Cambridge Assessment International Education

# Cambridge International AS & A Level

**ECONOMICS** **9708/21**

Paper 2 Data Response and Essay **May/June 2022**

**1 hour 30 minutes**

*7950622965*

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

**INSTRUCTIONS**

- Answer **two** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You may answer with reference to any economy you have studied where relevant to the question.

**INFORMATION**

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **4** pages. Any blank pages are indicated.

DC (PQ) 213817/1
© UCLES 2022

**[Turn over**

stemup.co.uk

## Section A

Answer this question.

**1** **Inflation in Bangladesh**

The annual inflation rate in Bangladesh, as measured by changes in the Consumer Prices Index (CPI), has varied in the period from 2009 to 2019 between 5.4% and 11.4%. The average annual rate of inflation over this period has been 6.7%, one of the highest in Asia.

**Table 1.1: Bangladesh Annual Inflation Rate, February 2009 to 2019**

| Year | Inflation Rate (% change in CPI) |
|---|---|
| 2009 | 5.4 |
| 2010 | 8.1 |
| 2011 | 11.4 |
| 2012 | 6.2 |
| 2013 | 7.5 |
| 2014 | 7.0 |
| 2015 | 6.2 |
| 2016 | 5.5 |
| 2017 | 5.7 |
| 2018 | 5.5 |
| 2019 | 5.5 |

*Source: World Bank*

The relatively high rate of inflation has been caused by price rises in both the food and the non-food sectors. In terms of the food sector, there have been significant rises in the price of fish, chicken and vegetables, particularly onions. In terms of the non-food sector, price rises have been significant in healthcare, transport and energy resources such as gas.

The Bangladesh Government is concerned about the possible consequences of a relatively high rate of inflation. It has now therefore set an annual inflation rate target of 5.5%.

The central bank of Bangladesh has the maintenance of price stability as one of its main objectives. It uses monetary policy to control the rate of increase of prices in the country. However, there is always the possibility that tough monetary policies could do more harm than good to an economy, compared with the possible use of fiscal policy.

The central bank recognises that inflation can be caused by both demand-pull and cost-push factors in the economy. A particular cause of inflation is the increase in wages. The Wage Rate Index (WRI) rose in December 2019 by 6.6% compared with a 6.4% rise in the index in November.

*Source: Adapted from 'Inflation hits 9-month high', The Daily Star, Bangladesh, 16 October 2019, accessed on 24 February 2020*

© UCLES 2022


stemup.co.uk

**(a)** Describe the trend in the annual inflation rate of Bangladesh between 2009 and 2019. [2]

**(b)** Explain why price changes in the food and the non-food sectors in Bangladesh are treated differently when calculating the CPI. [2]

**(c)** Explain **one** domestic consequence and **one** external consequence for Bangladesh of having 'a relatively high rate of inflation'. [4]

**(d)** Analyse, with the help of aggregate demand and aggregate supply diagrams, how increasing wages can cause **both** demand-pull and cost-push inflation in Bangladesh. [6]

**(e)** 'However, there is always the possibility that tough monetary policies could do more harm than good to an economy, compared with the possible use of fiscal policy.'

Discuss whether monetary policy or fiscal policy is more likely to be effective in controlling inflation. [6]

## Section B

Answer **one** question.

**2** When a planned economy introduces the price mechanism to allocate some resources, a mixed economy arises.

**(a)** Explain, using examples, why merit goods are classified as private goods rather than public goods. [8]

**(b)** Discuss the advantages of a mixed economy and whether it is always preferable to a planned economy. [12]

**3** **(a)** Explain **two** factors that determine the price elasticity of supply of a manufactured product. [8]

**(b)** Taxes are often placed on manufactured products, even those that are necessities with few substitutes.

Discuss whether the incidence of a tax on a manufactured product always falls mainly on the producer. [12]

**4** **(a)** Explain why a fixed exchange rate could cause difficulties for a country that has one. [8]

**(b)** Protectionism can take different forms in different countries.

Discuss whether export subsidies are always a better method of protectionism than tariffs. [12]

© UCLES 2022


stemup.co.uk

**BLANK PAGE**

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2022



stemup.co.uk

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

Question number

Answers for paper 9708/21

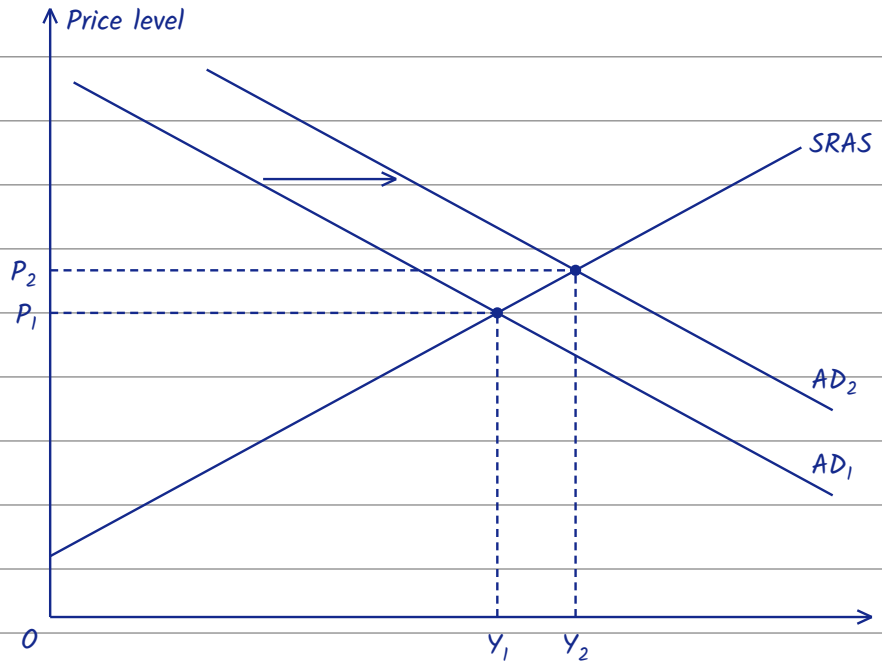
1(a) The trend fluctuated: inflation rose from 5.4% in 2009 to a peak of 11.4% in 2011, then generally fell, with small rises in 2013 (7.5%) and 2017, to 5.5% in 2016 to 2019, so it ended about where it started.

1(b) Prices in the food sector (fish, chicken, onions) and the non-food sector (healthcare, transport, gas) change by different amounts. Each item is given a weight according to the proportion of household income spent on it, so a price rise in a sector where people spend more, such as food, has a bigger effect on the CPI.

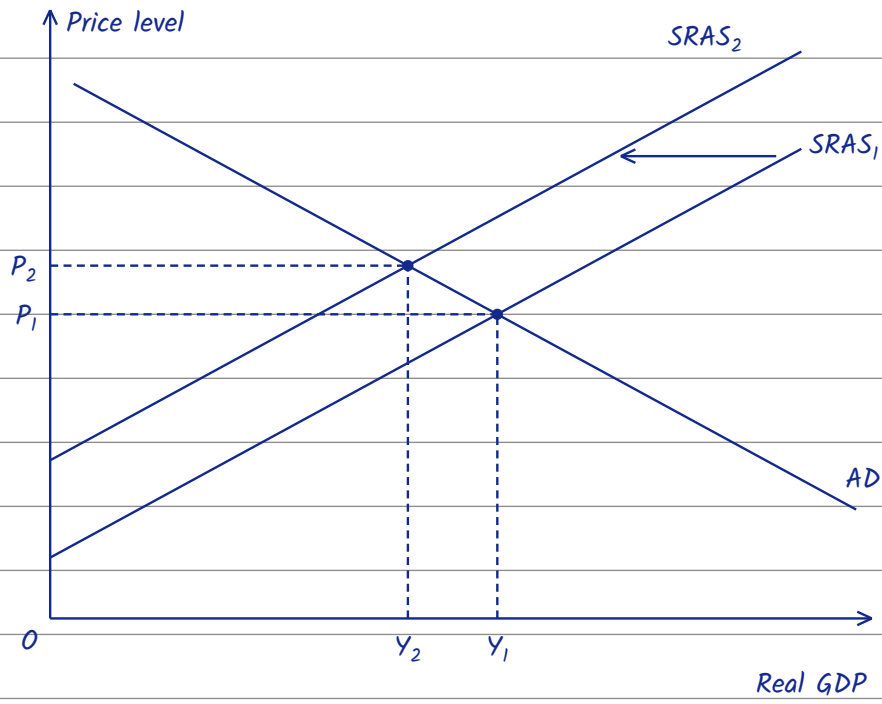
1(c) Domestic: high inflation reduces the purchasing power of money, so people on fixed incomes or whose wages rise more slowly than prices see their real income and living standards fall; uncertainty may also discourage investment.
External: Bangladesh's inflation is one of the highest in Asia, so its exports become less price competitive and imports relatively cheaper. If demand is price elastic, export revenue falls and import spending rises, worsening the current account.

1(d) Demand-pull: the Wage Rate Index rose by 6.6% in December 2019. Higher wages raise disposable income and consumer confidence, so consumption rises and AD shifts right from AD1 to AD2. The general price level rises from P1 to P2 (and real GDP from Y1 to Y2).

Question number




Cost-push: wages are a large cost of production. If wages rise faster than productivity, unit labour costs rise and firms pass them on as higher prices. SRAS shifts left from SRAS1 to SRAS2, so the price level rises from P1 to P2 while real GDP falls from Y1 to Y2.




1(e) Monetary policy: the central bank can raise interest rates, which increases the cost

Question number

of borrowing and the reward for saving, so consumption and investment fall and AD falls, reducing demand-pull inflation. A higher exchange rate also cuts import prices. However, if demand is interest inelastic the effect is small, it takes a long time to work, and 'tough' rises could cut investment and growth, doing more harm than good. It does little for cost-push inflation, such as higher prices of onions or gas.

