



GCE AS

B520U20-1



ECONOMICS – AS component 2
Exploring Economic Issues

THURSDAY, 16 MAY 2019 – MORNING

2 hours

B520U201
01

ADDITIONAL MATERIALS

In addition to this examination paper, you will need a calculator and a WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Answer **all** questions.

Use black ink or black ball-point pen.

INFORMATION FOR CANDIDATES

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

Answer all questions.

1. TRUMP: “LETS MAKE AMERICA GREAT AGAIN”

When Donald Trump won the American Presidential election in 2016, the word on everyone’s lips was Trumponomics. Whilst the exact meaning of the term is hard to determine, there seem to be several key elements:

- Sizeable cuts in direct taxes for both individuals and businesses
- A \$1 trillion infrastructure programme to rebuild roads and bridges
- Deregulation in the form of reduced red tape (bureaucracy) across a range of industries including transport and power
- Trade reform –
 - Trump has pulled out of the Trans Pacific Partnership (a free trade agreement between Japan, Australia and Canada, amongst others).
 - Trump is seeking to renegotiate NAFTA (The North American Free Trade Agreement, between the US, Canada and Mexico).
 - Trump is threatening to impose import tariffs on a range of products such as solar panels and steel.
- Tougher immigration control on the border with Mexico, including tougher action on illegal immigrants and the possibility of building a 3000km border wall, paid for by 20% tariffs on Mexican goods. Some commentators have suggested that all this really means is that the wall will be paid for by US consumers.

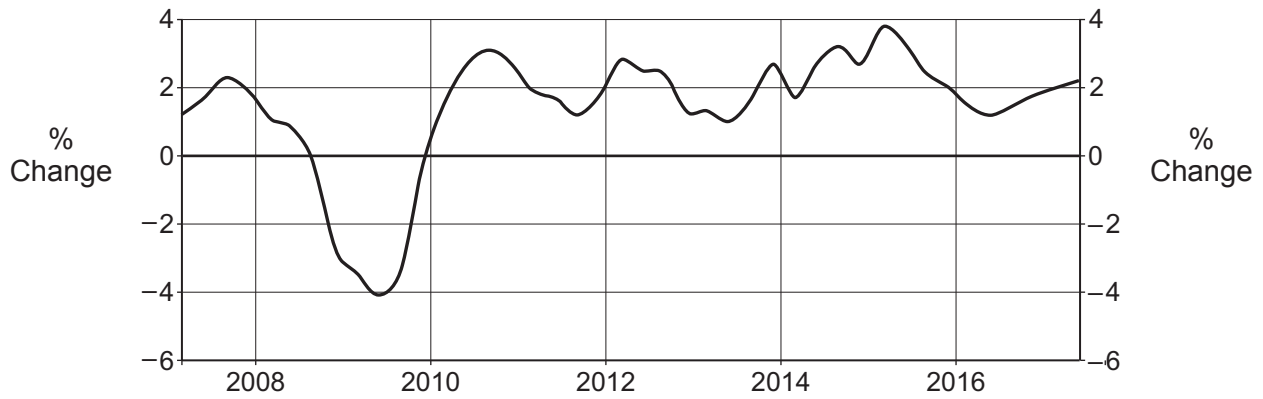
Steel tariffs to protect US industry

US regulators are expected to rule in favour of the imposition of tariffs on imported steel to the US later this year on the grounds of national security. President Trump has also accused Chinese manufacturers of ‘dumping’ steel below cost of production in the US, causing unemployment in the US ‘rustbelt’, an area where a significant proportion of US steel is made. Industry experts, however, have warned that tariffs will hurt steel-using industries and cause retaliation by America’s trade partners, meaning that more jobs will be lost than created.

