Surname	StemUp Model Solution	Centre Number	Candidate Number
Other Names			2

GCE AS/A LEVEL

2520U10-1

S19-2520U10-1

ECONOMICS – AS unit 1
Introduction to Economic Principles

MONDAY, 13 MAY 2019 – MORNING

1 hour 15 minutes

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1-15	**15**	
16	**4**	
17	**12**	
18	**10**	
19	**14**	
Total	**55**	

2520U101
01

ADDITIONAL MATERIALS

A calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions in the spaces provided in this booklet. You may use continuation paper on page 19 if necessary, taking care to number the continuation correctly.

INFORMATION FOR CANDIDATES

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

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SECTION A

For each question in Section A, write the letter (A, B, C, D or E) that corresponds to your answer in the box provided.

You are advised to spend approximately **30 minutes** *on this section.*

1. Which of the following is the best example of a 'free good'? [1]

A Flood defence

B Music concert ticket

C Oil

D Sunlight

E Dental services

D

2. The Law of Diminishing Marginal Utility explains: [1]

A The shape of the demand curve

B The shape of the Laffer curve

C The income elasticity of demand of a product

D The shape of the supply curve

E The amount of tax revenue received from an indirect tax

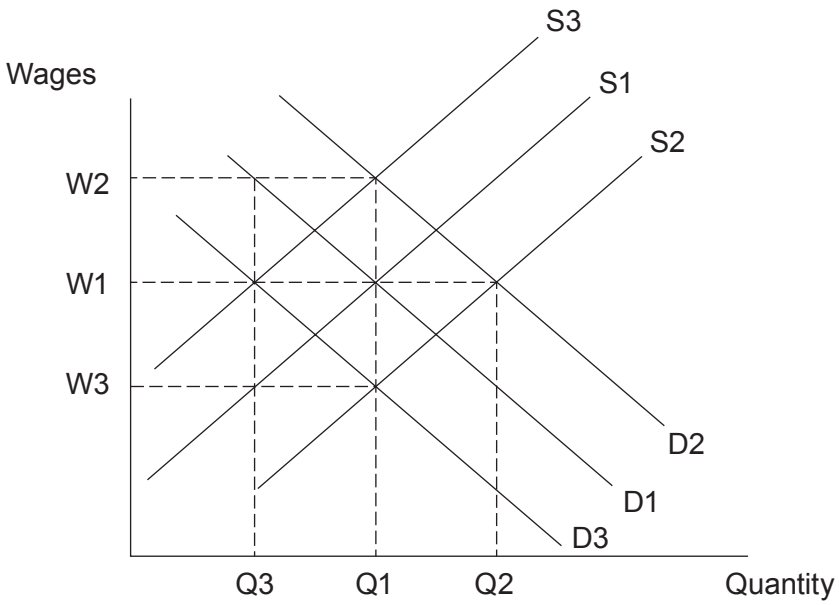
A

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3. The diagram below shows the labour market equilibrium for childcare workers in the UK. The market is in equilibrium at Q1, W1.



A newly-elected government then introduces new legislation which says that all childcare workers must now serve a longer training period of 2 years. At the same time, it increases funding to parents to pay for childcare.

Which of the following is most likely to occur? [1]

A The equilibrium wage will decrease to W3 but the number employed will remain at Q1

B The equilibrium wage will increase to W2 but the number employed will remain at Q1

C The equilibrium wage will remain at W1 but the number employed will rise to Q2

D The equilibrium wage will remain at W1 but the number employed will fall to Q3

E The equilibrium wage will remain at W1 and the number employed will remain at Q1