Fiscal policy: raising taxes or cutting government spending reduces AD directly and can be targeted. But spending and tax plans are hard to change quickly, higher taxes can reduce incentives to work, and cuts to healthcare or transport are unpopular. It is also less useful against cost-push inflation.

Conclusion: monetary policy is more likely to be effective, as it is flexible and run by an independent central bank focused on price stability, but only for demand-pull inflation; for the food and energy price rises in Bangladesh, neither policy alone will be effective.

2(a) A private good is one that is rival and excludable. Rival means that when one person consumes it, it cannot be consumed by someone else, so it reduces the amount available for others. Excludable means that people who do not pay can be prevented from consuming it. A public good is non-rival, non-excludable and non-rejectable, for example street lighting, national defence or the police service.

Merit goods are goods whose benefits are greater than consumers realise and which create positive externalities, so they are under-consumed in a free market; examples are education and healthcare. Their classification depends on their characteristics, not on whether they are good for people.

Merit goods are private goods. Healthcare is rival: a doctor's appointment or a hospital bed used by one patient cannot be used by another at the same time, and a vaccine given to one person cannot be given to another. It is excludable: a private clinic can refuse treatment to people who will not pay. Education is also

Question number

rival, since a place in a class of limited size taken by one student is not available to another, and excludable, since a private school can charge fees and refuse entry to those who do not pay.

They are not public goods. With street lighting, once it is provided everyone on the street benefits, it is impossible to exclude a non-payer, and an extra person walking under it does not reduce the light for others. So there is a free rider problem and the market would not supply it at all. This is not true of education and healthcare: because they can be charged for, private schools and hospitals do supply them profitably.

So merit goods are private goods even when the government provides them free; they are under-provided by the market, not missing from it.

2(b) A mixed economy combines the price mechanism with government intervention. Its main advantage is that most resources are allocated by the price mechanism, which performs its rationing, signalling and incentive functions: prices transmit consumer preferences to producers, and the profit motive and competition encourage efficiency, innovation, quality and choice. At the same time, the government can correct market failure. It can provide public goods such as defence, provide or subsidise merit goods such as education, tax demerit goods, and use maximum or minimum prices, for example to keep essential food affordable. It can redistribute income through taxes and benefits, and it can nationalise strategic industries.

However, a mixed economy has disadvantages. Government intervention can distort the price mechanism, for example taxes and subsidies alter price signals, and price controls cause shortages or surpluses. Government failure can occur when governments lack information or act for political reasons. Market failure may still remain where the government does not intervene.

A planned economy has some advantages. The state can directly provide all the

Question number

goods and services it sees as important, such as healthcare, housing and public goods, guaranteeing basic needs and full employment, and producing greater equality. It can also direct resources quickly to a national priority, as in wartime. But planners lack information on consumer preferences, so there are shortages and surpluses; a large bureaucracy is inefficient; and the lack of competition and profit motive leads to poor quality, restricted choice and little innovation.

Is a mixed economy always preferable? Usually yes, because it gains the efficiency and choice of markets while correcting their failures, which is why most economies are mixed. However, it is not always preferable. In an emergency such as a war or pandemic, more central planning may allocate resources faster. It also depends on the quality of government: a mixed economy with a corrupt or poorly informed government may suffer from serious government failure. And 'mixed' covers a wide range: the right balance between state and market differs between countries and over time.

In conclusion, a mixed economy is generally preferable to a planned economy, but not always; it depends on the circumstances and on how well the government intervenes.

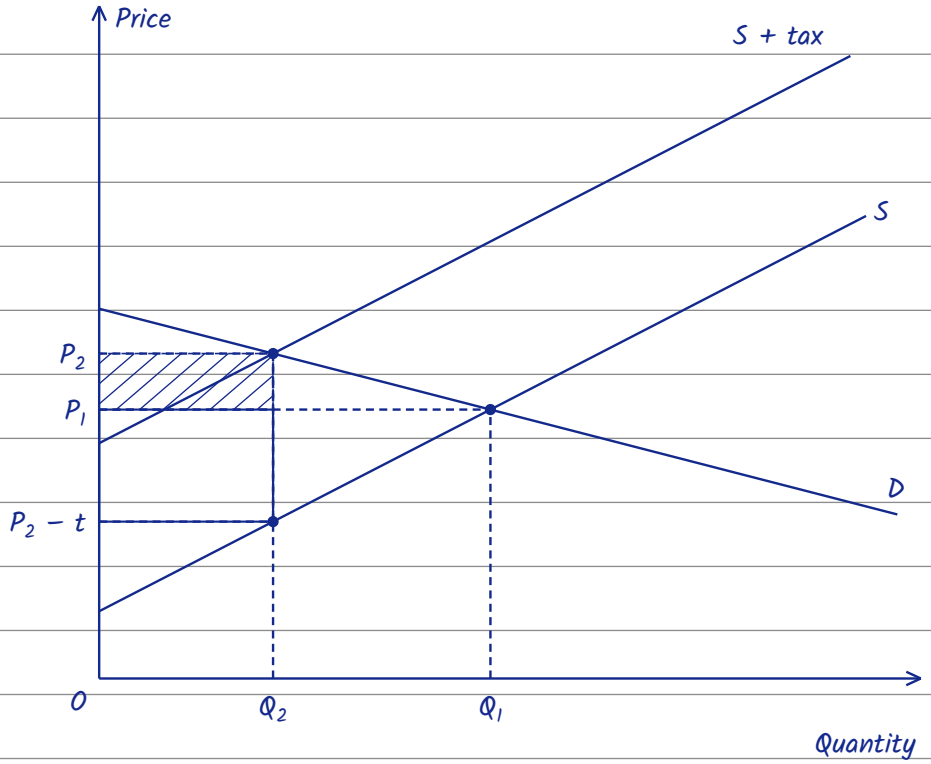
3(a) Price elasticity of supply (PES) measures the responsiveness of the quantity supplied of a product to a change in its price. PES = % change in quantity supplied ÷ % change in price. If PES > 1 supply is price elastic; if PES < 1 it is price inelastic.

One factor is the existence of spare capacity. If a manufacturer, such as a car or clothing producer, has unused machinery and workers who could work extra shifts, it can increase output quickly and without a large rise in costs when the price rises. So supply is price elastic. If the factory is already working at full capacity, output can only rise once new machinery is installed or a new factory built, so supply is price inelastic.

Question number

A second factor is the ability to store stocks. Most manufactured products, unlike fresh food, are not perishable and can be stored cheaply in warehouses. When the price rises, the firm can release stocks onto the market straight away, so the quantity supplied rises a lot and supply is elastic. If the product is costly to store, or goes out of date quickly, as with some fashion items, supply is less elastic. Other factors include the time period, since over a longer period firms can build capacity and new firms can enter the industry, the mobility of factors of production, and how long the product takes to make. In general, manufactured products have more elastic supply than agricultural products.

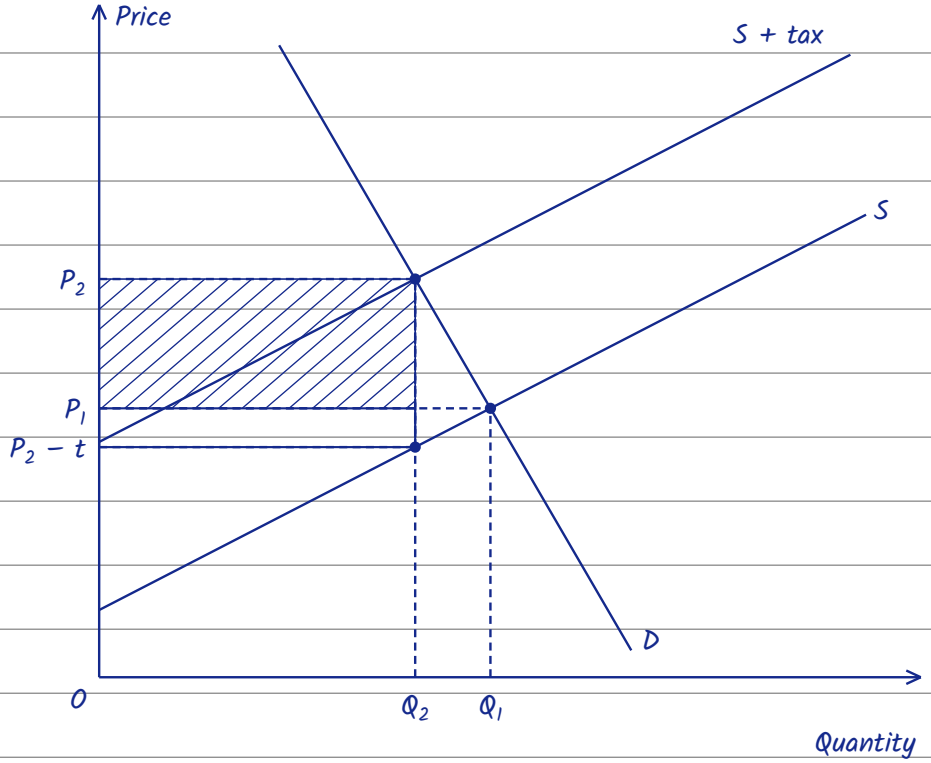
3(b) The incidence of a tax is the extent to which the burden of the tax is borne by producers and by consumers. When an indirect tax is placed on a product, supply shifts up by the amount of the tax. How much of this is passed on to consumers as a higher price depends on the price elasticities of demand and supply. In both diagrams the hatched area is the tax paid by consumers and the boxed area the tax paid by producers. Diagram 1 shows price elastic demand:



Question number

If demand is price elastic, consumers have many substitutes, so firms cannot raise the price much without losing many sales. In the diagram the price rises only from P1 to P2, while the price the producer keeps falls from P1 to P2 – t. Most of the tax is paid by producers, so in this case the statement is correct. This could apply to a branded manufactured product, such as one brand of soft drink, in a competitive market.

