

Please check the examination details below before entering your candidate information

Candidate surname <i>StemUp Model Solution</i>		Other names	
Pearson Edexcel		Centre Number	Candidate Number
Level 3 GCE			
Time 2 hours	Paper reference	9EB0/02	
Economics B Advanced PAPER 2: Competing in the global economy			
You do not need any other materials.			Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.
- Good luck with your examination.

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Answer ALL questions.

SECTION A

Read the following extracts (A to D) before answering Question 1.

Write your answers in the spaces provided.

Extract A

Edinburgh to introduce £2 a day tourist tax

Edinburgh city councillors voted to be the first UK city to introduce a tourist tax. It is not likely to be introduced for at least two years as the Scottish Parliament has to pass it into law first.

The tax, officially known as the Transient Visitor Levy (TVL), will be added to the cost of all accommodation for the first week of a visitor's stay. The proposed £2 a day TVL previously gained strong support in a public survey, with 85% of respondents backing the tax.

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Edinburgh's City Council estimates that with more than four million visitors a year the tax would raise an estimated £14.6m annually, which could be used to reduce the external costs of mass tourism to the city.

10

(Source: adapted from <https://www.independent.co.uk/travel/news-and-advice/edinburgh-city-tourist-tax-scotland-holiday-city-break-a8769141.html>)

Extract B

Tourism in Scotland: the economic contribution of the sector

In 2016, 207,000 people were employed in the tourism sector, 8% of total employment in Scotland.

Tourism's contribution to economic growth has been significant, with 2.3% growth for the sector in the third quarter of 2017, compared to 0.2% growth for the Scottish Economy as a whole.

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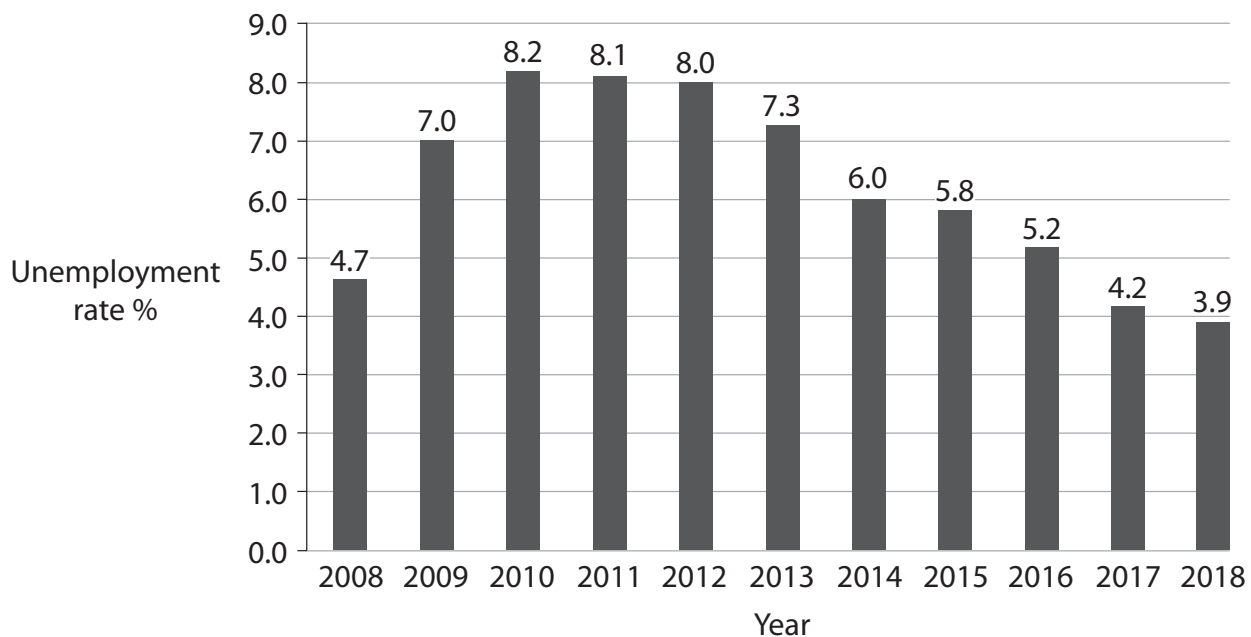
Tourism accounts for a significant proportion of Scotland's exports, particularly with regard to services. Total exports from the sector were £900m in 2016, accounting for 2.4% of Scotland's total export of services, and for 1.2% of Scotland's total exports.

