Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/42**

Paper 4 A Level Data Response and Essays **February/March 2025**

2 hours

7414777531

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. Any blank pages are indicated.

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Section A

Answer all parts of Question 1.

1 **China's population trend**

China's economic miracle has been built on a seemingly endless supply of affordable labour from a population of 1.4 billion.

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Fig. 1.1 Annual population change in China, 1970 to 2050

Sources: Didi Tang, The Times, 29 April 2021 and 12 January 2023
US Census International Database, 15 February 2023

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(a) Explain what is meant by an optimum population. [2]

(b) Explain how China's population structure changed between 1970 and 2020 **and** consider whether the statement 'its population is decreasing' is supported by Fig. 1.1. [5]

(c) Identify **two** observations economists have made about changes in China's population **and** analyse how these changes would affect GDP. [6]

(d) China's government has a different view from what it says are the alarming statements made by economists. Consider the effects on the economy of the population policies suggested by China's government. [7]

Section B

Answer **one** question.

EITHER

2 Oligopolies are able to avoid price competition while maintaining supernormal profits in the long run.

Evaluate this statement. [20]

OR

3 With the help of a diagram, evaluate the consequences of imposing an effective minimum wage on the employment level and the wage level in a monopsony labour market. [20]

Section C

Answer **one** question.

EITHER

4 With the help of a diagram, assess the effectiveness of government policies that might be used to reduce demand-pull inflation. [20]

OR

5 With the help of a diagram, evaluate the effectiveness of the use of expenditure-switching policies to reduce a current account deficit on the balance of payments. [20]

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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

1(a) An optimum population is the size of population which, given the existing natural resources, factors of production and state of technology, yields the highest income (output) per head, so the standard of living is at a maximum. Below it there are too few workers to use the resources fully; above it diminishing returns reduce output per head.

1(b) Between 1970 and 2020 the birth rate in China fell sharply, partly because of the one-child policy, while life expectancy rose. As a result the population structure aged: a smaller share of young people and a growing share of people over 65, so the dependency ratio of older people to those of working age increased.

Fig. 1.1 shows that the annual change in population fell over the period, but it stayed positive up to 2020, so the population was still growing, only at a slower rate. The fall only appears in the projections after 2020. Therefore Fig. 1.1 does not support the statement that the population is decreasing for the period 1970 to 2020.

1(c) Observation 1: there are smaller numbers of younger people. This means a smaller pool of potential innovators and would-be entrepreneurs, and fewer new entrants to the workforce. With fewer workers and less innovation, output and productivity growth fall, so the growth of GDP slows (the productive potential grows less quickly).

Observation 2: there is an increase in the relative number of older people. The government must spend more on pensions, health care and other social services for the elderly. Much of this is transfer payments, which do not add directly to output, so the budget deficit increases. Higher taxes or borrowing to finance it,

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and the diversion of resources away from productive investment, have a negative impact on GDP.

1(d) The one-child policy assumed that China's population had grown beyond its optimum and that the economy needed to move from one based on the size of its workforce to one based on skills. It did sharply reduce the rate of population growth, but it created an increasingly dependent, ageing population. This may reduce savings and investment, leading to a fall in AD and in long-run AS.

The two-child policy (2016) aims to reverse the declining birth rate and move back towards an optimum population, by encouraging couples to have two or more children. It assumes China needs a young, skilled workforce supported by technology. If it works, consumption rises (higher AD), and in the long run the larger, better educated labour force raises AS and international competitiveness. However, the effect takes about 20 years to reach the labour market, and in the meantime more children raise the dependency ratio.

The government also proposes raising the retirement age for men and women. This has an immediate effect: it increases the working population, raising AS and incomes and so AD, and reduces pension spending. It also accepts that cheap labour alone cannot keep China competitive, because labour is more organised and demands higher pay and pensions, raising costs. So it plans to raise the productivity of a smaller workforce through applied technology, education and training reforms (raising AS), and to increase domestic consumption so growth depends less on exports, with multiplier effects on income.

