

## 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: PALM OIL**

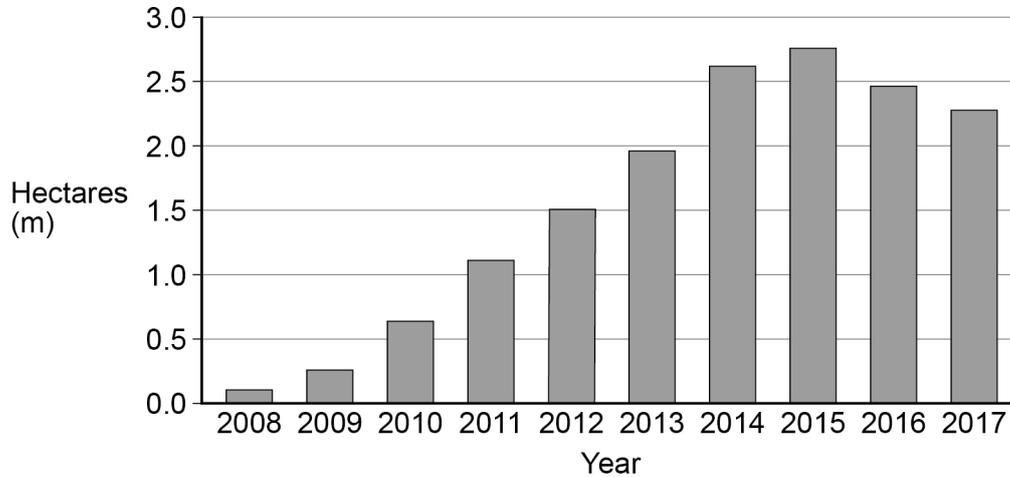
##### **Questions 21 to 26**

- **Extract A:** Certified sustainable palm oil production area (millions of hectares), 2008–2017
- **Extract B:** The importance of palm oil
- **Extract C:** So what's the problem with palm oil?

#### **CONTEXT 2: DENTAL CARE**

##### **Questions 27 to 32**

- **Extract D:** Courses of dental treatment (CoT) per 100 000 population in England, by NHS region, 2016–17
- **Extract E:** Is the current UK dental system 'fit for purpose'?
- **Extract F:** What else could be done?

**Context 1****Total for this context: 50 marks****PALM OIL****Extract A: Certified sustainable palm oil production area (millions of hectares), 2008–2017**

**Note:** To be 'certified sustainable' requires firms to meet criteria which help to minimise the negative impacts of growing palm oil on the environment and communities in palm oil-producing regions.

Source: Roundtable on Sustainable Palm Oil, January 2018

**Extract B: The importance of palm oil**

Palm oil is the world's cheapest and most popular vegetable oil with over 30% of the market. It is used for cooking throughout the world, both in the food industry and in homes, particularly in Africa and parts of Asia. Palm oil can be used as a cheap substitute for butter so for many poor people, palm oil is an important part of their diet. According to one source, average consumption per person worldwide was 7.7 kg in 2015. Palm oil is also used to make soap, washing powder and biofuel. 5

With growing populations in emerging economies, the demand for palm oil for food has doubled over the last 15 years. Rising concerns about other less healthy fats have led to stricter food labelling requirements in some countries. The World Health Organization believes that the fat in palm oil can also cause health problems, including higher cholesterol which may lead to heart disease. 10

Malaysia and Indonesia, in south-east Asia, produce over 80% of the world's palm oil. The industry has provided much-needed export revenue as well as jobs and improvements to infrastructure. It has helped to reduce poverty and, in the case of Malaysia, it has also reduced its specialisation in rubber and tin. Another important reason for the increased popularity of palm oil with growers is that it is the most productive oil crop, yielding five times as much oil per hectare as rapeseed, eight times as much as sunflower and ten times as much as soybean yields. Therefore, it seems that the palm oil industry has much to offer to both consumers and producers in a variety of industries. 15

Source: News reports, December 2017

**Extract C: So what's the problem with palm oil?**

The environment is a scarce resource. The high yield of trees producing palm oil and increased demand have encouraged farmers to plant more. However, this has resulted in cutting down forests which are home to animals such as the orangutan. In the dry season, there is an increased risk of fires in south-east Asia as forests are cleared and the surrounding areas can be affected by clouds of ash for several weeks, causing breathing problems.

