Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/41**

Paper 4 Data Response and Essays **October/November 2021**

2 hours 15 minutes

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 **two** questions.
- 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 70.
- 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 this question.

1 The economic impacts of the increasing use of all-electric cars

Some governments have agreed targets to reduce air pollution and, as part of this, are concerned about the social costs caused by the use of petrol and diesel vehicles. In response, car manufacturers are producing all-electric cars. The sales of these are increasing, especially in developed countries. The success of this switch to all-electric cars will depend on improving both battery technology as well as building an infrastructure in which, as drivers reduce their use of fossil fuels, electricity charging points will replace petrol pumps.

Fig. 1.1 shows the cumulative number of all-electric cars in the world between 2010 and 2016.

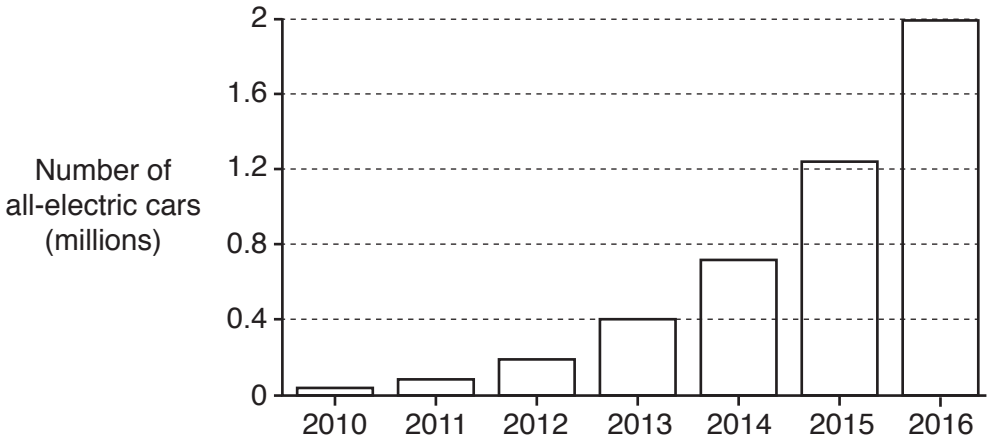


Fig. 1.1

Fig. 1.2 shows the annual sales of all cars in the world between 2010 and 2016.

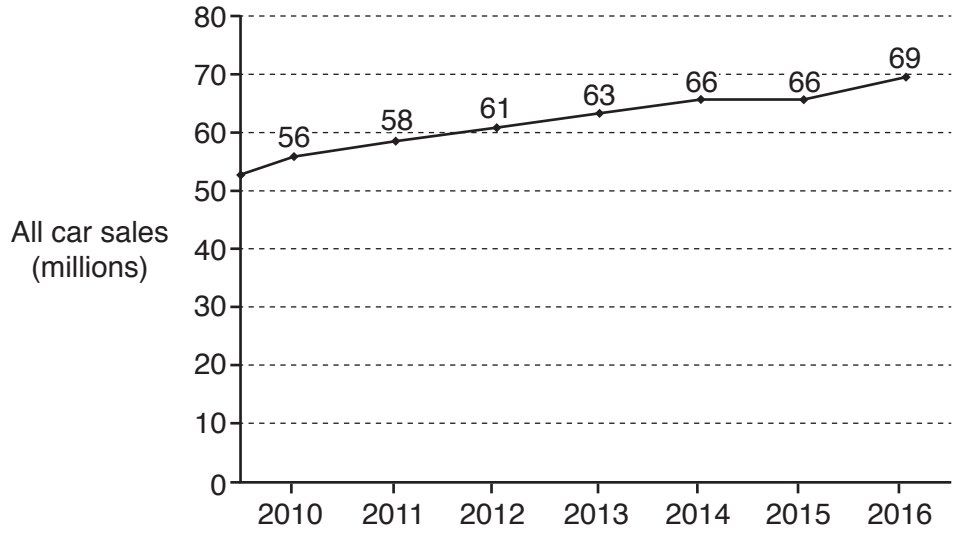


Fig. 1.2

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Some forecasters predict that about one third of the world's cars will be all-electric by 2040. Their forecasts are based on the assumption that the costs of batteries to run these cars will have declined steeply from their present levels. Battery costs are dependent on supplies of various metals which are used as component parts. Supplies of these metals are finite and their prices, linked to mining costs, will be crucial in increasing the scale of all-electric car production.

In 2016, the cost of the batteries was 49% of the total cost of the car. In 2017 it was stated at a New Energy conference in Shanghai that battery prices would need to drop by more than half before all-electric cars would become competitive with cars powered by petrol and diesel engines.

Oil producers claim that growth in sales of all-electric cars will not substantially reduce world demand for oil. The world needs oil for much more than just cars. Cars account for only about a fifth of the 95 million barrels the world consumes every day. Most of the rest is used in industry or to fuel heavy goods vehicles, aircraft and ships, which do not have easy non-oil alternatives. In developing economies, petrol sales are expected to continue rising because these countries do not have the infrastructure or sufficient capital investment to enable the switch to electric vehicles.

Source: The Times, 31 July 2017; letters to the Guardian, 8 August 2017;
World Motor Vehicle sales of new vehicles 2005–2016 published by OICA, accessed 8 August 2017

(a) Comment on the relative significance of the growth in the number of all-electric cars for 2010–2016 compared with annual sales of all cars in the world. [2]

(b) Use the information to discuss what might happen to the long-run average cost of producing batteries for all-electric cars. [5]

(c) Use the information to assess whether it is likely that the switch to all-electric cars will substantially reduce world demand for oil. [6]

(d) Assess the effects on the social costs of transport of replacing diesel and petrol engine cars with all-electric cars. [7]

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Section B

Answer **two** questions.

2 'The cause and extent of market failure depends entirely upon the type of market structure under consideration.'

Discuss this statement. [25]

3 **(a)** Explain the factors which determine the elasticity of demand for labour and discuss the importance of the elasticity of demand for labour in relation to the effectiveness of a government's minimum wage policy. [12]

(b) 'Monopsonist employers cause labour market failure while trade unions can solve this labour market failure.'

To what extent do you agree that this view is accurate? [13]

4 **(a)** Explain what economists mean by the marginal propensity to consume and consider the importance of this concept in relation to government macroeconomic policy. [12]

(b) Discuss what determines the level of savings in an economy and assess the impact of an increase in the level of savings upon economic growth and employment. [13]

5 **(a)** Explain the quantity theory of money and discuss why the theory might not work in practice. [12]

(b) To what extent do you agree with the view that the control of inflation should be the most important macroeconomic aim? [13]

6 'In developing economies an increase in GDP determines an increase in the standard of living. Foreign direct investment (FDI) will produce an increase in GDP therefore governments in developing economies should encourage FDI.'

How far do you agree with this statement? [25]

7 **(a)** Explain what is meant by infrastructure and consider the view that an increase in investment in infrastructure will promote an increase in both actual and potential economic growth. [12]

(b) To what extent do you agree that it is **not** possible to achieve economic growth without simultaneously causing a balance of payments deficit? [13]

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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

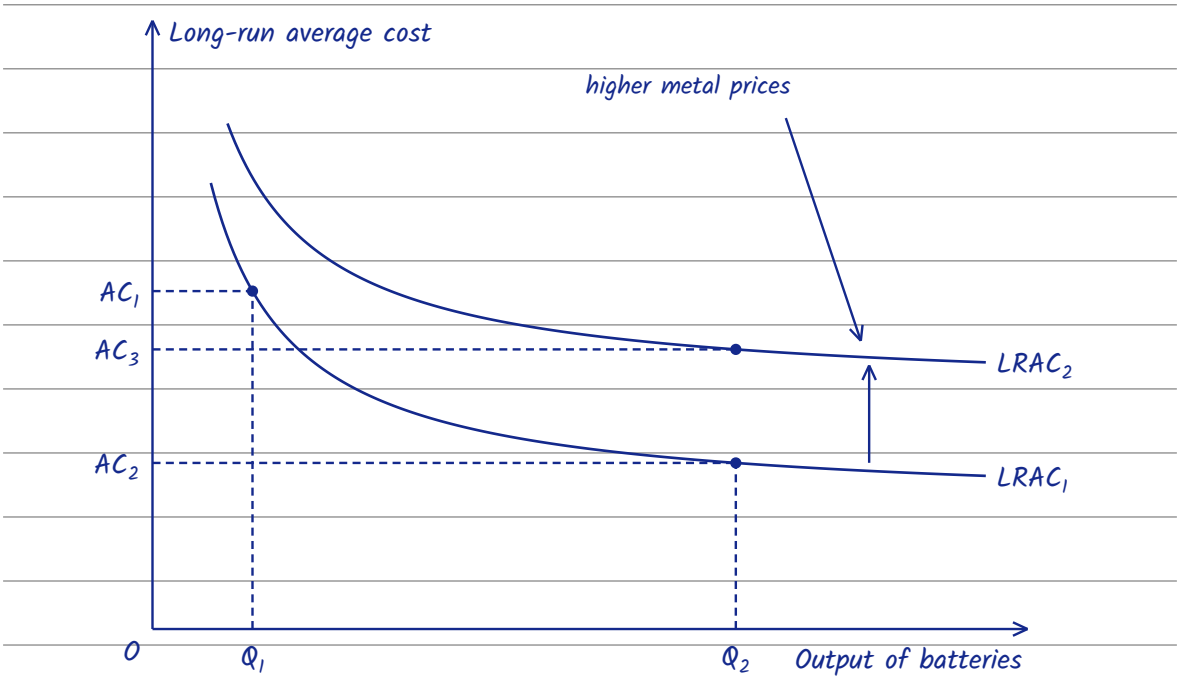
Answers for paper 9708/41

1(a) Both have grown over the period: the cumulative number of all-electric cars rose from about 0.04 million in 2010 to 2 million in 2016, and annual sales of all cars rose from 56 million to 69 million. However, the growth of all-electric cars is far less significant in scale. Even the total stock of 2 million built up over seven years is only about 2.9% of one year's car sales in 2016 (2 ÷ 69 × 100 = 2.9%).

1(b) Long-run average cost (LRAC) is total cost divided by output when all factors are variable. It is made up of average fixed cost (AFC) and average variable cost (AVC).

As sales of all-electric cars rise, with forecasts of one third of the world's cars by 2040, battery output will increase greatly. Battery makers can then gain economies of scale: large fixed costs of research, plant and machinery are spread over more units, so AFC falls, and technical and purchasing economies cut costs. This is a movement down LRAC1 from AC1 to AC2 in the diagram, as forecasters expect.

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However, battery costs depend on metals whose supplies are finite. As demand for these metals rises and reserves are depleted, mining costs and metal prices will rise, so the AVC of each battery rises and LRAC shifts up to LRAC2. If this effect is large, cost at Q2 could be AC3, cancelling out the economies of scale. So LRAC will fall only if improved battery technology reduces the use of these metals; otherwise it may not fall by the 'more than half' needed.

1(c) Some evidence suggests a substantial fall. If about one third of the world's cars are all-electric by 2040, they will use no petrol or diesel, so the derived demand for oil as a fuel for cars must fall.

However, most evidence is against a large reduction. Cars account for only about a fifth of the 95 million barrels used each day, about 19 million barrels. Even if a third of these were replaced, demand would fall by only about 6 million barrels, around 7%. The other 80% is used in industry and to fuel heavy goods vehicles, aircraft and ships, which have no easy non-oil alternatives, so this demand is price and cross-price inelastic and will not switch.

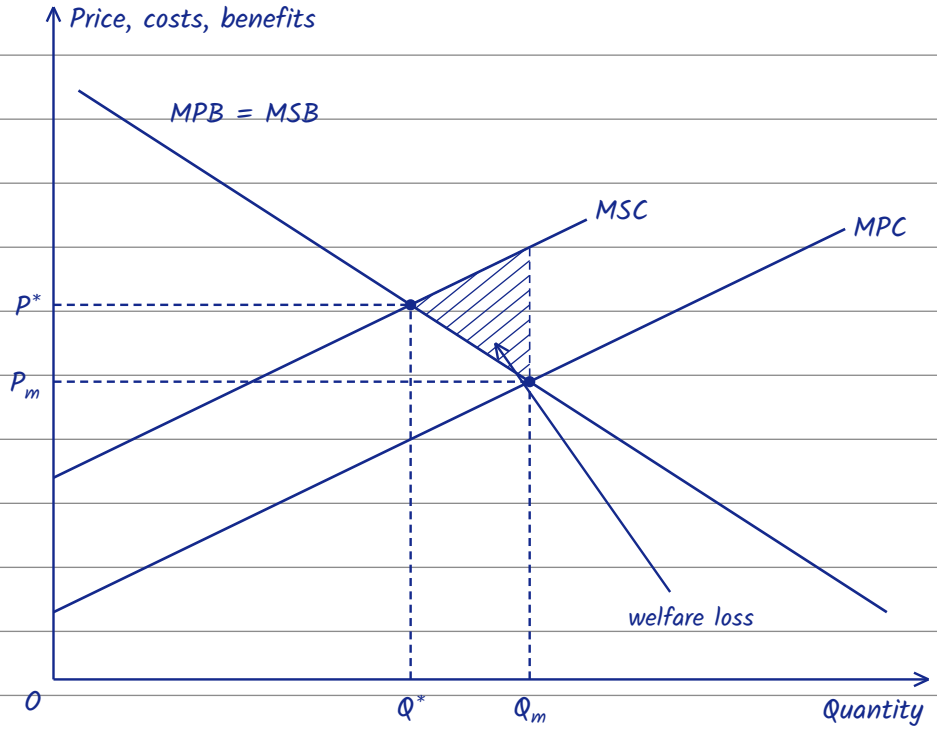
Also, in developing economies petrol sales are expected to keep rising, because

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these countries lack the charging infrastructure and capital investment needed to switch to electric cars. As their incomes grow, their demand for oil will increase and could offset the fall in developed countries. The forecast also depends on battery costs falling by more than half, which may not happen.

On balance, it is unlikely that the switch will substantially reduce world demand for oil; it is more likely to slow down its growth.

1(d) Social cost is private cost plus external cost (MSC = MPC + external cost). External costs are costs to third parties not paid for by the driver. Exhaust emissions from petrol and diesel cars pollute the air, causing breathing problems especially in urban areas and adding carbon to the atmosphere, so MSC is above MPC. Drivers consider only MPC, so the market produces Qm, more than the social optimum Q^*, and the shaded area is the welfare loss.



Replacing these cars with all-electric cars eliminates exhaust emissions, so the external cost per journey falls and MSC moves closer to MPC, reducing the social cost of transport. Cleaner air also brings a positive externality, as MSB rises above

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MPB through better health, so governments may subsidise electric cars like a merit good.

However, social costs will not be eliminated. If the number of cars keeps rising, congestion, accidents and noise will continue to get worse, especially in cities.

Heavy goods vehicles, ships and aircraft will still use oil, and their external costs will rise as demand grows. Electricity may itself be generated by burning fossil fuels, and increased mining of the metals for batteries creates new external costs, such as land and water pollution.

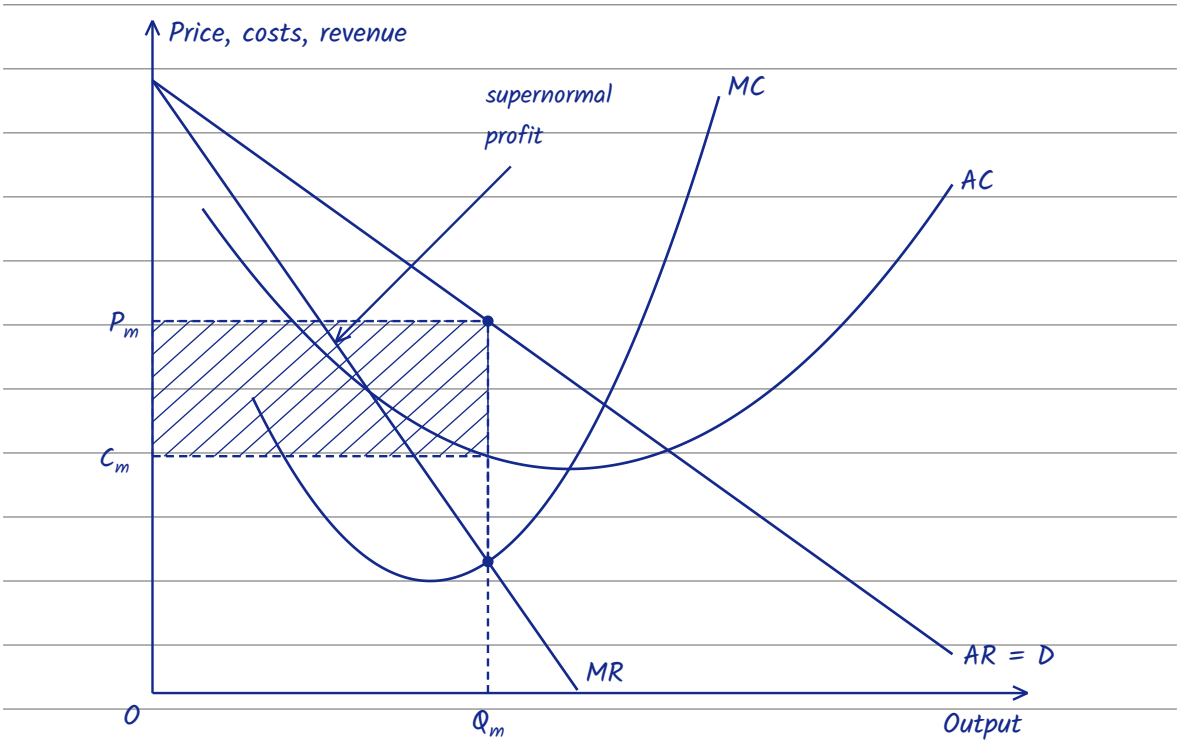
Overall, the switch is likely to reduce the pollution costs of car use, but the overall effect on the social costs of transport is uncertain and depends on how electricity is generated and how fast car use grows.

2

Market failure occurs when the free market fails to allocate resources efficiently, so that society's welfare is not maximised. Efficiency has two key parts: allocative efficiency, where price equals marginal cost (P = MC), so resources produce what consumers value most, and productive efficiency, where output is produced at the minimum point of the average cost curve. Market failure can be caused by the type of market structure, but it can also be caused by the type of good being produced.

Market structure is clearly one cause. In perfect competition, with many firms, a homogeneous product, perfect information and free entry and exit, the long-run equilibrium is where P = MC = minimum AC, so the market is both allocatively and productively efficient and there is no market failure. In monopoly, however, the firm maximises profit where MR = MC and charges the price on the demand curve.

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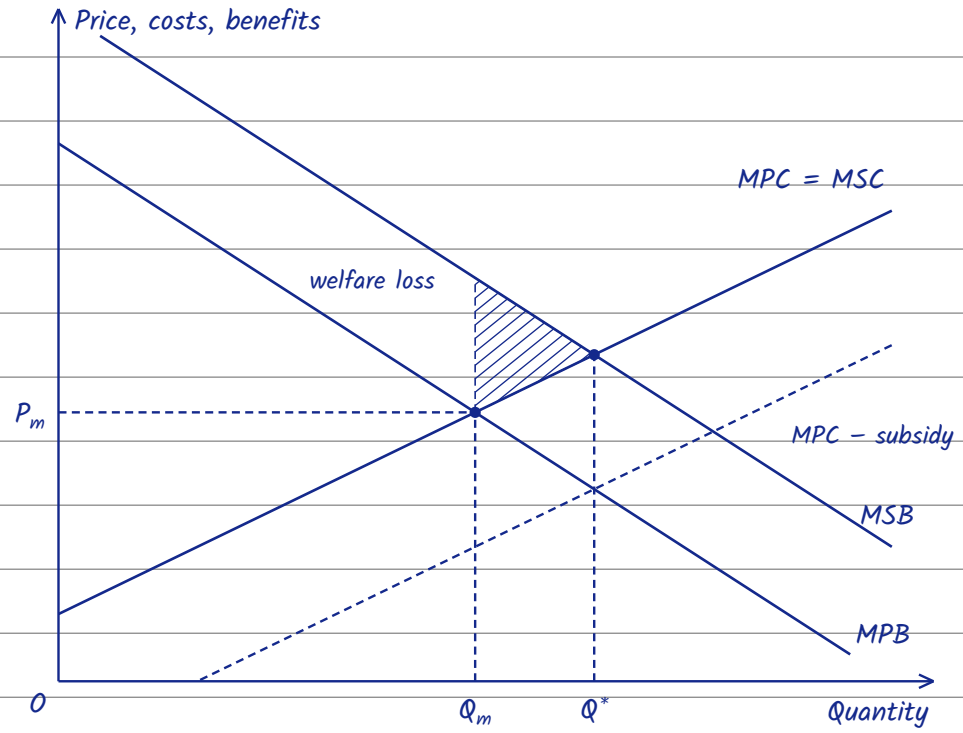
The diagram shows that at Qm the price Pm is above MC, so the monopolist is allocatively inefficient: output is restricted and consumers pay more, causing a deadweight welfare loss. Output is not at minimum AC, so it is productively inefficient, and barriers to entry protect supernormal profit in the long run. Without the pressure of competition, costs may also rise, causing X-inefficiency.