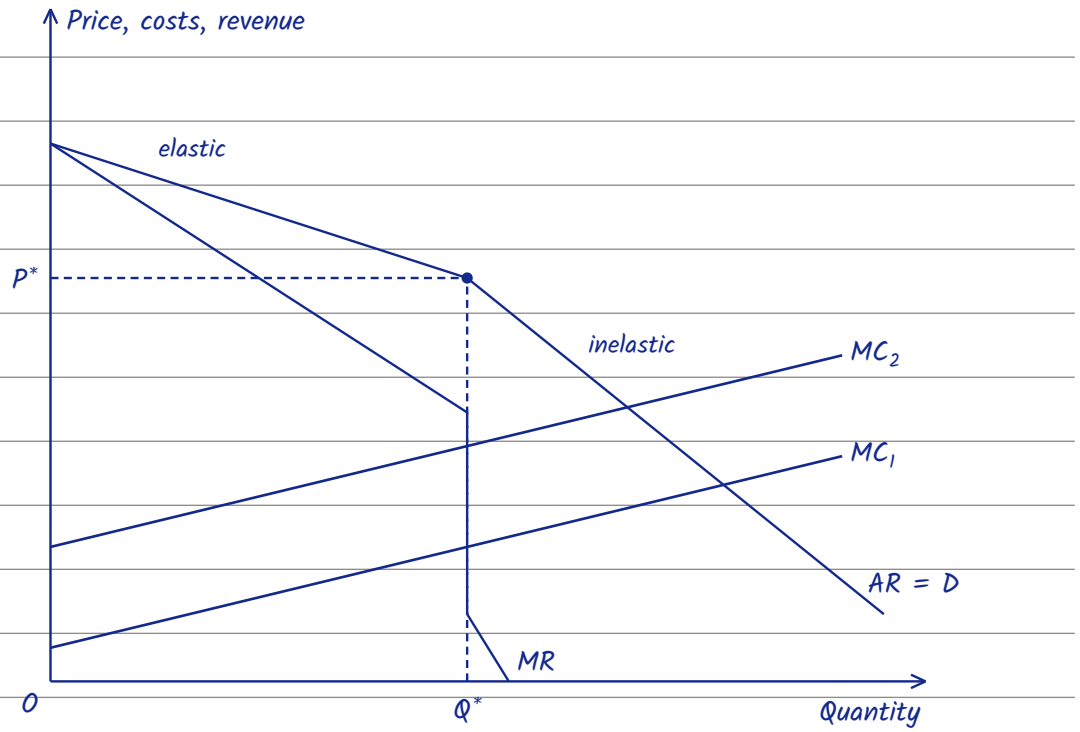
Conclusion: the policies may raise productivity, but Fig. 1.1 suggests the population will keep falling, so the intended effects of the two-child policy on the size of the workforce are unlikely to be achieved; raising productivity through technology and skills is likely to matter more.

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2

An oligopoly is a market dominated by a few large, interdependent firms, with high barriers to entry and products that may be homogeneous or differentiated. Because each firm's decisions affect its rivals, each must consider how the others will react. Supernormal profit is profit above normal profit, where AR > AC.

Price rigidity can be explained by the kinked demand curve. Suppose the price is P^*. If one firm raises its price, rivals do not follow, so it loses many customers: demand above P^* is price elastic. If it cuts its price, rivals match the cut, so it gains few customers: demand below P^* is inelastic. The demand curve is kinked at P^*, so the MR curve has a vertical gap. In the diagram, MC can rise from MC1 to MC2 within the gap and the profit-maximising output (MC = MR) stays at Q^* and price at P^*. Neither raising nor cutting price increases revenue, so firms avoid price competition and compete in other ways.



Game theory gives a similar result. In the payoff matrix (profits), if both firms keep their price they earn $10m each. Each has an incentive to cut price to gain market share, but if both cut they earn only $5m each. If the game is repeated and firms expect retaliation, a stable outcome where both keep prices high can be

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maintained, and firms learn that price wars only reduce profits for all.

