Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/21**

Paper 2 Data Response and Essay **October/November 2020**

1 hour 30 minutes

2742646130

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **two** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You may answer with reference to any economy you have studied where relevant to the question.

INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

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Section A

Answer this question.

1 Latvia becomes a banking capital between the European Union's (EU's) east and west

Latvia regards itself as a financial bridge between Europe's east and west. Since the Soviet Union's collapse in 1991, Latvia (population 2.2 million) joined the EU (population 510 million) in 2004. It has since built itself into a banking centre for people from all parts of Europe and many other parts of the world, although its reputation as a financial centre has been growing since 1988 when two entrepreneurs founded a private bank, Parex Bank, in the capital, Riga.

In the early years of the 21st century, favourable credit conditions in Latvia contributed to an economic boom, but in the global financial crisis of 2007–2008 Parex Bank, by then Latvia's second biggest bank, needed government assistance and was nationalised.

The financial crisis caused Latvia's annual inflation rate to rise rapidly to 17.7% in May 2008, which was significantly higher than its average annual inflation rate of 3.7% for the period 1998–2018.

In 2008, the Latvian government decided to substantially reduce the size of the budget deficit, in an attempt to reduce the relatively high rate of inflation, through a series of fiscal measures such as increasing taxation and reducing public spending.

Latvia emerged from the global financial crisis to become the EU's fastest-growing economy. The intention was that Latvia would eventually join the EU's common currency (the euro). Fig. 1.1 below shows the exchange rate of Latvian Lats (the country's former currency) per euro from 2007 to 2013.

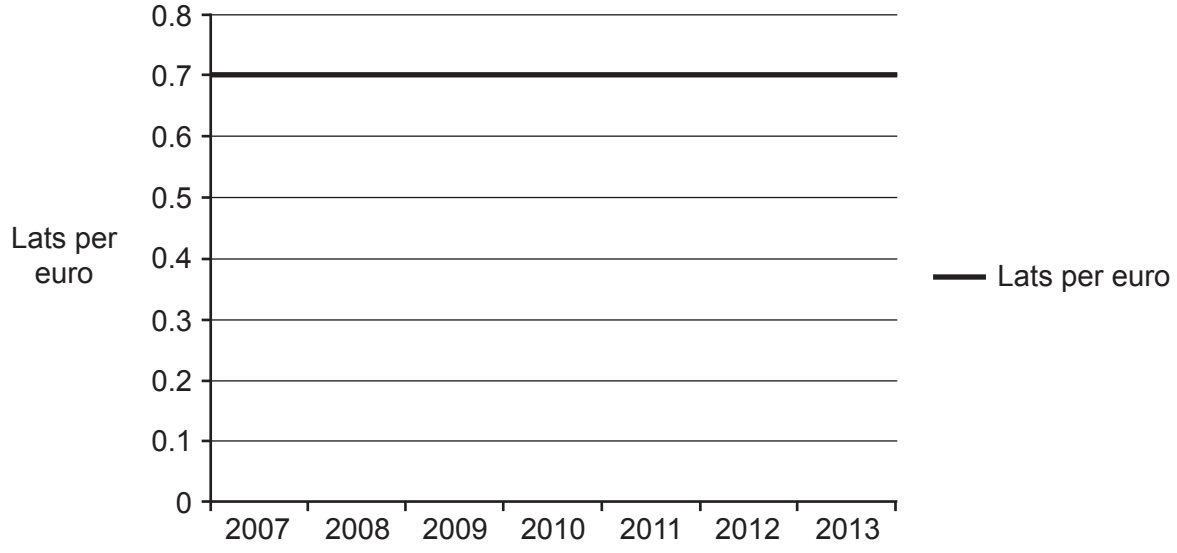


Fig. 1.1 Exchange rate of Latvian Lats per euro, 2007–2013

In January 2014, Latvia did join the euro and this was welcomed by business leaders and economists in Latvia, stating that it would improve Latvia's credit rating and attract foreign investors. The governor of Latvia's central bank said: "The euro brings stability and certainty, definitely attracting investment."

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However, not everybody in Latvia supported the introduction of the euro. Many people thought that Latvia would lose a certain amount of economic independence and that it would lead to an increase in prices and taxes.

Sources: Adapted from The Financial Times 20 February 2018
Latvijas Banka, accessed October 2018

(a) Describe the functions of an entrepreneur in the production process. [2]

(b) When Latvia joined the EU it became part of a customs union.

How does a customs union differ from a free trade area? [2]

(c) As a result of the global financial crisis in 2007–2008 there was a large capital outflow from Latvia.

Use a supply and demand diagram to explain how the exchange rate against the euro was maintained as shown in Fig. 1.1. [4]

(d) **(i)** Explain what is meant by a 'budget deficit'. [2]

(ii) Analyse, using a diagram, how fiscal measures to reduce the budget deficit could be used by the Latvian government to lower the relatively high rate of inflation. [4]

(e) Discuss whether it is better for Latvia to specialise in banking services rather than having a more diversified economy. [6]

Section B

Answer **one** question.

2 **(a)** Explain, with the help of examples, how imperfect information among consumers affects their consumption of merit goods and demerit goods. [8]

(b) Discuss why in most mixed economies, resources are mainly allocated using market forces and the price mechanism. [12]

3 **(a)** Cross elasticity of demand for bread with respect to the price of rice is +1.4 while the cross elasticity of demand for bread with respect to the price of butter is –0.7.

Explain why the cross elasticity of demand figures for bread differ. [8]

(b) Explain the implications of price elasticity of demand and income elasticity of demand for business decisions. Discuss which measure is likely to be more useful to a business. [12]

4 **(a)** Explain, with the aid of a diagram, the impact of a subsidy to domestic producers of a product on the export revenue from that product. [8]

(b) Discuss whether supply-side policies are an effective way of correcting a deficit on an economy's current account of the balance of payments. [12]

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

Question number

Answers for paper 9708/21

1(a) An entrepreneur organises the production process: they decide what to produce and how, and they combine and coordinate the other factors of production (land, labour and capital). They also take the risk of the business, putting money in with no guarantee of a profit, as the two founders of Parex Bank did in 1988.

1(b) In both, member countries remove tariffs and other trade barriers on trade with each other. However, a customs union, like the EU, also has a common external tariff, so all members charge the same tariffs on imports from non-member countries, whereas in a free trade area each member is free to set its own tariffs against non-members.

1(c)

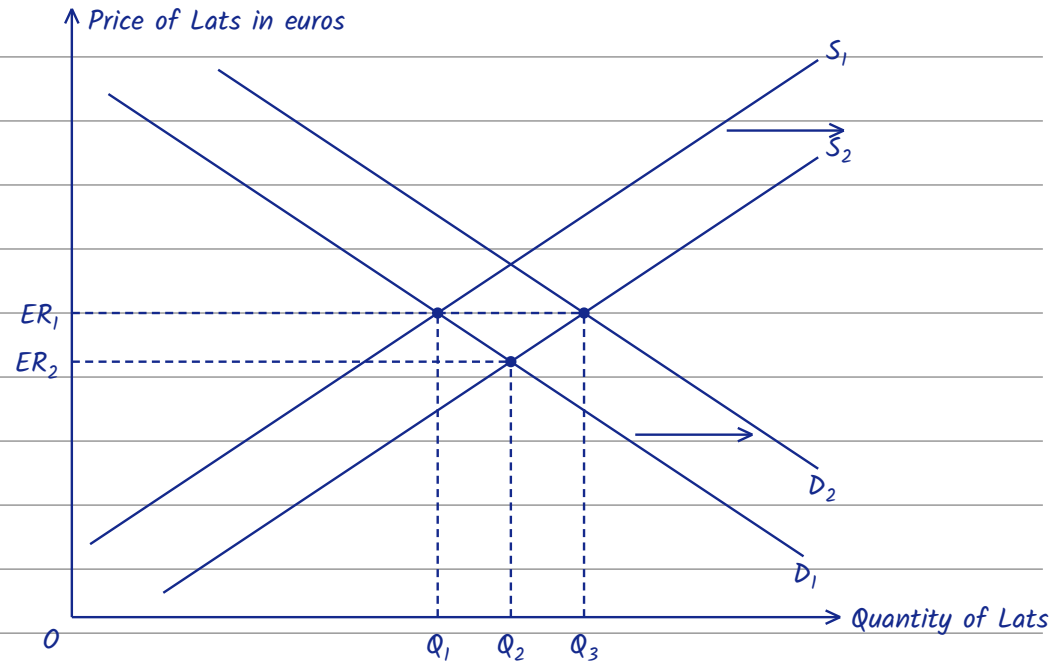


Fig. 1.1 shows the rate fixed at 0.7 Lats per euro (about €1.43 per Lat, ER_1) from

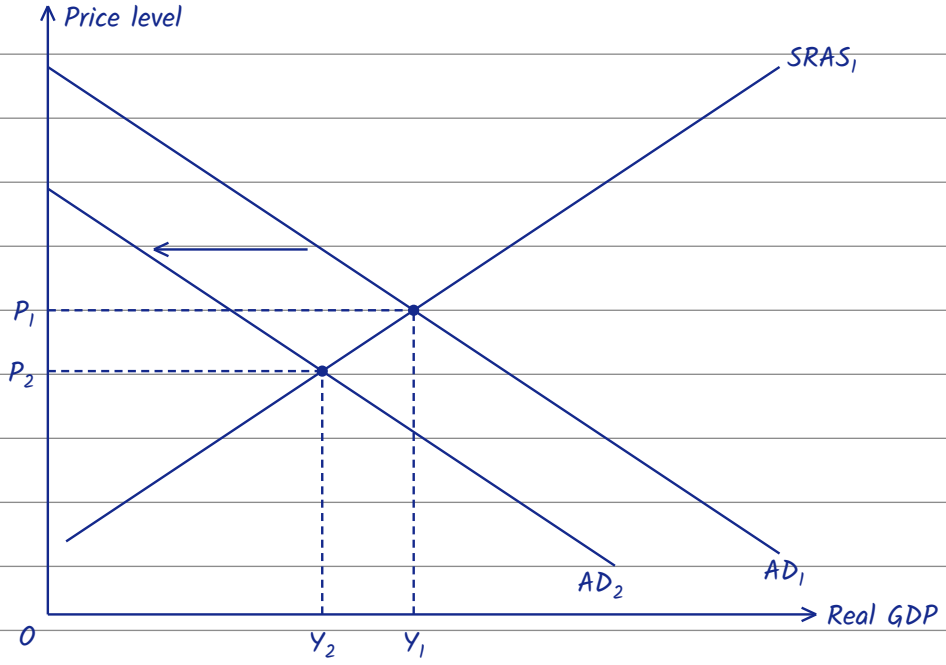
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2007 to 2013. The capital outflow in the crisis meant investors sold Lats to buy euros and other currencies, so the supply of Lats increased from S_1 to S_2. Left to market forces the price of the Lat would have fallen to ER_2.