(Source: adapted from <https://www.gov.scot/publications/tourism-scotland-economic-contribution-sector/pages/2/>)



Extract C

International Labour Organisation (ILO) unemployment rate in Scotland, 2008 to 2018



(Source: adapted from <https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment/timeseries/ycon/lms>)

Extract D

Ownership of Scottish firms

In March 2019, 35.5% of private sector employment was in firms registered outside of Scotland. In Scotland this means:

- 17.4% of private sector employment was in firms owned in England, Wales and Northern Ireland
- 18.1% of private sector employment was in firms owned outside the UK
- 655 USA-owned businesses employed 114,220 people and generated 37.1% of all revenue from foreign-owned firms in Scotland
- 1,225 EU (non-UK) firms operated in Scotland
- EU (non-UK) firms employed 131,920 people and generated 34.6% of all revenue from foreign-owned firms in Scotland

In terms of individual countries, USA-owned firms accounted for the highest share of Scotland's foreign-owned firms, employment and revenue.

(Source: adapted from <https://www2.gov.scot/Topics/Statistics/Browse/Business/Corporate/KeyFacts>)



- 1 (a) Using the data from Extract C, calculate, to two decimal places, the mean rate of unemployment in Scotland between 2008 and 2018.

(4)

Mean = sum of the values ÷ number of values

Sum = 4.7 + 7.0 + 8.2 + 8.1 + 8.0 + 7.3 + 6.0 + 5.8 + 5.2 + 4.2 + 3.9 = 68.4

Number of years = 11 (2008 to 2018)

Mean = 68.4 ÷ 11 = 6.2181...

Mean rate of unemployment = 6.22%

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In August 2018, the seasonally adjusted claimant count for Scotland was 2.7%.

- (b) With reference to Extract C, explain **one** reason why the claimant count may be different to the International Labour Organisation (ILO) measure of unemployment in Scotland.

(4)

The ILO measure counts everyone who is out of work, actively seeking work and available to start, whereas the claimant count only includes those who are claiming unemployment-related benefits.

In 2018 the ILO rate in Scotland was 3.9%, which is 1.2 percentage points higher than the claimant count of 2.7% in August 2018. Not everyone who is unemployed on the ILO measure claims benefit, for example people who are not eligible because their partner earns too much, students, or those who choose not to claim. This tends to make the ILO rate higher than the claimant count, although the falling ILO rate since 2010 is likely to have been matched by a falling claimant count over the same period.



(c) Explain **one** external cost caused by mass tourism to the city of Edinburgh.

(4)

An external cost is a cost of a production or consumption decision that falls on third parties and is not included in the price mechanism.

Edinburgh receives more than four million visitors a year, and this mass tourism causes traffic congestion and air pollution as visitors travel around the city centre, as well as litter and noise in popular areas. Tourists do not pay for these costs in the price of their accommodation, so they are borne by third parties. These external costs then have to be paid by the residents and taxpayers of Edinburgh, through longer journey times, poorer health and higher council spending on cleaning and street maintenance.

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- (d) With reference to Extract B, analyse the impact of the tourism industry on **two** components of aggregate demand (AD) in Scotland.

(6)

Aggregate demand is the total planned spending in an economy, $AD = C + I + G + (X - M)$.

Firstly, tourism is a service export, or invisible export, which is part of the net exports $(X - M)$ component of AD. When overseas visitors spend money in Scotland, money flows into the Scottish economy. Extract B shows that total exports from the tourism sector were £900m in 2016, accounting for 2.4% of Scotland's total export of services. Therefore tourism increases AD through rising net exports, shifting AD to the right.

Secondly, tourism creates employment in the local economy. In 2016, 207,000 people were employed in the tourism sector, 8% of total employment in Scotland, and visitor numbers of over four million a year in Edinburgh alone sustain these jobs. These workers earn wages, which raises their disposable income, so they increase their consumer spending, the C component of AD. Through the multiplier effect, this spending creates further income for other firms, so tourism increases AD through increased consumption, which helps explain the 2.3% growth for the sector compared with only 0.2% for the whole economy.



(e) Discuss the likely impact of the Transient Visitor Levy (TVL) on tourism in Edinburgh.

(8)

The Transient Visitor Levy (TVL) is an example of a specific (unit) tax, as it is a fixed £2 per day added to the cost of accommodation for the first week of a visitor's stay.

The tax would be collected by the hotels and guest houses and passed to the council, which estimates it would raise £14.6m a year from more than four million visitors.