	Firm B: keeps price	Firm B: cuts price
Firm A: keeps price	A $10m, B $10m	A $2m, B $14m
Firm A: cuts price	A $14m, B $2m	A $5m, B $5m

Supernormal profits can be maintained in the long run because of barriers to entry, such as economies of scale, high sunk costs, brand loyalty, patents and control of distribution. New firms cannot enter and compete the profit away. Firms may also collude, formally as a cartel or tacitly through price leadership, setting a price close to the monopoly price and sharing the market. Alternatively they may use limit pricing: setting the price just below the AC of a potential entrant, giving up some profit in the short run to keep entrants out and protect supernormal profit in the long run. Instead of price, they use non-price competition, such as advertising, branding, product differentiation and loyalty schemes, which can raise demand and make it less elastic.

However, the statement does not always hold. Collusion to fix prices is illegal in most countries, and competition authorities can fine firms heavily. Cartels are also hard to maintain: each member has an incentive to cheat by cutting price, especially when demand falls, and price wars can break out, as in airline and supermarket markets. Barriers to entry may be weakened if a government introduces legislation to make markets more contestable, or by new technology such as online selling. If the market is contestable, firms may earn only normal profit in the long run.

Avoiding price competition also has costs. Long periods of limit pricing reduce profit, which may reduce investment and dynamic efficiency in the long run. Non-price competition, such as heavy advertising and constant product development, is costly and may significantly reduce profits. Some oligopolists do not aim to maximise profit at all: they may adopt break-even pricing or sales

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maximisation to increase market share. The kinked demand curve also explains why prices are stable but not how the price was set in the first place.

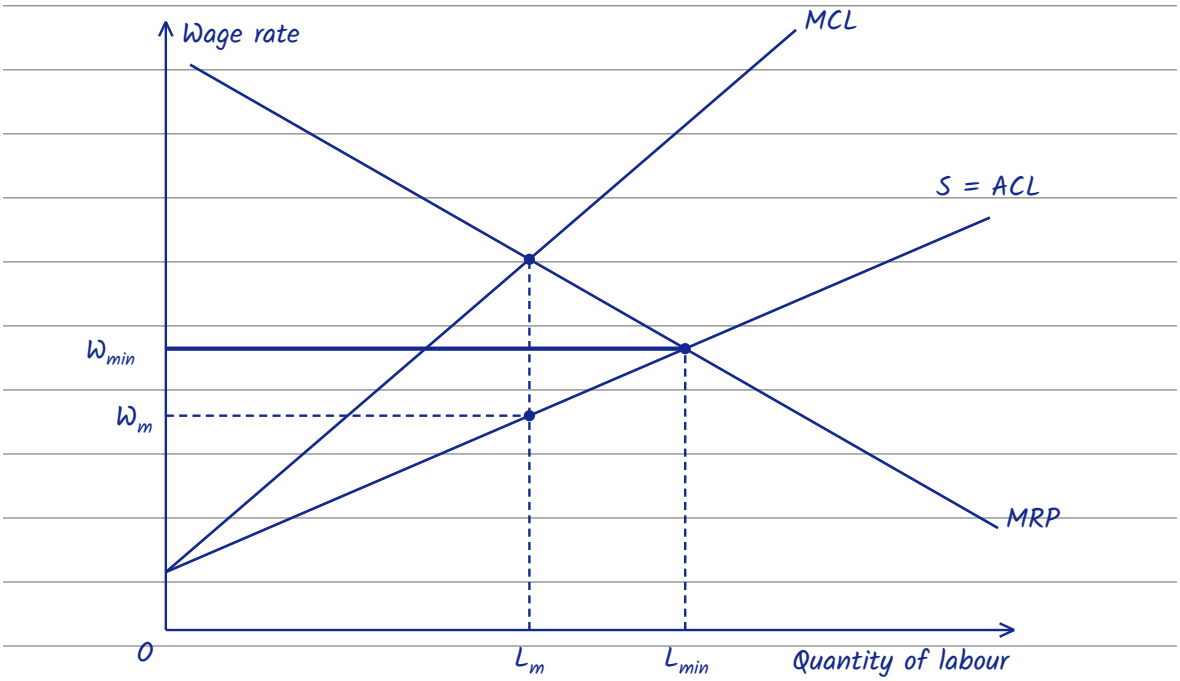
In conclusion, the statement is broadly true for oligopolies with high barriers to entry and few firms that recognise their interdependence, where tacit collusion and non-price competition protect supernormal profits. It is less true where markets are contestable, regulators enforce competition law, firms differ in costs or demand falls, because price competition then breaks out and profits may be competed down. So oligopolies can avoid price competition, but whether they maintain supernormal profit in the long run depends on the strength of the barriers to entry and of competition policy.