To maintain the rate, Latvia's central bank intervened in the foreign exchange market: it used its foreign currency reserves (euros) to buy Lats, increasing the demand for Lats from D_1 to D_2, so the market cleared at ER_1 with a larger quantity Q_3. It could also raise interest rates to attract capital back and support demand.

1(d)(i) The government budget sets out its planned spending and its revenue (mainly from taxation) for a year. A budget deficit is the amount by which government expenditure exceeds government revenue, so the government must borrow to cover the gap.

1(d)(ii)

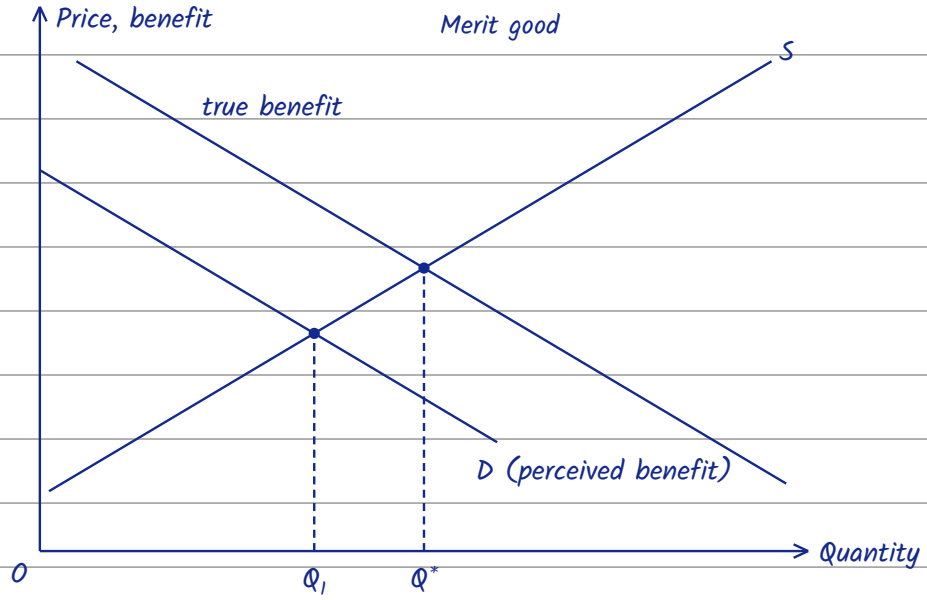


Latvia's inflation reached 17.7% in May 2008, against an average of 3.7%. To reduce the deficit the government raised taxes and cut public spending, a deflationary (contractionary) fiscal policy. Higher income taxes reduce households'

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	disposable income, so consumption falls; higher indirect taxes also discourage spending; and lower government spending directly cuts a component of AD. Through the multiplier, AD shifts left from AD_1 to AD_2. With less spending chasing the available output, demand-pull pressure eases and the general price level is lower, P_2 rather than P_1, so the rate of inflation falls, although real GDP also falls from Y_1 to Y_2.
1(e)	Specialising in banking has advantages. If Latvia has a comparative advantage in financial services, so a lower opportunity cost than other countries, specialising and trading raises its output and income. Its position as a "financial bridge" between east and west and its reputation since 1988 attract customers, and specialising builds expertise and economies of scale. Banking services, especially online, have low transport costs, so Latvia can sell them across a market of 510 million in the EU despite its own population of only 2.2 million. However, a diversified economy spreads risk. The crisis of 2007–2008 showed the danger: Parex Bank, the second biggest bank, had to be nationalised and the economy suffered, because over-specialisation leaves a country exposed when demand for financial services falls or a bank fails. A wider base of manufacturing, tourism and other services gives more stable jobs and incomes and uses workers of different skills. On balance, it is better for Latvia to keep banking as a key strength, since it is where its comparative advantage lies, but not to rely on it alone; how far to specialise depends on how well banks are regulated and how stable world financial markets are.
2(a)	Merit goods, such as education and health care, are private goods (rival and excludable) that are more beneficial to the individual than they realise. Demerit goods, such as tobacco and alcohol, are private goods that are more harmful to the

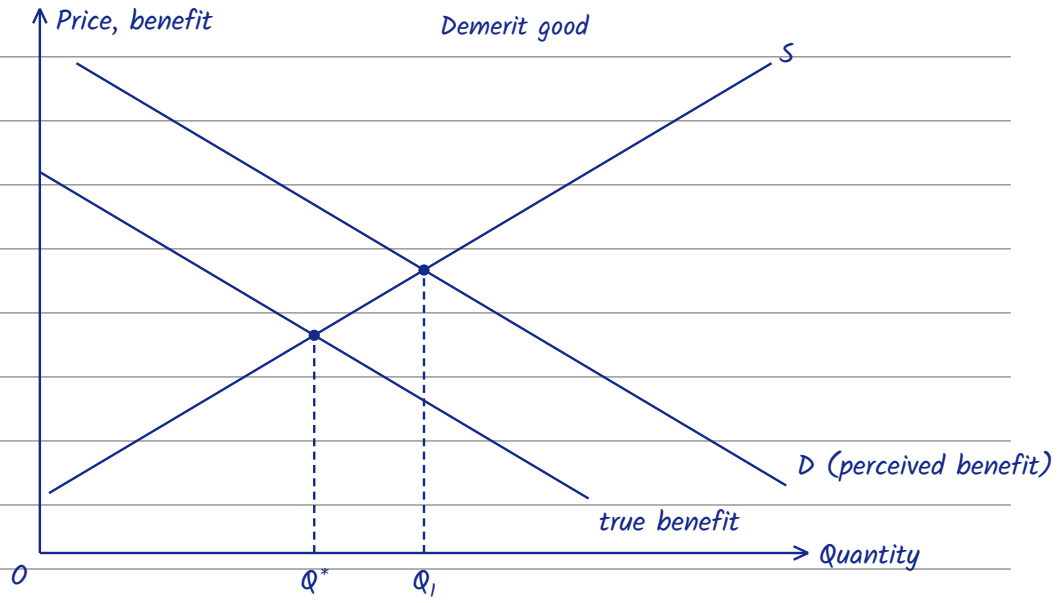
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individual than they realise. Imperfect information means consumers do not know the full benefits or costs, so they base their decisions on a wrong perceived benefit; this is information failure.



Merit goods: consumers underestimate the benefits. A teenager may not appreciate how much another two years of education will raise their future earnings, and a person may not know the long-term benefit of vaccinations or regular health checks. Their demand reflects the perceived benefit, which is below the true benefit, so they buy only Q_1 instead of Q^*. Merit goods are therefore under-consumed and under-produced in a free market.

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Demerit goods: consumers underestimate the harm, or ignore it in the short term. Smokers may not fully understand the risk of cancer or how addictive cigarettes are, and young people may not appreciate the long-term damage of heavy drinking. Perceived benefit is above the true benefit, so they consume Q_1, more than the level Q^* they would choose with full information. Demerit goods are therefore over-consumed and over-produced.

2(b) In a mixed economy resources are allocated partly by the market (the private sector) and partly by the government (the public sector). In most mixed economies the market is the main method because of how well the price mechanism works. Prices act as signals: if consumers want more of a good, its price rises, which signals to producers that it is in demand. They also act as incentives, since a higher price means higher profits, so firms move resources into producing the good. Finally they ration scarce goods to those willing and able to pay. Millions of decisions are coordinated automatically, without an expensive bureaucracy, and decisions are made by private owners who have the best information about their own wants and costs.

Competition between private firms also gives an incentive to cut costs and

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innovate, so resources are used efficiently and consumers get choice. The failures of planned economies, with shortages, surpluses and poor quality, have persuaded most countries to rely mainly on markets.

However, the word "mainly" matters, because markets fail and the government must also allocate resources. Public goods, such as defence and street lighting, are non-excludable and non-rival, so free riders mean the market would not provide them at all. Merit goods like education and health care would be under-consumed, and demerit goods over-consumed, so governments provide, subsidise, tax or regulate them. Markets also create negative externalities such as pollution, can be dominated by monopolies, and can produce a very unequal distribution of income, so the government uses taxes, benefits and laws.

The balance between the two depends on the country. Scandinavian economies have a large public sector, while others leave more to the market, and government intervention can itself fail through lack of information or inefficiency.