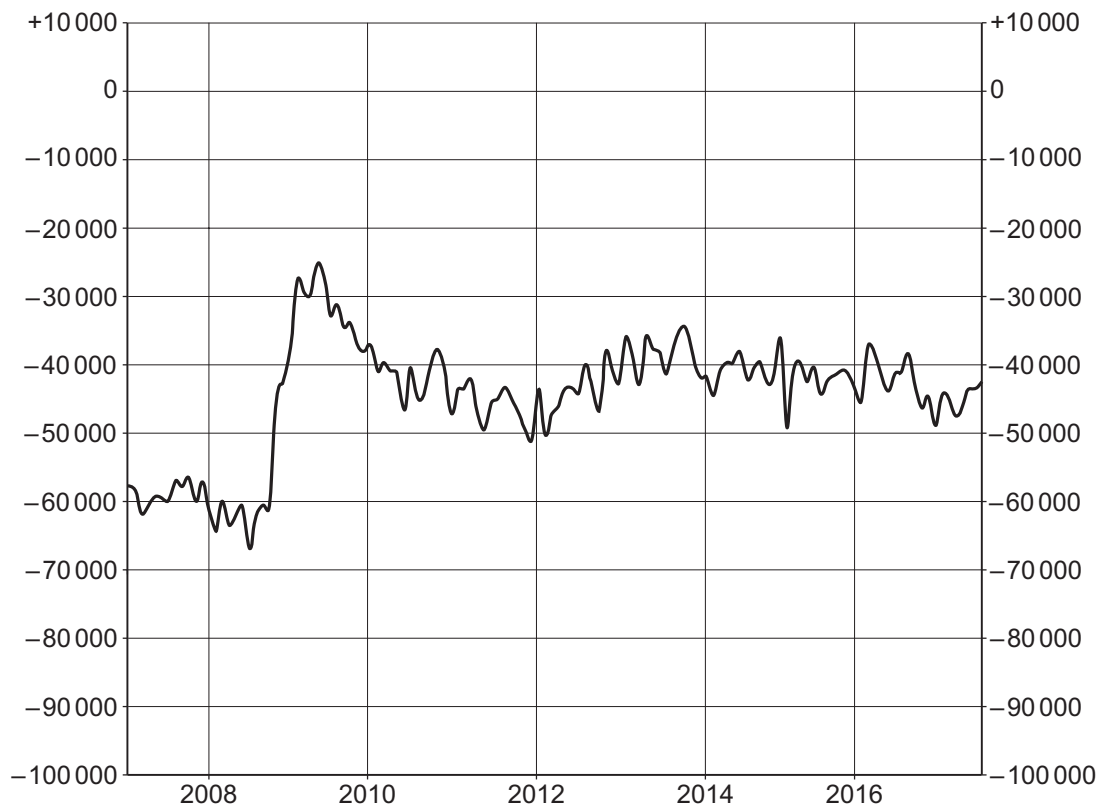
Critics of Trumponomics have suggested that the fiscal expansion may be unsustainable because of the large size of US public sector debt (national debt). Also the tax cuts announced tend to favour higher income earners. If the fiscal expansion were successful in stimulating economic growth, this might also lead to an even wider trade deficit (see Chart 1).

CHART 1

US GDP Annual Growth Rate



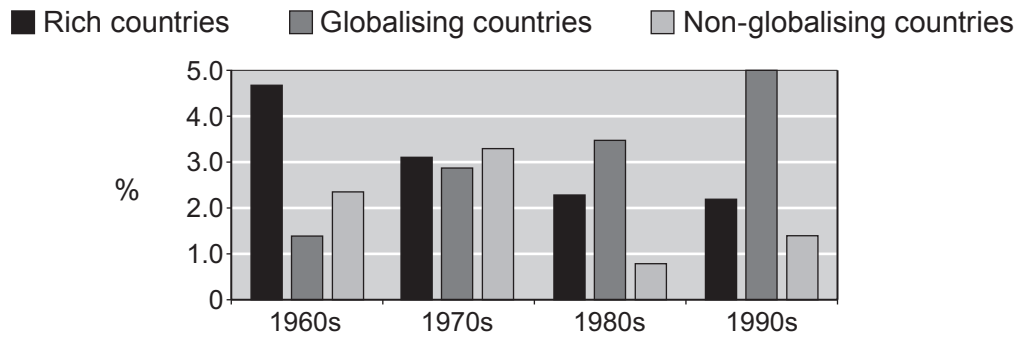
US Balance of Trade (\$ US millions)



Source: <http://www.imf.org/external/pubs/ft/fandd/2001/09/dollar.htm>

In addition, although Trump's goal is to increase US economic growth from 2% a year to 3%, research (see Chart 2) suggests that greater openness to global free trade is associated with higher growth rates; a more protectionist position might reduce rather than increase US economic growth.

CHART 2 – Real per capita GDP growth
(annual rate)



Source: *Trading economics*

In any case, some critics argue that Trump's focus on the manufacturing industry is missing the point – the manufacturing industry employs only 8.5% of the US workforce and contributes 12% of GDP. It is the technological revolution in services that is more likely to drive economic growth in the US in the near future.

- (a) With the use of a tariff diagram, outline: [6]
- (i) How US imports from Mexico will be affected by tariffs on Mexican goods.
 - (ii) How Trump plans to finance the border wall.
 - (iii) Why some commentators argue that it will be US consumers who actually pay for the border wall.
- (b) (i) Outline what economists mean by economic growth. [2]
- (ii) With reference to economic theory and Chart 1, discuss the extent to which economic growth is a major influence on the US Balance of Trade (part of the current account of the Balance of Payments). [10]
- (c) Using the data, discuss whether President Trump's trade reforms and immigration controls will be good for the US economy. [8]
- (d) (i) Outline what is meant by fiscal expansion. [2]
- (ii) Outline what is meant by public sector debt (national debt). [2]
- (iii) Discuss whether the proposed fiscal expansion and greater deregulation are likely to increase the long term rate of US economic growth from 2% to 3%. [10]

2. OLIVE OIL ON THE UP

The price of olive oil has risen by almost 25% this year (2017), as drought affects Mediterranean producers. Production in Greece, Italy, Tunisia and Spain is forecast to fall sharply.

