



GCE A LEVEL

A520U20-1



FRIDAY, 9 OCTOBER 2020 – AFTERNOON

ECONOMICS – A level component 2
Exploring Economic Behaviour

2 hours 30 minutes

A520U201
01

ADDITIONAL MATERIALS

A calculator.

A WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Answer **all** questions.

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 presentation in your answers.

Answer all the questions.

1. The Codfathers – a fishy business

The oceans have been in the news quite often lately, as the impact of plastics on sea-life has been publicised through programmes such as the BBC's *Blue Planet*. More than 8 million tonnes of plastic enter the world's seas every year, and experts think that by 2050, the amount of plastic in the ocean will weigh more than the amount of fish. The costs are significant as birds and fish can be killed as they mistake plastic for food, contributing to a steady fall in the world's fish stocks.

Around the UK's shores however, North Sea cod stocks have recovered to sustainable levels. Cod was close to extinction in the North Sea in 2006 (**Figure 1**), which led to a plan by the Scottish Government and the EU to dramatically cut fishing quotas to help fish stocks to recover. This goes against a global trend of over-exploitation of fish stocks, as seen in the unregulated market for Pacific sardines (**Figure 2**).

Figure 1

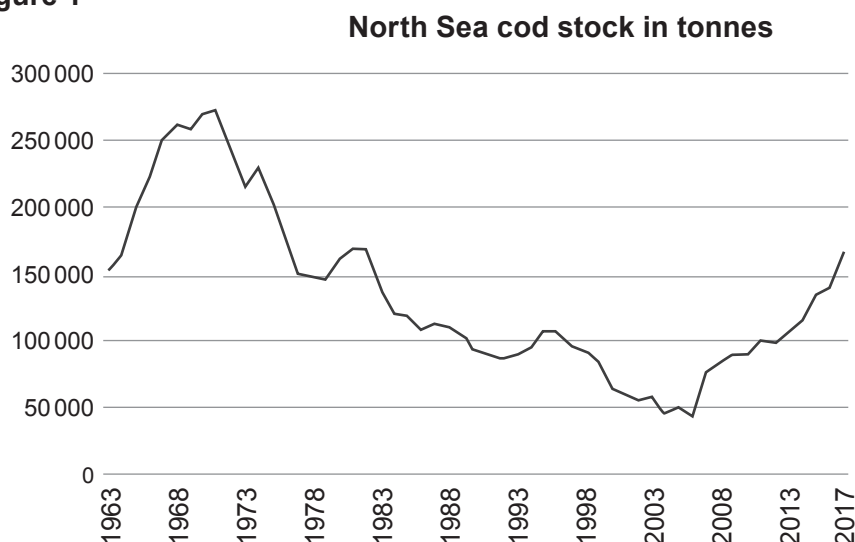
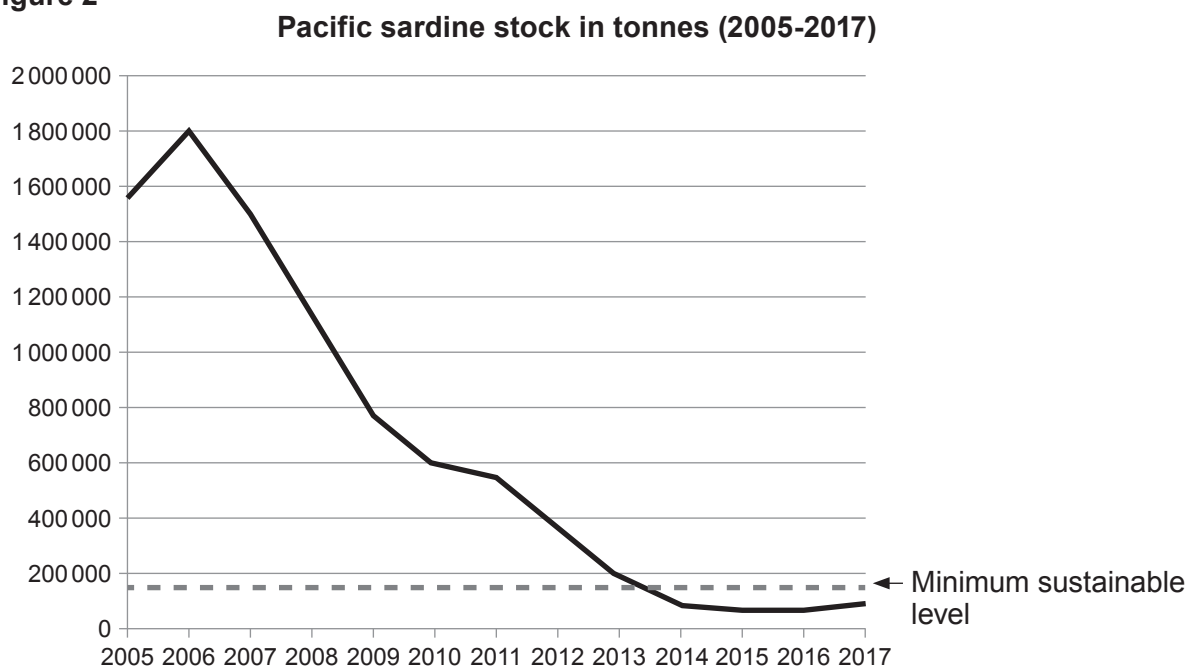


Figure 2



15 Policies to prevent over-fishing, together with growing global demand for fish, have driven up prices. But even so all is not well for the UK fishing sector. According to newspaper reports, powerful trawlers (fishing boats) and large fishing firms have forced smaller, more environmentally friendly boats on which local communities depend, out of business.

20 Because of current fishing quotas, small boats under 10 metres, which make up 77% of the English fleet, currently have the right to catch only 3% of English cod, haddock, plaice, sole, herring and mackerel. According to Greenpeace, across the UK as a whole, 5 families that Greenpeace have nicknamed 'the Codfathers' have 29% of all the UK's fishing quotas. One giant super-trawler, has the right to catch 94% of the English herring quota in the Atlantic and North Sea.

