GCE A LEVEL

1520U40-1

S18-1520U40-1

ECONOMICS – A2 unit 4
Evaluating Economic Models and Policies

TUESDAY, 12 JUNE 2018 – AFTERNOON

2 hours 30 minutes

ADDITIONAL MATERIALS

A WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.
Answer **one** question from Section A.
Answer **one** question from Section B.
Answer **one** question from Section C.

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,

1. *(a)* Explain what is meant by a contestable market and, using a diagram, explain why firms in a contestable market tend to earn only normal profit. [10]

(b) Discuss the view that firms in an oligopoly must always be heavily regulated in order to prevent collusion. [20]

Or,

2. *(a)* Explain what is meant by monopoly and, using a diagram, explain why a monopoly may have lower average costs of production than a firm in perfect competition. [10]

(b) "Concentrated markets are always better for the economy than non-concentrated markets." Discuss. [20]

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SECTION B

Answer **one** *question from this section.*

Either,

3. *(a)* Using an appropriate diagram, explain the process by which Neo-classical economists believe that the economy will always adjust to reach long-run equilibrium. [10]

(b) Discuss the likely effectiveness of policies, other than the use of interest rates, to reduce the rate of inflation in an economy. [20]

Or,

4. *(a)* Using an appropriate diagram, explain why Keynesian economists believe that government intervention is often essential for decreasing cyclical unemployment. [10]

(b) Assess the extent to which a fall in unemployment is always desirable. [20]

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SECTION C

Answer **one** *question from this section.*

Either,

5. *(a)* Explain the factors that may result in an improving terms of trade index. [10]

(b) Evaluate the view that running a current account surplus is always better than running a current account deficit for LEDCs. [20]

Or,

6. *(a)* Explain how and why a "resource curse" may develop in an economy. [10]

(b) Discuss the extent to which governments of all LEDCs should encourage inward foreign direct investment (FDI). [20]

END OF PAPER

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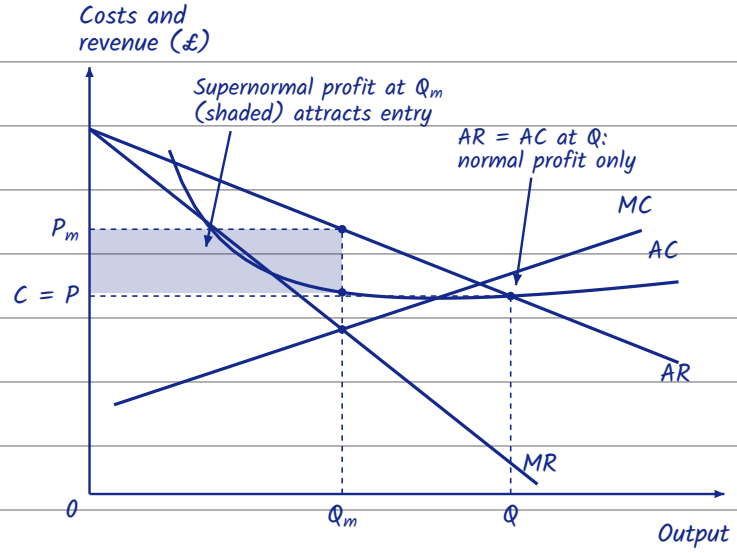
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Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number

1. (a)

A contestable market is one in which the threat of potential competition, rather than the number of firms actually in the market, determines how incumbent firms behave. In a perfectly contestable market there are no barriers to entry or exit and, crucially, no sunk costs (costs that cannot be recovered when a firm leaves, such as advertising or specialised capital). Entrants can use the same technology as incumbents, so they face the same costs. This makes 'hit and run' competition possible: a firm can enter whenever supernormal profit is being made, take that profit and leave without loss once prices fall. So even a market with only one or two firms, such as a single airline route, can be highly contestable.



As the diagram shows, if the incumbent maximised profit where MC = MR it would produce Q_m and charge P_m, earning the shaded supernormal profit because P_m is above average cost at Q_m. In a contestable market this is not sustainable. With no barriers, the supernormal profit signals to potential entrants that they can enter, undercut P_m slightly and still earn supernormal profit. With no sunk costs entry is low risk, because if the incumbent cuts its price the entrant can

Question number

simply leave and recover its costs.

