



GCE A LEVEL

A520U30-1



S24-A520U30-1



FRIDAY, 7 JUNE 2024 – MORNING

ECONOMICS – A level component 3
Evaluating Economic Models and Policies

2 hours 30 minutes

ADDITIONAL MATERIALS

A WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Answer **both** parts of **one** question from Section A.

Answer **both** parts of **one** question from Section B.

Answer **both** parts of **one** question from Section C.

Write your answers in the separate answer booklet provided, following the instructions on the front of the answer booklet.

Use both sides of the paper. Write only within the white areas of the booklet.

Write the question number in the two boxes in the left-hand margin at the start of each answer, for example

1	1
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Leave at least two line spaces between each answer.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly, clear presentation in your answers.

SECTION A

Answer **both** parts of **one** question from this section.

Either,

National Living Wage to be two-thirds of average earnings by 2024

1	1
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Explain what is meant by labour market flexibility and the factors which can reduce it. [10]

and

1	2
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Discuss whether a cut to the UK's national minimum and living wages would be economically desirable. [20]

Or,

Competition and Markets Authority fines pharmaceutical firms £260m for breaking competition law

2	1
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Outline what is meant by collusion and explain why it may occur in oligopolistic markets. [10]

and

2	2
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Discuss whether oligopolies are desirable market structures. [20]

SECTION B

Answer **both** parts of **one** question from this section.

Either,

Keynesian and Neo-Classical theories clash

3	1
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Using a diagram, explain what is meant by the circular flow of income. [10]

and

3	2
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Evaluate the view that an economy will automatically adjust to reach equilibrium at full employment (the NAIRU). [20]

Or,

Deflation, more worrying than inflation

4	1
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Outline what is meant by deflation and explain how governments might intervene to control it. [10]

and

4	2
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Evaluate the extent to which deflation is a serious problem for an economy. [20]

SECTION C

Answer **both** parts of **one** question from this section.

Either,

Pandemic reveals weak links in global supply chain

5	1
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With the aid of a diagram, explain how the imposition of a tariff can lead to a decline in economic welfare. [10]

and

5	2
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Assess the extent to which an increasingly integrated world economy is beneficial to the UK. [20]

Or,

Adult literacy in Chad only 23%

6	1
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Explain why rapid population growth can be an obstacle to economic development in low-income countries. [10]

and

6	2
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In low-income countries, how effective is a rise in government spending on education likely to be in terms of increasing economic development? [20]

END OF PAPER

Surname

StemUp Model Solution

Answer booklet

Write the question number in the left-hand margin at the start of each answer.

Question
number

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Collusion is when firms in the same market cooperate rather than compete, agreeing on prices, output or market shares so that they maximise their joint profits, generally at the expense of consumers. It can be overt (formal), for example a cartel with a written or verbal agreement to fix prices or set output quotas, which is illegal in the UK under the Competition Act 1998; the CMA fining pharmaceutical firms £260m is an example of this being enforced. It can also be tacit (hidden and unspoken), where there is no agreement but firms behave as if there were one, for example price leadership, where rivals follow the price changes of a dominant firm. Other forms include market sharing, customer allocation, bid rigging and sharing of commercially sensitive information.

An oligopoly is a market dominated by a few large firms with a high concentration ratio (e.g. a 5-firm ratio above 60%), high barriers to entry and differentiated or homogeneous products. Its key feature is interdependence: each firm's price and output decisions affect its rivals, so each must anticipate their reactions, which creates uncertainty.

Collusion occurs because competing is costly for oligopolists. If one firm cuts its price to win market share, rivals are likely to match it, so a price war drives prices towards costs and reduces profits for the whole industry. By colluding, the firms can act as a joint monopoly: they restrict industry output to where $MR = MC$, raise the price and earn supernormal profits. Collusion also removes uncertainty and lets firms cut costs by reducing the intensity of competition, e.g. less advertising.