The extent of the failure also depends on the market structure. In monopolistic competition, the downward sloping demand curve means P > MC and firms produce with excess capacity, but because entry is free, profits are only normal in the long run and the inefficiency is small. In oligopoly, a few interdependent firms may collude, acting like a monopoly, or compete through advertising and branding rather than price, so the failure lies between the two. So the extent of market failure varies with the degree of competition. However, even a monopoly may not always fail: economies of scale may give it lower costs than competitive firms, a natural monopoly may be the most efficient structure, and supernormal profit can fund research, giving dynamic efficiency.

On the other hand, much market failure has nothing to do with market structure,

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because it depends on the type of good. When there are externalities, private and social costs or benefits differ. With a negative externality such as pollution, the market produces where MPC = MPB, beyond the social optimum where MSC = MSB, so there is over-production and allocative inefficiency. This happens even in a perfectly competitive market, so even the most competitive structure can fail. Merit goods such as education and vaccinations have positive externalities and consumers undervalue them because of imperfect information, so they are under-consumed: MSB is above MPB and output is below the optimum.



Demerit goods such as cigarettes are over-consumed, because their negative externalities and the harm to the user are underestimated. Public goods such as street lighting and national defence are non-excludable and non-rival, so the free rider problem means that firms cannot charge for them and they are not provided at all; this is a missing market, the most extreme form of market failure. Market failure can also come from information failure, factor immobility and an inequitable distribution of income, whatever the market structure.

In conclusion, the statement is only partly true. Market structure does help to

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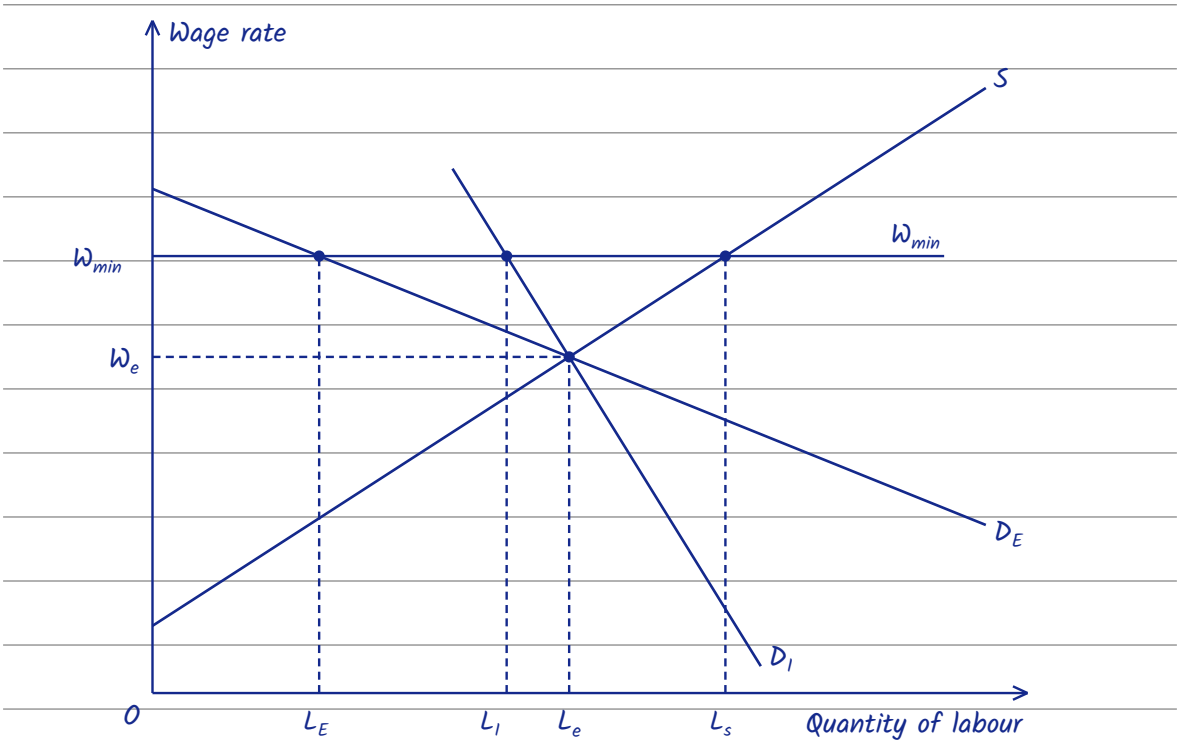
explain the cause and the extent of some market failure, since monopoly and oligopoly power cause allocative, productive and X-inefficiency which become greater as competition falls. But it does not depend entirely upon market structure, because externalities, merit and demerit goods, public goods and information failure cause market failure in any structure, including perfect competition. The cause depends on both the market structure and the type of good.

3(a) The demand for labour is a derived demand, determined by its marginal revenue product (MRP). The elasticity of demand for labour measures how responsive the quantity of labour demanded is to a change in the wage rate: % change in quantity of labour demanded ÷ % change in the wage rate. Its main determinants are:

First, the price elasticity of demand for the product. A wage rise increases costs and prices; if demand for the product is elastic, as in monopolistic competition, sales fall a lot and so does the demand for labour. Second, the proportion of labour costs in total costs. If labour is a large share, as in hairdressing, a wage rise increases total costs greatly, so demand for labour is elastic. Third, the ease of substituting capital for labour: if machines can easily replace workers, demand is elastic. Fourth, time: in the long run firms can change technology, so demand becomes more elastic.

A minimum wage is a legal wage floor set above the equilibrium wage. Its aim is to raise the incomes of the low paid, but it may reduce employment, and its effectiveness depends on the trade-off between these effects.

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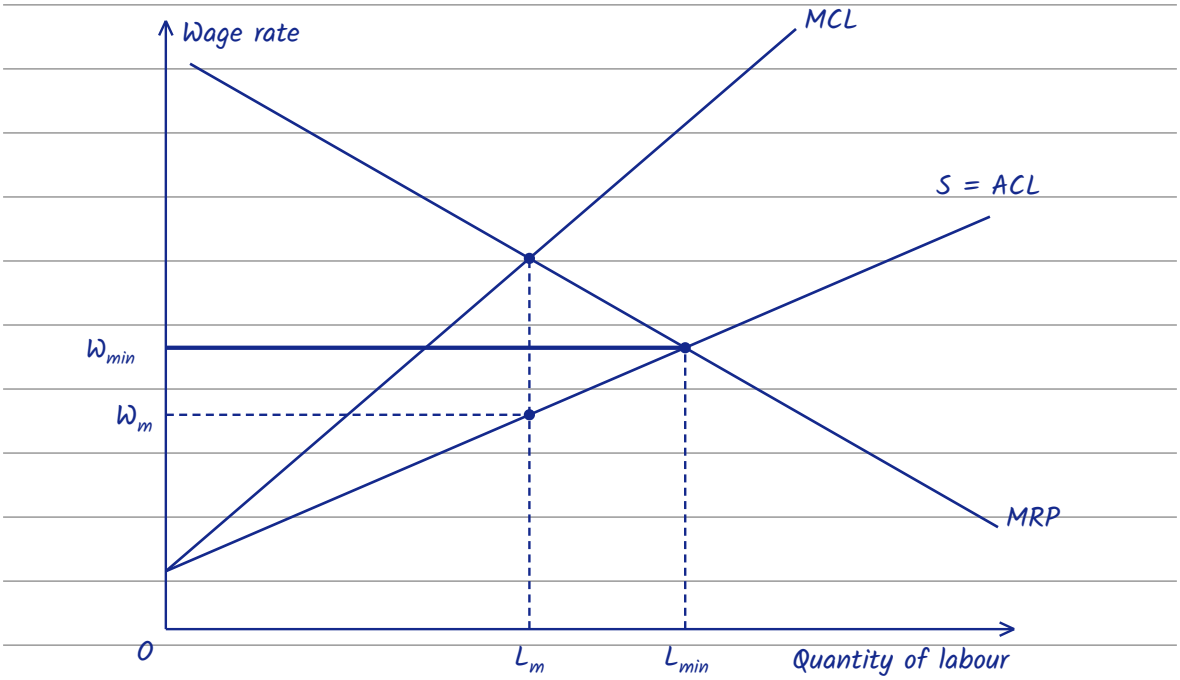
The diagram shows a minimum wage set above the equilibrium We. If demand for labour is inelastic (DI), employment falls only from Le to LI, so most workers keep their jobs and gain higher wages: total wages paid rise and the policy is effective. If demand is elastic (DE), for example because the product has many substitutes or labour is easily replaced by machines, employment falls to LE, so many low-paid workers lose their jobs and unemployment of Ls – LE results. The policy then harms the people it aims to help.

However, elasticity is not the only factor. The elasticity of supply of labour affects the size of the excess supply; if the employer is a monopsonist, a minimum wage can raise both wages and employment; and if the minimum wage raises productivity and spending, demand for labour may rise. In conclusion, the elasticity of demand for labour is very important: a minimum wage is most effective where demand for labour is inelastic, and in the long run, when demand becomes more elastic, its job losses may increase.

3(b) A monopsonist is the single buyer of labour in a market, such as the only large

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employer in a town. Because it faces the upward-sloping market supply of labour (S = ACL), it must raise the wage for all workers to hire one more, so its marginal cost of labour (MCL) lies above ACL. It maximises profit where MCL = MRP, employing Lm, but pays only the wage Wm read from the supply curve.



This is labour market failure. Compared with a competitive market, where the wage and employment would be Wmin and Lmin, the monopsonist employs fewer workers and pays a lower wage. Workers are exploited, as the wage Wm is well below the MRP, the value they add, and resources are misallocated, so the first part of the statement is largely accurate. However, monopsony does not always cause failure: if the employer pays above the market wage to attract skilled workers, or the labour market is competitive, there may be little exploitation.

A trade union is an organisation of workers which bargains collectively with employers. Facing a monopsonist, a union can create countervailing power. If it negotiates a wage at Wmin, the firm's MCL becomes horizontal at that wage up to the supply curve, so it now employs up to Lmin. As the diagram shows, both the wage and employment rise towards the competitive level, so the union can correct the market failure caused by monopsony.

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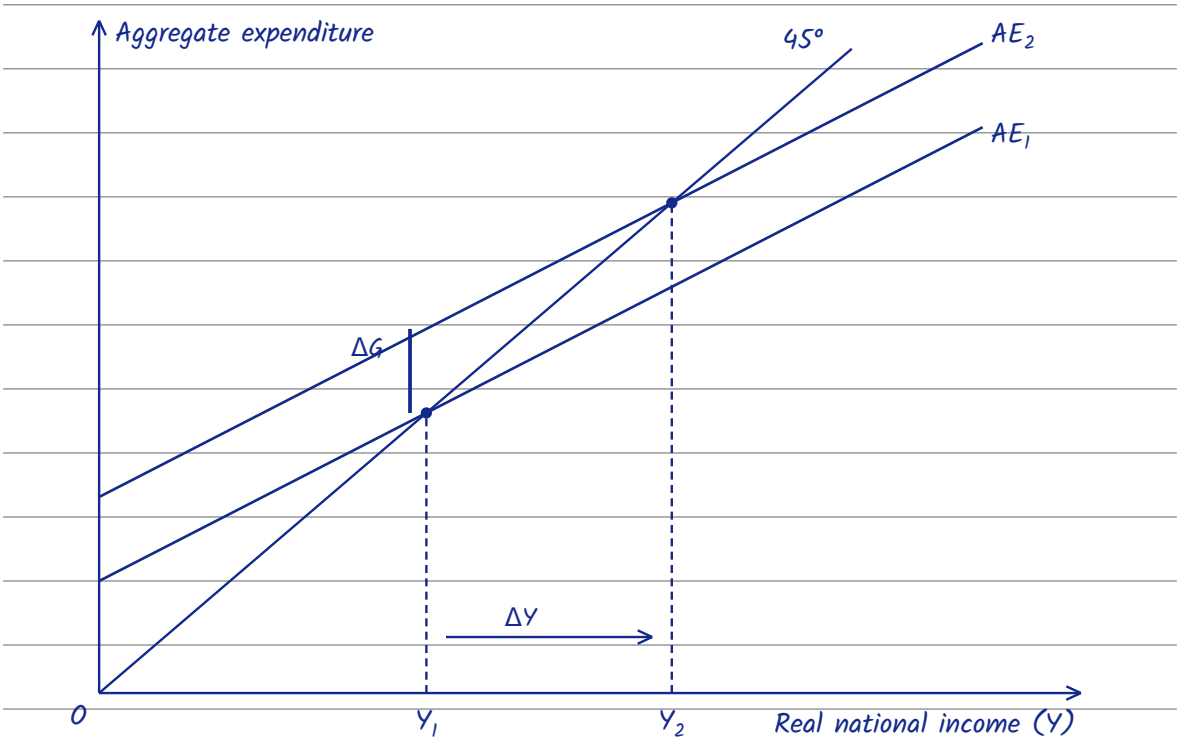
However, trade unions can also cause labour market failure. If the union pushes the wage above Wmin, employment falls again, and in a competitive labour market any wage above equilibrium creates real wage unemployment. Unions may also restrict the supply of labour through closed shops or long training requirements, raising wages for members but reducing employment for others, and strikes reduce output. The outcome depends on the union's bargaining power and information, which it may not have, and in many countries union membership is now low.

In conclusion, I largely agree that monopsony causes labour market failure, because it reduces wages and employment below the competitive level. But trade unions only solve this failure in particular circumstances, when they bargain for a wage close to the competitive level; if they push wages too high or restrict supply, they create a different market failure, so the view is only partly accurate.

4(a) The marginal propensity to consume (MPC) is the proportion of any extra income that is spent on consumption: MPC = $\Delta C \div \Delta Y$. For example, if income rises by \$100 and consumption by \$80, the MPC is 0.8. Since extra income is either consumed, saved, taxed or spent on imports, MPC + MPS + MPT + MPM = 1 in an open economy with a government. Simple Keynesian theory assumes the MPC is constant, but in reality it tends to fall as income rises, because richer people save a larger share of extra income.

The MPC matters because it determines the size of the multiplier. When the government increases spending, the first rise in income is spent again, creating further rounds of income. The multiplier is $k = 1 \div (1 - MPC)$ in a closed economy without a government, so with an MPC of 0.8, $k = 5$, and a \$10bn increase in government spending raises national income by \$50bn. In an open economy $k = 1 \div (MPS + MPT + MPM)$.

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The diagram shows government spending raising aggregate expenditure from AE1 to AE2. National income rises from Y1 to Y2, by more than ΔG. The higher the MPC, the steeper AE and the larger the rise in income.

This is important for several aims. For employment and growth, a high MPC means fiscal policy has a large effect, so a small injection can close a deflationary gap. For inflation, a high MPC means that if the economy is near full capacity, extra spending may cause demand-pull inflation, so the government must judge the size of the change carefully. For the balance of payments, as income rises, part of the extra spending goes on imports, so a high marginal propensity to import worsens the current account. For redistribution, the poor have a higher MPC, so transferring income to them raises total spending more than tax cuts for the rich.

However, the importance of the MPC differs with the policy. It is most important for fiscal policy, whose effect works directly through the multiplier. For monetary policy, the key is how responsive consumption and investment are to interest rates, and for supply-side policies, which shift LRAS, the MPC matters much less. The MPC is also difficult to measure and can change with confidence. In conclusion,

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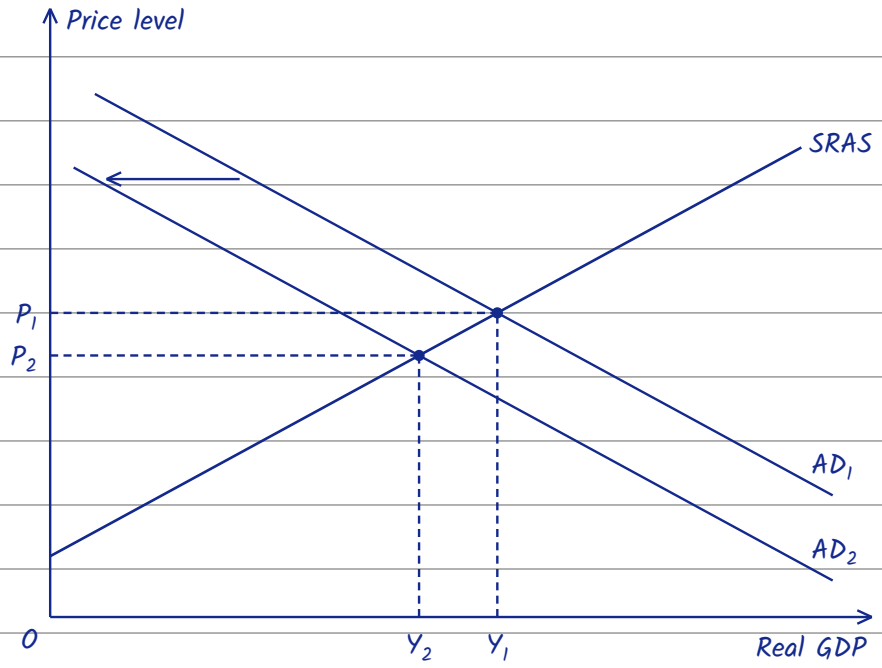
the MPC is an important concept, especially for fiscal policy, but its importance depends on the policy used.

4(b) Saving is the part of disposable income that is not spent on consumption. The level of savings in an economy is determined by several factors. The most important is the level of income: as income rises, people can afford to save more, and the average propensity to save rises. Interest rates matter, as a higher rate rewards saving and increases the opportunity cost of spending. Expectations also matter: if people expect unemployment or a recession, they save more as a precaution, and if they expect high inflation, they may spend now before prices rise. Other factors include attitudes to thrift, the age structure of the population, the availability of pension and government savings schemes, and the availability of credit.

Keynes argued that income is far more important than interest rates, which is supported by evidence that saving rises sharply in recessions, such as in 2020, even when interest rates are very low. So income and confidence are probably the main determinants.

In the short run, an increase in saving reduces employment. Saving is a withdrawal from the circular flow of income: if households save more, consumption falls, so aggregate demand falls from AD1 to AD2 and, through the negative multiplier, real output falls from Y1 to Y2. Firms need fewer workers, so cyclical unemployment rises and growth slows.

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Keynes called this the paradox of thrift: if everyone tries to save more, income falls, so total saving may not rise at all. The effect will be largest when the economy is already in a recession and when the multiplier is large.

In the long run, however, saving can increase growth and employment. Savings deposited in banks provide funds for lending, and a higher supply of loanable funds lowers interest rates, so investment rises. If the extra saving is fully turned into investment, injections equal withdrawals, AD need not fall, and the capital stock grows. This shifts LRAS to the right, increasing potential growth and creating jobs. High saving rates helped to fund rapid growth in China and East Asia, and a country with low saving must rely on borrowing from abroad.