B

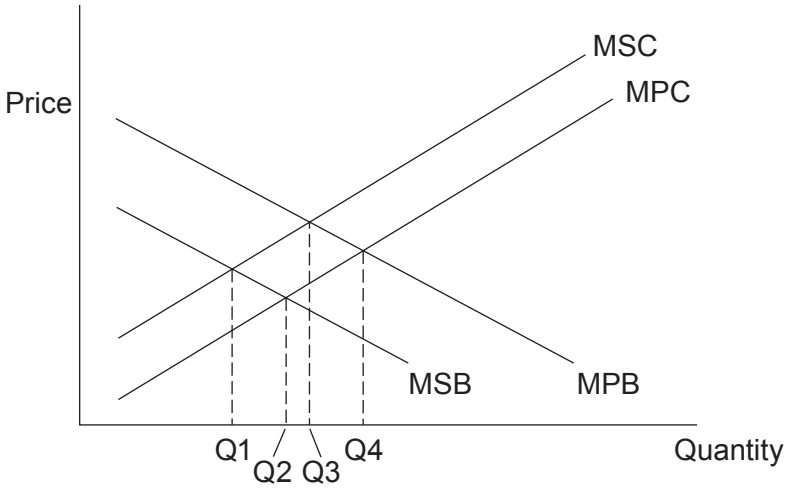
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4. The diagram below shows a product that has negative externalities in **both** consumption and production. What is the socially efficient level of output? [1]



MSC - Marginal Social Cost
MSB - Marginal Social Benefit
MPC - Marginal Private Cost
MPB - Marginal Private Benefit

A Q1

B Q2

C Q3

D Q4

E Cannot be determined

A

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5. The table below shows a market demand schedule and a market supply schedule for tomatoes.

Price per tonne (£)	Quantity demanded per month (millions of tonnes)	Quantity supplied per month (millions of tonnes)
280	4.0	9.2
260	5.0	8.8
240	6.4	8.2
220	7.4	7.4
200	8.2	6.6
180	9.0	5.8
160	9.8	4.8

What would be the consequence of the government setting a maximum price for tomatoes at £200 per tonne? [1]

A There would be a surplus of 1.6 million tonnes of tomatoes

B Producers' revenue would increase by £12 million

C The price of tomatoes would be unchanged

D Producers' revenue would decrease by £12 million

E There would be a shortage of 1.6 million tonnes of tomatoes

E

6. Which of the following is most likely to cause an appreciation of the pound sterling? [1]

A US interest rates are raised

B The Bank of England starts a programme of quantitative easing

C Confidence in Britain's departure from the EU deteriorates

D China imports significantly more luxury British products

E Capital outflows from the UK increase

D

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7. Which of the following is **not** an assumption of free markets operating? [1]

A Perfect information

B No government intervention

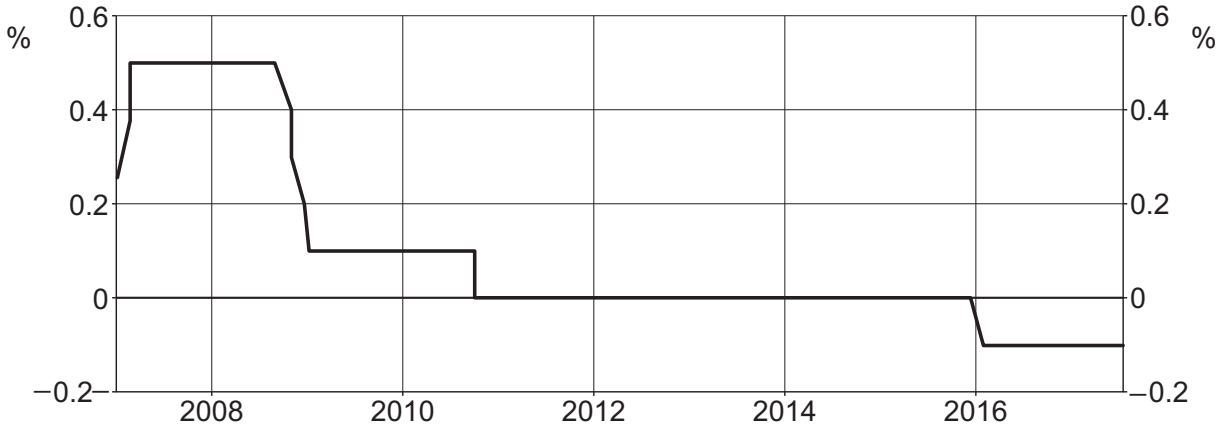
C Large number of buyers and sellers

D There is at least one fixed factor of production

E No externalities

D

8. The graph below shows Japan's interest rates over a given time period.



What is the most likely effect on the Japanese economy of the interest rate changes shown in the data? [1]

A Japan will suffer from deflation

B Commercial banks will stop lending

C The Bank of Japan will change its inflation target

D Unemployment will rise

E The rate of saving will fall

E

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9. The demand for Good X is both price inelastic and income inelastic. Good X is also a complement to Good Y.