Game theory explains this. In the payoff matrix below, if both firms charge a high price they earn £10m each. However, each firm's dominant strategy is to charge a low price, because whatever the rival does, a low price pays more

(£14m > £10m and £6m > £4m). So the Nash equilibrium is (Low, Low) with only £6m each, a prisoners' dilemma.

		Firm B	
Firm A		High price	Low price
	High price	A £10m, B £10m	A £4m, B £14m
	Low price	A £14m, B £4m	A £6m, B £6m

(profits; Nash equilibrium = Low, Low)

By colluding, the firms escape this low-price Nash equilibrium and move to (High, High), raising joint profit from £12m to £20m. This is why collusion is a rational strategy in oligopoly.

Collusion is more likely when there are few firms with similar costs and products, high barriers to entry protect the profits, the game is repeated (so firms can punish cheating with tit-for-tat) and demand is price inelastic, so a higher price raises revenue a lot. Demand for many medicines is very inelastic because patients need them and the NHS has few substitutes, so the gains from collusion are large, which explains why firms risked fines. However, each member still has an incentive to cheat by undercutting, which is why cartels are often unstable.

2 2

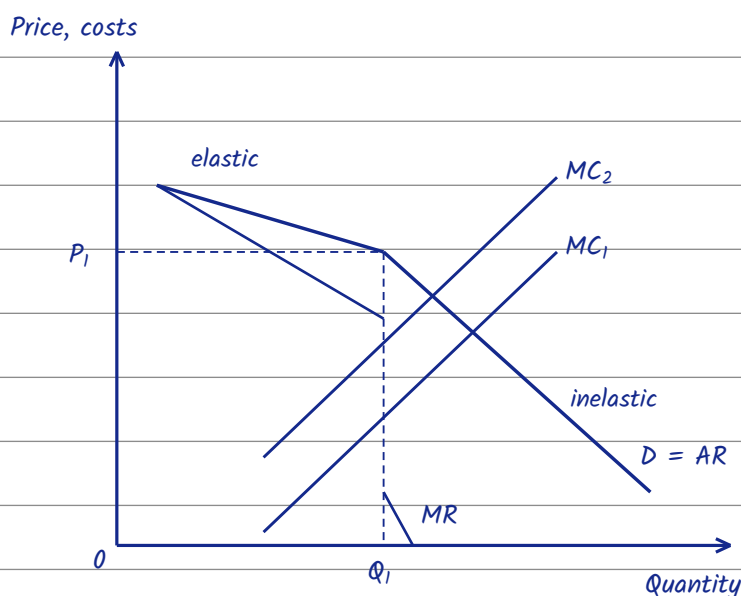
An oligopoly is a market dominated by a few large interdependent firms, with high barriers to entry. Whether it is desirable depends on its effects on efficiency, consumers and the wider economy.

The case for oligopoly. First, barriers to entry allow firms to earn supernormal profits in the long run, unlike in perfect or monopolistic competition. These profits can be reinvested in research and development into new products and processes, so oligopoly can be dynamically efficient. Firms such as Apple, Google and Amazon operate in oligopolistic markets and are among the most

innovative firms in the world; pharmaceutical firms use profits to fund the high cost of developing new drugs, which brings large long-run gains to consumers' welfare.

Second, oligopolists are large, so they can exploit internal economies of scale (technical, purchasing, financial and managerial). This lowers long-run average cost, which may be passed on as lower prices and makes UK firms internationally competitive. Third, a competitive oligopoly can create intense rivalry for market share: in UK grocery retail the growth of Aldi and Lidl has forced Tesco and Sainsbury's to cut prices and costs, increasing consumer surplus. Non-price competition, such as quality improvements, loyalty schemes and advertising, can also increase consumer information and choice.

Fourth, oligopoly can give price stability, which creates certainty for consumers and firms. The kinked demand curve model explains this. If a firm raises its price above P_1 , rivals do not follow, so demand is price elastic and it loses much of its market share; if it cuts its price, rivals match it, so demand is inelastic and it gains little. This gives a kink in demand at P_1 and a vertical discontinuity in MR, as shown below.



