Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/21**

Paper 2 AS Level Data Response and Essays **May/June 2024**

2 hours

8737215146

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **three** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
  - Section C: 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 60.
- The number of marks for each question or part question is shown in brackets [ ].

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Section A

Answer all parts of Question 1.

1 Will an increase in exports lead Sri Lanka back into economic growth?

In May 2022, Sri Lanka had to admit that it was unable to pay its debts to other countries for the first time in its history. As a result, in February 2023 it was forced to obtain a loan of US$3bn from the International Monetary Fund (IMF). The question is now, can Sri Lanka trade its way out of trouble?

The main problem faced by Sri Lanka for many years has been a lack of international competitiveness. Despite a growth in exports between 2000 and 2018, over the same period, they fell as a share of the economy from 39% to 23% of Gross Domestic Product (GDP). As a result, the country has found itself unable to earn enough foreign currency to pay for essential imports of food and fuel.

Table 1.1: Sri Lanka balance of trade in goods and services, US$ million, January 2022 to January 2023.

January 2022	March 2022	May 2022	July 2022	September 2022	November 2022	January 2023
–858	–762	–404	–123	–205	–450	–410

For many years, Sri Lanka has enjoyed a comparative advantage in growing and exporting tea. However, the ban on imports of fertilisers in 2021 which cut yields by a fifth and an overreliance on outdated methods of production have had a disastrous impact. Another major export is textiles, but these rely heavily on imported raw materials that have rapidly increased in price following the COVID-19 pandemic and the conflict in Ukraine. So, what alternatives exist for Sri Lanka?

Unlike in other Asian nations, Sri Lanka does not appear to have a plan to develop any new comparative advantage. Probably the most likely option would appear to be to take full use of its position at the centre of Indian Ocean shipping lanes by developing its ports. Sri Lanka could become a major shipping hub which would extend opportunities for exports. For example, approximately a third of the world's oil is transported across the Indian Ocean.

Other options include allowing the Sri Lankan rupee to depreciate to boost exports because it is felt that the currency is overvalued. There are also suggestions that all import tariffs should be removed. Sri Lanka is currently one of the most protected economies in the World and removing tariffs may help attract much needed foreign investment and encourage local industries to become more efficient.

The question now is, could the introduction of these options lead Sri Lanka back into economic growth?

Source: Adapted from Ben Chu, Economics Editor, BBC Newsnight article and tradingeconomics.com, February 2023

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(a) Using Table 1.1:

(i) Identify the overall trend in Sri Lanka's balance of trade in goods and services between January 2022 and January 2023. [1]

(ii) Calculate the percentage change in Sri Lanka's balance of trade in goods and services between January 2022 and January 2023. [1]

(b) Explain what is meant by 'Sri Lanka has enjoyed a comparative advantage in growing and exporting tea.'. [2]

(c) Consider the extent to which depreciation of the Sri Lankan rupee could improve the country's balance of trade in goods and services. [4]

(d) Assess whether the removal of all protectionism is likely to reduce the balance of trade deficit. [6]

(e) Assess the extent to which supply-side policies will be able to 'lead Sri Lanka back into economic growth'. [6]

Section B

Answer **one** question.

EITHER

2 **(a)** With the use of examples, explain the difference between public goods and merit goods and consider whether markets will always provide enough of both goods. [8]

(b) Assess whether a planned economic system should always switch to a mixed economy. [12]

OR

3 **(a)** With the help of a formula, explain what is meant by the income elasticity of demand for a product and consider the extent to which demand for the product will always rise at the same rate as the income of its consumers. [8]

(b) Assess the extent to which price elasticity of supply or cross elasticity of demand is more useful to businesses. [12]

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Section C

Answer **one** question.

EITHER

4 **(a)** Explain **three** of the components of aggregate demand and consider the extent to which they may be increased without leading to inflation. [8]

(b) The Chinese government has re-emphasised its commitment to rebalancing the economy from one focused mainly on investment and exports to one aiming to increase the proportion spent on domestic consumption.

Assess the extent to which it would be possible to achieve this by fiscal policy alone. [12]

OR

5 **(a)** Explain **three** causes of unemployment and consider which cause is likely to be most damaging to a high-income economy. [8]

(b) Assess which expansionary macroeconomic policy would be most likely to enable a government to meet its economic objective of a low rate of unemployment. [12]

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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 (all questions answered)

1(a)(i) Overall, Sri Lanka's trade deficit fell (narrowed) between January 2022 and January 2023, from −$858m to −$410m, although it widened again after July 2022.

1(a)(ii) % change = (−410 − (−858)) ÷ 858 × 100 = 448 ÷ 858 × 100 = 52.2%, so the trade deficit fell by about 52%

1(b) It means that Sri Lanka can grow and export tea at a lower opportunity cost than other countries, so it gives up fewer other goods to produce each unit of tea than its trading partners do.

1(c) A depreciation is a fall in the value of the rupee against other currencies in a floating exchange rate system, for example from 300 to 360 rupees per US$. It makes Sri Lankan exports, such as tea and textiles, cheaper in foreign currency and makes imports more expensive in rupees. Export volumes should rise and import volumes fall, so the deficit in goods and services should narrow. However, the extent depends on the price elasticity of demand for exports and imports. The trade balance only improves if the sum of the PEDs is greater than 1 (Marshall-Lerner condition). Imports of food and fuel are essential and price inelastic, so the import bill in foreign currency may hardly fall, and in the short run the balance may even worsen (J-curve). Textile exports rely on imported raw materials, which also become dearer, and tea output is limited by low yields, so exports may not rise much. The improvement is likely to be small at first.

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1(d)	Removing all protection, such as tariffs and quotas, would make imports cheaper in Sri Lanka, one of the most protected economies in the world. In the short run this is likely to increase imports and widen the trade deficit, because domestic firms protected for years would lose market share to cheaper foreign goods, and some may close, which reduces employment and output. Protection is also used against dumping and to shelter infant industries that could later export. On the other hand, removing tariffs could reduce the deficit in the long run. Cheaper imported raw materials would lower costs for exporters such as textile producers, making exports more price competitive. Foreign competition would force local firms to become more efficient, and the extract says that removing tariffs may attract much needed foreign direct investment, which could build new export industries such as port services. It would also remove the risk of retaliation by trading partners against Sri Lankan exports. Overall, removing all protection is unlikely to reduce the deficit in the short term, as imports would rise faster than exports. It is more likely to help in the long term, but only if FDI arrives and local firms can become competitive, so a gradual, phased removal would be a safer way to reduce the deficit.
1(e)	Supply-side policies aim to increase the productive capacity of the economy and shift LRAS to the right. Spending on education and training would create a more skilled, productive workforce; investment in modern farming methods and fertilisers could reverse the fall in tea yields of a fifth; and developing the ports would let Sri Lanka use its position on Indian Ocean shipping lanes, where about a third of the world's oil is carried. This creates a new comparative advantage, raises exports and leads to sustained economic growth without inflation. However, supply-side policies are expensive and Sri Lanka cannot pay its debts and has needed a US$3bn IMF loan, so it may not be able to fund them. There is a

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long time lag: training workers or building ports takes years, while the economy needs growth now. Their success also depends on how the workforce and firms respond, and on the country having a clear plan, which the extract says it lacks.

In conclusion, supply-side policies are the best way to lead Sri Lanka back to long-run growth because the main problem is a lack of competitiveness. However, they will not work quickly on their own, so they need to be combined with IMF support and demand-side measures in the short run.

2(a) A public good is non-rival, meaning one person's use does not reduce the amount available to others, and non-excludable, meaning people who do not pay cannot be stopped from benefiting, for example street lighting or national defence. A merit good, such as education or healthcare, is a good that is more beneficial than people realise. Because of information failure and positive externalities it is under-consumed and so under-produced in a free market. Merit goods are rival and excludable, so they can be sold.

In a market economy firms produce only where there is a profit motive. Public goods will not be provided at all, because of the free rider problem: consumers wait for others to pay, so firms cannot charge (missing market). Merit goods will be provided, but at less than the socially optimal quantity, as only those who can afford them and value them buy them. In a mixed economy the government can provide street lighting from tax revenue and provide or subsidise healthcare and education, so enough of both may be provided.

However, government provision is limited by its budget and by government failure. In the street lighting market a low-income government may not afford full coverage, and in healthcare long waiting lists show that demand can exceed what is provided. So markets on their own will never provide enough public goods and will under-provide merit goods; even with government involvement, enough of both is only provided where tax revenue is sufficient.

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2(b)

In a planned economy the state owns most resources and decides what, how and for whom to produce. In a mixed economy resources are allocated partly by the price mechanism in markets and partly by the government.

A planned economy has advantages. The state can provide public goods and merit goods such as healthcare and education to everyone, reduce inequality of income and wealth, and keep unemployment low. Resources can be directed quickly to priorities, for example rapid industrialisation or a national emergency, and negative externalities such as pollution can be controlled directly.

