Zig Zag Education

Economics

A Level | OCR | H460

Data Response Case Studies

For A level Year 2 OCR Economics Component 1: Microeconomics

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Contents

Teacher's Introduction

This resource is designed to be used for teaching OCR A level Economics Component 1: Microeconomics The resource consists of 12 Data Response Case Studies intended for students to complete as homework tasks.

The case studies are presented in specification order, collectively covering each topic in the A level specification, and revising the main topics from lower-sixth. Each case study contains detailed information (including diagrams and data), and tasks and questions.

Remember!
Always check the exam board website for new information, including changes to the specification and sample assessment material.

The 'Use the data' tasks focus particularly on quantitative skills, and the 'Test your knowledge' mainly on AO1/2 knowledge and application skills. The extended-response questions are an opportunity for students to practise higher-level analysis and evaluation skills. Most of the questions given are in exam style, although we have not limited questions to this style except in the case of the extended-response questions. Detailed answers are provided for all tasks and questions.

Reading through each study and answering the questions is expected to take 20--30 minutes, not including the extended-response questions at the end of each case study. One option for using these is to work through a case study in class and set the exam-style evaluation question as homework.

This resource will help prepare students for the microeconomics component of the A Level exam, but also stimulate an interest in the real-world applications of microeconomics. Each case study uses real data, introducing the student to a fascinating array of contemporary microeconomic issues.

I hope this resource helps you to bring economics to life for your students.

March 2018

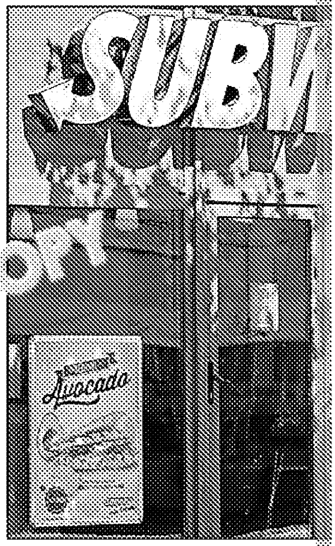
Update v2, February 2022
Minor updates to match 2019 specification: specification topic names updated throughout.

Case Study	Spec reference
1. Subway making headway	'Business objectives'
2. Creative destruction in the business world	'Costs and economies of scale' and 'Revenue and profit'
3. Quasi-public goods	'Public goods'
4. The stock market – perfectly competitive?	'Perfect competition'
5. Supermarket wars	'Costs and economies of scale', 'Monopolistic competition' and 'Oligopoly'
6. Inertia in the energy market	'Monopoly', 'Monopolistic competition' and 'Oligopoly'
7. Diamonds are forever	'Perfect competition', 'Monopoly' and 'Monopolistic competition'
8. Contestability	'Contestable markets'
9. Is there a shortage of teachers?	'The interaction of labour markets'
10. Trade unions in the UK	'Demand for labour' and 'The interaction of labour markets'
11. Will raising the minimum wage harm employment?	'Demand for labour' and 'The interaction of labour markets'
12. For-profit universities	'Information failure' and 'Government intervention'

Subway making headw

This case study requires knowledge of the topic 'Business C

The free-market economic system in most parts of the world has led to a dynamic business environment, with huge numbers of firms competing to get ahead. In the last few years, few businesses have grown as successfully as the American fast-food restaurant Subway.

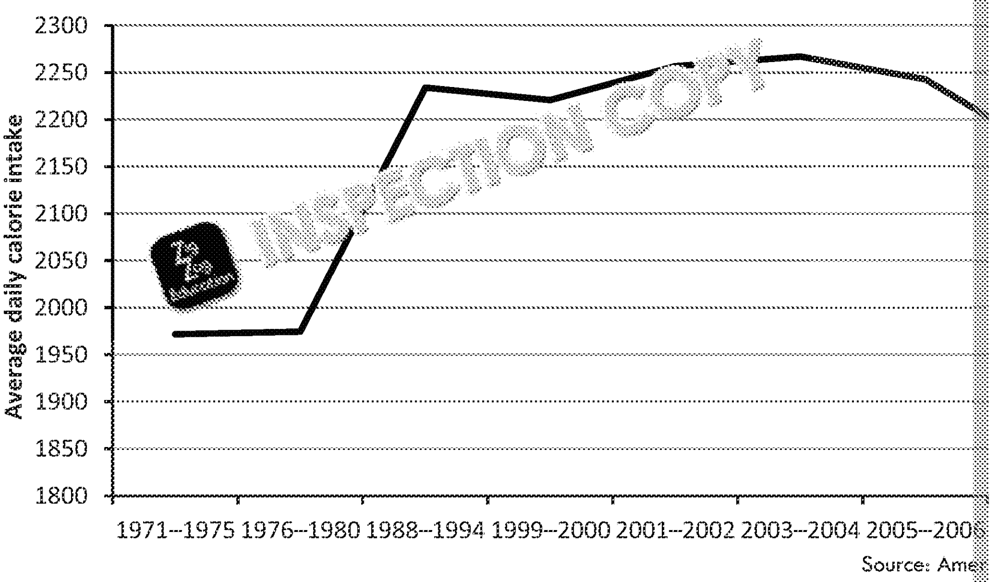


Subway operates a franchise model. This is when the parent company sells the right to use their business model to independent third parties. In practice, the owner of each Subway restaurant pays Subway an upfront fee and a certain portion of their earnings, and keeps the rest. This can be a good deal for potential entrepreneurs who want to run their own business, backed up by the support of a large, well-established company. I these stores are unsuccessful, they only incur part of the cost. If the store i reap the rewards from the royalties.

Some of the milestones Subway has reached include opening stores in ove its 40,000th store worldwide in 2013 (up from 35,000 in 2011) – this is more t annual revenue, however, Subway trails its US rival McDonald's (and Sta

Along with the popularity of the franchise model, one reason for Subway's far more customisation of its meals to customers than its rivals, a feature w Subway restaurants also tend to be small and cheap to build, allowing for and growth in brand recognition. In addition, Subway has benefited from healthier than that of its traditional rivals such as McDonald's, at the same seem to be becoming more conscientious in their eating habits. Figure 1 sh consumption among Americans is beginning to fall, after decades of stead

Figure 1: Average daily calorie consumption in the USA



Source: Ame

Note: falls in average calorie consumption have yet to result in a fall in obesity, possibly because

However, as of 2015 there have been signs of a slowdown in Subway's rel
in the market adapt to changing consumer habits. Rivals such as Chipotle
fewer additives, better anticipating trends in consumer tastes. The sheer n
market has also eaten away at Subway's market share, with many Americ
Subway also suffered a blow from a child pornography case involving a v
too early to tell whether this will have a material impact on sales.

Use the data

1. Using Figure 1, calculate the percentage change in average calories consum
period and the 2009–2010 period.

2. Explain how the 'principal-agent problem' m gnt ply to Subway's business

Test your knowledge

1. Name one adv d one disadvantage of business growth.

2. Which following objectives is Subway most likely to pursue in 2016?
   A. Sales revenue maximisation
   B. Profit maximisation
   C. Sales volume maximisation
   D. Growth maximisation

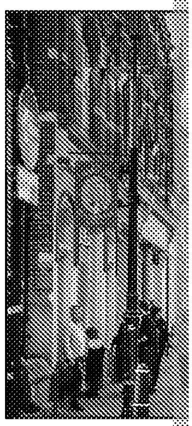
3. Describe what it means to be 'profit satisficing.' Is this relevant to Subway?

Extended-response question

1. Evaluate two ways in which Subway's rivals could try to increase their sales.

Creative Destruction in the Busi

This case study requires knowledge of the topics 'Costs and Economies of Sc



In modern economies, businesses start up and go bust very frequently, as technology evolves and consumer tastes and preferences change, among other factors. In the 1940s, the Austrian economist Joseph Schumpeter described this process as a 'gale of creative destruction'.

In the UK, high streets have always changed over time, with new shops coming in to replace existing underperformers. Tables 1 and 2 show the top 10 business closures and openings by classification for the first six months of 2015 (based on the UK's largest 500 towns):

Table 1: top business openings

Classification	Net change (%)	Net change (units)
Barbers	+4.7	118
Mobile Phones	+9.4	86
Tobacconists	+28.3	81
Cafés and Tearooms	+1.2	80
Restaurants and Bars	+6.7	74
Hair and Beauty Salons	+3.6	65
Nail Salons	+4.2	51
Beauty Salons	+2.3	43
Restaurants – American	+19.2	28
Health Clubs	+5.0	25

Table 2: top busine

Classification
Clothes – wome
Newsagents
Public Houses and
Jewellers
Restaurants – Indi
Night Clubs
Confectioners
Discount Stores
Hairdressers
Booksellers

Notably, the number of tobacconists jumped by 28.3% with the rise of e-ci discount stores fell by 6.3% (reversing the trend of rapid growth in the yea Cafés / coffee shops continued their relentless rise: some have speculated t replace the pub as a traditional place to meet and socialise, particularly for Overall, there was a slight fall in the total number of high street shops, wit shops and 437 fewer chain shops. This could be due to competition from l captured a large part of the market in recent years), although the total num been increasing since 2012.

Some high-profile examples of chains that have had to close down in the U include Woolworths, [illegible] and HMV. Both of the latter have been tak this often [illegible] with large brand names that go bust.

Costs and revenues

When it boils down to it, a firm's success depends on its revenues and cos theories about how a firm's revenues and costs change depending how mu This can help to predict how businesses should operate in order to meet d profit maximisation).

In reality, it's almost impossible to obtain complete cost and revenue data, si
experiment with every possible price/quantity combination (and even if they
demand and supply are likely to change over time). Nevertheless, it is still u

Figure 1 shows the partly completed costs and revenues for a fictional fish
operates in the short run: they can hire more employees but they cannot o

Figure 1: Ben's fish and chip shop, costs and revenues

Portions sold	0	10	20	30	40	50	60
Price per unit	10	9	8	7	6	5	4
Cost of rent and electricity	60	60	60	60	60	60	60
Wage bill	0	30	[illegible]	60	60	105	120
Cost of buying ingredients	[illegible]	[illegible]	40	45	60	50	90
Total cost	60		130		180		270
Average cost	N/A		6.5		4.5		4.5
Average variable cost	N/A		3.5		3		3.5
Marginal cost	N/A		1		1.5		5.5
Total revenue	0		160		240		240
Average revenue	N/A		8		6		4
Marginal revenue	N/A		7		3		-1

In order to increase the number of portions/units sold, the wage bill increas
workers and has them work longer hours. The cost of buying ingredients s
to bulk discounts up to a point when they have to buy from another suppli

Use the data

1. (a) Fill in the blanks in Figure 1. (Note: when filling in the marginal cost an
calculate the MC/MR of one extra unit sold, not 10 extra units. Assume
across all 10 units – see examples already filled in.)
   (b) Draw a diagram with goods sold on the x-axis and price on the y-axis. Ro
the diagram: average variable cost, average total cost, marginal cost, ave
   (c) Find the profit-maximising level of output by estimating where margina
Why does the condition MR=MC imply profit maximisation?
   (d) On a separate diagram, roughly plot the total revenue and total cost cu
   (e) Find the profit-maximising level of output by estimating the point where
total cost. Does this fit with your answer to (c)?

Test your knowledge...

1. (a) Using the data from Fig[illegible]ify one fixed cost and one variable c
   (b) Explain the sig[illegible] Ben's fish shop operating in the short run. W
id[illegible]d [illegible]ner in any respects?
   (c) Ex[illegible]hat is meant by the law of diminishing returns, using an example f
2. Explain what is meant by the minimum efficient scale.