Identify Good X from the table below. [1]

	Price elasticity of demand	Income elasticity of demand	Cross-elasticity with Good Y
A	–0.8	0.25	1.4
B	–0.8	1.25	0.4
C	–2.8	–0.25	–1.4
D	–2.8	–1.25	–0.4
E	–0.8	0.25	–1.4

E

10. In 2017, the price of a Toshiba laptop computer was £460. Twelve months later in 2018, the price of the same Toshiba laptop was £483.

In the same period of time, the UK's inflation rate was measured at 3.5%.

Using 2017 as a base year, calculate the real price of the Toshiba laptop in 2018. [1]

A £444.44

B £466.67

C £476.10

D £483.00

E £499.91

B

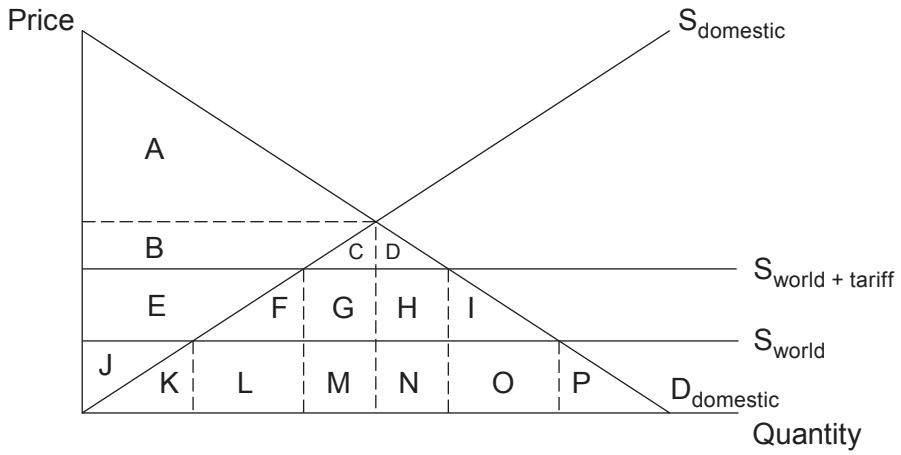
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Questions 11 and 12 refer to the diagram below.

A tariff on imports is imposed by a certain government with the aim of reducing imports.



11. Which area shows the increase in revenue received by domestic producers after the imposition of the tariff? [1]

A I+J

B E+F+L

C K+L+M+N+O+P

D J+K

E A

B

12. Which area shows the loss in consumer surplus after the imposition of the tariff? [1]

A E

B B+C+G+M

C E+F+G+H+I

D B+C+D

E C+D+G+H+M+N

C

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13. The Government decides to use a per unit subsidy to reduce the price of an agricultural product. The price of the product will fall the most when: [1]

A The price elasticity of demand is inelastic

B The price elasticity of supply is inelastic

C The price elasticity of demand is unitary

D The price elasticity of supply is elastic

E The price elasticity of demand is elastic

A

14. Jon is buying a health insurance policy from a provider. He does not tell them about his smoking habit and, as a result, he is able to buy a health insurance policy at a much lower price than if he had told them.