As the diagram shows, marginal cost can rise from MC_1 to MC_2 within the gap in MR without the profit-maximising price P_1 or output Q_1 changing, so prices are sticky. Finally, even collusion is not always harmful: governments permit

some agreements, such as joint R&D ventures, recession cartels and vertical agreements in car distribution, and large oligopolists are big employers and pay significant tax revenue through corporation tax, VAT, income tax and NICs.

The case against oligopoly. Where firms collude, they behave like a monopoly. Price is raised above marginal cost ($P > MC$), so the market is allocatively inefficient and output is restricted, creating a deadweight welfare loss. Firms are unlikely to produce at the minimum of average cost, so they are productively inefficient, and protected by barriers to entry they may become X-inefficient. Collusion also reduces the incentive to innovate and raises prices for consumers and the government, as shown by the £260m CMA fines for pharmaceutical firms that overcharged the NHS.

Even competitive oligopoly has costs. There can be competitive waste through excessive advertising, duplicated effort and superficial product differentiation, which raise costs and prices without adding real value. Alternatively, a race to the bottom may develop in which quality is sacrificed for lower prices.

Supernormal profits may also be paid out to shareholders rather than reinvested, so dynamic efficiency is not guaranteed, and while oligopolists have more scale than firms in monopolistic competition, they have less than a monopoly, so the economies of scale argument is weaker than it first appears.

Evaluation. Whether oligopoly is desirable depends firstly on whether it is collusive or competitive. A tight oligopoly with a high concentration ratio, homogeneous products and inelastic demand (such as some generic medicines) is likely to collude and behave like a monopoly, whereas a market with a lower concentration ratio and contestable entry, such as UK supermarkets, is more likely to deliver low prices. Secondly, it depends on the industry: where minimum efficient scale is very large or R&D costs are huge, as in pharmaceuticals or aircraft manufacture, oligopoly may be the only way to achieve economies of scale and innovation, and perfect competition is not a realistic alternative. Thirdly, it depends on the effectiveness of regulation: the CMA can fine firms up to 10% of worldwide turnover and leniency schemes

make cartels unstable, but detection is difficult and tacit collusion is hard to prove. The time scale also matters, as dynamic gains from innovation appear in the long run while static inefficiency is felt immediately.

Overall, oligopoly is not inherently desirable or undesirable. It is likely to be desirable when it is competitive and contestable, when economies of scale and innovation are large, and when strong regulation such as that of the CMA deters collusion. It is undesirable when firms collude, as the pharmaceutical case shows. On balance, given effective competition policy, most UK oligopolies probably bring more benefits than costs.

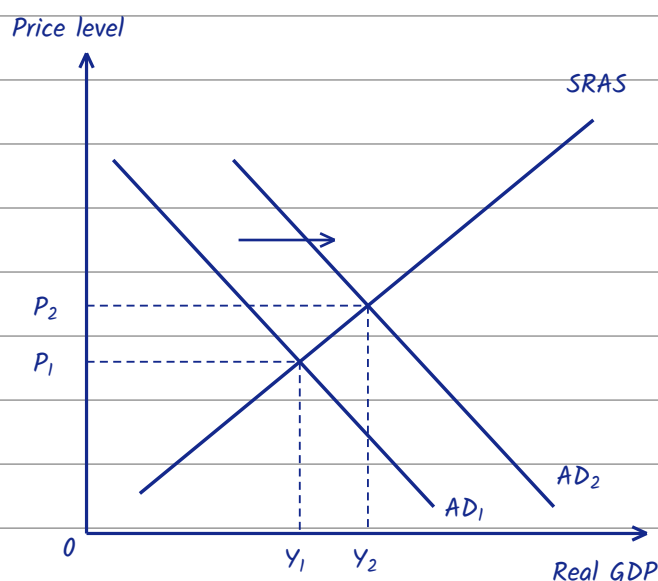
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Deflation is a sustained fall in the general price level, so the rate of inflation, measured in the UK by the CPI, is negative (for example UK CPI inflation was -0.1% in April 2015). It is different from disinflation, which is a fall in the rate of inflation while prices are still rising. Deflation can be caused by continual supply-side improvements (benign deflation), or by a sustained period of low or falling aggregate demand (malign deflation). To stop it, the government and central bank need to boost AD and reverse deflationary expectations.

