GCE A LEVEL

1520U40-1

Z22-1520U40-1

MONDAY, 6 JUNE 2022 – AFTERNOON

ECONOMICS – A2 unit 4
Evaluating Economic Models and Policies

2 hours 30 minutes

ADDITIONAL MATERIALS

A WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Answer **one** question from Section A.

Answer **one** question from Section B.

Answer **one** question from Section C.

Write your answers in the separate answer booklet provided following the instructions on the front of the answer booklet.

Use both sides of the paper. Write only within the white areas of the booklet.

Write the question number in the two boxes in the left-hand margin at the start of each answer, for example **0 1** .

Leave at least two line spaces between each answer.

INFORMATION FOR CANDIDATES

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

You are reminded of the necessity for good English and orderly, clear presentation in your answers.

You are reminded that this paper is synoptic and so will test understanding of the connections between the different elements of the subject.

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SECTION A

Answer **one** question from this section.

Either,

0 1 **a)** Using relevant diagrams, explain how a long-run equilibrium position is reached in a perfectly competitive market structure. [10]

b) Assess the reasons why the reduction of monopoly power in an economy may not be entirely desirable. [20]

Or,

0 2 **a)** Using a diagram and examples, explain what is meant by a monopolistically competitive market structure. [10]

b) Evaluate the view that firms in monopolistically competitive markets are always less efficient than firms in other market structures. [20]

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SECTION B

Answer **one** question from this section.

Either,

0 3 **a)** Using a production possibility frontier (PPF) diagram, explain the possible causes of actual growth and potential growth in an economy. [10]

b) Evaluate the extent to which economic growth always leads to conflicts with other policy objectives. [20]

Or,

0 4 **a)** Explain how inflation is calculated using a weighted price index. [10]

b) Discuss the view that inflation is always costly and never beneficial. [20]

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SECTION C

Answer **one** question from this section.

Either,

0 5 **a)** Explain the likely link between changes in the terms of trade and changes in the current account balance. [10]

b) Evaluate the ways in which governments could reduce a sustained current account deficit, in both LEDCs and MEDCs. [20]

Or,

0 6 **a)** Explain the impacts of industrialisation on an LEDC. [10]

b) Evaluate the extent to which high levels of national (public sector) debt are damaging for LEDCs. [20]

END OF PAPER

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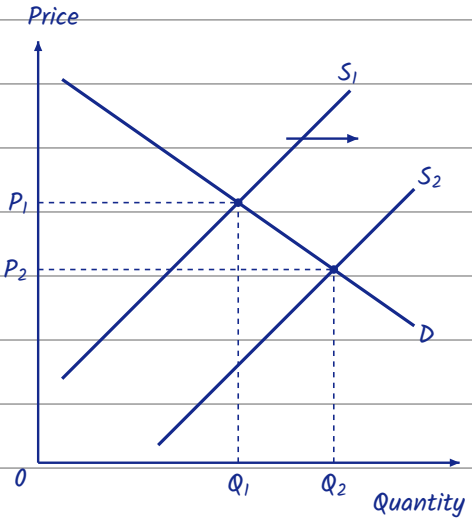
Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

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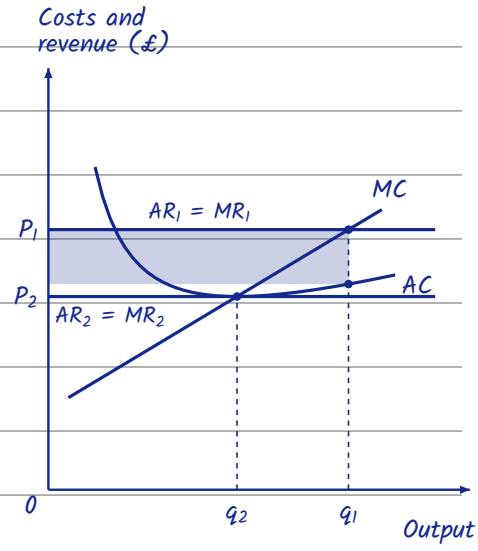
0 1 a)

Perfect competition is a market structure with many small buyers and sellers, a homogeneous product, perfect knowledge, perfect factor mobility and no barriers to entry or exit, so the market is perfectly contestable. Because no firm can influence the market price, each firm is a price taker: its demand curve is perfectly elastic at the price set by industry demand and supply, so $P = AR = MR$. Firms are assumed to profit maximise, producing where $MC = MR$, and there is no non-price competition because goods are identical, so a firm charging above the market price would lose all its customers.