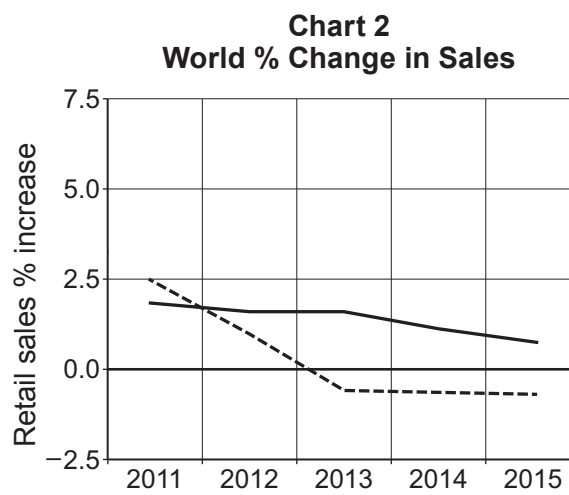
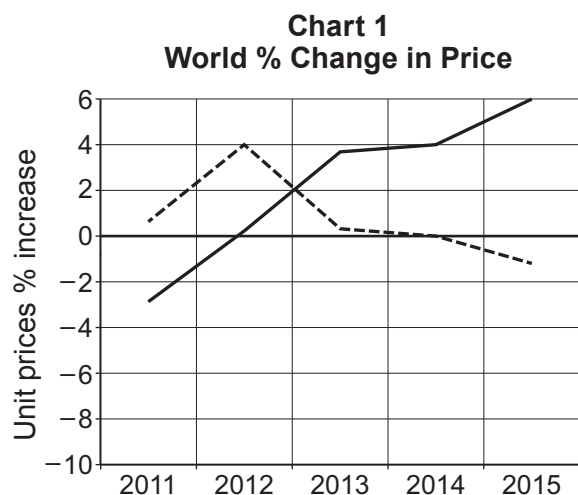
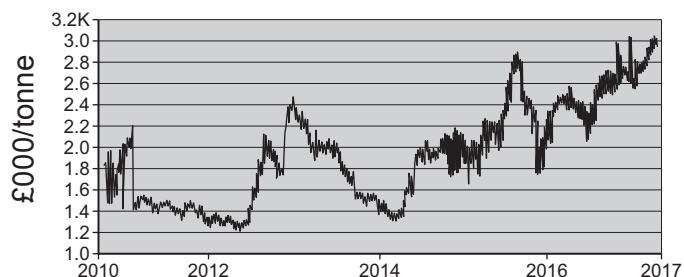
World production is forecast to fall 14%, with Italian output expected to fall by almost 50% in the 12 months to September 2017, according to the International Olive Council (IOC). Greece is likely to see a 20% fall, Tunisia a 17% fall, while production in Spain is predicted to decline 7%. The fall in supply is happening at a time when demand remains strong; Australia, Brazil and China are among the markets where sales are growing rapidly, according to the IOC.

Unfavourable weather conditions have been affecting olive oil production in Mediterranean countries more frequently, experts have noted. "We have had bad weather affecting production three years out of the last five," said Vito Martielli, an industry expert. While the production level is higher than that of 2012 and 2014, when a drought in Spain and pests in Italy were the cause of poor harvests, the more frequent declines in output and lower stock levels have made price rises more likely.

Adding to the problem is that olive harvests work on a cycle in which trees generally produce a strong harvest one year and then a weaker harvest the following year as the trees take a bit of a rest. Furthermore, newly planted trees take at least five years before they start producing olives in sufficient quantity to be harvested. Some would say that olive oil has inelastic price elasticity of supply, although olive oil, if stored in the right conditions, can last for up to two years after harvesting.

The price of olive oil is likely to hit a seven-year high in Britain after post-Brexit changes in the value of the pound against the euro helped drive up prices of imported olive oil by around 20%. However, retailers and suppliers are able to hold stocks of olive oil which means price rises take time to feed through to supermarket shelves. The US imports more than 300,000 tons of olive oil a year, more than half of which comes from Italy and Spain. US consumers have so far enjoyed lower prices thanks to a stronger dollar. Nonetheless, many consumers in developed economies have in the past switched from expensive olive oil to the relatively cheaper substitute sunflower oil.