In conclusion, most mixed economies rely mainly on market forces because the price mechanism allocates most goods efficiently and responds quickly to consumers, but not exclusively, because in cases of market failure the government must step in; the right mix depends on how serious the market failures are and how effective the government is.

3(a) Cross elasticity of demand (XED) measures the responsiveness of the quantity demanded of one good to a change in the price of another good:

XED = % change in quantity demanded of good A ÷ % change in price of good B.

The sign shows the relationship between the goods. Bread and rice have a positive XED of +1.4, so they are substitutes: both are staple foods that meet the same need. If the price of rice rises by 10%, consumers switch from rice to bread, so the quantity of bread demanded rises by 14%. As the figure is greater than 1 the relationship is strong: the goods are close substitutes and demand for bread is very

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responsive to the price of rice.

Bread and butter have a negative XED of −0.7, so they are complements, jointly demanded since butter is spread on bread. If the price of butter rises by 10%, people buy less butter and so less bread, and the quantity of bread demanded falls by 7%. As the figure is less than 1 in size the relationship is weak: many people eat bread without butter or use substitutes such as margarine.

So the figures differ in sign because rice is a substitute and butter a complement, and in size because the relationship with rice is stronger than that with butter.

3(b) Price elasticity of demand (PED) is the responsiveness of quantity demanded to a change in the good's own price: % change in quantity demanded ÷ % change in price. It shows a business how a price change will affect its total revenue. If demand is price elastic (PED greater than 1), cutting the price raises revenue because quantity rises proportionately more; if demand is price inelastic, raising the price raises revenue. So PED helps a firm set prices, decide whether to run a sale, and judge how much of a tax or cost increase it can pass on to consumers. Firms with inelastic demand, such as petrol, can raise prices; those facing many substitutes cannot.

Income elasticity of demand (YED) is the responsiveness of demand to a change in income: % change in quantity demanded ÷ % change in income. It helps a business forecast how sales and revenue will change as the economy grows or goes into recession. A firm selling luxuries with YED greater than 1, such as foreign holidays, can expect sales to grow fast in a boom, so it can plan investment and capacity, but sales fall sharply in a recession. Firms selling inferior goods (negative YED) may do well in a recession. YED also helps firms choose which markets to enter, for example selling luxuries in fast-growing emerging economies.

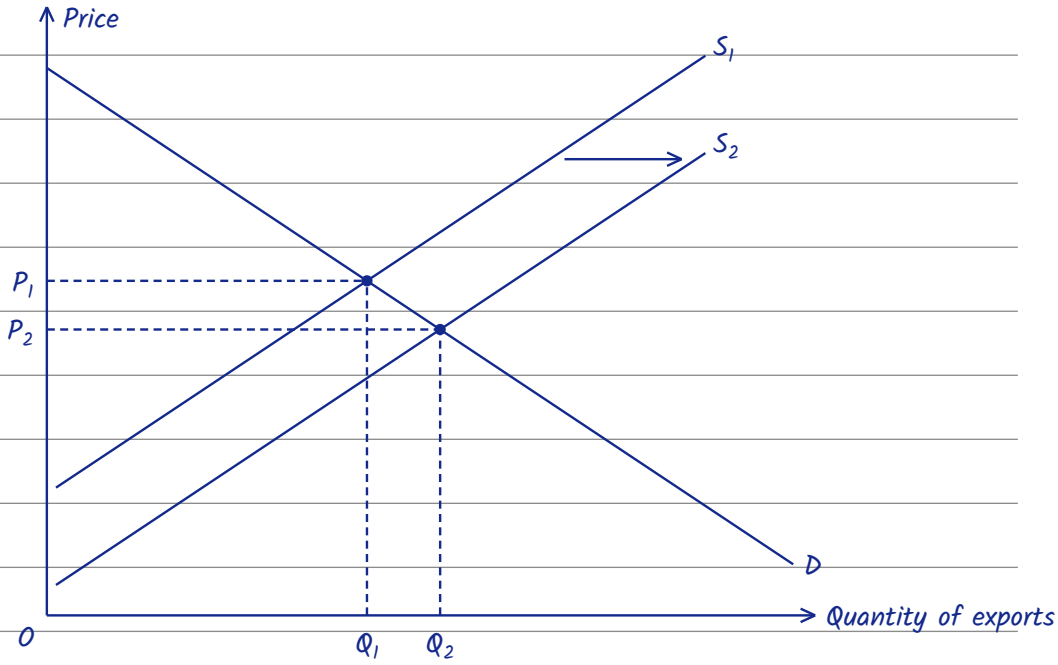
Which is more useful? PED is about a variable the firm controls, its own price, so it is used in day-to-day decisions, while income is outside the firm's control, so

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YED helps long-term planning. However, both have limits: estimates are based on past data, assume other things stay the same, and change over time. PED depends on the availability of substitutes, how widely the product is defined, the share of income spent on it and the time period; YED depends on whether the good is normal or inferior and on the level of development of the economy.

In conclusion, PED is likely to be more useful to most businesses because it directly guides pricing and revenue decisions, which firms make all the time. YED is more useful for a firm planning long-term investment or selling luxury goods, whose sales depend heavily on the economic cycle.

4(a) A subsidy is a payment by the government to producers for each unit produced. It reduces their costs of production, so they are willing to supply more at every price and supply shifts to the right from S_1 to S_2.



The equilibrium price falls from P_1 to P_2 and the quantity rises from Q_1 to Q_2. Domestic producers can now sell more cheaply in world markets, so their exports are more price competitive and more are sold. Export revenue is price × quantity, so it changes from $P_1 \times Q_1$ to $P_2 \times Q_2$.

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Whether export revenue rises depends on the price elasticity of demand for the exports. If foreign demand is price elastic, for example because there are many substitute suppliers in other countries, the percentage rise in quantity is greater than the percentage fall in price, so export revenue rises. If demand is price inelastic, the quantity rises proportionately less than the price falls and export revenue falls.

The price elasticity of supply also matters: if supply is elastic, the subsidy leads to a large increase in output and a smaller fall in price. The size of the subsidy matters too, since a larger subsidy shifts supply further.

4(b) A current account deficit means the value of imports of goods and services, plus income and transfer outflows, is greater than the value of exports and inflows.

Supply-side policies aim to increase the productive capacity and efficiency of the economy, shifting LRAS to the right.

They can be effective. Spending on education and training raises labour productivity, lowering unit costs, so exports become more price competitive and domestic firms compete better with imports. Encouraging research, investment and innovation improves the quality of products, increasing non-price competitiveness. Lower income and corporate taxes increase incentives to work and invest, while privatisation and deregulation increase competition and efficiency. Lower inflation from greater capacity also helps competitiveness. Because these policies tackle the cause of the deficit, a lack of competitiveness, the improvement can be long-lasting, unlike a devaluation.

However, they may not be effective. Their effect takes a long time: training and infrastructure can take years to raise productivity, while the deficit needs action now. They are costly and may increase the budget deficit. There is no guarantee they work: lower income tax may not increase the supply of labour, especially if there are no jobs; training may not raise productivity or occupational mobility;

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privatised firms may not become more efficient; and deregulation may not lead to new firms entering. If higher incomes from growth increase spending on imports, the deficit may even widen. The deficit may also be due to other causes, such as an overvalued exchange rate, high consumer spending or a recession in trading partners, which supply-side policies do not address.

In conclusion, supply-side policies are an effective way of correcting a current account deficit in the long run, when it is caused by poor competitiveness, but they are slow and uncertain. In the short run they need to be combined with expenditure-reducing or expenditure-switching policies, and their success depends on the cause of the deficit and the type of policy used.

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1 hour 30 minutes

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Section A

Answer this question.

1 **Ice cream producers struggle with record vanilla prices**

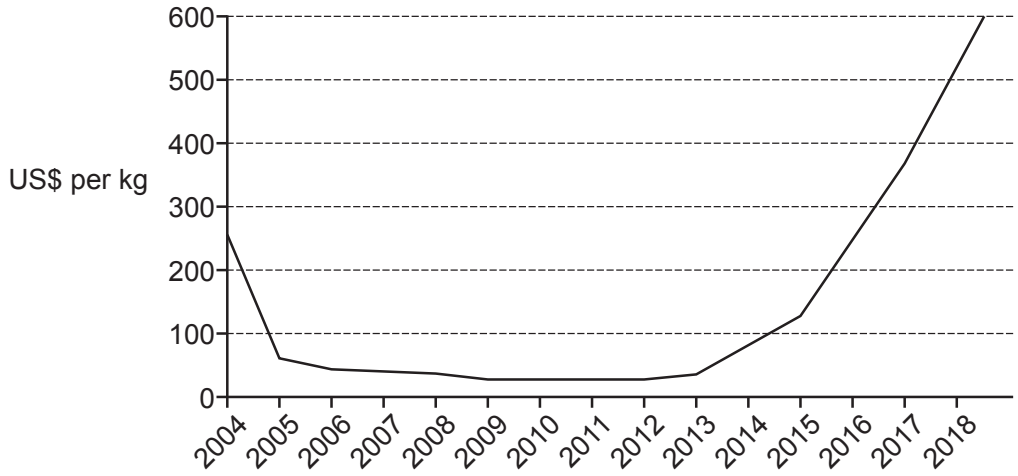


Fig. 1.1 Vanilla Prices, January 2004 to May 2018 (US dollars per kilogram)

The price of natural vanilla hit a record high of US$600 per kilogram in May 2018, making it even more expensive than silver. As a result, many ice cream producers are considering whether they should raise their prices or perhaps stop selling the vanilla flavour of ice cream. The price of natural vanilla has been rising sharply since March 2017 when a cyclone hit Madagascar, which accounts for 75% of global production. Natural vanilla represents 20% of Madagascan exports, worth around US$600 million at current prices.