Expansionary monetary policy: the Bank of England's MPC, which has a symmetric 2% CPI target, can cut Bank Rate. This lowers the cost of borrowing and the reward for saving, so consumption on credit and investment rise; mortgage payments fall, raising disposable income; and lower rates tend to depreciate the pound, making exports cheaper and imports dearer, which raises $(X - M)$ and import prices. If Bank Rate is already near zero, it can use quantitative easing: creating new money to buy government bonds, which raises bond prices, lowers long-term interest rates, increases the money supply and creates a wealth effect. Forward guidance can also raise inflation expectations.

Expansionary fiscal policy: the government can increase government spending

(e.g. on infrastructure) or cut direct taxes such as income tax, raising disposable income and consumption. Because one person's spending is another's income, the multiplier effect means AD rises by more than the initial injection. In both cases AD shifts right from AD_1 to AD_2 , as shown below, so the price level rises from P_1 to P_2 and real GDP rises from Y_1 to Y_2 .



Higher AD reduces spare capacity and unemployment, so there is less competition in product markets (firms no longer need to cut prices to sell stock) and in labour markets (fewer unemployed workers competing for jobs), reducing the downward pressure on wages and prices. At the same time, expansionary policy generates positive inflation expectations, which feed into wage bargaining and price setting, so the downward price spiral is broken and inflation returns towards the 2% target.

4 2

Deflation is a sustained fall in the general price level. Whether it is a serious problem depends largely on its cause: malign deflation from falling AD, or benign deflation from rising aggregate supply.

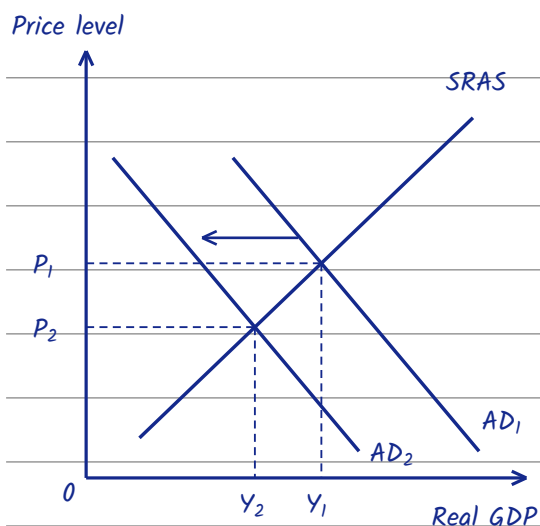
Why deflation can be serious. The biggest danger is a deflationary spiral. If

consumers expect prices to keep falling, they postpone spending on durable goods such as cars and furniture, so consumption and AD fall. Firms then face falling sales and lower prices, cut output and employment, and households' incomes fall, which reduces AD and prices further, so expectations of deflation become self-fulfilling. Japan experienced this in its 'lost decades' after the 1990s, with years of stagnant growth.