OLIVE OIL PRICES GO UP, AND UP, AND UP



— Olive Oil - - - - Sunflower Oil

While the production of two of the biggest producers (Spain and Italy) in the global olive oil market has fallen, the UK demand for olive oil has grown rapidly. From 6,200 tons in 1990, demand soared to 65,000 tons in 2015. Britain's restaurants have felt the impact of more expensive olive oil. Several chefs spoke out about the impact of having to pay more. Francesco Mazzei, owner of the London-based Sartoria restaurant, said that he had increased his menu prices to cover the extra cost of buying olive oil. Ben Tish who runs Salt Yard (a London tapas restaurant), said he had recently paid \$648 for 100 litres of olive oil that cost \$573 three months ago. Russell Norman, co-owner of an Italian restaurant chain, voiced his dismay over the high price of olive oil and the impact of Brexit in 2019 on the staffing of his restaurants, as EU nationals leave or stop coming to work in the UK.

Adapted source: www.thesun.co.uk

- (a) (i) Calculate the percentage change in the demand for olive oil in the UK between 1990 and 2015. [2]
- (ii) With reference to the data and using a demand and supply diagram, outline why the price of olive oil has been rising in recent years. [5]
- (b) With the aid of the data, discuss the likely cross elasticity relationship between olive oil and sunflower oil. [6]
- (c) (i) Outline what is meant by inelastic price elasticity of supply. [3]
- (ii) Using the data, discuss whether the price elasticity of supply of olive oil is likely to be more elastic in the long run than the short run. [7]
- (d) With the aid of a diagram, discuss the effects on the UK restaurant sector if EU migrants leave the UK labour market as a result of Brexit. [7]
- (e) Using a diagram, discuss whether governments should intervene to stabilise agricultural prices. [10]

END OF PAPER

Surname *StemUp Model Solution*

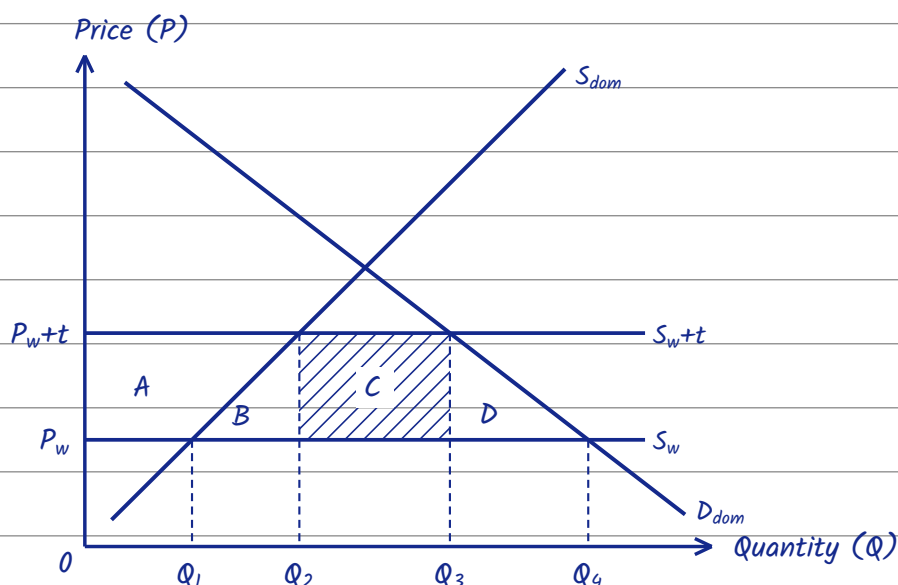
Answer booklet

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

Question
number

1 (a)

The diagram below shows the US market for a good imported from Mexico. With free trade the US can import at the world price P_w ; US firms supply $0Q_1$, consumers buy $0Q_4$ and imports are Q_1Q_4 .



(i) A 20% tariff on Mexican goods raises the price of imports from P_w to $P_w + t$. As imports are now more expensive, US consumers buy less (demand contracts from Q_4 to Q_3) and higher-cost US producers can now compete, so domestic supply expands from Q_1 to Q_2 . Imports therefore fall from Q_1Q_4 to Q_2Q_3 .

(ii) Trump plans to pay for the wall with the tariff revenue, which is the tariff per unit (P_w to $P_w + t$) multiplied by the quantity still imported (Q_2Q_3): the hatched area C.

(iii) The tariff raises the price US consumers pay from P_w to $P_w + t$ and they buy less, so consumer surplus falls by area $A + B + C + D$. Area C, the revenue that pays for the wall, comes out of this lost consumer surplus, so it is really US consumers who pay for the wall through higher prices, not Mexico (A

goes to US producers, while B and D are deadweight welfare losses).

1(b)(i)

Economic growth is an increase in real GDP (the real output of goods and services) over a period of time, usually measured as the annual % change in real GDP. Actual growth is a rise in real output, while potential growth is an increase in the productive capacity of the economy (an outward shift of the PPF or LRAS).