Extended-response question

1. Examine how the costs and revenues of a luxury tea shop might change in a
economic downturn).

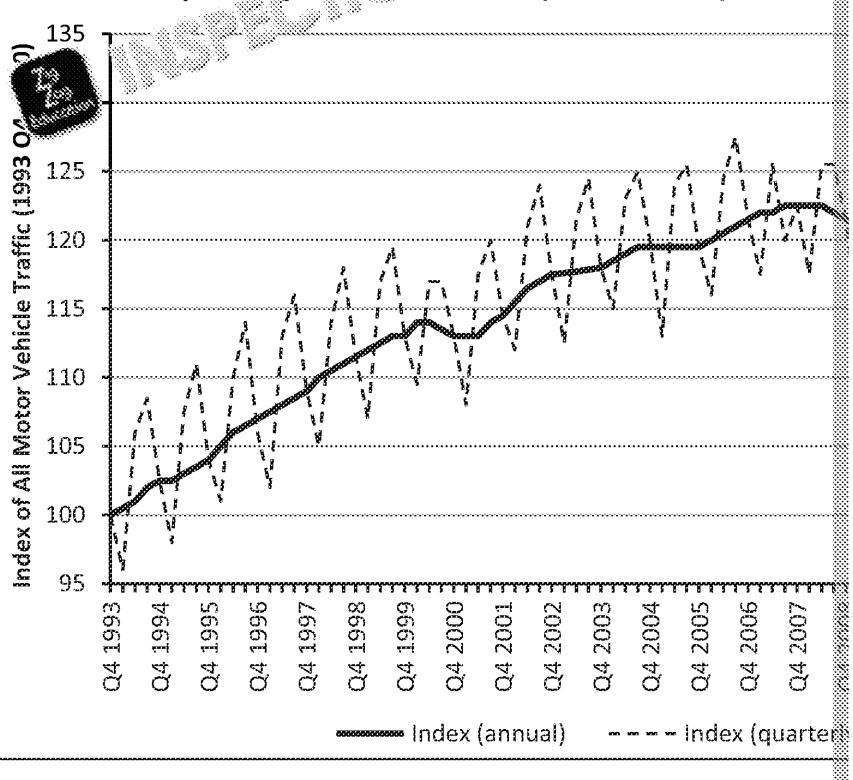
Quasi-public goods

This case study requires knowledge of the topic 'Public

Public goods are usually provided by the government rather than the free market: a typical example is national defence. Some goods are not quite as pure-public in the same way as national defence: these are known as 'quasi-public goods'. In the UK, some quasi-public goods provided by the government have been under increasing strain over the past few years.

Roads

Figure 1: Annual and quarterl[illegible]affic index (Great Britain)



Note: traffic is measured by vehicle miles travelled. Q1 = Jan, Feb, March; Q2 = Apr, May, Jun; Q3

Road traffic was at its highest level ever in 2015, due to a growing econom Van (or light commercial vehicle) traffic in particular [illegible] significantly, pe online shopping and delivery.

Excessive congestion can [illegible]y damaging for the economy, in terms of b and time was[illegible]d. It has been casually observed that traffic in busy cities a worsening[illegible]he statistics in Figure 1 would seem to support this.

It would be costly for the government to improve the road system: perhap improved when technology for driverless cars advances.

Police force

Figure 2: changes in total government spending on the police

	Average annual percentage cha		
	1995–96 to 2000–01	2000–01 to 2005–06	2005–06 to 2
Total spending	1.4%	4.1%	1.4%

Figures are in real terms (adjusted for inflation).

As part of the coalition government's austerity policies to balance the bud a total of 14% between 2010–11 and 2014–15. The formula for allocating g different areas is very complex, so some police forces were cut more sever

There were plans to cut the police bud[illegible] from 2015–2020, but the C made an unexpected U-turn in November 2015 (during the Autumn Staten attacks in Paris and a rise in domestic cyber-crime, the Chancellor decided further cuts may also have been influenced by the strong economic g

Hopefully this change in policy will allow the police service to continue to

Use the data

1. Look at Figure 1:
   (a) Explain why the quarterly road traffic figures follow a 'saw-tooth' p
   (b) Explain why annual road traffic might have fallen after around Q4 2
   (c) If total vehicle miles was 300 billion in Q4 1993, roughly how many 2015?

Test your knowledge…

1. What is market failure?
2. Explain the two main characteristics of public goods.
3. (a) Are roads an example of a pure-public good? Explain why or why no
   (b) Is policing an example of a pure-public good? Explain why or why n
4. Describe the 'free-rider problem'.

Extended-response question

1. Examine why public goods such as roads and the police force are unlikely to b market.

The Stock Market – Perfectly Co

This case study requires knowledge of the topic 'Perfect Co

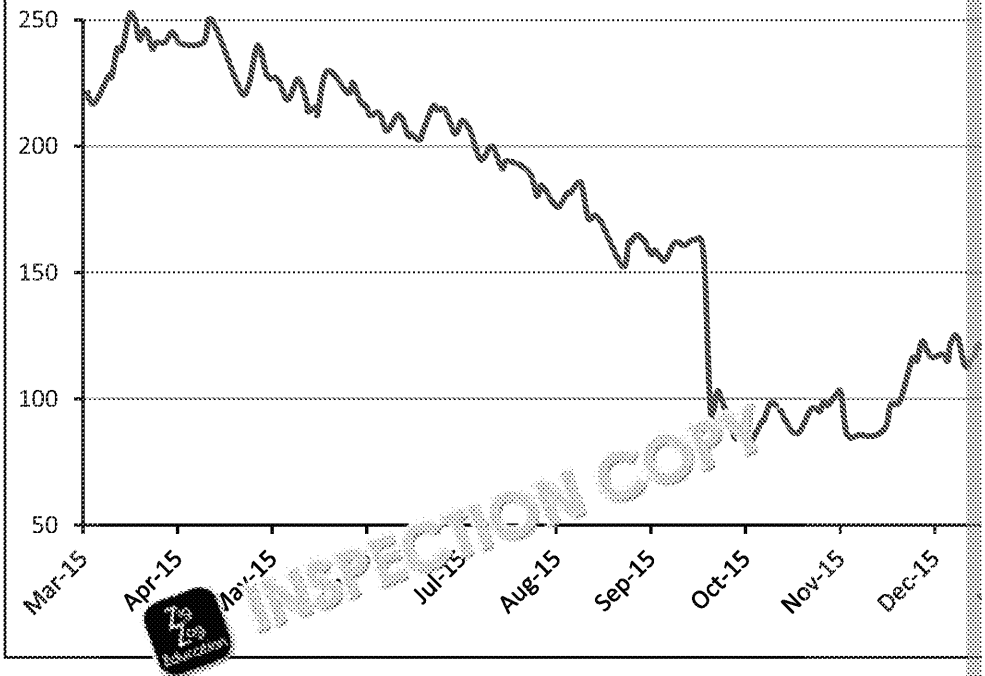
Perfect competition is a theoretical idea, and there are few real-world examples of markets that are perfectly competitive. One possible contender is the stock exchange.

The stock exchange is a global marketplace where millions of buyers and sellers trade shares in companies. Owning a share in a company means you have a small stake in the com[illegible]'s success – if the company does well, the share [illegible] more valuable. Owning 'stock' in a com[illegible] essentially the same thing – it means the total [illegible]er of shares you own. Owning stock in a com[illegible] referred to as having 'equity', a term which also [illegible] partly owning a house (e.g. via a mortgage).

Companies benefit from being on the stock market, as it gives them access variety of sources. Canny investors, using stock market information freely also benefit if they can correctly guess the movement of share prices. Buyi time can be very lucrative, but it is inherently risky.

Figure 1 shows the share price of Volkswagen, the German car manufactu of one share in VW in euros.

Figure 1: VW daily share price, March 2015 – March 2016

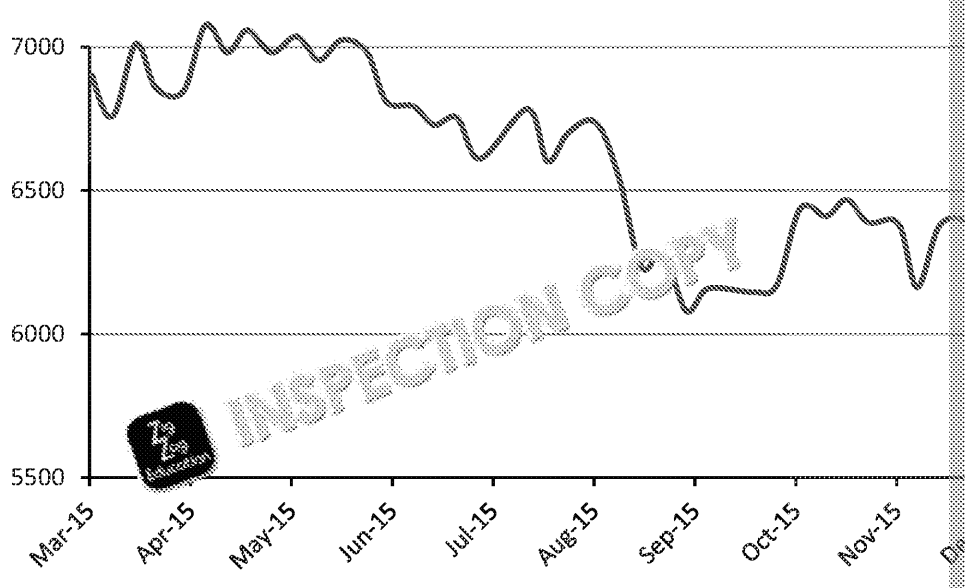


VW's share price nosedived in September 2015 after the emissions test sca by over €25.

The share prices of many large companies are often combined into stock m include the FTSE 100 (based on the 100 largest companies on the London S Jones Industrial Average (based on 30 large stocks traded on American sto Composite Index (based on the share prices of large Chinese firms).

Figure 2 shows the FTSE 100 index over time. The y-axis is a measure of h
the index are performing on average.

Figure 2: FTSE 100 Index, March 2015 – March 2016



After peaking at over 7,000 in April 2015, the FTSE 100 has performed wea
in January 2016 (which means that the index is at least 20% below its highe
jargon, a 'bear' market is simply one in which prices are falling, while a 'bu
rising prices.

Note: If you're still not entirely sure how the stock exchange works, watch
https://www.youtube.com/watch?v=F3QpgXBtDeo

Use the data

1. (a) Look at Figure 1. In September 2015 do you think there were more sell
   (b) Suppose you owned 500 shares in VW. Calculate the change in value o
   2015 and February 2016.
2. If the FTSE 100 index reached 8,500, what number would it have to reach to

Test your knowledge…

1. Name one possible example of a perfectly competitive market (other than t
2. Using revenue and cost curves, show the long-run equilibrium of a firm in a
   What do you notice about allocative efficiency'?

Extended response question

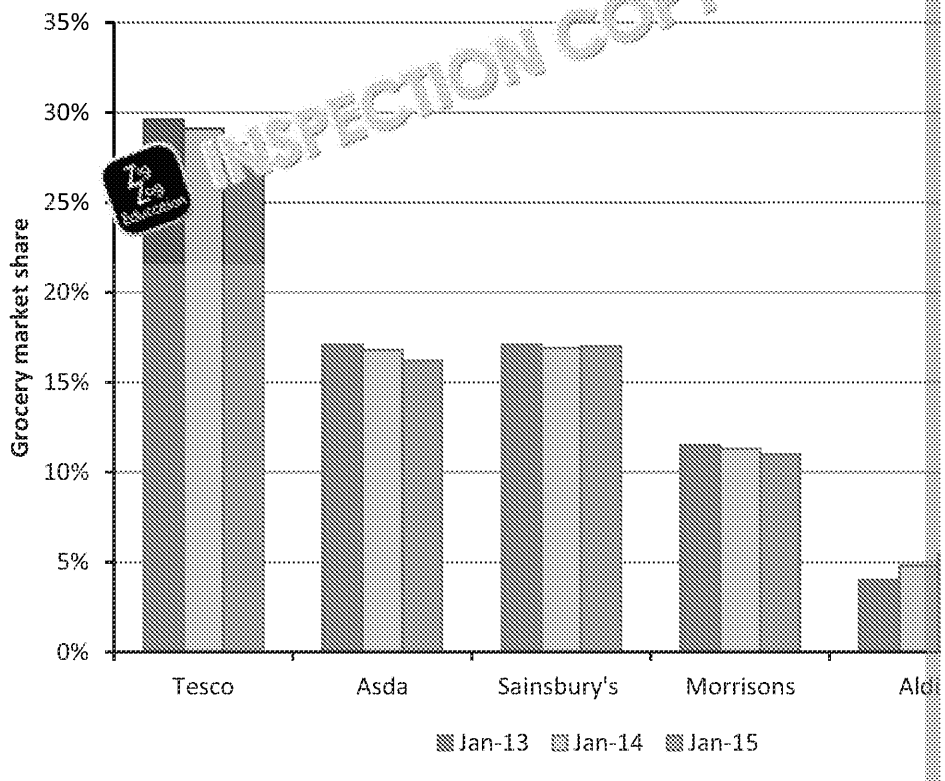
1. Evaluate how well the stock market exhibits the characteristics of perfect co

Supermarket Wars

This case study requires knowledge of the topics 'Costs and Economies of scale', 'Oligopoly'.