As shown in the diagram below, the tax increases producers' costs, so the supply curve shifts vertically upwards by £2, from S to $S + \text{tax}$. The price paid by tourists rises from P_1 to P_2 and the quantity of accommodation demanded falls from Q_1 to Q_2 , so demand for stays in Edinburgh decreases. Some visitors may choose cheaper destinations such as Glasgow, or stay outside the city boundary to avoid the levy.

This may reduce the revenue and incomes of accommodation providers, because they receive a lower price after the tax and sell fewer room nights. Fewer tourists also means less spending in the local economy, on restaurants, shops and attractions, which through the multiplier could reduce income and employment in the tourism sector.

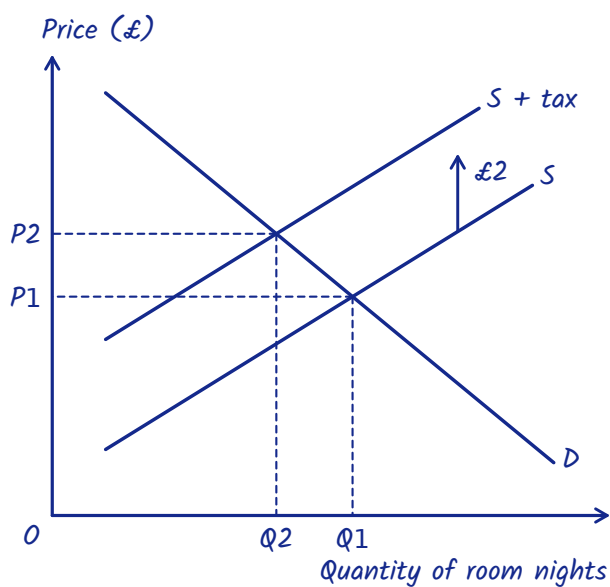
However, the revenue could be used to reduce the external costs of mass tourism, such as congestion and litter, improving the experience for both residents and visitors in the long run.

However, the £2 specific tax for only the first week of accommodation is a relatively low rate of taxation compared with typical room prices of £80 to £150 a night, so it is a small percentage rise in the price of a trip. Demand for visits to Edinburgh, a unique destination with events such as the Festival, is likely to be price inelastic, so the fall in quantity from Q_1 to Q_2 would be small and the impact on tourism may be minimal.

In addition, the impact may depend on other economic influences, such as the economic cycle and the exchange rate. A recession or a stronger pound would reduce tourism far more than a £2 levy. Overall, the TVL is likely to have only a small negative effect on



tourist numbers, while raising revenue that may improve the city.



- (f) With reference to Extract D, assess the likely impact of foreign-owned firms on the circular flow of income in Scotland.

(10)

The circular flow of income model shows the flow of money between households and firms, with injections into and leakages (withdrawals) from the economy. Injections are investment (I), government spending (G) and exports (X); withdrawals are savings (S), taxation (T) and imports (M), as shown in my diagram below. If injections exceed withdrawals, national income rises.

Extract D shows that in March 2019, 35.5% of private sector employment in Scotland was in firms registered outside of Scotland, with 18.1% in firms owned outside the UK. Foreign-owned firms are an injection into the circular flow: when they set up or expand in Scotland, this is investment (FDI). They also pay wages to Scottish workers, for example 655 USA-owned businesses employed 114,220 people and EU firms employed 131,920 people, so household incomes and consumption rise, creating a multiplier effect. Foreign firms in the tourist industry also attract visitors, whose spending is an export of £900m in 2016, adding to the circular flow.