Diagram 2 shows price inelastic demand:




However, the question says that taxes are often placed on necessities with few substitutes, such as fuel, medicines or basic household products. Demand for these is price inelastic, because consumers have to keep buying them. Producers can pass most of the tax on: the price rises a lot, from P1 to P2, and the quantity falls only a little, so most of the tax is paid by consumers (the hatched area) and only a small part by producers. Governments deliberately choose such products because tax revenue is high.

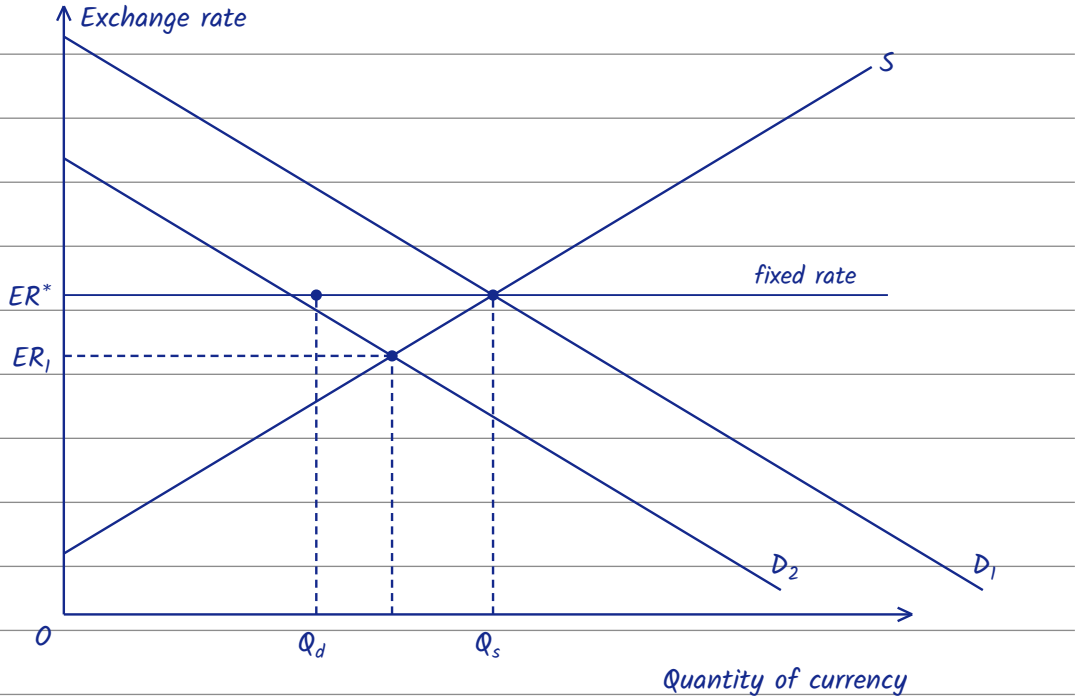
The elasticity of supply also matters. Manufactured products tend to have elastic supply, because they can be stored and firms can change output; the more elastic

Question number

supply is relative to demand, the more of the tax falls on consumers. If supply were inelastic, producers would bear more.

In conclusion, the incidence of a tax on a manufactured product does not always fall mainly on the producer. It falls mainly on the producer only when demand is more elastic than supply. For necessities with few substitutes, which are often the products taxed, the burden falls mainly on consumers. The incidence can also change over time, since demand becomes more elastic as consumers find alternatives.

4(a) A fixed exchange rate is one that is set by the government or central bank at a particular value against another currency, such as the US dollar, rather than being determined by the market forces of demand and supply. The central bank maintains it by buying or selling its currency in the foreign exchange market, using its foreign currency reserves, or by changing interest rates.




One difficulty is the need for sufficient reserves. If demand for the currency falls, eg because exports fall, demand shifts from D1 to D2 and at the fixed rate ER* there is excess supply of the currency (Qd to Qs). To stop the rate falling to the

Question number

free market rate ERI, the central bank must buy its own currency with foreign currency reserves. If this continues, reserves run out and the country may be forced to devalue, and speculators who expect this sell the currency, making the pressure worse.

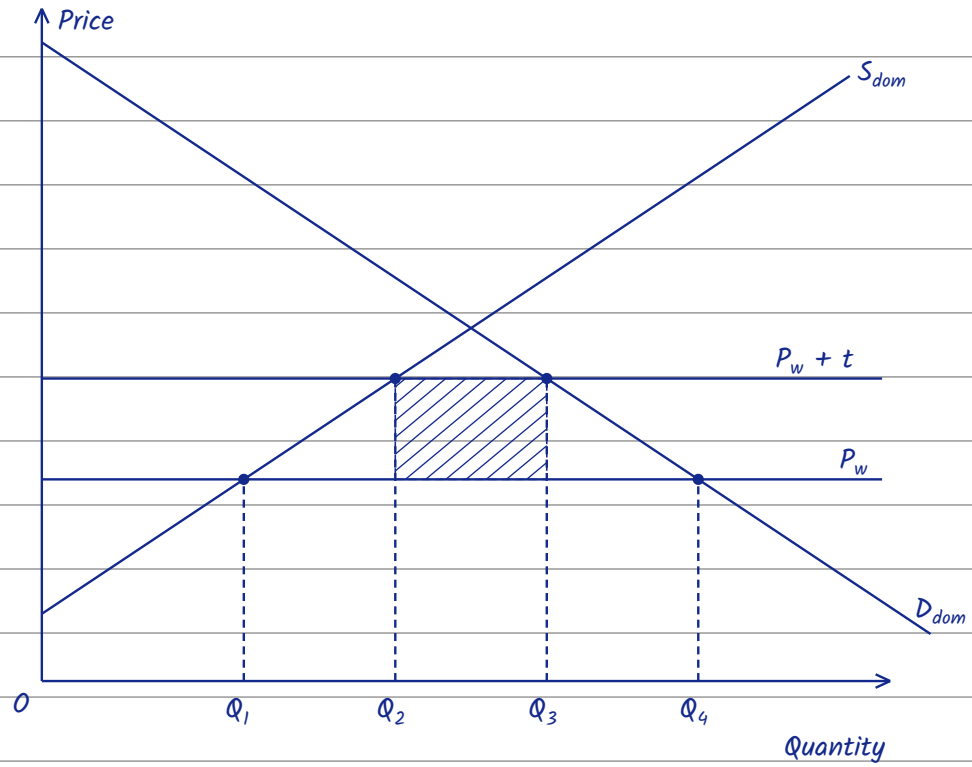
A second difficulty is the loss of an independent monetary policy. To defend the rate the central bank may have to raise interest rates to attract capital inflows. This may conflict with other objectives: if there is high unemployment, higher interest rates reduce consumption and investment and make unemployment worse. The country cannot use interest rates to manage its own economy.

Also, if the rate is fixed too high, exports are uncompetitive and the current account deficit persists, because the exchange rate cannot fall automatically to correct it.

4(b) Protectionism is any measure that restricts trade to protect domestic producers. An export subsidy is a payment from the government to domestic firms for each unit they export, while a tariff is a tax on imports.

Export subsidies lower domestic firms' costs, so they can cut their prices and undercut foreign competitors, increasing export sales, output and employment and improving the current account. Unlike a tariff, they do not raise prices for domestic consumers, and they are less visible, so they may be harder for the WTO and trading partners to challenge. However, they have an opportunity cost: the money could have been spent on schools or healthcare, or tax would need to rise. Firms may become dependent on the subsidy rather than becoming more efficient, and foreign governments may still retaliate.

Question number




A tariff raises the price of imports from Pw to Pw + t. Domestic consumption falls from Q4 to Q3 and domestic production rises from Q1 to Q2, so imports fall from the distance Q1Q4 to the smaller distance Q2Q3, protecting domestic jobs. Unlike a subsidy, it raises revenue for the government (the hatched area). However, consumers pay higher prices and have less choice, which is regressive, and if demand for imports is price inelastic, imports fall only a little. Tariffs are visible, so they often lead to retaliation and trade wars, and they also protect inefficient firms.

So are export subsidies always better? They are better for consumers and for promoting exports, but they cost the government money while a tariff earns it. A country with a large budget deficit may prefer tariffs. If the aim is to protect an industry from imports at home, a tariff is more direct, while if the aim is to win export markets, a subsidy is better. Both risk retaliation and inefficiency.

In conclusion, export subsidies are not always a better method: it depends on the aim of the protection, the government's finances and the price elasticities involved.

Cambridge Assessment International Education

# Cambridge International AS & A Level

**ECONOMICS** **9708/22**

Paper 2 Data Response and Essay **May/June 2022**

**1 hour 30 minutes**

*4104904768*

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

**INSTRUCTIONS**

- Answer **two** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You may answer with reference to any economy you have studied where relevant to the question.

**INFORMATION**

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **4** pages.

DC (KN/CGW) 213818/2
© UCLES 2022

**[Turn over**

stemup.co.uk

## Section A

Answer this question.

**1 Economic growth in Russia has slowed to well below the global average**

In 2019, Russia set an aim to quicken its economic expansion – to grow faster than the world as a whole. So far, the plan is off to an uncertain start.

**Content removed due to copyright restrictions.**

This has also led to a fall in the value of the exchange rate for the Russian currency, the rouble.