However, planners lack the information to know what millions of consumers want, so there are shortages of some goods and surpluses of others, with queues and black markets. Without a profit motive or competition there is little incentive to innovate or to cut costs, so productive and allocative efficiency are low, choice is limited and growth tends to be slow.

A mixed economy may combine the best of both. Prices signal consumer wants and give firms an incentive to be efficient and innovate, while the government still corrects market failure by providing public goods, subsidising merit goods, taxing demerit goods and redistributing income. China and Vietnam grew rapidly after moving towards mixed systems.

However, switching is not always desirable or easy. A mixed economy can suffer from inequality, unemployment and instability, and markets may fail. The transition itself can be painful: when the former Soviet economies switched quickly in the 1990s, privatisation and price liberalisation led to high inflation, unemployment and falls in output, and many state assets were bought cheaply by a few people. The benefits also depend on how mixed the economy becomes and on strong institutions such as property rights and competition law.

In conclusion, a planned economy should usually move towards a mixed economy, because the gains in efficiency, choice and growth are large in the long run.

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	However, it should not "always" switch quickly: the switch should be gradual and well managed, and a larger planned element may still be justified for essential services or in a crisis. The best mix depends on the country's priorities between efficiency and equity.
3(a)	Income elasticity of demand (YED) measures the responsiveness of the quantity demanded of a product to a change in consumers' income, ceteris paribus. YED = % change in quantity demanded ÷ % change in income If YED is greater than 1, demand is income elastic: demand rises by a larger percentage than income (for example foreign holidays). If YED is between 0 and 1, demand is income inelastic: demand rises by a smaller percentage than income (for example basic food). So demand will only rise at the same rate as income if YED is exactly +1 (unitary). For a normal good YED is positive, so demand rises when income rises, but faster for a luxury (YED > 1) and slower for a necessity (0 < YED < 1). For an inferior good, such as cheap own-brand bread or bus travel, YED is negative, so demand falls as income rises, as consumers switch to better alternatives. The rate also changes over time: a product may be a luxury at low incomes but a necessity at high incomes, and other factors such as tastes and prices change at the same time. Therefore demand will rarely rise at the same rate as income; this depends on the size and sign of YED, which varies between products and income levels.
3(b)	Price elasticity of supply (PES) measures the responsiveness of quantity supplied to a change in the price of the product: PES = % change in quantity supplied ÷ % change in price. Cross elasticity of demand (XED) measures the responsiveness of the quantity demanded of one good to a change in the price of another good: XED = % change in quantity demanded of A ÷ % change in price of B.

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PES is useful because it tells a business how quickly it can respond to a change in demand. If supply is elastic, for example because the firm has spare capacity, stocks of finished goods or easily available factors of production, it can increase output and take advantage of a rise in price before rivals. If supply is inelastic, as with agricultural products in the short run, the firm knows it must plan ahead, hold more stock or invest in capacity. However, PES is mainly determined by the firm's own production conditions, which it already knows, so it adds limited new information, and it changes over time (supply is more elastic in the long run).

XED is useful because it tells a business how its demand depends on other firms. A positive XED shows a substitute, and a high value (for example +3 between two brands of cola) shows close competition, so the firm knows that a rival's price cut will take many of its customers and it may need to match it. A negative XED shows a complement, for example games consoles and games, so a firm can price one product low to raise sales of the other. XED therefore helps with pricing, marketing and product range decisions. However, XED is difficult to measure accurately, because other factors change at the same time, and it can quickly become out of date as new products appear.

Overall, the usefulness depends on the business and its market. For a firm in a competitive oligopoly, XED is more useful as it shows how sensitive its sales are to rivals' actions. For a producer facing changing demand, such as a farmer or manufacturer deciding on stock levels, PES matters more. On balance XED is likely to be more useful to most businesses, because it gives information about the market that the firm does not control, but both are only estimates based on past data and should be used together.

4(a) Aggregate demand is total planned spending on an economy's goods and services: $AD = C + I + G + (X - M)$. Consumer spending (C) is spending by households on goods and services and is the largest component; it depends on income, interest

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rates and confidence. Investment (I) is spending by firms on capital goods such as machinery and buildings, influenced by interest rates and expected profits. Government spending (G) is spending by the government on goods and services such as healthcare, education and infrastructure, not including transfer payments. Demand-pull inflation happens when AD rises faster than aggregate supply, so too much money chases too few goods. If the economy is close to full capacity, a rise in C, I or G mainly raises the price level rather than output. However, if there is spare capacity, as in a recession, firms can increase output using unemployed resources, so AD can rise with little or no rise in the price level. Also, increases in I, and in G on infrastructure and education, raise productive capacity, so AS increases as well and offsets the inflationary pressure.

Therefore the components can be increased without inflation when there is spare capacity, or when the rise is in investment that also increases AS. A rise in consumer spending at full employment is the most likely to be inflationary. The extent depends on how big the increase is and how close the economy is to full capacity.

4(b) Fiscal policy is the use of government spending and taxation to influence the economy. To rebalance China towards consumption, the government could cut income tax or VAT, raising households' disposable income and their spending. A key reason Chinese households save so much is precautionary saving, because healthcare, pensions and unemployment benefits are limited. Higher government spending on healthcare, education and social security would reduce the need to save, so the average propensity to consume would rise. Transfer payments to rural and low-income households, who have a high marginal propensity to consume, would raise C most.

However, fiscal policy alone has limits. Tax cuts may be saved rather than spent if confidence is low, and temporary measures do not change long-term saving habits.

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Higher spending and lower taxes increase the budget deficit and government debt, which may not be sustainable. There are time lags in setting up welfare systems, and higher consumption may suck in imports or cause inflation if supply does not adjust.

Other policies are therefore needed. Monetary policy, such as lower interest rates, reduces the reward for saving and makes borrowing for consumer durables cheaper, although it can also encourage more investment, which works against rebalancing. Allowing the yuan to appreciate would make imports cheaper and raise real incomes, while reducing the reliance on exports. Supply-side policies, such as reforming the hukou system so that migrant workers can access public services, or policies to raise wages and labour's share of income, would make higher consumption sustainable.

In conclusion, fiscal policy is the most direct tool, because building a social safety net tackles the main cause of high saving. However, it would be very difficult to achieve the rebalancing by fiscal policy alone: the change is structural and long term, so fiscal policy needs to be combined with exchange rate, monetary and supply-side reforms.

5(a) Frictional unemployment occurs when workers are between jobs, for example a graduate searching for a first job, because of imperfect information about vacancies. Structural unemployment occurs when there is a long-term change in the pattern of demand or production, so an industry declines, such as coal mining in the UK, and workers lack the skills or are in the wrong area for new jobs (occupational and geographical immobility). Cyclical (demand-deficient) unemployment occurs when aggregate demand falls in a recession, so firms cut output and need fewer workers.

Frictional unemployment is usually short term, and in a high-income economy with good job centres and online information it can be kept low, so it does little

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damage. Cyclical unemployment can be large in a deep recession, causing lost output and tax revenue, but it depends on the economic cycle and should fall as the economy recovers or as fiscal and monetary policy boost AD. Structural unemployment can be permanent: whole regions can be left with long-term unemployment, skills become out of date, and the economy loses productive capacity. High-income economies face this because of technological change and competition from low-cost countries.

Overall, frictional unemployment is the least damaging. Cyclical unemployment can be most damaging in the short run during a severe recession, but structural unemployment is likely to be the most damaging to a high-income economy, because it lasts longer, is harder to solve and reduces long-run potential output.

5(b) A low rate of unemployment is a main macroeconomic objective. The government can use expansionary fiscal, monetary or supply-side policy, and the best choice depends on the cause of the unemployment.

Expansionary fiscal policy means raising government spending or cutting taxes. This increases AD directly, and with the multiplier effect national income rises by more than the initial injection, so firms need more workers and cyclical unemployment falls. Spending on infrastructure creates jobs quickly in construction. However, it increases the budget deficit and national debt, there are time lags in planning projects, and if the economy is near full capacity the result is mainly inflation. It may also crowd out private investment.

Expansionary monetary policy, such as cutting interest rates or quantitative easing, makes borrowing cheaper and saving less attractive, so consumption and investment rise, AD shifts right and unemployment falls. It can be introduced quickly by the central bank. However, if confidence is low, firms and households may not borrow even at low rates, especially if rates are already near zero. Investment may also be in capital-intensive machinery that replaces workers, and

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lower rates can cause the currency to depreciate and inflation to rise.

Expansionary supply-side policy, such as training and education, better job information or lower income tax to improve incentives, reduces structural and frictional unemployment by making workers more employable and mobile. It also raises productive capacity, so it reduces unemployment without causing inflation. However, it is costly, takes many years to work and does nothing for cyclical unemployment caused by a lack of demand.