In conclusion, the impact depends on the time period and on whether saving is turned into investment. In the short run, higher saving is likely to reduce growth and employment, especially in a recession when confidence is low and firms do not want to borrow; in the long run, if financial markets channel savings into investment, it is likely to raise both.

5(a) The quantity theory of money is based on the Fisher equation of exchange: MV =

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PT. M is the money supply, V is the velocity of circulation (the number of times each unit of money is spent in a year), P is the general price level and T is the number of transactions, or real output. MV is total spending and PT is the money value of all goods and services sold, so the equation is always true as an identity.

Monetarists turn it into a theory of inflation by making two assumptions. V is constant, or stable, because it depends on payment habits which change only slowly. T is constant in the long run, because the economy tends towards the full employment level of output, which depends on supply-side factors and not on money. If V and T are fixed, any increase in M must lead to an equal percentage increase in P: if the money supply rises by 10%, the price level rises by 10%. So inflation is caused by excessive growth of the money supply, and to control inflation the government should control the money supply.

However, the theory might not work in practice. First, V is not constant. Keynesians argue that when the money supply rises, interest rates fall and people hold more idle money, so V falls; after 2008, quantitative easing greatly increased the money supply in the UK and the USA, yet inflation stayed low because velocity fell. Second, T is not fixed when there is spare capacity: if the economy is below full employment, extra money can increase output rather than prices. Third, it is very difficult to define and measure the money supply, since there are many measures, from narrow money to broad money, and banks create credit. Fourth, causation may run the other way: a rise in prices or output increases the demand for money, and banks then lend more, so the money supply increases as a result of inflation rather than causing it.

In conclusion, the theory gives a useful long-run explanation of inflation, especially in cases of hyperinflation, such as Zimbabwe, where huge increases in the money supply clearly drove prices up. But because the assumptions that V and T are constant often do not hold, especially in the short run and in a recession, it is not a reliable guide in practice. The assumption about V is probably the most

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important weakness.

5(b) The main macroeconomic aims are low and stable inflation, low unemployment, steady economic growth and a stable balance of payments on current account.

Inflation is a sustained rise in the general price level.

There are strong reasons to make inflation control the most important aim. High inflation reduces the purchasing power of money, harming those on fixed incomes and savers when the real interest rate is negative. It creates uncertainty, so firms delay investment, which reduces long-run growth. It also makes exports less price competitive and imports relatively cheaper, which worsens the current account and puts pressure on the exchange rate. Lower exports and investment then cause unemployment. Because high inflation damages all the other aims, low inflation can be seen as a precondition for achieving them, which is why many central banks, such as the Bank of England, have an inflation target of 2%.

However, failure to achieve the other aims can be just as serious. High unemployment means a waste of scarce resources, so output is below potential, and it causes poverty, loss of skills and social problems; it also reduces tax revenue and increases welfare spending, worsening the budget deficit. Low or negative economic growth means living standards stop rising, and for a developing economy growth is essential to reduce poverty. A persistent current account deficit must be financed by borrowing or selling assets and may force a sharp depreciation.

There is also a conflict between aims. The Phillips curve suggests a short-run trade-off between inflation and unemployment, so controlling inflation with higher interest rates or tighter fiscal policy may reduce growth and raise unemployment. Strict inflation control can therefore cause a recession, as some argue it did in the early 1980s. Very low inflation or deflation is also harmful, as consumers delay spending.

The relative importance also depends on the situation. When inflation is very high,

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as in hyperinflation, controlling it must come first. When inflation is low and stable but unemployment is high, as after 2008 and in 2020, reducing unemployment and restoring growth become more important.

In conclusion, I partly agree. Controlling inflation is very important because high inflation damages growth, employment and the balance of payments, so low stable inflation provides the basis for the other aims. But it should not always be the most important aim: the priority should depend on which problem is most serious in the economy at the time, and inflation should be kept low rather than eliminated at any cost.

6 The statement has three parts: that an increase in GDP determines an increase in the standard of living, that foreign direct investment (FDI) increases GDP, and that governments of developing economies should therefore encourage FDI. Each needs to be assessed.

GDP is the total value of goods and services produced in an economy in a year. The standard of living refers to people's material and non-material well-being. A rise in real GDP per head means more goods and services per person, so for a developing economy it can mean better food, housing, healthcare and education, and higher tax revenue to pay for public services. So economic growth is usually necessary for living standards to rise.

However, an increase in GDP does not determine an increase in living standards. GDP must be measured in real terms and per head: if the population grows faster than GDP, GDP per head falls. The gains may go to a small rich group, so inequality increases and the poor are no better off. Growth may come with pollution, longer working hours and the depletion of natural resources. Much of the output may be capital goods or exports, not consumer goods, and GDP ignores the informal economy and non-material factors. Measures such as the Human Development Index, which includes life expectancy and education, show that some

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countries with similar GDP per head have very different living standards. So the first part is only partly true.

FDI is investment by a multinational company (MNC) in productive assets in another country, such as building a factory. FDI is an injection: it increases investment, so AD rises and through the multiplier GDP rises in the short run. It also increases the capital stock and brings new technology, management skills and training, which raises productivity and shifts LRAS to the right, raising potential output. It creates jobs, increases tax revenue and exports, and brings in foreign currency. Developing countries often lack domestic saving, so FDI helps to fill the savings gap and the foreign exchange gap.

However, FDI may not increase GDP as much as expected. Profits are repatriated to the MNC's home country, so GNI rises by less than GDP. MNCs may import most of their inputs and use capital-intensive methods, creating few jobs and few links with local firms. They may drive local firms out of business, use transfer pricing to avoid tax, exploit low-cost labour and natural resources, and cause pollution. Governments often have to offer tax breaks and subsidies to attract them, and MNCs may leave quickly when costs rise elsewhere.

There are also alternatives. Governments could encourage domestic saving and investment, invest in education, health and infrastructure, receive aid, or use trade to grow. Many successful economies, such as China, used FDI but combined it with conditions on local content, joint ventures and technology transfer, which shows that the type of FDI and how it is managed matter.

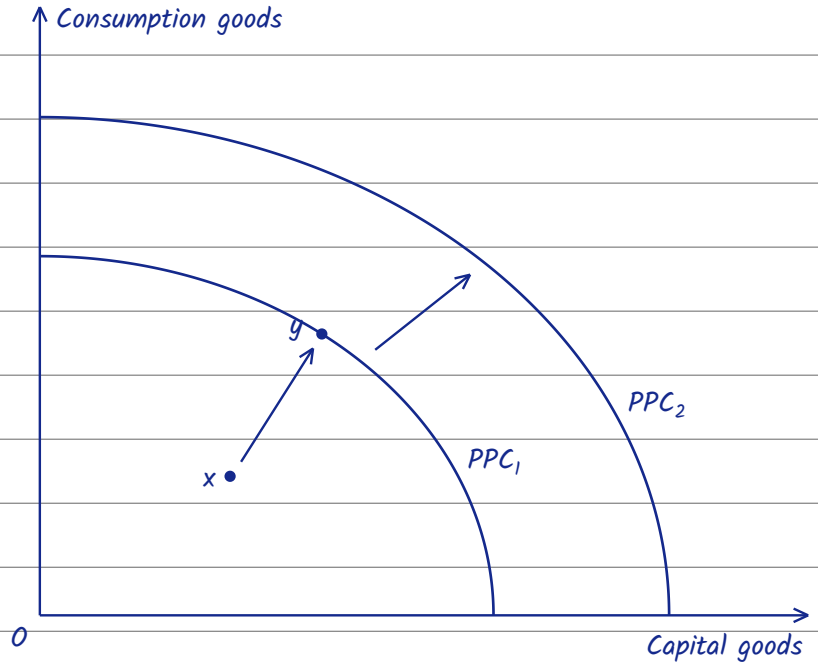
In conclusion, I only partly agree. An increase in GDP makes higher living standards possible but does not guarantee them, as distribution and the type of growth matter. FDI is likely to raise GDP, but by less than it appears if profits leave the country. Governments in developing economies should encourage FDI, but selectively, with regulation to ensure that it creates local jobs, transfers skills and protects the environment, and alongside policies to spread the benefits of growth.

Question number

7(a)

Infrastructure is the basic physical and organisational facilities that an economy needs to operate, such as roads, railways, ports, airports, power generation, water supply, telecommunications, and schools and hospitals. It enables firms to produce and distribute goods and services efficiently and is often provided by the government because of its high cost and external benefits.

Economic growth is an increase in real GDP over a period of time. Actual growth is an increase in real output, using previously unemployed resources, shown by a movement from a point inside the production possibility curve (PPC) towards it, such as x to y. Potential growth is an increase in the productive capacity of the economy, shown by an outward shift of the PPC from PPC1 to PPC2.



Investment in infrastructure increases actual growth in the short run. Investment and government spending are injections into the circular flow, so aggregate demand rises and, through the multiplier, real output and employment increase, for example as construction workers are hired. This only happens if there is spare capacity; if the economy is near full employment, higher AD mainly causes inflation.

It also increases potential growth in the long run. Better transport cuts firms'

Question number

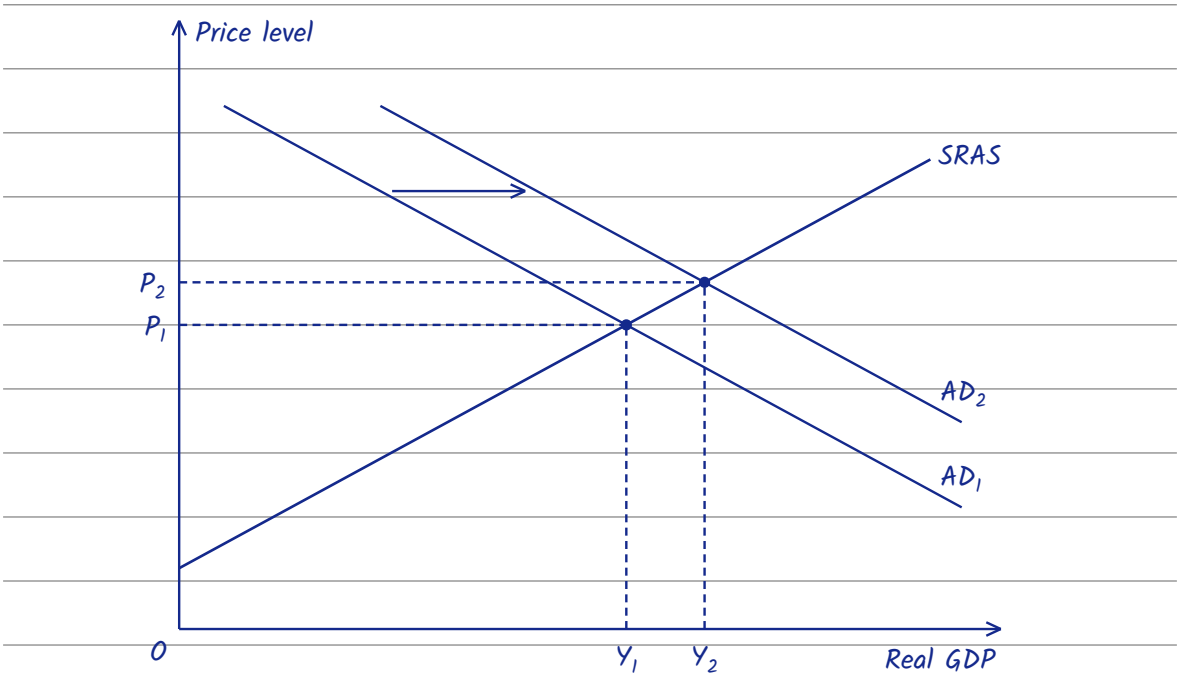
costs and journey times, reliable power and communications raise productivity, and education and health investment improves the quality of labour. The quantity and quality of resources increase, so the PPC shifts outwards and LRAS shifts to the right.

However, the effects depend on several factors. Infrastructure projects take years to complete, so the supply-side benefits come with a long time lag. The projects must be well chosen and maintained; poorly planned projects may add little to capacity. If financed by borrowing, they may crowd out private investment. In conclusion, infrastructure investment is likely to promote both: actual growth in the short run, depending on spare capacity, and potential growth in the long run, depending on the type and quality of the investment.

7(b) Economic growth is an increase in real GDP. A balance of payments deficit here means a current account deficit, when spending on imports of goods and services and income outflows are greater than export earnings and income inflows. Both growth and a stable current account are key macroeconomic aims, and there may be a conflict between them.

Demand-side growth is likely to cause a deficit. If growth comes from expansionary fiscal or monetary policy, for example lower taxes or interest rates, consumption and investment rise and AD increases. As national income rises, spending on imports rises, by the marginal propensity to import. If AD grows faster than productive capacity, inflation also rises, making exports less competitive. The current account therefore worsens, as happened in the UK and the USA during their consumer-led booms. The deficit will be larger in countries with a high income elasticity of demand for imports and a high marginal propensity to import. The diagram shows AD rising from AD1 to AD2: real output grows from Y1 to Y2, but the price level also rises from P1 to P2.

Question number



However, growth does not always cause a deficit. Export-led growth increases exports, which are an injection, so AD rises while the current account improves, as in China and Germany, which grew while running large surpluses. Supply-side policies such as education, training and investment in technology increase productivity and shift LRAS to the right, which lowers costs and the price level, so exports become more competitive. Growth may also be in industries that replace imports. If the country's trading partners are growing at the same time, its exports rise too.

There are also other factors. A floating exchange rate will depreciate when there is a deficit, making exports cheaper and imports dearer, which reduces the deficit in time. A deficit is not always a problem if it is caused by imports of capital goods that raise future capacity and exports, and it can be financed by capital inflows.

In conclusion, I disagree with the statement. Growth driven by consumer demand in an economy with a high propensity to import is very likely to cause a current account deficit, at least in the short run. But growth driven by exports or by supply-side improvements in productivity can be achieved without a deficit, so it depends on the source of growth and the policies used.

Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/42**

Paper 4 Data Response and Essays **October/November 2021**

2 hours 15 minutes

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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 **two** questions.
- 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 70.
- 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 this question.

1 **Competition in the skies over Europe**

In the sixteen months to April 2019 thirteen airlines ceased trading in Europe. This reflected a global trend where small airlines found it increasingly difficult to compete against large airlines, which have continued to grow.

Large airlines charge a price for a flight that includes meals and entertainment for passengers. Smaller airlines charge a price for the flight only and passengers need to pay extra for other services such as meals.

Large airlines benefit from economies of scale. Without these cost-reductions some smaller airlines have gone bankrupt.

The reduction in the number of airlines has not reduced the overcapacity in the market because the aircrew and aircraft of the bankrupt airlines were acquired by the remaining companies, which have developed into super-airlines. This has left passengers with fewer airlines to choose from and more expensive fares. It was predicted that this would lead to an increase in the market share for the top five European airlines from 50% of the European market in 2019 to match the top five United States (US) airlines, which control 77% of the US market.

The development of super-airlines took place at the same time as increasing regulation of the airline market. For example, the European Union (EU) will only grant operating licences for flights between EU countries to an EU airline. This has prevented non-EU airlines from competing on EU routes.

For the super-airlines, large scale is the easy way to avoid the stresses and strains of open competition. For passengers this will lead to higher prices and poorer service.

Sources: adapted from Financial Times, 6 October 2017 and The Economist, 27 April 2019

(a) Using the information, explain the predicted effect of the development of super-airlines on the concentration ratio in the European airline market. [2]

(b) 'Large airlines benefit from economies of scale.'

With the use of an example and a diagram, explain how a large airline can benefit from economies of scale. [5]

(c) Explain what is meant by a contestable market and discuss how making the airline market more contestable could benefit passengers. [6]

(d) Identify the market structure for airlines in Europe in 2019 following the development of the super-airlines and discuss how airlines may compete in this market structure. [7]

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Section B

Answer **two** questions.

2 Discuss whether market failure can be successfully eliminated by governments. [25]

3 **(a)** Use marginal utility analysis to explain the derivation of the individual demand curve for a good. [12]

(b) Use indifference curve analysis to discuss whether the demand curve for a good will always slope downwards. [13]

4 **(a)** Explain the link between diminishing marginal returns and the shape of a firm's short-run marginal cost curve and short-run average total cost curve. [12]

(b) Discuss whether consumers or producers benefit more from the practice of price discrimination. [13]

5 Discuss the extent to which gross domestic product (GDP) is a useful measure of living standards and economic development. [25]

6 **(a)** Explain the difference between frictional unemployment and real wage (classical) unemployment. [12]

(b) Evaluate the policies available to a government to reduce the level of structural unemployment. [13]

7 **(a)** Explain the quantity theory of money and consider its relevance for a country's macroeconomic policy. [12]

(b) Discuss whether fiscal policy alone can promote a more equal distribution of income. [13]

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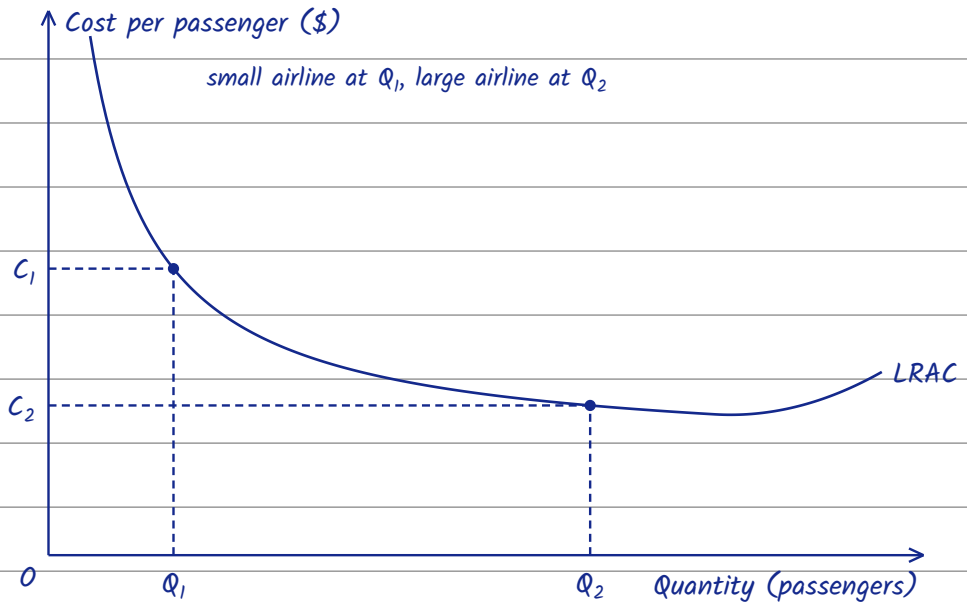
Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number

Answers for paper 9708/42

1(a) The concentration ratio is the combined market share of the largest firms. As small airlines go bankrupt and their aircraft and crew are taken over by the super-airlines, the number of airlines falls, so the five-firm concentration ratio is predicted to rise from 50% towards the 77% seen in the US. The market becomes more oligopolistic.

1(b) Economies of scale are the reductions in long-run average cost (LRAC) that occur as a firm increases its scale of output. For example, a technical economy: a large airline can fly bigger aircraft, such as a 300-seat plane instead of a 150-seat plane. The cost of the plane, fuel and the two pilots does not double, so the cost per passenger falls. Large airlines also gain purchasing economies when buying fuel and aircraft in bulk, and marketing economies, as the cost of advertising and booking systems is spread over more passengers.



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The diagram shows that as output rises from Q1 (a small airline) to Q2 (a large airline), LRAC falls from C1 to C2, so the large airline can charge lower fares or earn higher profits, and smaller airlines cannot compete.

1(c) A contestable market is one where there are low or no barriers to entry and exit, so new firms can enter freely and leave without losing sunk costs. The threat of entry means that existing firms, even if there are only a few, must behave as if they faced competition.

This could benefit passengers in two ways. First, lower prices: if super-airlines charge high fares and earn supernormal profits, new airlines would enter, for example if the EU allowed non-EU airlines onto EU routes. To prevent this, existing airlines keep fares close to average cost, earning only normal profit (limit pricing), which reverses the 'more expensive fares' in the article.