Knowing this, the incumbent's best strategy is limit pricing: setting the lowest price it can without making a loss, which is where AR = AC at output Q and price P = C. Here total revenue just covers total cost, including the opportunity cost of the entrepreneur, so only normal profit is made and there is no abnormal profit for an entrant to appropriate. At any output below Q, AR is above AC, so supernormal profit would attract hit and run entry. At any output beyond Q, AR is below AC and a loss is made, so the firm would leave the industry, which is easy because there are no barriers to exit. Q is therefore the only stable output. Incumbents can afford to accept normal profit because they have no large sunk costs to recover.

This is a dynamic process: even if supernormal profit is earned in the short run, the threat or reality of entry competes it away in the long run, just as in perfect competition, but the reason is the ease of entry and exit, not the number of firms. As Q is close to the minimum point of AC, contestable markets also tend towards productive efficiency.

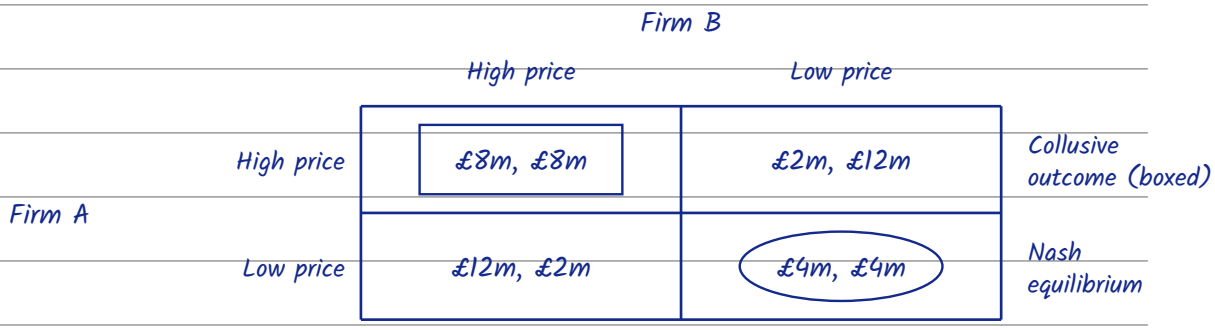
1. (b)

An oligopoly is a market dominated by a small number of large firms, with a high concentration ratio (for example a five-firm ratio above 60%), high barriers to entry and exit, products that may be homogeneous (cement, petrol) or differentiated (cars, mobile networks), and interdependence: each firm's decisions on price and output depend on how it expects rivals to react. Firms have price-making power. Collusion is when firms work together rather than compete, restricting supply and raising prices so that they act as a joint monopoly and maximise joint profits. It can be overt, as in a formal cartel, or tacit, for example following a price leader without any explicit agreement. Collusion is illegal in the UK under the Competition Act 1998: the Competition and Markets Authority (CMA) can fine firms up to 10% of worldwide turnover, and individuals can be imprisoned under the cartel offence.

Collusion is most likely when there are few firms, products are homogeneous,

Question number

demand is price inelastic and firms have good information about and trust in each other, while consumers are poorly informed. Game theory shows the incentive to collude.



Each firm has a dominant strategy to charge a low price (£12m beats £8m, and £4m beats £2m), so without cooperation the Nash equilibrium is (low, low) with £4m each. By colluding to fix a high price both raise profit to £8m, at the expense of consumers.

There is therefore a strong case for regulation. Firstly, collusion pushes price above the competitive level, reducing consumer surplus and redistributing it to producers as supernormal profit. Secondly, because price is above MC, output is restricted below the allocatively efficient level, creating a deadweight welfare loss. Thirdly, secure profits remove the pressure to control costs, causing X-inefficiency, and weaken the incentive to innovate, so the industry becomes less dynamic. Fourthly, consumers in oligopolies often have little choice and face information asymmetry and switching costs, for example complex energy tariffs and mobile phone contracts, so they are easily exploited: in 2016 the CMA found energy customers were overpaying by about £1.4bn a year. Without bodies such as the CMA monitoring anti-competitive behaviour, and sector regulators using price caps such as RPI - X in utilities, collusion could cause serious market failure.

However, it does not follow that oligopolies must always be heavily regulated. Firstly, collusion is inherently unstable. The matrix shows that once a high price

Question number

is agreed, each firm can raise its profit from £8m to £12m by secretly cutting its price, so cartels tend to break down, especially when there are more firms, differentiated products or falling demand. Leniency (whistleblowing) rules strengthen this: the first firm to confess is given immunity from the fine, as when Virgin Atlantic reported its fuel surcharge collusion with BA on transatlantic routes and BA alone was fined £121.5m. This light-touch approach makes collusive arrangements less stable and shorter-lived and cuts the cost of investigations, without heavily regulating every firm.