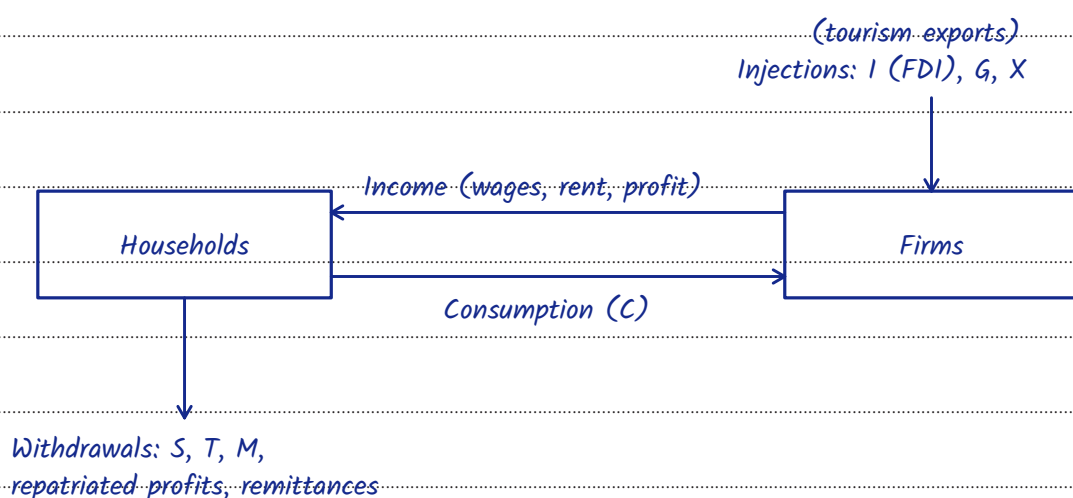
Foreign-owned firms also pay direct taxes such as corporation tax and employer National Insurance, and generate indirect tax receipts such as VAT and the TVL. Taxes are a leakage from the circular flow, but they may contribute to government spending, an injection. However, the extent of the leakage from taxation will depend upon how much of the tax revenue is spent by the government in Scotland in the form of investment and public sector wages.

On the other hand, there are significant leakages. USA-owned businesses generated 37.1% of all revenue from foreign-owned firms in Scotland and EU firms 34.6%, so profits on this revenue are likely to be transferred back to the country in which the firm is registered. This repatriation of profits is a leakage from the circular flow of income. Foreign firms may also import components and services from their home



country, and the extent of the injection from tourism also depends on the value of imports required to sustain the industry. Foreign firms are also likely to employ some foreign workers, who may send remittances to the country in which they are primarily resident, a further withdrawal.

Overall, foreign-owned firms are likely to have a positive net impact on the circular flow, as wages paid to over 246,000 workers in USA and EU firms alone are spent in Scotland. However, the size of the impact depends on how much profit is repatriated, how much is reinvested in Scotland and how many inputs are imported.



(g) Assess the likely impact of the falling rate of unemployment between 2010–2018 on firms in Scotland.

(12)

Unemployment refers to those who are actively seeking work but unable to obtain suitable employment. Extract C shows that the ILO unemployment rate in Scotland fell from a peak of 8.2% in 2010 to 3.9% in 2018, a fall of 4.3 percentage points, more than halving over the period.

One effect of decreasing unemployment is that there is a smaller pool of labour available for firms to recruit from. As the labour market tightens, firms must compete for workers, so the smaller pool of labour may increase labour costs, as wages are driven up by the decreasing supply of available labour. Higher wages raise firms' average costs, which squeezes profit margins or forces firms to raise prices.

Decreasing unemployment may also increase skill shortages, as the remaining unemployed may lack the skills firms need. Firms may have to hire less experienced workers, which can reduce productivity, or leave vacancies unfilled and turn down orders. Combined with higher wage costs, this may reduce the competitiveness of some Scottish firms, especially exporters competing with firms in lower-cost countries, and labour-intensive sectors such as tourism, which employed 207,000 people in 2016.

However, one positive effect of decreasing unemployment is a rise in employment, wages and disposable income across Scotland. Rising disposable income increases consumer spending and therefore the demand for the goods and services supplied by Scottish firms, raising their sales revenue and profits. Higher demand may also give firms the confidence to invest, and falling unemployment reduces the risk of a recession. Firms selling income elastic products, such as restaurants, leisure and tourism, are likely to benefit most.

The impact on wages and costs for firms will depend upon how quickly firms are able to increase the skills and training of employees. If firms invest in training and capital,



productivity may rise, offsetting higher wage costs so that unit labour costs do not increase. In the short run skill shortages are likely, but in the long run training can close the gap.

Skill shortages may also be reduced through migrant labour, which would increase the supply of labour and may keep wages lower than would otherwise be the case. Extract D shows that many firms in Scotland are foreign-owned and these may be able to recruit workers from abroad, although this depends on immigration rules after the UK leaves the EU.

The impact upon demand for firms will also depend upon the sector and whether the good or service is income elastic or inelastic. Firms selling necessities or inferior goods will see little increase, or even a fall, in demand as incomes rise. In addition, the unemployment rate of 3.9% may still hide underemployment and regional differences.

In conclusion, falling unemployment is likely to be positive overall for most Scottish firms, because the increase in demand from rising incomes outweighs higher labour costs, particularly for firms selling income elastic products. However, for labour-intensive firms facing skill shortages, rising costs may reduce competitiveness unless they can raise productivity or recruit migrant labour.