The situation is no better in Scotland where 65% of the entire Scottish catch, was caught by 19 powerful super-trawlers in 2016. Small-scale fishermen, who operate 80% of Scottish boats, have only 1% of the quotas.

Figure 3.1

UK fishing fleet: number of boats, 2016

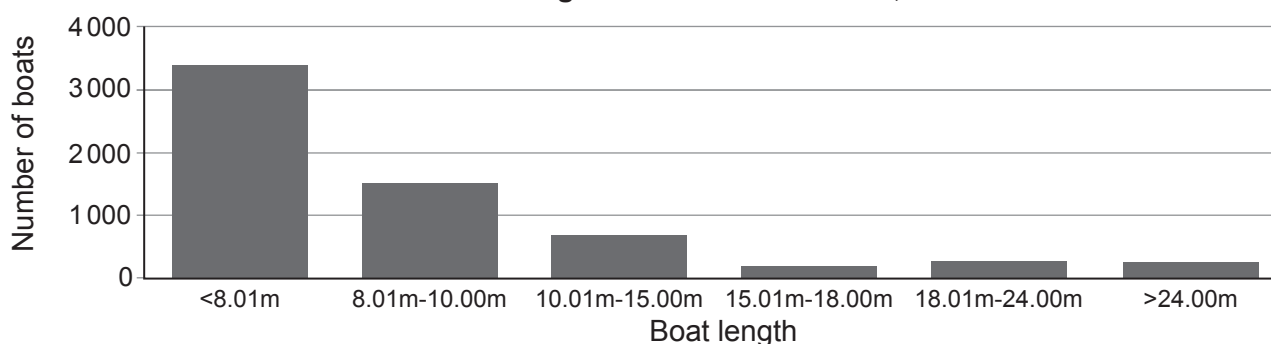
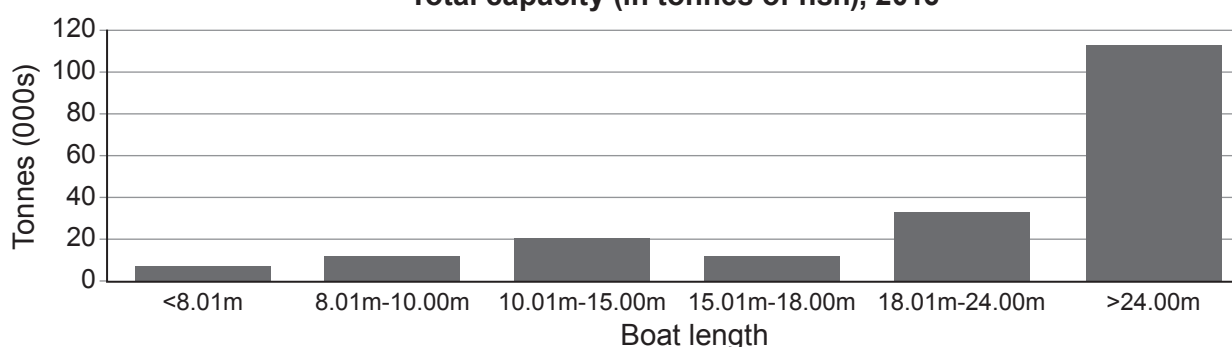


Figure 3.2

Total capacity (in tonnes of fish), 2016



25 Small-scale fishing businesses and coastal communities are struggling, with operating profits close to zero. This is not because of competition from European boats but is because of the failure of UK governments to challenge the "eating up" of quotas by big businesses. This reduces the total demand for smaller fishing businesses and also stops them from getting the economies of scale that the super-trawlers can generate. Therefore, jobs are at risk and many small-scale fishermen are going out of business. In many coastal tourist resorts, the fish sold in local restaurants has actually been driven a substantial distance by road, rather than supplied by local fishing boats, because all the local fishermen have gone out of business. This is bad both for the local economy and for the environment.

35 On the other hand, some concentration of the fishing industry is inevitable and desirable. Small-scale fishermen have a limited range for their boats, and fish processing factories cannot be built all around the coastline. But too much market concentration is a bad thing, it destroys small coastal communities and hands over entire fish stocks to large-scale more destructive types of fishing which are bad for the environment.

40 Meanwhile, the UK Government is also attempting to tackle the other major issue challenging the oceans – plastic. The Government has an ambitious plan to abolish all plastic waste by 2042. Since 2005, firms creating plastic packaging waste have been obliged to buy a “packaging recovery note”, to pay for the cost of dealing with it, with the charge acting as a small incentive to use greener packaging.

45 The Government now plans to increase this charge significantly on firms that use non-recyclable plastics and to use the money to invest in more recycling factories for plastic that can be recycled. This should increase the demand for recyclable plastic. Until recently most plastic waste was simply exported to China, but the Chinese government have now stopped this practice, leaving the UK with a shortfall of 350 000 tonnes of recycling capacity. This means that plastic that could be recycled will simply go to landfill, where it will take 450 years
50 to decompose.

Of course, for plastic to be recycled, it still has to make it to a recycling factory, which will require a major change in attitudes from consumers. In 2017 only 59% of plastic bottles were recycled. This has created calls for a deposit scheme on plastic bottles to be introduced (where consumers get money back if they return bottles to shops or recycling points).