*Source: Andrew E. Kramer,* The New York Times *18 February 2020*

**Table 1.1: Russia: Government budget balance as % of national output**

| 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|
| –2.4 | –3.4 | –1.5 | 2.9 | 1.8 |

© UCLES 2022



stemup.co.uk

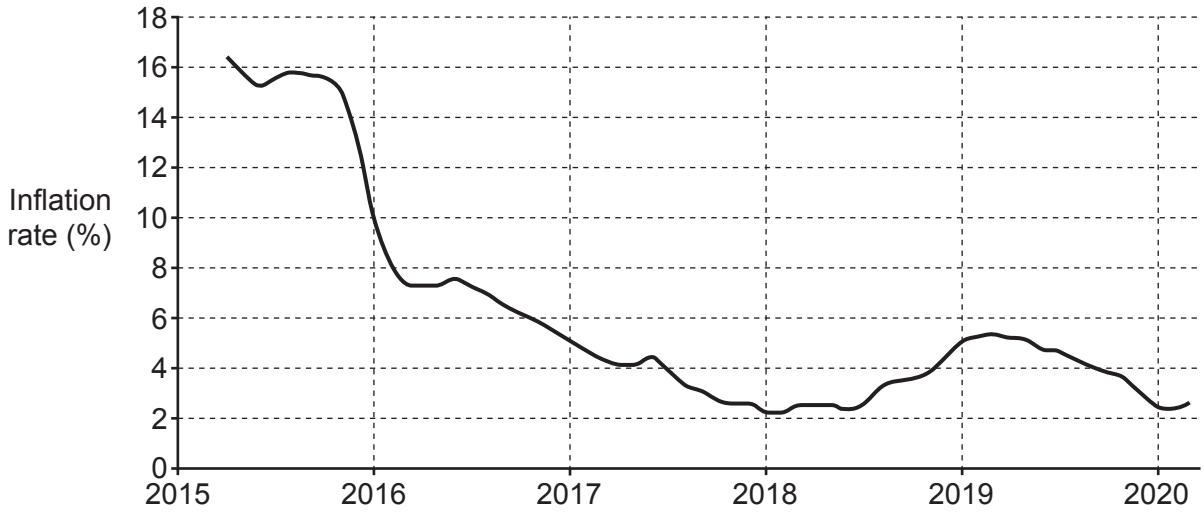



**Fig. 1.1: Russia's annual inflation rate, March 2015 to March 2020**

*Source: Trading Economics/Ministry of Finance of the Russian Federation*

**(a)** Using Fig. 1.1

**(i)** Compare the rate of inflation in Russia in March 2015 with that in March 2020. [1]

**(ii)** What has happened to the price level over this period? [1]

**(iii)** Explain what could have caused real wages in Russia to decline between 2016 and 2018. [2]

**(b)** Explain whether school lunches provided free-of-charge by the Russian government would be classified as private goods or public goods. [4]

**(c)** Assess, using aggregate demand and aggregate supply analysis, the likely impact of the changes shown in Table 1.1 upon the rate of inflation in Russia. [6]

**(d)** Discuss whether the 'huge decrease in the price of oil' and the fall in the value of the rouble might bring more opportunities than threats to the Russian economy. [6]

© UCLES 2022


stemup.co.uk

## Section B

Answer **one** question.

**2** **(a)** With the help of a production possibility curve diagram(s) compare growth in the productive capacity of an economy and growth that results from a reduction in the quantity of unused resources in an economy. Explain **one** reason that might cause each to occur. [8]

**(b)** Discuss the disadvantages of a planned economy and consider whether the transition to an economy in which many resources are allocated by market forces is likely to be of overall benefit. [12]

**3** **(a)** With the help of diagrams, use the concept of income elasticity of demand to explain the impact of a fall in incomes on the equilibrium price and equilibrium quantity of a normal good and an inferior good. [8]

**(b)** Discuss the difficulties that businesses might have when they try to control the factors that determine the price elasticity of demand for a product and consider whether attempts to control these factors are likely to be successful. [12]

**4** **(a)** An economy moves from a deficit to a surplus on the current account of the balance of payments.

Explain what is meant by a surplus on the current account of the balance of payments and consider the possible impact on the level of employment and prices when there is a change from a deficit to a surplus current account balance in an economy. [8]

**(b)** Discuss whether expenditure-reducing or expenditure-switching policies are more likely to be of greater overall benefit if adopted to remove a persistent deficit on the current account of the balance of payments. [12]

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2022



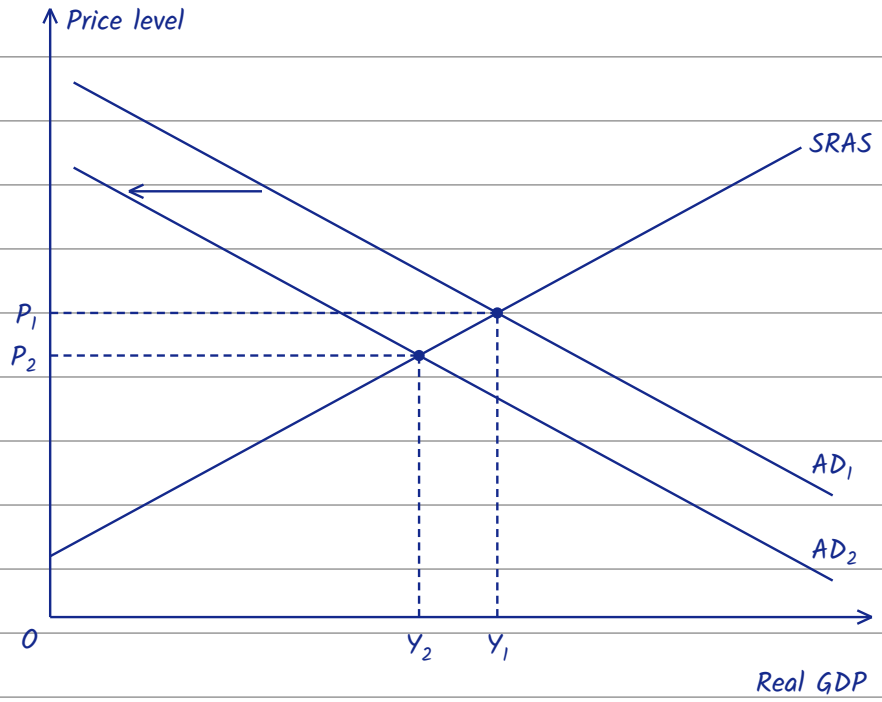
stemup.co.uk

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

| Question number | |
|---|---|
| | Answers for paper 9708/22 |
| 1(a)(i) | The rate of inflation was much higher in March 2015 (about 16.5%) than in March 2020 (about 2.5%): it has fallen. |
| 1(a)(ii) | The price level has continued to rise throughout, because inflation stayed positive, but more slowly. |
| 1(a)(iii) | Real wages fall when prices rise faster than money wages. Inflation was still about 7% in 2016, so if money wages rose by less than this, for example because unemployment held wage rises down, the purchasing power of wages fell. |
| 1(b) | A public good is non-excludable (people who do not pay cannot be stopped from benefiting) and non-rival (one person's consumption does not reduce what is available for others). A private good is excludable and rival.<br>School lunches are excludable: the school can decide who receives a meal, eg only registered pupils. They are rival: a lunch eaten by one pupil cannot be eaten by another, so extra pupils need extra meals. So free school lunches are private goods (in fact merit goods), even though the government provides them free of charge. |
| 1(c) | Table 1.1 shows the budget moving from a deficit of 3.4% of national output in 2016 to a surplus of 2.9% in 2018 and 1.8% in 2019. This suggests the government cut its spending and/or raised taxes. Lower government spending reduces a component of AD directly, and higher taxes reduce disposable income and so consumption. AD shifts left from AD1 to AD2 and the price level rises less |

Question number

(P1 to P2 in the diagram), so the rate of inflation falls. This is consistent with Fig. 1.1, where inflation fell from about 7% in 2016 to about 2.5% in 2018.




However, the effect may be limited. If spending cuts reduce subsidies to firms, or higher taxes discourage investment and work, SRAS may shift left, raising costs and partly offsetting the fall in inflation. Other policies, such as lower interest rates, or a fall in the rouble that raises import prices, also affect inflation. Overall the move to a surplus is likely to reduce inflation, as the data suggest, but other factors explain some of the fall.

1(d) Opportunities: a lower oil price cuts costs for Russian firms that use oil, such as transport and manufacturing, so their prices fall and they become more competitive. The fall in the rouble makes Russian exports cheaper abroad, which could raise the volume of non-oil exports and help diversify the economy, while imports become dearer, encouraging people to buy Russian goods. If demand is price elastic, the current account improves and output and jobs rise.

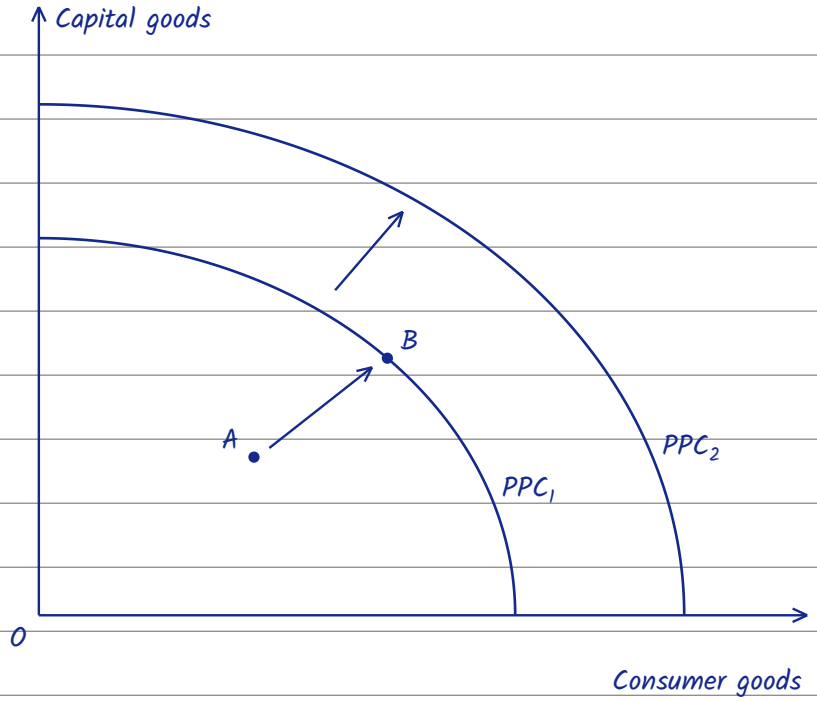
Threats: Russia depends heavily on oil exports, and demand for oil is price inelastic, so a huge price fall means a large fall in export revenue and government tax

Question number

revenue, worsening the current account and the budget and slowing growth further. The weaker rouble raises the price of imported goods and inputs, causing imported inflation that lowers living standards, and imports may be price inelastic in the short run.