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So, what can be done to take advantage of the benefits but limit the problems of palm oil production and use? The Malaysian government has said that it will restrict the growth of palm oil plantations so that 50% of the country remains covered by forest. Also, since December 2014, palm oil must be listed as a separate ingredient on food labels in the European Union (EU) rather than just under the general heading of 'vegetable oil'.

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In 2004, the Roundtable on Sustainable Palm Oil (RSPO) was formed 'to promote the production and use of sustainable palm oil for people, planet and prosperity'. If growers and retailers, such as Waitrose and Starbucks, agree to be environmentally responsible and comply with certain standards, their brands can then be RSPO certified. However, meeting such standards adds to firms' costs and the prices paid by consumers. By 2016, only 19% of world palm oil was certified as 'sustainable'.

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Is enough being done? Who gains and who loses from controls on the palm oil industry? For example, should there be limits on the use of palm oil for biofuel, the so-called 'food versus fuel debate'? Is more international agreement required, and if so, about what? Or should the industry be left to market forces?

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Source: News reports, December 2017

**Turn over for Context 1 questions****Turn over ►**

**Context 1 – Questions 21 to 26**

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 Define 'specialisation' **Extract B** (line 15). **[3 marks]**
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**Extract B** (lines 15–16) states: 'Another important reason for the increased popularity of palm oil with growers is that it is the most productive oil crop.'
- If 4 hectares of land yield 15 tonnes of palm oil, calculate, to **one** decimal place, the expected yield of sunflower oil from 6 hectares of land. **[4 marks]**
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 Use **Extract A** to identify **two** significant features of the changes in the area used for certified sustainable palm oil production over the period shown. **[4 marks]**
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**Extract B** (line 3) states: 'Palm oil can be used as a cheap substitute for butter'.
- Draw a supply and demand diagram showing the effects on the market for butter of a fall in the price of palm oil. **[4 marks]**
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**Extract C** (lines 18–19) states: 'should there be limits on the use of palm oil for biofuel, the so-called 'food versus fuel debate'?'
- Explain how the increased demand for palm oil used for biofuel is likely to affect the market for palm oil used for food. **[10 marks]**
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**Extract B** (lines 18–19) states: 'the palm oil industry has much to offer to both consumers and producers in a variety of industries.'
- Use the extracts and your knowledge of economics to evaluate whether more should be done to control the palm oil industry. **[25 marks]**

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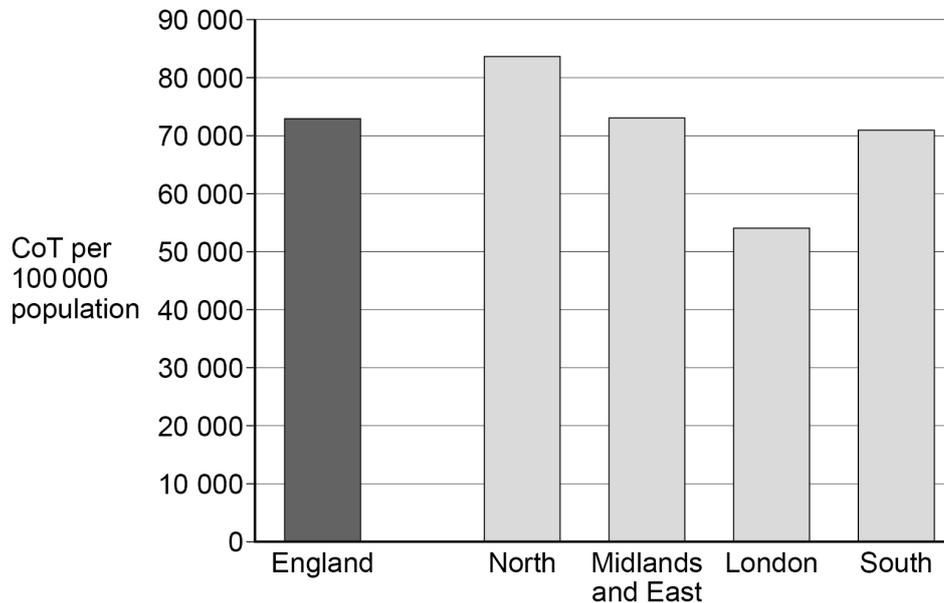
**Turn over for Context 2**

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## Context 2

Total for this context: 50 marks

## DENTAL CARE

**Extract D: Courses of dental treatment (CoT) per 100 000 population in England, by NHS region, 2016–17**

**Note:** A ‘course of dental treatment’ involves a single payment even if it includes more than one visit to the dentist to complete the work needed.