The landscape in the UK grocery market has been changing over the past ... 'discounters' such as Aldi and Lidl have emerged as big players in the ma... such as Tesco have struggled. Figure 1 shows how Aldi and Lidl's market ... expense of their larger rivals:

Figure 1: Change in grocery market share, selected ... ailers (2013–201...



This could be an indication that the supermarket business, usually considered an oligopoly, is shifting closer to monopolistic competition, similar to that seen in the market for local convenience stores.

Evidence of this shift can be seen in the price wars between supermarkets. In November 2014, total food sales in the UK fell for the first time in 20 years as prices tumbled. The competition was particularly fierce over the Christmas period in 2015. Aldi's move to cut the price of parsnips to 39p a bag triggered swift responses from Morrisons, who offered a 4kg bag of vegetables for just £1, and Lidl who cut packs of vegetables to a mere 29p. Tesco and Asda's sales in the run-up to Christmas suffered, with sales falling around 3.4% compared to the same period in 2014.

Combined with low commodity prices, price wars have meant consumers have benefited from pleasantly low prices.

Although the traditional incumbent firms such as Tesco continue to benefit from economies of scale and brand loyalty, Aldi and Lidl have s their in-store strategy. In Aldi and Lidl, stores offer a smaller range of goo tills and replenish stocks (this is helped by the fact that sell-by dates are n These measures have helped to keep costs of production to a minimum. I differentiated from the traditional supermarkets, who typically competed

Use the data

1. Using Figure 1, calculate the change in the four-firm concentration ratio bet
2. Using revenue and cost diagrams, and assuming that both firms aim to max afford to charge lower prices than Tesco.

Test your knowledge...

1. (a) Define the term 'economies of scale'.
   (b) Explain two ways in which large supermarkets could benefit from econ
2. Are firms operating in the UK's supermarket sector interdependent? Why?

Extended-response question

1. Evaluate whether the characteristics of the UK supermarket sector are thos monopolistic competition.

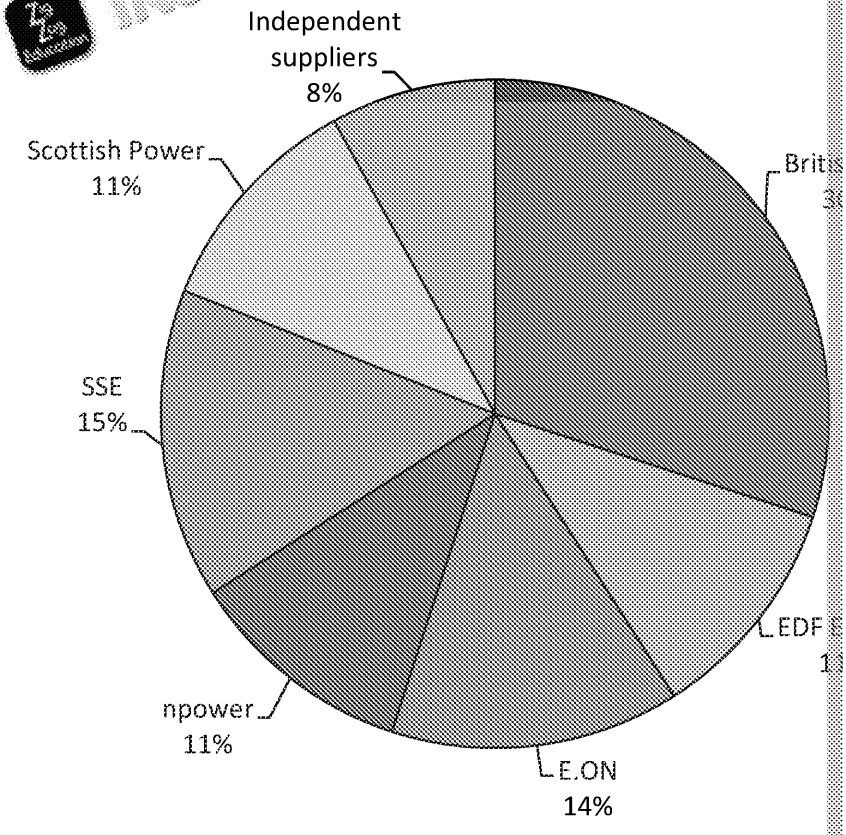
Inertia in the Energy Ma

This case study requires knowledge of the topics 'Monopoly', 'Monopolistic

It is well known that asymmetric information can lead to market failures. car salesman who convinces his customers that his cars are worth more th has better knowledge of the car's true value – for more information about Lemons' by G Akerlof.

Another market that has been suspected of suffering from asymmetric inform The vast majority of energy in the UK is supplied by a few large, vertically int Six'. Figure 1 shows the market share for these companies. Although the sha independents has increased from almost zero in 2009, the market is still domi

Figure 1: Share of UK energy market (2014)



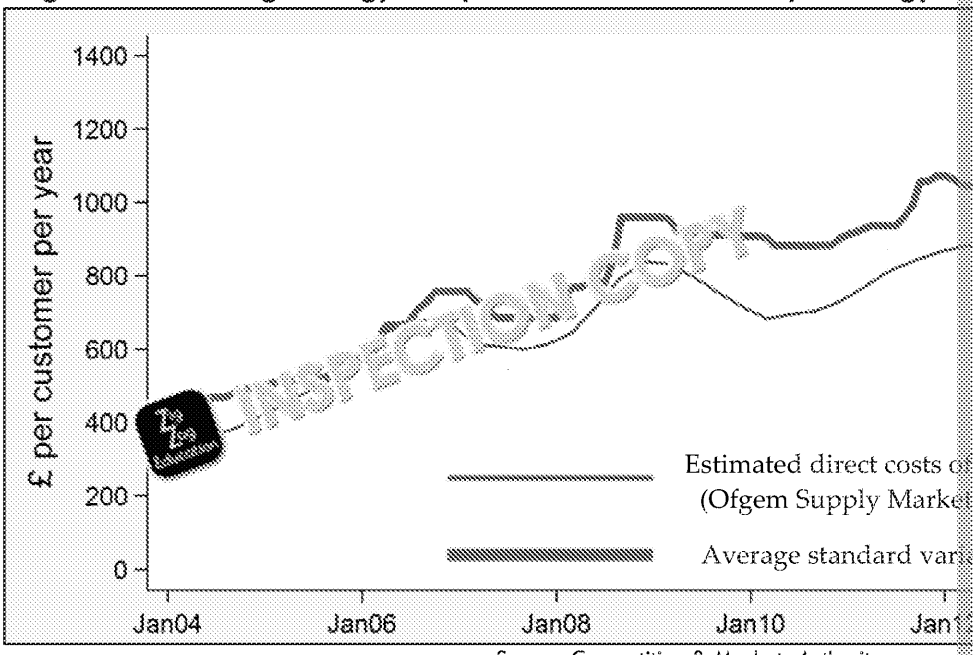
Energy = electricity and gas.

Energy prices tend to benefit those who 'shop around' a lot in the market. Energy firms offer the best deals to new customers who switch providers, and usually offer the worst deals to 'inert' consumers who stick with the same prov

This would work well in a market with symmetric information between firms and consumers, as customers would switch regularly to get the best deals. However, it is argued that comparing energy costs is overly complicated, and that the procedure for switching can be difficult. As such, only the most well informed (often the better-off) consumers reap the benefits of switching providers, while most of the population are stuck with high tariffs. One government report, analysing Quarter 1 2012 to Qua consumers could save by switching supplier (or tariff type), at an average s

It has been argued that the market has become less competitive over time. estimated costs of energy production with the average standard variable t of energy bill that fluctuates in price):

Figure 2: UK average energy bills (standard variable tariffs) vs energy co



Source: Competition & Markets Authority – energ

Note that indirect costs are not included (e.g. insurance, depreciation)

Consumer distrust in energy suppliers currently stands at 59%, making en consumer industry sectors. There are likely to be ongoing battles between suppliers in the future to make sure the market is competitive and outcom

Use the data

1. Using Figure 1:
   (a) Calculate the three-firm concentration ratio for the energy market in 2
   (b) Calculate the six-firm concentration ratio.
2. Based on the article:
   (a) Give evidence of increasing competition in the UK energy market.
   (b) Give evidence of decreasing competition in the energy market.
3. Based on the article, what is the main source of market failure in the energy

Test your knowledge...

1. Which of the following best describes the UK en[illegible] market – (a) perfect co competition, (c) oligopoly, (d) m[illegible]oc[illegible]. Why?
2. Explain why 'vertica[illegible]' might be a barrier to entry in the energy m might e[illegible]
3. List son[illegible]antages and disadvantages of an oligopoly.

Extended-response question

1. Evaluate the effectiveness of a government policy to increase competition i subsidising new entrants in the market for the first few years.

This case study requires knowledge of the topics 'Perfect competition' and 'Monopolistic Competition'.

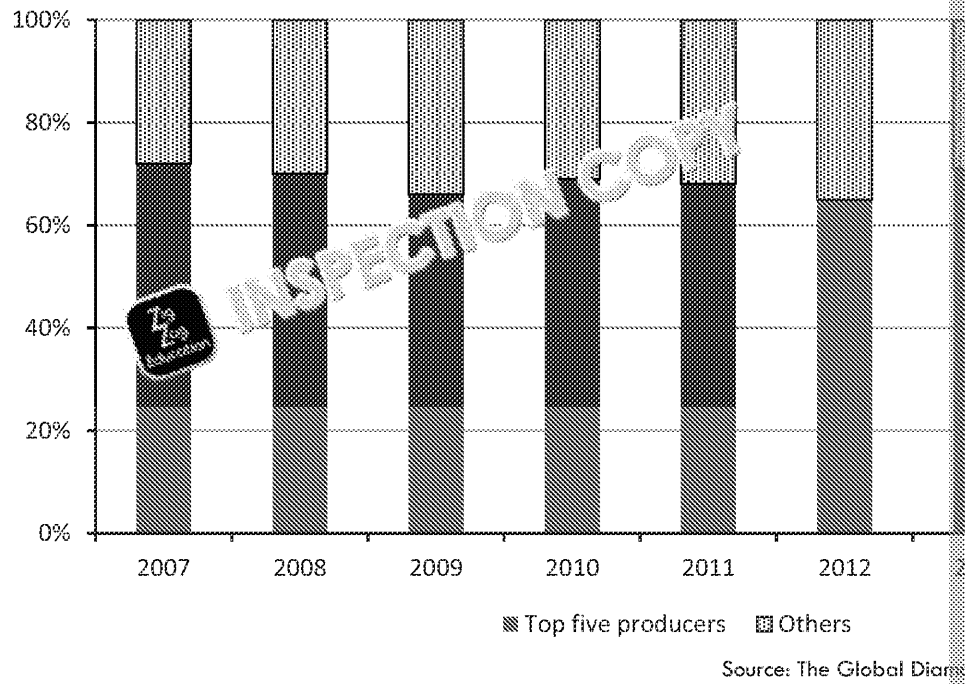
Most people are familiar with the idea of a monopoly, but there are relatively few examples of true monopolies. One infamous example of both a monopoly and a monopsony that has been well studied is the diamond company De Beers. Although their monopoly power has substantially waned since the turn of the millennium, in the twentieth century De Beers dominated the diamond market, peaking at 90% market share in the 1980s.

De Beers' success was partly due to their undoubtedly successful marketing campaign – they came up with the slogan 'diamonds are forever', and many people still feel obliged to buy a diamond ring to accompany a proposal. However, their marketing applied for all diamonds, not just De Beers diamonds. Their success was more to do with their ruthless control of several stages of production.