In the short run a firm may make abnormal (supernormal) profit or a loss. As the diagram shows, the industry price is initially P_1, so the firm produces q_1 where $MC = MR_1$. Here AR is above AC, so it earns abnormal profit, shown by the shaded area.



Industry: entry shifts S right



Firm: abnormal profit (shaded) competed away to normal profit

Because there are no barriers to entry and knowledge is perfect, the abnormal

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profit acts as a signal and incentive for new firms to enter. Industry supply shifts right from S_1 to S_2, so the market price falls from P_1 to P_2. Each firm must take the new, lower price, so its AR = MR line shifts down to $AR_2 = MR_2$. Entry continues until all abnormal profit has been competed away, at q_2 where P = MC = minimum AC. In this long-run equilibrium every firm earns only normal profit (AR = AC), the minimum needed to keep its resources in the industry, so there is no further incentive to enter or leave.

The process works in reverse if firms are making losses. In the short run a loss-making firm continues to produce as long as price covers average variable cost, since it must pay its fixed costs anyway; if P falls below minimum AVC it shuts down immediately. In the long run all costs are variable, so firms leave if P is below AC. Exit shifts industry supply left, raising the price until the remaining firms again earn normal profit where P = minimum AC.

So long-run equilibrium is reached through the dynamic adjustment of entry and exit. It is productively efficient (lowest point of AC) and allocatively efficient (P = MC), which is why perfect competition is used as a benchmark for other market structures.

0 1 b)

Monopoly power is the ability of a firm to set prices above marginal cost and earn abnormal profit in the long run. A pure monopoly is a single seller, but in the UK a firm with over 25% market share is treated as having monopoly power. Governments may reduce it by blocking mergers, breaking up firms, regulating prices (RPI - X), removing barriers to entry or privatising and opening markets to competition, for example through the CMA.

Reducing monopoly power is usually seen as desirable. A monopolist produces where MC = MR, restricting output and charging a price above MC, so there is allocative inefficiency and a deadweight welfare loss. More competition pushes prices down towards MC, increasing consumer surplus and consumer welfare.

Without the threat of competition, monopolies may become complacent, with

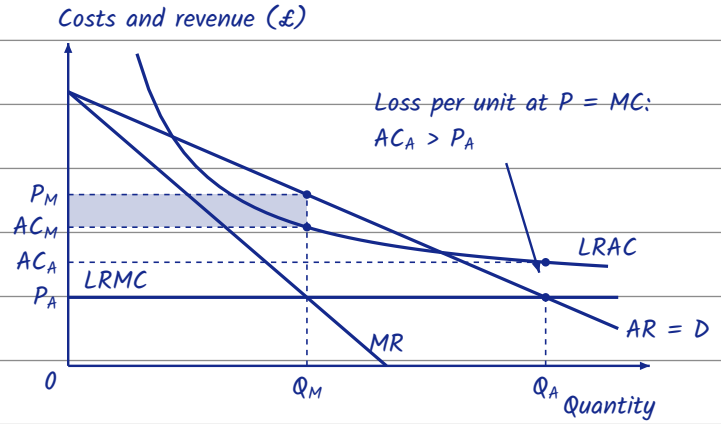
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X-inefficiency (costs above the lowest possible AC) and poor service. More suppliers would also give consumers greater variety and choice. If monopoly power falls, less spending is needed on regulators and competition authorities, freeing tax revenue for other uses.

However, there are several reasons why reducing monopoly power may not be entirely desirable. Firstly, dynamic efficiency. Monopolies use their long-run abnormal profit to fund research and development and new production processes. Reducing their power lowers profit, so there are fewer funds and less incentive to innovate, especially if rivals can quickly copy new products. In pharmaceuticals, for example, patents give temporary monopoly power that makes it worthwhile to spend over £1bn developing a new drug. Less innovation could reduce long-run economic growth and future living standards, a cost that may outweigh the short-run gain from lower prices.

Secondly, economies of scale. Firms with monopoly power are often large, so they benefit from technical, purchasing and financial economies of scale. If a monopoly is broken into smaller firms, each produces higher up its long-run average cost curve, so resources are used less efficiently and prices may even rise. In some industries, scale lets UK firms compete with global rivals.