Natural vanilla comes from the vanilla orchid, which produces vanilla beans. Madagascar has the perfect climate and soil for growing vanilla, but poor harvests have reduced the country's vanilla production by more than 20%, leading to a worldwide supply shortage. It takes three years for the plant to start producing. So if there is a sharp rise in price, people plant more, but then it takes three years for the new supplies to reach the market.

Vanillin is a synthetic substitute to natural vanilla that can be used in the production of ice cream. It is made from more reliable sources of plentiful raw materials, such as wood pulp and petroleum and it has been falling in price. For many years, some of the world's largest producers of ice cream replaced natural vanilla with vanillin. A consequence of this falling demand for natural vanilla was that Madagascar's farmers earned very low returns and many ceased growing natural vanilla. Surprisingly, despite there being fewer growers, the price of natural vanilla stayed low between 2005 and 2012.

However, from 2012, concerns about possible health risks arising from the use of vanillin caused some producers to use more natural vanilla in their ice cream production process. For example, in 2015, one of the world's largest ice cream producers announced plans to end their use of vanillin and use only natural ingredients by 2020. In recent years, however, the sharply rising price of natural vanilla has persuaded some ice cream makers to consider turning back to vanillin. As a result, some of the leading producers of ice cream have more than a year's stock of vanillin.

Source: Hong Kong Economic Journal, 9 May 2018

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(a) With reference to the extract and Fig. 1.1, use supply and demand diagrams to explain the change in the price of natural vanilla

(i) from 2004 to 2009 [3]

(ii) from 2015 to 2018. [3]

(b) Ice cream producers can use natural vanilla or vanillin to produce ice cream.

(i) State the concept that an economist would use to measure the responsiveness of the demand for natural vanilla to a change in the price of vanillin. [1]

(ii) Explain the value that you would expect for this measurement. [3]

(c) Explain why the price elasticity of supply of ice cream made with vanillin is likely to be relatively more elastic than the price elasticity of supply of ice cream made with natural vanilla. [4]

(d) Discuss whether the recent rise in the price of vanilla is on balance likely to have a positive or negative impact upon Madagascar's economy. [6]

Section B

Answer **one** question.

2 In some countries vaccinations against infectious diseases are offered at a price and payment has to be made.

(a) Use a diagram to explain how a subsidy given to producers in the market for vaccinations will affect the market price and explain the impact of this subsidy upon the consumer surplus in this market. [8]

(b) If the cost of the subsidy is to be paid from tax revenues, discuss whether the revenue should be raised through direct taxes or indirect taxes. [12]

3 **(a)** Explain how the factor of production enterprise contributes to aggregate supply in a modern economy and how it differs from the other factors of production in terms of the reward for its services. [8]

(b) Explain how aggregate demand is likely to be affected by an increase in the money supply and consider whether the impact of such an increase will be on employment or on the general price level. [12]

4 China's terms of trade index fell from 102.1 in March 2018 to 99.7 in April 2018.

(a) State how the terms of trade are measured, and explain **three** possible causes of the fall in China's terms of trade shown above. [8]

(b) Discuss whether a rise in the terms of trade or a fall in the terms of trade is more likely to be of benefit for an economy. [12]

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Question number

Answers for paper 9708/22

1(a)(i)

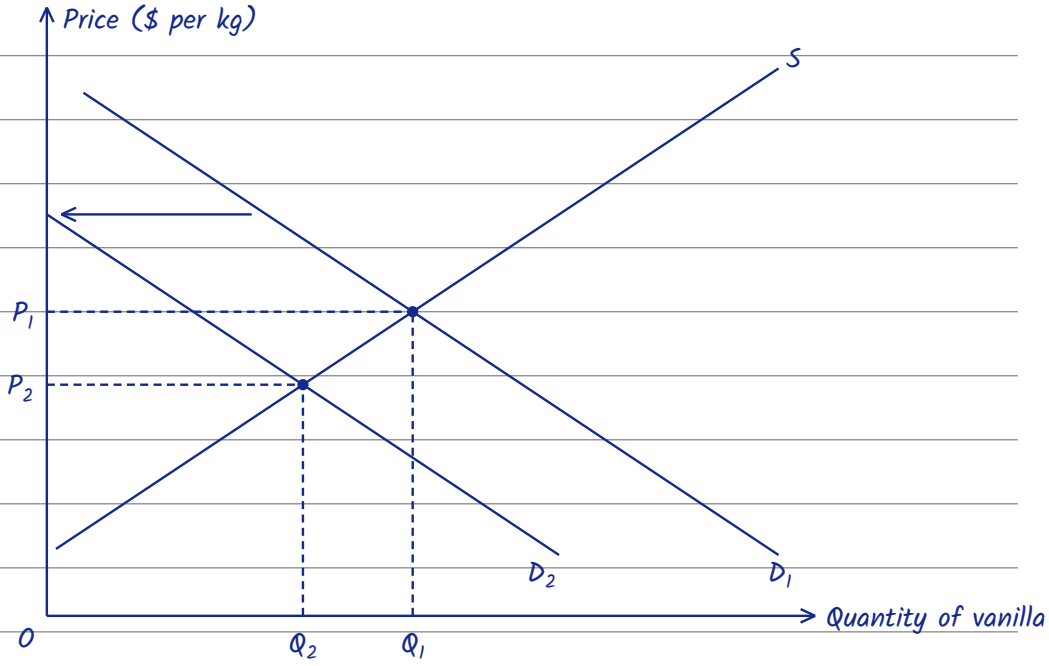
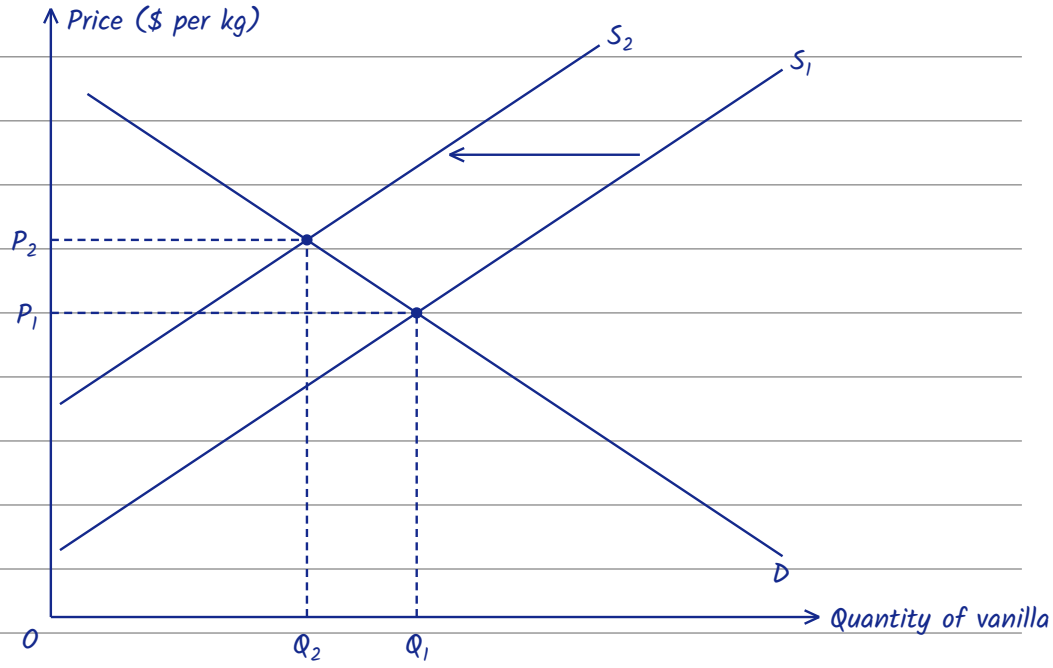


Fig. 1.1 shows the price falling from about $260 per kg in 2004 to about $30 in 2009. This was mainly due to a decrease in demand: vanillin, a substitute, was falling in price, so many large ice cream producers replaced natural vanilla with vanillin. Demand shifted left from D_1 to D_2, so the price fell from P_1 to P_2 and the quantity from Q_1 to Q_2.

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1(a)(ii)



From 2015 to 2018 the price rose from about $130 to a record $600 per kg. In March 2017 a cyclone hit Madagascar, which produces 75% of world vanilla, and poor harvests cut its production by more than 20%. Supply shifted left from S_1 to S_2, so the price rose from P_1 to P_2. Demand also rose as health concerns about vanillin led producers to switch back to natural vanilla, adding to the price rise.

1(b)(i) Cross elasticity of demand (XED).

