

Data Response Case Studies

Theme 1: Markets, consumers and firms

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Teacher's Introduction

The case studies in this series are designed to support students as they study the A Level Edexcel B module *Theme 1: Markets, consumers and firms*. These case studies cover the Edexcel B specification perfectly, and are designed as real-world contexts to complement the theoretical content of the module.

Remember!

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

Each of the 12 case studies contains:

- * **Contextual information:** this is the body text of the case studies, providing the relevant information, facts and figures.
- * **Data:** presented in a graphical format.
- * **Use the data questions:** students are presented with questions set in response to the data presented. Answers are included.
- * **Test your knowledge questions:** students are presented with questions designed to mimic short-answer examination questions. Answers are included.
- * **Extended-response question:** students are presented with a question designed to mimic long-answer examination questions. Possible answers are included in summary form.

This resource is designed to be useful to students of all abilities. Students of the highest ability require up-to-date contextual information for use in examination, while for lower-ability students these case studies may complement class activity and help to ground theoretical content in real-world contexts.

These case studies are designed to be up to date for 2023 and provide as contemporary a snapshot of economic discussion as possible. However, it is likely that some themes which are relevant and topical at the time of teaching may not be included. It is therefore advised that these examples are used in tandem with the study of the most recent themes.

I hope this resource can contribute towards an engaging and rewarding learning environment. Best of luck with your teaching!

May 2023

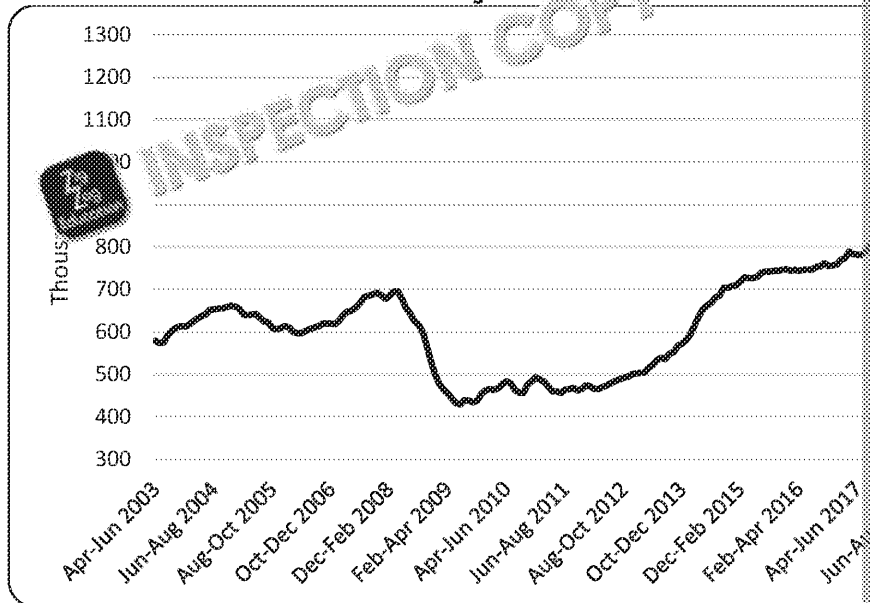
Scarcity in economics: tightening labour

1.1 Scarcity, choice and potential conflicts

Perhaps the central feature of economics is the management of scarce resources in a world of unlimited wants. When scarcity becomes particularly acute, economic stakeholders are forced to choose between different uses of resources.

We often think of scarce resources in terms of commodities, but labour – as a fundamental resource – is just as important. At the onset of the coronavirus pandemic, faced with a deeply uncertain future, businesses across the macroeconomy stopped hiring. The result was a collapse in job vacancies.