Thirdly, natural monopoly. Where economies of scale are so large that one firm can supply the whole market at a lower average cost than several firms, such as water pipes, rail track or the National Grid, competition would cause wasteful duplication of infrastructure. As the diagram shows, the LRAC falls over the whole range of output.



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An unregulated natural monopoly produces Q_M and charges P_M, earning abnormal profit (shaded). If the government forces it to price at marginal cost, output rises to Q_A at P_A, but price is below average cost (AC_A), so the firm makes a loss. With no incentive to keep operating, there could be total market failure unless the government pays a subsidy, which has an opportunity cost.

Fourthly, the process of reducing monopoly power may itself lead to government failure. Regulators may lack information about firms' costs, suffer regulatory capture or impose rules that raise costs. Breaking up British Rail separated track from trains and arguably increased costs and complexity. Fifthly, monopolies are often large employers, so a loss of profit could lead to job losses and lower tax revenue, especially in regions dependent on one firm. Finally, a firm with monopoly power can price discriminate, charging lower prices to price-elastic groups such as students or off-peak rail passengers. This lets lower-income consumers take part in markets they might otherwise be priced out of, so reducing monopoly power could hurt them.

How undesirable a reduction is depends on several factors. Firstly, the industry: in natural monopolies and research-intensive industries the costs of reducing power are high, while in retail or consumer goods, where economies of scale are limited, the gains from competition clearly dominate. Secondly, how the market is defined. A firm may look dominant in a narrowly defined market, such as one airline on one route, but have little power in a broader market, so measured monopoly power may overstate the problem. Thirdly, contestability: if barriers to entry are low, even a firm with a high market share must keep prices close to AC because of the threat of hit-and-run entry, so intervention gives little benefit and only costs. Fourthly, time: Schumpeter's idea of creative destruction suggests that monopoly power rarely lasts, as new technology erodes it, for example Nokia and BlackBerry losing their dominance in mobile phones, so market forces may reduce it without intervention.

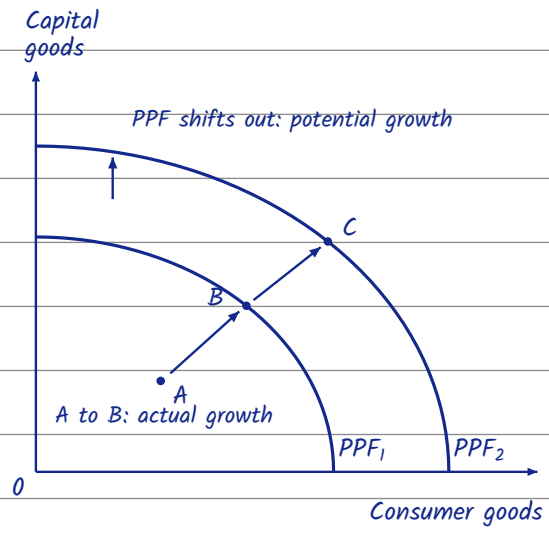
In conclusion, reducing monopoly power is generally desirable because it improves allocative efficiency and consumer welfare and reduces X-inefficiency. However, it

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is not entirely desirable: it can reduce dynamic efficiency and economies of scale, and in natural monopolies it could cause market failure. On balance, the best approach is selective, regulating natural monopolies through price caps rather than breaking them up, protecting innovation through time-limited patents, and promoting competition where economies of scale are small. Therefore whether reducing monopoly power is desirable depends mainly on the type of industry and how contestable the market already is.

0 3 a) A production possibility frontier (PPF) shows the maximum combinations of two goods, here capital goods and consumer goods, that an economy can produce when all its resources are fully and efficiently employed, given the current state of technology. Points inside the frontier mean resources are unemployed or used inefficiently, so there is spare capacity.

Actual growth is an increase in real GDP, the output the economy actually produces, using existing spare capacity. It reduces a negative output gap. On the diagram it is a movement from point A inside PPF_1 towards the frontier, such as to point B. Potential growth is an increase in the productive capacity of the economy, shown by an outward shift of the PPF from PPF_1 to PPF_2 (equivalent to a rightward shift of LRAS), which allows output to rise to a point such as C.