Second, better quality and more choice: the threat of entry gives airlines an incentive to cut costs and improve service, offering more routes, more flights and better meals and entertainment, rather than the 'poorer service' predicted.

Passengers also gain from more airlines to choose from if entry actually happens.

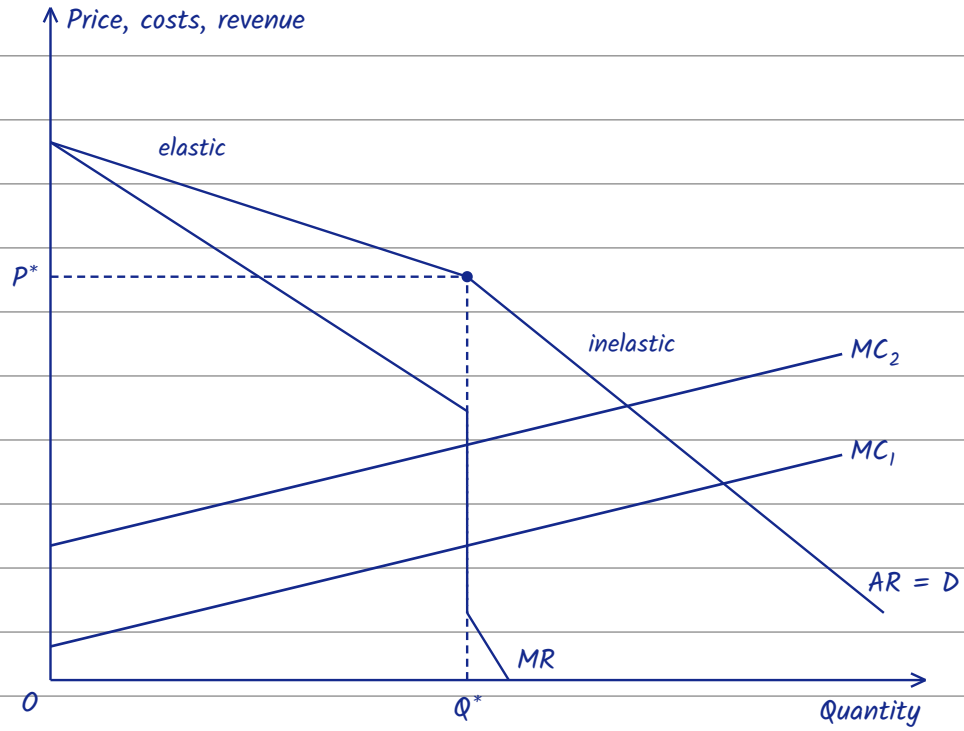
However, the airline market can only be made partly contestable, as aircraft and airport slots are costly.

1(d) The market structure is oligopoly: a few large super-airlines dominate the market, with the top five expected to have a large share, there are barriers to entry such as EU licences, and the firms are interdependent.

Because each airline must consider rivals' reactions, they may avoid price competition. Using the kinked demand curve, if one airline raises its fares, rivals do not follow and it loses many passengers (elastic), but if it cuts fares, rivals follow and it gains few (inelastic). Prices therefore tend to be stable, as shown at P^* where MC can change between MC1 and MC2 without changing price. Price cuts

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may still happen in a price war or on routes facing low-cost rivals.

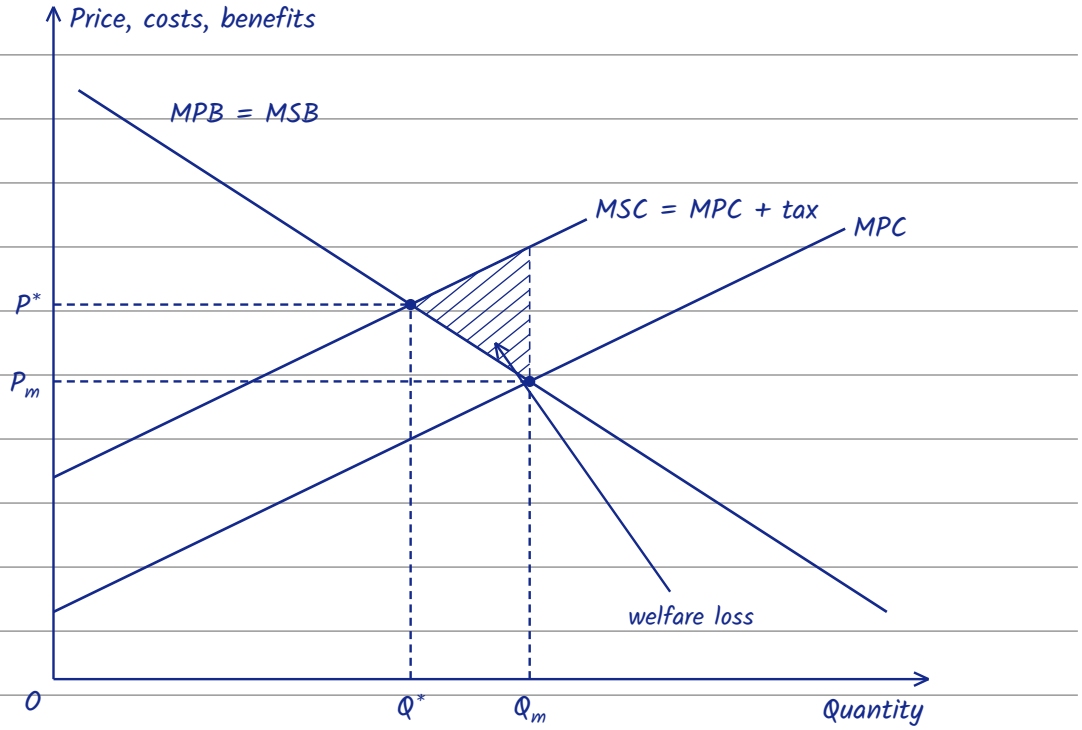


Instead, airlines compete in non-price ways. They use advertising, branding and marketing, such as loyalty schemes and frequent flyer points, to make demand less elastic. They compete on the quality of service, such as meals, entertainment, legroom and lounges, as the article shows large airlines do. They also compete through product innovation, such as new routes, more frequent flights and better online booking. Alternatively, they may collude to share routes and fix fares, which is the risk for passengers suggested by the article.

2 Market failure is when the free market fails to allocate resources efficiently, so society's welfare is not maximised. It means a lack of allocative efficiency, where P = MC, or productive efficiency, where output is at minimum average cost. Its causes include negative and positive externalities, merit and demerit goods, public goods, imperfect information and imperfect competition such as monopoly. Governments can use indirect taxes to correct negative externalities. Pollution from a factory means MSC is above MPC, so the market produces Qm, more than the

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optimum Q^*. A tax equal to the external cost raises the firm's MPC to MSC, so output falls to Q^* where MSC = MSB and the welfare loss is removed. The polluter pays, and the revenue can be used to clean up.



However, the government rarely knows the exact size of the external cost, since it is hard to put a money value on damage to health or the environment, so the tax may be set too high or too low. If demand is price inelastic, as for cigarettes, a tax reduces consumption little, and it is regressive.

Subsidies can correct positive externalities and the under-consumption of merit goods such as education and vaccinations, lowering the price so that consumption rises towards the level where MSB = MSC. But they have an opportunity cost, and again the size of the external benefit is hard to measure.

Direct provision is needed for public goods. Because public goods such as defence and street lighting are non-excludable and non-rival, free riders mean the market does not provide them. The government can provide them, financed from taxation, so the missing market is filled. But the government does not know how much people value them, so it may provide too much or too little, and state provision

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may be inefficient because there is no profit motive.

Legislation and regulation can ban or limit harmful activity, such as emission limits, bans on smoking in public places or compulsory education. Competition policy can prevent monopolies from abusing their power. Regulation is simple and certain, but it needs costly monitoring and enforcement, and firms may avoid it.

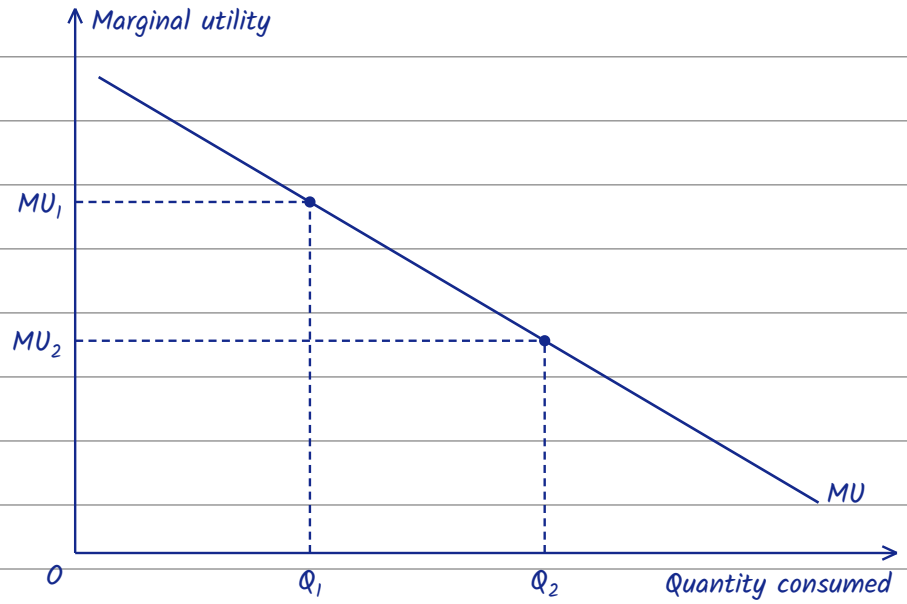
Providing information, such as health warnings, can reduce information failure, and tradable pollution permits can limit pollution at the lowest cost.

However, government intervention often leads to government failure, where intervention makes the allocation of resources worse. This is caused by a lack of information, the time lags in responding, administrative costs, political pressures and unintended consequences, such as black markets when goods are banned or taxed heavily. Regulators may also be influenced by the firms they regulate.

In conclusion, governments can reduce market failure, especially for public goods, which can be provided directly, and pollution, which can be limited by taxes, permits and regulation. But they cannot usually eliminate it, because they lack the information needed to set policy at exactly the right level and intervention creates its own costs. Success depends on the type of market failure and the policy used, and intervention is only worthwhile when its benefits exceed the cost of government failure.

3(a) Utility is the satisfaction a consumer gains from consuming a good. Total utility (TU) is the total satisfaction from all units consumed; marginal utility (MU) is the extra satisfaction from consuming one more unit. The law of diminishing marginal utility states that as more units are consumed, MU falls, as shown below.

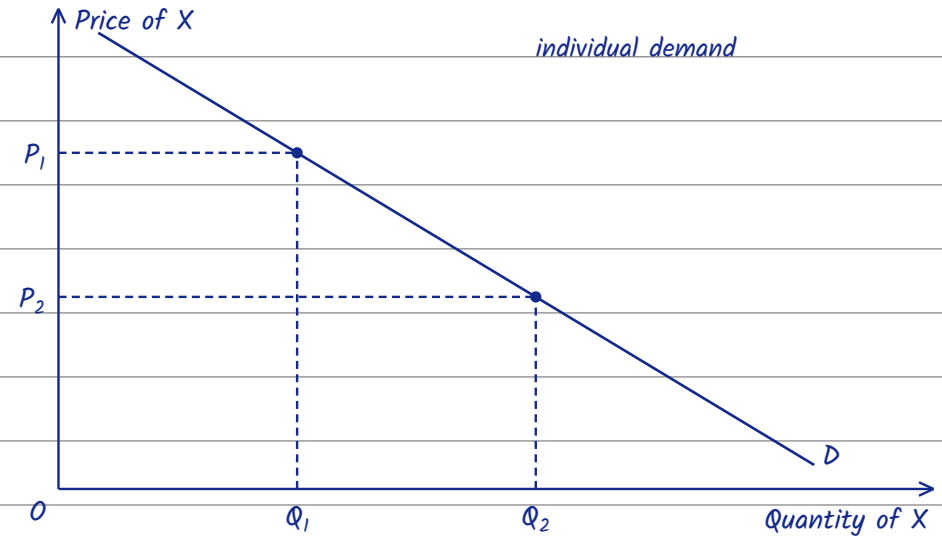
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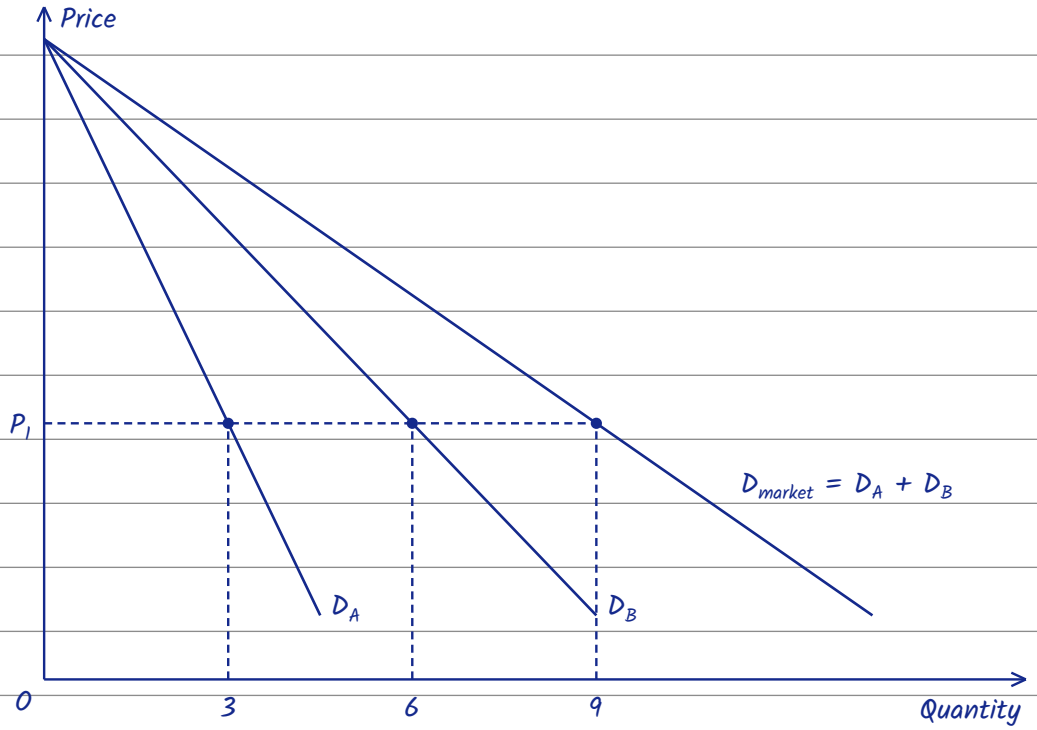
A rational consumer wants to maximise total utility from a limited income. With one good, they buy until the MU of the last unit equals its price. With two goods, X and Y, they are in equilibrium when the utility from the last dollar spent on each good is equal, the equi-marginal principle: MUx ÷ Px = MUy ÷ Py. If MUx ÷ Px were greater, the consumer could gain more utility by spending a dollar less on Y and a dollar more on X.

Now suppose the price of X falls from P1 to P2. Then MUx ÷ Px becomes greater than MUy ÷ Py, so the consumer gets more utility per dollar from X. They buy more X; as they do so, MUx falls, because of diminishing marginal utility, until MUx ÷ Px = MUy ÷ Py again. So a lower price leads to a larger quantity demanded, from Q1 to Q2. Plotting each price against the quantity bought gives the individual's demand curve, which slopes downwards.

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The market demand curve is found by adding the individual demand curves horizontally: at each price, the quantities demanded by every consumer are added together. For example, at P1 consumer A buys 3 units and consumer B buys 6, so market demand is 9 units.



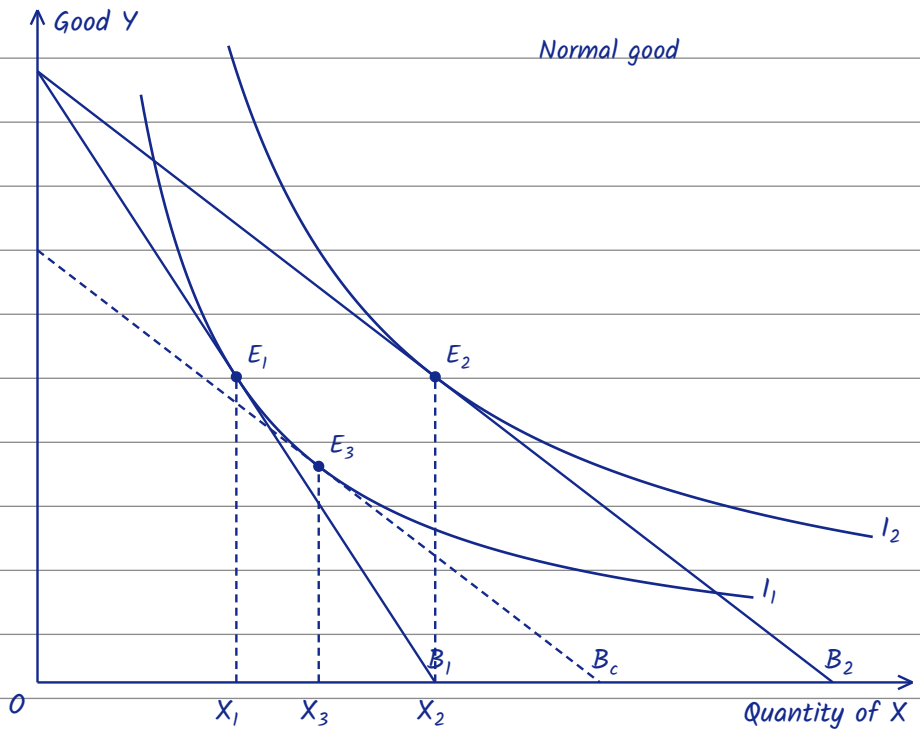
This analysis assumes that utility can be measured and that consumers are rational and have full information, which may not be realistic.

Question number

3(b)

An indifference curve (I) shows all combinations of two goods that give a consumer the same level of satisfaction; it is convex to the origin because of the diminishing marginal rate of substitution. A budget line (B) shows all combinations that can be bought with a given income at given prices. The consumer is in equilibrium where the budget line is tangent to the highest possible indifference curve.

When the price of good X falls, the budget line pivots outwards from B1 to B2 and the consumer moves from E1 to E2. This effect can be split. The substitution effect is the change in quantity due to the change in relative prices, with real income held constant: drawing a compensated budget line Bc parallel to B2 and tangent to I1 gives E3. The substitution effect (X1 to X3) always increases the quantity of the good that has become relatively cheaper. The income effect is the change in quantity due to the rise in real income (X3 to X2).

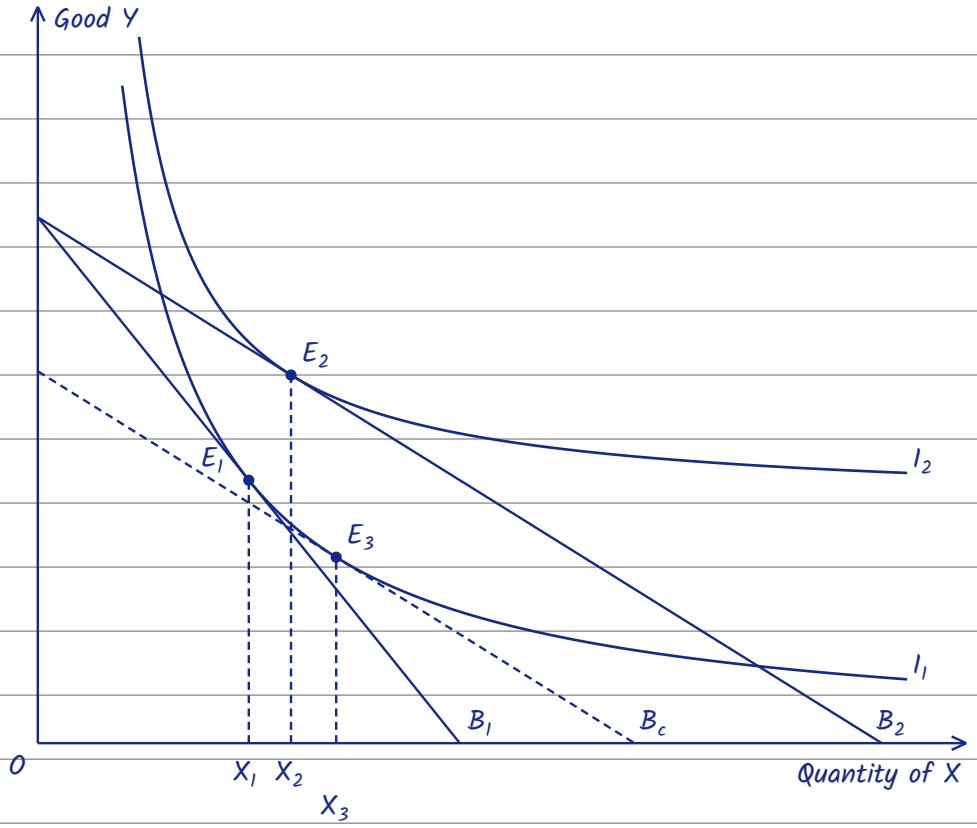


For a normal good, the income effect is also positive, so both effects increase the quantity demanded and the demand curve slopes downwards.