3

A monopsony is a market with a single (dominant) buyer of labour, for example one large employer in a town. Because it is the only employer, it faces the upward-sloping market supply curve of labour (S = ACL): to hire more workers it must raise the wage for all of them, so the marginal cost of labour (MCL) is above the supply curve. A minimum wage is a legal wage floor below which employers cannot pay; it is effective if it is set above the current equilibrium wage.

Without a minimum wage the monopsonist maximises profit where MCL = MRP. It employs Lm workers and pays only the wage on the supply curve, Wm. Both the wage and employment are below the competitive level, and workers are paid less than their MRP (exploitation).

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Suppose the minimum wage is set at Wmin, where S = MRP. The firm can now hire any number of workers up to Lmin at Wmin, so the supply curve becomes horizontal at Wmin up to Lmin and the MCL is also equal to Wmin over that range: each extra worker costs only Wmin. The firm now equates MCL = MRP at Lmin. So, unlike a competitive market, the minimum wage raises both the wage (Wm to Wmin) and employment (Lm to Lmin). Any minimum wage between Wm and Wmin raises both the wage and employment, which rises along the supply curve. Above Wmin the firm hires where the minimum wage equals MRP, so employment falls as the minimum rises, but it stays above Lm as long as the minimum is below the MRP at Lm. Only a minimum wage set above that level reduces employment below Lm.

Evaluation: the effects depend on the relative elasticities of demand for and supply of labour. If labour supply is elastic, the gap between MCL and S is small, so the gain from a minimum wage is small; if MRP is elastic, a minimum wage set too high causes a larger fall in employment. The size of the increase is therefore critical, and the government needs accurate information about MRP and the supply curve, which it rarely has.

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A higher wage may also raise productivity, because workers are more motivated, staff turnover falls and training costs are lower (efficiency wages). This shifts MRP to the right, increasing the demand for labour and allowing even higher wages and employment. On the other hand, a minimum wage raises costs, which may close smaller businesses that are already struggling to make a profit, reducing employment. It may make firms less competitive in global markets. The effect on employment also depends on how easily capital can be substituted for labour: where machines can replace workers and labour is a high proportion of costs, firms may automate in the long run.

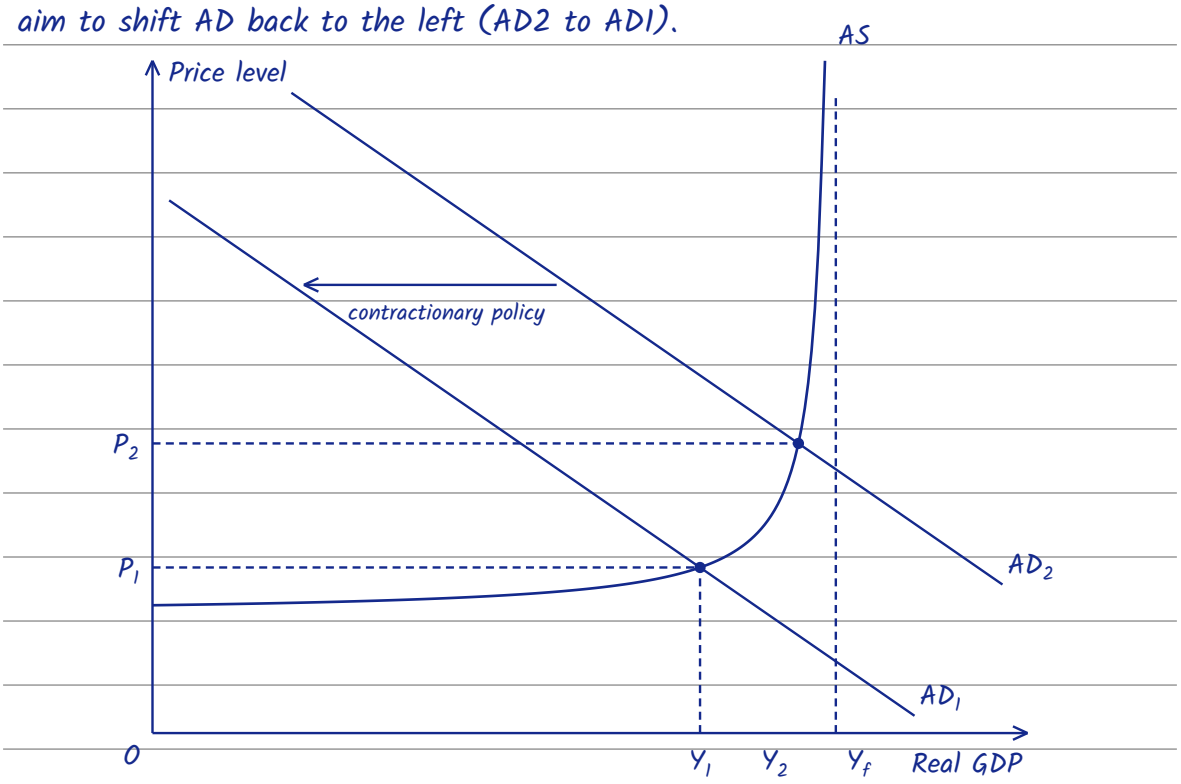
In conclusion, in a monopsony labour market an effective minimum wage set close to the competitive level can raise both wages and employment, which is the strongest economic argument for a minimum wage. The net effect depends on where the minimum is set, the elasticities of labour supply and demand and the scope for substituting capital: a moderate minimum is likely to be beneficial, while a high one is likely to reduce employment.