Source: NHS Digital

**Extract E: Is the current UK dental system ‘fit for purpose’?**

The recommended time between dental check-ups varies between 3 months and 2 years, depending on the person’s dental health. A check-up can identify problems with teeth and gums, which may be more difficult to treat later: poor dental health is linked with an increased risk of heart disease and strokes. However, concerns are growing about the ability of the UK dental system to provide an adequate service. In 2016, a letter from over 400 dentists to a national newspaper claimed that the NHS dental system in England was ‘unfit for purpose’. Inadequate spending by government, targets to increase the number of patients treated and a lack of education about basic dental care have all been blamed for making the work of dentists very difficult. Meanwhile, a growing population is increasing the demand for dental care.

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Dental care is one of the few services provided by the National Health Service (NHS) where people have to pay part of the cost, although it is provided free to children and those on certain benefits. However, the lack of access to NHS treatment in some parts of the UK, particularly in England, has forced some people to pay the higher cost of private dental care whilst others go without or go elsewhere. In Dewsbury, West Yorkshire, Dentaid, a charity which mainly works in poorer countries, recently trialled a scheme to offer emergency dental care for poor and vulnerable people, who only paid if they could afford to.

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Staff shortages have attracted many foreign dentists but it may become more difficult for foreign dentists to work in the UK when we leave the European Union (EU). Given all these problems, a review of the current system for providing dental care in the UK may be needed.

Source: News reports, January 2018

**Extract F: What else could be done?**

Recent NHS figures show that 48% of adults and 31% of children have not seen a dentist for two years. Research by Healthwatch, a group that promotes the interests of consumers, claims that in some areas, only 1 in 5 dental surgeries is taking on new NHS patients. However, NHS England has stated that over 90% of people who wanted an NHS dental appointment during the previous two years got one. So, is there a crisis or not?

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Currently, about 60 000 people are admitted to hospital each year because of tooth decay, three-quarters of them children. With over 90% of dental diseases being preventable, perhaps there should be more education to reduce children's sugar consumption. Unlike Wales and Scotland, England does not have a national programme aimed at improving children's dental health. The Royal College of Surgeons has suggested supervised tooth-brushing sessions in all nursery schools in England. Hopefully, policy interventions such as the new tax on sugar-sweetened drinks will help but parents also have an important part to play.

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Another relatively recent change has been the growth of 'dental tourism'. Prices for many dental treatments in Hungary, for example, are about half those of the UK, and more people are choosing to go abroad for dental treatment. Cheap flights from low-cost airlines have also made such trips more affordable. It could be argued that the dental care industry is therefore becoming a more competitive market, with foreign clinics offering state-of-the-art equipment and friendly, English-speaking staff.

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Taking all the evidence into consideration, is there a need for the government to take more action to improve dental health in the UK, and if so, what should be done? Or is the current system still 'fit for purpose'?

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Source: News reports, January 2018

**Turn over for Context 2 questions****Turn over ►**

## Context 2 – Questions 27 to 32

- 2 7** Define ‘competitive market’ **Extract F** (line 17). **[3 marks]**
- 2 8** **Extract F** (line 6) states: ‘Currently, about 60 000 people are admitted to hospital each year because of tooth decay...’
- If the population increases by 2.25% in the following year, other things being equal, calculate, to the nearest child, the number of children expected to be admitted to hospital because of tooth decay. **[4 marks]**
- 2 9** Use **Extract D** to identify **two** significant features of the number of courses of dental treatment (CoT) per 100 000 population in 2016–17. **[4 marks]**
- 3 0** **Extract F** (lines 13–14) states: ‘Prices for many dental treatments in Hungary, for example, are about half those of the UK’.
- Draw a supply and demand diagram showing the effects on the market for UK dental care of a fall in the price of dental care abroad. **[4 marks]**
- 3 1** **Extract E** (line 9) states: ‘a growing population is increasing the demand for dental care.’
- Explain how the increasing demand for dental care is likely to affect the market for dentists. **[10 marks]**
- 3 2** **Extract F** (lines 19–20) states: ‘is there a need for the government to take more action to improve dental health in the UK, and if so, what should be done?’
- Use the extracts and your knowledge of economics to evaluate whether the UK government should take more action to improve dental health in the UK. **[25 marks]**

## END OF CONTEXTS

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