55 Major challenges still remain ahead for the oceans and the creatures that live in them.

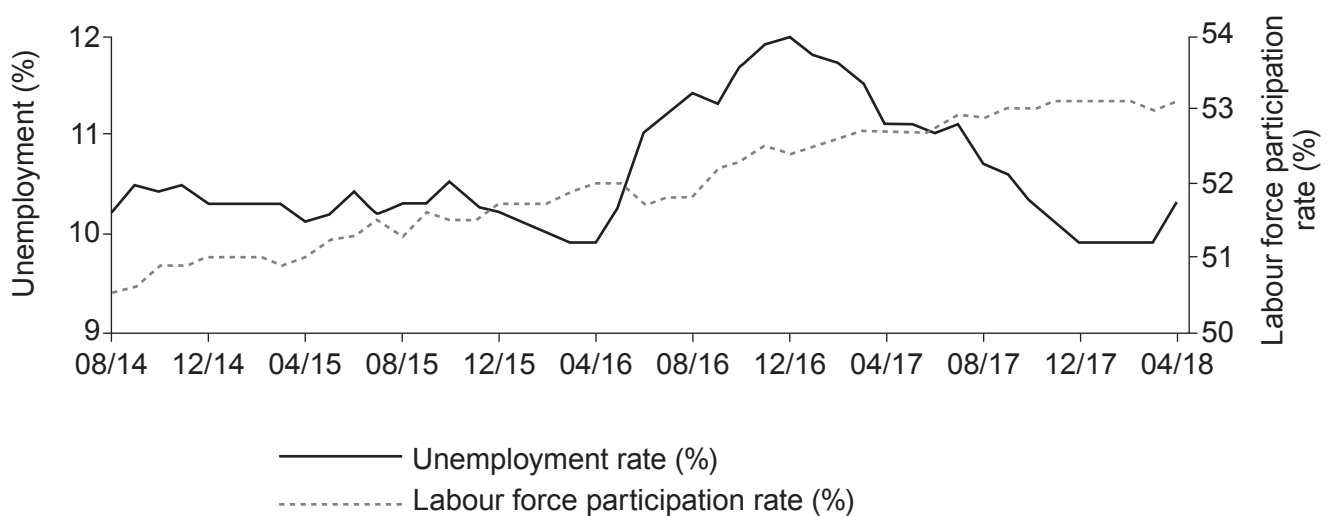
- (a) (i) Define market failure. [2]
- (ii) With reference to **Figures 1** and **2** and appropriate economic theory, explain why regulation is likely to be necessary in the fishing industry to prevent market failure. [4]
- (b) With reference to the data (including **Figures 3.1** and **3.2**), discuss which market structure best describes the UK fishing industry. [9]
- (c) Using diagrams and with reference to the data, explain why small-scale fishing operators have profits close to zero, but large scale operators are highly profitable. [7]
- (d) With reference to the data, discuss whether it would be beneficial to give more fishing quotas to small-scale fishing operators instead of large-scale fishing operators. [9]
- (e) Using diagrams, discuss whether the policies that the UK is considering (lines 44 to 46) will be effective in preventing market failure in the plastics industry. [9]

2. Turkey in economic turmoil

Turkey has the world's 17th largest nominal GDP and the 13th largest by purchasing power parity. It is often classified as an emerging economy and has a population of 82 million with a young age structure – half of the population is aged under 30. However, the country's labour force participation rate of just over 53% is by far the lowest in the OECD (The Organisation for Economic Cooperation and Development) which has a median rate of 74%. Turkey's female participation rate is only 32%. The labour force participation rate is the proportion of those aged 16-64 in employment or actively seeking employment.

Figure 1

Unemployment and labour force participation rates in Turkey



In 2017 the OECD expected Turkey to be one of the fastest growing economies among OECD members up to 2025 with an average growth rate of 4.9%. However, by 2018 the growth estimates for the Turkish economy had been cut in half.

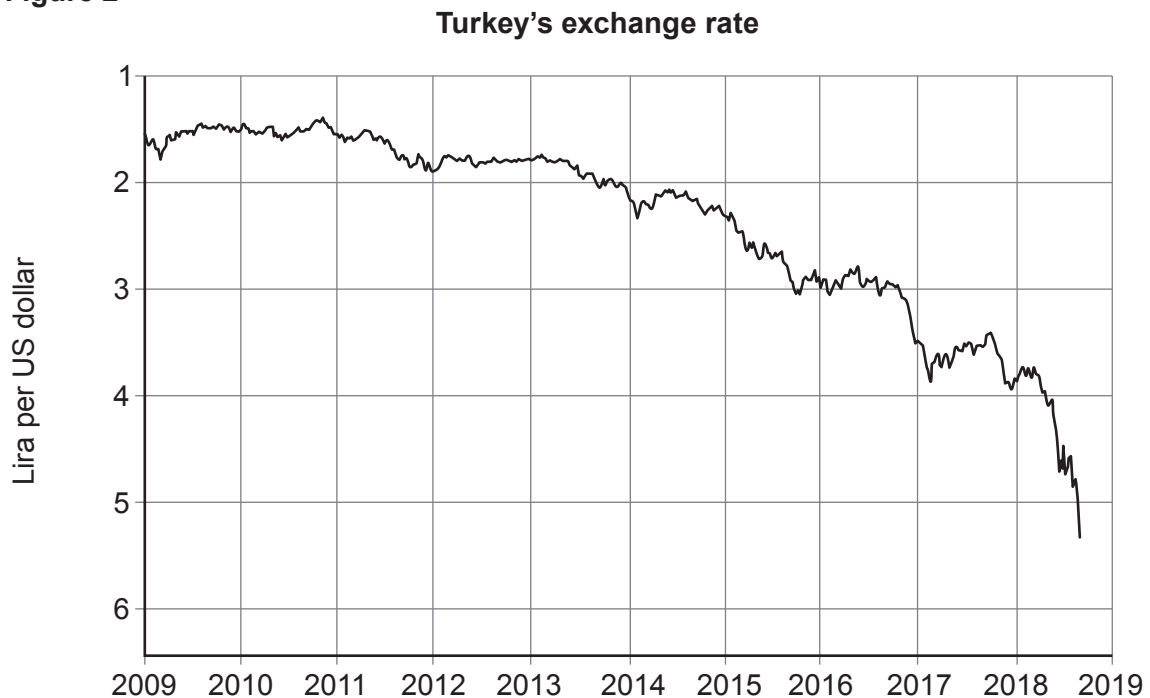
Something had clearly gone wrong, as currency and debt crises ended a period of strong growth under President Erdogan dating back to 2003 which had been built on a construction boom fuelled by easy credit and government spending.