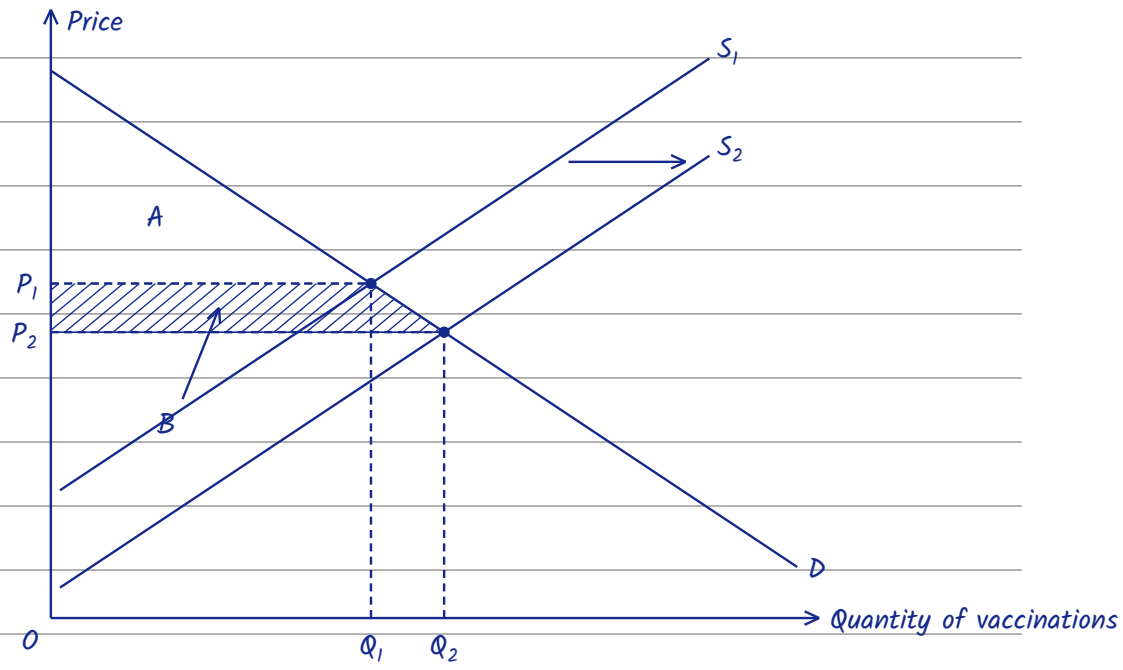
1(b)(ii) XED = % change in quantity demanded of natural vanilla ÷ % change in the price of vanillin. I would expect the value to be positive because the two are substitutes in making ice cream: the extract shows that when the price of vanillin fell, producers switched to it and demand for natural vanilla fell, so both changes move in the same direction. As they are close substitutes, the value should be high (greater than 1): the larger the coefficient, the stronger the relationship.

1(c) Price elasticity of supply (PES) is the responsiveness of quantity supplied to a change in price: % change in quantity supplied ÷ % change in price. Supply is

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	more elastic when producers can increase output easily and quickly when the price rises, and less elastic when they cannot. Supply of ice cream made with natural vanilla is inelastic because the vanilla input is hard to increase: a new plant takes three years to start producing, many farmers left the industry when prices were low, so there is little spare capacity, and poor harvests have cut output. Vanillin, however, is made from reliable sources of plentiful raw materials such as wood pulp and petroleum, and some producers hold more than a year's stock, so output of ice cream made with vanillin can be increased quickly, making its supply relatively more elastic.
1(d)	The rise could be positive. Vanilla is 20% of Madagascar's exports, worth about $600 million. If demand is price inelastic in the short run, as ice cream makers need it, the higher price raises export revenue, improving the current account. Higher exports increase aggregate demand, so through the multiplier output, incomes and employment rise, and farmers have an incentive to replant, using Madagascar's comparative advantage in climate and soil. However, it could be negative. The rise is caused by a fall in supply, so the quantity exported fell by over 20%. If demand is price elastic, export revenue falls, AD contracts and the current account worsens. At $600 per kg ice cream makers are already turning back to vanillin, so demand may fall in the long run, and when new plants produce in three years the price could collapse. Higher incomes with limited capacity could also cause demand-pull inflation, and reliance on one crop leaves the economy vulnerable. On balance, the impact is likely to be positive in the short run, since export revenue rises, but negative in the long run if buyers switch to vanillin, so Madagascar should use the extra revenue to diversify.
2(a)	A subsidy is a payment by the government to producers, which lowers their costs,

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so supply of vaccinations shifts to the right from S_1 to S_2.



At the old price there is excess supply, so the market price falls from P_1 to P_2 and the quantity of vaccinations bought rises from Q_1 to Q_2.

Consumer surplus is the difference between the price consumers are willing to pay for each unit and the price they actually pay: the area below the demand curve and above the price. Before the subsidy it is area A. After the subsidy it increases by area B (shaded), since existing buyers pay less and new buyers who now get vaccinated also gain surplus, so it becomes A + B.

How much the price falls depends on the size of the subsidy and on the price elasticities of demand and supply. If demand is price inelastic, as for an essential vaccination, most of the subsidy is passed on as a lower price, so the price falls a lot and consumer surplus rises by more; if demand is elastic, the price falls less, quantity rises more and more of the subsidy goes to producers.

2(b) Direct taxes are taxes on income and wealth, such as income tax and corporation tax, paid directly to the government by the person who bears them. Indirect taxes are taxes on spending, such as VAT and excise duties, collected from firms who

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can pass them on to consumers.

Direct taxes have advantages. Income tax is usually progressive, so people with higher incomes pay a larger proportion, which promotes equity and helps redistribute income; this fits a subsidy for vaccinations that benefits everyone, including the poor. They raise large revenues, are fairly predictable and do not directly raise prices. However, higher income tax may reduce the incentive to work and save, and higher corporation tax may discourage investment and drive firms abroad. Tax evasion and avoidance are widespread, especially in less developed economies with large informal sectors, where many people's income is hard to tax.

Indirect taxes have advantages. They are harder to evade because they are collected from firms at the point of sale, they are paid by everyone who spends, including tourists, and consumers have some choice over whether to pay. Taxes on demerit goods like tobacco also reduce harmful consumption. However, they are regressive: poor households spend a higher proportion of their income, so they pay a larger share of income in tax. They raise prices, so they can be inflationary, and very high indirect taxes can encourage smuggling and black markets. If demand is elastic, revenue may be less than expected.

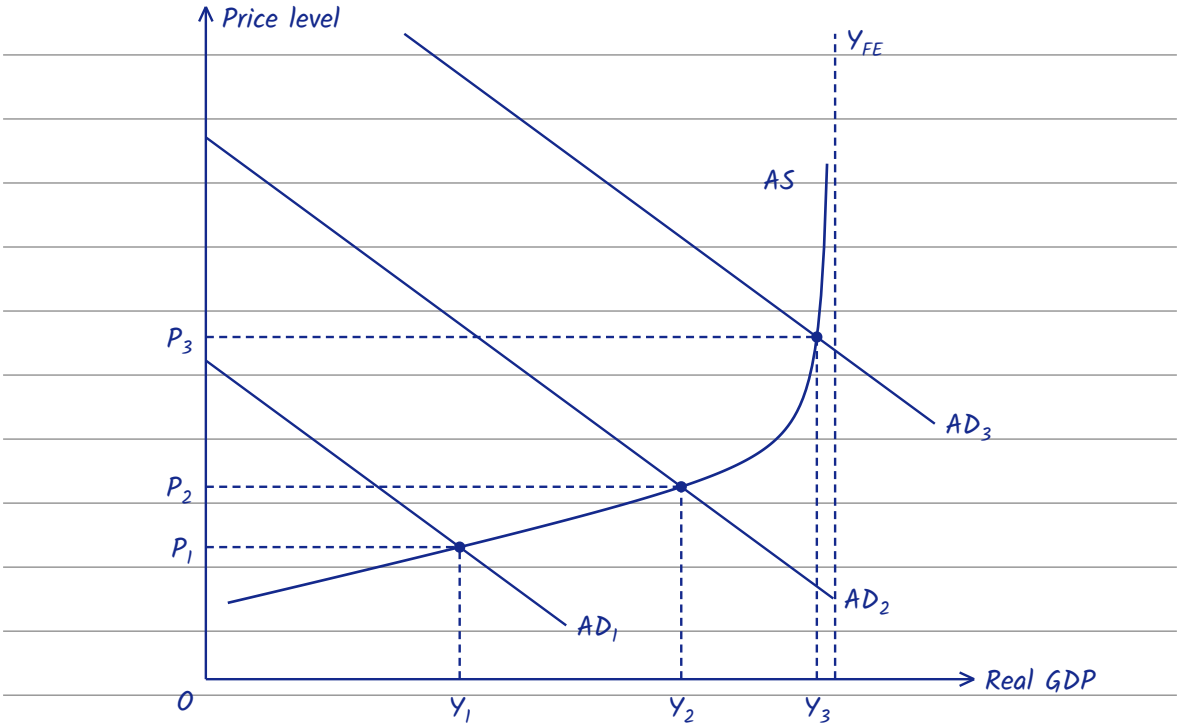
Which is better depends on the country. In a developed economy with an efficient tax system, direct taxes are a fairer way to fund a subsidy that mainly helps lower income groups. In a developing economy where evasion of income tax is high, indirect taxes may be the only reliable source. It also depends on the existing tax burden.

In conclusion, I think the revenue should mainly be raised through direct taxes, because they are progressive and the aim of the subsidy is to make vaccinations affordable for all, so taxing the poor more heavily would partly undo its benefit; but where income tax cannot be collected effectively, a mix including indirect taxes on demerit goods is sensible.

Question number	
3(a)	Enterprise is the factor of production that organises and coordinates the other factors, land, labour and capital, deciding what to produce, how and in what quantity, and it bears the risk of production, since costs may exceed revenue. In a modern economy this role is often split between shareholders, who own the firm and bear the risk, and managers, who control it (the divorce of ownership and control). Aggregate supply is the total output of goods and services an economy's firms are willing to produce at each price level in a period. Without enterprise the other factors would not be combined to make output. Entrepreneurs hire labour, rent land and buy capital to produce goods and services, which adds to aggregate supply. By bringing unused resources into production they move the economy towards full capacity, and by introducing new products and more efficient methods (innovation) they raise productive potential, shifting AS to the right. Enterprise also differs in its reward. Labour receives wages, land receives rent and capital receives interest, and these payments are agreed in advance and paid as costs whether the firm does well or not. The reward to enterprise is profit, which is what is left after all the other factors have been paid. It is the reward for taking risk, so it is uncertain and can be negative: a loss-making firm earns no profit at all.
3(b)	The money supply is the total amount of money in the economy, such as notes, coins and bank deposits. An increase in the money supply means banks have more to lend, so the price of borrowing, the rate of interest, falls. Consumption: lower interest rates make loans for cars and houses cheaper and reduce the reward for saving, so households save less and borrow and spend more. Lower mortgage repayments raise disposable income, and asset prices such as houses may rise, increasing wealth and confidence. So consumption rises. Investment: lower interest rates reduce the cost of borrowing for firms, so more

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investment projects become profitable and firms buy more capital goods. Net exports may also rise, as lower interest rates cause hot money to leave, the currency depreciates and exports become cheaper. As C, I and (X – M) are components of AD, AD shifts right and through the multiplier national income rises by more than the initial increase in spending.