De Beers gained control of the main diamond mines in South Africa, Tanzania by absorbing its main competitors, paying the governments of host countries competitors to stockpile in warehouses. This allowed it to artificially restrict supply, giving the illusion of scarcity and inflating prices. Using De Beers' monopsony power, were then sold to trusted dealers at fixed prices, who then sold them to the

This system finally collapsed in 2004 when De Beers pleaded guilty to price fixing. Around the same time, other diamond companies found sources beyond the control of Canada and Australia, ending the monopoly. The diamond industry also suffered a bad reputation, relating to wars in Africa funded by 'conflict diamonds' (or blood diamonds), leading to increased scrutiny from consumers and regulators. By 2012, De Beers' market share was below 50%. Figure 1 shows the market concentration of the main five firms in the diamond industry (with De Beers still being the largest):

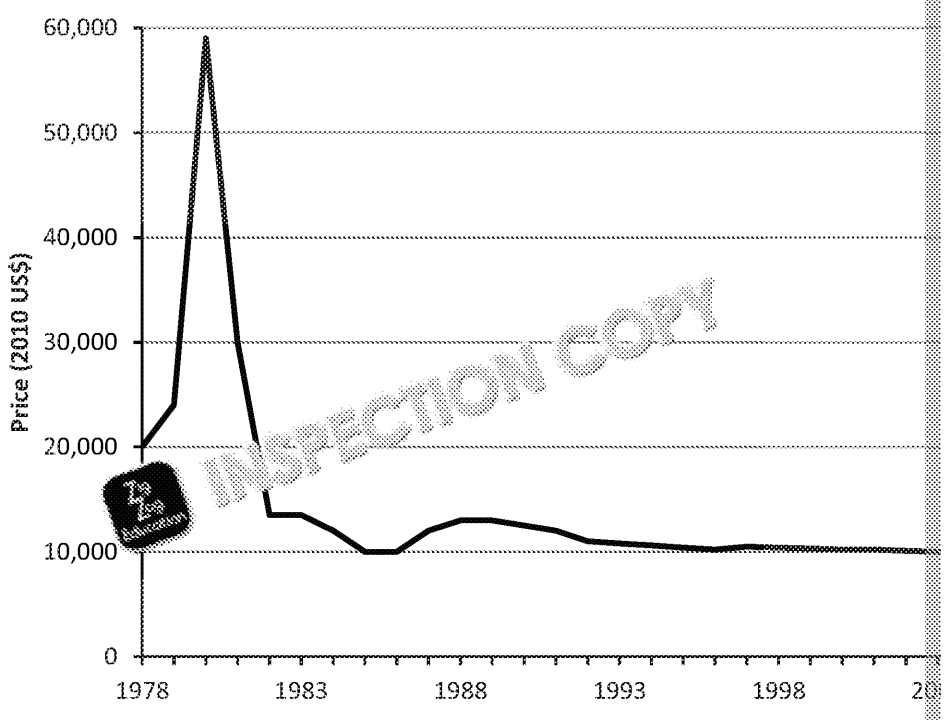
Figure 1: Five-firm concentration ratio, diamond industry (2007–2015)



Source: The Global Diam

Figure 2 shows the world price of diamonds over time:

Figure 2: Average price of top-quality one-carat diamonds, 1978–2010



Note: figures are real (i.e. adjusted for inflation). One-carat diamonds are often used in engagem

The spike in 1980 was a price spike for many precious metals, as inflation encouraged people to invest in commodities such as gold and diamonds, safer value than currency).

Demand seems to have picked up in the last few years as the middle class although the US remains the largest buyer of demands.

Use the data

1. Do you think De Beers' monopoly of the diamond market was a natural mon
2. Which market structure best characterises the diamond market in recent ye
3. How would Figure 2 change if diamond prices were not adjusted for inflatio
4. Explain how De Beers acted as a monopsony.

Test your knowledge...

1. (a) Define the term 's... ...nal profit'.
   (b) Usi... di... ...ow the price and quantity of diamonds arising unde... la... ...er normal profit.
2. Explain two possible benefits of monopolies (not necessarily the diamond m

Extended-response question

1. Using a diagram, explain why there may be a natural monopoly in some ma

This case study requires knowledge of the topic 'Contestab

An important feature of many markets is how *contestable* they are. A conte
where firms are free to enter and exit the industry at little or no cost. Even
firms (or even just one), if it is contestable then existing players in the mar
output as if they are in a competitive market, due to the threat of entry by

The classic example: US airlines

In the late 1970s and early 1980s when the contestability idea was first stu
examples of a contestable market was the international flight market in the U

Survey data showed that the majority of non-stop internal flight routes in
route was only served by one firm.

Figure 1: International US flight routes (1980)

	No. of monopoly markets	
0–200 miles	425	
201–400 miles	294	
401–600 miles	140	
601+ miles	302	

Source: 'The contestability of airline markets during the transi

The explanation for this is that there are economies of scale in the airline m
the aircraft, the lower the cost per passenger for the airline (declining aver
equilibrium number of flights per day (to benefit from the economies of sc
effect, these routes are natural monopolies.

Figure 2: Economies of scale in aircraft size

Flight length	Aircraft	Seats	Average c passe
500 miles	CV-580	56	$6
	B-737–200	130	$4
1,000 miles	B-737–200	130	$6
	B-727–200	162	$5
1,500 miles	B-727–200	1	$8
	DC-10–10		$6

Source: 'Th bility of airline markets during the transi

Note: marginal and average costs assum 5% full.

The interes hi out this case is that the airlines didn't charge high
there was a a possibility that another airline at each airport could en
market was contestable.

Note that in this case, although there were high sunk costs for completely
the fact that there were other airlines flying different routes who had alrea
meant that the market for each route was contestable.

Pharmaceutical drug prices in the US

A lack of contestability in the US market for Daraprim, a drug used to treat a condition affecting some AIDS patients, caused something of a scandal in 2015. A company called Turing Pharmaceuticals bought the rights to produce and sell the drug, and promptly increased the price from $13.50 a pill to $750 a pill (in the UK these pills can be bought for about 50p each).

In this case it was not a patent that prevented other companies from entering the market (the drug has been around for over 60 years), but regulatory process for other potential producers to enter the market. Given Daraprim is very small (only 8,000 prescriptions per year in the US), it would for another firm to enter the market and undercut Turing.

This case highlights flaws in American regulation, where a system designed poor-quality drugs can permit such blatant profiteering.

Use the data

1. Using the article, identify one barrier to entry in the pharmaceutical drugs m... think of any other barriers to entry that might apply to the pharmaceutical in...
2. Using Table 1, calculate the proportion of all flight routes that were competi...
3. Using Table 2, calculate the total cost of a 1,500 mile DC-10–10 flight assuming...

Test your knowledge...

1. State two features of perfectly contestable markets.
2. Define the term 'sunk costs'.

Extended-response question

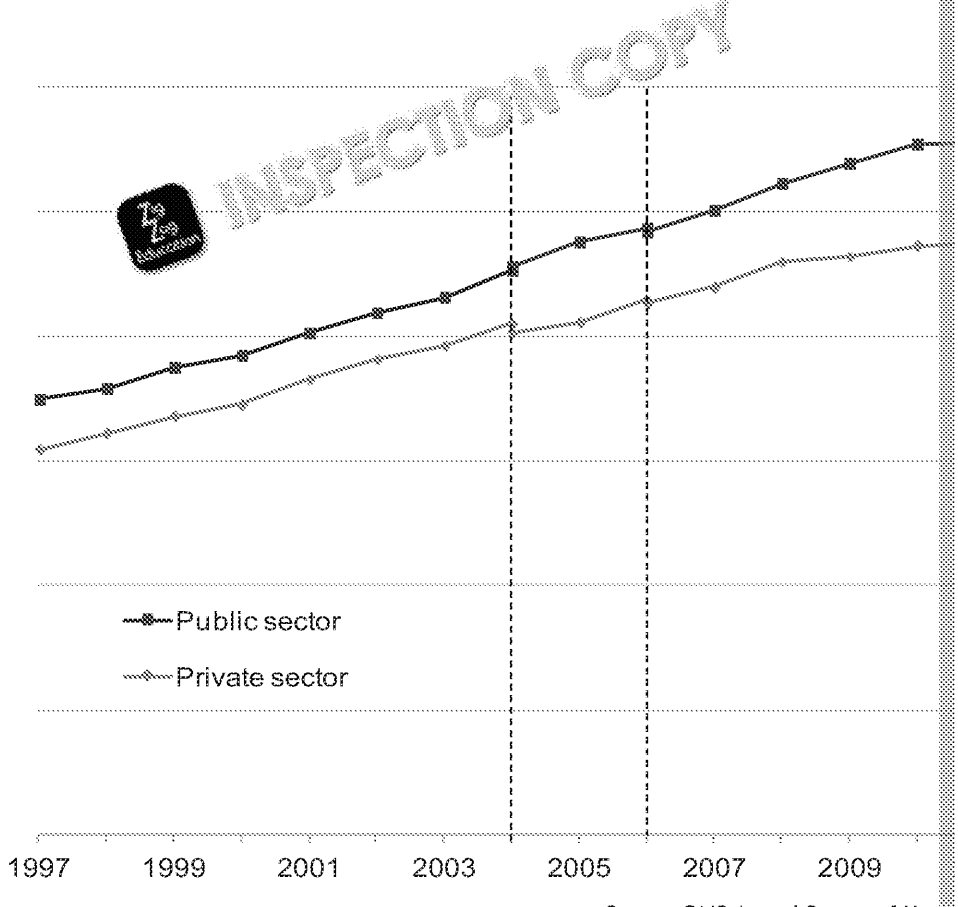
1. Evaluate the extent to which the market for automobiles is contestable.

Is There a Shortage of Teac

This case study requires knowledge of the topic 'The Interaction o

In the UK, around 19% of workers are in the public sector, over half of wh NHS. On average, working in the public sector pays better than the priva The main explanation for this is that public-sector workers are, on average sector workers (and most of the lowest paid jobs are in the private sector).

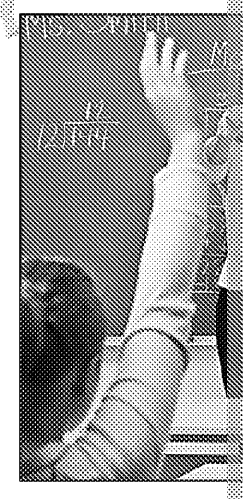
Figure 1: UK median full-time gross weekly earnings, public and private



Source: ONS Annual Survey of Hou

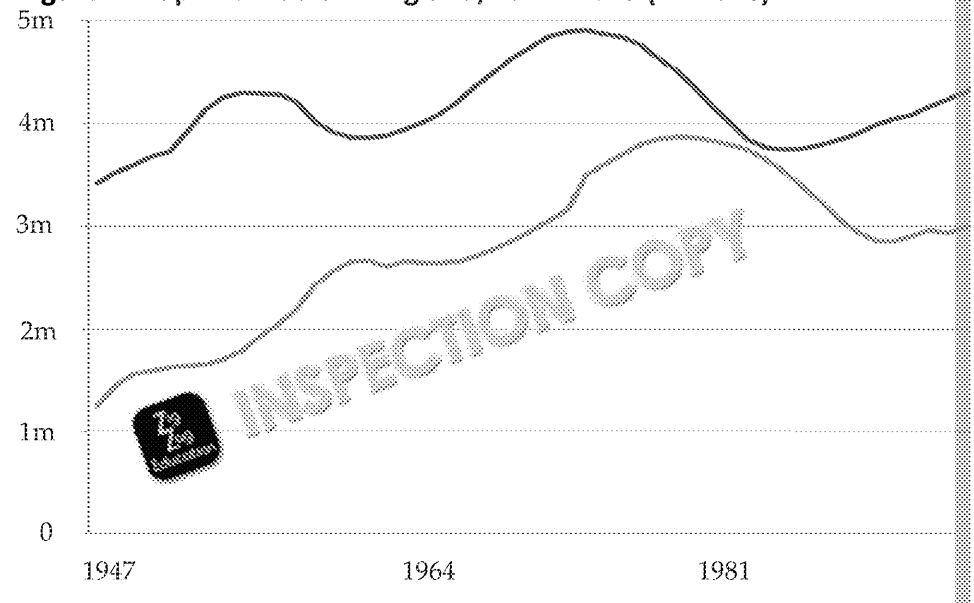
Data is nominal (i.e. not adjusted for inflation).
Dotted lines show different estimates of the data in 2006, 2008 and 2011.

Recently the government has struggled to recruit sufficient levels of staff in the public sector, pa ... y teachers. This varies by area and subj ... iti ... aths, business, science and English t ... ac ... especially short supply (although ... e ... have a surplus, e.g. art and PE). M ... ha ... ging schools are the worst off (since teach ... ould usually choose to work in better-performing schools, given the choice), and schools in expensive areas in the south-east are also affected as house prices rise. Schools are having to spend significantly more on supply teachers to plug gaps in staff and recruitment agency fees to hire good teachers. In a few cases, pupils are having to travel between two different schools in a day for teaching.