For an inferior good, demand falls as real income rises, so the income effect is

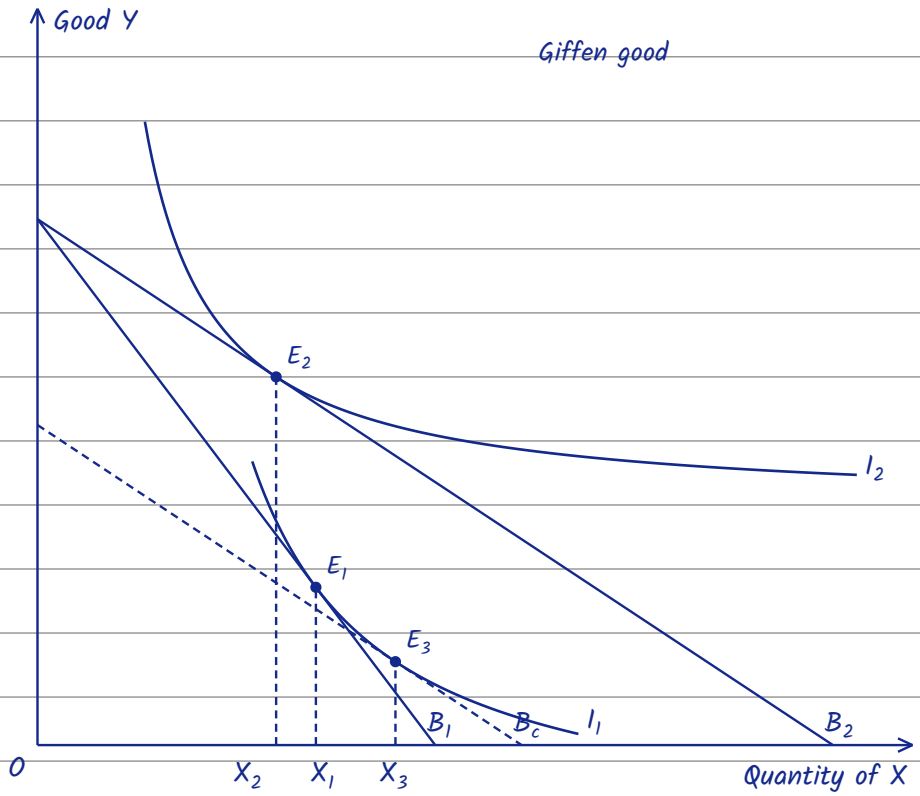
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negative and works against the substitution effect. As long as the substitution effect is larger, quantity still rises when price falls, from X1 to X2 below, so the demand curve still slopes downwards, though it is steeper.



For a Giffen good, a very inferior good that takes a large share of a poor consumer's income, such as a staple food like rice, the negative income effect is larger than the substitution effect. A fall in price then leads to a fall in quantity demanded, from X1 to X2 below, so the demand curve slopes upwards.

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Demand curves may also slope upwards for Veblen goods, where a higher price makes a luxury more desirable, though this is about tastes rather than income and substitution effects.

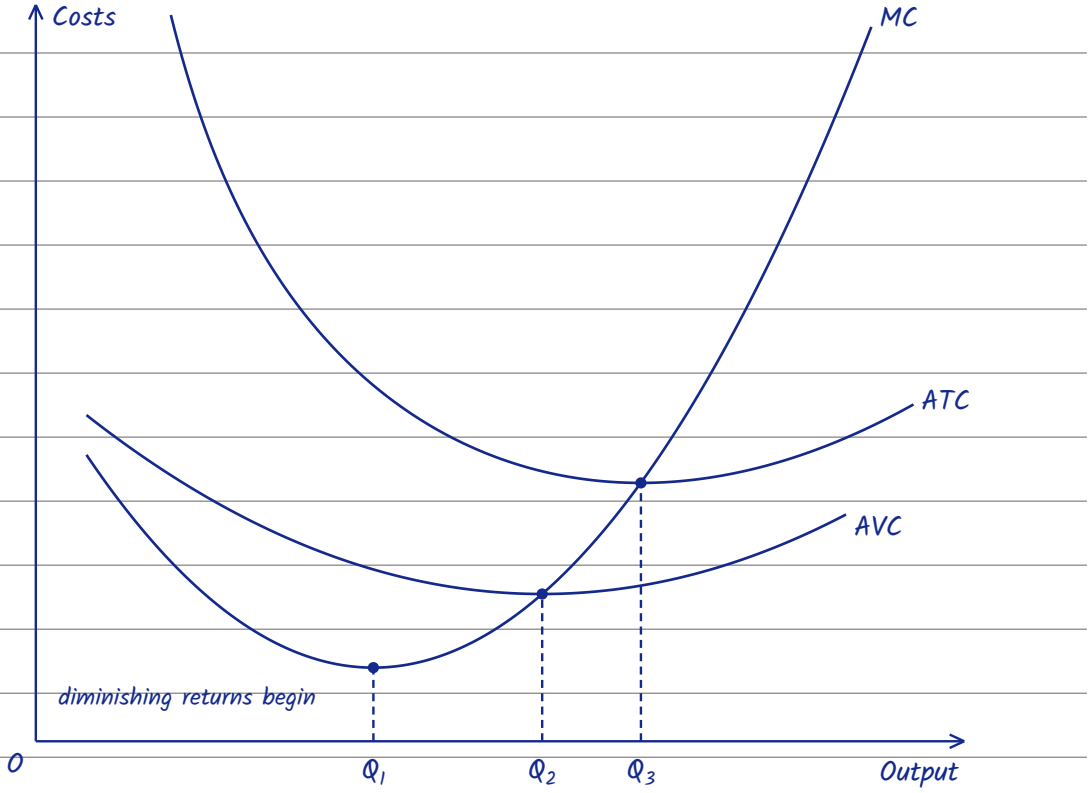
In conclusion, the demand curve does not always slope downwards. It slopes downwards for normal goods and most inferior goods, but for a Giffen good, where the negative income effect outweighs the substitution effect, it slopes upwards. Giffen goods are very rare in practice, so in almost all cases the demand curve slopes downwards.

4(a) The short run is the period in which at least one factor of production, usually capital, is fixed. The law of diminishing marginal returns states that as more units of a variable factor, such as labour, are added to a fixed factor, the marginal product (the extra output from one more worker) will at first rise but eventually fall. At first, extra workers allow specialisation and better use of the fixed machinery, so marginal product rises. Eventually, each worker has less capital to

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work with and workers get in each other's way, so marginal product falls.

Marginal cost (MC) is the extra cost of producing one more unit. If the wage is W and the marginal product of labour is MP, then MC = W ÷ MP. While marginal product rises, each extra unit of output needs less extra labour, so MC falls. Once diminishing returns set in, at Q1, marginal product falls, each extra unit needs more labour, and MC rises. So the U-shape of the short-run MC curve is caused by first increasing and then diminishing marginal returns.



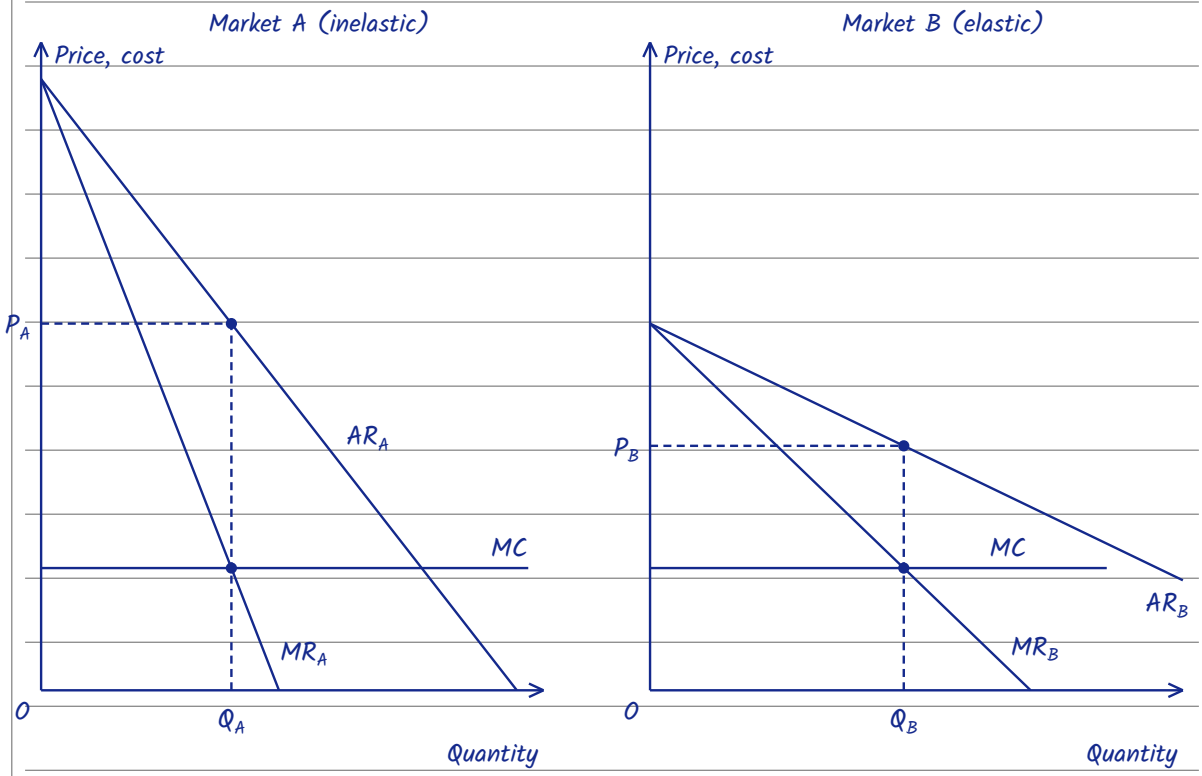
Average total cost (ATC) is total cost divided by output: ATC = AFC + AVC. Its shape follows from MC. Average fixed cost falls continuously as fixed costs are spread over more output. AVC falls while the marginal cost of each unit is below the average, and rises once MC is above it, so MC cuts AVC at its minimum (Q2). In the same way, ATC falls while MC is below ATC and rises when MC is above it, so MC cuts ATC at its lowest point (Q3). Because AFC keeps falling, the minimum of ATC is at a higher output than the minimum of AVC.

Therefore diminishing marginal returns explain why the short-run MC curve

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eventually rises, and because MC pulls the average up when it is above it, they also explain why ATC is U-shaped.

4(b) Price discrimination is when a firm charges different prices to different consumers for the same good or service, for reasons not related to differences in cost. For example, rail companies charge more for peak travel, and cinemas give student discounts. It can only occur when the firm has price-setting power, can separate the markets, and the markets have different price elasticities of demand; resale between markets must also be prevented.



The firm maximises profit by producing where MC = MR in each market. In the market with inelastic demand (A) it charges a high price PA, and in the elastic market (B) a lower price PB. Total revenue and profit are higher than with a single price.

Producers clearly benefit. Price discrimination turns consumer surplus into producer surplus, so profits rise. In first-degree discrimination, where each consumer pays the maximum they are willing to pay, all consumer surplus becomes profit. Higher

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profits can be used for investment and research, and spare capacity, such as empty seats off-peak, can be filled.

Consumers in the inelastic market lose, because they pay a higher price than under a single price and their consumer surplus falls. However, some consumers gain. Those in the elastic market, often students, pensioners or the less well-off, pay lower prices and some can now afford a product they could not otherwise buy. Output may be higher than under single-price monopoly, so allocative efficiency may improve. In some cases a service could not be provided at all without price discrimination, such as a rural bus service or a doctor in a poor area charging the rich more.

In conclusion, producers usually benefit more, because the main purpose of price discrimination is to turn consumer surplus into profit, so the gain to producers is certain while the effect on consumers is mixed. Consumers as a whole tend to lose, although those in the elastic market may gain; the overall outcome depends on whether total output rises and how the extra profit is used.

5 Gross domestic product (GDP) is the total value of all goods and services produced within a country in a year. To measure living standards, it is converted to real GDP per head: nominal GDP adjusted for inflation and divided by the population, usually in US dollars at purchasing power parity so that countries can be compared. The standard of living refers to the material and non-material well-being of people. Economic development is a broader concept: an improvement in people's quality of life, including reductions in poverty, better health and education, more freedom and choice, and structural change in the economy.

Real GDP per head is useful. A higher value means more goods and services are available per person, so material living standards are usually higher. Growth of GDP also provides the tax revenue that governments use to fund healthcare, education and infrastructure, which are part of development. GDP figures are widely available,

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collected using standard methods and easy to compare over time and between countries, and there is a clear positive link between GDP per head and other measures such as life expectancy.

However, GDP has many limitations as a measure of living standards. It is an average, so it ignores the distribution of income: a rise may benefit only a small rich group. It ignores non-marketed output, such as housework and subsistence farming, and the informal economy, which are large in developing countries, so their GDP is understated. It ignores leisure time, working conditions and the quality of goods, and it counts spending on defence or cleaning up pollution as output while ignoring negative externalities and the depletion of resources.

Comparisons using exchange rates can be misleading if costs of living differ, which is why PPP is used.

There are also problems with GDP data in developing countries. Statistics may be poorly collected, the population may not be accurately known, and much output is not recorded, so figures are unreliable.

GDP is an even weaker measure of economic development. Development includes literacy, health, access to clean water, gender equality and political freedom, none of which are measured directly. Some countries with high GDP per head from oil exports have relatively poor health, education and inequality outcomes.

So alternative measures are used. The Human Development Index (HDI) combines life expectancy, education (mean and expected years of schooling) and GNI per head at PPP into an index from 0 to 1, so it captures health and education as well as income. The Multidimensional Poverty Index (MPI) measures deprivation in health, education and living standards, and the Measure of Economic Welfare (MEW) adjusts GDP for leisure, unpaid work and environmental damage. These are broader, but HDI still uses only three measures with equal weights, and MEW relies on subjective valuations.

In conclusion, real GDP per head is a useful starting point for measuring material

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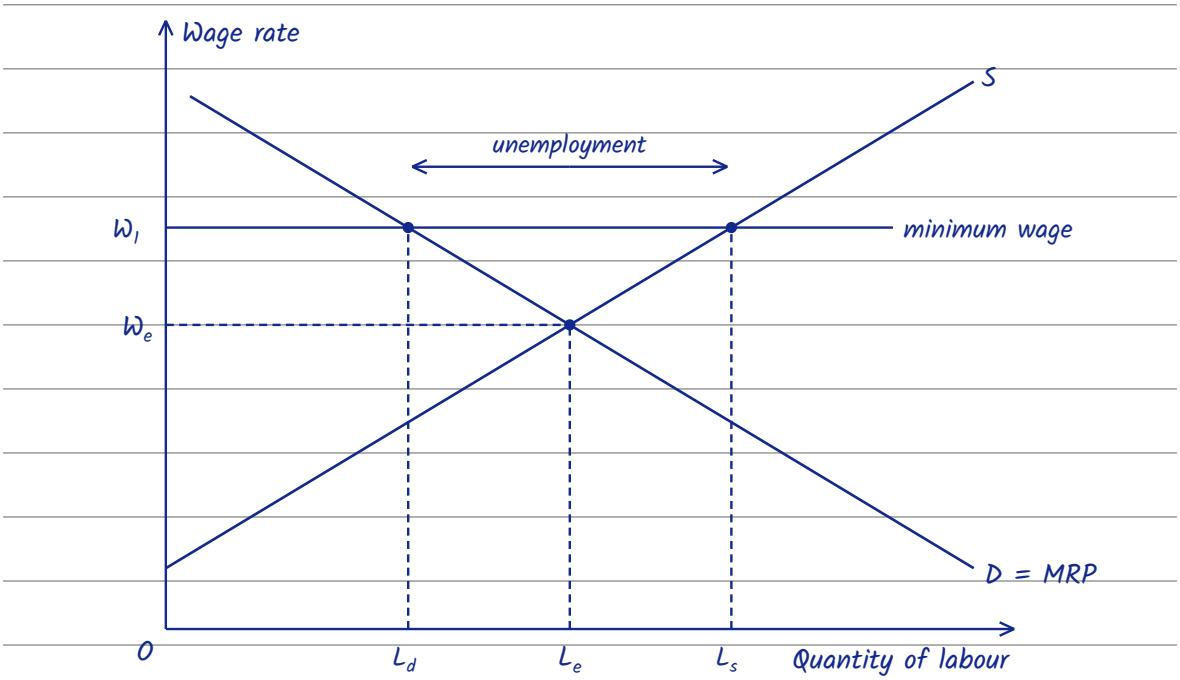
living standards, because it is available, comparable and closely linked to other indicators. But it is a much less useful measure of economic development, as it ignores distribution, the informal economy, the environment and non-material well-being. It is best used together with broader indicators such as HDI and MPI.

6(a) Unemployment is when people who are willing and able to work, and actively seeking work, cannot find a job.

Frictional unemployment is temporary unemployment that occurs when workers are between jobs. People leave jobs voluntarily to look for better ones, are dismissed, or enter the labour market for the first time, such as school leavers. It takes time to search and match workers with vacancies, because of imperfect information about jobs. It exists even when the labour market is in equilibrium and there are enough vacancies for every unemployed worker, so it is part of the natural rate of unemployment. It is usually short term, and some is useful, as better matching raises productivity. It can be reduced by better information, such as job centres and online job sites, and by reducing benefits which make long searches possible.

Real wage (classical) unemployment occurs when the real wage is held above the equilibrium wage at which the supply of labour equals the demand for labour. This can be because of trade union power or a minimum wage set by law above equilibrium. At the wage W1, firms demand only Ld workers, because the wage exceeds the MRP of the extra workers, but Ls workers wish to work, so there is an excess supply of labour of Ls – Ld.