1(b)(ii)

The balance of trade is the value of exports of goods and services minus the value of imports. In theory, economic growth worsens the trade balance. Rising real GDP means higher household and corporate incomes, and depending on the marginal propensity to import, part of the extra income is spent on imported goods and services, while firms import more raw materials and components to raise output. Strong growth can also cause demand-pull inflation, making US goods less price competitive at home and abroad, so exports fall and imports rise further, and firms may divert output to the booming home market rather than export it. In a recession the reverse happens: incomes fall, so imports fall and the trade balance improves.

Chart 1 strongly supports this in 2008 to 2010. GDP growth fell from about +2% in 2008 to about -4% in 2009, and over the same period the trade deficit narrowed from about -\$65 000 million in late 2008 to about -\$25 000 million in 2009, an improvement of around \$40 billion. As growth recovered to about +3% in 2010 to 2011, the deficit widened again to about -\$45 000 to -\$50 000 million by 2012.

However, the link is weaker in other years. The balance began to worsen in late 2009 while growth was still negative. After 2012 growth stayed at about 1.5% to 3%, but the balance was fairly stable at between -\$35 000 and -\$50 000 million: when growth peaked at almost 4% in 2015 the deficit did not widen noticeably, and when growth slowed to about 1.3% in 2016 it did not improve. This suggests other factors matter. The exchange rate is important: the strong

dollar makes US exports dearer and imports cheaper. Growth in trading partners determines demand for US exports, and in 2009 the fall in world oil prices also cut the value of US imports. There may be time lags, as firms and households take time to change their spending. Causation may also run the other way: a worsening trade balance reduces net exports and AD, which slows growth, so the trade balance may be a cause of growth rather than an effect.

Overall, economic growth is a major influence on the US trade balance when changes in growth are large, as in the 2009 recession when the swing was dramatic. When growth is steady at about 2%, other factors such as the exchange rate, world growth and competitiveness appear to be more important, so growth is a significant but not the only determinant. This suggests that if Trump does raise growth to 3%, the deficit will probably widen.

1 (c)

Trump's trade reforms are protectionist. Tariffs on steel and solar panels protect US firms from imports, including Chinese steel "dumped" below the cost of production, saving jobs in the rustbelt, and a 20% tariff on Mexican goods switches spending to US producers. Improved net exports raise AD and employment in the short run, and renegotiating NAFTA may win better terms for US firms. Tougher immigration control could reduce the supply of low-skilled labour, raising wages for low paid US workers in the southern states, and building the wall would create construction jobs.

However, Chart 2 shows that globalising countries grew faster than non-globalising ones: 5.0% a year per capita in the 1990s compared with about 1.4%, and about 3.4% compared with 0.8% in the 1980s, because trade brings competition, innovation and economies of scale. Steel tariffs raise costs for steel-using industries such as car makers, and retaliation hurts US exporters, so more jobs may be lost than created. Leaving the TPP means US exporters lose easier access to markets such as Japan and Australia, and consumers pay higher prices. Immigration controls may leave firms in agriculture, construction and hospitality short of workers, causing wage-push inflation and slower growth. The

wall would take years to build along a 3000 km border and is very expensive given the large national debt, and as most targeted migrants are illegal and outside the formal labour force, the labour market effect may be small. A 20% tariff may still not make US producers competitive, and manufacturing is only 8.5% of jobs and 12% of GDP.

Overall, the policies may help protected sectors and some low paid workers in the short run, but in the long run they are likely to harm the US economy through retaliation, higher costs and slower growth. The extent depends on how much retaliation there is and whether the tariffs and wall actually go ahead.

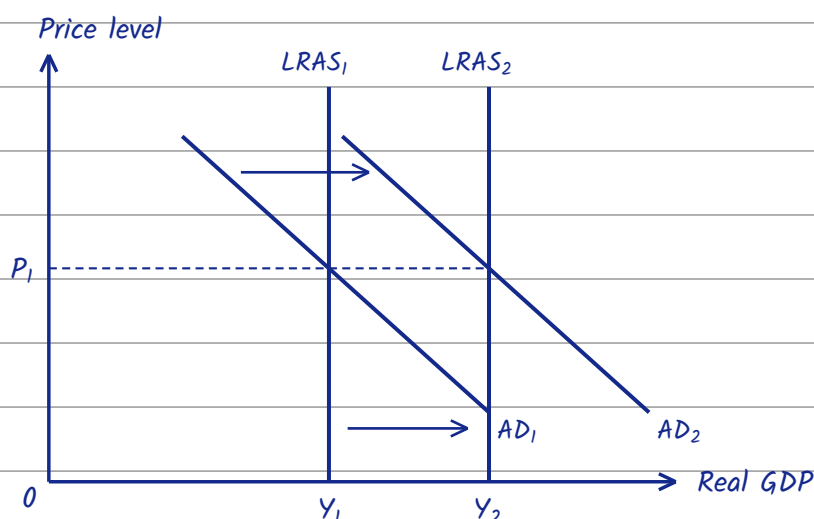
1(d)(i) Fiscal expansion is the use of fiscal policy to increase aggregate demand by increasing government spending (G) and/or cutting taxes (T), usually running a larger budget deficit, e.g. Trump's tax cuts and \$1 trillion infrastructure programme.