This is in spite of the fact that the number of teachers in the UK is at an all
problems seems to be the rising numbers of pupils (see Figure 2), and also
has led to more alternative employment options for graduates.

Figure 2: Pupil numbers in England, 1947–2015 (millions)



Source: Departme

One option for the government could be to increase the pay of teachers to
Teachers currently earn between £22,244 and £32,831 per year depending
(this is higher for London where the cost of living is higher). The governm
Service initiative offers financial incentives to attract high-calibre teachers
performing areas of the UK, while introducing national tests for seven-yea

However, a study by the National Foundation for Educational Research (N
those leaving teaching went on to lower salaries – so perhaps offering high
effective in this case. Furthermore, at a time when the government is tryin
spending, higher spending on teachers would be costly.

Use the data

1. Look at Figure 1. This figure shows median weekly earnings. Would you exp
different if mean weekly earnings were used instead?

2. (a) Look at Figure 2. Given that changes in pupil nu rs usually reflect ch
identify roughly where the 'baby boom' per oc England was from the
(b) How would you expect the nu state-funded secondary-school p
years?

Test you ge...

1. (a) Ba the article, explain how geographical immobility of labour mi
teachers in certain areas.
(b) Name two other factors that affect the supply of teachers.

2. Using a demand and supply diagram, show how there might be a shortage o
by the government is too low.

Extended-response question

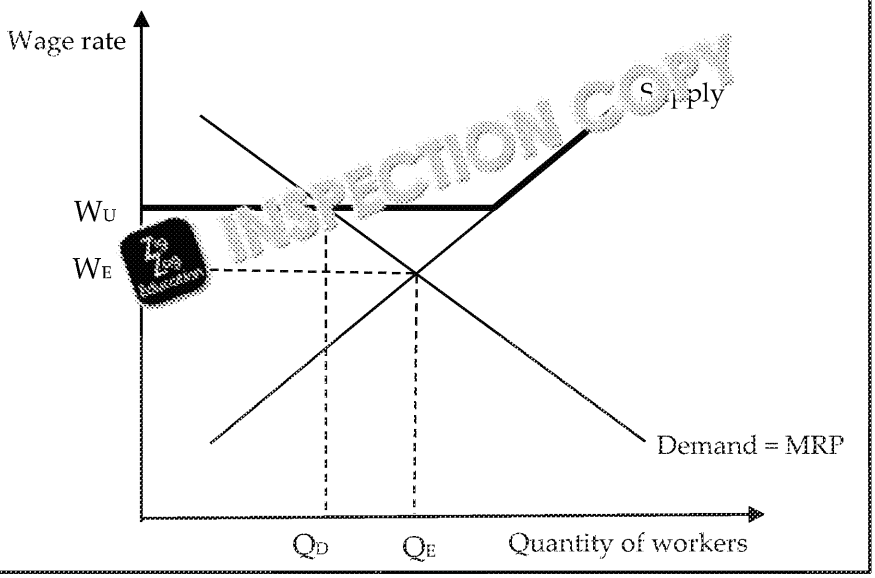
1. Discuss the effectiveness of the government increasing the salaries of all tea
increase the supply of teachers.

Trade Unions in the UK

This case study requires knowledge of the topics 'Demand for Labour' and 'The

The presence of trade unions is an important feature of many labour mark
unions include the BMA (British Medical Association), several teachers' u
NASUWT) and the National Union of Miners.

Figure 1



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Critics of trade unions have argued that they create unemployment by for
levels (in the diagram, $Q_E - Q_D$ would be unemployed workers). Having to
equilibrium can damage the profitability of firms and reduce their compet

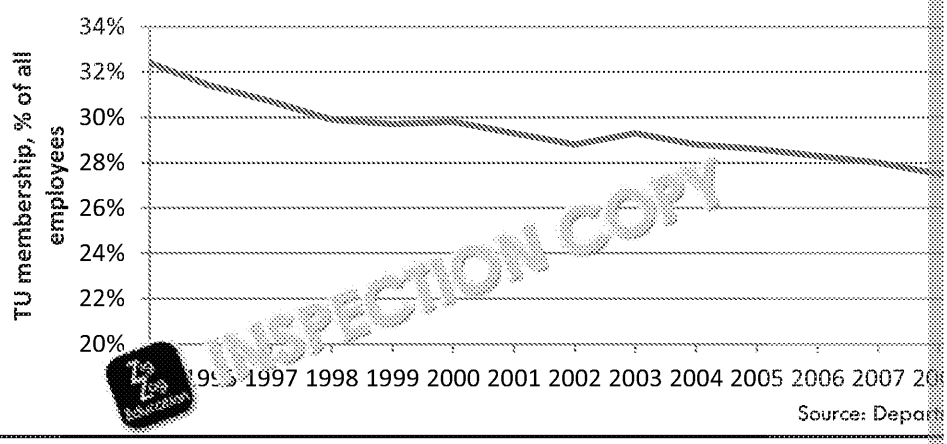
On the other hand, it could be argued that belonging to a trade union could
productivity, since workers respond positively to being paid a good wage –
Adam Smith noted that 'Where wages are high, we shall always find the wo
and expeditious, than where they are low.' Also, a trade union can articula
managers more effectively as a bloc, allowing the firm to improve its manag

Trade unions can be particularly effective in overturning the market powe
over the past few decades, declines in membership might suggest that the
unions is dwindling.

Trade unions in decline

Figure 2 show the decline in the trade union 'density' in the UK over time (employees in a trade union). The steady fall reflects a similar trend in other the USA.

Figure 2: Trade union density in the UK, 1995–2014



Based on data for 2014, trade union membership is more prevalent in Wal (30–35%) and less prevalent in the south-east of England (15–25%). Public more likely to be unionised (over 50%) than private sector workers (aroun

The wage gap between union and non-union workers is about 21.6% in th private sector. This indicates that despite their decline, trade unions still re However, part of this wage gap could be due to characteristics of trade un more experienced and productive on average.

Use the data

1. How might a trade union help solve the problem of discrimination in the lab
2. Using only the information from Figure 2 and the next paragraph (based on more employees – the public or private sector?

Test your knowledge

1. Using a diagram, show how an increase in the marginal productivity of work market in Figure 1.
2. Explain the term 'monopsony' in the context of a labour market.

Extended-response question

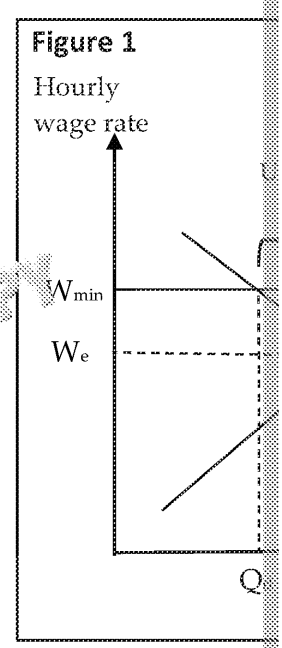
1. Assess the importance of having effective trade unions in reducing income i

Will Raising the Minimum Wage Harm

This case study requires knowledge of the topics 'Demand for Labour' and 'The

The basic economic theory concerning a national minimum wage (NMW) is quite simple – imposing such a wage will lead to disequilibrium in the labour market and unemployment among low-skilled workers, as shown in Figure 1.

Figure 1



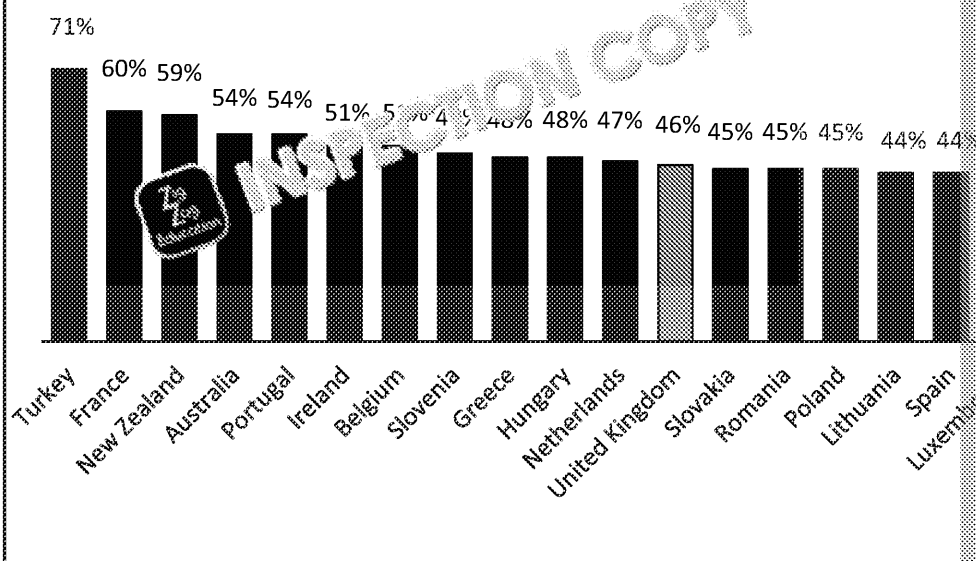
In light of this, George Osborne's plans to introduce a 'living wage' might seem misguided – surely it will just lead to unemployment? The current plan is to increase the NMW for over 25s to £7.20 an hour in April 2016, rising to £9 an hour by 2020 (partly offset by cuts to benefits). The OBR (Office for Budget Responsibility) estimated that employment would fall by 60,000 by 2020 as a result of the policy, although this estimate is very uncertain.

So, what does the empirical evidence suggest about the link between a NM UK? The consensus among researchers is that since its introduction in 199 resounding success: it has effectively reduced wage inequality without cau (in a poll of experts, the NMW was voted the most successful UK governm

However, we have to be careful before interpreting this to mean that Geor equally successful – there has been some evidence that the NMW has had employers in terms of lower profits, shorter hours for employees, higher p non-wage benefits such as pension entitlements, for example.

Furthermore, even though the NMW has increased more quickly than ave a big jump to £9 an hour in 2020 could be enough to cause noticeable unem level of the NMW is important: one way researchers have looked into this of the NMW in the UK with other countries:

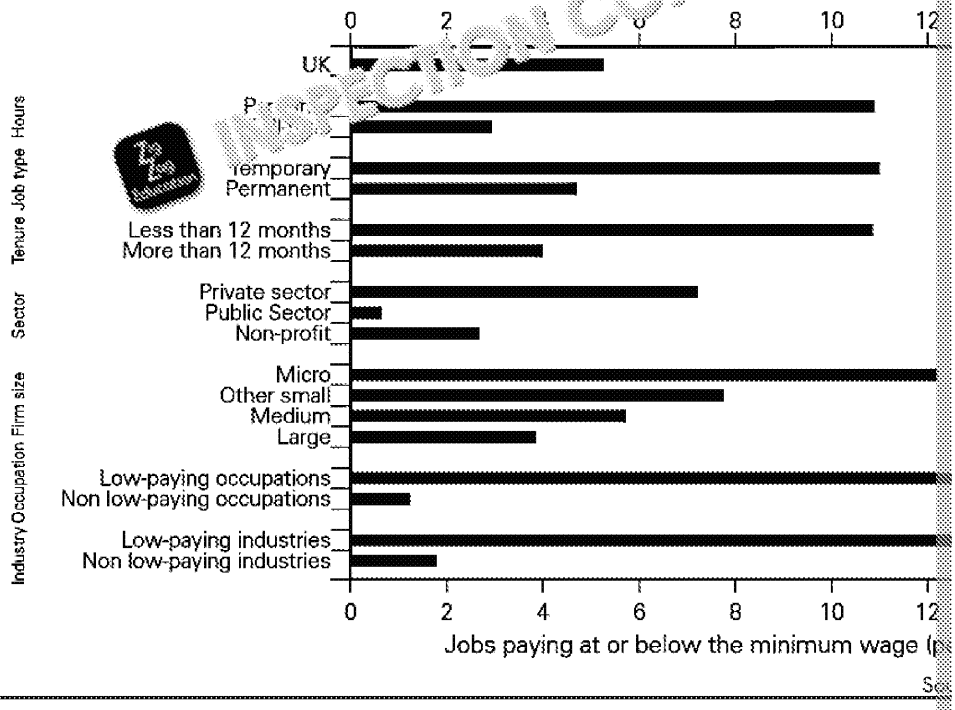
Figure 2: NMW as a percentage of median earnings for full-time worke



The size of the NMW as a percentage of median earnings is a measure of i
UK is fairly average in this regard compared to other OECD (Organisation
and Development) countries at 46%, although this figure is higher among
those in low-skilled occupations. If the NMW were to increase significantl
New Zealand, for example) it is much more likely that this would lead to
France is widely criticised as being damaging to employers.