In conclusion, no single policy is always best. If unemployment is cyclical, expansionary fiscal policy is most likely to work, especially when interest rates are already low, because it injects spending directly. If unemployment is structural, supply-side policy is the only lasting solution. In practice a government is most likely to meet its objective by combining demand-side policy in the short run with supply-side policy in the long run.

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2 hours

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INFORMATION

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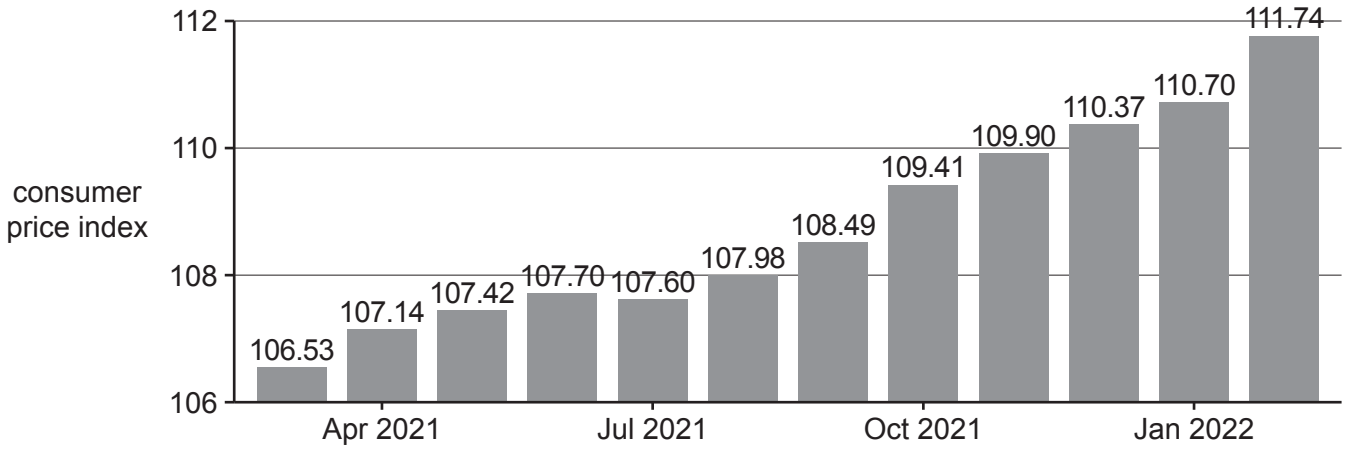
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Section A

Answer all parts of this question.

1 Dilemma for the European Central Bank (ECB)

The Eurozone consists of 19 European Union (EU) states that have agreed to use a common currency (the euro) and monetary policy, both of which are governed by the ECB. The ECB sets interest rates for all 19 members of the Eurozone and since July 2021 has aimed to maintain the rate of inflation at 2% in the medium term. Interest rates have been held at 0% since March 2016.



source: Tradingeconomics.com

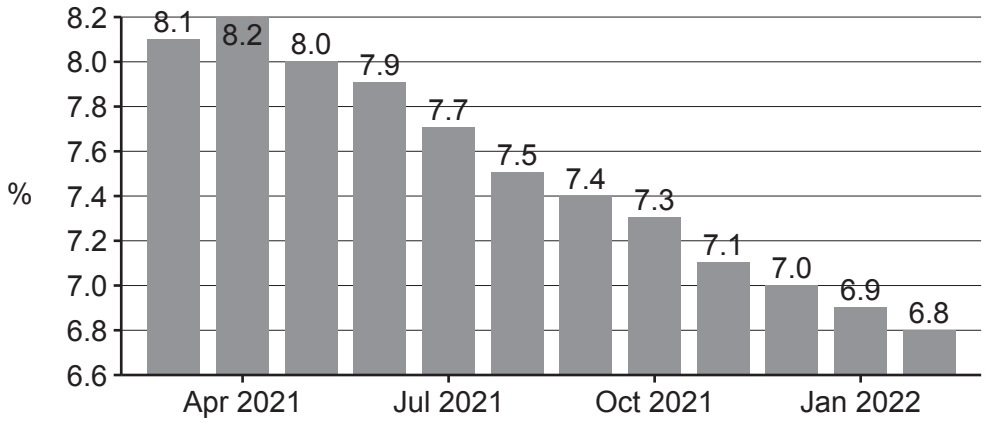
Fig 1.1: Eurozone Consumer Prices Index (CPI) March 2021 – February 2022

In March 2022, the annual rate of inflation hit a record high for the Eurozone of 7.5% and is forecast to continue to rise throughout 2022. Additionally, according to the ECB vice president, annual economic growth is expected to fall from 4.6% at the end of 2021 to around 0% at the end of 2022. Most of the impact of these changes is expected to fall on consumers. Much higher energy costs and rising food prices tend to have a more severe effect on poorer households and those on fixed incomes.

The main causes of the rapid increase in the inflation rate are supply-side factors. The rise in energy prices result from a combination of the Covid-19 pandemic and the conflict between Russia and Ukraine which have reduced supplies of oil and gas. Additionally, the Eurozone labour market is increasingly suffering from a shortage of supply as unemployment has fallen to a record low of 6.8% in February 2022 with further falls predicted. Because the rise in the rate of inflation is almost exclusively supply-side driven, the ECB fears that this will lead to further falls in economic growth leading to a period of 'stagflation', where an economy experiences high inflation and low economic growth at the same time.

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source: Tradingeconomics.com

Fig 1.2: Eurozone % unemployment rate March 2021 – February 2022

All this leaves the ECB with a dilemma. Should it:

- increase interest rates substantially now to control the increasing rate of inflation and risk weakening economic growth even further, or
- increase them slightly in the hope that supply pressure will ease soon (this runs the risk of making high inflation more permanent if the pressure does not ease), or
- leave interest rates unchanged?

Sources, adapted from: reuters.com 31 March 2022
and reporting by Balazs Koranyi 1 April 2022

(a) Describe what has happened to consumer prices in the Eurozone between March 2021 and February 2022. [2]

(b) With the help of an aggregate demand and aggregate supply diagram, identify the main type of inflation in the Eurozone. [2]

(c) Consider the extent to which the shortage of supply of labour in the Eurozone may have contributed towards the increasing rate of inflation. [4]

(d) Using the concept of price elasticity of demand, assess the relative impact on poorer households, including those on fixed incomes, of rising prices of food and energy. [6]

(e) Assess the advantages and disadvantages of the ECB 'substantially' increasing the interest rate to control rising inflation. [6]

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Section B

Answer **one** question.

EITHER

2 **(a)** Explain how the Gini coefficient is used to measure income inequality **and** consider the relative strength of **two** economic reasons suggested for such inequality in a low-income country. [8]

(b) Assess the extent to which government policies to redistribute income and wealth are likely to be successful. [12]

OR

3 **(a)** With the help of an example of each, explain the difference between a merit good and a demerit good **and** consider whether a subsidy given to a merit good will always be effective in increasing its consumption. [8]

(b) Assess whether fixing a minimum price is likely to be the best policy to reduce the consumption of a demerit good. [12]

Section C

Answer **one** question.

EITHER

4 **(a)** With the help of a diagram, explain what is meant by the circular flow of income in an open economy **and** consider the extent to which it can explain economic growth in such an economy. [8]

(b) Assess whether supply-side policy is the most effective way to achieve long-run economic growth. [12]

OR

5 **(a)** Explain what is meant by protectionism **and** consider the effectiveness of using tariffs as a method of protectionism. [8]

(b) Assess whether free trade is always better than a policy of protectionism for a developing economy that wishes to trade internationally. [12]

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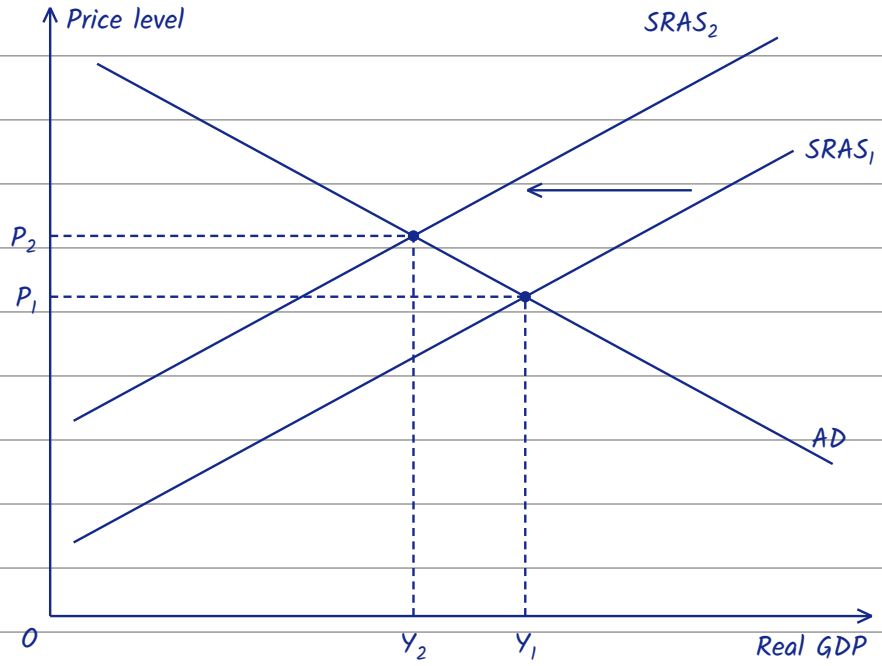
Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number

Answers for paper 9708/22 (all questions answered)

1(a) Consumer prices rose over the period, with the CPI increasing from 106.53 to 111.74, a rise of (111.74 – 106.53) ÷ 106.53 × 100 = 4.89%. Prices rose every month except July 2021 (107.60), and the rate of increase was faster after October 2021, with the largest monthly rise in February 2022.