1(d)(ii) Public sector (national) debt is the total accumulated borrowing of the government over time that has not yet been repaid. It is a stock built up from past budget deficits, unlike the budget deficit, which is the shortfall in one year.

1(d)(iii) Raising long term growth from 2% to 3% requires an increase in potential output (LRAS), not just a short-term rise in AD. Cuts in direct taxes for individuals raise disposable income and consumption, increasing AD, and lower income tax increases the incentive to work, raising labour supply. Lower corporation tax raises post-tax profits, giving firms more retained profit and a greater incentive to invest, increasing the capital stock and productivity. It may also attract FDI and encourage US firms to bring production back home, especially alongside tariffs.

The \$1 trillion infrastructure programme raises G , boosting AD through the multiplier, and in the long run better roads and bridges cut transport costs and

journey times, raising productivity. Deregulation, cutting red tape in transport and power, reduces firms' compliance costs, raising profitability and investment and making entry and competition easier. As the diagram below shows, AD shifts from AD_1 to AD_2 and LRAS from $LRAS_1$ to $LRAS_2$, so real GDP rises from Y_1 to Y_2 without inflation.



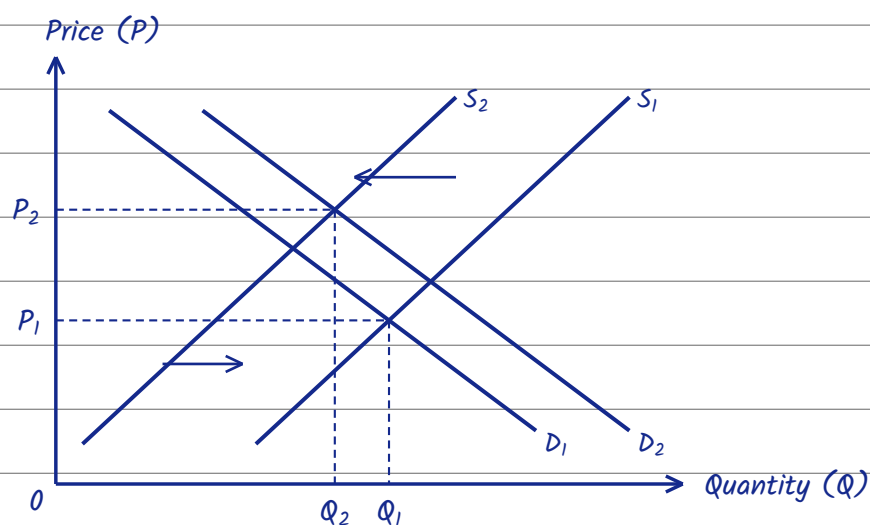
However, the tax cuts tend to favour higher income earners, who have a lower marginal propensity to consume, so the effect on AD is smaller, and the incentive effect on hours worked is uncertain. The fiscal expansion widens the budget deficit when national debt is already large: extra borrowing may raise interest rates and crowd out private investment, and may be unsustainable, leading to tax rises later. With US unemployment already low, near the NAIRU, extra AD may cause inflation, so the Fed may raise interest rates and choke off growth. It is doubtful that there are enough "shovel-ready" projects to spend \$1 trillion, skill shortages will be worse if immigration is restricted, and the supply-side gains will take years. The scale of deregulation is uncertain, and weaker environmental rules in energy may create negative externalities and slow the growth of alternative-technology industries.

Also, protectionism may slow growth (Chart 2) and offset these policies, and they focus on manufacturing, only 8.5% of jobs and 12% of GDP, while services are more likely to drive growth. Chart 1 shows growth averaged only about 2% even in the recovery after 2010.

Overall, the policies are likely to raise growth above 2% in the short run through higher AD, but sustaining 3% in the long run is unlikely unless the infrastructure and deregulation raise productivity significantly. It depends on the extent of crowding out, the Fed's response and whether protectionism offsets the gains.

2(a)(i) $\% \text{ change} = (\text{new} - \text{old}) \div \text{old} \times 100 = (65\,000 - 6\,200) \div 6\,200 \times 100 = 58\,800 \div 6\,200 \times 100 = 948.39\% \text{ increase}$

2(a)(ii) Demand has increased from D_1 to D_2 : demand remains strong, with sales growing rapidly in Australia, Brazil and China, and UK demand rising from 6 200 tons to 65 000 tons. At the same time, drought in Mediterranean producers has cut supply from S_1 to S_2 : world production is forecast to fall 14%, with Italy down almost 50%, Greece 20%, Tunisia 17% and Spain 7%.