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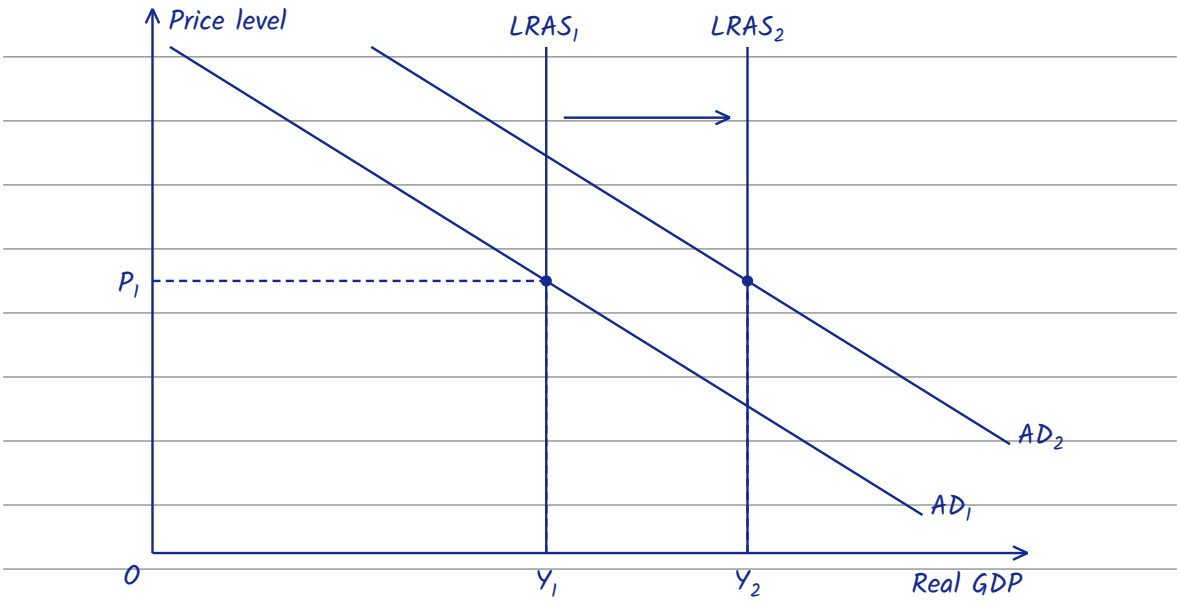
The key differences are as follows. Frictional unemployment is caused by the time taken to search for a job and imperfect information, while real wage unemployment is caused by the wage being too high, a failure of the price mechanism to clear the labour market. With frictional unemployment, vacancies exist that match the number unemployed; with real wage unemployment, there are not enough jobs at the current wage. Frictional unemployment is temporary, while real wage unemployment persists as long as the wage stays above equilibrium. So the remedies differ: better information for frictional, but lower real wages, through reducing union power or the minimum wage, for real wage unemployment.

6(b) Structural unemployment is long-term unemployment caused by a change in the structure of the economy, such as the decline of an industry because of new technology or foreign competition, as with coal mining. Workers lose their jobs and do not have the skills needed in growing industries (occupational immobility), or live in the wrong areas (geographical immobility). It is reduced mainly by supply-side policies.

Education and training improve the skills of unemployed workers, so they can move

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into growing industries, reducing occupational immobility. This tackles the main cause and also raises productivity, shifting LRAS to the right.



However, it is costly, has an opportunity cost, takes a long time, and the government may not know which skills will be needed; older workers may be unwilling to retrain.

Policies to improve geographical mobility, such as subsidies for housing costs and relocation grants, help workers move to areas with jobs. But family ties and high housing costs in prosperous regions limit their effect. Alternatively, regional policy can bring jobs to workers, using grants or lower taxes to attract firms to areas of high unemployment, although firms may need large subsidies and may leave when they end.

Reducing corporation tax encourages firms to invest and expand, creating jobs. But the jobs may not be in the areas or industries where the structurally unemployed are, and lower tax revenue has an opportunity cost.

Labour market reforms, such as reducing trade union power and making benefits conditional on job search, can increase the incentive to take available jobs, and a higher minimum wage can increase the incentive to work. However, these may increase inequality or, for a minimum wage, reduce demand for labour. Tariffs could

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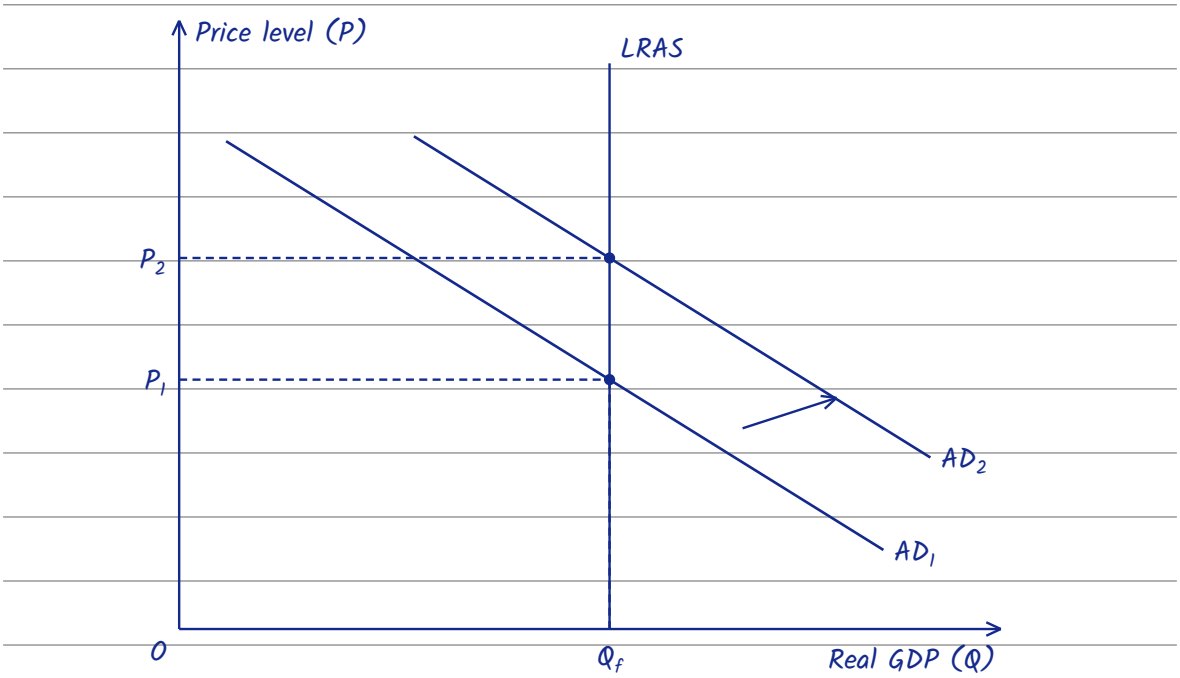
protect a declining industry and slow job losses, but they invite retaliation, raise prices and only delay the necessary change.

In conclusion, education and training are likely to be the most effective policy, because they deal with the mismatch of skills that causes structural unemployment, but they work only in the long run. A combination of training, mobility support and incentives for firms is needed, and its success depends on cost, time lags and how well the government identifies the skills in demand.

7(a) The quantity theory of money is based on the Fisher equation of exchange: MV = PT. M is the money supply; V is the velocity of circulation, the average number of times each unit of money changes hands in a year; P is the average price level; and T is the number of transactions, or real output. MV is total spending and PT is the total value of goods sold, so the two sides are always equal.

Monetarists turn this into a theory of prices by assuming that V is constant, because it depends on payment habits, and that T is fixed in the long run at the full employment level of output. If so, an increase in M leads to a proportional increase in P: a 5% rise in the money supply causes a 5% rise in the price level. So inflation is caused by the money supply growing faster than real output. The diagram shows this: a rise in M shifts AD to the right, but with output fixed at Qf, only the price level rises.

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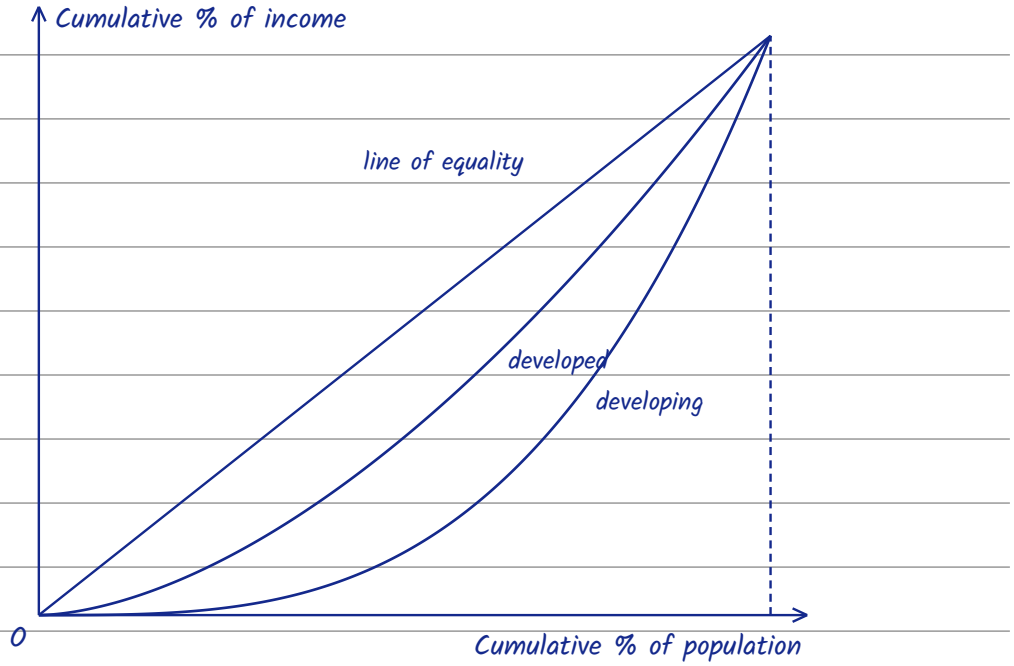
This is relevant to macroeconomic policy. If the theory is correct, the government can control inflation by controlling the growth of the money supply, for example by limiting bank lending, raising interest rates and avoiding financing budget deficits by printing money. In the 1980s some governments set money supply targets. It also warns that printing money causes high inflation, as in Zimbabwe's hyperinflation.

However, its relevance is limited. V is not stable; for example, after quantitative easing increased the money supply greatly from 2009, inflation stayed low because V fell. Output is not fixed when there is spare capacity, so more money can raise output. The money supply is hard to define and control, so money supply targets were abandoned. Today most central banks target inflation directly using interest rates. So the theory is relevant as a long-run guide, especially to avoid excessive money creation, but not as a precise policy tool.

7(b) A more equal distribution of income means a smaller gap between the incomes of the rich and the poor. This can be shown by a Lorenz curve closer to the line of equality and a lower Gini coefficient. In the diagram, the further the Lorenz curve

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bows away from the line of equality, as for a typical developing economy, the more unequal the distribution; redistribution moves the curve towards the line. Fiscal policy is the use of government spending and taxation to influence the economy.



Progressive taxation is the most direct fiscal tool. With a progressive income tax, the proportion of income paid in tax rises as income rises, so the rich pay a larger share and the gap in disposable income narrows. However, very high tax rates may reduce the incentive to work and invest and encourage tax avoidance and evasion, so less is raised. Indirect taxes such as VAT are regressive and work in the opposite direction.

Transfer payments, such as unemployment benefits, pensions and child benefits, raise the incomes of the poorest directly. However, means-tested benefits can create a poverty trap, where people lose benefit as they earn more, reducing the incentive to work.

Government spending on public services such as free education and healthcare raises the real incomes of the poor, who could not otherwise afford them. Spending on education also raises skills, so in the long run the poor can earn higher wages. But this takes a long time, and the better-off often use public services more.

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However, fiscal policy is not the only way. A national minimum wage raises the wages of the lowest paid directly. Supply-side policies such as training and improving labour mobility help people move into better-paid jobs. Monetary policy can help too: lower interest rates may reduce unemployment, which is a major cause of poverty, though low rates can also raise asset prices and benefit the wealthy. Inequality also depends on wealth, which fiscal policy changes only slowly through inheritance and property taxes.

In conclusion, fiscal policy is the most powerful way to make the distribution of income more equal, because progressive taxes and transfers redistribute income directly. But it cannot do this alone without harming incentives and creating a poverty trap, so it is most effective when combined with a minimum wage, education and training, and other supply-side policies.

Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/43**

Paper 4 Data Response and Essays **October/November 2021**

2 hours 15 minutes

6157617536

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 **two** questions.
- 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 70.
- The number of marks for each question or part question is shown in brackets [ ].

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Section A

Answer this question.

1 The effects of European Union (EU) labour migration

In 2016 in the EU labour market there was free movement of people seeking work among the EU's 28 member countries. One country reported that an extra 252 000 workers from other EU countries came to work there during 2014–2015. This meant that the total number of EU workers was 2.1 million, or 6.8% of the country's workforce. The eight Eastern European countries that joined the EU in 2004 supplied 987 000 of those workers by 2015.

A critic of this free movement of labour stated that "It is the workers on low pay in the receiving country – and those out of work – who feel the consequences of uncontrolled migration. They are forced to compete for jobs with thousands of people from abroad, and they suffer downward pressures on their wages."

In contrast, other studies have shown that migration of workers has been good for both economic growth and public finances. These studies reported "There is no correlation between high migration and unemployment. Unemployment fell significantly as total migration rose to a record level of 392 000 in May 2014. Migration is acknowledged to be positive for public finances. In the EU, migrants contributed US$25 billion more in taxes in the decade to 2011 than they used in welfare and public services. Wages may have been affected for low-skilled workers but only marginally downward."

Other economists have argued that, in theory, "the impacts of immigration on wages and employment critically depends on whether migrants' skills are complements to, or substitutes for, the skills of existing workers. These impacts vary between the short run and long run. In the short run if the skills of migrants and existing workers are substitutes, immigration can be expected to increase competition in the labour market and drive down wages. If, on the other hand, the skills of migrants are complementary to those of existing workers, all workers experience increased productivity which can be expected to lead to a rise in wages of existing workers. In the long run the economy can adjust to the increase in labour supply."

Some governments have introduced a minimum wage to help those workers on low pay. The wage is set to increase to match any increase in inflation.

Sources: The Times, 18 May 2016, Daily Telegraph, 18 May 2016, BBC, 19 May 2016

(a) Use a marginal revenue product diagram to illustrate what will happen to wages as a result of the changes mentioned by the critic of the free movement of labour (in the second paragraph). [3]

(b) What do the high numbers of workers migrating from Eastern Europe to other countries in the EU suggest about the state of their own economies compared with the country to which they migrate? [4]

(c) Explain whether the introduction of a minimum wage will always result in a different outcome for employment from that which would occur in a free market. [5]

(d) With the help of information in the article assess whether the increasing numbers of migrant workers are an advantage or a disadvantage to the receiving country. [8]

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Section B

Answer **two** questions from this section.

2 Analyse the reasons why it might be thought necessary for a government to control dominant firms in an industry and consider the methods it might use to achieve such control. [25]

3 **(a)** Explain the theory of how a consumer decides to achieve the situation described as 'equilibrium' when purchasing two different products. [12]

(b) Two shops sell clothes. One has luxury fashionable designs. The other has cheaper inferior alternatives. Both shops decided to have promotional sales with price reductions.

Consider how indifference curve analysis could be used to explain a consumer's reaction to both the price reductions. [13]

4 **(a)** Explain the difference between, and the purpose of, integration between firms and a cartel. [12]

(b) 'In large firms the long-run average cost falls as output increases and consumers benefit from lower prices. In small firms it does not. There is, therefore, no place in a modern economy for small firms.'

Do you agree with these statements? [13]

5 **(a)** Explain the role of liquidity preference in the determination of interest rates and assess its importance. [12]

(b) Keynes argued that the rate of interest will not ensure that the level of savings will equal the level of investment in an economy because savings and investment are undertaken by different individuals for different reasons.

Explain this statement and discuss how far you would support this view. [13]

6 **(a)** Explain how governments measure economic growth and discuss why this measurement is important. [12]

(b) 'Economic growth will always decrease the level of unemployment but this will usually create significant problems in relation to attaining other key macroeconomic aims.'

How far do you agree with this statement? [13]

7 The International Monetary Fund (IMF) lends money to developing countries but requires that these countries reduce existing restrictions on imports, focus on the export of primary goods and accept a devaluation of their currencies.

Based upon the above, assess whether developing countries should continue to borrow money from the IMF. [25]

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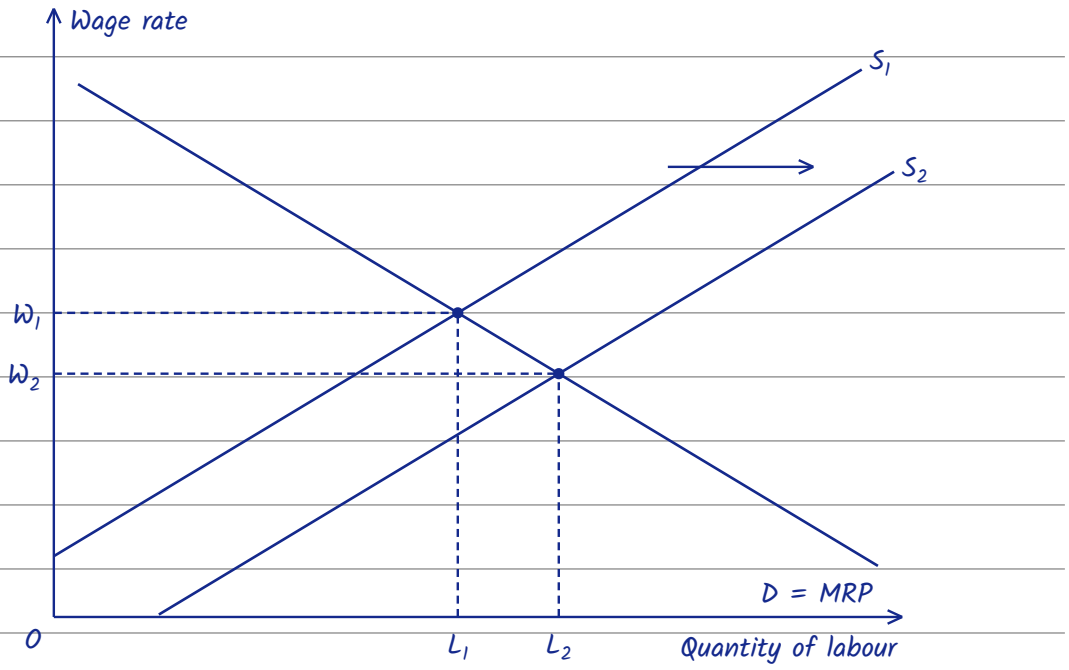
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Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number

Answers for paper 9708/43

1(a) In the labour market for low-paid work, demand is the marginal revenue product of labour (D = MRP). Migrant workers increase the supply of labour, so the supply curve shifts down to the right from S1 to S2. There is an excess supply at W1, so the equilibrium wage falls from W1 to W2 and employment rises from L1 to L2, the 'downward pressure on wages' the critic describes.

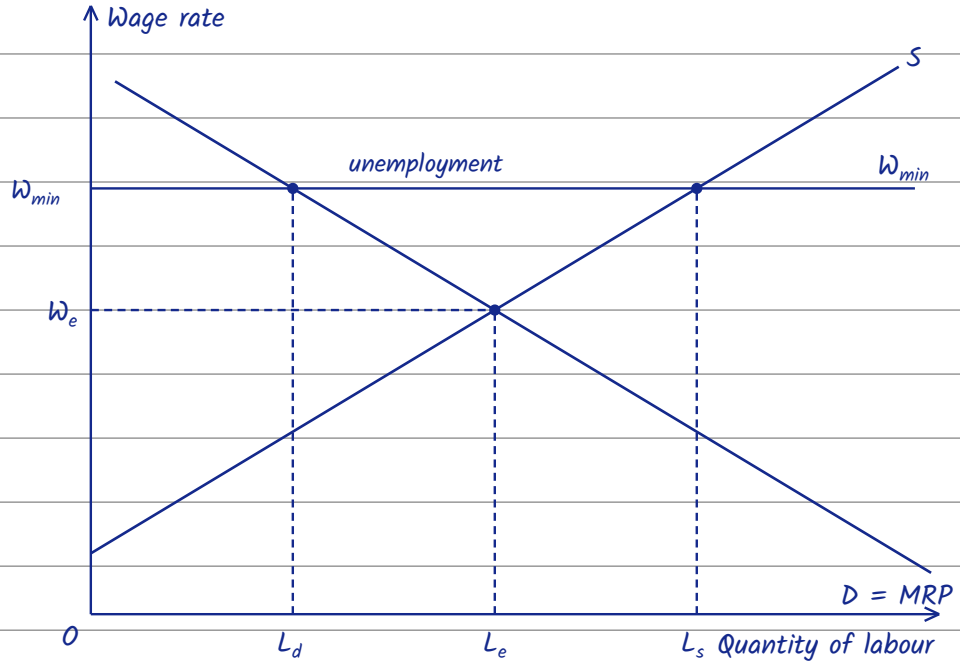


1(b) The large numbers migrating, 987 000 from eight Eastern European countries, suggest their own economies are weaker than the receiving country. Wages for the same skills are probably much lower, so workers can earn more by moving. Unemployment is likely to be higher, with fewer job opportunities, especially for young and skilled workers. Their welfare systems, public services and infrastructure are probably weaker, and overall living standards, such as real GDP per head, are

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lower, so the pull factors of the receiving country are strong.