GDP per capita in Scotland increased from £23 720 in 2008 to £29 800 in 2018.

- (h) Assess whether this increase in GDP per capita is likely to improve living standards for everyone in Scotland.

(12)

GDP per capita is total GDP divided by the population, so changes in either GDP or the population will change the GDP per capita figure. Living standards refer to the material and non-material well-being of households.

GDP per capita in Scotland increased by £6,080, from £23,720 in 2008 to £29,800 in 2018. This is an increase of $(6,080 \div 23,720) \times 100 = 25.63\%$ over the period. This suggests that more income and output is being created per head of the population, so on average people can afford more goods and services, which suggests living standards may be increasing.

This rise in GDP per capita has also been accompanied by falling unemployment, from 8.2% in 2010 to 3.9% in 2018 (Extract C). More people in work earn wages rather than relying on benefits, which raises their income, self-esteem and access to goods and services, suggesting living standards are improving for many households.

However, the figures are nominal (money) GDP per capita, which does not take into account inflation. If the price level rose by around 2% a year over the ten years, much of the 25.63% increase would be due to rising prices rather than more output. Real GDP per capita data would give a more accurate measure of living standards as it takes into account changes in living costs.

Furthermore, GDP per capita is an average and does not show how this increased income and wealth is distributed. Rising GDP per capita may be associated with rising income and wealth inequality, if most of the gains go to high earners and owners of capital while low-paid workers see little rise in real wages. Therefore living standards are unlikely to improve for everyone. Data would be required on absolute and relative poverty to judge this.



In addition, the presence of foreign-owned firms (35.5% of private sector employment in Extract D) and migrant workers suggests that some of the profits and income created in Scotland are being transferred overseas. This means the income actually received by Scottish residents may have grown more slowly than GDP per capita, so it does not fully improve living standards in Scotland.

GDP per capita also ignores non-material aspects of living standards. A more useful measure may be the Human Development Index (HDI), which includes health (life expectancy), education (years of schooling) and income variables with equal weighting.

GDP also ignores the external costs of growth, such as pollution and congestion from mass tourism, and unpaid work and leisure time.

In conclusion, the increase in GDP per capita is likely to have improved average living standards in Scotland, especially as unemployment fell. However, it is unlikely to have improved living standards for everyone, as the figure is nominal, an average that hides inequality, and includes income sent overseas. Real GDP per capita, HDI and poverty data would be needed to reach a firm judgement.

(Total for Question 1 = 60 marks)

TOTAL FOR SECTION A = 60 MARKS



SECTION B

Read the following extracts (E to F) before answering Question 2.

Write your answer in the space provided.

Extract E

Success of the creative industries is prompting business investment

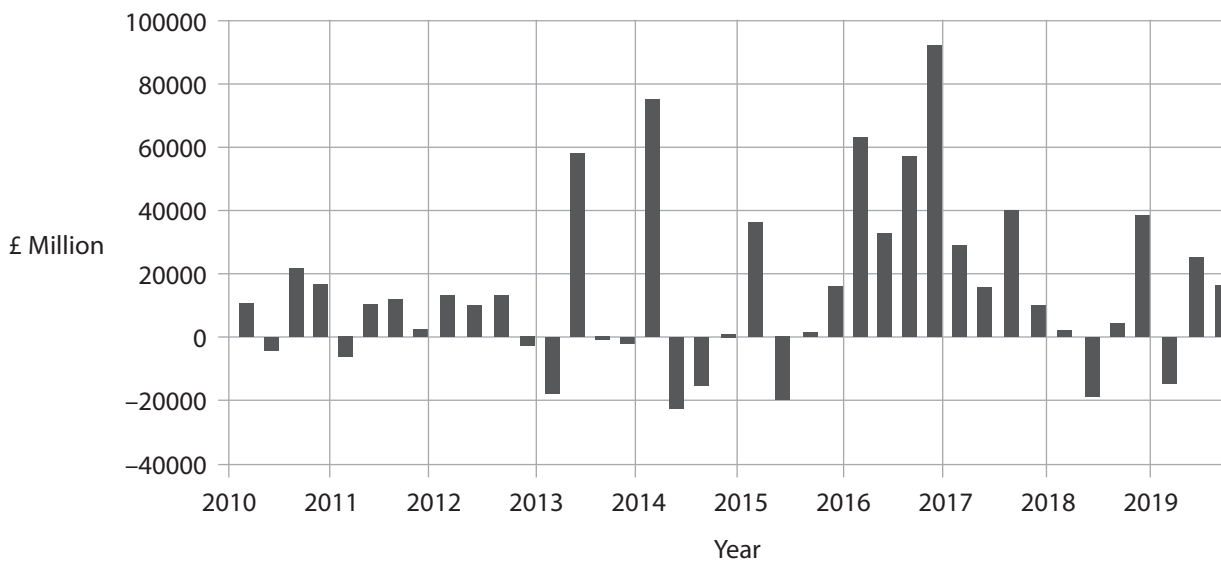
In 2019, official figures show that the film and TV industry is the fastest growing part of the UK economy, offsetting weakness in other sectors. The motion picture, television and music industry has grown by 43% since the start of 2016, compared with 6% in the service sector as a whole. This success is prompting foreign direct investment by multinationals: *Sky* is building new studios in Elstree, north London. Other new studios are being developed, such as Wolf Studio Wales in Cardiff and Titanic Studio in Belfast, where *Game of Thrones* was shot. In Scotland, the government has financed the development of Pentland Studios near Edinburgh.