Whether the impact is on employment or on prices depends on the amount of spare capacity in the economy. If the economy is in recession with high unemployment (AD_1 to AD_2), firms can increase output using unused workers and capital, so output rises from Y_1 to Y_2 and employment rises with only a small rise in the price level. If the economy is close to full employment (AD_2 to AD_3), firms cannot increase output much, so the main effect is demand-pull inflation, the price level rising from P_2 to P_3. Monetarists argue, using the quantity theory ($MV = PT$), that in the long run more money only raises prices.

Also, the effect on AD may be small: if confidence is low, households and firms may not borrow even at low interest rates, and banks may not lend, as after 2008.

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	In conclusion, an increase in the money supply will raise AD, but whether the effect is on employment or on the price level depends on the spare capacity in the economy: mainly employment in a recession, mainly prices near full employment, and probably prices in the long run.
4(a)	The terms of trade measure the relationship between a country's export prices and its import prices. The index is: Terms of trade = (index of average export prices ÷ index of average import prices) × 100. The fall from 102.1 to 99.7 means China's export prices fell relative to its import prices. Three possible causes: 1. A depreciation of the yuan. If the yuan falls in value, for example because China's central bank cut interest rates and hot money left, imports cost more in yuan and export prices in foreign currency fall. 2. A rise in the price of imports. China imports large amounts of oil and raw materials; if world oil prices rise due to cuts in production by oil exporters, the import price index rises. 3. A fall in the price of exports. Lower production costs in China's export industries, for example due to export subsidies or productivity gains from new technology, allow firms to cut export prices. Similarly, higher inflation in China's trading partners, caused for example by excess government spending there, makes China's export prices relatively lower.
4(b)	A rise in the terms of trade (a favourable movement) means that each unit of exports buys more imports; a fall (an unfavourable movement) means a given quantity of exports buys fewer imports. A rise can be beneficial. The country can import more for the same amount of exports, so living standards rise. Cheaper imports of raw materials and components

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lower firms' costs and reduce cost-push inflation. If the rise is caused by higher world demand for its exports, such as oil, export revenue and the current account both improve. However, if the rise is caused by higher export prices due to domestic inflation or an appreciation, exports become less price competitive. If demand for exports is price elastic, export revenue falls, the current account worsens, and output and employment in export industries fall.

A fall can be beneficial. If it is caused by a depreciation or by lower costs, exports become more price competitive and imports dearer, so with elastic demand the current account improves and AD, output and employment rise. However, a given volume of exports buys fewer imports, so living standards fall, and dearer imported raw materials and food cause cost-push inflation. If the fall is due to falling world prices for primary products, as for many developing countries, export revenue falls and the country is worse off.

Which is better depends on the cause of the change, on the price elasticities of demand for exports and imports, and on the state of the economy. An economy with unemployment may prefer a fall that boosts export demand, while one with high inflation gains more from a rise.

In conclusion, a rise in the terms of trade is generally more likely to benefit an economy because it raises the real purchasing power of its exports and living standards, especially when caused by stronger demand for its exports; a fall is only beneficial when it comes from improved competitiveness and demand for exports is price elastic.

Cambridge Assessment International Education

Cambridge International AS & A Level

ECONOMICS **9708/23**

Paper 2 Data Response and Essay **October/November 2020**

1 hour 30 minutes

9900643376

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **two** questions in total:
  - Section A: answer Question 1.
  - Section B: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You may answer with reference to any economy you have studied where relevant to the question.

INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **4** pages. Blank pages are indicated.

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Section A

Answer this question.

1 Malaysia's persistent trade surplus

Malaysia has the third highest income per head in South East Asia and, in the last six years, has experienced an average rate of growth approaching 6% per year. It is now a successful 'newly industrialised market economy' with a strong export sector. This strength is seen in its consistent surplus on its balance of trade in goods and services (see Fig. 1.1).

In the past, Malaysia's economy was firmly based on the production of basic raw materials such as rubber and tin. In more recent years, however, its growing prosperity has come about through it being a leading exporter of electrical appliances, electronic parts, petroleum and natural gas. China is its biggest export market, accounting for 16% of total exports in 2016, and a further 11% of exports go to the European Union (EU). Malaysia's economy though remains vulnerable to external shocks like the global financial crisis of 2007–2008, which led to capital outflows.

Despite what appears to be a strong external trade position, the foreign exchange rate of Malaysia's currency, the ringgit (RM), against the US dollar has experienced significant change since 2013 (see Fig. 1.2). Given the importance of trade in goods and services to its economy, any volatility and uncertainty of the ringgit's value may well hinder Malaysia in its drive to become a 'high income economy'.

Source: adapted from tradingeconomics.com/articles, accessed April 2018

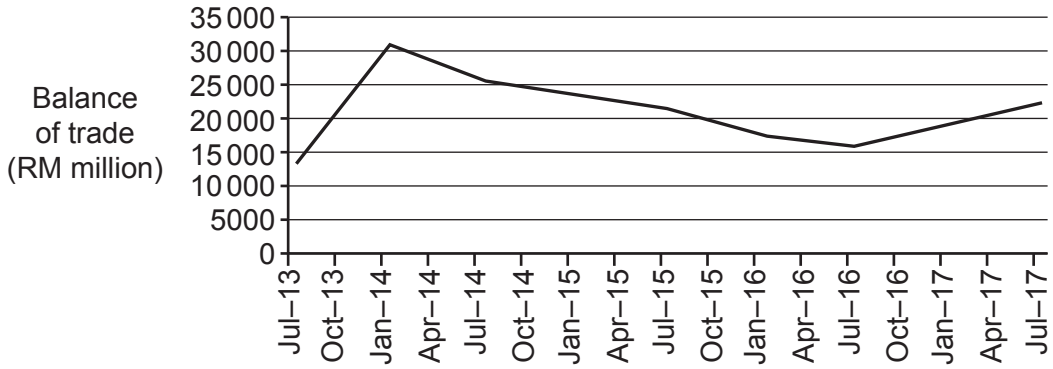


Fig. 1.1 Malaysia balance of trade in goods and services, July 2013–July 2017 (RM million)

Source: tradingeconomics.com, accessed April 2018

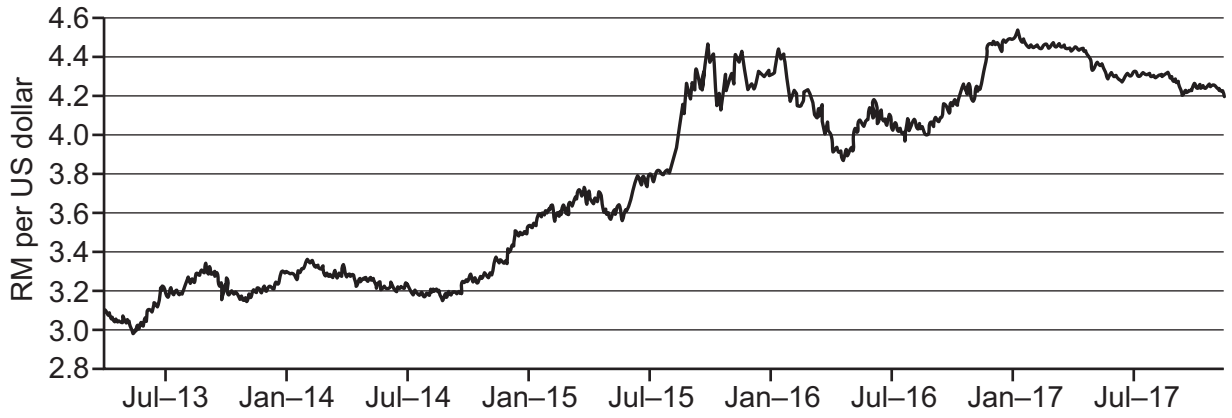


Fig. 1.2 Malaysia/US foreign exchange rate, July 2013–July 2017

Source: US Federal Reserve

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(a) State whether the Malaysian ringgit depreciated or appreciated against the US dollar over the period July 2013 to July 2017. Justify your answer. [2]

(b) **(i)** Describe the relationship you would expect between a change in the foreign exchange rate of a country and its balance of trade in goods and services. [2]

(ii) Explain whether the evidence in Fig. 1.1 and Fig. 1.2 confirms this relationship. [2]

(c) In July 2017, Malaysia's balance of trade in goods and services was RM22 045 million and its current account balance was RM9642 million.

Explain the reason for this difference. [2]

(d) Other than exchange rate changes, explain **two** possible reasons for Malaysia's increasing balance of trade in goods and services surplus from July 2016 to July 2017. [6]

(e) Discuss whether the Malaysian government should be concerned about persistent surpluses in its balance of trade in goods and services. [6]

Section B

Answer **one** question.