By 2018, the construction boom had ended as 2 million new houses remained unsold, three times the average annual number of new houses sold. In August 2018 the Turkish currency, the lira, collapsed following President Trump's tweet about doubling US tariffs on Turkish steel and aluminium, losing 17% of its value on the day of the tweet alone. The lira crisis highlighted deeper concerns about the Turkish economy that have been around for years, such as the low average savings rate, the huge current account deficit on the balance of payments, increased corporate debt and decreased inward investment.

Turkey has also experienced substantially higher inflation than other emerging economies in recent years, reaching almost 12% in late 2017.

The rise in inflation and the depreciation of the lira have generally been attributed to President Erdogan preventing the Central Bank of Turkey making necessary interest rate adjustments. Erdogan argued that high interest rates were a 'tool of exploitation'. He has repeated his unconventional view that high interest rates cause inflation rather than reduce it.

Figure 2



However, in 2018, inflation reached 17.9% and in the autumn the Turkish Central Bank raised the main interest rate from 17.75% to 24%, higher than the 22% that markets had been expecting. The lira appreciated by as much as 5% following this decision. The Central Bank said it would maintain a tight stance with its monetary policy until the inflation outlook improved significantly.

Timothy Ash, a leading emerging markets financial analyst, has said that “Turkey has strong banks, healthy public finances, good demographics, and a pro-business culture but has been spoiled over the last few years by unconventional and loose macroeconomic management. The consequences of a monetary policy involving low interest rates and easy credit are the currency and debt crises in Turkey, which have previously occurred many times in other emerging economies”.

At least low-paid workers in Turkey have been protected by increases in the national minimum wage. Between 2014 and 2018 the monthly minimum wage rose from 1134 liras to 2030 liras, although the \$ value remained the same at around \$530.

Over a longer period, between 2003 and 2018 the index of Turkey's minimum wage rose to 709 from a base of 100. That compares very favourably with the index of CPI inflation of 357 over the same period. These figures prove that the government did what it could to support Turkey's lower income groups. Such a policy stance has helped stimulate economic growth, but it remains to be seen what effect the increase in the minimum wage will have on the labour market and the wider economy.

Looking to the long term, Turkey aims to become a member of the European Union (EU). In 1995 Turkey entered a customs union agreement with the EU which covers manufactured goods and processed agricultural goods, although Turkey is not in the full EU customs union. Turkey has some freedom to develop trade policy with other countries across the world, but has to open its markets to any country the EU makes a trade agreement with and doesn't get the same immediate tariff-free access to that country's market that EU members do.

The EU accounts for about half of Turkey's total trade, while Turkey is the EU's fourth-largest trading partner, after China, the US and Russia. In 2003-2017, the EU accounted for 72% of Turkey's FDI inflows (\$98bn). And, despite a drop over the past two years, the EU still accounts for about 40% of tourism flows to Turkey.

- (a) Outline why Turkey's GDP ranking is higher when measured in terms of purchasing power parity. [2]
- (b) Using a labour market diagram and the data, assess the likely effects of the increases in the Turkish national minimum wage between 2014 and 2018. [9]
- (c) Using the data, discuss the extent to which the Turkish economy might have benefitted from the change in the lira exchange rate over the period shown in **Figure 2**. [11]
- (d) President Erdogan's view was that high interest rates cause inflation rather than reduce it. Using diagrams, discuss whether high interest rates are more likely to reduce inflation than to increase it. [9]
- (e) Using the data, evaluate the possible economic effects on the Turkish economy of Turkey becoming a full member of the European Union. [9]

END OF PAPER

Surname	<i>StemUp Model Solution</i>
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number	
1. (a) (i)	<i>Market failure is a situation where the free market fails to allocate resources efficiently (in a socially optimal way), so there is a misallocation of resources, with over- or under-production of a good, resulting in a welfare loss to society.</i>
1. (a) (ii)	<i>Fish in the open sea are a common resource (common good): they are non-excludable, as no one can stop a boat from fishing, but rival and diminishable, since every fish caught leaves fewer for others and fewer to breed. Each fishing firm maximises its own profit and ignores the cost it imposes on others by depleting the stock, so the stock is over-exploited: the tragedy of the commons. Without regulation such as quotas the market will over-fish until the stock collapses.</i> <i>Figure 2 shows this in the unregulated market for Pacific sardines: the stock fell from about 1 800 000 tonnes in 2006 to below 100 000 tonnes by 2014, under the minimum sustainable level. In contrast, Figure 1 shows North Sea cod fell from about 270 000 tonnes in the late 1960s to under 50 000 tonnes in 2006, but after quotas were dramatically cut (lines 8 to 10) it recovered to over 150 000 tonnes by 2017. Regulation is therefore needed.</i>
1. (b)	<i>Market structures range from perfect competition (many small price-taking firms selling identical products with no barriers to entry) and monopolistic competition (many firms, slightly differentiated products, low barriers, normal profit in the long run) to oligopoly (a few large interdependent firms, high concentration ratio, barriers to entry) and monopoly (a single seller, or a working monopoly with over 25% market share).</i> <i>Looking at the number of firms, the industry could be described as competitive.</i>

Figure 3.1 shows about 6 100 UK boats in 2016, of which about 3 400 are under 8.01m and about 1 500 are 8.01m to 10m, so around 80% of the fleet are small boats (line 23). With so many sellers of a fairly homogeneous product (cod, haddock, mackerel) each small boat is a price taker, as in perfect competition, and small-scale fishing businesses earn operating profits "close to zero" (line 25), consistent with only normal profit in the long run in perfect or monopolistic competition. Local boats may also be slightly differentiated by freshness or sustainability, which suggests monopolistic competition.