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The causes of actual growth are mainly demand-side, an increase in aggregate demand (C + I + G + X - M). Expansionary fiscal policy, such as a cut in income tax rates or a rise in government spending financed by a larger budget deficit, raises disposable income and spending. Expansionary monetary policy, such as a cut in Bank Rate, quantitative easing or forward guidance, lowers the cost of borrowing and raises consumption and investment. A fall in the exchange rate makes exports more price competitive and imports dearer, raising net exports. Rising consumer and business confidence also increases spending. The initial rise in AD is magnified by the multiplier, and rising output can trigger extra investment through the accelerator. Because there is spare capacity, firms employ idle labour and capital, and output moves from A towards B.

The causes of potential growth are supply-side, increases in the quantity or quality of factors of production. Net inward migration increases the size of the labour force. Investment in capital goods increases the capital stock; as the diagram shows, choosing more capital goods now shifts the PPF further out in the future. Improvements in human capital through education and training raise labour productivity, and new technology from research and development lets more output be produced from the same inputs. Supply-side policies such as deregulation and privatisation can increase competition and efficiency, while better infrastructure reduces firms' costs. These shift the PPF outwards from PPF_1 to PPF_2. However, potential growth only becomes higher real output if AD also rises to use the new capacity, so both types of growth are needed for sustained growth.

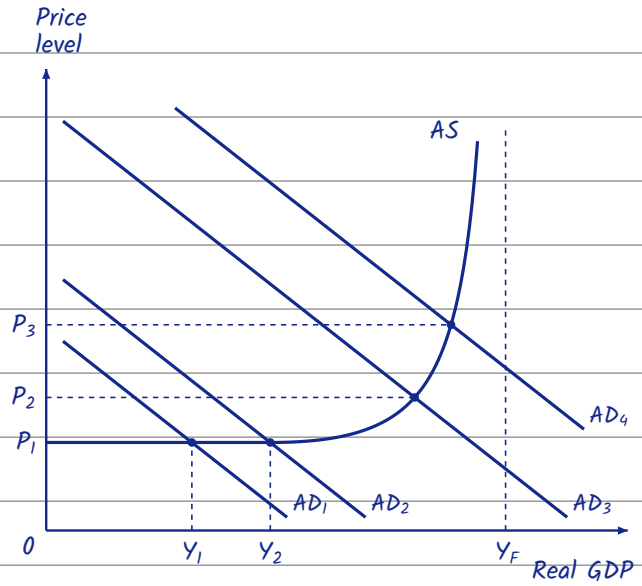
0 3 b)

Economic growth is the increase in real GDP over time; actual growth uses spare capacity, while potential (long-run) growth increases productive capacity. Governments also aim for low and stable inflation (the UK CPI target is 2%), low unemployment, a balanced current account, a sustainable fiscal position and reduced inequality. A conflict, or trade-off, exists when achieving one objective

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makes another harder to achieve.

The most common conflict is between growth and inflation. Rapid actual growth driven by rising AD means firms compete for increasingly scarce labour and raw materials, and workers gain bargaining power, so costs and prices rise. As the diagram shows, when the economy is near full capacity (Y_F), a rise in AD from AD_3 to AD_4 causes a large rise in the price level from P_2 to P_3, which is demand-pull inflation. The short-run Phillips curve supports this trade-off between lower unemployment and higher inflation.



However, this conflict does not always exist. If the economy has a large negative output gap, as after a recession, a rise in AD from AD_1 to AD_2 raises real GDP from Y_1 to Y_2 with the price level unchanged at P_1, because idle resources can be brought into use without bidding up costs. If growth is potential growth driven by investment, technology or a larger labour force, LRAS shifts right, so output can rise while inflationary pressure falls. Independent central banks can also use interest rates to keep inflation on target, and global factors such as falling commodity prices or cheap imports can hold inflation down. In the long run, the long-run Phillips curve is vertical, so once expectations adjust there is no lasting trade-off. On the other hand, stagflation in the 1970s showed that inflation can rise even when growth is weak, so inflation is not only linked to growth.

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Growth and unemployment usually do not conflict. Labour is a derived demand, so as output rises firms need more workers and cyclical unemployment falls (Okun's law). However, if growth comes from labour-saving technology such as automation, structural unemployment may rise. Growth may be concentrated in certain regions or industries, such as finance in London, leaving unemployment high elsewhere. If potential growth outpaces actual growth, the negative output gap widens and unemployment can rise.