Secondly, collusion is not the most likely outcome. The kinked demand curve model predicts price stability, because rivals follow price cuts but not price rises, so firms compete through non-price competition such as quality, branding and loyalty schemes, which can benefit consumers through innovation and choice. In homogeneous markets firms are just as likely to start a price war, as UK supermarkets did in response to Aldi and Lidl, lowering prices for consumers at least in the short term.

Thirdly, regulation is costly and difficult. Tacit collusion leaves no written evidence, so it is very hard to prove; investigations take years and cost taxpayers money, and regulators may lack information or suffer regulatory capture, causing government failure. Heavy regulation such as permanent price caps may also cut the profits needed for investment, reducing dynamic efficiency; the energy price cap contributed to many small suppliers leaving the market in 2021. Fourthly, cooperation is not always harmful: car makers have worked together on fuel-efficient engines, pharmaceutical firms share R&D and patents, and in an industry with very low margins some cooperation may prevent complete market failure.

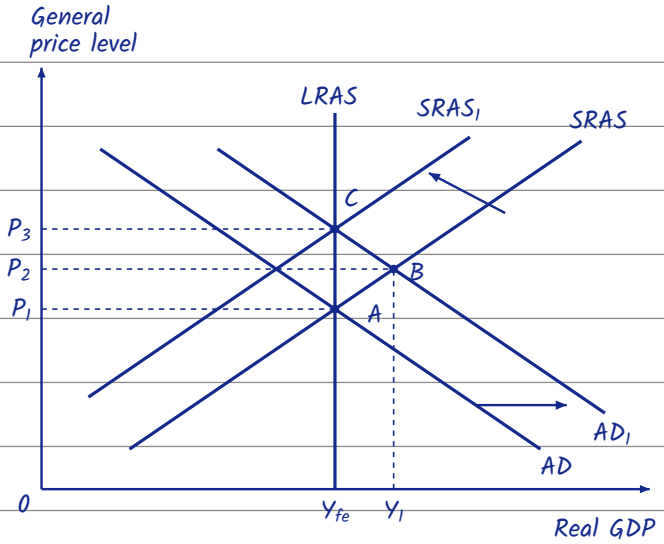
Whether heavy regulation is needed therefore depends on the height of barriers to entry (a contestable oligopoly is disciplined by the threat of entry), on whether the product is homogeneous with inelastic demand (which makes collusion easier), on whether the good is an essential such as energy, water or banking where consumers are vulnerable, and on how strong existing competition

Question number

law and penalties already are.

In conclusion, oligopolies do need to be regulated to prevent collusion, because its effects on consumer welfare and efficiency are serious. However, they do not always need to be heavily regulated. Most oligopolies are kept in check by the instability of collusion, non-price competition and the threat of large fines combined with leniency programmes, a cost-effective light-touch approach. Heavy regulation, such as price caps and close monitoring, is justified only in concentrated markets for essential goods with high barriers, homogeneous products and inelastic demand, where tacit collusion and exploitation are most likely.

3. (a) Neo-classical (free market) economists assume that resources are allocated efficiently through the interaction of demand and supply, that individuals are rational and maximise their utility, and that prices and wages are fully flexible so that markets clear. The invisible hand moves markets to equilibrium without government intervention (laissez-faire), and individual demand and supply can be aggregated for the whole economy. As a result, long-run aggregate supply (LRAS) is perfectly inelastic at the full employment level of output, Y_{fe}, which depends on the quantity and quality of factors of production rather than the price level, and the economy always tends back to it.



Positive output gap at B closes as costs rise: SRAS shifts to $SRAS_1$

Question number

As the diagram shows, the economy starts in long-run equilibrium at A, where AD = SRAS = LRAS at Y_{fe} and price level P_1. Suppose a demand shock, such as an increase in government spending or a rise in consumer confidence, shifts AD to AD_1. In the short run firms increase output along SRAS, so the economy moves to B, with real GDP at Y_1, above Y_{fe}, and the price level at P_2. There is now a positive output gap.