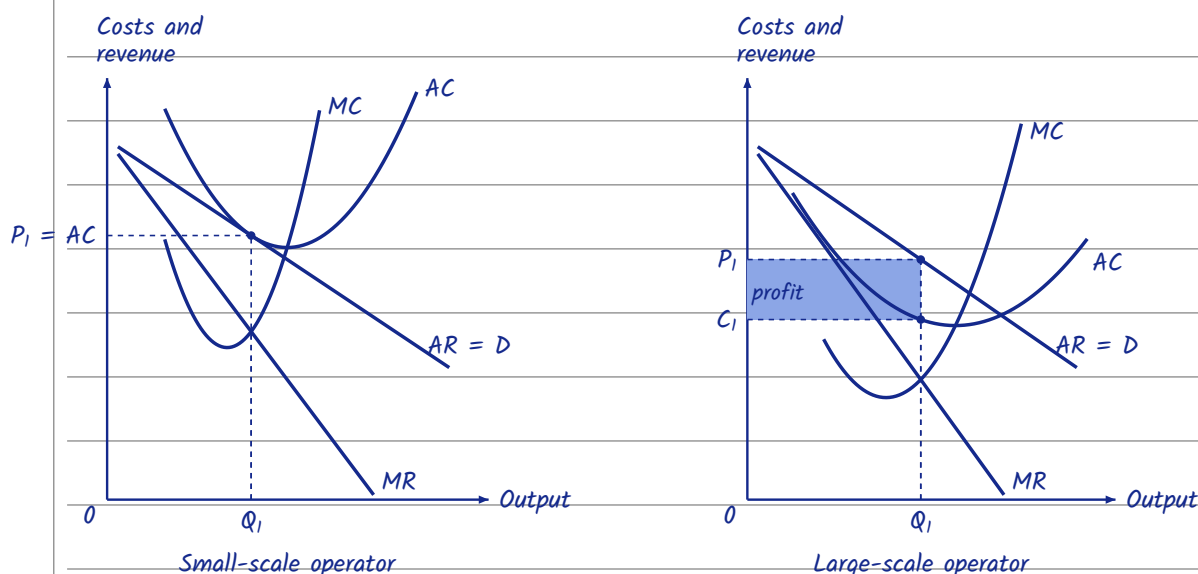
However, market share is better measured by capacity and quotas than by the number of boats, and on this basis the market is an oligopoly. Figure 3.2 shows that the roughly 220 boats over 24m (under 4% of the fleet) have about 113 000 tonnes, well over half of the total capacity of roughly 200 000 tonnes, while boats under 10m have only about 19 000 tonnes, under 10%. Small boats, 77% of the English fleet, may catch only 3% of the main species (lines 16 to 18), and 5 families, "the Codfathers", hold 29% of all UK quotas (lines 18 to 19), a 5-firm concentration ratio of at least 29%. In Scotland 19 super-trawlers caught 65% of the catch in 2016 (lines 22 to 23). Quotas act as a legal barrier to entry, super-trawlers enjoy large economies of scale and earn supernormal profits, all features of oligopoly. In some markets there is even a working monopoly: one super-trawler holds 94% of the English herring quota (lines 19 to 20).

Overall, the industry has features of more than one structure: a competitive fringe of many small boats in a market dominated by a few large firms. The degree of monopoly power varies by fish species, with Atlantic herring close to a monopoly. Because most output and quotas are concentrated in a few firms with barriers to entry, the UK fishing industry is best described as an oligopoly with a competitive fringe.

1. (c)

Profit = total revenue minus total cost, so profit depends on both costs and revenue. The UK government has allowed large firms to "eat up" the fishing

quotas (lines 26 to 27), which affects both small and large operators.



Revenue: small boats under 10m make up 77% of the English fleet but hold only 3% of the quota (lines 16 to 17), so the total demand they can supply is restricted (line 28). Their average revenue (AR = D) curve is low and close to the cost curve. Large super-trawlers hold most of the quotas, for example 94% of the English herring quota, so their demand and total revenue are much higher.

Costs: Figure 3.2 shows boats over 24m have a capacity of about 113 000 tonnes against only about 7 000 tonnes for the 3 400 boats under 8.01m. Large trawlers therefore gain technical economies of scale (bigger nets and engines spread over a much larger catch), as well as purchasing and financial economies, so their average cost is much lower. Small boats have a limited range (line 35) and cannot reach the minimum efficient scale, so their unit costs are high. As the left diagram shows, for a small operator AR is tangent to AC at Q_1 , where $MC = MR$, so $AR = AC$ and it earns only normal profit (profit close to zero). As the right diagram shows, a large operator produces Q_1 where $MC = MR$, but $AR (P_1)$ is well above $AC (C_1)$, so it earns the shaded supernormal profit. Quotas are a barrier to entry, so this profit is not competed away in the long run.

1. (d)

Giving more quotas to small-scale operators could bring several benefits. Small businesses currently have operating profits close to zero (line 25), so more quota would raise their revenue and allow them to gain some economies of scale, increasing profits and keeping them in business. Many coastal communities depend entirely on fishing (line 15), so saving these firms protects jobs, and through the regional multiplier the extra income is spent in local shops, restaurants and tourism, raising incomes further. It would reduce inequality between "the Codfathers", 5 families with 29% of the quotas, and small fishermen, 80% of Scottish boats, with only 1% (lines 18 to 24). It would also help correct government failure, since the current allocation was caused by governments failing to challenge the "eating up" of quotas (lines 26 to 27). There are environmental gains too: small boats are "more environmentally friendly" (line 15) while large-scale fishing is "more destructive" (lines 37 to 38), and local fish would cut food miles, as restaurants in tourist resorts currently have fish driven a substantial distance by road (lines 30 to 33). Reducing the market power of large firms may also bring more competition and lower prices.

