

A-level ECONOMICS

Paper 1 Markets and Market Failure

Thursday 18 May 2023

Morning

Time allowed: 2 hours

Materials

For this paper you must have:

- an AQA 12-page answer book
- a calculator.

Instructions

- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front cover of your answer book.
The **Paper Reference** is 7136/1.
- In **Section A**, answer **EITHER** Context 1 **OR** Context 2.
- In **Section B**, answer **ONE** essay.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- There are 40 marks for **Section A** and 40 marks for **Section B**.

Advice

- You are advised to spend 1 hour on **Section A** and 1 hour on **Section B**.

Section A

Answer **EITHER** Context 1 **OR** Context 2.

EITHER

Context 1

Total for this context: 40 marks

Electric cars and battery production

Study **Extracts A, B and C** and then answer **all** parts of Context 1 which follow.

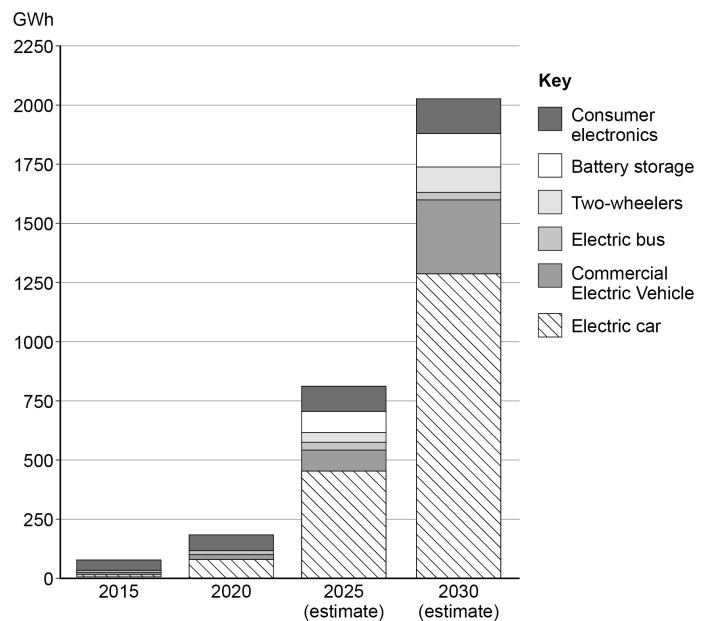
Extract A

Table 1: Sales of cars by fuel type in the UK, 2020 and 2021

	2020	2021
Diesel	261 772	135 773
Petrol	903 961	762 103
Battery Electric	108 205	190 727
Hybrid Electric*	357 126	558 578
Total	1 631 064	1 647 181

*Hybrid Electric cars use lithium-ion batteries and diesel/petrol

Figure 1: UK demand for lithium-ion batteries, Gigawatt hours (GWh), 2015 to 2030



Extract B: The electric vehicle revolution

Sales of electric vehicles (EVs) in Europe have jumped from 198 000 in 2018 to an expected 1.17 million in 2021. They are an alternative to petrol and diesel vehicles, which create damaging emissions through air pollution and contribute to climate change. EVs still only make up about 1% of all cars on the road, but global sales of EVs are forecast to reach 10.7 million by 2025 and then 28.2 million by 2030. Carmakers have announced a total of \$330 billion of investment into electric and battery technology over the next five years. In fact, several manufacturers have begun to phase out petrol and diesel cars altogether.

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Why is this happening now? Regulations are becoming tighter. Ambitious plans to expand the use of electric vehicles are one of the most obvious ways to meet emissions targets set by national governments. The UK has already announced plans to ban the sale of petrol and diesel cars by 2035. Meeting this target will require government spending to install the charging points needed to convince consumers to switch to electric vehicles.

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Another reason for the EV revolution is the improved choice of such vehicles. There are around 330 EV models on sale today, compared with just 86 five years ago. While many are still more expensive than petrol vehicles, they boast substantially lower running costs, even more so as global petrol prices rise. Also, many governments still offer generous financial incentives to encourage people to purchase EVs.

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Driving cars of all fuel types creates environmental problems, traffic congestion and road traffic accidents. Critics have suggested that, instead of governments offering subsidies and tax exemptions for electric vehicles, all vehicle owners should be forced to pay the full costs of their driving. This would incentivise people to consider using public transport, cycling or walking. 20

Source: News reports, 2021

Extract C: Are electric vehicles as green as claimed?