2 **(a)** Using diagrams, explain what might cause a market to be in disequilibrium, and how market forces would lead to equilibrium being restored. [8]

(b) Discuss whether the incidence of an indirect tax on a product always affects its consumers more than its producers. [12]

3 **(a)** Explain what is meant by income elasticity of demand and, with the help of examples, show how it can be used to determine whether a good is normal or inferior. [8]

(b) Discuss whether knowledge of price elasticity of demand or price elasticity of supply is more useful for a car manufacturer. [12]

4 A government embarks on a supply-side policy involving substantial additional funding for new road schemes and for new training schemes designed to raise labour productivity.

(a) Use an AD/AS diagram to explain the effects of this funding on the level of output in the economy. [8]

(b) Discuss the extent to which a supply-side policy involving new road schemes and new training schemes will increase the rate of inflation in the economy. [12]

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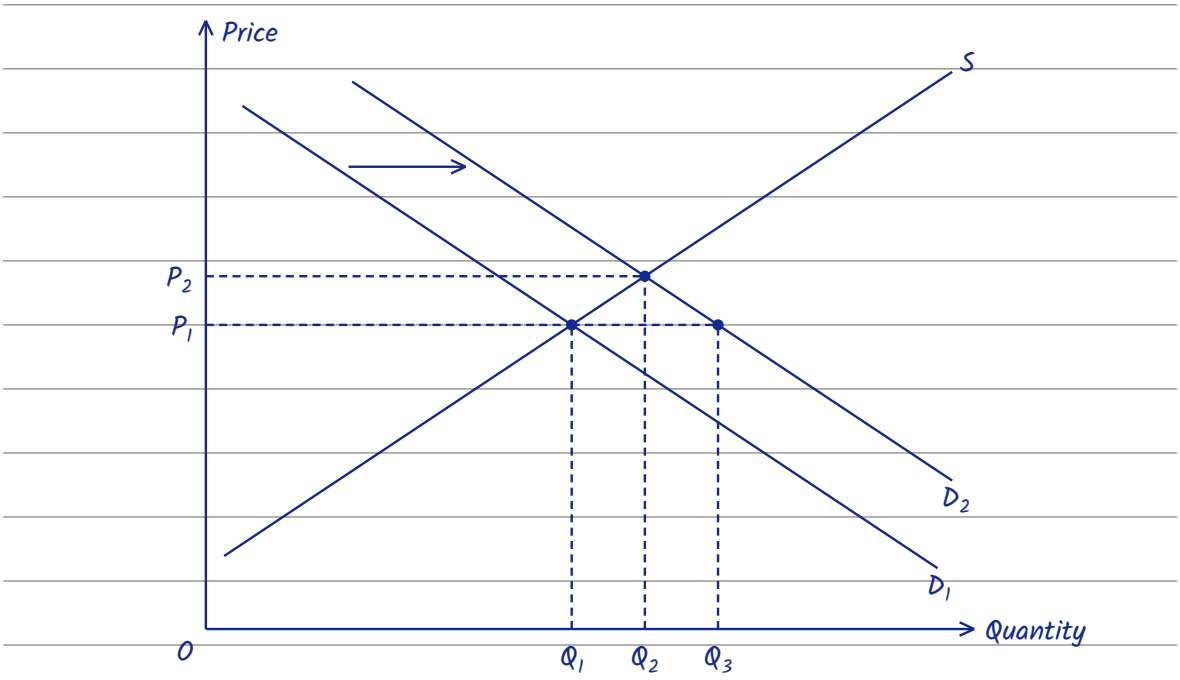
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Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number	
	Answers for paper 9708/23
1(a)	The ringgit depreciated. Fig. 1.2 shows it rose from about RM3.1 to about RM4.3 per US dollar, so each ringgit is worth fewer US dollars (a dollar buys more ringgit).
1(b)(i)	A fall (depreciation) in the exchange rate makes exports cheaper and imports dearer, so it should increase a trade surplus or reduce a deficit. A rise (appreciation) should reduce a surplus or increase a deficit.
1(b)(ii)	In general the evidence does not confirm it, as the two figures are not closely related. From Jan 2014 to Jul 2016 the ringgit depreciated from about RM3.3 to RM4.1 per dollar, but the surplus fell from about RM31 000 million to about RM16 000 million. Only from Jul 2016 to Jul 2017 does depreciation coincide with a rising surplus.
1(c)	The current account also includes primary income (such as profits, interest and dividends) and secondary income (current transfers such as remittances). The difference, RM22 045m – RM9642m = RM12 403m, means the combined balance of primary and secondary income was a deficit of RM12 403 million.
1(d)	Rising incomes in its main export markets: China takes 16% of Malaysia's exports and the EU 11%. If these economies grew faster in 2016–2017, their consumers and firms would buy more Malaysian electrical appliances and electronic parts, so export revenue rose faster than imports and the surplus increased.

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	Higher world prices for Malaysia's commodity exports: Malaysia is a leading exporter of petroleum and natural gas. A recovery in world oil and gas prices from their low in 2016 raised the value of these exports, and as demand for energy is price inelastic, export revenue rose. (Alternatively, government subsidies to export industries would lower export prices and make Malaysian goods more competitive.)
1(e)	The government may not need to be concerned. A trade surplus adds to aggregate demand, since (X – M) is positive, supporting growth of nearly 6% a year, high employment and rising real GDP. It shows that Malaysia's export industries are competitive, and the inflow of foreign currency builds reserves that help protect against shocks like the capital outflows of 2007–2008. However, there are reasons for concern. If the economy is near full capacity, the extra demand could cause demand-pull inflation. A surplus means Malaysians consume fewer imports than they could, so living standards may be lower than possible. Persistent surpluses, especially if supported by subsidies or a low exchange rate, may cause tension and retaliation from trading partners, and dependence on exports to China leaves Malaysia exposed to a downturn there. On balance the government should not be very concerned, as the surplus reflects strong competitive industries and the economy is growing; it should only be concerned if inflation rises or trading partners threaten retaliation.
2(a)	A market is in equilibrium when the quantity demanded equals the quantity supplied at the current price, so the market clears and there is no tendency for the price to change. In the diagram this is at P_1 and Q_1, where D_1 crosses S.

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Disequilibrium is caused when demand or supply shifts, or when the government fixes a price. For example, a rise in consumers' incomes increases demand for a normal good from D_1 to D_2. At the old price P_1, quantity demanded is now Q_3 but quantity supplied is only Q_1, so there is excess demand (a shortage) of Q_1Q_3.

Market forces restore equilibrium. Consumers who cannot buy the good compete for it and bid the price up. The higher price rations the good, so quantity demanded contracts along D_2, and acts as a signal and incentive to producers, who expand supply along S because it is now more profitable. The price rises until there is no excess demand, at the new equilibrium P_2, Q_2.

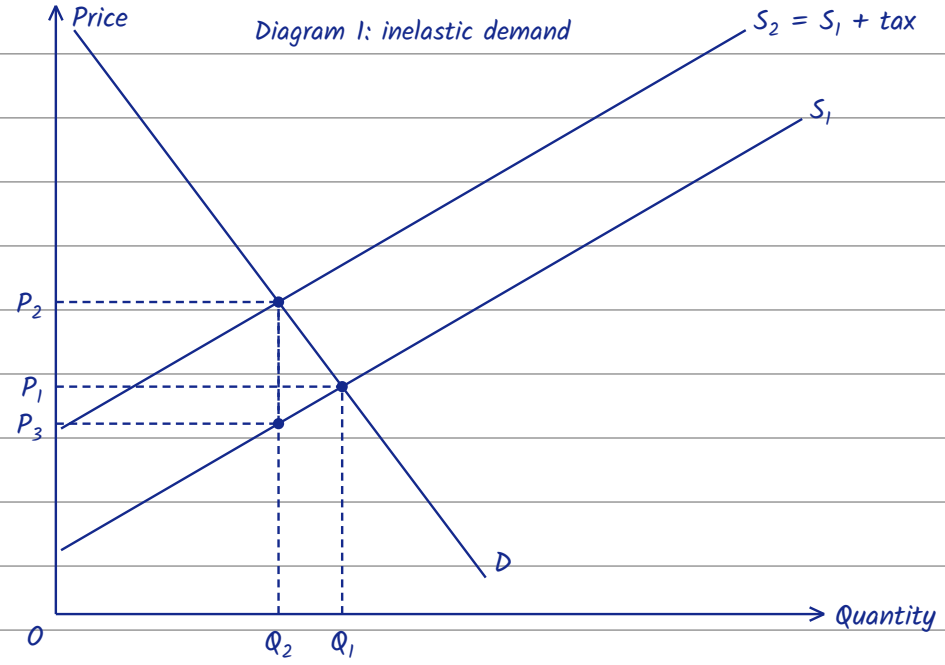
Similarly, a fall in demand or an increase in supply, for example a good harvest, creates excess supply at the old price; firms cut prices to sell their stocks, quantity demanded extends and quantity supplied contracts until a new, lower equilibrium is reached. A maximum price below equilibrium, however, keeps the shortage in place because market forces cannot raise the price.