1(b) The main type of inflation is cost-push inflation, caused by higher energy costs and labour shortages. In the diagram the SRAS curve shifts left from SRAS1 to SRAS2, so the price level rises from P1 to P2 and real GDP falls from Y1 to Y2.



1(c) A shortage of labour, with unemployment at a record low of 6.8% in February 2022, means firms compete for workers, so wage rates rise. Wages are a large part of firms' costs, so costs of production rise and SRAS shifts left, causing cost-push

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inflation as firms pass on higher costs in higher prices.

However, the extract says the main cause was higher energy costs from the pandemic and the Russia and Ukraine conflict, which raise costs for all firms, along with food prices. Unemployment only fell from 8.2% to 6.8%, so the labour shortage was probably a smaller contributor; the extent depends on how much wages rose compared with energy costs.

1(d) Price elasticity of demand (PED) measures the responsiveness of quantity demanded to a change in price: PED = % change in quantity demanded ÷ % change in price.

Food and energy are necessities with few substitutes, so their demand is price inelastic (PED between 0 and −1). When their prices rise, quantity demanded falls by a smaller percentage than the price rise, so households spend more in total on them. Poorer households spend a larger proportion of their income on food and energy, so these price rises take a bigger share of their budget and reduce their real income most. Those on fixed incomes, such as pensioners or people on benefits, cannot raise their income in line with the 7.5% inflation and are unlikely to be able to negotiate higher wages, so their real income falls and they must cut spending on other goods or on heating and food themselves. Higher-income households spend a smaller proportion of income on these goods and are more able to absorb the price rises or negotiate pay rises.

The impact is therefore much greater on poorer households. However, the extent depends on how much support governments give, for example energy price caps or higher benefits, and whether incomes are index-linked. Overall, because demand is price inelastic, poorer and fixed income households suffer the largest fall in living standards unless government support is given.

1(e) A substantial rise in interest rates from 0% would increase the cost of borrowing

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and the reward for saving, so consumption and investment fall, AD shifts left and inflationary pressure falls. It is quick for the ECB to introduce, it would show that the ECB is serious about its 2% target, reducing inflation expectations, and it may cause the euro to appreciate, making imported energy cheaper.

However, the inflation is mainly supply-side (cost-push), so reducing AD will do little to energy prices that are set in world markets. Instead it would reduce output further when growth is already expected to fall from 4.6% to around 0%, risking a recession and the stagflation the ECB fears. Higher rates also raise firms' borrowing costs and mortgage payments, and a single rate for 19 members may harm the weaker economies most.

On balance, the disadvantages of a substantial increase outweigh the advantages, because it tackles the wrong cause of inflation. A small, gradual increase to control expectations, combined with supply-side policies to increase energy and labour supply, would be better, unless the inflation starts to become permanent.

2(a) The Gini coefficient is a numerical measure of the extent of income inequality in an economy. It is calculated from the Lorenz curve as the area between the line of perfect equality and the Lorenz curve divided by the whole area under the line of equality. A value of 0 means perfect equality, where everyone has the same income, and a value of 1 means total inequality, where one person earns all the income. The nearer the value is to 1, the more unequal the distribution of income; for example South Africa is about 0.63, compared with about 0.25 in Slovenia.

One reason for inequality in a low-income country is a lack of education and health care. Without schooling, many people cannot gain the skills for higher-paid jobs, and poor health lowers their productivity and earnings, while a small educated elite earns high incomes. This is a bigger problem in low-income countries because government budgets are too small to provide universal education and health care. A second reason is a lack of employment opportunities: industry is less developed, so

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many people work in low-paid subsistence farming or the informal sector, while those who own land or capital receive high incomes.

Both are important, but lack of employment opportunities affects the largest number of people immediately. However, a lack of education is the stronger underlying reason, because it causes the low skills that keep people out of better-paid jobs and passes inequality on to the next generation.

2(b) Redistribution means transferring income and wealth from richer to poorer groups to reduce inequality, which would lower the Gini coefficient. Governments can use several policies.

Progressive income taxes take a higher percentage of income from those on higher incomes, so post-tax income is more equal, and the revenue can fund services for the poor. However, high earners may avoid or evade tax, move abroad, or work less because incentives are reduced, so revenue may be lower than expected. In many low-income countries much income is in the informal sector and is not taxed at all.

Transfer payments, such as unemployment benefits, pensions and child benefit, directly raise the income of the poorest. Conditional cash transfers, such as Bolsa Família in Brazil, have reduced poverty and inequality. However, they are expensive, may create a poverty trap where people lose benefits if they work more, and depend on the government having enough revenue.

A national minimum wage set above the equilibrium raises the incomes of the lowest paid. However, it may cause unemployment if firms cannot afford it, which would make poverty worse, and it does not help the self-employed or the unemployed.

State provision of free education and health care, and investment in infrastructure, redistributes in kind and tackles the causes of inequality by raising the skills and earnings of the poor. However, it takes many years to work. Wealth taxes, such as

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inheritance tax, can reduce inequality of wealth, but are easily avoided.

The success of these policies depends on the design of the tax and benefit system, on how well it is enforced, and on the size of the informal economy. In conclusion, redistribution policies are likely to be partly successful, as shown by the much lower Gini coefficients after tax and benefits in many European countries. A combination of progressive taxes and transfers works best in the short run, but long-term success requires investment in education and health so that the poor can earn higher incomes themselves.

3(a) A merit good is a good that is more beneficial to the consumer than they realise, such as education or vaccinations. Because of information failure, and the positive externalities it creates, it is under-consumed and under-provided in a free market. A demerit good, such as cigarettes or alcohol, is more harmful than the consumer realises, so it is over-consumed and over-provided because of information failure and negative externalities.

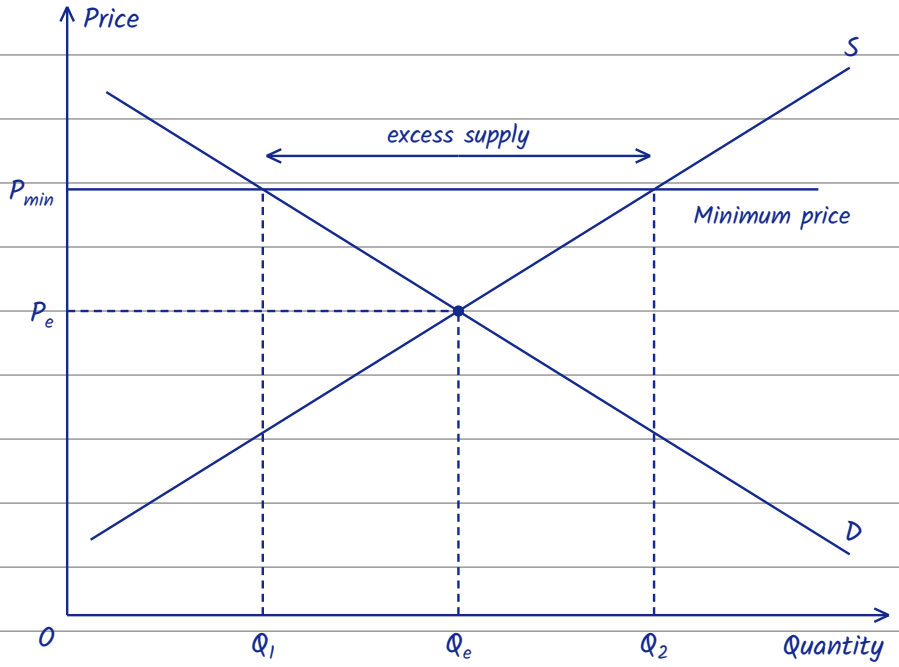
A subsidy is a payment from the government to producers, which lowers their costs, shifts supply to the right and reduces the price of the merit good. Quantity demanded rises, which is especially helpful where poorer households under-consume because they cannot afford the good, for example vaccinations.