This is an example of which type of market failure? [1]

A Demerit good

B Volatile prices

C Asymmetric information

D Negative externalities

E Public good

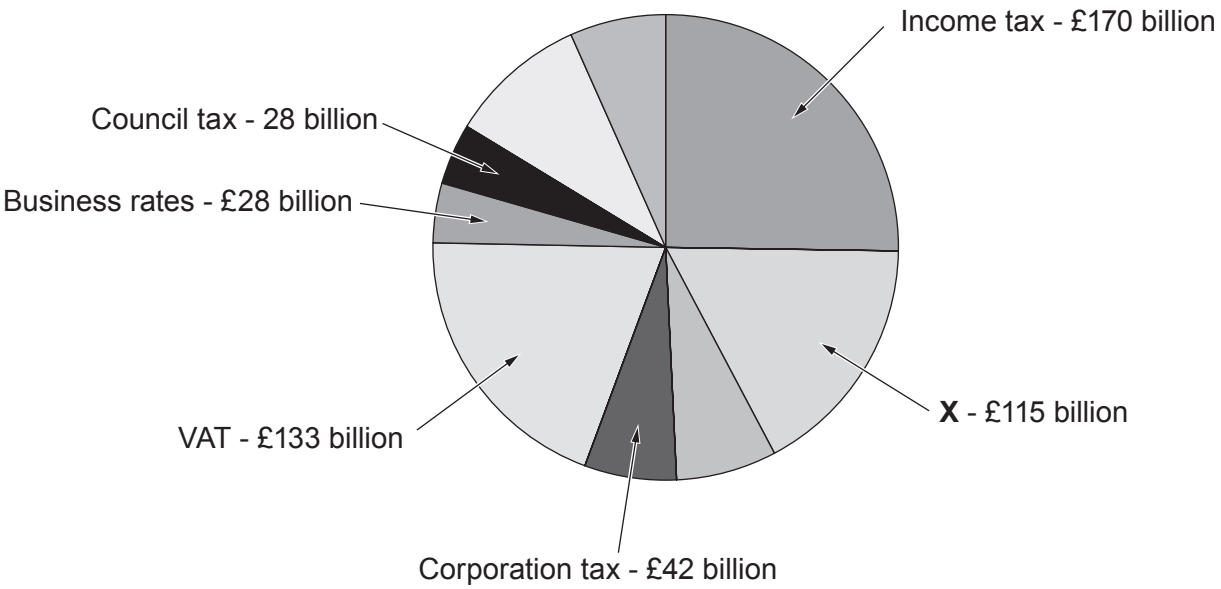
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15. The graph below shows the main sources of UK Government tax revenues in 2015-16.



Identify the source of tax revenue labelled **X**. [1]

A Inheritance Tax

B National Insurance Contributions

C Stamp Duty

D Capital Gains Tax

E Excise Duties

B

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SECTION B

Answer **all** *the questions in the spaces provided.*

16. In 2013 a university graduate inherited £200 000. She decided to buy an asset. She had two choices: buy a £200 000 house or buy £200 000 worth of UK shares.

She bought the house.

Over the course of the next four years, UK share prices increased in value by 18%.

Table 1 - UK House Price Index 2013-17

Year	2013	2014	2015	2016	2017
UK house price index	510	570	630	680	710

(a) Using the House Price Index in **Table 1**, calculate the price of the graduate's £200 000 house four years later in 2017. Give your answer to two decimal places. [2]

% change in index 2013 to 2017 = (710 – 510) ÷ 510 × 100 = 39.22%

Price in 2017 = £200 000 × 710 ÷ 510 = £278 431.37

(b) Identify and calculate the opportunity cost of buying the house. [2]

Opportunity cost = the next best alternative forgone: buying £200 000 of UK shares.

Value of the shares in 2017 = £200 000 × 1.18 = £236 000 (a gain of £36 000 forgone).

