank.org

Extract E: The rising popularity of coffee

Although the UK is traditionally thought of as a tea-drinking nation, coffee has become increasingly popular in recent years. In 2008, we drank about 70 million cups of coffee a day but in 2018, this increased to 95 million, with 65% of these consumed at home. The other 35% was split 5:2 between consumption at work and in shops respectively. At the time, Costa, Starbucks and Caffè Nero had over 50% of the coffee shop market.

The value of the world coffee market was estimated to be $126bn in 2023 and was predicted to grow at an average of 4.72% a year between 2023 and 2028. However, with more people working from home, having your own coffee machine is now more common. In 2023, about 40% of people in the UK had a coffee machine at home. This in turn affects the demand for the coffee capsules (or pods) that they require. Similarly, the price of the capsules also affects the demand for the coffee machines. In total, the UK coffee industry provides over 210 000 jobs and contributes over £15bn to the UK economy.

Source: News reports, November 2023

Extract F: Problems facing the coffee industry

There are various markets for coffee at different stages of the production and consumption process, and at local and global levels. The coffee industry today faces a number of challenges. To increase productivity, some farmers have cleared rainforest to grow coffee in the sunshine instead of the shade. With increased use of fertiliser, chemicals have affected water supplies, particularly after heavy rain. In some countries, the coffee industry has also been accused of using child labour and paying below the minimum wage.

Fair trade organisations are trying to improve wages and working conditions. They work with around 800 000 coffee farmers, independently of governments. Coffee farmers in countries helped by fair trade schemes must use more sustainable farming methods but in exchange they have a more stable income. In a recent survey, 71% of people stated that treating farmers well and fair pay were important factors in their choice of coffee shop. However, is enough being done and can this be left to the market or non-government organisations?

There are different issues at the consumption stage in richer countries like the UK and the US. It has been estimated that 10 billion plastic coffee pods are disposed of in landfill sites in North America each year. Should these be banned or taxed, to encourage the use of pods made from renewable materials and which can be recycled? Similarly, cups used by many sellers cannot be recycled, or where they can, not enough is done to encourage this. Is it sufficient to just provide a bin for recycling?

In 2018, the UK government decided not to introduce a 25p ‘latte levy’ on single-use cups. Some sellers have their own schemes to encourage recycling, for example, offering discounts if you bring your own cup. However, some were withdrawn due to health concerns or have become less effective with the increased use of takeaway and home delivery. With many coffee shops struggling to survive, is it fair to impose even more measures which add to their costs?

Source: News reports, November 2023

Turn over for Context 2 questions

Context 2 – Questions 27 to 32

2 7 Define 'productivity' **Extract F** (line 3).

[3 marks]

2 8 **Extract E** (lines 3–4) states: 'in 2018, this increased to 95 million, with 65% of these consumed at home. The other 35% was split 5:2 between consumption at work and in shops respectively.'

Calculate the number of cups of coffee drunk at work in 2018. Give your answer to the **nearest million** cups.

[4 marks]

2 9 Use **Extract D** to identify **two** significant points of comparison between the forecast price and the actual price of coffee over the period shown.

[4 marks]

3 0 **Extract E** (lines 7–8) states: 'with more people working from home, having your own coffee machine is now more common.'

Draw a diagram to show the impact on total revenue of a rise in the price of coffee machines if their demand is inelastic. The total revenue from the sale of coffee machines, both before and after the rise in price, should be labelled clearly.

[4 marks]

3 1 **Extract E** (lines 10–11) states: 'Similarly, the price of the capsules also affects the demand for the coffee machines.'

Explain how an increase in the price of coffee capsules is likely to affect the market for coffee machines to use at home.

[10 marks]

3 2 **Extract F** (lines 1–2) states: 'There are various markets for coffee at different stages of the production and consumption process, and at local and global levels.'

Use the extracts and your knowledge of economics to evaluate whether or not governments should intervene in the various markets for coffee.

[25 marks]

END OF QUESTIONS