However, the subsidy will not always be effective. If demand is price inelastic, quantity demanded will rise by less than the fall in price, so consumption increases only a little. More importantly, the main cause of under-consumption is information failure: if people do not know the benefits of a vaccination, they may not take it even when it is cheap or free. The subsidy also has an opportunity cost for the government.

Therefore a subsidy is effective when cost is the main barrier and demand is price elastic, but it will not always increase consumption by much. It works best combined with information campaigns.

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3(b) A demerit good is over-consumed because consumers underestimate its harm, and it often creates negative externalities. A minimum price is a legal price set above the equilibrium, below which the good cannot be sold, as with minimum unit pricing for alcohol in Scotland.



In the diagram, the minimum price Pmin is above the equilibrium Pe, so quantity demanded falls from Qe to Q1, reducing consumption. It targets cheap, strong products that are bought most by heavy drinkers and young people, and costs the government nothing to run. Unlike a tax, it does not raise prices of more expensive products.

However, demand for demerit goods such as alcohol and tobacco is often price inelastic because they are addictive, so the fall in consumption may be small. Information failure is not corrected. Producers gain higher revenue per unit, there is excess supply of Q2 – Q1, and higher prices may lead to illegal or smuggled supply in informal markets, which may be more dangerous. It is also regressive.

An indirect tax also raises the price and reduces consumption, and it raises revenue that can fund health care or education, but it suffers from the same problem of

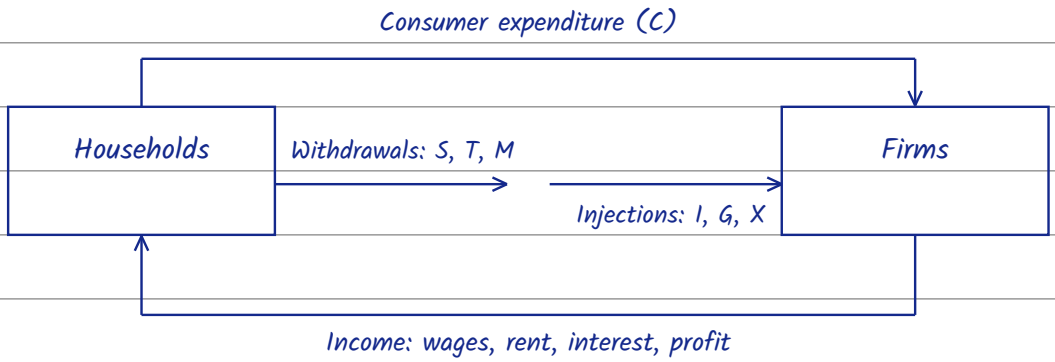
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inelastic demand and may also encourage smuggling. Information provision and education campaigns tackle the root cause, information failure, and can change behaviour in the long run, but they are slow and their effect is uncertain. Regulation, such as banning sales to under-18s or advertising bans, can be effective but needs enforcement and may create black markets.

In conclusion, a minimum price is useful for targeting the cheapest, most harmful products, but it is not likely to be the best policy on its own because demand is inelastic and information failure remains. The best approach is a combination: an indirect tax or minimum price to reduce consumption in the short run, together with education to change preferences in the long run. Which is best depends on the good and the PED of demand.

4(a) The circular flow of income shows how money flows around the economy between households and firms. Households provide factors of production to firms and receive income (wages, rent, interest and profit); they spend this income on goods and services produced by firms (consumer expenditure). In an open economy there are also leakages (withdrawals) from the flow, which are saving, taxation and imports, and injections into the flow, which are investment, government spending and exports.

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S = saving, T = taxes, M = imports, I = investment,

G = government spending, X = exports

If injections are greater than withdrawals, for example when exports or investment rise, total spending increases, so firms raise output and employ more workers. National income rises by a multiple of the injection (the multiplier), which is economic growth. If withdrawals are greater than injections, for example when spending on imports or saving rises, national income falls.

The model explains short-run growth caused by changes in demand, in particular how the size of exports and imports affects national income in an open economy. However, it does not explain long-run growth caused by increases in productive capacity, such as better technology or a more skilled workforce, and it assumes there is spare capacity. So it only partly explains economic growth.

4(b) Long-run economic growth is an increase in the productive potential of an economy, shown by a rightward shift of LRAS or an outward shift of the PPC. Supply-side policies aim to increase the quantity and quality of the factors of production.

Supply-side policies such as spending on education and training, infrastructure, and research and development raise labour productivity and capacity, shifting LRAS right, so real GDP can rise without inflation. Market-based policies such as

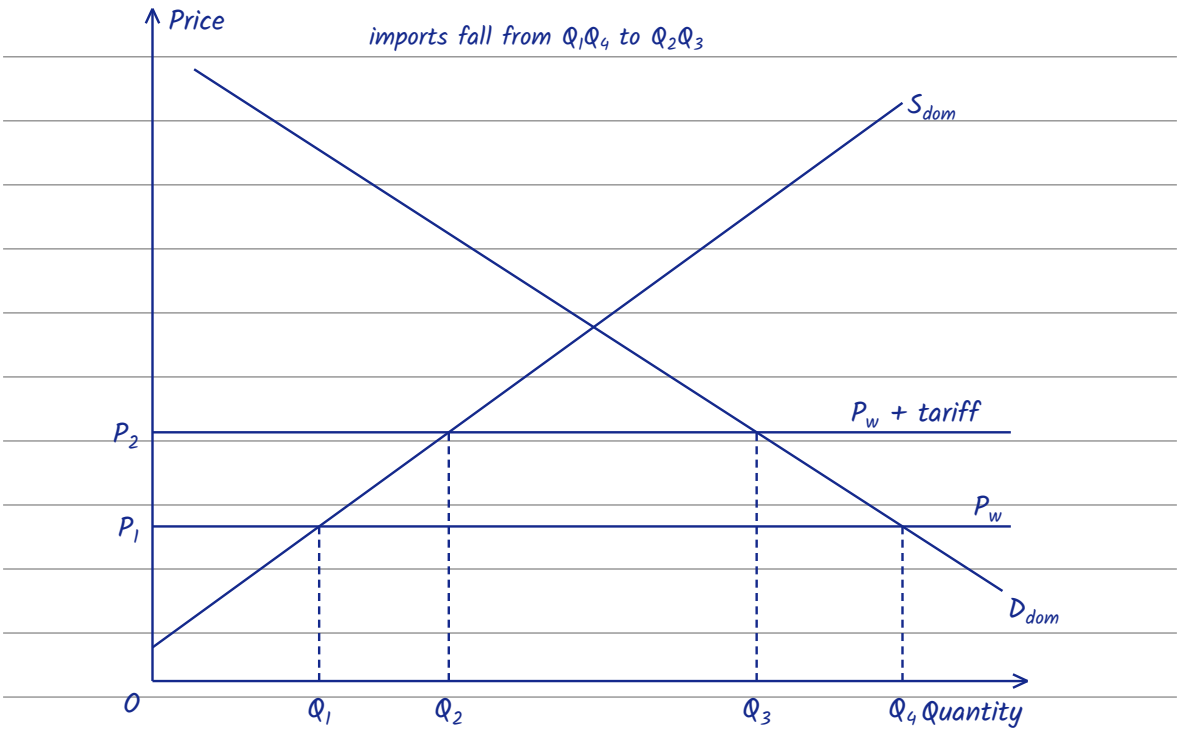
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privatisation, deregulation and lower income and corporation tax improve incentives to work and invest. Better-trained workers also earn higher incomes, so consumer spending rises and AD increases too. However, these policies are costly, take many years to have an effect, and their results are uncertain; for example, trained workers may emigrate. They also do little to increase AD directly, so if demand is weak the extra capacity may not be used.

Demand-side policies are an alternative. Expansionary fiscal policy, such as cutting income tax or raising government spending, increases AD quickly and, through the multiplier, raises output. Lower taxes may also encourage more people to work, increasing AS. Expansionary monetary policy, with lower interest rates, encourages investment, which adds to capital stock and future capacity. However, if AS does not increase, higher AD only causes inflation once the economy reaches full capacity, so growth is not sustained, and fiscal expansion raises government debt. Long-run growth needs both AD and AS to rise together: capacity must grow, and there must be enough demand to use it. In conclusion, supply-side policy is the most effective way to achieve long-run growth, because only an increase in productive capacity allows sustained, non-inflationary growth. However, it is most effective when combined with demand-side policies that keep AD growing in line with capacity, especially in a recession.

5(a) Protectionism is when a government restricts free trade to protect domestic businesses against foreign competition, increasing the price competitiveness of domestic firms. Methods include tariffs, quotas, subsidies to domestic producers and embargoes.