Redwood Materials, a US firm, recycles discarded batteries into a fresh supply of metals needed for new cars. Its goal is to solve the most glaring problem for electric vehicles. While they are 'zero emission' when being driven, the mining, manufacturing and disposal process for batteries could soon become an environmental disaster. Cobalt, one of the metals used in batteries, typically originates in the Democratic Republic of Congo, where it is extracted in large energy-intensive industrial mines and also dug by hand using basic tools. Then it might be shipped to Finland, home to Europe's largest cobalt refinery, before heading to China where the majority of the world's battery production occurs. From there it can be shipped to the US or Europe for packing, then shipped again to car factories. In all, the cobalt can travel more than 20 000 miles before becoming part of a 'zero emission' car. 5 10

Every day, about 60 tonnes of old smartphones, power tools and scooter batteries are delivered to Redwood's warehouse. The firm then separates out the nickel, cobalt and lithium, so that they can re-enter the supply chain as the building blocks for new lithium-ion batteries. Reclaiming these metals at scale is a massive task: roughly 10 000 smartphones need to be recycled to produce one EV battery. 15

Redwood hope to play a role in the emergence of 'the circular economy' – a grand hope born in the 1960s that society can re-engineer the way goods are designed, manufactured and recycled so as to avoid waste. It has been estimated that recycling batteries could account for 30% of the emissions cuts needed to meet the targets set in the Paris climate change agreement and 'create 10 million safe and sustainable jobs around the world' by 2030. 20

Source: News reports, 2021

0 1 Using the data in **Extract A (Table 1)**, calculate the index of total car sales in 2021 if, in the base year, total car sales were 1.25 million. Give your answer to **two** decimal places. [2 marks]

0 2 Explain how the data in **Extract A (Table 1 and Figure 1)** show that developments in the car market are the main reason for the changing demand for lithium-ion batteries in the UK. [4 marks]

0 3 **Extract C** (lines 3–4) states that 'the mining, manufacturing and disposal process for batteries could soon become an environmental disaster.' With the help of a diagram, explain why the production and sale of lithium-ion batteries might lead to market failure. [9 marks]

0 4 **Extract B** (lines 20–21) states that 'all vehicle owners should be forced to pay the full costs of their driving. This would incentivise people to consider using public transport, cycling or walking.' Evaluate policies that could be used to reduce the environmental impact of all types of car. [25 marks]

Turn over ►

Do **NOT** answer Context 2 if you have answered Context 1.

OR

Context 2

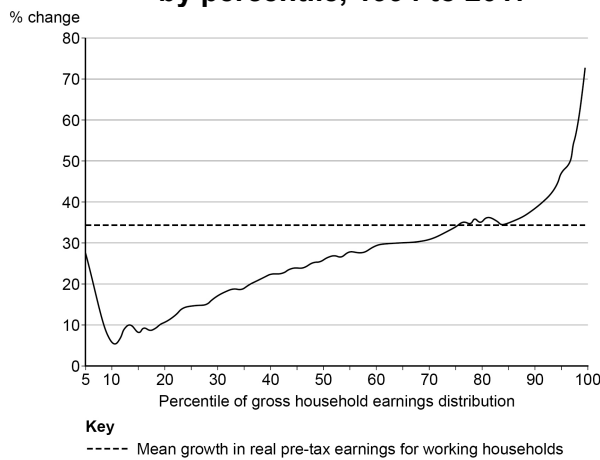
Total for this context: 40 marks

In-work poverty in the United Kingdom

Study **Extracts D, E and F** and then answer **all** parts of Context 2 which follow.

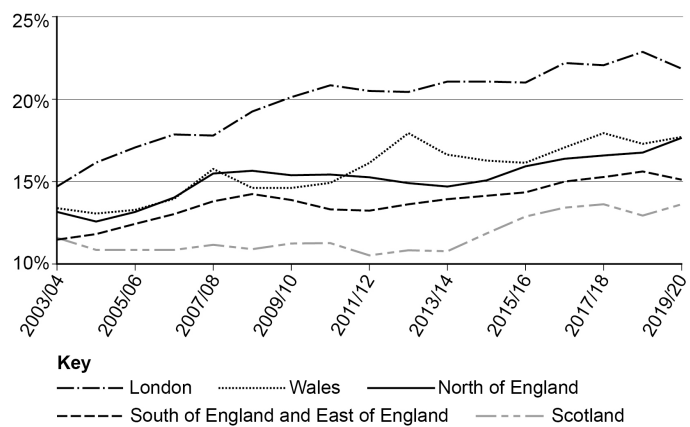
Extract D

Figure 2: Growth in real pre-tax earnings for working households, by percentile, 1994 to 2017



Source: Institute for Fiscal Studies, 2020

Figure 3: In-work poverty rate, by selected UK region, 2003/04 to 2019/20



Source: Institute for Public Policy Research, 2021

Extract E: In-work poverty is on the rise in the UK

Approximately 14 million people are in poverty in the UK, more than one in five of the population, including 4 million children and 2 million pensioners, up by 400 000 and 300 000 respectively over the past five years. A family is classified as being in poverty if it has an income, after housing costs, of less than 60% of the median income for their family type. A family's income includes earnings from employment, self-employment and state benefits.