Growth often conflicts with a balanced current account. As incomes rise, households buy more goods, including imports, especially in the UK where the marginal propensity to import is high, and firms import more raw materials and components to meet demand, so the trade deficit widens. However, if growth is export-led, as in Germany or China, it can improve the current account, and many other factors such as the exchange rate and competitiveness affect the trade balance.

Growth generally helps the fiscal balance. Through automatic stabilisers, tax revenue from incomes, spending and profits rises while spending on benefits falls, so the deficit shrinks and the debt to GDP ratio falls. However, a structural deficit may remain if spending commitments such as pensions are growing, or if growth was achieved by cutting tax rates in a 'race to the bottom'. High interest payments on existing debt also limit the improvement.

Growth may also widen inequality if the gains go mainly to owners of capital and highly skilled workers, and it can conflict with environmental sustainability through more pollution and carbon emissions.

The extent of conflict depends on several factors. Firstly, the type of growth: short-run actual growth driven by AD close to full capacity creates the most conflicts, while long-run supply-side growth creates few. Secondly, the size of the output gap and the starting point of the economy. Thirdly, the type of economy: an LEDC with high primary product dependency may find that growth draws in imported capital goods, but it may prioritise growth and poverty reduction over low inflation. Finally, government and central bank policy can

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	reduce trade-offs, for example supply-side policies alongside demand management. In conclusion, economic growth does not always lead to conflicts. It is broadly complementary with low unemployment and fiscal balance, and conflicts with inflation and the current account mainly arise when growth is rapid, demand-led and close to full capacity. Therefore the claim that growth always conflicts with other objectives is too strong; sustainable, supply-side led growth can achieve several objectives at once, although some short-run trade-offs, especially with the current account and the environment, are likely.
0 5 a)	The terms of trade measure the rate at which a country's exports exchange for its imports. They are calculated as (index of average export prices ÷ index of average import prices) × 100. For example, if export prices rise by 10% and import prices are unchanged, the terms of trade rise from 100 to 110. A rise is called an improvement, because each unit of exports now buys more imports; a fall is a deterioration. The current account is one part of a country's balance of payments. It is made up of the trade balance in goods and services (exports minus imports), net primary income (such as wages, profits, interest and dividends from abroad) and net secondary income (transfers such as remittances, foreign aid and EU contributions). A current account deficit means outflows exceed inflows. An improvement in the terms of trade is likely to worsen the current account, ceteris paribus. If the terms of trade improve because export prices rise relative to import prices, for example due to higher domestic inflation or an appreciation of the exchange rate, exports become relatively more expensive abroad, so by the law of demand foreign buyers demand fewer of them. At the same time imports become relatively cheaper, so domestic consumers buy more imports instead of home-produced goods. The quantity of exports falls and the quantity of imports rises, so the trade balance worsens, and with it the current account balance. A

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deterioration in the terms of trade, for example after a depreciation, has the opposite effect, making exports more price competitive and improving the current account.

However, the size and direction of the effect depend on the price elasticity of demand for exports and imports. The Marshall-Lerner condition states that a fall in relative export prices only improves the trade balance if the sum of the PEDs for exports and imports is greater than 1. If demand is price inelastic, then when the terms of trade improve the volume of exports falls by proportionally less than their price rises, so export revenue actually increases, while spending on imports falls. The trade balance and current account would then improve. This may be the case for the UK, which exports specialised financial services and technology and imports food and other necessities. It also depends on why the terms of trade changed: if export prices rise because world demand for a country's commodities increases, such as oil for Saudi Arabia, export revenue rises and the current account improves. In the short run demand is usually inelastic, so this effect is more likely, as the J-curve suggests.