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A tariff is a tax on imports. In the diagram, before the tariff the price is the world price Pw, domestic firms supply Q1 and imports are Q1Q4. The tariff raises the price to P2, so domestic supply rises to Q2, consumption falls to Q3 and imports fall to Q2Q3. Domestic firms gain sales and jobs are protected, and the government gains tax revenue.

However, trading partners may retaliate with their own tariffs, which harms the country's exporters. If demand for imports is price inelastic, imports will fall only slightly, so domestic firms gain little. If the tariff is on imported raw materials, it raises firms' costs and causes cost-push inflation, and consumers pay higher prices. Protected firms may also become inefficient.

Therefore tariffs are effective in the short run, especially for infant industries and where demand for imports is price elastic, but their effectiveness is reduced by retaliation and inelastic demand.

5(b) Free trade is international trade without barriers such as tariffs or quotas. Protectionism restricts trade to protect domestic industries. A developing economy

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usually has a low income per head, relies on primary products and has small, young manufacturing industries.

Free trade allows a developing economy to specialise according to comparative advantage, for example in agriculture or labour-intensive textiles, using its factor endowment of abundant cheap labour. Resources are allocated more efficiently and total output rises. Access to large world markets lets firms gain economies of scale, foreign competition keeps costs and prices down, and consumers have more choice. Free trade also attracts FDI and new technology; Vietnam and Bangladesh grew rapidly by exporting manufactured goods.

However, free trade has disadvantages for a developing economy. Its infant industries cannot compete with established firms in developed countries that already have economies of scale, so they may close and cause unemployment. Specialising in primary products makes the economy dependent on volatile commodity prices and may cause the terms of trade to deteriorate. Natural resources may be over-exploited, and foreign firms may dump goods below cost. Protectionism can therefore help a developing economy. Tariffs can shelter infant industries until they grow large enough to compete, as South Korea did, protect jobs, prevent dumping and raise government revenue, which is important where income tax is hard to collect. However, protection can lead to inefficient firms that never grow up, higher prices for consumers, corruption, and retaliation against exports. Developing economies also usually import essential capital goods, so tariffs raise costs.

In conclusion, free trade is not always better. In the long run free trade is likely to bring higher growth and living standards for a developing economy that wishes to trade internationally. However, temporary, targeted protection of genuine infant industries and protection against dumping may be justified, as long as it is reduced over time. The best policy depends on the stage of development and the industries involved.

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Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/23**

Paper 2 AS Level Data Response and Essays **May/June 2024**

2 hours



You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **three** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
  - Section C: 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 60.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **4** pages.

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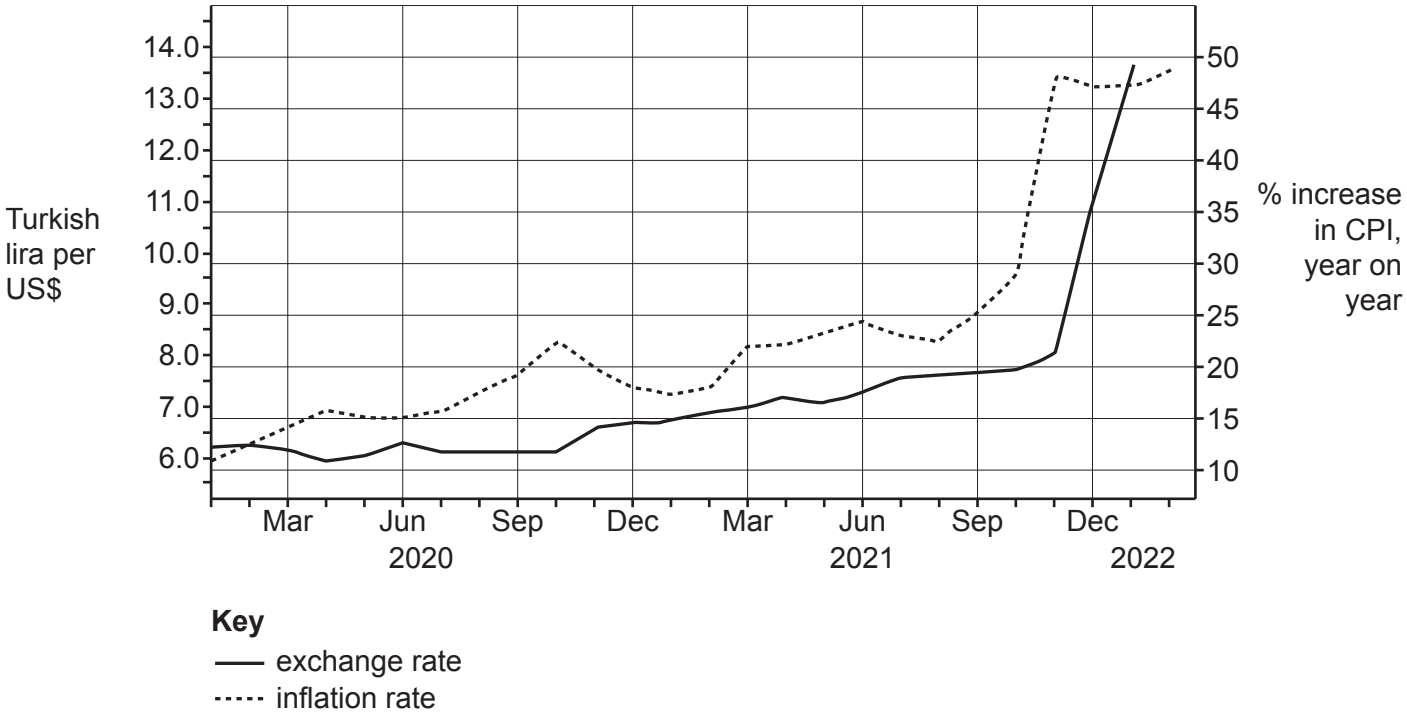
Section A

Answer all parts of Question 1.

1 **Turkey's unconventional way of managing its economy**

The relationship between interest rates and the general price level is one that is central to macroeconomic theory; namely that an increase in the rate of interest produces a reduction in the rate of inflation in an economy. Most economists agree on this relationship. Not so, according to President Erdoğan of Turkey, who has defied conventional economic theory in tackling his country's fundamental economic challenges.

Two economic challenges stand out. There is spiralling inflation and a collapse in the external value of Turkey's currency (the lira) in the foreign exchange market, as shown in Fig. 1.1.



Source: Turkstat, Bloomberg, February 2022

Fig. 1.1 Inflation and the exchange rate of Turkey, January 2020 to February 2022

In January 2022, the year-on-year rise in consumer prices was 48.7%, against a 36.1% year-on-year increase for December 2021. Much higher food prices and transport and energy costs accounted for most of the increase. Despite this rise, the country's Monetary Policy Committee (MPC) held the short-term interest rate at 14%. This was the rate set in September 2021 when the MPC cut the rate substantially from 19%. In short, the President had used his influence over the MPC to reduce interest rates in an attempt to reduce the increasing rate of inflation.

The President's unconventional approach has had a dramatic effect on the external value of the lira. The rapid depreciation in the value of the lira from September 2021 has had serious repercussions for Turkey's economy as Mr Erdoğan has sought to prioritise exports over currency stability. Consumer and producer confidence are low; many who can, have converted their lira deposits into US dollars or euros, fearing a collapse of the banking system.

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Despite these problems, the President remains adamant that his economics is right for Turkey. Moreover, he is convinced that when exports increase and international tourists return after the COVID-19 pandemic, employment will increase and the current account deficit on the balance of payments will be reduced. If true, this unconventional approach to Turkey's economic problems will be proved to be a success.

(a) Use the information provided to calculate the real interest rate for Turkey in January 2022. [2]

(b) **(i)** Explain why the Turkish lira depreciated from September 2021. [2]

(ii) Consider the extent to which producers in Turkey are likely to have been affected by the depreciation of the lira on the foreign exchange market from September 2021. [4]

(c) Assess whether Mr Erdoğan's economic policies have had a beneficial impact on Turkey's economy since 2020. [6]

(d) Excluding interest rate changes, assess what alternative policies might be used to reduce Turkey's rate of inflation. [6]

Section B

Answer **one** question.

EITHER

2 **(a)** From 2030, most new car production in the United Kingdom (UK) will be of electric cars.

Excluding the price of electric cars, explain the determinants of demand for electric cars **and** consider which of these determinants is likely to be of greatest significance at the present time. [8]

(b) Assess whether cross elasticity of demand is likely to be more important in determining the demand for electric cars than income elasticity of demand. [12]

OR

3 **(a)** Use a production possibility curve (PPC) diagram to explain how a government in a mixed economy might allocate more resources to consumption and fewer resources to investment **and** consider a limitation of this approach to resource allocation. [8]

(b) Assess whether producers are the only ones to benefit when an economy decides to allocate additional resources to investment. [12]

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Section C

Answer **one** question.