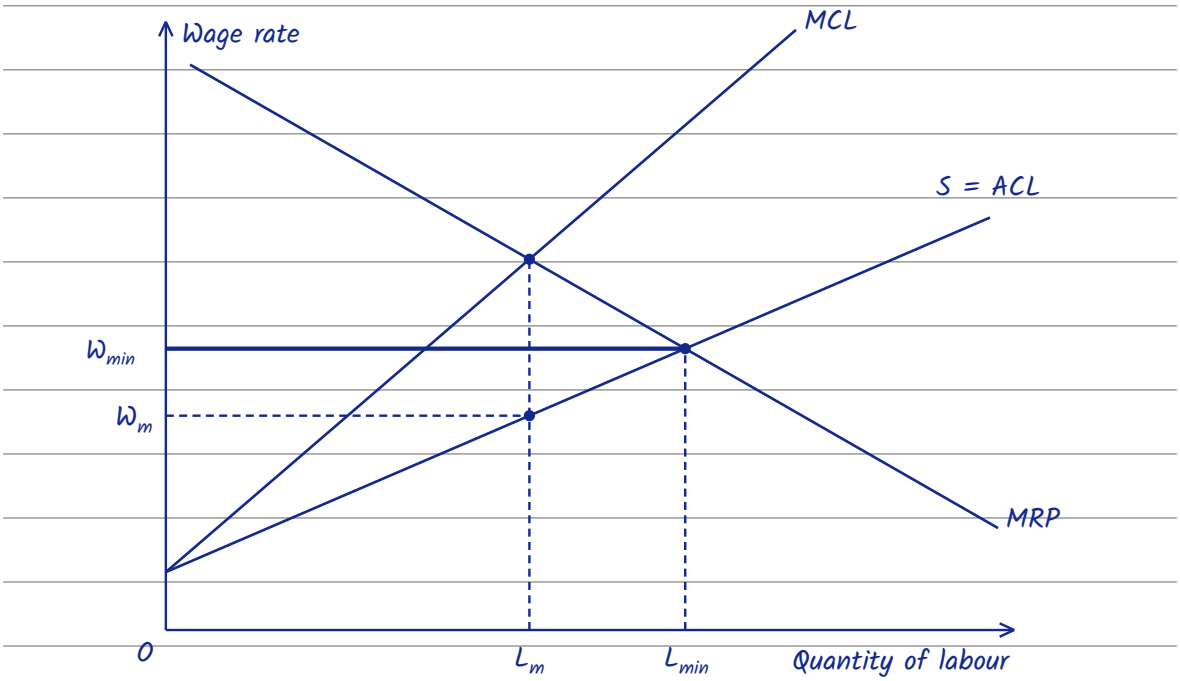
1(c) Not always. In a competitive labour market, if the minimum wage is set above the equilibrium wage, the quantity of labour demanded falls and supply rises, so employment falls from Le to Ld and there is unemployment, a different outcome from the free market.



However, if the minimum wage is set below the market wage, it has no effect, and employment is the same as in a free market. And if the wage is raised in line with inflation only, the real wage, and so employment, does not change.

In a monopsony, the employer pays Wm and employs Lm. A minimum wage set at Wmin, where MRP crosses supply, raises both the wage and employment to Lmin. If set between Wm and this level, employment still rises; only if it is set well above it does employment fall. So the outcome depends on the market structure and on the level of the minimum wage compared with equilibrium.

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1(d) Migrant workers bring several advantages. If their skills are complements to those of existing workers, all workers become more productive, so wages and economic growth rise. Migrants fill jobs where there are labour shortages, so firms can expand and the supply of labour can keep up with rising AD, reducing inflationary pressure. Their earnings are spent, which increases AD and, through the multiplier, creates more jobs. The article shows that unemployment fell significantly as migration rose to a record 392 000 in May 2014, and that migrants contributed US$25 billion more in taxes than they used in welfare and public services in the decade to 2011, which helps public finances.

There are also disadvantages. If migrants' skills are substitutes for those of existing workers, competition for jobs increases and the wages of low-paid workers are driven down, as the critic argues, which may reduce living standards for the poorest and lower income tax revenue. Some domestic workers may lose their jobs to migrants willing to work for less, which can cause industrial unrest, and a rapidly growing population puts pressure on housing, schools and health services. However, the studies suggest the effect on wages was only marginal and in the

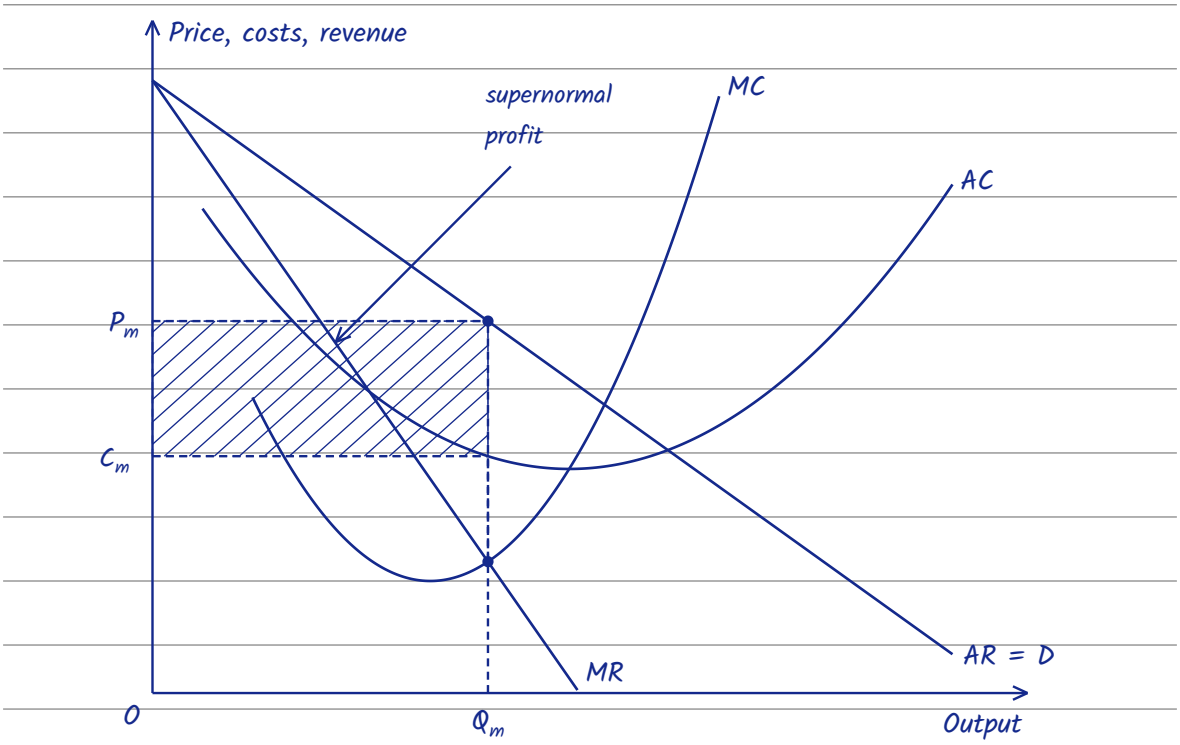
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long run the economy adjusts to the increase in labour supply. Overall, increasing migration appears to be an advantage to the receiving country, especially for growth and public finances, but it can be a disadvantage for low-skilled domestic workers in the short run, so the effect depends on the skills of the migrants and the time period.

2 A dominant firm is one with a large market share, such as a monopoly, which has over 25% of the market in UK law, or a leading firm in an oligopoly. Dominant firms have market power, so they can set prices and are protected by barriers to entry.

There are several reasons why government control may be thought necessary. A profit-maximising monopolist produces where MR = MC, at Qm, and charges Pm from the demand curve. Compared with a competitive market, output is lower and price is higher, so consumers lose consumer surplus. Price is above MC, so the monopolist is allocatively inefficient and there is a deadweight welfare loss: this is underproduction from society's point of view. Output is not at minimum average cost, so it is productively inefficient, and barriers to entry allow supernormal profits in the long run, transferring income from consumers to the owners.

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Without competition, dominant firms may also become X-inefficient, letting costs rise, and offer less choice and lower quality. They may use anti-competitive practices, such as predatory pricing to drive out rivals, colluding with other firms in a cartel, or price discrimination. They may also ignore the external costs of their production, and with their size they can influence governments.

However, control is not always needed. Dominant firms can gain economies of scale, so their costs and prices may be lower than in a competitive market; a natural monopoly, such as water supply, is most efficient with one firm.

Supernormal profit can fund research and development, giving dynamic efficiency, and if the market is contestable, the threat of entry keeps prices low.

The government can use several methods. Competition policy, through a competition authority, can investigate mergers and block those that would create a dominant firm, and can fine firms for abusing market power or forming cartels. This prevents the problem but is slow and costly, and may block mergers that would bring economies of scale.

Price regulation can be used for natural monopolies and privatised utilities. A

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formula such as RPI – X limits price rises to inflation minus an efficiency factor, giving an incentive to cut costs. Alternatively, a maximum price can be set where P = MC, giving allocative efficiency, although this may cause a loss for a natural monopoly, which then needs a subsidy. Regulators need detailed information on costs, which firms may hide, and risk regulatory capture.

Taxes can be used: a lump-sum tax on supernormal profit (a windfall tax) does not change MC or MR, so it reduces profit without changing price or output, while subsidies could encourage a monopolist to increase output towards the allocatively efficient level. Nationalisation puts the firm under state ownership so it can set price equal to MC and act in the public interest, but state firms may lack incentives to be efficient. Privatisation and deregulation, removing legal barriers to entry, can increase competition and contestability, as in telecommunications.

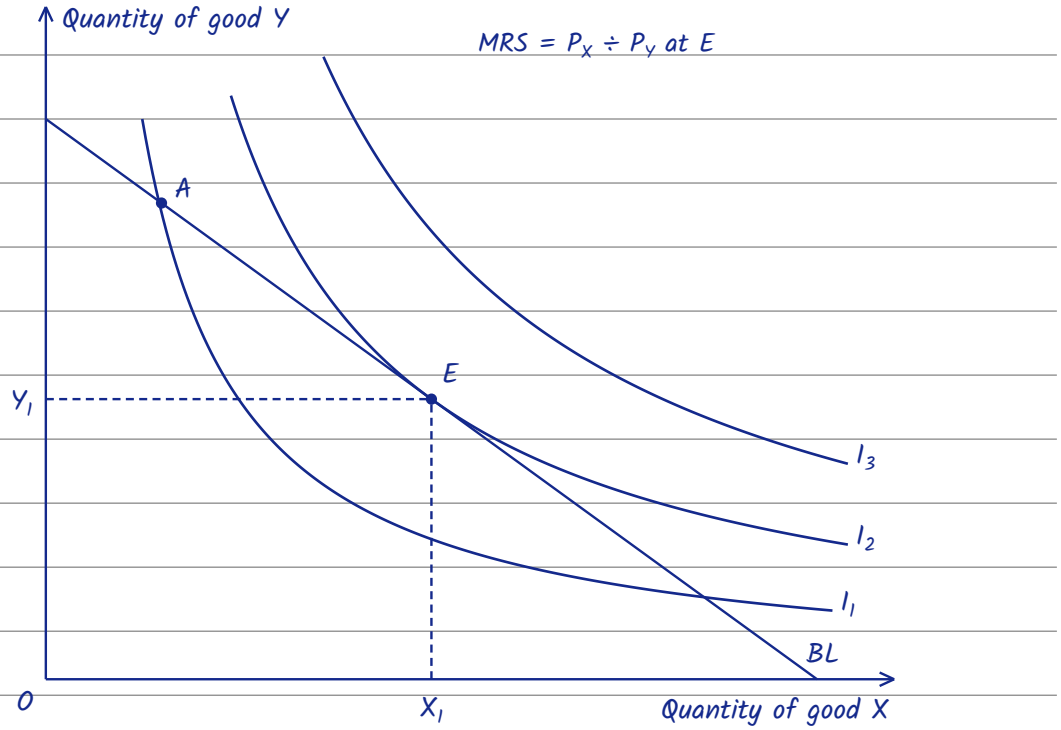
In conclusion, control of dominant firms can be necessary because they may restrict output, raise prices and be inefficient, but not all dominant firms abuse their power, and some bring economies of scale and innovation. The best method depends on the industry: competition policy and deregulation for most markets, and price regulation for natural monopolies, but all methods face the problem of imperfect information and the risk of government failure.

3(a) A consumer is in equilibrium when they have spent their limited income so as to maximise total utility (satisfaction), so they have no incentive to change what they buy. This can be explained using marginal utility or indifference curves.

Marginal utility (MU) is the extra satisfaction from one more unit, and it diminishes as more is consumed. With two goods, X and Y, the consumer compares the MU of each good with its price. They are in equilibrium when the utility from the last dollar spent on each good is the same: $MUx \div Px = MUy \div Py$ (the equi-marginal principle). For example, if X costs \$2 and Y \$1, and the last unit of X gives 20 units of utility and of Y 15, then $MUx \div Px = 10$ and $MUy \div Py = 15$.

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The consumer gains by switching spending from X to Y; as they buy more Y its MU falls, and as they buy less X its MU rises, until the ratios are equal. Indifference curve analysis gives the same result. An indifference curve shows combinations of X and Y giving equal satisfaction; higher curves give more satisfaction. Its slope is the marginal rate of substitution (MRS). The budget line shows the combinations the consumer can afford; its slope is the ratio of prices, Px ÷ Py.



The consumer reaches the highest indifference curve possible where the budget line is tangent to it, at E, buying X1 and Y1 on I2. At point A on I1, the consumer could move along the budget line and reach a higher curve, and I3 cannot be afforded. At E, MRS = Px ÷ Py, and since MRS = MUx ÷ MUy, this is the same condition as MUx ÷ Px = MUy ÷ Py. So in both approaches the consumer is in equilibrium when the relative satisfaction from the last unit of each good matches its relative price. This assumes the consumer is rational and has full information.

3(b) Indifference curve analysis can show how a consumer reacts to a price reduction

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by splitting the change in quantity demanded into a substitution effect and an income effect. When the price of a good falls, the budget line pivots outwards from B1 to B2 and the consumer moves from E1 to E2. The substitution effect is the change caused by the change in relative prices with real income held constant, found by drawing a compensated budget line Bc parallel to B2 and tangent to the original indifference curve I1 at E3. The income effect is the change caused by the rise in real income (E3 to E2).

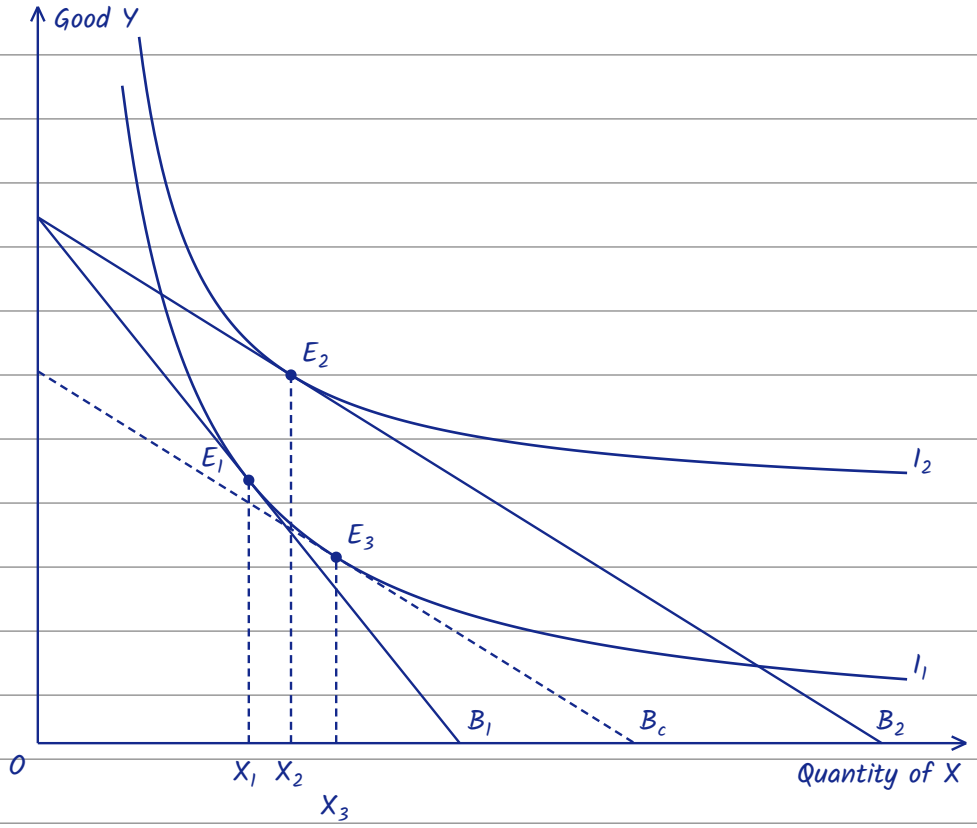
For the luxury fashionable clothes, which are a normal good with a high income elasticity of demand, the substitution effect (X1 to X3) is positive: the clothes are now relatively cheaper, so the consumer buys more. The income effect (X3 to X2) is also positive, because the price cut raises real income and demand for a normal good rises with income; for a luxury it is likely to be large. Both effects increase quantity demanded, so the consumer buys considerably more, from X1 to X2.



For the cheaper inferior clothes, the substitution effect is again positive (X1 to X3), as they are now relatively cheaper. But the income effect is negative: the rise in real income leads the consumer to buy fewer inferior goods and switch to

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better ones (X3 to X2). As long as the substitution effect is greater than the income effect, as below, the quantity bought still rises, but only a little, from X1 to X2.



If the inferior clothes made up a very large share of a poor consumer's budget, the negative income effect could outweigh the substitution effect, so the price cut would reduce quantity demanded, a Giffen good. This is very unlikely for clothes. Also, a luxury may be a Veblen good, bought partly because of its high price, so a price cut could make it less desirable to some consumers.

So the analysis suggests the sale in the luxury shop will increase sales greatly, while the sale in the shop selling inferior clothes will increase sales only slightly, because the two effects work against each other.

4(a) Integration is when two or more firms join together into one firm, by a merger or a takeover. Horizontal integration is between firms at the same stage of production in the same industry, such as two car makers. Its purpose is to increase market

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share and market power, gain economies of scale such as bulk buying and technical economies, reduce competition, and widen the product range. Vertical integration is between firms at different stages of production. Backward vertical integration, such as a car maker buying a component supplier, secures supplies of inputs, controls their quality and cost and removes the supplier's profit margin. Forward vertical integration, such as a brewery buying pubs, controls sales outlets and gives better access to customers. Conglomerate integration joins firms in unrelated industries to spread risk.