This can only be sustained for a short time, by factors of production working overtime and beyond normal capacity. As labour, raw materials and capital become scarcer, their prices are bid up, and workers demand higher money wages to restore real wages eroded by the higher price level. Firms' costs of production rise, so SRAS shifts upwards to $SRAS_1$. The economy moves to C, where $AD_1 = SRAS_1 = LRAS$: output has returned to Y_{fe} but at the higher price level P_3. In the long run the rise in AD has caused only inflation, with no lasting increase in real GDP.

The same process works in reverse from a negative output gap. If AD falls, output falls below Y_{fe} and unemployment rises. Unemployed resources mean wages and raw material prices fall, lowering costs, so SRAS shifts downwards to the right until the economy returns to Y_{fe} at a lower price level. This is why Neo-classical economists argue that the economy self-corrects, that demand management is unnecessary, and that output can only be raised permanently by shifting LRAS to the right.

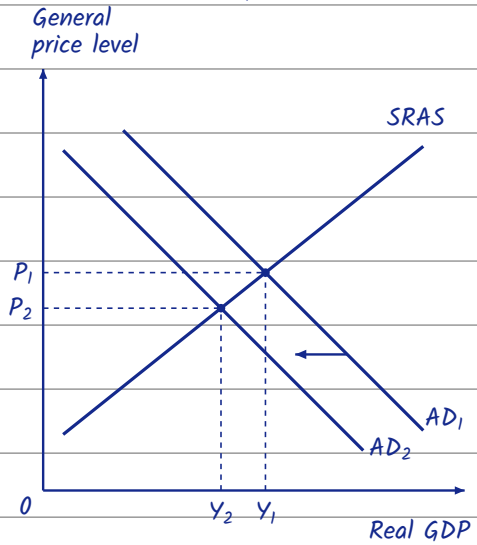
3. (b)

Inflation is a sustained increase in the general price level, measured in the UK by the CPI, for which the Bank of England has a 2% target. For many years changing interest rates has been the default tool, but other policies can be used. Their effectiveness depends heavily on the cause: demand-pull inflation occurs when AD grows faster than productive capacity, whereas cost-push inflation comes from rising costs such as wages, oil prices or a depreciation that raises import prices.

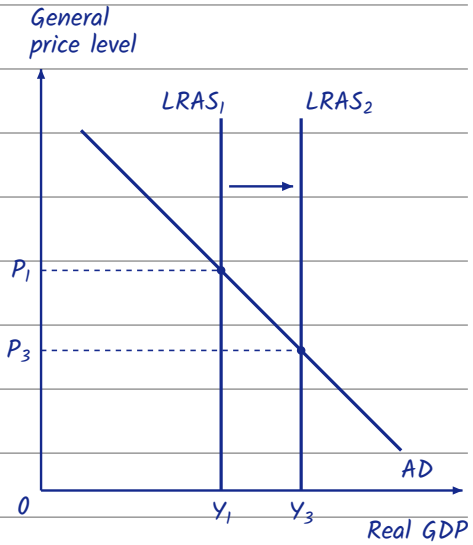
Firstly, contractionary (deflationary) fiscal policy: cutting government spending

Question number

and/or raising direct taxes such as income tax. Higher income tax reduces disposable income and so consumption, while lower government spending directly reduces G, a component of AD = C + I + G + (X - M). Through the negative multiplier AD falls by more than the initial change. As the left-hand diagram shows, AD shifts from AD_1 to AD_2 and the price level falls from P_1 to P_2; in practice the rate of increase in prices slows. This is effective against demand-pull inflation, especially near full capacity where AS is steep, so most of the effect falls on prices rather than output.



Contractionary fiscal policy



Supply-side policy

However, real GDP falls from Y_1 to Y_2, raising cyclical unemployment (the short-run Phillips curve trade-off). Fiscal tightening does nothing to tackle cost-push inflation and could worsen stagflation. It also suffers time lags, as budgets are set annually, and cuts to health and education or higher taxes are politically unpopular and may harm long-run growth; it would also run counter to the recent relaxation of UK austerity.

Secondly, other monetary policies. The central bank could reverse quantitative easing by selling the government bonds it bought, reducing the money supply and raising bond yields and borrowing costs, so consumption and investment fall. The quantity theory (MV = PT) suggests that if V and T are stable, slower money supply growth reduces inflation. A credible, independent central bank, or

Question number

a lower target, also anchors inflationary expectations, so workers bargain for smaller pay rises and a wage-price spiral is avoided. Buying the domestic currency on the foreign exchange market causes an appreciation, making imports cheaper and reducing cost-push pressure. However, reversing QE may destabilise bond markets and raise government borrowing costs, worsening the fiscal balance; the target is already low at 2%; and intervention is unlikely in a floating system like the UK's because reserves are small relative to the market.