On balance, the threats are likely to be greater in the short run because oil is such a large share of Russia's exports and demand for it is inelastic. The opportunities could outweigh them in the long run only if Russia uses the competitive rouble to develop other export industries.

2(a)




A production possibility curve shows the maximum combinations of two goods that an economy can produce when all its resources are fully and efficiently employed. Growth that results from a reduction in unused resources is shown by a movement from point A, inside the curve, towards or onto the curve at B. At A some workers are unemployed and some capital is idle, so actual output is below potential. A reason could be an increase in aggregate demand, eg lower interest rates or higher government spending, so firms hire the unemployed to meet the extra demand and output of both goods rises. This is actual growth, but the productive capacity of

Question number

the economy has not changed.

Growth in productive capacity is shown by an outward shift of the PPC from PPC1 to PPC2. The economy can now produce more of both goods even when fully employed. A reason could be an improvement in technology, or an increase in the quantity or quality of resources, such as more capital from investment or a better educated workforce, which raises productivity.

So the difference is that using unused resources only moves the economy towards its existing limit, and this growth stops once the curve is reached, whereas growth in productive capacity raises the limit itself, allowing sustained long-run growth.

2(b) In a planned economy the state decides what, how and for whom to produce. This has several disadvantages. There is little consumer sovereignty: planners cannot know the preferences of millions of consumers, so they produce the wrong goods, causing surpluses of some and shortages and queues for others. Without a profit motive or competition there is little incentive for managers to cut costs, so productive efficiency is low and there is waste. Lack of incentives also discourages investment and innovation, so quality is poor and choice is restricted. A large bureaucracy is also costly and slow to respond.

The transition to an economy in which many resources are allocated by market forces can solve these problems. Prices act as signals: a shortage raises the price, which rations the good and gives firms an incentive to supply more, so resources move to what consumers want. The profit motive and competition encourage efficiency, innovation and more choice, so living standards can rise.

However, markets fail. Public goods such as defence would not be provided, merit goods such as healthcare would be under-consumed and demerit goods over-consumed, and negative externalities such as pollution would be ignored.

Income and wealth inequality may increase, because rewards go to those who own resources. The transition itself can be painful: when state firms are privatised or

Question number

close, unemployment may rise sharply and prices may rise rapidly once controls are removed, as happened in Russia in the 1990s, and powerful private monopolies may replace state ones.

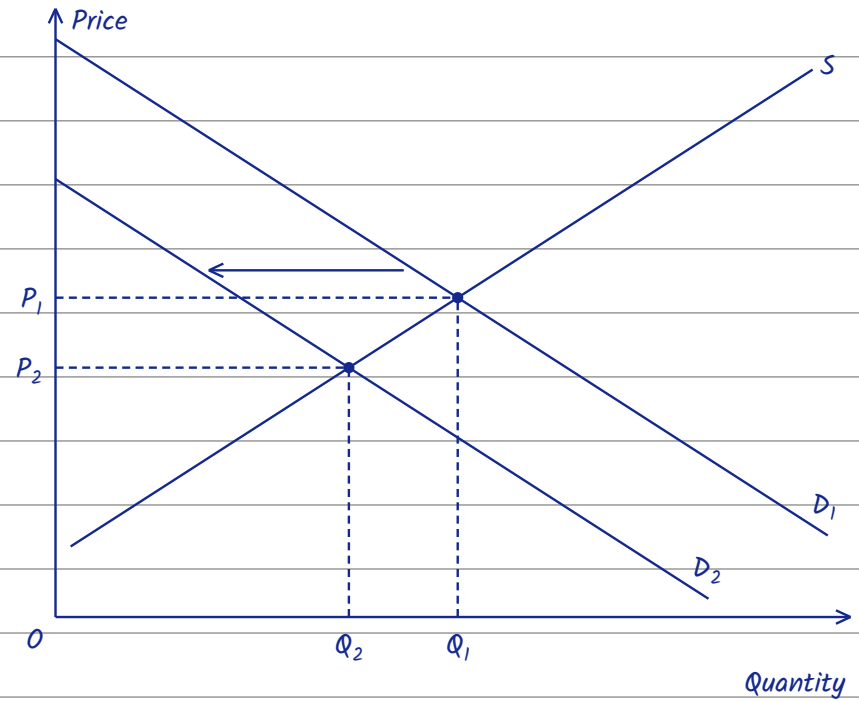
Whether the transition is of overall benefit therefore depends on the time period and on how it is managed. In the short run the costs, unemployment, inflation and inequality, may outweigh the benefits. In the long run, greater efficiency and growth are likely to make it beneficial, provided the government keeps a role in correcting market failure, providing public and merit goods and regulating monopolies. So the best outcome is usually a mixed economy rather than a pure free market, and a gradual transition is more likely to be of overall benefit than a sudden one.

3(a) Income elasticity of demand (YED) measures the responsiveness of the quantity demanded of a good to a change in income. YED = % change in quantity demanded ÷ % change in income.

A normal good has a positive YED: demand rises when income rises and falls when income falls. When incomes fall, at every price consumers buy less, so the demand curve shifts left from D1 to D2. At the original price P1 there is now excess supply, so the price falls. The equilibrium price falls from P1 to P2 and the equilibrium quantity falls from Q1 to Q2.

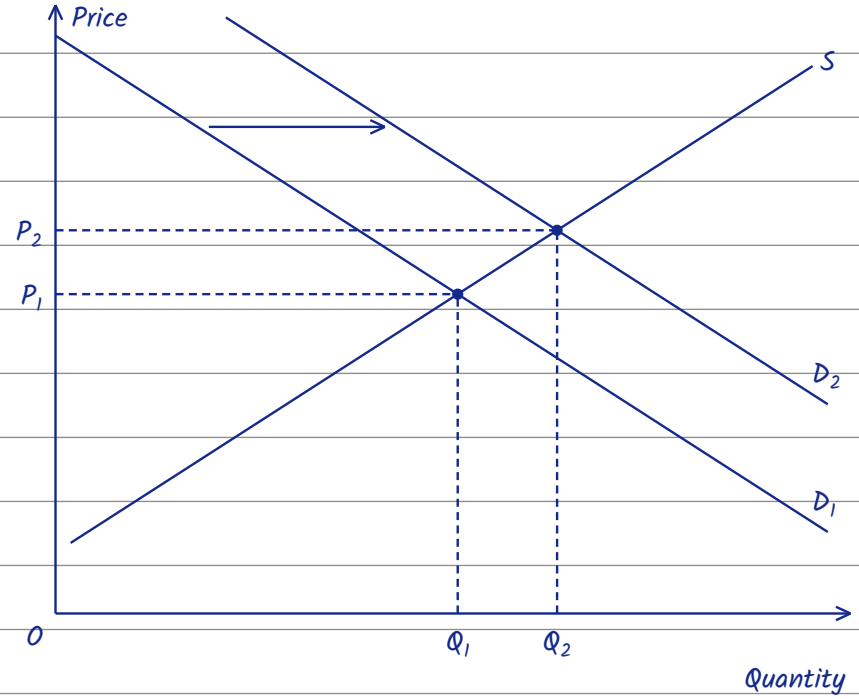
Diagram 1, normal good, incomes fall:

Question number




An inferior good has a negative YED: demand falls as income rises and rises as income falls, because consumers switch to cheaper alternatives, such as bus travel instead of cars. When incomes fall, the demand curve shifts right from D1 to D2. At P1 there is now excess demand, so the price is bid up. The equilibrium price rises from P1 to P2 and the equilibrium quantity rises from Q1 to Q2.

Diagram 2, inferior good, incomes fall:



Question number

The size of the shift depends on the size of YED: the larger the value, the bigger the change in demand, price and quantity for a given fall in income.

3(b) Price elasticity of demand (PED) is determined mainly by the number and closeness of substitutes, whether the good is a necessity or habit forming, the proportion of income spent on it and the time period. A business would like demand for its product to be price inelastic, so that it can raise its price and increase revenue.

The most important factor is the availability of substitutes. A business can try to make its product seem different from rivals through branding, advertising, product design and quality, so that consumers see fewer close substitutes. The difficulty is that this is expensive, and rivals respond by advertising and improving their own products, so the effect may be cancelled out. New firms may enter the market, especially where barriers are low, creating new substitutes, and the internet makes it easy for consumers to compare prices. A firm has no control over its competitors.

A firm may try to make its product habit forming or seen as a necessity, for example through loyalty schemes, subscriptions or making products compatible only with its own accessories. But consumer tastes change and are hard to influence, and regulators may act against such practices. Other factors are almost impossible to control: the proportion of income spent on a good depends on consumers' incomes, which depend on the state of the economy, and demand becomes more elastic over time as consumers find alternatives, whatever the firm does.

However, some attempts can succeed. Firms with strong brands, such as Apple or Coca-Cola, have created loyal customers and relatively inelastic demand, and patents can legally prevent close substitutes for a period. Large firms with big budgets are more likely to succeed than small firms in competitive markets.

In conclusion, businesses can influence some factors, mainly substitutes and habit,

Question number

but they cannot fully control them, and income and time are outside their control. Attempts are most likely to be successful in the short run, for large firms with strong brands or patents, and least successful in highly competitive markets where rivals can quickly copy them.