The recent success of film and television is, in part, due to tax credits introduced in 2007 and extended in 2012. Productions that operate in the UK can claim back a rebate on their spending. Yet there is a risk here too. Few think the current boom in high quality television is sustainable. *Netflix*, *Amazon*, *Apple* and *Disney* are committing billions of dollars in a “spend-to-win” competition. Some analysts wonder who will survive in what may be an oversaturated market: potentially leaving local governments with empty studios once growth begins to slow down.

(Source: adapted from <https://www.ft.com/content/f33e3722-ec01-11e9-a240-3b065ef5fc55?desktop=true&segmentId=d8d3e364-5197-20eb-17cf-2437841d178a#myft:notification:instant-email:content>)

Extract F

United Kingdom Net Foreign Direct Investment, 2010 to 2019



(Source: adapted from <https://tradingeconomics.com/united-kingdom/foreign-direct-investment>)



2 Evaluate the impact of FDI on a developed economy such as the UK.

(20)

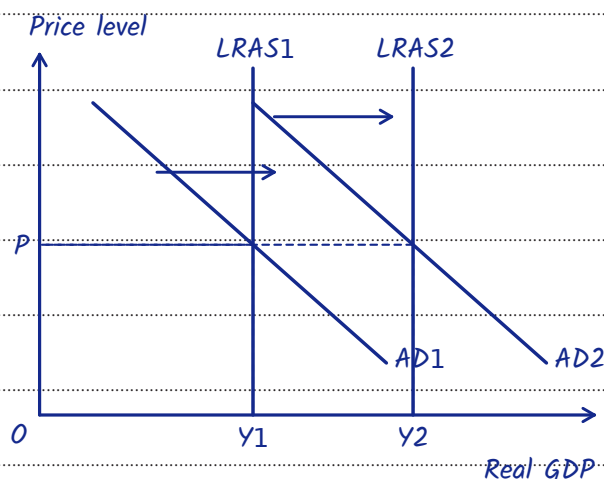
Foreign direct investment (FDI) is investment in productive assets by firms or governments in a country other than the one in which they are registered or based, for example building a factory or studio, or taking a controlling stake in a firm. FDI is distinguished from portfolio investment, which is the purchase of shares and bonds, in that it is direct investment in the real economy. Extract E shows multinationals such as Sky investing in new studios at Elstree, while new studios are being developed in Cardiff, Belfast and near Edinburgh.

FDI is an injection of investment, a component of aggregate demand, so it shifts AD to the right from AD1 to AD2, as shown in my diagram on the next page. FDI provides employment in the short term, in the construction of new studios, and in the long term in running the firm, as film and TV production needs crew, actors, set builders and technicians. This raises incomes and consumption, and through the multiplier effect real GDP rises by more than the initial investment. The motion picture, television and music industry has grown by 43% since the start of 2016, compared with only 6% for the service sector as a whole, which is offsetting weakness in other sectors of the UK economy.

FDI can also bring technology transfer, including knowledge of production methods and management practices, which is particularly important in the rapidly changing entertainment industry, where digital effects and streaming technology change quickly.

Skills learnt by UK workers spill over to domestic firms, raising productivity. This increases the productive capacity of the economy, shifting LRAS to the right from LRAS1 to LRAS2, so the UK achieves long-run economic growth without inflationary pressure, as real GDP rises from Y1 to Y2 while the price level stays at P.