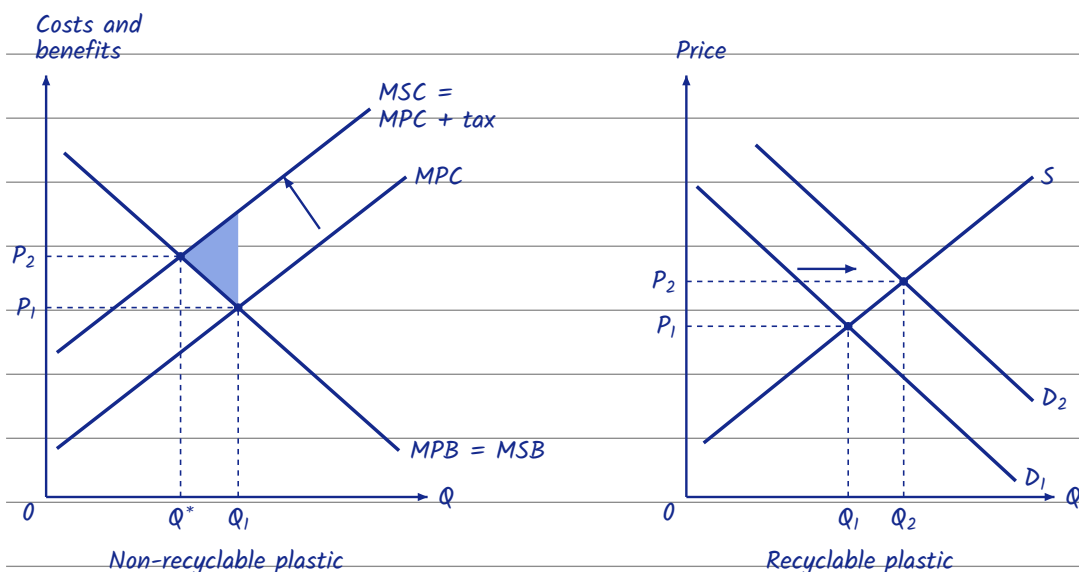
On the other hand, large firms are needed. Some concentration is "inevitable and desirable" (line 34) because small boats have a limited range and processing factories cannot be built all around the coast (lines 35 to 36). Moving quota away from super-trawlers, with capacity of about 113 000 tonnes for boats over 24m (Figure 3.2), would lose economies of scale, raising average costs, which could mean higher fish prices for consumers in the long run, or less dynamic efficiency and investment. It is also easier and cheaper to police quotas on a small number of large boats than on thousands of small ones, so over-fishing could rise again, threatening the recovery shown in Figure 1. As prices are already rising due to strong global demand (lines 13 to 14), some might argue there is no need to act.

Overall, it would be beneficial to give more of the quota to small-scale

operators, but only partly. The question is not about removing large boats, just shifting some of the quota, so the UK could have the best of both worlds: retain the economies of scale of large trawlers for distant waters and processing, while protecting coastal communities and the environment. The benefit depends on the size of the shift and on effective monitoring of the total catch.

1. (e)

Non-recyclable plastic creates negative externalities: 8 million tonnes enter the sea each year, killing birds and fish (lines 2 to 6), and landfilled plastic takes 450 years to decompose (lines 49 to 50). These external costs are not included in the price, so $MSC > MPC$ and the free market over-produces at Q_1 instead of Q^* , while recyclable plastic is under-produced. The government plans to raise the charge on firms using non-recyclable plastics and use the money to invest in recycling factories (lines 44 to 46).



As the left diagram shows, the higher charge acts like a tax equal to the marginal external cost. It shifts the supply curve from MPC to $MSC = MPC + tax$, so the price rises from P_1 to P_2 and quantity falls from Q_1 to the social optimum Q^* . The externality is internalised (polluter pays) and the welfare loss triangle is removed. Firms have an incentive to switch to greener packaging. As the right diagram shows, recyclable plastic is a substitute, so its demand shifts

right from D_1 to D_2 , raising output from Q_1 to Q_2 . The revenue builds recycling factories, helping to close the 350 000 tonne shortfall in recycling capacity left when China stopped taking UK waste (lines 47 to 48), so less goes to landfill. Over-production of non-recyclable plastic falls, more recyclable plastic is produced, and the misallocation of resources is reduced.

However, the policies may not fully correct the market failure. It is very hard to put a money value on the external cost, so the charge may be set too low (the old charge was only a "small incentive", line 43) or too high, a risk of government failure. If demand for plastic packaging is price inelastic, firms will pass the charge on and quantity will fall only a little. Building factories to cover a 350 000 tonne shortfall will take years, and recycling also depends on consumers: only 59% of plastic bottles were recycled in 2017 (line 52), so a deposit scheme and changes in attitudes will also be needed, and habits change slowly. The bigger problem may be the amount of packaging used rather than its type. Plastic in the oceans is a global problem, with most coming from other countries, so UK action alone is limited.

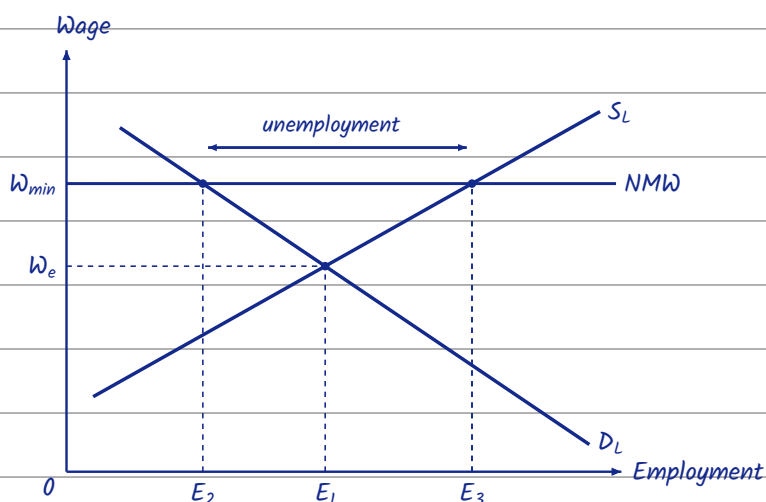
Overall, the policies should reduce market failure because they tackle both the over-production of non-recyclable plastic and the under-provision of recycling. They will only be fully effective in the long run if the charge is set close to the external cost and is combined with a bottle deposit scheme and international action.