4(a) The current account of the balance of payments records trade in goods and services, primary income (such as profits, interest and dividends) and secondary income (current transfers). A surplus occurs when the money received from exports and income from abroad is greater than the money paid out for imports and income sent abroad.

A move from a deficit to a surplus will be caused by exports rising and/or imports falling, for example because the country's goods have become more competitive, or because of a depreciation of the currency.

Employment: net exports (X – M) are a component of aggregate demand, so a rise in net exports increases AD. Firms producing exports and goods that compete with imports sell more, so they increase output, and as labour is a derived demand they hire more workers. Through the multiplier, the extra income is spent on other goods and services, so employment rises further. However, if the surplus came from lower imports because domestic demand was being reduced, employment might not rise.

Prices: higher AD may cause demand-pull inflation, especially if the economy is close to full employment, since firms face capacity constraints and bid up wages. If the surplus resulted from a depreciation, import prices rise, adding cost-push inflation. On the other hand, a surplus increases demand for the currency, which may appreciate and lower import prices over time, and if there is plenty of spare capacity, prices will rise only a little.

4(b) Expenditure-reducing policies reduce total spending in the economy, for example by

Question number

raising taxes, cutting government spending or raising interest rates. Lower disposable income reduces spending on imports, and firms facing weaker home demand may try harder to export. They also reduce inflation, helping competitiveness, and can be introduced quickly, especially interest rates. But they reduce spending on domestic goods too, so output falls, unemployment rises and growth slows; if the marginal propensity to import is low, a large fall in national income is needed to cut imports by enough. Higher interest rates may also attract capital inflows and raise the exchange rate, making exports less competitive.

Expenditure-switching policies shift spending away from imports towards domestic output. A devaluation makes exports cheaper and imports dearer; if the Marshall-Lerner condition holds, the current account improves, though perhaps only after a J-curve effect. Tariffs and quotas reduce imports. The advantage is that output and employment can rise as spending moves to domestic firms. However, devaluation raises the price of imported raw materials and causes inflation, which erodes the gain, tariffs risk retaliation and breach WTO rules, and protection allows inefficient firms to survive. Supply-side policies that raise productivity also switch expenditure, but they take years.

Comparing the two, expenditure-switching is more likely to be of greater overall benefit because it can remove the deficit while maintaining or increasing employment, whereas expenditure-reducing removes it by making people poorer. However, its success depends on price elasticities, on the absence of retaliation and on preventing inflation. Expenditure-reducing may be better if the deficit is caused by an overheating economy with high inflation.

Overall, for a persistent deficit, which usually reflects a lack of competitiveness, expenditure-switching, especially supply-side improvements, is likely to give the greater overall benefit, possibly supported by some expenditure-reducing measures to control inflation.

Cambridge Assessment International Education

# Cambridge International AS & A Level

**ECONOMICS** **9708/23**

Paper 2 Data Response and Essay **May/June 2022**

**1 hour 30 minutes**

*2855957817 3*

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

**INSTRUCTIONS**

- Answer **two** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You may answer with reference to any economy you have studied where relevant to the question.

**INFORMATION**

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **4** pages.

DC (KS/CGW) 304436/3
© UCLES 2022



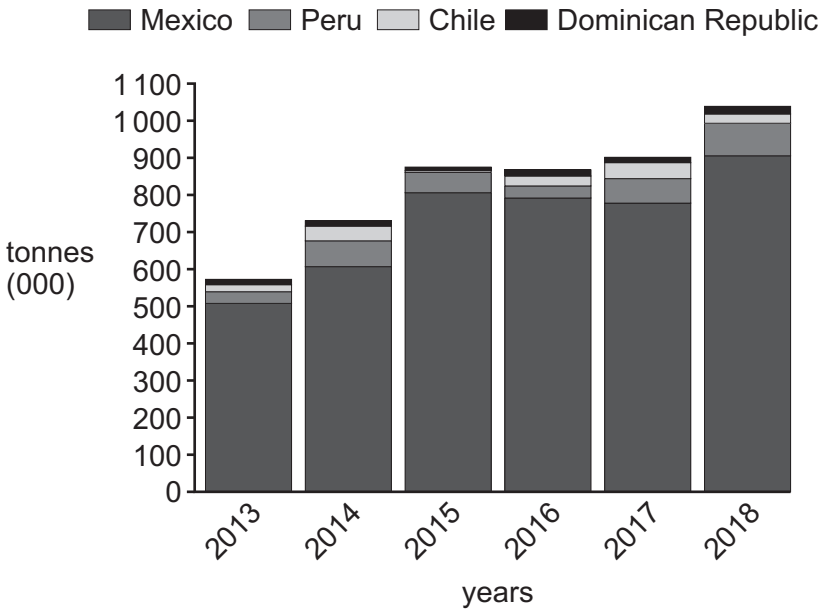
stemup.co.uk

## Section A

Answer this question.

**1** **The changing market for avocados**

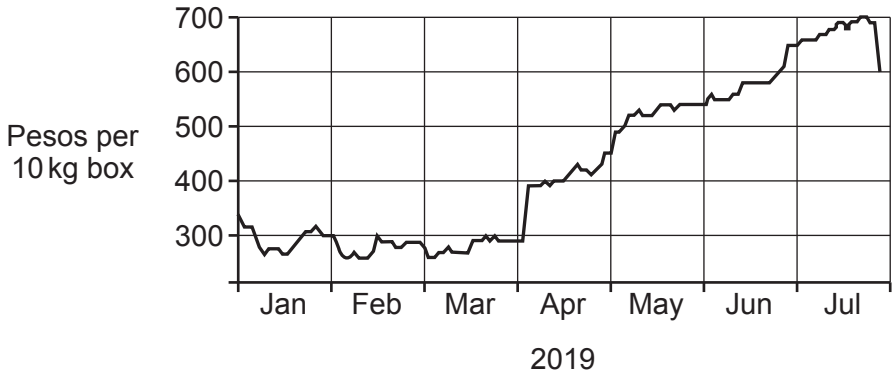
The global consumption of avocados has increased in the last few years, particularly in the United States (US) but also in China and parts of Europe. This growth is largely due to the increasing popularity of 'guacamole' (smashed avocado) and the health benefits claimed for its regular consumption. The US is the largest importer of avocados with supplies coming mainly from Central and South American producers as shown in Fig. 1.1.




*Source: Avacados show growth in volume,* www.thepacker.com

**Fig. 1.1: US Avocado imports by country, 2010 to 2018**

The supply of avocados is unpredictable. It is estimated that to produce one kilogram of avocado requires 2000 litres of water. Consequently, production is highly susceptible to drought conditions such as those that affected Central American growers in 2018. When this happens, the price of avocados increases as shown in Fig. 1.2.




*Source: Mexican Ministry of Economy*

**Fig. 1.2: Wholesale price of Mexican avocados in the US, January to July 2019 (pesos per 10 kg box)**

© UCLES 2022



stemup.co.uk

A shortage in supply provides an opportunity for new producers to enter the global market. Kenya, for example, has expanded its productive capacity and signed an agreement to supply the Chinese market. Even some New Zealand farmers switched from dairy to avocado production.

The global market for avocados is expected to continue to grow over the next few years. Rising prices will continue to increase production. It should be recognised, however, that there are increasing objections to higher production. In Mexico, for example, farmers have cleared forests to cultivate more avocados. This has put a strain on water supplies and raised concerns about the effects of the farmers' actions on climate change. These concerns have led one market research report to conclude that 'the price mechanism is not working to allocate resources successfully.'

*Source: Global avocado market, Mordor Intelligence, Avocado market trends 2020, Inspira Farms*

**(a)** Describe the change in the level and source countries of the US's imports of avocados from 2013 to 2018. [2]

**(b)** **(i)** Calculate the percentage change in the wholesale price of Mexican avocados between April 2019 and the end of July 2019. [1]

**(ii)** Explain **one** possible demand reason and **one** possible supply reason for this change in price. [4]

**(c)** Using the information provided, consider whether the supply of avocados is price elastic or price inelastic in the short run and in the long run. [4]

**(d)** Explain, with the help of a production possibility curve diagram, the opportunity cost to a New Zealand farmer of converting from dairy to avocado production. [3]

**(e)** Discuss whether the price mechanism in the avocado market is working to allocate resources successfully. [6]



stemup.co.uk

## Section B

Answer **one** question.

**2** **(a)** A government has decided to spend money building a new barrier to prevent flooding across a city. Explain why this flood defence barrier is likely to meet the characteristics of a public good. [8]

**(b)** Education and healthcare are considered to be merit goods.

Discuss why merit goods are provided by both the private sector and the public sector. [12]

**3** **(a)** Explain the difference between cost-push inflation and demand-pull inflation. [8]

**(b)** Discuss whether a contractionary monetary policy is the best way to reduce the rate of inflation. [12]

**4** **(a)** Explain why some countries consistently have a deficit on the current account of the balance of payments. [8]

**(b)** Discuss the extent to which expenditure-switching policies and expenditure-reducing policies might be able to reduce such a deficit. [12]

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2022



stemup.co.uk

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

Question number

Answers for paper 9708/23

1(a) The level of US avocado imports rose overall, from about 570 thousand tonnes in 2013 to about 1040 thousand tonnes in 2018, almost doubling (with a small dip in 2016). Mexico remained by far the largest source, about 900 thousand tonnes in 2018, while imports from Peru grew strongly and those from Chile and the Dominican Republic were small and variable.

1(b)(i) Start of April ≈ 300 pesos, end of July ≈ 600 pesos per 10 kg box.
% change = (600 − 300) ÷ 300 × 100 = +100% (approximately).