The extract also shows that FDI has been attracted through fiscal policy: tax credits introduced in 2007 and extended in 2012 mean productions by firms operating in the UK can claim back a rebate on their spending. Some investment is also government investment, such as the Scottish government financing Pentland Studios. MNCs also look to produce and sell in free markets such as the UK, and UK membership of the EU customs union attracted inward FDI, as MNCs could produce in the UK and export to the EU with no trade barriers. Corporation tax paid by MNCs also raises government revenue.

However, there are costs. The tax credits have an opportunity cost, as the rebates could have been spent on health or education, and much of it benefits foreign multinationals.

Profits made by foreign firms are likely to be repatriated to their home country, a leakage from the UK circular flow and a debit on the primary income account. FDI may also crowd out domestic firms that cannot compete with large, well-funded MNCs.

The resulting integration of the UK economy with other economies may also mean that the economy becomes more susceptible to external shocks. Extract F suggests FDI is cyclical and volatile: UK net FDI peaked at over £90,000m in one quarter around 2017 but fell below -£20,000m in 2014 and 2015. Extract E warns that few think the boom in high quality television is sustainable, as the 'spend-to-win' competition may leave an oversaturated market and local governments with empty studios once growth



slows. The impact of a reduction in FDI is likely to be lower growth and higher unemployment, as well as a deterioration in the current account if FDI was focused in export industries.

Leaving the EU may reduce FDI in manufacturing that relies on tariff-free access to the EU. However, the motion picture, television and music industries are global industries with products exported worldwide and not focused on the EU, so they may not be affected by the UK leaving the EU.

In conclusion, FDI has a positive impact on the UK, increasing AD in the short run and LRAS in the long run through jobs, technology transfer and exports, as the 43% growth of the creative industries shows. However, the size of the benefit depends on how much profit is repatriated, the cost of the tax credits and the volatility of FDI. Overall the benefits outweigh the costs, provided the UK does not depend too heavily on one footloose sector.

(Total for Question 2 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS



SECTION C

Read the following extracts (G to H) before answering Question 3.

Write your answer in the space provided.

Extract G

Meatless takeover

International Flavors & Fragrances (IFF) is planning to merge with *DuPont* nutrition and biosciences in a \$26.2bn deal. *DuPont* is a leading producer of the cultures, enzymes, soya proteins and probiotics that are used in the growing trend of meatless food products. The two companies would combine knowledge to serve this fast-growing meatless market. *IFF* offers features such as marks on meatless burgers that make them look grilled, while *DuPont's* capabilities include the 'texturants' that makes plant-based protein feel like beef when in the mouth.

5

The merger, announced in 2019, reflects attempts across the food technology sector to follow consumers as they try out products they perceive to be healthy, have fresher ingredients or leave a smaller environmental footprint. The rise of plant-based burgers typifies the trend.

10

The merger will enable the new firm to supply the pharmaceuticals and consumer products industries. *DuPont* turned down bids from *Kerry*, the Irish food producer, and Dutch chemicals company *DSM*, as it believed that expanding its product range was a priority. The combined company will have a value of \$45.4bn and annual revenues of \$11bn. *DuPont* shareholders will own 55.4% and *IFF* shareholders 44.6% of the new company.

15

(Source: adapted from <https://www.ft.com/content/dd7a0a1e-2019-11ea-92da-f0c92e957a96>)

Extract H

The veganism boom does more for food company profits than the planet

The number of people in the UK identifying as vegan or vegetarian is rising. However, it is not certain that a vast increase in plant-based diets would solve environmental problems. The carbon cost of industrial cropping is huge: by some estimates, up to 20% of the world's CO₂ output is a direct result of ploughing. Not all methods of animal rearing are equal. Grain-fed animals are environmentally harmful, yet pasture-raised cows and sheep can help to preserve the quality of the topsoil within which carbon is stored. It is not clear that a vegan diet is the healthiest. There is research pointing out that mixed diets could well be better than plant-based diets, particularly if those plant-based diets are high in carbohydrates and heavily processed food.

5

10

There is one group for whom the trend towards veganism is definitely a good thing: processed food manufacturers and retailers. What better time for the industry to find itself with a new market into which to sell factory-made, processed food? There is no reason why food companies should not respond to demand. However, with steak burgers costing £6.61 per kg and 'fake' burgers £21.81 per kg, those who are turning vegan might consider that most of these processed, packaged and shipped products are likely to do more for food company profits than for the planet or their health.