4 Demand-pull inflation is a sustained rise in the general price level caused by aggregate demand growing faster than aggregate supply, so there is excess demand, especially as the economy approaches full capacity. It may be caused by higher consumer spending (rising confidence, cheap credit), higher investment, government spending, an export boom, or, in the monetarist view, the money supply growing faster than real output ($MV = PT$). Inflation is a problem because it reduces purchasing power and the real value of savings, creates uncertainty that discourages investment, makes exports less price competitive and causes menu and shoe-leather costs.

In the diagram, AD rises from AD1 to AD2. Because the economy is close to full employment output Yf, AS is steep, so output rises only slightly from Y1 to Y2 but the price level rises sharply from P1 to P2. Policies to reduce demand-pull inflation

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aim to shift AD back to the left (AD2 to AD1).



Contractionary fiscal policy: the government can raise direct taxes such as income tax, which reduces disposable income and so consumption, and cut government spending, which reduces AD directly. The multiplier makes the fall in AD larger than the initial change. Contractionary monetary policy: the central bank raises interest rates. This raises the cost of borrowing and the reward for saving, so consumption on credit and investment fall; mortgage payments rise and house prices may fall, reducing wealth. Higher interest rates also attract hot money, causing the currency to appreciate (or a fixed rate can be revalued), which makes exports dearer and imports cheaper, reducing (X – M) and the price of imports. The central bank may also reduce the money supply, for example by open market operations (selling bonds) or by raising reserve requirements. Supply-side policies, such as training and improving competition, shift AS to the right so the extra demand can be met with less inflation.

Evaluation: the effectiveness depends on the size of the multiplier and the elasticities of spending. Higher direct taxes reduce incentives to work and invest,

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so they may harm long-term growth and raise unemployment. Cutting government spending may mean less spending on education and health care, with a long-term negative effect on social welfare and productivity. Fiscal policy also has long implementation lags, because budgets are set once a year and are politically unpopular. The overall impact depends on the state of the economy when the policy is introduced: if output is already falling, the policy may cause a recession. Monetary policy can be changed quickly by an independent central bank and is usually the main tool. However, it works with a time lag of 18 months to 2 years, and if confidence is high, households and firms may keep borrowing. High interest rates reduce investment, which damages long-term growth, and may cause a rapid fall in house prices and debt problems. A revalued or appreciating currency may worsen the current account, depending on the Marshall-Lerner condition, and cause unemployment in export industries. In a global economy, interest rates may also be constrained by the exchange rate. Supply-side policies are the only way to reduce inflation without reducing output, but they take years to work, so they cannot deal with a current inflationary surge.