Figure 3 shows the percentage of UK jobs paying the minimum wage, var
The number of people affected by the NMW is another important factor in
economy.

Figure 3: Characteristics of minimum wage job



In summary, the NMW has been a highly successful policy in raising livin
since predicting the effects of a change in the NMW is so difficult, the gen
should be wary of raising the NMW very rapidly, to avoid a potential une

Use the data

1. Look at Figure 2. If the UK's NMW in 2009 was £5.80, calculate the median
workers.

2. Look at Figure 1. How would the level of unemployment change in respons
and supply for unskilled workers were relatively elastic?

Test your knowledge...

1. The NMW wage rates for workers aged 21+ in the UK over time are as follow

Year	2011	2012	2013	2014	2015	2016
NMW	£6.08	£6.19	£6.31	£6.50	£6.70	£7.2

**Predicted, ages 25+*

(a) Compare the growth rates in the NMW from 2011–2015 with the growth
(b) Based on the article, does the government's proposed policy fit with th
the NMW should be gradual?

Extended-response question

1. Evaluate the extent to which introducing a National Minimum Wage will inc

For-profit Universities

This case study requires knowledge of the topics 'Information Failure' and

The global market for higher education has been going through some major changes in recent years, with a rise in e-learning and a much higher proportion of young people going to university than a generation ago.

In the UK, the vast majority of universities are still not-for-profit organisations funded by the government. There are a few exceptions including the University of Law and BPP University, but critics argue that introducing a profit motive in higher education leads to low-quality teaching.

In contrast, the US has seen a strong rise in private, for-profit universities greater choice for students, it is argued. However, the US's Department fo clashed with certain private colleges over allegations that they have been In May 2015, Corinthian Colleges, who ran 107 campuses across the US, w the DOE cut off its funding. Private colleges in the US have some access t US, particularly to support student loans (80% of annual revenues in Cori was rescinded after the college was found to be misleading students about programmes and trapping students with massive debts of up to $75,000 a

Figure 1: US for-profit colleges: revenue from government 2013/2014

Revenue from government	Num
> 90%	
85–90%	
80–85%	
70–80%	
60–70%	
50–60%	
40–50%	
30–40%	
20–30%	
10–20%	
0–10%	
Total colleges	

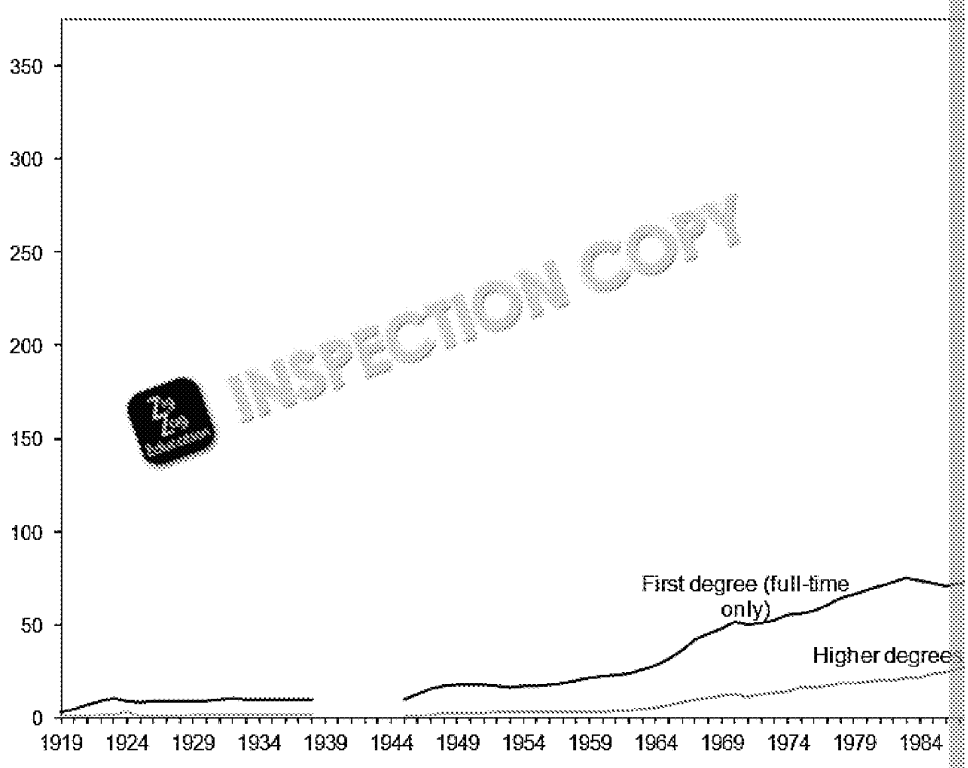
The problem of bogus colleges [illegible] the agenda in the US after it was Trump University (of Donald Trump, the infamous Republican presidenti over 5,000 [illegible] of (collectively) millions of dollars. At the time of Some commentators have argued that the US government has not been ne intervening in the market, by continuing to fund colleges that have been a behaviour, substandard practices or illegal activity', to the tune of several

The government has to be careful in these instances in order to protect stu perhaps also to ensure that for-profit colleges are innocent until proven gu would argue that the US government should have done more to regulate t from happening in the first place.

UK university data

Figure 2 shows the rise in the number of students going on to study at uni
'discontinuity' (break) in 1994 reflects the inclusion of former polytechnic

Figure 2: Students obtaining degrees in the UK each year (thousands)



Source: Education: Historic

Data not collected during WWII.

As a percentage of the whole population, total participation in higher edu
3.4% (1950), 8.4% (1970), 19.3% (1990), 33% (2000), and 46% (2014 – althou
account for students who do not finish their degrees). The proportion of w
level has consistently exceeded that of men.

Use the data

1. Look at Figure 1. In which bracket would the median school receive its gove
2. Look at Figure 2. Estimate the proportion of university degrees awarded in
polytechnic universities. (Assume that the number of students getting first-
polytechnic universities remained unchanged between 1993 and 1994.)

Test your knowledge.

1. Explain the differe[illegible]t[illegible]en public- and private-sector organisations.
2. Explai[illegible]e concept of 'asymmetric information' can be applied to the for
3. State one advantage and one disadvantage for students of allowing for-prof

Extended-response question

1. In 2012, the government introduced a cap of £9,000 a year for tuition fees. T
might charge less to attract students, but it turned out that almost all univers
Discuss the pros and cons of allowing universities to charge any fee they wis

Answers

Case Study 1: Subway making headway

Use the data

1. In 2003–2004, average calorie consumption was around 2267, by 2009–2010 this ha
   percentage change using these figures is: $\frac{2267-2175}{2267}\times 100 = 4.04\%$ fall (allow
2. The principal-agent problem is the idea that when control of a business is separated
   Subway) and an agent (in the case, the franchisees), this can incur costs, particularly
   objectives.

   In the case of Subway, chances are both parties would have the same objective (to m
   costs to Subway involved with getting their franchisees to operate their stores in the
   wouldn't want too much variation in the way that these stores are operated.

Test your knowledge…

1. Possible advantages: larger ... its economies of scale
   Possible disadvantages: ... economies of scale, risk that attempts to grow will fail (e
   experti... ...vle...e,
   1 mark ... (list is not exhaustive).
2. The most likely answer is C – 'Profit maximisation' (1).
   This is the standard assumption of a firm's operation in economics. (Note, unless a
   profit maximisation is the **primary** business objective.) Instead, though, a business
   its sales revenue (where MR=0) or its sales volume in order to attract a larger custo
   pursue the objective of growth maximisation to increase its market share, especially
   competition from the likes of Chipotle and others.
3. 'Profit satisficing', or simply 'satisficing', is a non-maximisation business objective th
   for a certain level of profit to satisfy shareholders (since managers may not directly
   Satisficing might occur when managers are temporarily pursuing other objectives b
   being made for the firm's shareholders. However, satisficing is unlikely to be an ob
   franchised business structure. Since Subway franchises out the use of its business m
   parties are likely to be maximising profit for themselves.

Extended-response question

1. Possible strategies that Subway's rivals could adopt include (not an exhaustive list):
   - Price wars / predatory pricing. This could divert sales away from Subway. The
     that Subway could respond by cutting its own prices, leading to lower profits a
     rivals' food is perceived as lower quality, then charging a lower price may not
     could argue that the goods are weak substitutes).
   - A non-price strategy could be to launch a big marketing campaign and/or switc
     keeping with the gradual trend in consumer tastes towards healthier eating). N
     responsibility' (CSR) is an increasingly important concept in the business world
     business' efforts to promote better health favourably. This could divert deman
     but it depends on the success of the advertising cam..., how loyal Subway's
     well the other companies can keep up with ... tastes and preferences.
   - Alternatively, Subway's competit... attempt to grow 'inorganically'. Fo
     to integrate horizontally th... ...gers and acquisitions to bolster their mar
     revenue. Or, the ... integrate vertically in an effort to reduce the c
     prod...ion ...ach that they can afford to lower their prices, increase sa
     H... these strategies are likely to be fairly costly in the short term and so
     wh...king decisions.

   Make sure that you evaluate the strategies you propose – 10-mark questions and a

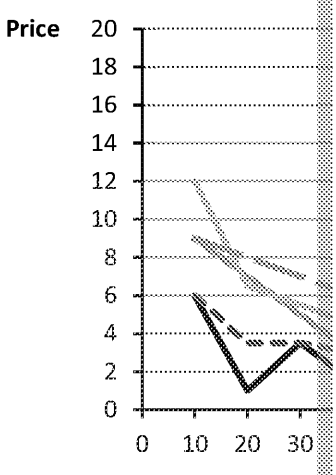
Case Study 2: Creative destruction in the business world

Use the data

1. (a) The completed table is:

Portions sold	0	10	20	30	40	50
Price per unit	10	9	8	7	6	5
Cost of rent and electricity	60	60	60	60	60	60
Wage bill	0	30	30	60	60	105
Cost of buying ingredients	0	30	40	45	60	50
Total cost	60	120	130	165	180	215
Average total cost	N/A	12	6.5	5.5	4.5	4.3
Average variable cost	N/A	6	3.5	3.5	3	3.1
Marginal cost	N/A	6	1	3.5	1.5	3.5
Total revenue	0	90	160	210	240	250
Average revenue	N/A	9	8	7	6	5
Marginal revenue	N/A	9	7	5	3	1

(b) The diagram should look roughly like the one on the right.



(c) According to the diagram, the profit-maximising level of output is at roughly 44 units (MC=MR). Profits are maximised when the MR=MC condition is satisfied because beyond this point a marginal increase in the firm's production – i.e. an increase in productive output of *one* unit - leads to a marginal increase in revenue that is less than the marginal increase in cost (MR<MC), meaning that you'd be making a loss on each extra unit of production. Notice that, up to the point that MR=MC, each additional unit of output contributes to a positive marginal profit (since MR>MC). If MC exceeds MR, however, then the firm might still be making an 'accounting profit' but it is not making the *maximum* profit it could given the resources it has available.

(d) The diag
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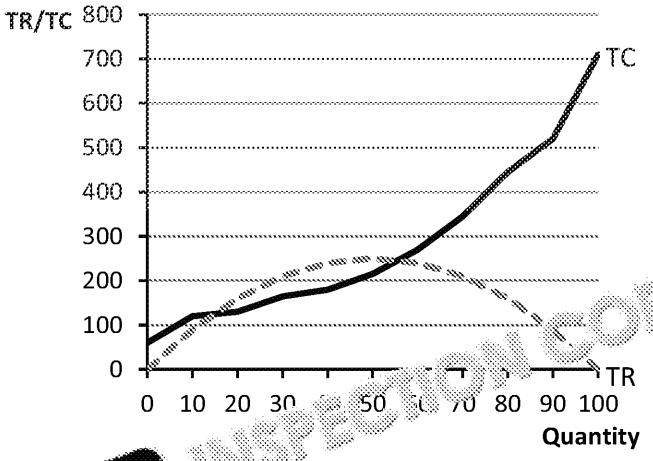
answers



Test your kno...

1. (a) The only fixed cost is the rent/electricity column (this does not vary with quan
cost, you could state either wages or cost of ingredients (1).