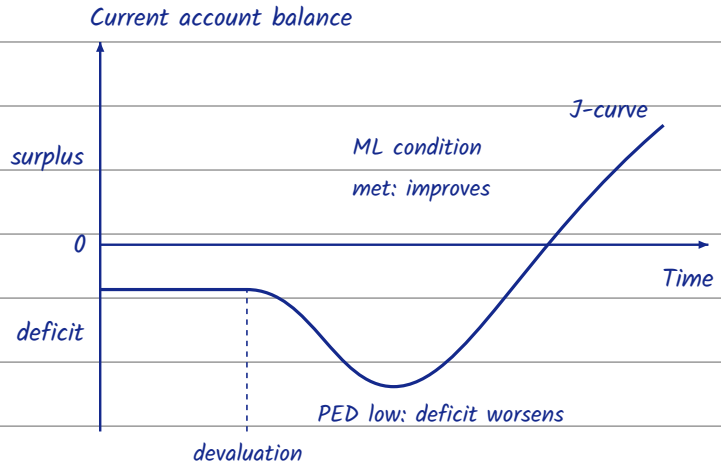
0 5 b) A current account deficit occurs when the value of outflows on the current account (imports, primary income paid abroad and transfers abroad) is greater than the value of inflows. It must be balanced by net inflows on the financial and capital accounts, such as foreign direct investment, portfolio investment or borrowing. A sustained deficit is one that persists for many years, for example the UK has had a deficit every year since the 1980s, often around 3 to 4% of GDP, while many LEDCs, such as Pakistan, have deficits linked to imports of oil and food.

Governments want to reduce a sustained deficit for several reasons. Net exports are part of AD, so a deficit is a leakage from the circular flow that reduces output and jobs. Domestic firms may be undercut by imports, making it hard for infant industries to grow. If the deficit is financed by short-term 'hot

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money' rather than long-term FDI, a sudden outflow could cause a currency crash or balance of payments crisis, which is a bigger risk for LEDCs with low foreign currency reserves. The right policy depends on the cause of the deficit.

Firstly, expenditure switching policies aim to switch spending from imports to domestic goods. A devaluation of a fixed or managed exchange rate makes exports cheaper and imports dearer. As the diagram shows, the current account may initially worsen because demand is price inelastic in the short run, but improves once the Marshall-Lerner condition is met (the J-curve).



However, devaluation requires a central bank to sell its own currency and buy foreign currency; many MEDCs such as the UK have floating exchange rates, so this is not possible, although lower interest rates can cause a depreciation. LEDCs may lack the reserves to defend a new rate, and if they rely on imports of food, energy and medicine, which are price inelastic, devaluation raises import costs and causes cost-push inflation, reducing the gain in competitiveness.

Protectionism, such as tariffs and quotas, directly reduces imports, but it risks tit-for-tat retaliation and trade wars, which LEDCs are more likely to lose. It is also limited by WTO rules, and it protects inefficient firms, raising prices for consumers. Import substitution industrialisation, building domestic industries to replace imports, worked for South Korea, but it takes many years and often failed in Latin America.

Secondly, expenditure reducing policies such as higher income tax rates, lower

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government spending or higher interest rates reduce disposable income and so reduce spending on imports, especially where the marginal propensity to import is high. These work quickly, but they reduce AD, economic growth and employment, so they conflict with other objectives and are politically unpopular. In LEDCs they would cut living standards for people already in poverty, and many essential imports would continue anyway.

Thirdly, supply-side policies tackle the root cause when the deficit is due to uncompetitive exports. Improving education and training, transport infrastructure and tax breaks on R&D raise productivity and quality, making exports more competitive on non-price factors. Subsidies to exporters can also help. These are the best long-term solution for MEDCs such as the UK, where the deficit reflects low productivity in manufacturing. However, they take many years to have an effect, are expensive at a time of austerity and may involve the government 'picking winners'. LEDCs often lack the tax revenue to fund them, so they may need to attract FDI from MNCs to build infrastructure and skills, which increases future outflows of profit on the primary income account.

The best approach depends on several factors. Firstly, the cause: if the deficit is due to strong consumer demand, expenditure reducing policy fits; if it is due to poor competitiveness, supply-side policies are needed. Secondly, the size and financing of the deficit: a deficit financed by long-term FDI that builds productive capacity may not need correcting at all, and doing nothing is a valid option, especially with a floating exchange rate that should depreciate and self-correct over time. Thirdly, the type of economy: MEDCs have more policy tools and credibility, while LEDCs face limited funds and essential imports. Governments of different political views will also choose differently.

In conclusion, there is no single best policy. For MEDCs, supply-side policies to improve productivity are the best way to reduce a sustained deficit, perhaps supported in the short run by a floating exchange rate. For LEDCs, export diversification away from primary products, FDI and gradual import substitution are likely to be more effective than protectionism or devaluation, which risk

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retaliation and inflation. Since a sustained deficit is a structural problem, long-term supply-side measures should be prioritised over quick short-term fixes.