Thirdly, supply-side policies increase the productive capacity of the economy. Free-market policies include deregulation, privatisation, reducing trade union power and cutting income and corporation tax to improve incentives; interventionist policies include spending on education, training and infrastructure and tax credits for R&D. As the right-hand diagram shows, LRAS shifts from $LRAS_1$ to $LRAS_2$, so the price level falls from P_1 to P_3 while real GDP rises from Y_1 to Y_3. There is no trade-off with unemployment, and higher productivity lowers unit labour costs, easing cost-push inflation. However, supply-side policies work mainly in the long run (training or infrastructure may take a decade), interventionist ones are costly and widen the budget deficit, and the results are uncertain. Some, such as labour market deregulation, act faster than others, but none can deal with a sudden inflationary shock.

Fourthly, direct controls on wages and prices: public sector pay freezes, caps on bankers' bonuses or on top pay as a multiple of the lowest paid, maximum prices on essentials such as food and fuel (used in some LEDCs), or a full prices and incomes policy. A pay freeze, as in the UK public sector after 2010, directly limits wage costs and government spending and works quickly. However, maximum prices below equilibrium cause shortages and black markets, and wage controls distort labour markets and cause skill shortages. When controls are lifted, pent-up pressure often causes a surge in inflation, creating stop-go cycles, as with UK incomes policies in the 1970s. They are also politically unlikely under the current government.

Overall effectiveness depends on several factors. Most importantly, the cause of

Question number

inflation: inflation from short-run growth in AD needs demand management, while inflation caused by supply constraints needs supply-side policies. If inflation results from an exogenous shock, such as the surge in energy prices after Russia invaded Ukraine, which pushed UK CPI to 11.1% in October 2022, domestic policy can only reduce demand at a heavy cost in output and jobs. It also depends on the economic context: the size of the output gap, the other macro policies being used and other objectives such as growth and unemployment, and the exchange rate system, since currency intervention is only realistic in a fixed or managed system.

In conclusion, no single policy is always effective. Contractionary fiscal policy is the most effective short-run alternative to interest rates against demand-pull inflation, but at the cost of higher unemployment. Supply-side policies are the most effective in the long run because they lower inflation while raising output, but they are slow and uncertain. Direct controls and currency intervention are generally the least effective because they treat symptoms rather than causes. The best approach is a combination: credible monetary policy to anchor expectations, prudent fiscal policy and supply-side reform to raise LRAS, with the mix chosen according to the cause of the inflation.

5. (a) The terms of trade (ToT) measure the rate at which a country's exports exchange for its imports: ToT index = (index of average export prices ÷ index of average import prices) × 100. An improving (rising) ToT index means export prices are rising relative to import prices, so each unit of exports buys more units of imports. For example, if in the base year both indices are 100, the ToT is 100. If export prices rise by 10% to 110 and import prices by 5% to 105, the ToT becomes (110 ÷ 105) × 100 = 104.8, an improvement of 4.8%. The ToT also improves if import prices fall: with export prices at 100 and import prices falling to 90, ToT = (100 ÷ 90) × 100 = 111.1. This matters especially for LEDCs, whose imports are often essential capital goods, food and medicines, so an

Question number

improving ToT allows more of these to be bought with the same export revenue.

The first factor is rising demand for the country's exports. Many LEDCs export primary commodities such as oil, copper or cocoa, whose supply is price inelastic in the short run. If global growth, for example rapid industrialisation in China, increases demand, export prices rise sharply, raising the export price index and so the ToT; Zambia's ToT improved strongly in the 2000s as copper prices rose. Growing interest in a country's tourism similarly raises the prices of hotels and services sold to foreign visitors. Conversely, falling world demand for, or rising world supply of, the goods a country imports, such as cheaper manufactures from Asia, lowers import prices and improves the ToT.

Secondly, an appreciation of the currency. If the exchange rate rises, for example because higher interest rates attract hot money, or rising confidence in the government and a better business environment (such as lower corporation tax) attract inward FDI, the foreign currency price of exports rises and the domestic price of imports falls. Both raise the ToT index, although the volume of exports sold may fall.