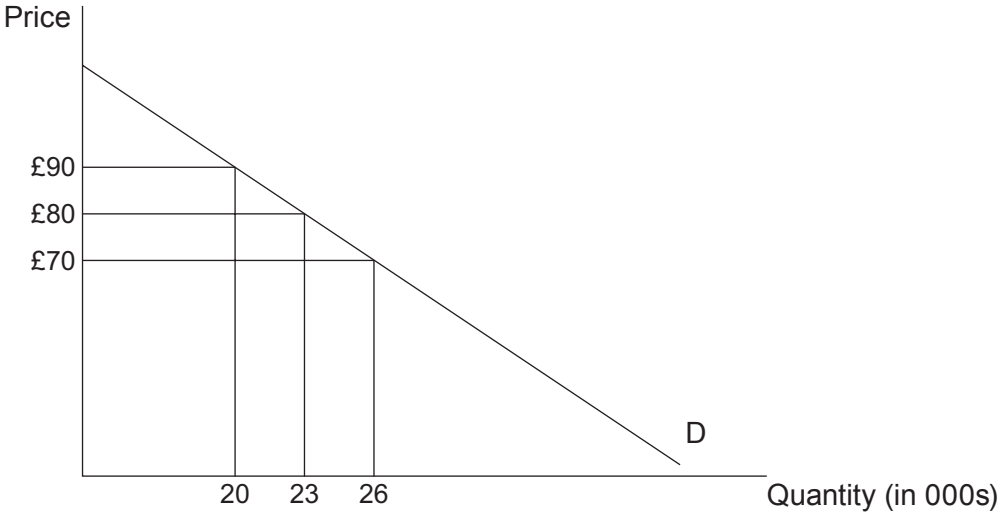
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17. A football club appoints a new marketing manager to increase its revenue. She immediately suggests that the ticket prices are too high.

For the next game, she reduces the ticket price from £90 to £80. Ticket sales increase from 20 000 to 23 000. For the following game, she reduces the ticket price from £80 to £70 and ticket sales increase from 23 000 to 26 000.



(a) Describe how prices help to allocate resources between different users. [2]

Prices signal and ration. A rising price (e.g. due to higher demand) signals to producers that supply is profitable, so resources move into that use; it also rations scarce goods to those willing and able to pay. Falling prices signal weaker demand, so resources move to other uses.

(b) Using price elasticity of demand (PED) calculations, explain why PED changes along a straight line downward sloping demand curve. [4]

£90 to £80: %ΔQ = 3000 ÷ 20 000 = +15%, %ΔP = −10 ÷ 90 = −11.11%, so PED = 15 ÷ −11.11 = −1.35 (elastic)

£80 to £70: %ΔQ = 3000 ÷ 23 000 = +13.04%, %ΔP = −10 ÷ 80 = −12.5%, so PED = 13.04 ÷ −12.5 = −1.04

The slope is constant, but PED uses % changes: as price falls, each £10 cut is a bigger % of a smaller price, while each extra 3000 sales is a smaller % of a larger quantity. So PED becomes more inelastic, from elastic above the midpoint to unitary to inelastic, e.g. £70 to £60 gives 11.54% ÷ −14.29% = −0.81.

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(c) Consider whether the marketing manager should continue to reduce ticket prices in order to increase revenue. Use revenue calculations to support your answer. [6]

TR = P × Q: at £90, £90 × 20 000 = £1.80m; at £80, £80 × 23 000 = £1.84m; at £70, £70 × 26 000 = £1.82m.

The first cut raised revenue by £0.04m because demand was price elastic (PED −1.35): the 15% rise in sales outweighed the 11.11% fall in price. The second cut reduced revenue by £0.02m because PED had fallen to −1.04, near unitary elasticity where TR is maximised. Once demand is inelastic, cutting price reduces revenue. If the linear demand curve holds, a cut to £60 sells 29 000 tickets, TR = £1.74m, a further fall of £0.08m (PED −0.81). So she should not keep cutting, and should return to about £80.

However, the demand curve may not be linear, so we cannot be sure how many extra tickets a cut would sell. Demand may also shift between games (opponent, league position, weather), so the revenue changes may not reflect PED alone. Lower prices may fill the stadium and raise revenue from food, drink and merchandise, so total club revenue could rise even if ticket revenue falls. Overall, she should stop cutting ticket prices and use other methods, e.g. price discrimination with higher prices for big matches.