(b) In the short run, at least some factors of production are fixed (1). Ben's fish a
to open another premises to mitigate the effects of decreasing marginal return
demand in a neighbouring area. In the long run, however, there are no fixed f
costs are *variable* (1). Therefore, in the long run, Ben's outgoings for rent and
on the investments he chooses to make (1)!

(c) The law of diminishing returns is the idea that increasing one input while holdi
steadily smaller increases in output (1). In the context of Figure 1, this could b
that need to be hired – each new worker contributes less to output than the la

2. The minimum efficient scale is the point where long-run average costs are minimise
gains from economies of scale are maximised.

Extended-response question

1. In terms of revenues, it is likely that a luxury tea shop would face falling revenues in
spend less in a recession, perhaps because they are saving money / paying off debt
further by explaining that luxury tea is likely to have a high income elasticity of dem
recession), demand will fall by a disproportionately large amount.

   In terms of costs, this really depends on how the firm responds to the fall in deman
which would reduce variable costs. Alternatively, it might switch to providing lower
reduce variable costs. Thirdly, the owners might choose to accept a temporary fall i
a fall in costs (remember, normal profits are counted as a cost of production). So ei
demand will trigger a fall in costs, for one or more of thes ons.

Case Study 3: Quasi-public goods

Data response questions

1. (a) This pattern arises b traffic is higher in the summer months (Q2 and Q3)
   (b) This w th of the recession: road traffic might have fallen as people c
   w e rather than use cars. The number of vehicles used to transport goo
   ec slowed down.
   (c) The index for Q4 2015 is around 124, and the index for Q4 1993 is 100, so this
   increased by 24%. 300 billion miles plus 24% = (300 * 1.24) = 372 billion vehic
   are acceptable.

Test your knowledge...

1. Market failure refers to the concept in which the market mechanism fails to allocate r

2. Public goods are non-excludable (1). This means that one person's consumption of
person (who hasn't paid for it) from consuming that good (1). Public goods are also
person's consumption of the good does not diminish another person's ability to con

3. (a) Roads would seem to be non-excludable (1), since one cannot be prevented fr
   using that road. However, they are not completely non-rival (1), since if too m
   congested. Therefore, roads aren't a pure-public good (1), they are a quasi-pu
   (b) As with roads, police services seem to be non-excludable (1), but they are also
   are only a finite number of police officers on the job at any one time, so if too m
   they will not be able to help everyone. Therefore, policing isn't a pure-public g

4. The 'free-rider problem' is a market failure associated with public goods. (1) When
excludable, individuals will have no incentive to pay for its provision. Therefore, in
provided. (1)

Extended-response question

1. At the start of your answer you could explain that public goods have the characteris
excludability in consumption. Public goods have a high priva cost but a relatively
person pays for all the roads in the UK, it will cost the a ge amount, but they wi
benefits: everyone else will 'free ride'.

   You could mention that individu s could be private (or a small-scale 'police' fo
system as a whole would e able to function effectively if it were private.

Case Study 4: Stock market – perfectly competitive?

Use the data

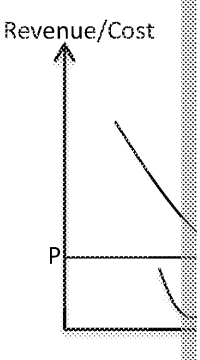
1. (a) In September 2015 the share price plummeted due to the emissions scandal.
more sellers than buyers – investors were trying to get rid of their shares befo
you can be sure that few people would have been looking to purchase these, e
   (b) In April 2015, the share price was around €240, so 500 shares would have bee
   the share price had fallen to around €80, so 500 shares would have been wort
   €80,000. (Accept 70,000 – 90,000 to account for different readings of the grap

2. A bear market occurs when the stock market falls by at least 20% from its peak. 20
to fall to 6,800 to be considered a bear market.

Test your knowledge…

1. Typical examples include: the market for agricultural goods or the foreign exchange

2. Your diagram should look something like the one on the right. The demand/MR/AR curve is horizontal (1), equilibrium occurs at price P and quantity Q (1), where AC is at its lowest point at a tangent to the demand curve (1). The marginal cost curve goes through this equilibrium point (1). Notice that, since P=MC, a perfectly competitive market is said to be *allocatively efficient* – that is, the marginal benefit of consumption is equal to the marginal cost of production.



Extended-response question

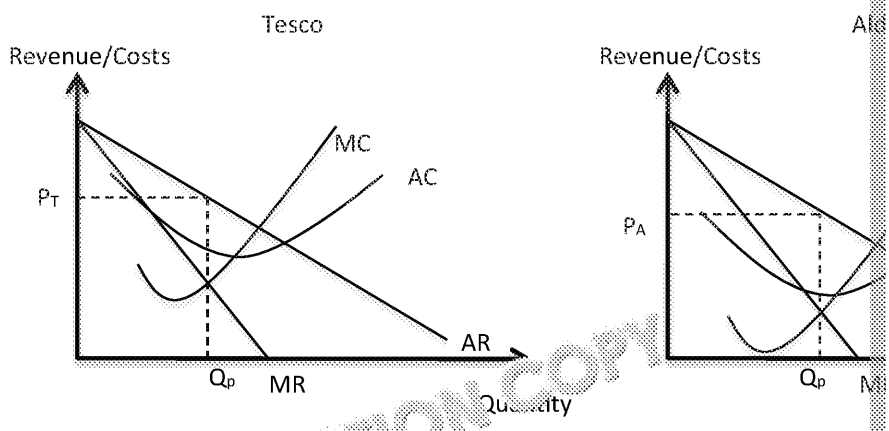
1. Characteristics of perfect competition include:
   - Many buyers and sellers, none of whom are arg… enough to independently influenc… ce (firms are price-takers). This is defin… y t… the stock market, there are millions … and sellers, and prices are governed entirely by ma…
   - Low … ier … y/exit. This is probably true of the stock market – anyone … al… many investors choose to pay a broker/trader to pick stocks for them…
   - Per… owledge of prices. This is true of the stock market; prices are freely … updated frequently. However, some traders have been accused of (unfairly) e… takes to receive market data, which would violate this characteristic. Read *Flo…* interested (or maybe read a summary of the book).
   - Products are homogeneous – this is true of the stock market, a share in one co… as a share in another.

Case Study 5: Supermarket wars

Use the data

1. From Figure 1, in 2013 the four-firm concentration ratio was roughly 75%, in 2015 i… 2.5 percentage points (2–3 acceptable). This is almost exactly how much Aldi and L…

2. Your diagrams should look roughly like this. According to the article, Aldi has lower … curves will be shifted down. If both firms maximise profit (i.e. produce where MC=… P_A, which is lower than Tesco's price of P_T.



Test your knowledge…

1. (a) Econ… ies … e when a firm's average costs of production fall as outpu…
   (b) P… co… omies of scale for supermarkets include: discounts for bulk buyin… sp… achinery), specialisation (workforce concentrate on one task, increas… economies of scale, financial economies of scale (access to credit), and any oth… mark for each type identified.

2. Yes (1). The UK's supermarket industry demonstrates the characteristic of inte… wars show that firms in this industry are unable to make pricing decisions with… their closest competitors – that is, Aldi's pricing had effects on the pricing of M… Therefore, because a firm's decisions are **not** considered independently of its … market is interdependent. (Hint: for the exam, learn the Prisoner's Dilemma o… explain the concept of an oligopoly's interdependence of actions). 2 marks fo…

Extended-response question

1. Some characteristics of the two market structures you could discuss include:
   - The number and size of the firms (the market is still dominated by a few big su ratio is falling as Lidl and Aldi compete)
   - Stability of prices (price wars could make the market look more like monopolis where prices can be stable if the oligopoly is of a collusive type)
   - Barriers to entry (still more like an oligopoly: difficult to establish customer ba fixed costs)
   - Interdependent firms (this is still more like an oligopoly: look at Christmas pric
   - Product differentiation (Aldi and Lidl have differentiated themselves quite a bi terms of the store layout, although their products are still similar. Product diff monopolistic competition and oligopoly, although not all oligopolies have this

Case Study 6: Inertia in the energy market

Use the data

1. (a) 59% (1)
   (b) 92% (1)
2. (a) The ...le ... the share of independent energy suppliers in the marke 20... ...ch would suggest increasing competition.
   (b) Fig... ...hows that the difference between prices and direct costs of producti suggesting that the Big Six firms have made large profits. This would be consis (notably, direct costs of production fell in 2014 as oil prices fell, but prices stay
3. Asymmetric information about energy tariffs.

Test your knowledge...

1. (c) Oligopoly (1). The UK's energy market appears to be an oligopoly because it is 'Big Six' control 92% of the market.
2. Vertical integration is when several stages of supply are owned by the same compa factor that makes it more difficult for other firms to compete in the market (1). Ver entry because it makes it cheaper for firms to generate energy (1) (because they do energy wholesaler). It would be very difficult for a newcomer to compete with firms those of the established firms (1). Other barriers to entry might include: (a) 'governm entrance through licensing requirements or other regulatory burdens; (b) 'start-up co new firms must incur in order to enter the oligopolistic market (e.g. the cost of infrast cost of advertising); (c) 'economies of scale' – these are efficiency gains and decrease achieved once an incumbent firm has reached a certain size, making it easier for then 'brand recognition' is a natural barrier to entry that makes it particularly difficult for n they have to compete with established brands.
3. Advantages:
   - Oligopoly might behave competitively, e.g. *competitive oligopoly* – and so con – especially during *price wars*!
   - Oligopolies can be dynamically efficient. Since they make 'supernormal' profit innovative R & D.
   - Interdependence might imply stability of price... ...su...ers, e.g. kinked dem
   - Non-price competition might imply th... ...or... ...ers have a better choice of qu

   Disadvantages:
   - Concentrated ind... ...s consumer choice.
   - If th... ...go... ...ollusive one then the firms' behaviour can lead to higher p
   - Ba... ...e entry prevent potentially creative firms from entering the market,
   - All... ...e inefficiency – and the associated welfare losses to society!

Extended-response question

1. The benefits of this idea would be that new entrants would increase price competit prices for consumers, leading to a welfare gain. A subsidy would help new entrants the market (e.g. vertical integration, high fixed costs, building up a brand, etc.). How drawbacks/limitations of this policy you could mention:
   - The main drawback is that this policy does not address the underlying cause o information. Perhaps a government information campaign on the benefits of addition/alternative to this policy.

- Another option could be to cap the prices of tariffs that penalise consumers w
  cheaper way of limiting market power than a subsidy
- Subsidies are expensive: opportunity cost in terms of government spending
- The size of the subsidy would have to be calculated correctly for new firms to
- Subsidies can introduce inefficiencies in firms that become reliant on them

Case Study 7: Diamonds are forever

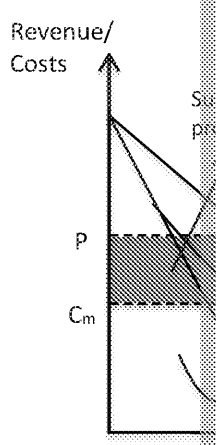
Use the data

1. A natural monopoly is characterised by incredibly high fixed costs: it would be unec
   (e.g. railway networks, or infrastructure for electricity supply). There is no evidence
   market: the monopoly arose because De Beers controlled the rights to the largest m
   because there are unusually high fixed costs (a natural *monopoly*).
2. Oligopoly: the five-firm concentration ratio in Figure 1 ... that the market is c
3. Without accounting for inflation, the flat line for ... ound 1982 onwards would inst
   Unsurprisingly, diamond compan... firms to attract investors will usually show th
   in Figure 2!
4. A mono... ex... there is a single *buyer* of the factors of production in a ma
   De Bee... as a monopsony because it employed almost all the diamond miners

Test your knowledge...

1. (a) Supernormal profit is any extra profit above normal levels of profit (1), since normal profits are counted as part of costs. Alternative answer: the amount by which total revenue exceeds total costs (1).

   (b) Your diagram should look roughly like this. The monopoly produces where MC=MR (1), leading to a price of P_m and a quantity of Q_m (1). Supernormal profits are shown by the shaded area. (1). 1 mark for labelling axes, 1 mark for showing cost/revenue curves correctly.