Thirdly, changes in market power and elasticity. If domestic firms grow larger and gain price-making power, which is more likely with a reliable energy supply, good communications and transport and available workers, they can charge higher export prices. If demand for a country's exports becomes more price inelastic, even a small reduction in supply, such as a poor harvest or an OPEC output cut, raises the price significantly. Fourthly, trade policy: reducing or removing import tariffs lowers the price of imports relative to export prices, improving the ToT.

5. (b) The current account of the balance of payments records trade in goods and services, primary income (wages, interest, profits and dividends) and secondary income (current transfers such as remittances and aid). A surplus means total credits exceed total debits, so the country earns more from the rest of the

Question number

world than it spends; a deficit means the opposite. Because the balance of payments must balance, a current account surplus is matched by a net outflow on the financial account and a deficit by a net inflow. LEDCs have low GNI per capita and a low HDI, are often specialised in commodities or low value manufactures, may be landlocked or politically unstable, and have low savings and soft currencies.

A surplus has important benefits for an LEDC. If it comes from a trade surplus, net exports (X - M) are an injection into the circular flow, increasing AD. In an LEDC with large spare capacity and high unemployment, this raises real GDP and employment with little inflation, and the multiplier generates further income. Relying on export demand is also less risky than relying on domestic demand when domestic incomes and consumption are low, and a trade surplus shows that firms are internationally competitive. Vietnam, for example, has run surpluses based on manufactured exports while poverty fell sharply.

A surplus may also come from remittances: in Nepal and Tajikistan they are over 20% of GDP, raising GNI and funding spending on education and healthcare, so the HDI rises. In addition, a surplus provides hard currency and foreign exchange reserves, which LEDCs need because their own currencies are not accepted internationally. Reserves can be used to import essential capital goods, food and medicines, to repay foreign debt and to support the currency in a fixed or managed exchange rate system, reducing the risk of a currency crisis; China's large US dollar reserves are an example. The matching financial account outflow means the country invests abroad, spreading risk and earning future income, as China has done in sub-Saharan Africa. A surplus driven by rising export prices may also reflect an improving ToT, so more imports can be bought per unit of exports.

However, a surplus is not always better. Firstly, if the economy is close to full capacity, high net exports cause export-led demand-pull inflation, as in some Chinese manufacturing regions. Secondly, a surplus may reflect a short-lived boom in demand for one commodity such as oil or copper. This encourages

Question number

over-reliance on that export and appreciates the currency, damaging other exporters and import-competing firms: the resource curse or Dutch disease. When the price collapses, as oil did from 2014 to 2016 for Nigeria and Angola, the surplus turns into a deficit and growth slumps. Thirdly, a surplus may be due to heavy import restrictions or very low incomes rather than competitive exports, denying citizens consumer goods and the capital imports needed for development. Fourthly, export-dependent growth relies on growth and openness in trading partners, which is risky given rising protectionism in large economies such as the USA, and it weakens the effectiveness of domestic macro policy. Most importantly, a deficit can be beneficial. A current account deficit is matched by a financial account surplus, which may be inward FDI. LEDCs suffer from a savings gap, so in the Harrod-Domar model they cannot fund enough investment from domestic savings. A deficit financed by FDI allows them to import capital goods and technology, such as machinery for new factories, raising productivity, shifting LRAS to the right and increasing future exports and growth. Ethiopia ran large deficits while importing capital for infrastructure and achieved some of the fastest growth in Africa. In contrast, a surplus means capital is flowing out of a country that is itself short of capital. Persistent large surpluses can also destabilise the international financial system and provoke competitive devaluations.

Whether a surplus is better therefore depends on several factors. The cause: a surplus from competitive exports of manufactures and capital goods is more sustainable than one from commodities or import controls. Its size and persistence: a small, temporary imbalance is not a problem, but a large persistent deficit financed by hot money or loans risks a debt crisis and capital flight, whereas one financed by long-term FDI is sustainable. What the deficit is spent on: capital goods rather than consumer imports. The number of trading partners: exporting to many countries is less risky than to a few. And the stage of development: a poor country with a large savings gap may gain more from an FDI-financed deficit.

Question number

In conclusion, a current account surplus is not always better than a deficit for LEDCs. A surplus brings growth, jobs, reserves and stability, which are valuable to LEDCs with spare capacity and soft currencies, but only if it is based on diversified, competitive exports rather than a commodity boom or import controls. A moderate deficit can be better if it is financed by long-term FDI and used to import capital that raises future productive capacity. The key judgement is not whether the balance is positive or negative, but whether it is sustainable and contributes to long-run development.