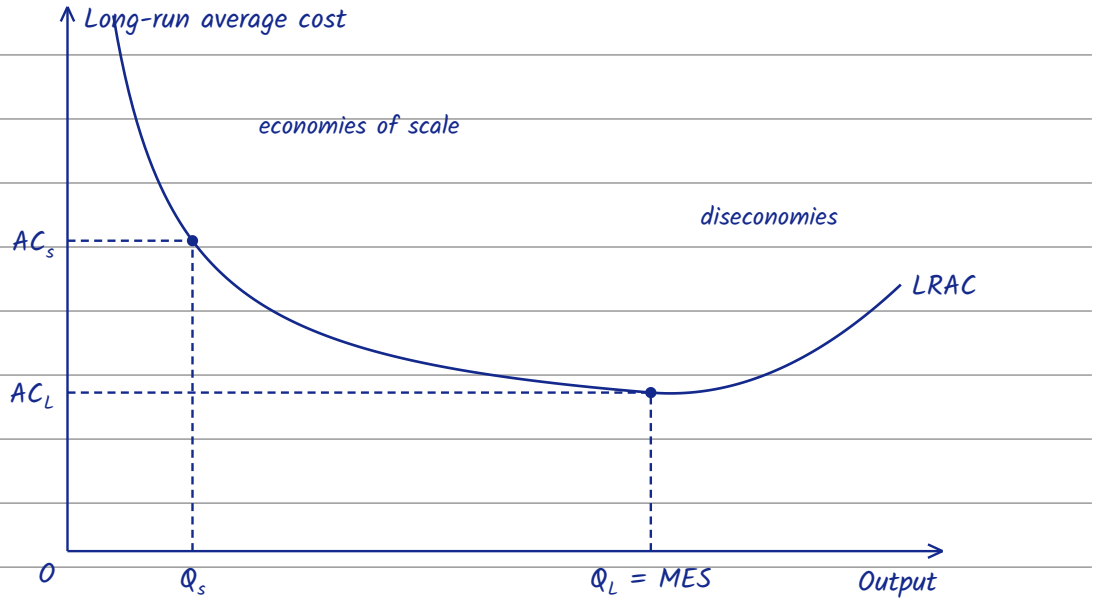
A cartel is a formal agreement between independent firms in an oligopoly to collude, rather than compete, for example by fixing prices or output quotas or sharing out markets. OPEC is an example: members agree production quotas for oil. Its purpose is to act like a single monopolist: by restricting total output, the cartel can raise the market price and maximise joint profits, removing the uncertainty of price wars. Each member is then given a quota.

The key difference is that integration creates one firm under single ownership and control, whereas in a cartel the firms remain separate and independent but agree to act together. Integration is usually legal, although large mergers may be investigated by competition authorities, while cartels are illegal in most countries because they are against consumers' interests, so they are often secret. A cartel is also less stable: each member has an incentive to cheat by producing more than its quota at the high price, and it may break down, whereas an integrated firm cannot cheat on itself. Integration can bring genuine cost savings from economies of scale which may benefit consumers, while a cartel's main purpose is higher prices and profits, with no gain in efficiency. Both, however, reduce competition and increase market power.

4(b) The statement has three parts: that LRAC falls as large firms grow, that consumers benefit from lower prices, and that there is no place for small firms.

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Long-run average cost often falls as output rises because of internal economies of scale: technical economies from large machines, purchasing economies from bulk buying, financial economies from cheaper borrowing and managerial economies from specialisation. The diagram shows LRAC falling as output rises from Q_S to the minimum efficient scale (MES) at Q_L.



But LRAC does not always fall. Beyond a certain size, firms suffer diseconomies of scale, such as communication and coordination problems and poor motivation, so LRAC rises. In some industries, the MES is small, so small firms can produce at the same low cost as large ones.

Consumers do not always benefit either. Lower costs only lead to lower prices if there is competition. Large firms often have market power, so they may keep prices high and turn lower costs into supernormal profit, or become X-inefficient. Large firms may also reduce choice.

There is an important place for small firms in a modern economy. Many markets are small, such as local services and specialist or luxury products, where demand is too small for economies of scale. Small firms can offer a personal, flexible service and adapt quickly to changing tastes. They can also benefit from external economies of scale, and through the internet can reach global markets at low cost.

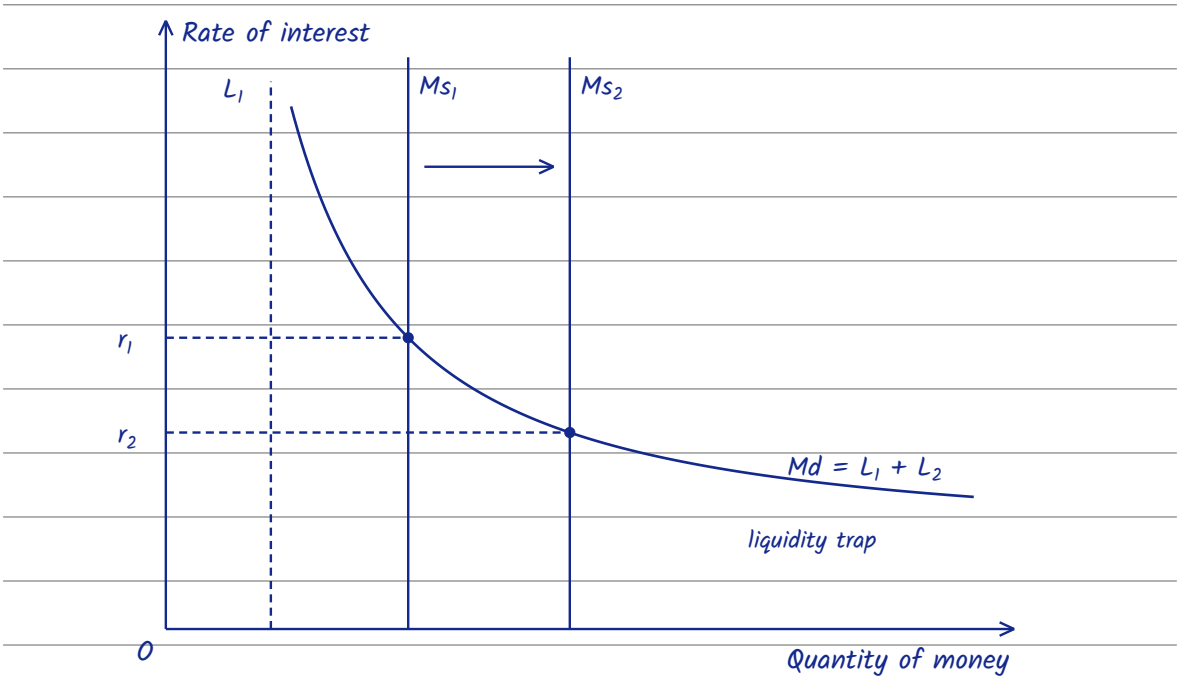
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Many large firms rely on small suppliers, and small firms are a major source of new ideas, innovation and employment; today's large firms started as small ones. Some owners prefer to stay small, and small firms add competition, keeping large firms efficient. Governments also support them, as they create many jobs.

In conclusion, I disagree with the statements. Large firms often benefit from falling LRAC, but not beyond the MES, and consumers only gain if competition passes the savings on. Small firms survive and succeed in many markets because of flexibility, small markets and innovation, so they have an important place in a modern economy.

5(a) Liquidity preference is Keynes's theory of the demand for money: the desire to hold wealth in the form of money (cash and bank deposits) rather than in less liquid interest-earning assets such as government bonds. Keynes gave three motives. The transactions motive is to pay for everyday spending, and the precautionary motive is to cover unexpected expenses; both depend mainly on the level of income (L1). The speculative motive (L2) depends on the rate of interest: when interest rates are high, bond prices are low, the opportunity cost of holding money is high and people expect bond prices to rise, so they hold bonds rather than money. When interest rates are low, they hold more money. So the demand for money curve slopes downwards.

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In the liquidity preference theory, the rate of interest is the price of money, determined by the demand for money (Md = L1 + L2) and the supply of money, which is set by the central bank and so is vertical. If the money supply increases from Ms1 to Ms2, there is an excess supply of money at r1; people use the extra money to buy bonds, bond prices rise and the interest rate falls to r2. An increase in income raises the demand for money and the interest rate.

The theory is important because it explains how monetary policy works and the possibility of a liquidity trap. At very low interest rates, the demand for money becomes perfectly elastic, as everyone expects bond prices to fall, so increasing the money supply does not reduce interest rates further. This helped explain why policy was less effective after 2008.

However, its importance can be questioned. The loanable funds theory argues that interest rates are determined by the supply of savings and the demand for loans for investment, not just money. In practice, central banks now set the base rate directly, so the money supply adjusts to demand rather than being fixed, and there are many interest rates, affected also by risk and global markets. So liquidity preference is an important part of the explanation of interest rates, but not the

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only determinant.

5(b) In classical theory, the rate of interest makes saving equal investment. Saving rises as the interest rate rises, because it is the reward for saving, and investment falls as the interest rate rises, because it is the cost of borrowing. If saving is greater than investment, the surplus of loanable funds pushes the interest rate down, so saving falls and investment rises until they are equal. So all saving withdrawn from the circular flow is injected back as investment, and there is no fall in aggregate demand.

Keynes disagreed, because saving and investment are carried out by different people for different reasons. Saving is mainly done by households, and depends mainly on the level of income, as shown by the marginal propensity to save, and on habits and precaution, not on the interest rate. Investment is mainly done by firms, and depends mainly on expected future profits, business confidence and 'animal spirits', as well as on the rate of interest compared with the marginal efficiency of capital. So there is no reason why planned saving should equal planned investment at any interest rate.

If households decide to save more, consumption and AD fall; firms see lower sales and become less confident, so investment may fall rather than rise even if interest rates fall. Saving and investment are then made equal by changes in national income, not the interest rate: income falls until saving falls to the level of investment, which may leave the economy below full employment. This is the paradox of thrift.

There is much evidence to support Keynes. In recessions, such as 2008 to 2009 and 2020, household saving rose sharply while investment fell, even though interest rates were cut to near zero, so low rates did not persuade firms to invest. Surveys show firms' investment depends heavily on expected demand, and the interest elasticity of investment and saving is often low.

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However, the view is not entirely correct. The interest rate does have some effect: higher rates encourage some saving and discourage borrowing for investment, and in the long run, when the economy is near full employment, saving does provide the funds for investment through banks. Firms also save, through retained profits, and invest those savings themselves, so saving and investment are not always done by different people. In open economies, foreign saving can finance investment.

In conclusion, I largely support Keynes's view, especially in the short run and in recessions, when income and expectations are much more important than the rate of interest. But in the long run interest rates and financial markets help to bring saving and investment together, so the classical view still has some validity.

6(a) Economic growth is an increase in real GDP over a period of time, usually measured as the annual percentage change in real GDP. GDP is the total value of goods and services produced in a country in a year. It can be measured in three ways which should give the same total. The output method adds the value added at each stage of production in every industry, avoiding double counting. The income method adds all factor incomes: wages, rent, interest and profits. The expenditure method adds total spending: $C + I + G + (X - M)$. Indirect taxes are deducted and subsidies added to convert market prices to factor cost.

To measure growth, nominal GDP must be converted to real GDP by removing the effects of inflation using a price index (the GDP deflator): real GDP = nominal GDP × base year price index ÷ current price index. Real GDP per head divides by the population. For example, if nominal GDP rises by 7% and prices by 3%, real growth is about 4%.

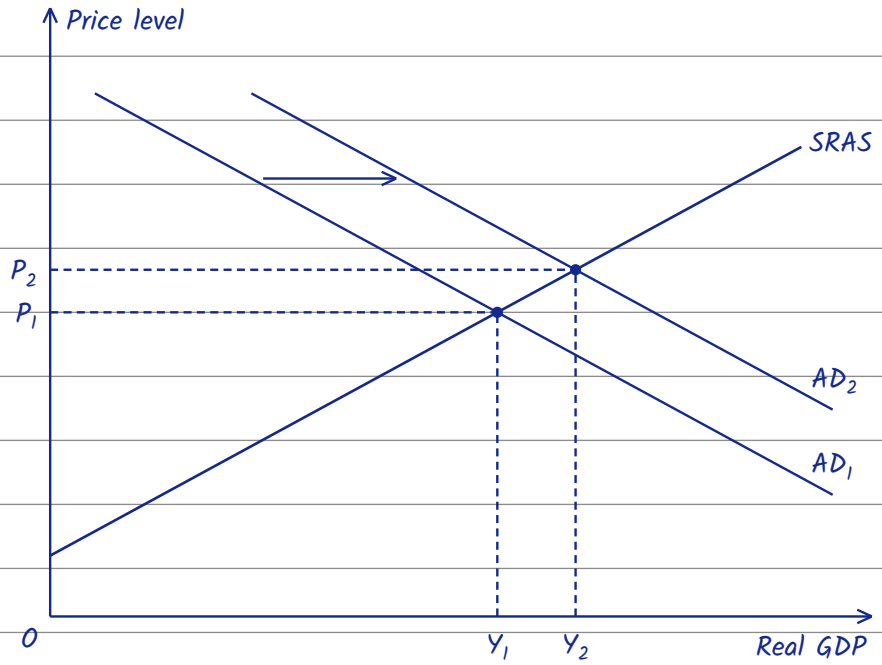
This measurement is important for several reasons. Changes in real GDP per head show whether output and incomes per person are rising, so they are a key indicator of changes in material living standards and wealth. It lets voters and economists

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judge the performance of the government in managing the economy. It guides future policy: slow or negative growth signals a recession and the need for expansionary policy, while very rapid growth may warn of inflation. It also allows comparison with international competitors, and is used by firms to plan investment and by bodies such as the IMF.

However, the measurement has limitations. Data may be inaccurate, especially where there is a large informal economy; GDP ignores distribution, leisure, the quality of goods and environmental damage; and figures are often revised. So real GDP growth is an important measure, but it should be used with other indicators, such as HDI, to judge living standards.

6(b) Economic growth is an increase in real GDP. In the short run, if growth comes from an increase in AD, firms produce more output and, since labour is a derived demand, they hire more workers, so cyclical unemployment falls. The diagram shows AD rising from AD1 to AD2, real output rising from Y1 to Y2 and so employment rising.



However, growth will not always reduce unemployment. If growth comes from

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higher productivity through new technology and automation, more output can be produced with the same or fewer workers, so there may be 'jobless growth'. Structural unemployment may continue, because new jobs require different skills or are in different regions. If the labour force grows faster than output, as with rapid population growth or migration, unemployment may not fall. And if the economy is already at full employment, growth cannot reduce it further.

Growth can cause problems for other aims. The first is inflation. As AD rises towards full capacity, the SRAS curve becomes steeper, so the price level rises from P1 to P2 and demand-pull inflation increases; labour shortages also push up wages, causing cost-push inflation. The Phillips curve shows this trade-off between lower unemployment and higher inflation. The second is the balance of payments. As incomes rise, spending on imports rises, and higher inflation makes exports less competitive, so the current account worsens. Growth may also increase inequality and damage the environment.

However, these problems are not inevitable. If growth is long-run growth from supply-side improvements, LRAS shifts to the right, so output and employment can rise without inflation, and lower costs improve export competitiveness. Export-led growth, as in China, improves the current account. Growth also raises tax revenue and reduces benefit spending, so it improves the government budget.

In conclusion, I only partly agree. Growth usually reduces unemployment, but not always, as productivity-led growth and structural change can leave unemployment high. Demand-led growth close to full capacity often causes inflation and current account deficits, but supply-side or export-led growth can avoid these problems, so the problems are likely but not certain, depending on the source of the growth.

7 The IMF lends to countries with balance of payments problems, but its loans come with conditions, often called structural adjustment. To decide whether developing countries should continue to borrow, the effects of each condition must be

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weighed against the benefits of the loan.

The loans themselves bring clear benefits. They provide foreign currency to pay for imports and debts, prevent a sudden collapse of the currency, and give time to make reforms. They are usually at lower interest rates than private lenders charge, and IMF support can restore the confidence of investors and other lenders, attracting further finance and FDI. The IMF also gives technical advice.

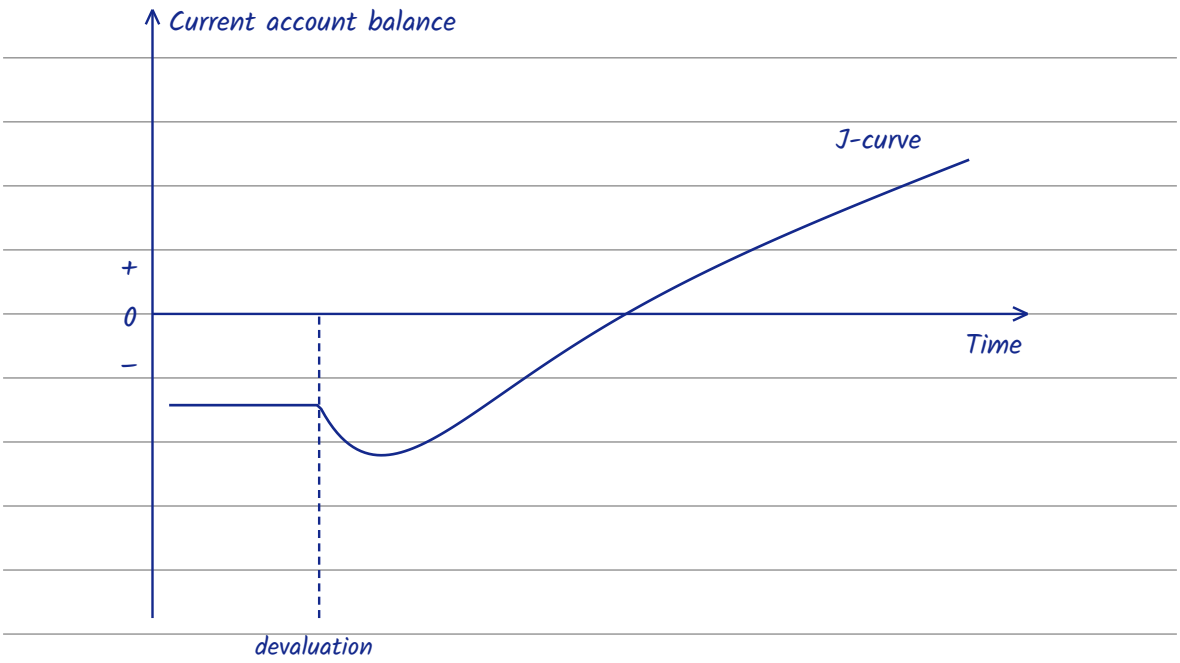
The first condition is reducing restrictions on imports, such as tariffs and quotas. This brings the benefits of free trade: consumers gain from cheaper imports and more choice, firms can buy cheaper inputs, and competition makes domestic firms more efficient. However, infant industries may be unable to compete with established foreign firms and close, causing structural unemployment. Imports will rise, which may worsen the current account deficit the loan was meant to solve, and the government loses tariff revenue.

The second is focusing on exporting primary goods, such as agricultural products and minerals, in which developing countries often have a comparative advantage. This can increase export earnings in the short run. But primary goods have price and income inelastic demand and supply that is affected by the weather, so prices are very volatile and export earnings unstable. Their prices tend to fall over time relative to manufactured goods, so the terms of trade worsen. Specialising in primary products, with low productivity and low value added, also discourages the move into manufacturing and services that is needed for development, and many countries doing the same increases world supply and lowers prices.

The third is devaluation, a reduction in the value of the currency under a fixed exchange rate. This makes exports cheaper abroad and imports more expensive, so in time the current account should improve. However, it only works if the Marshall-Lerner condition holds, that the sum of the price elasticities of demand for exports and imports is greater than one. As demand for primary exports and for essential imports such as oil and medicines is inelastic, the current account may

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first get worse, as the J-curve shows, and may not improve much.



Devaluation also makes imported food, fuel and raw materials dearer, causing cost-push inflation which hits the poor hardest and reduces competitiveness, and it raises the cost of repaying debts in foreign currencies.

Taken together, the conditions may work against each other: removing import controls and devaluing while relying on volatile primary exports can deepen balance of payments problems, raise inflation and increase poverty. Critics argue that IMF programmes in Africa and Latin America in the 1980s and 1990s reduced growth and public spending. On the other hand, the reforms can make the economy more efficient and competitive in the long run, and without a loan the country may face a far worse crisis, such as being unable to import food or default on its debts.

In conclusion, developing countries should continue to borrow from the IMF when they face a serious crisis and have no other source of finance, because the immediate benefits of the loan are large. But they should negotiate the conditions, phasing in import liberalisation, diversifying exports rather than focusing only on primary goods, and protecting the poor, and where possible use alternatives such as regional development banks, so that the long-term costs of the conditions do not

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outweigh the benefits of the loan.