As the diagram shows, at P_1 there is now excess demand, so price rises from P_1 to P_2 (from about £1 400 a tonne in 2014 to about £3 000 in 2017). Because the fall in supply is larger than the rise in demand, quantity falls from Q_1 to Q_2 .

2 (b) Cross elasticity of demand (XED) = $\% \Delta \text{ quantity demanded of sunflower oil} \div \% \Delta \text{ price of olive oil}$. Olive oil and sunflower oil are substitutes, so XED should

be positive: when the price of olive oil rises, sunflower oil becomes relatively cheaper, so demand for sunflower oil rises. The data supports this, as many consumers in developed economies have switched from expensive olive oil to the cheaper substitute sunflower oil. Chart 1 shows the rate of increase in olive oil prices rising from about -3% in 2011 to +6% in 2015, while Chart 2 shows growth in olive oil sales slowing from about 1.8% to 0.7%. Sales of sunflower oil fell sharply, from +2.5% growth in 2011 to about -0.6% in 2013, but then the fall levelled off at about -0.7% in 2014 to 2015 as olive oil prices rose by 4% to 6%, suggesting some switching. However, sunflower oil sales were still falling while olive oil prices rose, so they may not be close substitutes and the XED is probably low (between 0 and +1). The price of sunflower oil itself also changed, rising 4% in 2012 and falling by about 1.2% in 2015, so other factors are not held constant and it is hard to isolate the XED. Demand for olive oil keeps growing, because of tastes and health, and other oils are also substitutes. Overall the relationship is likely to be positive but weak.

2(c)(i) Price elasticity of supply (PES) measures the responsiveness of quantity supplied to a change in price: $PES = \% \Delta Q_s \div \% \Delta P$. Supply is price inelastic when a change in price causes a less than proportional change in quantity supplied, so PES is between 0 and +1.

2(c)(ii) In the short run, supply of olive oil is price inelastic. Newly planted trees take at least five years to produce enough olives to harvest, so producers cannot quickly increase output when prices rise. Output depends on the weather: drought means supply cannot be increased even if prices rise, and harvests follow a cycle of strong and weak years. Stock levels are also lower after the poor harvests of 2012 and 2014, so there is little spare oil to release. However, olive oil can be stored for up to two years and retailers and suppliers hold stocks, which can be released when prices rise, making short run supply

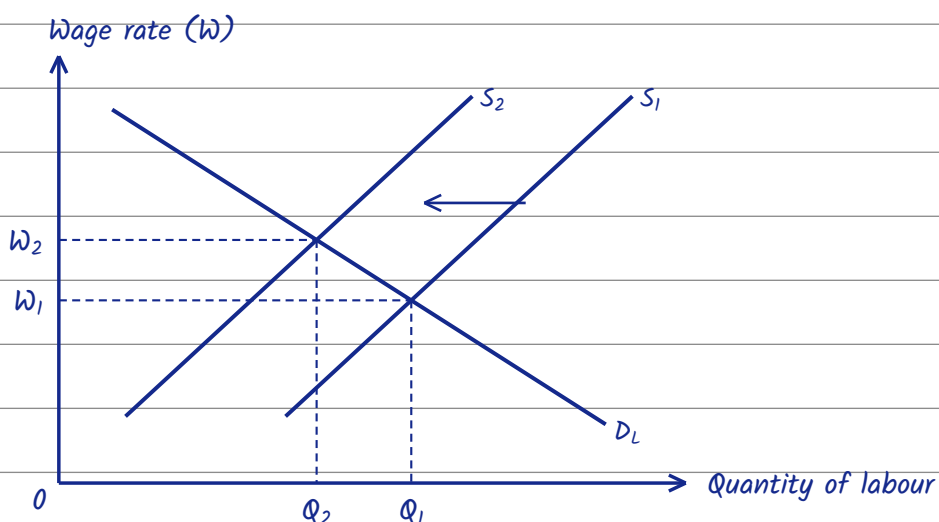
somewhat more elastic than it would be.

In the long run, supply is likely to be more elastic. Once the five-year limit has passed, newly planted trees reach maturity, existing producers can expand their groves in response to high prices and new producers can enter the market, so quantity supplied can rise by more in proportion to the price rise.

However, even in the long run, supply may remain relatively inelastic: bad weather has affected production "three years out of the last five", and pests are becoming more common, so output is often limited by nature rather than price. Land with a suitable climate is also limited. Overall, supply is more elastic in the long run than the short run, because storage only lasts two years and trees take five years to mature, but it is still likely to be fairly inelastic even in the long run.

2 (d)

Many UK restaurant workers, such as waiting staff and chefs, are EU nationals. If they leave as a result of Brexit, the supply of labour to the restaurant sector falls from S_1 to S_2 , as shown below.