EITHER

4 **(a)** With the help of a diagram, explain how increases in aggregate demand affect the level of real output and the price level in an economy **and** consider when such increases may become a problem. [8]

(b) Assess whether increases in aggregate demand are the best way of reducing unemployment in a high-income country. [12]

OR

5 **(a)** Explain **two** possible causes of a change in the terms of trade in an economy **and** consider which of these causes is likely to be more important for low-income countries. [8]

(b) Assess the extent to which different tools of protection can impact on the terms of trade in an economy. [12]

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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 (all questions answered)

1(a) Real interest rate = nominal interest rate – rate of inflation

= 14% – 48.7% = –34.7%

1(b)(i) The MPC cut the interest rate from 19% to 14% in September 2021 while inflation rose to 48.7%. The lower return on lira deposits led savers to convert lira into US dollars and euros, so demand for the lira fell and supply rose on the foreign exchange market, causing the lira to depreciate.

1(b)(ii) The lira fell from about 7.8 to about 13.7 lira per US$ between September 2021 and early 2022. Producers that rely on imported raw materials and energy face much higher costs in lira, which raises their costs of production, reduces their price competitiveness and reduces demand for their products. Uncertainty may also reduce investment. However, exporters gain, because Turkish goods are cheaper in foreign currency, so demand for exports and tourism may rise.

The extent depends on how much each producer relies on imported inputs compared with export sales.

1(c) There may be some benefits. The interest rate was cut from 19% to 14%, which reduces the cost of borrowing and may encourage investment and consumption.

The depreciation of the lira, from about 6 to about 13.7 lira per US$ since 2020, makes exports cheaper, and the President expects exports and returning tourists to raise employment and reduce the current account deficit.

However, the negative effects have been severe. Inflation has risen from about 11%

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	in early 2020 to 48.7% in January 2022, with food, transport and energy costs rising most, which reduces real incomes, especially for the poor. The real interest rate is very negative, so saving is discouraged. The depreciation raises import prices, adding to cost-push inflation, and consumer and producer confidence are low, with people moving savings into dollars for fear of a banking collapse. Overall, the policies have not been beneficial since 2020. Any gains in exports are likely to be wiped out by high inflation, which raises export costs, and by the loss of confidence, so the costs clearly outweigh the benefits.
1(d)	Contractionary fiscal policy, such as raising income tax or VAT or cutting government spending, would reduce disposable income and consumption, so AD falls and demand-pull inflation is reduced. It acts directly on spending. However, it may reduce economic growth and raise unemployment, higher taxes reduce incentives to work, and it may be politically unpopular. Other monetary measures, such as reducing the money supply or tighter restrictions on bank lending, would limit the money available for consumption and investment, reducing AD. However, they also reduce growth and are difficult to control accurately. Supply-side policies, such as investment in energy supply, transport and training, would reduce costs and shift AS to the right, tackling the cost-push inflation in food, transport and energy, but they take a long time to work. Since much of Turkey's inflation comes from food and energy prices and the falling lira, fiscal policy is the most effective alternative in the short run, especially if it also restores confidence in the lira. In the long run supply-side policy is needed, though neither is likely to work as well as raising interest rates.
2(a)	Demand is the quantity of a good consumers are willing and able to buy at each price. Apart from price, its determinants include income, the price and availability

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	of substitutes and complements, and tastes, fashion and attitudes. Electric cars are expensive normal goods, so a rise in real income increases demand. Petrol and diesel cars are substitutes, so a rise in their prices, or in the price of petrol, increases demand for electric cars. Charging points and electricity are complements, so more charging points or cheaper electricity increase demand. A change in attitudes, such as greater concern for the environment, shifts demand to the right. At the present time, attitudes are very significant because awareness of climate change and pollution has increased, and the 2030 ban on new petrol car production means buyers expect to switch anyway. Income is also significant: electric cars cost more than petrol cars, so in a recession or a cost-of-living crisis many households postpone buying them. The availability of complements, especially charging points, matters because fear of running out of charge (range anxiety) stops many people from buying. Overall, income is likely to be the most significant determinant at the present time, because high prices and squeezed real incomes are the main barrier, while attitudes are already favourable. In the longer term, as the ban approaches and charging networks expand, the price of substitutes will matter less.
2(b)	Cross elasticity of demand (XED) measures the responsiveness of the quantity demanded of one good to a change in the price of another: XED = % change in quantity demanded of A ÷ % change in price of B. Income elasticity of demand (YED) measures the responsiveness of quantity demanded to a change in income: YED = % change in quantity demanded ÷ % change in income. XED is important for electric cars because petrol and diesel cars are close substitutes, so XED is positive. When the price of petrol cars or petrol rises, many consumers switch to electric cars. Electric cars also have complements, such as electricity and charging points, with a negative XED: rising electricity prices reduce

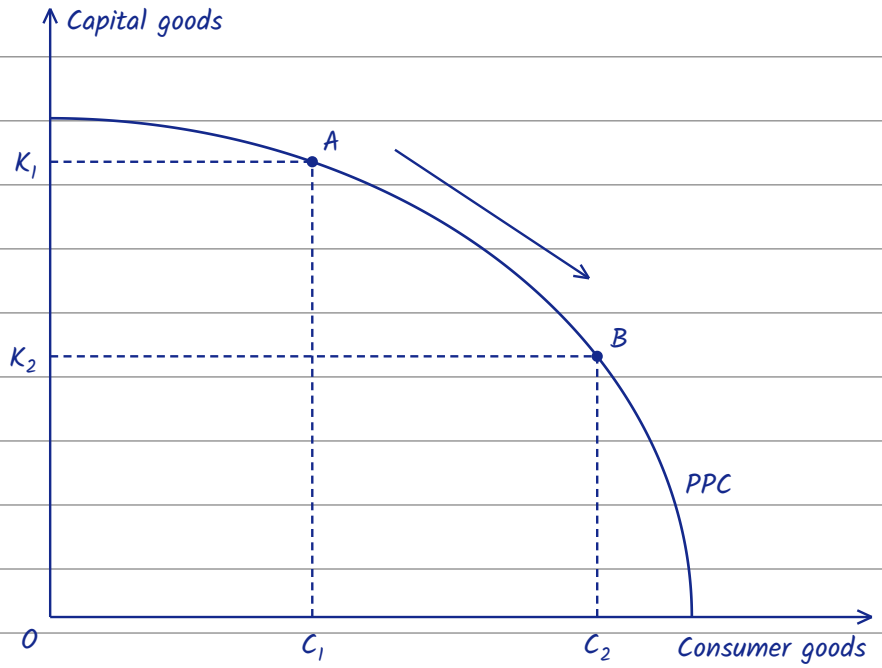
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demand. As the 2030 deadline approaches and petrol cars become less available, the substitute relationship becomes even stronger. However, XED is difficult to measure accurately, and once petrol cars are no longer produced it becomes less relevant, as the main substitutes will be other electric models or public transport. YED is important because cars are expensive normal goods, and electric cars are currently luxuries with YED greater than 1. A rise in incomes leads to a more than proportional rise in demand, while a recession leads to a large fall, as buyers delay purchases or buy cheaper used cars. Higher incomes also make it easier to take out loans for cars. However, YED is also only an estimate, it assumes other things remain equal, and it may fall as electric cars become cheaper and more common, becoming normal necessities rather than luxuries.

Which is more important depends on the time period. At present, high prices mean income is the main barrier, and changes in income cause large changes in demand, so YED is more important. As the ban takes effect, the price and availability of substitutes and complements, especially charging points and electricity prices, will matter more. In conclusion, YED is likely to be more important now, but XED will become more important in the future, and both are only estimates that change over time.

3(a) A production possibility curve (PPC) shows the maximum combinations of two goods that can be produced when all resources are fully and efficiently used. In the diagram, the economy moves from A to B: capital goods fall from K1 to K2 and consumer goods rise from C1 to C2. This is a movement along the curve, not a shift, because the resources available have not changed; the opportunity cost of more consumer goods is fewer capital goods.

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In a mixed economy the government could do this by reducing taxes on income or on consumer spending, raising disposable income and consumption, by giving subsidies or transfer payments to consumers, or by reducing government support and tax allowances for business investment.

A limitation is that fewer capital goods now means less growth of productive capacity, so the PPC will shift outwards more slowly in the future and fewer consumer goods can be produced later. There are also time lags, and consumers may save tax cuts rather than spend them. So this approach raises living standards now but at the cost of lower future growth.

3(b) Allocating more resources to investment means producing more capital goods, such as machinery, factories and infrastructure, and fewer consumer goods in the short run, as shown by a movement along the PPC towards capital goods. In the long run, the PPC shifts outwards.