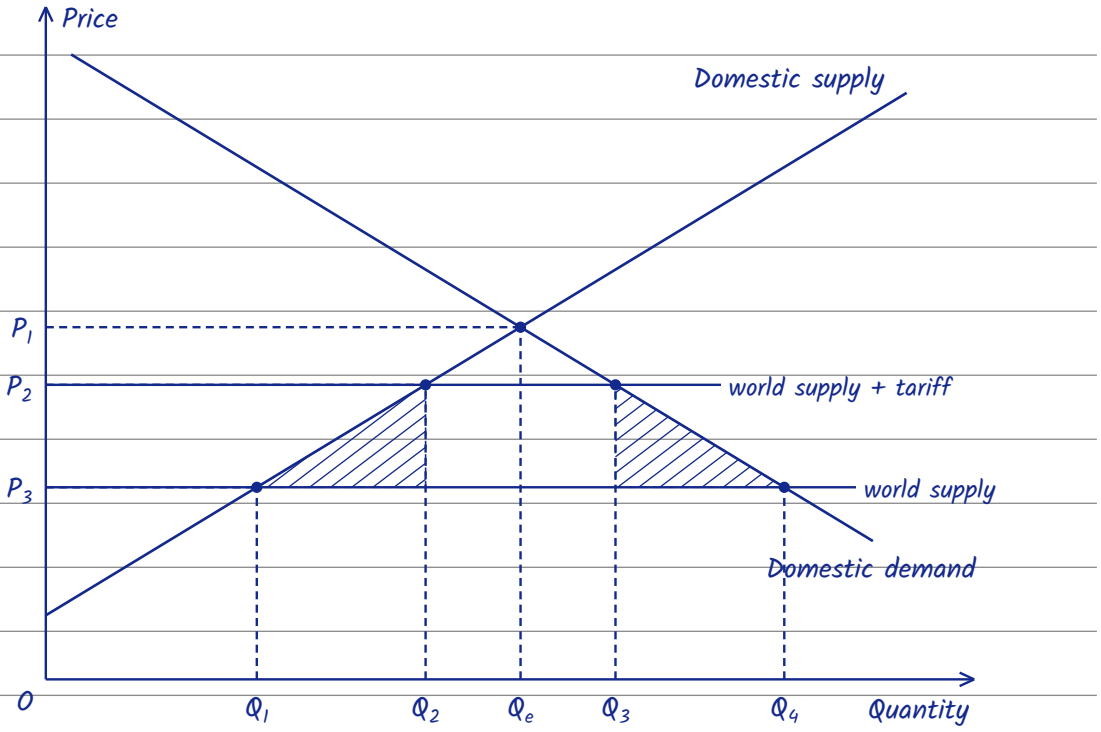
In conclusion, in the short run monetary policy, particularly raising interest rates, is likely to be the most effective way of reducing demand-pull inflation because it is flexible and fast to change, supported by fiscal restraint if the government is borrowing heavily. All demand-side policies risk lower growth and higher unemployment, so in the long run supply-side policies are needed to raise capacity and keep inflation low. The best approach depends on the cause of the excess demand, the size of the inflation and how close the economy is to full capacity.

5 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 (transfers). A deficit means that the value of outflows, such as imports, exceeds the value of inflows, such as exports. Expenditure-switching policies aim to

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change the relative prices of imports and domestic goods so that residents and foreigners switch spending away from imports and towards domestically produced goods and exports. Examples are tariffs, quotas, export subsidies and a devaluation of the currency in a fixed exchange rate system.