2. (a)

Nominal GDP is converted into dollars at the market exchange rate, whereas GDP at purchasing power parity (PPP) uses an exchange rate at which the same basket of goods and services costs the same in each country. Prices of a common basket are lower in Turkey than in many other countries, and the lira's market exchange rate is weak, so each lira buys more in Turkey than its dollar value suggests. GDP at PPP is therefore higher relative to other countries, raising Turkey's ranking from 17th to 13th.

2. (b)

A national minimum wage (NMW) is a legal minimum wage that employers must pay. Turkey's monthly NMW rose from 1 134 to 2 030 liras between 2014 and 2018, a rise of $(2\,030 - 1\,134) \div 1\,134 \times 100 = 79.0\%$.



As the diagram shows, if the NMW is set above the equilibrium wage W_e , firms move up the labour demand curve and employment falls from E_1 to E_2 , while more people want to work, so labour supplied rises to E_3 . There is excess supply of labour E_2E_3 : unemployment. The higher NMW also raises firms' costs, so SRAS shifts left, adding to cost-push inflation, which was already almost 12% in late 2017 and 17.9% in 2018. Higher costs make Turkish exports less price competitive, worsening the huge current account deficit (line 19), and may further deter inward investment, which has already decreased (line 20). Figure 1 supports this: unemployment rose from about 10.2% in August 2014 to about 12% at the end of 2016.

However, the effects may be more positive. The minimum wage index rose to 709 against a CPI index of 357 from 2003 to 2018, so real wages roughly doubled ($709 \div 357 \times 100 = 199$), raising living standards of the lowest paid and reducing inequality. Higher pay for low earners, who have a high marginal propensity to consume, raises consumption and AD, stimulating economic growth (line 44), which increases the derived demand for labour. A higher wage may

attract more people into the labour force: the participation rate of 53% (32% for women) is the lowest in the OECD, and Figure 1 shows it rose from about 50.6% to about 53% while unemployment fell back to about 10% by 2018, so employment rose. Higher pay can also raise productivity through efficiency wages. In dollar terms the NMW stayed at about \$530 (line 40) because the lira fell, so Turkey's international competitiveness may not have worsened at all. Overall, the increases probably had mainly positive effects on living standards and employment, because the dollar value did not rise and labour demand grew with the economy. The size of any unemployment depends on how far above equilibrium the NMW is and on the wage elasticity of demand for labour; with inflation now high, further rises risk a wage-price spiral.

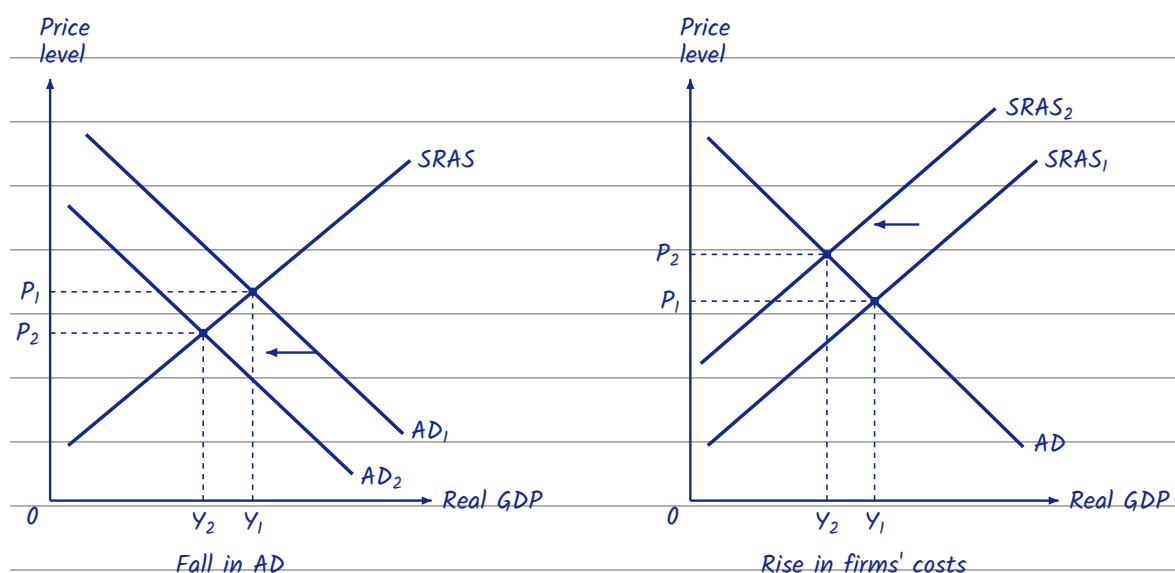
2. (c)

Figure 2 shows a large depreciation of the lira: from about 1.5 lira per \$ in 2009 to about 5.3 lira per \$ by late 2018, so the dollar value of one lira fell from about \$0.67 to \$0.19, a fall of about 72%, with most of the fall in 2018 and a fall of 17% on one day in August 2018 (line 17). In theory Turkey could benefit greatly. A weaker lira makes Turkish exports cheaper in foreign currency and imports dearer in lira, so Turkey becomes more price competitive. If the Marshall-Lerner condition holds, that is the sum of the price elasticities of demand for exports and imports exceeds 1, export revenue rises and import spending falls, improving the "huge" current account deficit (line 19). Higher net exports and import substitution raise AD, and through the multiplier this raises real GDP and employment. This could be valuable as growth estimates had been cut in half (lines 9 to 10), unemployment was around 10% to 12% (Figure 1) and the construction boom had ended with 2 million unsold houses (line 14). Turkish assets also become cheaper for foreigners, which may attract FDI, which has been falling (line 20), especially from the EU, which provided 72% of FDI inflows (line 54). Turkey also has favourable access to the EU through the customs union (lines 47 to 48), and a cheaper lira should boost tourism, 40% of which comes from the EU.