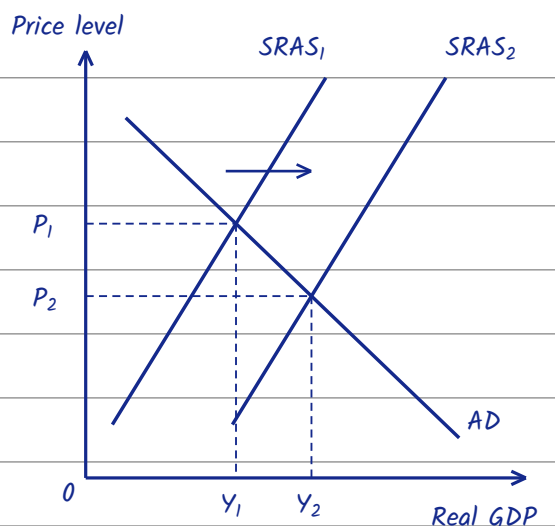
Secondly, deflation increases the real value of debt. Nominal debts are fixed, but with falling prices and usually falling nominal incomes, the real burden of repayments rises. Highly indebted households cut spending to repay debts, again reducing AD, and firms may default, damaging banks. For governments, inflation usually erodes the real value of national debt, but deflation does the opposite: with UK public sector net debt close to 100% of GDP, this makes the government less able and less willing to use expansionary fiscal policy.

Thirdly, deflation raises real interest rates (real rate = nominal rate - inflation). With 2% deflation, a nominal rate of 0% is a real rate of 2%, which rewards saving and discourages borrowing. Central banks cannot cut nominal rates much below zero (the zero lower bound), so monetary policy loses its power, which is why deflation can be hard to escape once it starts.

Fourthly, falling prices reduce firms' revenue and profit margins, so retained profits for investment fall. Lower investment reduces the growth of the capital stock and productivity, damaging long-run potential growth. Finally, if nominal wages are sticky downwards, because of contracts, the minimum wage and workers' resistance to pay cuts, falling prices raise real wages above the market-clearing level, causing real wage (classical) unemployment. Diagram (a) below shows demand-side deflation: AD falls from AD_1 to AD_2 , so the price level falls but real GDP also falls from Y_1 to Y_2 , with rising unemployment.



(a) demand-side (malign) deflation



(b) supply-side (benign) deflation

Why deflation may not be serious. If deflation comes from the supply side, as in diagram (b), it is benign. Technological progress, productivity gains or falling commodity prices (such as the fall in oil prices that caused the UK's brief deflation in 2015) shift SRAS right from $SRAS_1$ to $SRAS_2$, so the price level falls from P_1 to P_2 while real GDP rises from Y_1 to Y_2 . Households benefit because if their nominal income stays the same, real incomes rise as the price level falls, increasing living standards and consumption. Savers also gain as the real value of their savings rises.

In addition, other things being equal, if UK prices fall relative to those of trading partners, UK goods become more internationally competitive. Exports rise and imports fall, which can improve the current account balance and add to AD, especially if demand for exports and imports is price elastic (the Marshall-Lerner condition).

Evaluation. How serious deflation is depends on several factors. The type matters most: supply-side deflation is generally harmless or even beneficial, although it can turn into demand-side deflation if consumers start to expect falling prices. The size and duration also matter: a mild, short-lived 'blip' of -0.1% to -0.5% , as in the UK and eurozone in 2015, did not change spending behaviour, whereas persistent deflation of 1% to 2% over several years, as in Japan, becomes embedded in expectations. It also depends on the level of