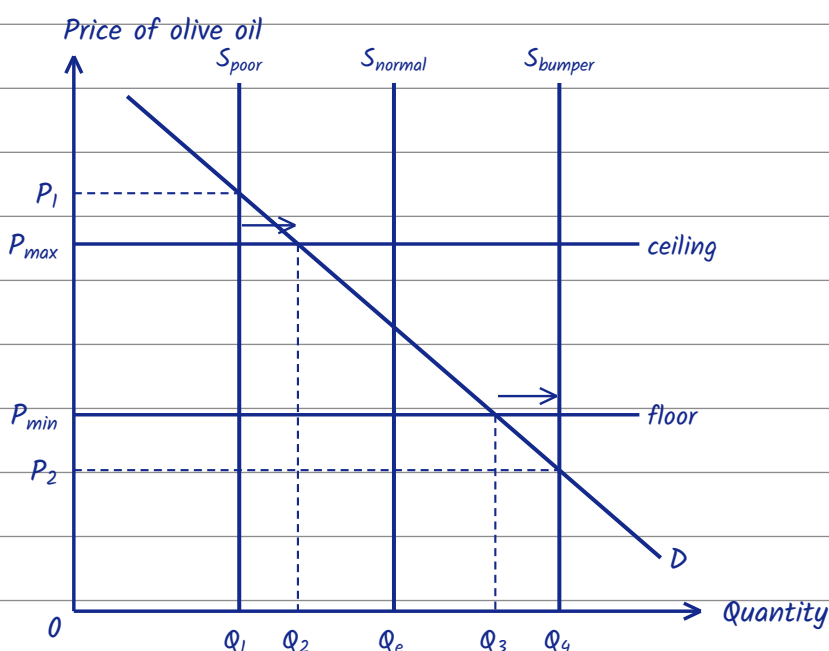
At w_1 there is now excess demand for labour, so restaurants have to pay more to recruit and wages rise from w_1 to w_2 , while employment falls from Q_1 to Q_2 . Higher wage costs raise restaurants' costs of production, so they either raise menu prices, as Sartoria did to cover olive oil, or accept lower profit margins, a bigger problem as olive oil costs have also risen (\$573 to \$648 per 100 litres,

about 13%). Restaurants may be unable to find the staff they need, leading to lower quality service, longer waiting times or shorter opening hours, and higher prices could reduce demand for meals out.

However, the effect depends on how many EU workers actually leave and on the UK's future relationship with the EU; migrants may still come, or other sources of labour such as UK or non-EU workers may be found. Wages in hospitality are often set by the National Minimum Wage, so if the market wage is below it, a fall in supply may remove excess supply with little rise in wages. The effect on menu prices also depends on the proportion of costs that is labour. Overall, the impact is likely to be significant for London restaurants that rely heavily on EU staff, but limited elsewhere.

2 (e)

Agricultural prices are highly volatile because supply depends on the weather, for example drought cut world olive oil production by 14%, and production lags are long, as trees take five years to mature. Both supply and demand are price inelastic, so a shift in supply causes a large change in price, such as the almost 25% rise in olive oil prices in 2017. Volatile prices mean volatile incomes for farmers, which discourages investment and may drive producers out, while consumers face sudden rises in food prices.



A buffer stock scheme sets a floor price (P_{min}) and a ceiling price (P_{max}). As the diagram above shows, after a bumper harvest supply is S_{bumper} and price would fall to P_2 , so the agency buys Q_3Q_4 into stock to hold price at P_{min} . After a poor harvest supply is S_{poor} and price would rise to P_1 , so it sells Q_1Q_2 from stocks to hold price at P_{max} . Between the two, the market is left alone. This gives producers a stable income, so they are more likely to invest and stay in the industry, protects consumers from price spikes and improves food security. In theory the scheme is self-financing, as it buys cheaply and sells at high prices. A guaranteed minimum price, where the government buys any surplus, also stabilises farm incomes.

However, these schemes are costly to run. Storage is expensive and olive oil only lasts about two years, so stocks are perishable. If the floor is set too high, there are persistent surpluses, such as the EU's "butter mountains", funded by taxpayers and often dumped abroad, harming farmers in developing countries. If there is a run of poor harvests, as with bad weather three years out of five, stocks run out and the ceiling cannot be defended. Consumers lose through higher prices and taxes, and there is an opportunity cost. Governments may lack the information to set the right price band, schemes are prone to corruption, and protecting farmers from price signals lets inefficient producers stay in the market. It also depends on the country: in developed economies farming is dominated by large producers who may not need support, while in developing economies governments may have more important budget priorities.

Overall, some intervention is justified for essential, storable crops with very volatile prices, provided the price band is set around the long-run trend price so the scheme does not build up surpluses. Fixed minimum prices set above equilibrium are generally not justified, as they cause surpluses and government failure.