However, the benefits are likely to be limited. The collapse was very sharp, so the negative effects may dominate in the short term. Imports become more expensive, causing cost-push inflation, and higher net exports add demand-pull pressure: inflation rose from almost 12% in late 2017 to 17.9% in 2018 (line 27). This may trigger a wage-price spiral, as minimum wages have already risen 79% in lira. The terms of trade worsen, so Turkish citizens can buy fewer imports and living standards fall, offsetting the higher minimum wage, which stayed at only about \$530. In the short run, demand for exports and imports is price inelastic, so by the J-curve the current account may worsen before it improves, and time lags are likely. Corporate debt has increased (line 20), and much of it is likely to be in dollars, so the depreciation raises the lira cost of repaying it, worsening the debt crisis. Non-price factors such as quality matter for exports, and because the EU is about half of Turkey's trade, the rate against the euro may matter more than the rate against the dollar. Overall, Turkey is likely to have benefitted only to a limited extent. The gradual depreciation from 2009 to 2017 probably helped competitiveness, but the collapse in 2018 was a symptom of crisis rather than a benefit: its costs of higher inflation, dearer debt and falling real incomes outweigh the gains in the short run, and long-run benefits depend on export elasticities and on controlling inflation, as the rise in interest rates to 24% attempts.

2. (d)

Higher interest rates increase the cost of borrowing and the reward for saving. Consumers save more and borrow less on credit for durable goods, while households with variable-rate loans and mortgages have less disposable income, so consumption falls. Firms face a higher cost of borrowing, so investment falls. Higher rates also attract hot money inflows, increasing demand for the currency, so the exchange rate appreciates: in Turkey the lira rose by as much as 5% after rates rose from 17.75% to 24% (lines 27 to 29). This makes exports dearer and imports cheaper, so net exports fall.



As the left diagram shows, lower C , I and $(X - M)$ shift AD left from AD_1 to AD_2 , so the price level falls from P_1 to P_2 (or rises less quickly) and demand-pull inflation is reduced. In a weaker, more competitive market firms find it harder to raise prices, and workers are more cautious about pay claims, which lowers inflation expectations. The appreciation also cuts the lira price of imported fuel and raw materials, reducing firms' costs and putting downward pressure on cost-push inflation too, an external channel. So high rates reduce inflation through both domestic and external channels.

However, Erdogan's view has some basis. Interest is a cost of production for firms that borrow, so higher rates raise their costs, which may be passed on in higher prices. As the right diagram shows, $SRAS$ shifts left from $SRAS_1$ to $SRAS_2$, raising the price level from P_1 to P_2 : cost-push inflation. This is more likely in Turkey, where corporate debt has increased (line 20). Higher mortgage costs may also feed into wage demands. If investment falls, productive capacity grows more slowly, so in the long run AS is lower and inflationary pressure higher.

On balance, high interest rates are more likely to reduce inflation than increase it. The cost effect is small because interest is only a small part of most firms' costs, whereas the effects on AD and the exchange rate are large and widespread, as shown by the immediate 5% appreciation of the lira. Erdogan's

low interest rates allowed easy credit and a depreciation which pushed inflation to 17.9%, as Timothy Ash argues (lines 34 to 36). The effect depends on the size of the rise, time lags of up to two years and the credibility of the central bank.

2. (e)

Full membership of the EU would mean joining the single market with its four freedoms (free movement of goods, services, capital and labour) and the full customs union. At present Turkey's customs union covers only manufactured and processed agricultural goods (lines 47 to 49).

There could be large benefits. Trade creation would occur as tariffs and barriers on services and agriculture are removed, giving Turkish firms unimpeded access to a market of around 500 million consumers. As the EU already accounts for about half of Turkey's trade (line 53), higher exports would raise AD and, through the multiplier, growth and employment, helping to offset the halving of growth forecasts (lines 9 to 10). Turkey would gain from all EU trade deals with full tariff-free access, instead of opening its market without reciprocal access (lines 50 to 52). A young population of 82 million, half under 30, with a minimum wage of only about \$530 a month, would attract more FDI, which already came 72% from the EU (\$98bn, lines 54 to 55), bringing capital, technology and jobs. Free movement of labour lets unemployed Turks, with unemployment around 10%, work elsewhere in the EU and send home remittances. Turkey could receive EU structural funds for regions with low GDP per head and CAP payments for farmers, and the credibility of EU rules might help reduce macroeconomic instability.

However, the gains may be smaller than expected and there are costs. Turkey already has much of the trade benefit for manufactures, and the EU already accounts for 72% of FDI and 40% of tourism (lines 54 to 56), so how much more would there be? With inflation of 17.9%, Turkish goods may lose competitiveness, and free access for EU firms could increase imports and worsen the already large current account deficit. Macroeconomic instability may still

deter FDI. Full customs union membership may cause trade diversion away from cheaper non-EU suppliers, and Turkey would lose its freedom to negotiate its own trade deals. Free movement could cause a brain drain of skilled young workers. Firms face costs of complying with EU regulations, and Turkey would lose economic sovereignty, especially if it later joined the euro and lost control of its interest rates and exchange rate.

Overall, full membership would probably benefit Turkey in the long run through trade creation in services and agriculture, FDI and structural funds. However, the additional gain over its current customs union is limited, and it depends on Turkey first controlling inflation and its current account deficit; otherwise greater openness could expose its weaknesses.