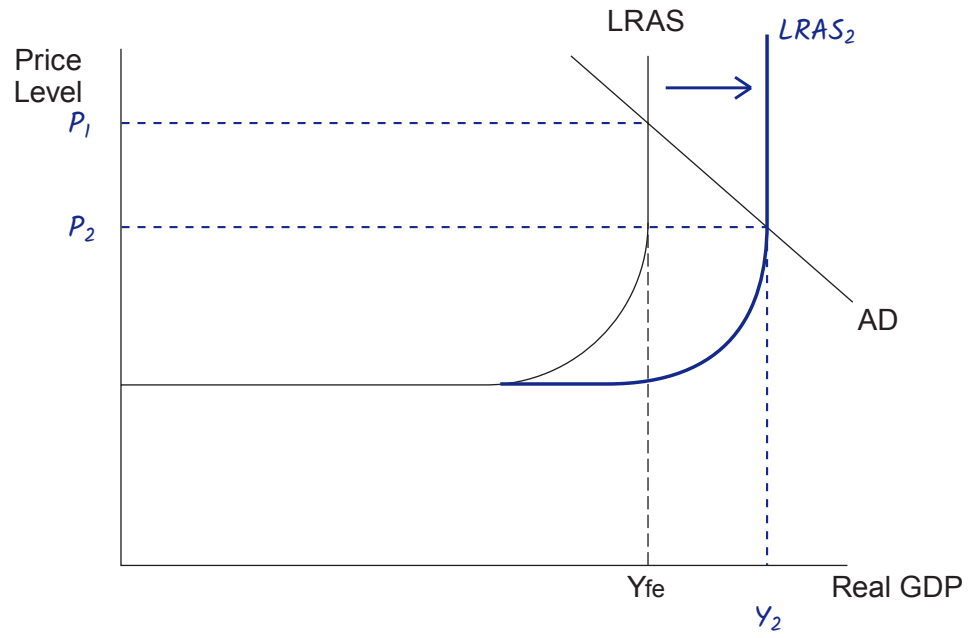
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18. The diagram below shows an economy experiencing a high level of inflation.



(a) Outline **one** reason why the aggregate demand curve slopes downwards. [2]

Real balance effect: as the price level rises, the real value of incomes and savings falls (10% higher prices with the same money income cut real income by 10%), so people can buy fewer goods, consumption falls and real GDP demanded contracts.

(b) Outline why the LRAS curve is vertical at the full employment level of output (Yfe). [2]

At Yfe all factors of production, including labour, are fully utilised, so the economy is at maximum productive capacity. Output cannot rise whatever the level of AD; extra demand only raises the price level. Any unemployment left is voluntary.

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(c) Using an example of a fiscal supply-side policy, discuss whether it would be effective at achieving the policy objective of low inflation in this economy. [6]

Example: government spending on infrastructure, e.g. new transport links and broadband networks.

The economy is at full capacity (Yfe), so excess AD causes demand-pull inflation.

Better infrastructure cuts firms' transport and communication costs and makes commuting easier, raising labour mobility and productivity and encouraging firms to invest. Productive capacity rises, so LRAS shifts right to $LRAS_2$ (diagram on page 14). There is an extension along AD, real GDP rises from Yfe to Y_2 and the price level falls from P_1 to P_2, lowering inflation without cutting output.

However, infrastructure takes years to build, so there is a long time lag: it works only in the long run, not on today's high inflation. Government spending is also part of AD (C + I + G + X − M), so in the short run it shifts AD right while the economy is already at full capacity, adding to inflation, and it may worsen the budget deficit. It also depends on the size of spending and whether projects really raise productivity. Overall it is effective at keeping inflation low in the long run only, so it should be combined with demand-side policy such as higher interest rates.