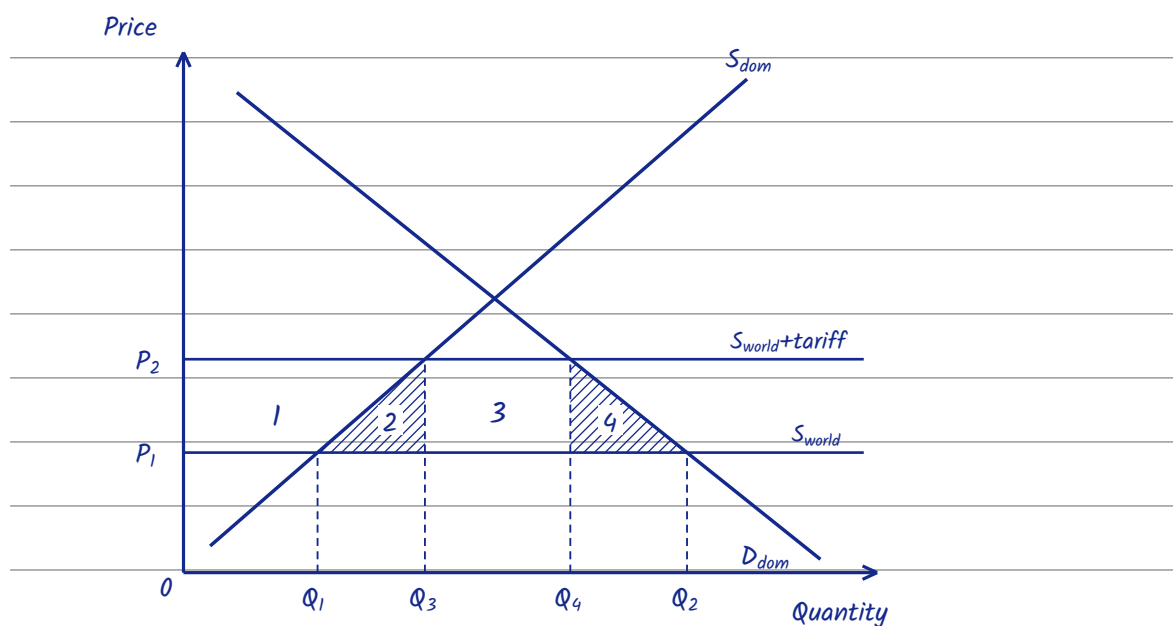
household, corporate and government debt, since high debt makes the debt-deflation effect much stronger, and on whether policymakers have room to act: if interest rates are already near zero and public debt is high, there is little scope for monetary or fiscal stimulus, so deflation is much harder to reverse. The credibility of the central bank is also important, as firm anchoring of expectations at 2% makes a spiral less likely.

In conclusion, deflation is a serious problem when it is caused by falling AD, is persistent and occurs in a highly indebted economy with interest rates at the zero lower bound, because the spiral and debt effects are then self-reinforcing and hard to cure. Benign, temporary deflation is not a serious problem and may even raise living standards. Because demand-side deflation is so difficult to escape, central banks are right to treat it as more worrying than moderate inflation.

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Economic welfare is the total net benefit to society from the allocation of resources, i.e. community surplus (consumer surplus + producer surplus, plus any government revenue), or net social benefit ($MSB - MSC$) where externalities exist. A tariff is a tax on imported goods.

In the diagram, D_{dom} and S_{dom} are domestic demand and supply. Under free trade the UK can import as much as it wants at the world price P_1 (world supply is perfectly elastic), so domestic consumers buy Q_2 , domestic firms supply Q_1 and imports are Q_1Q_2 . A tariff raises the price of imports to P_2 (world price + tariff).



At P_2 , domestic demand contracts to Q_4 and domestic supply extends to Q_3 , so imports fall to Q_3Q_4 . Consumers pay a higher price for fewer goods, so consumer surplus falls by areas 1 + 2 + 3 + 4. Area 1 is not lost to society: it is a transfer to domestic producers as extra producer surplus. Area 3 (the tariff per unit $\times$ imports Q_3Q_4) is also a transfer, as tariff revenue to the government.

Areas 2 and 4, however, are deadweight losses of economic welfare. Area 2 is a production inefficiency: output Q_1Q_3 is now produced by less efficient, higher-cost domestic firms instead of being imported at the lower world price, so resources are misallocated away from comparative advantage. Area 4 is a consumption loss: consumers who valued the good above the world price no longer buy Q_4Q_2 , so this consumer surplus is lost and world output falls. The net welfare loss is 2 + 4.