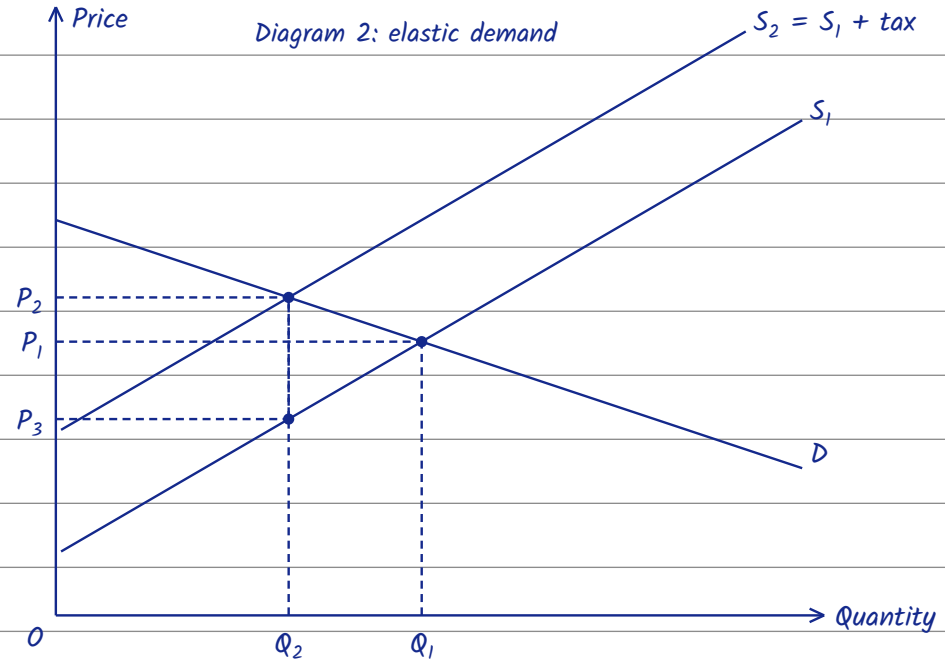
2(b)

An indirect tax is a tax on spending, which raises firms' costs and shifts supply up by the amount of the tax, from S_1 to S_2. Its incidence is how the burden of the

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tax is shared between consumers, who pay a higher price, and producers, who receive a lower price after paying the tax.





Consumers often bear more. In Diagram 1 demand is price inelastic, for example for petrol or cigarettes, which have few substitutes or are habit-forming. The price rises from P_1 to P_2, so consumers pay P_1P_2 of the tax while producers receive P_3 instead of P_1, bearing only P_3P_1. Consumers bear most of the burden and lose more

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consumer surplus, and quantity hardly falls. Many indirect taxes are placed on such goods precisely because they raise revenue, so in practice consumers often pay more.

However, this is not always the case. In Diagram 2 demand is price elastic, as for a brand with many substitutes. Firms cannot pass on much of the tax without losing many sales, so the price rises only a little (P_1 to P_2) and the price producers receive falls more (P_1 to P_3): producers bear most of the tax and lose more producer surplus. The price elasticity of supply also matters: if supply is inelastic, for example for agricultural goods in the short run, producers cannot easily reduce output, so they bear more of the tax; if supply is elastic, consumers bear more.

The incidence can also change over time: in the long run demand often becomes more elastic as consumers find substitutes, shifting more of the burden to producers.

In conclusion, the incidence of an indirect tax does not always fall more on consumers. It depends on the relative price elasticities of demand and supply: consumers bear more when demand is more inelastic than supply, which is common for the demerit goods usually taxed, but producers bear more when demand is more elastic than supply.

3(a) Income elasticity of demand (YED) measures the responsiveness of the quantity demanded of a good to a change in consumers' income:

YED = % change in quantity demanded ÷ % change in income.

Its sign shows whether a good is normal or inferior.

Normal goods have a positive YED: as income rises, demand rises, because consumers can afford to buy more of goods they want. For example, if incomes rise by 10% and demand for restaurant meals rises by 20%, YED = +2. As this is greater than 1 it is a luxury; clothing with a YED of, say, +0.4 is a normal

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necessity, as demand rises less than proportionately.

Inferior goods have a negative YED: as income rises, demand falls, because consumers switch to better quality alternatives they can now afford. For example, if incomes rise by 10% and demand for bus travel falls by 5%, YED = −0.5, as people buy cars instead. Cheap own-brand foods are another example, as consumers switch to branded goods.

3(b)

Price elasticity of demand (PED) measures the responsiveness of quantity demanded to a change in price: % change in quantity demanded ÷ % change in price. For a car manufacturer it shows how a price change affects sales and total revenue. If demand for its cars is price elastic, for example for family cars where there are many competing models, a price cut raises total revenue, while a price rise loses many sales. If demand is inelastic, for example for a luxury brand with strong loyalty, it can raise prices and revenue. PED also tells the firm how much of a cost increase or tax it can pass on to buyers and helps with price discrimination between markets.

Price elasticity of supply (PES) measures the responsiveness of quantity supplied to a change in price: % change in quantity supplied ÷ % change in price. It shows whether the manufacturer has the capacity to increase output when prices or demand rise. If it has spare capacity, stocks of finished cars and flexible labour and components, supply is elastic and it can take advantage of a rise in demand, for example for a popular new electric model. If its factories are at full capacity and car production takes time, supply is inelastic, so it must invest in capacity, hold stocks or use overtime to respond.

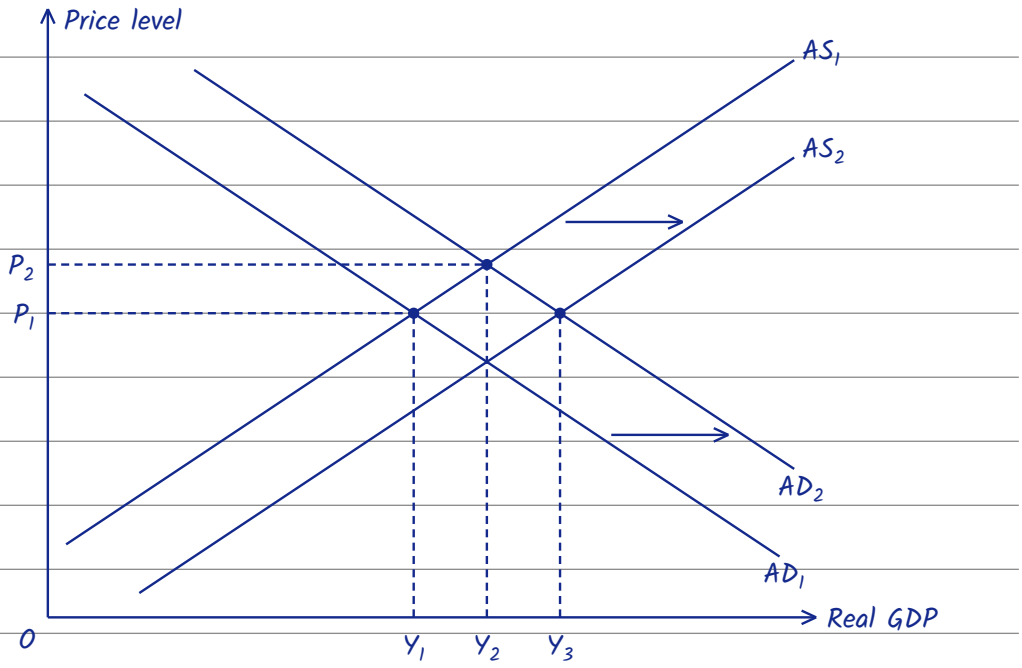
Which is more useful? PED is about consumers' behaviour, which the firm needs to understand whenever it sets or changes the price of its vehicles, a central decision for revenue and profit. PES is about the firm's own production, which it already knows well, and it is most useful for planning capacity and stocks. However, both

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measures are estimates from past data, change over time and assume other things are constant; in the long run both PED and PES tend to become more elastic. Other information, such as YED and competitors' prices, also matters.

In conclusion, knowledge of PED is likely to be more useful for a car manufacturer, because pricing decisions in a competitive market directly determine its revenue, while PES matters mainly when it plans how quickly it can respond to changes in demand.

4(a) Aggregate demand is total planned spending on an economy's goods and services at each price level (C + I + G + (X − M)). Aggregate supply is the total output firms are willing to produce at each price level. National output is in equilibrium where AD = AS, at Y_1.



Short run: the extra funding for road schemes and training is government spending, a component of AD, so AD shifts right from AD_1 to AD_2. Through the multiplier, output rises from Y_1 to Y_2, although the price level also rises to P_2.

Long run: new roads reduce transport costs and journey times, and training raises labour productivity and skills, so firms can produce more at lower cost. The

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productive capacity of the economy increases and AS shifts right from AS_1 to AS_2. Output rises further to Y_3, and the price level falls back towards P_1. So both effects increase the level of output.

4(b) Inflation is a sustained rise in the general price level. The policy could increase it through aggregate demand. Building roads and running training schemes is government spending, which raises AD at once, and the multiplier increases incomes and consumption further. If the economy has little spare capacity, firms cannot raise output quickly, so excess demand bids up prices, causing demand-pull inflation, as from P_1 to P_2 in the diagram in 4(a). Large construction projects also raise demand for scarce materials and skilled workers, pushing up costs and wages. If the funding is financed by borrowing or by creating money, the inflationary effect is greater.

However, the aim of supply-side policies is to increase productive capacity, and this could reduce inflation. Better roads lower firms' transport costs, and training raises labour productivity, so unit labour costs fall. AS shifts to the right, from AS_1 to AS_2, so the price level falls back and inflation could be lower than before. A bigger productive capacity also means future increases in AD can be met by more output rather than higher prices. If the economy has unemployed resources, the rise in AD increases output and employment with little effect on prices.

The overall effect depends on several factors. Time is crucial: the increase in AD happens immediately, while the supply-side benefits take years, as roads are built and workers are trained, so inflation is likely to rise in the short run and fall in the long run. It depends on the scale of the funding, how it is financed (higher taxes would offset the rise in AD), the amount of spare capacity, and whether the schemes are well chosen and actually raise productivity.

In conclusion, the policy is likely to increase the rate of inflation to some extent in the short run, especially if the economy is near full capacity and the spending

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is financed by borrowing. In the long run, as AS increases, it is more likely to reduce inflationary pressure, so its overall effect on inflation is likely to be small.