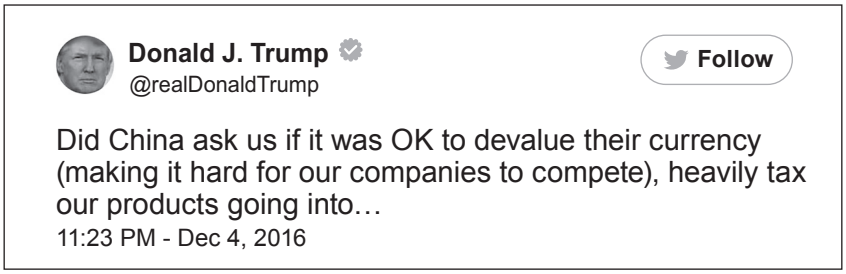
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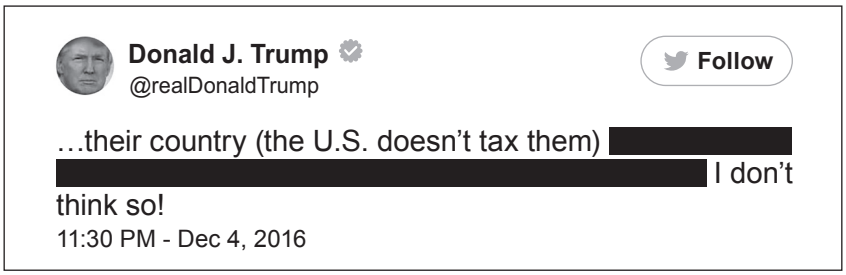
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19. In January 2017, Donald Trump was inaugurated as the 45th President of the US. He is very controversial on social media. On 4 December 2016, he sent the following tweets:





President Trump has been highly critical of China's exchange rate policy – previously labelling them as a 'currency manipulator'. In 2016, for example, the Chinese yuan depreciated by 6.6% against the US dollar. As president, he has since threatened to retaliate by raising tariffs on Chinese imports into the US.

(a) Explain **two** ways in which monetary authorities can influence the value of an exchange rate in a free floating system. [4]

1. Interest rates: the central bank (e.g. the People's Bank of China) can cut interest rates. This lowers the return on deposits held in that currency, so hot money flows out, demand for the currency falls and it depreciates (raising rates causes an appreciation).

2. Intervention on the foreign exchange market: selling its own currency for foreign reserves (e.g. selling yuan to buy dollars) increases the supply of the currency, so its value falls; buying it with reserves raises demand and its value.

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(b) Evaluate whether Donald Trump's claims that China is holding its exchange rate artificially below the free market level is likely to worsen the US trade balance. [10]

The trade balance is the value of exports minus the value of imports of goods and services. If China holds the yuan below its free market level, e.g. the 6.6% depreciation against the dollar in 2016, the dollar is overvalued against the yuan.

Exports: each dollar now costs more yuan, so US goods are dearer in China and less price competitive. Chinese demand for them falls, so the value of US exports falls.

Imports: a good priced at 100 yuan now costs fewer dollars, so Chinese goods are cheaper and more price competitive in the US. US consumers and firms switch from US-made goods to Chinese imports, so imports rise. Lower exports and higher imports both worsen the US trade balance, widening its deficit, and as net exports (X – M) are part of AD this may cost US manufacturing jobs, Trump's concern.

His claim that China also taxes US goods adds to this.

However, it depends on the PED for exports and imports. If US demand for Chinese imports is price inelastic, e.g. components with no US substitute, volumes rise little while each unit costs fewer dollars, so spending on imports could even fall. The balance only worsens if the sum of the PEDs is greater than one (Marshall-Lerner); demand is usually inelastic in the short run, so by the J-curve effect any worsening comes with a time lag.

It also depends on the size of the undervaluation. 6.6% is fairly small, and without figures for the free market rate we cannot know how far below it the yuan is; part of the fall may reflect market forces, such as a stronger dollar after US interest rate rises, not manipulation.

Moreover, China is only one US trading partner. The US also trades heavily with the EU, Canada and Mexico, so its overall balance depends on those exchange rates and on US incomes: strong US growth sucks in imports whatever the exchange rate.

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19 (b) Non-price factors such as quality and brand also matter.

Finally, it depends on Trump's response: tariffs or quotas on Chinese imports would make them dearer again, offsetting the weak yuan, although China may retaliate against US exports in a trade war.

Overall, an undervalued yuan is likely to worsen the US trade balance with China, especially in the long run, but the effect on the total US trade balance is probably small, as it depends on elasticities, the size of the undervaluation and US policy.

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