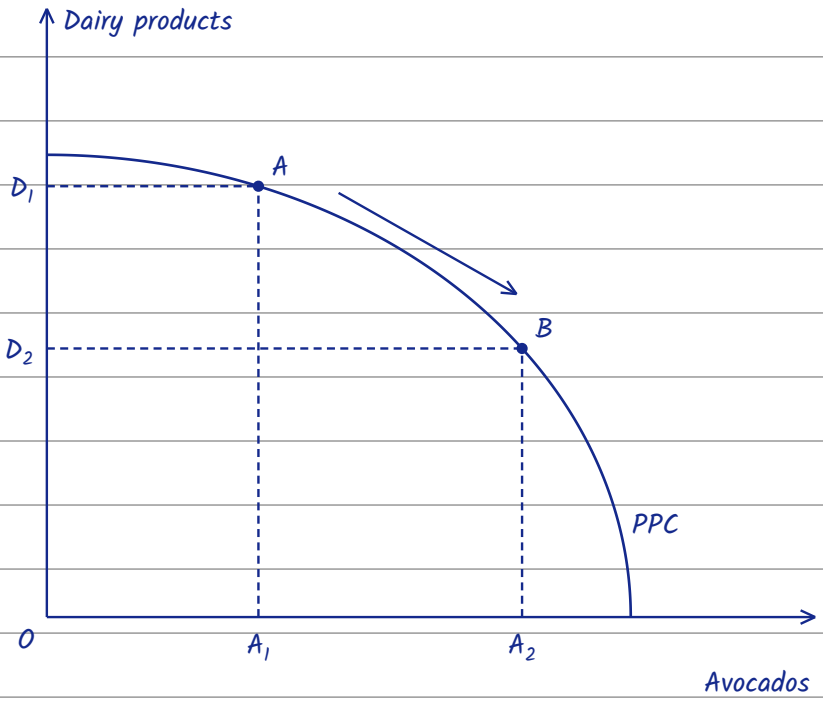
1(b)(ii) Demand: the claimed health benefits and the rising popularity of guacamole in the US increased demand, so the demand curve shifted right; at the old price there was excess demand, which pushed the price up.
Supply: drought conditions in Central America reduced the harvest because avocados need so much water (2000 litres per kg). The supply curve shifted left, creating a shortage at the old price, so the price rose.

1(c) In the short run supply is price inelastic. Avocados take years to grow and output depends on the weather and water, so when the price rises producers cannot quickly increase the quantity supplied; supply is 'unpredictable' and fell with the 2018 drought regardless of price.
In the long run supply is more price elastic. Higher prices attract new producers: Kenya expanded its productive capacity and some New Zealand farmers switched from dairy, and Mexican farmers cleared forest for new land, so the quantity

Question number

supplied responds much more to price.

1(d)




Opportunity cost is the next best alternative forgone. The PPC shows the combinations of dairy products and avocados the farmer can produce with his land, labour and capital. Moving from A to B to grow more avocados (A1 to A2), the farmer must give up D1 – D2 of dairy output: this lost dairy output is the opportunity cost. The PPC is concave, so each extra unit of avocados costs more and more dairy, because land and equipment suited to dairy are not equally suited to avocados.

1(e)

The price mechanism allocates resources through the signalling, incentive and rationing functions of price. In many ways it is working. Rising demand in the US, China and Europe raised prices, and when drought reduced supply the price doubled from about 300 to 600 pesos per box between April and July 2019. This rationed the scarce avocados to the consumers who valued them most and signalled to producers that more resources were wanted. Producers responded to the incentive of higher profit: Kenya expanded capacity and New Zealand farmers switched from

Question number

dairy, so resources moved to where consumers wanted them.

However, the market ignores external costs. Mexican farmers have cleared forests and put a strain on water supplies, which adds to climate change. These costs fall on third parties, so the marginal social cost exceeds the marginal private cost and avocados are overproduced at a price that is too low. Prices are also very volatile, and if the health claims prove wrong, or new suppliers such as Kenya flood the market, prices could collapse and leave resources wasted in orchards.

On balance, the price mechanism is working well to allocate resources between buyers and sellers, but it is not allocating resources successfully for society as a whole because of the environmental externalities, so government intervention such as water charges may be needed.

2(a) A private good is rival and excludable: one person's consumption reduces the amount available for others, and people who do not pay can be prevented from consuming it. A public good has the opposite characteristics: it is non-rival and non-excludable.

A flood defence barrier is likely to be a public good. It is non-excludable: once the barrier is built, it protects every home and business in the city from flooding, and it is impossible to stop a household that has not paid from being protected. It is also non-rival: one more family moving into the city and being protected does not reduce the protection that anyone else gets, so the marginal cost of an extra user is zero. It is also non-rejectable, since residents cannot choose not to be protected.

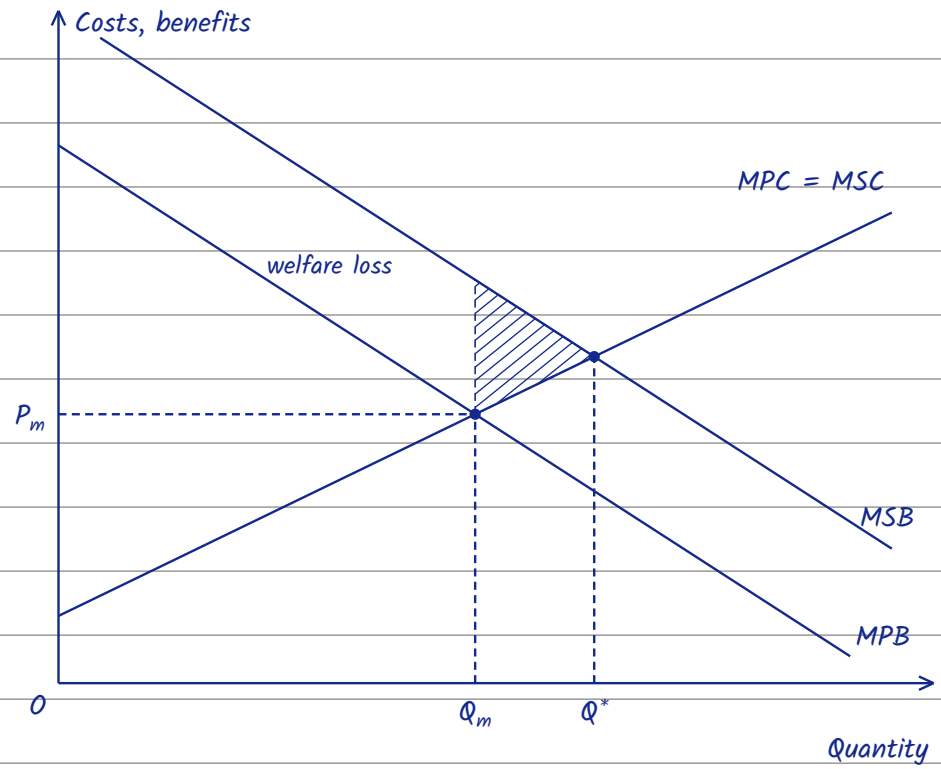
This means it cannot be supplied as a private good. A private firm could not charge each household a price, because people could not be excluded. Each resident has an incentive to be a free rider, waiting for others to pay because they will benefit anyway. So consumers will not reveal their demand, a firm could not earn revenue or profit, and the market would not provide the barrier at all: a missing

Question number

market.

That is why the government decides to build it and pays for it out of taxation, which everyone must pay, so the free rider problem is overcome.

2(b)




Merit goods such as education and healthcare are under-consumed in a free market because of information failure: consumers underestimate the private benefit (MPB) they receive and ignore the positive externalities (MSB > MPB). In the diagram the market produces Qm, where MPB = MPC, but the socially optimal output is $Q^*$, where MSB = MSC, so there is a welfare loss (hatched). Poorer households may also be unable to afford them even when they know the benefits. This is why the public sector provides them. The government can provide schooling and hospitals free at the point of use, financed by taxes, raising consumption towards $Q^*$. This also improves equity because access depends on need rather than income, and over time a healthier, better educated workforce raises productivity and growth.

However, merit goods are rival and excludable, so they are private goods and can

Question number

be sold at a profit. The private sector therefore provides them as well: private schools and private hospitals charge fees to those able and willing to pay. Many people want shorter waiting times, smaller classes or more choice than the state offers, and the profit motive gives private providers an incentive to be efficient and to respond to consumer preferences.