15

(Source: adapted from <https://www.ft.com/content/79c2aa16-35f1-11e9-bb0c-42459962a812>)



In 2018, the market value for meat substitutes in the USA alone was estimated to be worth \$10.1bn and is forecast to reach \$30.92bn by 2026.

- 3 Evaluate the likely conflicts between stakeholder objectives as a result of the growth in this market.

(20)

Stakeholders are the individuals, firms and government who have an interest in the success or failure of a firm or industry, including consumers, shareholders, employees, suppliers such as farmers, and the wider community. The market for meat substitutes is growing rapidly: in the USA alone it was worth \$10.1bn in 2018 and is forecast to reach \$30.92bn by 2026, an increase of over 200%.

Consumers are looking to replace a meat-based diet with what they see as a more sustainable and healthy plant-based diet, as the number of people in the UK identifying as vegan or vegetarian rises. This change in tastes, a non-price demand factor, is likely to reduce demand in the market for meat and dairy products but increase demand in the market for meat substitutes, shifting demand to the right and raising price and profits in that market.

Firms are responding to this profit signal by investing in product innovation and horizontal integration. The \$26.2bn merger of IFF with DuPont nutrition and biosciences is the outcome of profit signalling in the market for meat-free food, combining IFF's grill marks with DuPont's texturants to serve this fast-growing market. The combined firm will have annual revenues of \$11bn, and DuPont shareholders will own 55.4% of a company worth \$45.4bn. Consumer sovereignty suggests that firms are simply responding to changes in consumer tastes, so in this case consumers and shareholders both gain.

However, there is a possible conflict between consumers seeking an environmentally sustainable and healthy diet, and food producers seeking to maximise profits and share price. Extract H argues that the veganism boom does more for food company profits than the planet. Steak burgers cost £6.61 per kg while 'fake' burgers cost £21.81 per



kg, over three times as much, suggesting the market power of food producers allows them to charge high prices and influence consumer tastes in the pursuit of higher profits. A merger such as IFF and DuPont increases concentration in the supply of ingredients, so the new firm could raise prices further, reducing consumer surplus.

There is also asymmetric information between producer and consumer. It is not necessarily the case that arable farming is more sustainable than meat production: up to 20% of the world's CO₂ output may be a direct result of ploughing, and pasture-raised cows and sheep can help preserve the topsoil in which carbon is stored.

Nor is a plant-based diet necessarily healthier for everyone, as many products are heavily processed and high in carbohydrates. Consumers may therefore make purchasing decisions without understanding the environmental or health impact, a market failure, so their objective of better health and lower emissions conflicts with firms' objective of selling profitable processed food.

A further conflict is with workers and farmers in the meat industry. The shift away from meat might cause structural unemployment for stakeholders in the meat production and processing industries, including livestock farmers, dairy farmers and abattoir workers, whose objectives are job security and stable incomes. Rural communities that depend on livestock may suffer. Governments face a conflict too: they may want to cut carbon emissions and improve public health, but also protect farming jobs and rural incomes.

There may also be conflict within the firms. DuPont turned down bids from Kerry and DSM because it believed expanding its product range was a priority, which may not have given shareholders the highest price. After the merger, managers may seek growth and market share, while employees may face job losses from rationalisation as the firms combine.

However, the extent of conflict may be limited. Consumers seeking to reduce environmental damage and firms seeking profits may lead to firms producing the



profitable products that consumers most want, so there is no conflict. If competition in the market increases, as new firms enter attracted by high profits, prices of meat substitutes are likely to fall towards the price of meat, benefiting consumers. Farmers may switch to growing the soya and other crops used in these products, reducing unemployment in the long run.

The significance of the conflicts depends on the time period and on how informed consumers are. In the short run conflicts between farmers and producers are likely to be greatest, while in the long run resources can be reallocated. Better labelling and information on carbon footprints could reduce asymmetric information, and the Competition and Markets Authority can limit abuse of market power.

In conclusion, the growth of the meat substitutes market creates real conflicts, particularly between consumers seeking healthy and sustainable food and firms such as IFF and DuPont seeking profits, and between producers and workers in the meat industry. However, the conflict is not inevitable: where consumers are well informed and the market is competitive, profit-seeking firms will meet consumer demand, so the most significant conflict is likely to be the short-run loss of jobs in livestock farming.

(Total for Question 3 = 20 marks)

TOTAL FOR SECTION C = 20 MARKS
TOTAL FOR PAPER = 100 MARKS



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