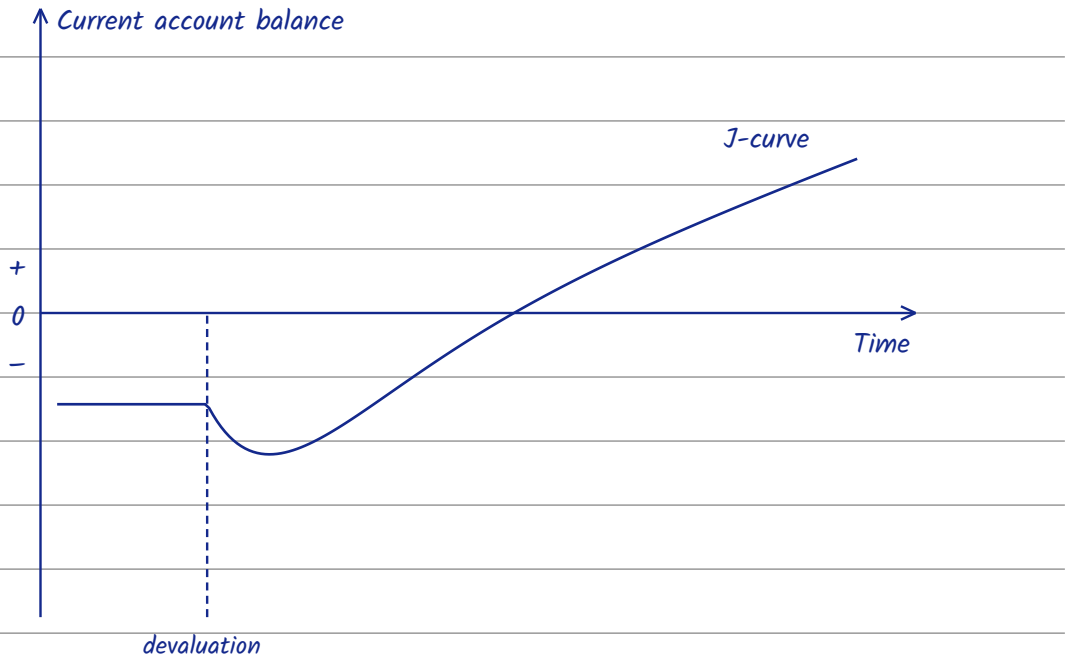
A tariff is a tax on imports. In the diagram, under free trade the domestic price is the world price P3; domestic firms supply Q1, consumers buy Q4, so imports are Q1Q4. A tariff raises the price of imports to P2. Domestic supply rises to Q2 and demand falls to Q3, so imports fall to Q2Q3. Spending on imports falls, which reduces the current account deficit. Domestic producers gain from higher prices and output, and the government gains tariff revenue, but consumers pay more and buy less.



A devaluation lowers the value of the currency. Exports become cheaper in foreign currency and imports become more expensive in domestic currency. If demand for exports and imports is price elastic, export revenue rises and spending on imports falls, so the deficit falls. The Marshall-Lerner condition states that a devaluation will improve the current account only if the sum of the price elasticities of

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demand for exports and imports is greater than one. In the short run demand is inelastic, because contracts are fixed and consumers take time to change suppliers, so the deficit first gets worse and then improves: the J-curve effect. Export subsidies work in a similar way by lowering the price of exports.



Evaluation: it is important to establish the magnitude of the deficit and how long it has persisted before interfering in trade. A small or temporary deficit, or one financed by investment inflows that build capacity, may not need correcting. Tariffs may reduce the deficit only temporarily, because other countries are likely to retaliate with their own tariffs, reducing exports. Tariffs may also break World Trade Organization rules. They raise the price of imported goods and raw materials, contributing to cost-push inflation, and protected domestic firms have less incentive to be efficient. In the tariff diagram there is a net welfare loss for society, shown by the two shaded triangles between P2 and P3: the loss from higher-cost domestic production and the lost consumer surplus.

The success of a devaluation depends on the price elasticities of demand for imports and exports (the Marshall-Lerner condition) and on the price elasticity of supply of exports: if domestic firms are at full capacity they cannot meet the

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extra demand. A devaluation also stimulates the demand for exports, which may cause demand-pull inflation, and raises the price of imported raw materials and fuel, causing cost-push inflation. If inflation rises, the gain in price competitiveness is lost, so the deficit may return. Expenditure-switching policies also do not address the deeper causes of a deficit, such as low productivity, poor quality or a high income elasticity of demand for imports.

In conclusion, expenditure-switching policies can reduce a current account deficit in the short to medium term, with a devaluation more effective than tariffs if the Marshall-Lerner condition holds and there is spare capacity. Their effectiveness is limited by retaliation, inflation and the J-curve, so for a large and persistent deficit they work best combined with expenditure-reducing and supply-side policies that improve competitiveness in the long run.