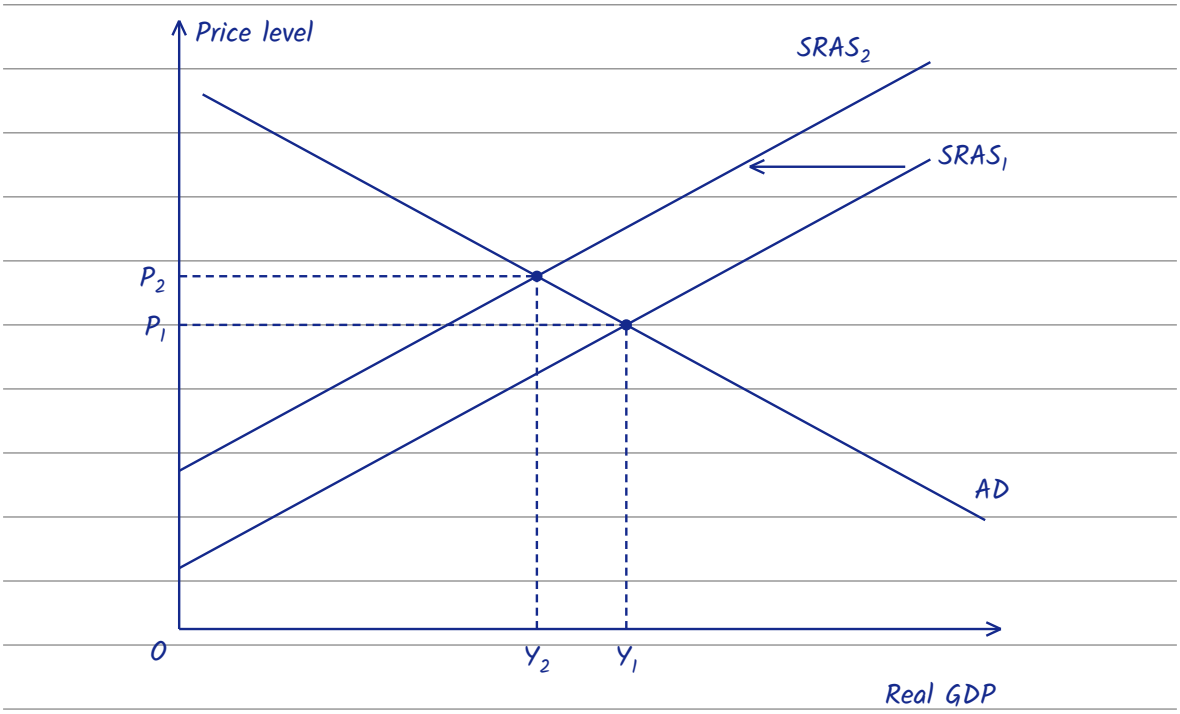
Both sectors are also needed because of limited government budgets. Providing free healthcare and education for everyone has a large opportunity cost, especially in low and middle income countries where tax revenue is small, so the state cannot meet all demand. Private provision eases the pressure on public services. On the other hand, private provision only reaches those who can pay, so it can widen inequality, and private firms may provide too little in poorer areas.

In conclusion, merit goods are provided by both sectors because the public sector is needed to correct under-consumption and ensure fair access, while the private sector meets extra demand that the government cannot afford. The balance depends on a country's income and tax base: richer countries can rely more on the state, while poorer countries depend more on private providers.

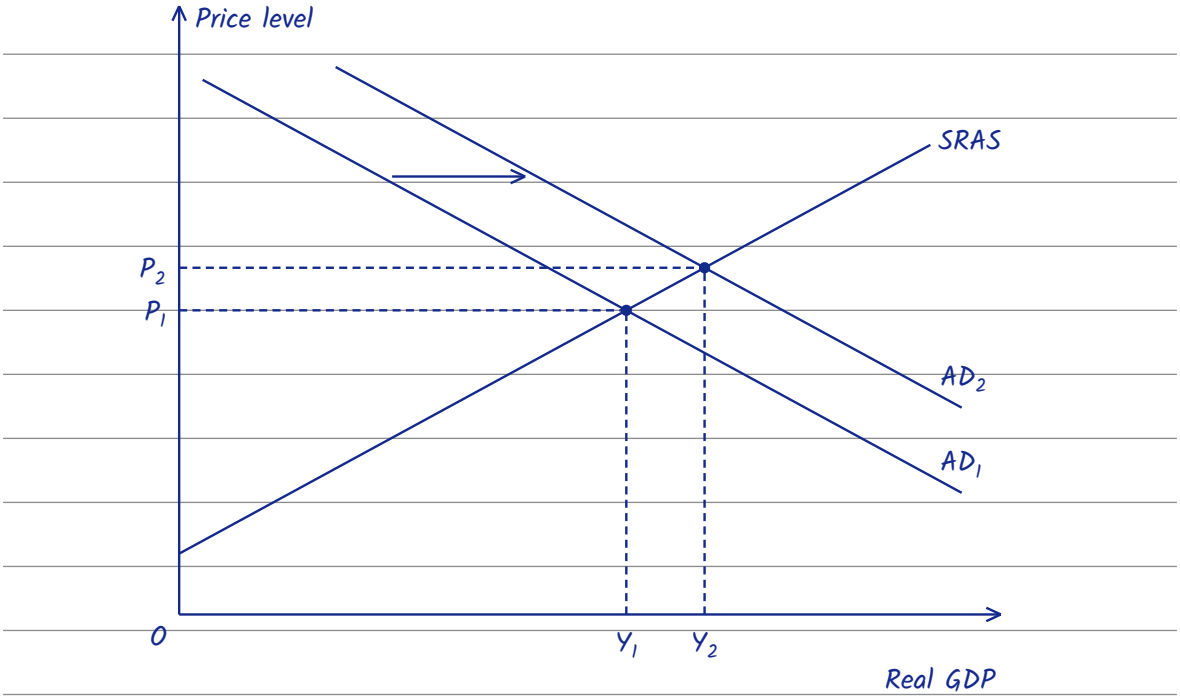
3(a) Inflation is a sustained rise in the general price level over a period of time, measured by the change in a consumer prices index.

Cost-push inflation is caused by rises in firms' costs of production. For example, wages may rise faster than productivity, or the price of imported oil and raw materials may rise, perhaps because of a depreciation of the currency. Firms pass the higher costs on to consumers as higher prices to protect their profit margins, so the SRAS curve shifts left from SRAS1 to SRAS2. The price level rises from P1 to P2 while real GDP falls from Y1 to Y2.

Question number




Demand-pull inflation is caused by aggregate demand rising faster than aggregate supply, so 'too much money chases too few goods'. A cause could be a cut in income tax leading to a consumer boom, a rise in government spending, or a rise in demand for exports. AD shifts right from AD1 to AD2, raising the price level from P1 to P2, and the effect is stronger the closer the economy is to full employment.




The key difference is the source: cost-push comes from the supply side and is

Question number

associated with falling output and rising unemployment, while demand-pull comes from the demand side and is associated with rising output and employment. This matters because they need different policies.

3(b)

Contractionary monetary policy means raising interest rates or reducing the growth of the money supply. Higher interest rates raise the cost of borrowing, so consumers buy fewer goods on credit and firms invest less; they also raise the reward for saving and increase mortgage payments, reducing disposable income. Consumption and investment fall, so AD shifts left and demand-pull inflation falls. Higher rates may also attract hot money and raise the exchange rate, making imports cheaper. It can be changed quickly by an independent central bank, which gives credibility and lowers inflation expectations.

However, it has disadvantages. It can take 18 months or more for the full effect, and if demand is interest inelastic, for example when confidence is high, the effect is small. It reduces output and raises unemployment, and it discourages investment, which reduces long-run capacity. It is unsuitable for cost-push inflation, since it lowers AD and so deepens the fall in output. A higher exchange rate also makes exports less competitive.

Contractionary fiscal policy, raising taxes or cutting government spending, also reduces AD directly. It can be targeted at particular groups or sectors, and cutting spending reduces a budget deficit. But tax and spending changes are slow to plan and politically unpopular, higher income taxes can reduce the incentive to work, and cuts to education or infrastructure harm long-term growth. Like monetary policy, it raises unemployment and does little for cost-push inflation.

Supply-side policies, such as training, privatisation or deregulation, raise productivity and shift AS right, so they reduce inflation while raising output. They are the best answer to cost-push inflation, but they take years to work and are expensive.

Overall, contractionary monetary policy is usually the best way to reduce

Question number

demand-pull inflation in the short run, because it is flexible and quick to change. But it is not always best: it depends on the cause. For cost-push inflation, supply-side policies are better in the long run, so a combination of policies is often most effective.

4(a) The current account of the balance of payments records trade in goods, trade in services, primary income (such as profits, interest and wages from abroad) and secondary income (transfers such as remittances and aid). A deficit occurs when the money flowing out of the country for imports and income payments is greater than the money flowing in from exports and income receipts.

Some countries have a deficit year after year because of structural causes rather than temporary ones. First, a lack of international competitiveness: if a country's inflation is higher than its trading partners', or its productivity is low, its exports become relatively expensive and imports relatively cheap, so export revenue falls and import spending rises. An overvalued exchange rate, perhaps one that is fixed too high, has the same effect.

Second, the structure of the economy. Many developing countries export mainly primary products, such as crops or minerals, whose prices are low and volatile and have a low income elasticity of demand, while they import manufactured and capital goods. Over time this leads to a deterioration in the terms of trade, so they must export more and more to pay for the same imports. Trading partners may also protect their own producers, limiting access to markets.

Third, strong domestic demand. When incomes rise quickly, and the marginal propensity to import is high, spending on imports rises faster than exports. A country can also pay out large primary income to foreign owners of firms or on foreign debt. If these causes are not dealt with, the deficit persists.

4(b) Expenditure-switching policies aim to switch spending from imports to domestically

Question number

produced goods. A devaluation or depreciation makes exports cheaper abroad and imports dearer at home. If the Marshall-Lerner condition holds, so that the combined price elasticities of demand for exports and imports exceed one, the current account improves, although at first it may worsen (the J-curve) because demand is inelastic in the short run. Tariffs and quotas raise the price or limit the quantity of imports. These policies can reduce the deficit without reducing national output; indeed higher net exports raise AD and employment.

However, they have drawbacks. A devaluation raises the price of imported raw materials and food, causing cost-push inflation that can wipe out the price advantage. Tariffs may lead to retaliation, are limited by WTO rules, and protect inefficient firms. Neither solves underlying low productivity.

Expenditure-reducing policies aim to reduce total spending in the economy, including spending on imports: higher taxes, cuts in government spending or higher interest rates. With less disposable income, households buy fewer imports, and firms may turn to export markets as home demand falls. They also reduce demand-pull inflation, which helps competitiveness. But they also cut spending on domestic goods, so output falls and unemployment rises; with a marginal propensity to import of, say, 0.2, only 20% of the cut in spending falls on imports. This is a high price to pay.

Overall, both can reduce a deficit to some extent, but only in the short to medium term. Expenditure-switching is more likely to remove a deficit at lower cost, provided demand for exports and imports is price elastic and inflation is controlled. Expenditure-reducing works mainly when the deficit comes from excess demand. A persistent deficit caused by low competitiveness needs supply-side policies alongside them.