Producers clearly benefit. New machinery and technology raise productivity and lower average costs, so firms become more price competitive at home and abroad and earn higher profits. Capital goods industries such as construction see higher

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demand. However, not all producers gain: if the investment is funded by higher taxes, some firms face higher costs, and firms producing consumer goods for the domestic market may lose sales.

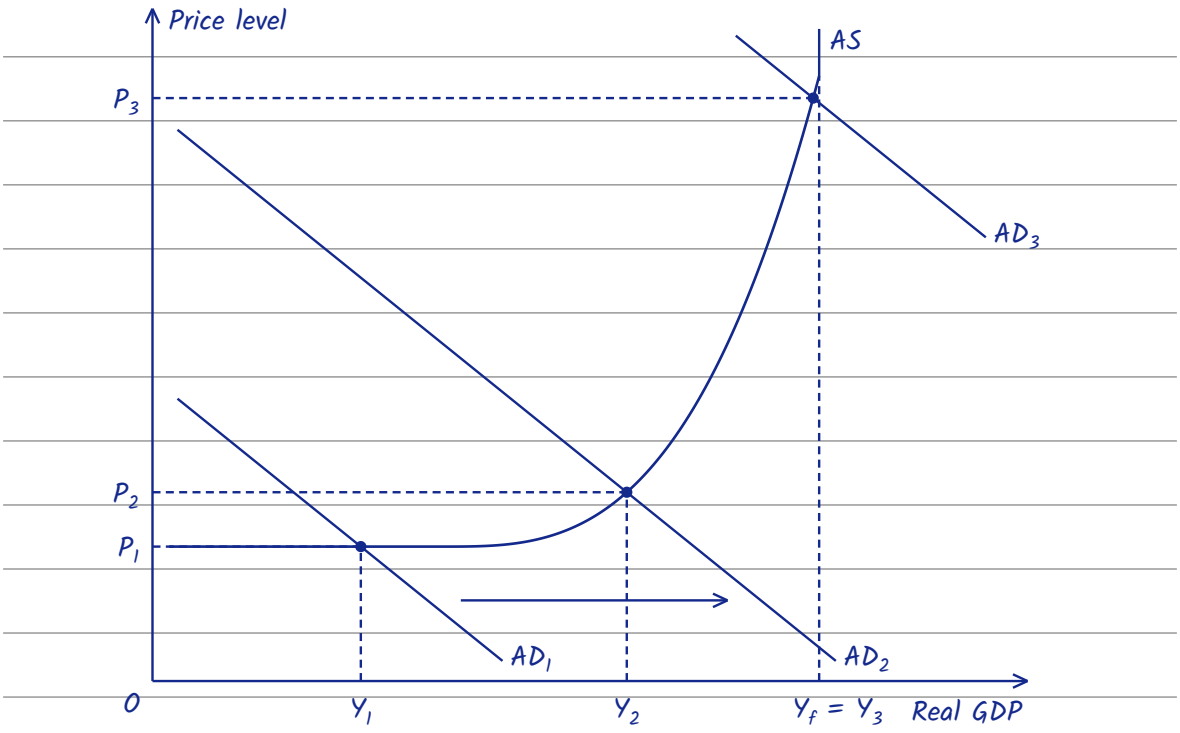
Consumers also benefit, but mainly in the long run. Higher productivity leads to lower prices, better quality and wider choice, and as the economy grows workers gain jobs and higher real wages. However, in the short run consumers have fewer consumer goods available, may pay higher prices, and may face higher taxes to fund public investment, so their living standards may fall at first.

The government benefits as well. Economic growth raises tax revenue and reduces spending on unemployment benefits, making it easier to fund health and education. Public investment in infrastructure benefits everyone. However, in the short run government spending rises and the budget deficit may increase.

In conclusion, producers are not the only ones to benefit. Producers gain soonest and most directly, but consumers and the government also benefit in the long run through higher incomes, lower prices and higher tax revenue. The extent depends on the level of development of the economy and how far the government ensures that the gains are shared, for example through taxation and public services.

4(a) Aggregate demand is total planned spending in an economy: AD = C + I + G + (X – M). AD increases, shifting to the right, when any component rises, for example when interest rates are cut, taxes are reduced, or exports grow. The effect depends on the shape of the AS curve.

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When there is a lot of spare capacity, as in a recession, an increase from AD1 to AD2 raises real output from Y1 to Y2 with only a small rise in the price level from P1 to P2, because unemployed resources can be used without raising costs. This is not a problem: it reduces unemployment. If the increase is in investment, AS may also increase, limiting inflation.

As the economy approaches full capacity, resources become scarce and costs rise, so further increases in AD raise the price level more and output less. At full employment output Yf, an increase to AD3 only raises the price level to P3, causing demand-pull inflation, and may also worsen the current account as imports rise. So increases in AD become a problem when the economy is close to or at full capacity.

4(b)

Unemployment is when people who are willing and able to work cannot find a job. In a high-income country the main types are cyclical (demand-deficient), structural and frictional unemployment.

Increasing AD can be achieved through expansionary fiscal policy, such as cutting

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taxes or increasing government spending, or expansionary monetary policy, such as lower interest rates or quantitative easing. Higher spending means firms need more workers to produce more output, and through the multiplier the increase in national income is greater than the initial injection. This is effective against cyclical unemployment, for example after the 2008 financial crisis and during the COVID-19 pandemic, when high-income countries used large fiscal and monetary stimulus to protect jobs. High-income countries usually have the tax base and credit rating to borrow for this.

However, increasing AD will not reduce structural unemployment, which is common in high-income countries because of deindustrialisation and technological change. Workers whose skills are no longer needed, or who live in declining regions, will not be employed just because demand rises. If the economy is near full capacity, higher AD mainly causes inflation. Many high-income countries already have high government debt, and interest rates may already be close to zero, limiting the policy.

Supply-side policies are the alternative. Training and retraining schemes, apprenticeships, better job information and reforms to benefits improve the occupational and geographical mobility of labour and reduce structural and frictional unemployment. They also increase AS, so unemployment falls without inflation. However, they are expensive, take years to work and do not help if unemployment is caused by a lack of demand.

In conclusion, increasing AD is the best way to reduce cyclical unemployment in a high-income country, and it works quickly. However, since much unemployment in high-income countries is structural, increases in AD are not the best way overall. A combination of demand management in recessions and supply-side policies for the long term is most likely to succeed.

5(a) The terms of trade measure the rate at which a country's exports exchange for its

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imports: terms of trade = (index of average export prices ÷ index of average import prices) × 100. They show how many imports can be bought with a given quantity of exports. They improve when the ratio rises and deteriorate when it falls.

One cause is a change in the demand for exports or imports. Low-income countries mainly export primary products such as food and import manufactured goods. As world incomes rise, demand for food rises slowly because its YED is low, while demand for manufactured goods rises faster, so export prices fall relative to import prices and the terms of trade deteriorate. A second cause is a change in supply and costs, for example a good harvest, new producers or higher productivity lowering export prices, or a rise in the world price of oil raising import prices. A change in the exchange rate also changes relative prices.

However, low-income countries that export minerals or oil, in high demand in high-income and emerging economies, may see their terms of trade improve when commodity prices rise, as demand is price inelastic. Overall, changes in demand are likely to be the more important cause for low-income countries, because they depend on a few primary exports; whether this is good or bad depends on whether they export food or minerals.

5(b) Tools of protection are measures that restrict imports to protect domestic producers, such as tariffs, quotas, embargoes, subsidies to domestic producers and exchange rate manipulation. The terms of trade are the ratio of the export price index to the import price index × 100.

A tariff is a tax on imports which raises their price in the domestic market. If a large country imposes a tariff, the fall in demand may force foreign suppliers to cut their prices, so the price the country pays for imports falls and its terms of trade improve. If tariffs protect infant industries that later become efficient exporters of higher-value goods, export prices may rise too. However, a small

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country cannot influence world prices, so its terms of trade hardly change, and if trading partners retaliate with tariffs, demand for its exports falls and export prices fall, worsening the terms of trade. If demand for imports is price inelastic, import volumes and prices change little.

An import quota limits the quantity of imports. Foreign suppliers may raise the prices of the limited quantity they can sell, so import prices rise and the terms of trade deteriorate. An embargo stops imports from a country completely, which may force the country to buy from more expensive sources, raising import prices.

Subsidies to domestic exporters allow them to lower their export prices, which worsens the terms of trade, although export volumes rise. Deliberately keeping the exchange rate low makes imports dearer and exports cheaper in foreign currency, so it worsens the terms of trade, even though it may improve the trade balance.

The impact therefore depends on the tool used, the size of the country and its market power, the price elasticity of demand for imports and exports, and whether other countries retaliate. In conclusion, most tools of protection have only a small effect on the terms of trade of a typical country, and many, such as quotas, export subsidies and a low exchange rate, actually worsen them. Only tariffs imposed by a large country with market power are likely to improve the terms of trade, and even this may be reversed by retaliation.