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For generations, politicians in the UK have highlighted the important role of employment in tackling poverty. However, employment is no longer a strong defence against poverty. The Joseph Rowntree Foundation, an anti-poverty group, said that while paid employment does reduce the risk of poverty, about 56% of people living in poverty in 2018 were in working households, compared with 39% 20 years ago. Seven in 10 children in poverty are now in a working household, and such in-work poverty is particularly common amongst single-parent families. Working single parents accounted for three in 10 households in poverty in 2018, compared with two in 10 in 2011. Working poverty among single-earning couple households also rose dramatically, increasing from 19% in 2003–04 to 31% last year, meaning this group now experiences poverty rates almost as high as those households where no one works full time.

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Amid concerns that the poorest receive worse healthcare and have the most insecure jobs, the Government faces a huge task if it is to 'level up' incomes across the UK by narrowing the gap between the wealthiest and poorest regions. Some out-of-work benefits have not kept up with inflation, putting downward pressure on wages, contributing to the rise in in-work poverty. Other factors include rising prices of energy, essential groceries and rented properties.

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Source: News reports, 2021

Extract F: Solutions to the problem of in-work poverty

Charities and think tanks have called for action to reduce job insecurity, lower housing costs and increase earnings for low-paid workers. Frances O'Grady, the former general secretary of the Trades Union Congress, said: "The government must crack down on business models based on poverty pay and insecure jobs. Zero-hour contracts should be banned and the minimum wage must go up to at least £10 per hour right away." The Chartered Institute for Personnel and Development called on companies to play their part in preventing working poverty by paying employees a living wage: 'Not only is there a strong moral case for paying staff a living wage, there is also a compelling business case, with research showing that money and debt problems may affect people's performance at work, which can hurt a company's profits.'

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If the labour market cannot pay sufficiently high wages to prevent poverty, a possible policy is to use means-tested benefits to make up shortfalls in household incomes. However, the introduction of Universal Credit, which rolls six benefits into one, did not help some low-income families because of complexities involved in claiming it, and the time lag before claimants could receive their first payment.

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Increasingly, households in poverty have been looking beyond both employers and the government for support. Charities and food banks have never been busier. The Trussell Trust reported that in 2020–21, 2.5 million emergency food parcels were delivered, an increase of 128% on 2015–16. Even professional workers are sometimes using food banks, alongside other sources of support. The Royal College of Nursing reported that, during the previous 12 months, more than half of their members had relied on food banks, credit or borrowing from friends and family to pay essential living costs.

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Source: News reports, 2021

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Use the data in **Extract D (Figure 2)** to calculate the difference between the mean and median rate of growth of working households' real pre-tax earnings, over the period 1994–2017.

[2 marks]

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Explain how the data in **Extract D (Figure 3)** show that employment is an increasingly ineffective protection against poverty.

[4 marks]

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Extract E (lines 19–20) states that 'Some out-of-work benefits have not kept up with inflation, putting downward pressure on wages, contributing to the rise in in-work poverty.'

With the help of a diagram, explain how a reduction in out-of-work benefits may lead to lower wages in some labour markets.

[9 marks]

0 8

Extract F (lines 1–2) states that 'Charities and think tanks have called for action to reduce job insecurity, lower housing costs and increase earnings for low-paid workers.'

Using the extracts and your knowledge of economics, evaluate policies that could be used to reduce in-work poverty in the UK.

[25 marks]

Turn over ►

Section B

Answer **one** essay from this section.

Each essay carries 40 marks.

EITHER**Essay 1**

Some believe that government intervention in markets is undesirable because market forces promote creativity, innovation and efficiency. Others believe that competition policy is needed to prevent firms abusing their market power.

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 Explain why, in long-run equilibrium, monopolistically competitive markets are neither productively nor allocatively efficient.
[15 marks]

1	0
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 Assess the view that competition policy is likely to lead to markets becoming less efficient in the long run.
[25 marks]**OR****Essay 2**

Since the 1980s, politicians have been freeing up one side of the labour market by reducing the power of trade unions and their influence over the supply of labour. Meanwhile, they have been doing very little about the monopsony power of employers.

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 Explain the determinants of the supply of labour to an industry.
[15 marks]

1	2
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 Evaluate the view that labour markets work best when strong monopsony power is balanced by trade union power.
[25 marks]

OR

Essay 3

Some argue that privatisation of government-owned industries is necessary to improve efficiency. However, there are several cases where privatisation has simply transferred a monopoly from the state to the private sector. Nevertheless, such private monopolies are vulnerable to the threat of new entrants challenging their dominance.

1	3
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Explain how market contestability affects the performance of an industry.

[15 marks]

1	4
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Discuss the view that privatisation is always beneficial because it leads to improvements in efficiency.

[25 marks]

END OF QUESTIONS

There are no questions printed on this page

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