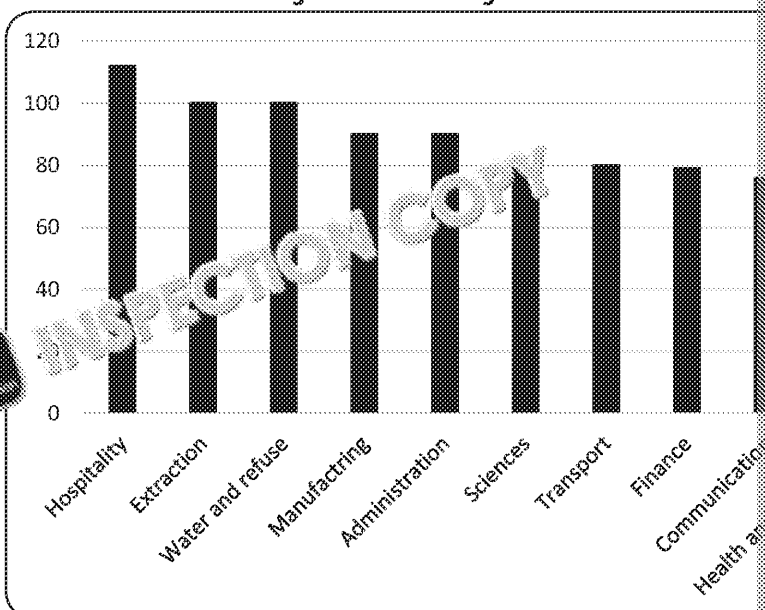
Figure 1: Job vacancies



Yet, by summer 2020, the number of job vacancies across the economy had almost returned to pre-pandemic levels, and had reached historic highs. So what happened? Well, there are several factors. First, many workers saw the pandemic as an opportunity for early retirement, reducing the overall labour supply. Second, many workers returned to their home countries during the pandemic, and may have been unable to return to the UK once it was outside of the European Union, further decreasing labour supply.

Figure 2: Percentage increase in vacancies

In addition, most vacancies were in low-paid or insecure jobs – positions less likely to tempt younger workers back into the labour market. Figure 2 shows the industries in which vacancies became the most widespread.



¹ Source: <https://commonslibrary.parliament.uk/how-has-the-pandemic-affected-industries-and-labour/>

One high-vacancy industry that caught particular attention in 2021 was road freight. During the pandemic, a significant shortage of HGV drivers led to supply problems all over the country.



There were various reasons for the shortage. The industry was suffering from a decline in lorry drivers, partly due to the work's poor pay and unsociable hours. The UK was heavily dependent on migrant labour from Eastern Europe. The country amid the upheavals of Brexit. There was also increased online consumption due to COVID-19, leading to increased consumer demand: with so many more parcels to be delivered, more drivers were needed.

This left employers in a tricky situation, having to choose between workers – for better remunerated jobs and greater flexibility – with those of consumers who wanted food products at the lowest possible price and without delay. A number of measures were implemented to address the shortages, including increased wages, greater shift flexibility, new funded training programmes, and recruitment for foreign HGV drivers.

Use the data

1. Why might the tightening of labour market displayed in Figure 1 be considered a problem?
2. Explain **three** reasons why the hospitality industry may have experienced the shortages of labour following the pandemic, as indicated in Figure 2.

Test your knowledge...

1. Explain what is meant by the term 'satisficing'.
2. Explain the difference between external stakeholders and internal stakeholders.

Extended-response question

1. Evaluate the opportunity costs associated with higher levels of migrant labour in the UK.

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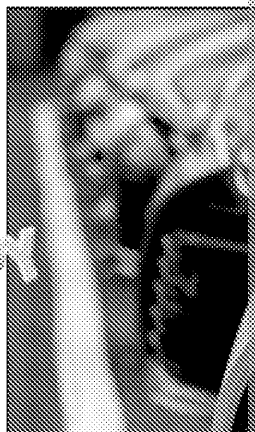