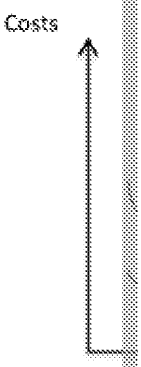


2. Possible benefits include:
   - Benefiting from greater economies of scale (1). This lowers costs, potentially allowing for lower prices (1).
   - Greater profits/revenues allow for research and development (1), this could potentially improve outcomes for consumers through better products (1).
   - Cross-subsidisation (or price discrimination) (1) could allow for monopolies to ... to consumers that may not have been available otherwise (1) (e.g. airlines sub... revenues from business class tickets).

   Other benefits are possible for the marks if they are well justified.

Extended-response question

1. The key thing to remember about natural monopolies ... t... marginal and average cost curves are continu... us... d... ward-sloping in the long run due to econo... ...e, as the diagram on the right shows.



   Indeed, ... ist ... economies of scale is an extremely significant concep... ...ural monopolies. A 'minimum efficient scale' (MES) is *lowest* ... level of production that is required for efficient and competitive economies of scale to be realised by a business. The MES for a natural monopoly is not reached until output is extremely high and so there may only be room for a single firm in an industry.

   An industry might turn out to be a natural monopoly if it is too costly for others firms to enter the market. For example, the rail network is a natio... prohibitively expensive for a new firm to build a whole new set of railway tracks. It... firm entered the market, since then neither firm would be able to reach as low an a... loss of productive efficiency).

Case Study 8: Contestability

Use the data

1. According to the article, the regulatory process is a barrier to entry. Other barriers i huge R & D costs, brand recognition, advertising costs impeding the route to marke
2. The total number of competitive routes is 525, and the total number of flight routes make up 31.1% of total routes.
3. 75% of 380 seats is 285, so the total cost is 285×69 =$19,665.

Test your knowledge...

1. Possible features include: no barriers to entry and exit, no sunk costs, absence of co firms, and all firms have access to the same technology and skilled labour (1 mark fo
2. Sunk costs are any costs that cannot be recovered if the business fails (e.g. money s

Extended-response question

1. For this question, you should go through the characteristics of a contestable market automobile market has these characteristics:
   - There are certainly barriers to entry in the automobile market. Incumbent firm breaking into this market would be costly. Furthermore, incumbent firms can p production processes that would be hard for new firms to overcome.
   - There would be large sunk costs in the automobile industry, as there would be up production facility, for example.
   - There may be some competitive disadvantages for new firms, perhaps related automobile manufacturers are transnational) and the fact that established bra
   - New firms may not have access to the latest technology available to other firm

   These considerations suggest that the automobile industry is mostly uncontestable, entrants. However, you could argue that the industry is contestable in the sense th certain areas of the market if one firm raised their prices too much (e.g. luxury cars there is so much variation between automobiles (product differentiation) that there be innovative and capture some of the market.

Case Study 9: Is there a shortage of teachers?

Use the data

1. Median earnings are calculated by taking the 'middle value' of everyone's earnings of salary, the median value would be the middle person's salary). The mean value i by the total number of people.

   The mean value should be higher, since those who earn higher salaries can earn mu those who earn lower salaries than the average will only earn slightly less. Therefo mean earnings were used. This is why it is usually considered fairer to calculate me If you have trouble visualising this, consider this example:

Person	1	2	3	4	5
Salary	£20,000	£24,000	£26,000	£32,000	£42,0

   Mean = £47,000, median = £32,000.

2. (a) The 'hump' in Figure 2 shows the effect of the baby boom during the 1960s. B
   (b) We can see from Figure 2 that the number of primary-school pupils is rising sh number of secondary-school pupils will see a simila a few years as thes secondary school.

Test your knowledge...

1. (a) Geographical immobili labour is when various factors constrain the ability of people to move to where jobs are located (1). In the ca acher, the passage mentions that high living costs in the so / London may prevent some teachers from working in schools in these regions (1).

   Teache wages rate

   (b) Other possible factors include: wage rates in other occupations, strength of the economy, job satisfaction, working hours, non-wage benefits, scope for promotions, qualifications needed, geographical mobility of labour, etc. 1 mark for each factor stated.

   W_e

   W_1

2. Your diagram should look something like the one on the right. The wage set by government (W_1) is below the market wage (W_e) (1), leading to a shortage of $Q_s - Q_d$ (1). 1 mark for labelling axes, 1 mark for supply and demand of teachers.

Extended-response question

1. Your answer should first explain how raising the wage would attract more teachers to labour (you could refer to your diagram in question 2 for this), and how it could help labour and/or attract better-quality teachers. There are a number of disadvantages you could mention:
   - The success depends on the elasticity of supply for teachers. If supply is inelas to train new teachers), a wage increase will be less effective in attracting new t for the government to further invest in human capital – that is, training and ot increase the effective supply of teachers (especially in the areas in which they
   - Raising the wages of all teachers ignores the fact that some areas/subjects have n would be counterproductive to raise the wages of teachers for subjects where th
   - The article states that wages may not be the most important factor in determi teachers are leaving the profession to work in jobs with lower wages, so perha non-wage factors instead.
   - The effectiveness of the policy depen[illegible] size of the wage change (too gr excess supply – which is a pro[illegible] in itself!), and on the wage rates in other o
   - Moreover, the gove[illegible]'s policy might have unintended consequences. It' income and [illegible] effect on an individual's supply of labour. This is also su[illegible]rve[illegible] labour'. If the government increases the salaries of teachers b su[illegible] leisure for labour and so actually decrease their supply of labour.
   - Opportunity cost of raising the wage, in terms of government spending. An alt teachers certain tax and benefit incentives to increase the effective labour sup

Case Study 10: Trade unions in the UK

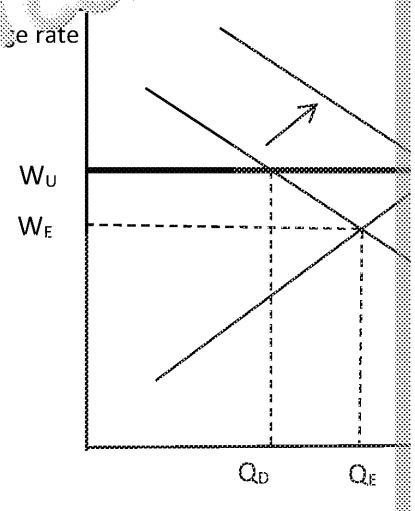
Use the data

1. Discrimination in the labour market may take the form of lower pay for certain emp or some other factor. A trade union should resolve this problem, since it guarantee members. (Note that even though discrimination of this nature is illegal in the UK, i need for unions to sort out such issues.)

2. According to Figure 2, in 2014 25% of employees were in a trade union. Since 15% trade union but over 50% of public sector workers were in a trade union, this indica larger (if the public sector were larger, the percentage of employees in a trade unio then 15%).
   Mathematically:
   - $0.25(E_{Total}) = 0.25(E_{Private} + E_{Public})$, where $E_{Private}$ is employees in the private secto sector and E_{Total} is the total employees in the UK.
   - We know that 50% of public sector employees are members of trade unions, 0 figure for private sector employees is 15%, $0.15(E_{Private})$
   - Therefore, $0.15(E_{Private}) + 0.5(E_{Public}) = 0.25(E_{Private} + E_{Public})$
   - Solve for $E_{Private}$
   - $E_{Private} = 2.5(E_{Public})$ – that is, the private sector is 2.5 times as large as the public available data.

Test your knowledge

1. Your diagram should show a shift to the right in demand / marginal revenue product (1), resulting in a [illegible]ge rate equilibrium wage and qu[illegible] (1) (note: this doesn't have to be exactly the sam[illegible]e diagram shown: your shift co[illegible]igger or smaller). 1 mark for labelling axes, 1 mark for labelling curves.



2. A monopsony is a single buyer of a product (1). In the case of a labour market, a monopsony occurs when only one firm hires workers in that sector (1). An example would be the market for civil servants: the government is the sole employer.

Extended-response question

1. There are two main sides to this: on the one hand, strong trade unions improve inco
   workers receive fair incomes and that certain groups of workers are not discriminat
   from exploiting workers.

   On the other hand, if trade unions are very dominant in the labour market then the
   firms can no longer afford to hire as many workers. In this case, income inequality i
   people have lower incomes.

   So, to evaluate this question, the effect of trade unions on income inequality will de
   - whether there is high income inequality to begin with (in this case, trade union
   - whether there is a monoposony employer
   - how many workers the trade union covers
   - whether employers can afford to absorb higher wage costs
   - whether trade unions create higher unemployment

Case Study 11: Will raising the minimum w[illegible]rm employment?

Use the data

1. If £5.80 is 46% of th[illegible]ar hourly wage, then the median hourly wage is $\frac{5.8}{0.46} =$
2. If the d[illegible]an supply for unskilled workers were more elastic, this implies that t
   more re[illegible]e to price changes. Therefore, the introduction of a NMW would lea
   unemployment than shown in Figure 1.

Test your knowledge…

1. (a) Your answer should note that the growth rates between 2016 and 2020 are co
   2011 and 2015, perhaps using some of the calculations below:

   The annual growth rates between 2011 and 2015 are: $\frac{6.19-6.08}{6.08} \times 100 = 1.8$
   (2011–2012), 1.9% (2012–2013), 3% (2013–2014), 3% (2014–2015). Over the w
   10.2%. (1)

   By comparison, the annual growth rates between 2016 and 2020 are around 5
   is the same each year), or 25% over the whole period. This is considerably hig
   higher between 2016 and 2020 (1).

   (b) Based on the article, the 25% increase in the NMW over the period seems very
   which suggests that there is a higher risk that it will lead to unemployment (1)

Extended-response question

1. There's lots of material in the article to draw on for this question. Your answer sho
   Figure 1 – the traditional model of how a NMW leads to disequilibrium in the labou
   some of the main evaluation points you could discuss include:
   - Level of unemployment depends on elasticity of demand and supply of labour
   - Level of unemployment depends on how much higher the minimum wage is a
     how high the NMW is compared to median wages).
   - Level of unemployment depends on how many people are affected by the min
   - You could argue that it would boost employment, as it would allow some peop
     afford to / were better off on benefits, e.g. it increas[illegible] participation rate (
   - Depends on the capacity of employers to ab[illegible]rt hi[illegible]r labour costs.
   - Depends on whether the economy [illegible]rming well or not: if the economy is
     unemployment, it might m[illegible]s worse.

Case Study 12: [illegible]r-p[illegible]versities

Use the data

1. There ar[illegible]7 schools in total, which means the median school is number 973 (or
   bracket (or down from the > 90% bracket) it is clear that the 973rd/974th school belo
2. In 1993, around 80,000 students obtained a first-time degree from normal universit
   increase to around 220,000. If the number of degrees from normal universities did
   degrees came from polytechnics. Therefore, the proportion of degrees from polyte
   way to account for different readings from the graph.)

Test your knowledge…

1. Public sector organisations are funded and run by the government (1) (either centra
   schools, hospitals, they are usually not-for-profit). In contrast, private-sector organi
   individuals or companies (1) (almost always for profit).
2. Asymmetric information is a situation where one party has better knowledge about
   (1). In the for-profit university market, the colleges have better knowledge of how
   graduates for getting good jobs. Prospective students have less information on this
   information problem comes from (1).
3. The main advantage for students is that they have greater choice about the univers
   argue that for-profit universities will increase competition in the market, leading to
   education (1).

   Possible disadvantages are that quality of education will be l er (1) or that studen
   universities (1).

Extended-response question

1. If the cap were scrapped uld probably expect at least some universities to ra
   since so many cha num amount now).

   On the d, it would allow universities to generate more revenue, which co
   the qua eir education. It might also resolve the problem that universities fe
   £9,000 fee, or it suggests that their courses are of a lower quality than their rivals: n
   Overall, the market mechanism should, in theory, mean that the 'price' (fee) of each
   reflects the benefits it gives to the individual, otherwise they would go to another u

   However, there are also possible downsides to this policy. It would probably add to
   consider to be unfairly high at the moment anyway. Students also face asymmetric
   university, since it's difficult to tell just how good/useful the teaching will be (open
   so far). Universities might still feel the need to bump up prices to give the illusion o
   government more in student loans, a large proportion of which is often never paid b

   This is quite a complex topic: forming policy on university fees is very tricky. At the o
   economists agree that completely scrapping tuition fees is a bad idea, since the 'priva
   university degree (in terms of higher future wages) generally exceeds the cost of fee
   of course). So it would be an unfair burden on society if the government paid for ev

   Note: you won't need to know any details of this topic for your exams, but it should b