Welfare may fall further if trading partners retaliate with tariffs on UK exports, and if the tariff is on components, as global supply chains mean, firms' costs rise, shifting supply left. Consumers also face less choice and domestic firms face less competitive pressure, which can lead to X-inefficiency.

interdependence between countries through freer trade in goods and services, free movement of capital and labour, and the transfer of technology and knowledge, helped by falling transport and communication costs.

Benefits to the UK. First, freer trade allows the UK to specialise according to comparative advantage. The UK has a comparative advantage in services such as finance, insurance, education and the creative industries, and runs a large surplus on trade in services; by exporting these and importing manufactured goods from lower-cost producers, world output rises and the UK consumes beyond its own PPF. Cheap imports from low-wage economies such as China and Vietnam lower prices and widen choice, raising real incomes, especially for lower-income households, and helped keep UK inflation low for two decades.

Larger markets also let UK firms exploit economies of scale.

Second, free movement of capital brings inward foreign direct investment.

Nissan's plant in Sunderland employs around 6,000 people directly and supports many more jobs in the supply chain, so FDI raises employment and incomes through the multiplier, adds to tax revenue and GNI, and brings new technology and management methods that raise productivity. The UK is one of the largest recipients of FDI in Europe, and the City of London benefits from global capital flows. Third, free movement of labour gives UK firms a global labour market, filling shortages in both high-skill jobs (NHS doctors, software engineers) and low-skill jobs (fruit picking, care work), which raises potential output and helps offset an ageing population. Fourth, the transfer of technology and greater competition push UK firms to become more efficient and innovative, and UK firms can cut costs, for example banks using overseas call centres.

Costs to the UK. Integration has caused structural unemployment as UK manufacturing lost out to lower-cost imports, contributing to deindustrialisation and regional inequality in areas such as the North East and South Wales, e.g. steel jobs at Port Talbot. Workers who lose jobs are often occupationally and geographically immobile, so unemployment can last. Secondly, complex global

supply chains and just-in-time production have made the UK over-reliant on overseas suppliers for vital parts: the pandemic, the shortage and rising cost of shipping containers and the global microchip shortage halted car production, and the deteriorating geopolitical situation, such as the energy price shock after Russia's invasion of Ukraine, caused cost-push inflation in the UK above 11% in 2022.

Thirdly, multinationals can use transfer pricing to book profits in low-tax countries, so the UK loses corporation tax revenue. UK firms are also more vulnerable to foreign takeover, such as Kraft's takeover of Cadbury, with decisions on jobs and investment made abroad, and profit outflows worsen the primary income balance. There are also risks of a brain drain of skilled workers, of a race to the bottom on environmental and labour standards, and of financial contagion, as the 2008 crisis spread rapidly through integrated financial markets.

Evaluation. The extent of the benefits depends on several factors. The time scale matters: the gains from specialisation and FDI accrue over the long run, whereas job losses and adjustment costs are felt immediately. The distribution matters: London and the South East, with high-skill services, have gained most, whereas former industrial regions have lost, so the net gain to the UK as a whole can coexist with losers. It also depends on the flexibility of the UK labour market and on government policy, such as retraining, regional investment and international tax cooperation (for example the OECD agreement on a 15% global minimum corporation tax), which can reduce the costs while keeping the benefits. The evidence on reduced integration is telling: the OBR estimates that leaving the EU single market will reduce UK trade intensity by about 15% and long-run productivity by about 4%, suggesting that integration has been beneficial overall. Finally, the pandemic suggests that integration may have gone too far in some areas, and some deglobalisation, such as reshoring the production of critical goods like microchips and medicines, may improve resilience without losing most of the gains.

Question
number

In conclusion, an increasingly integrated world economy is, on balance, beneficial to the UK, because as an open, services-based economy it gains strongly from trade, FDI and access to global labour and capital. However, the gains are unevenly distributed and the UK is more exposed to external shocks, so the benefits will be greatest if the government manages the costs through supply-side policies and greater supply chain resilience.