Elite specialisation: Toyota's takumi

1.2 Enterprise, business and the economy

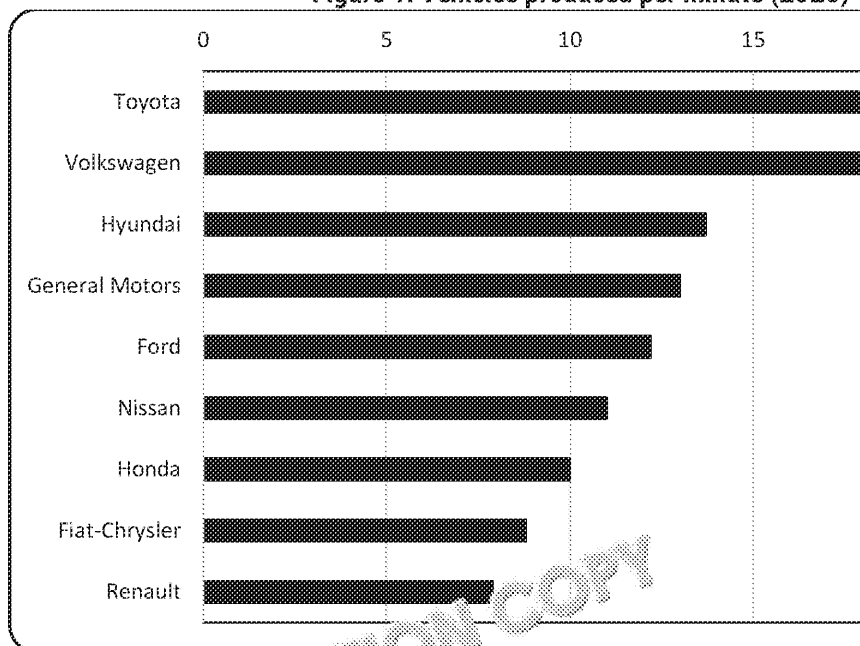
In the 2010s, Toyota definitively became the world's largest car company, overtaking US rival General Motors and German competitor Volkswagen. Like most car companies, Toyota operates a strict division of labour on its assembly lines to ensure each stage of production is conducted as expertly as possible. This helps to increase output while also reducing costs.

However, more unique to Toyota's approach is its investment in around 500 elite workers, known as takumis. In Japan, a takumi – roughly translated as an artisan – is a worker that has spent at least 60,000 hours refining their specialised skill.



The work of takumis has led to efficiency gains which are seen as critical to cutting productivity. The highly skilled employees are sent around the world to train staff and identify manufacturing inefficiencies. Many of Toyota's takumis are experts in robotics and methods of automation. Robots deployed on the production line are trained to perform specialised workers, such as takumis.

Figure 1: Vehicles produced per minute (2020)²



Toyota's approach to production is also pioneering: when workers are replaced on the line, they are retrained and allocated elsewhere in the company. Some may become supervisors and are expected to take over from a malfunctioning machine to ensure there is no downtime. This reallocation of workers ensures the company's sunk costs on employee training helps to drive up productivity and output.

Toyota's emphasis on a highly specialised workforce, with an elite class of workers in the production process and driven down costs. Figure 1 highlights how Toyota can produce more vehicles per minute than any other car company in the world.

² Source: <https://www.moneyshake.com/shaking-news/miscellaneous/minute-of-motor-manufacturing/>

Use the data

1. Using Figure 1, explain the likely price elasticity of demand for Toyota's production.
2. Toyota sold 10.7 million cars in 2021. How many days would it take them to produce 10.7 million cars, and what does this tell us about Toyota's production levels?

Test your knowledge...

1. Explain the effect of Toyota's strict specialisation, relative to a carmaker with a division of labour, using a production possibility frontier.
2. Explain the effect of high worker productivity on a demand and supply diagram.

Extended response question

1. Assess the costs and benefits of a firm introducing specialisation.

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Encouraging enterprise: credit and small

1.2 Enterprise, business and the economy & 1.4 The role of credit

Small to medium-sized enterprises, known as SMEs, play a critical role in the UK economy. SMEs are classed as firms which employ fewer than 250 people and are found across all industries. They are particularly important to the sustainability of local economies. But a common problem for SMEs is accessing funds, particularly at the start of operations. Start-up costs are usually much higher than an entrepreneur entering the market for the first time can afford.

This is where banks come in. The banking sector plays a vital role in the emergence of SMEs by offering credit to new and existing businesses. Banks are an intermediary which collect savings from consumers and channel them towards entrepreneurs even greater incentive to ensure their business succeeds as they will have loaned them, plus interest, further down the line. The risk of failure that the entrepreneur bears is the fourth 'factor of production'.

Figure 1: Total number of UK firms (by size)³

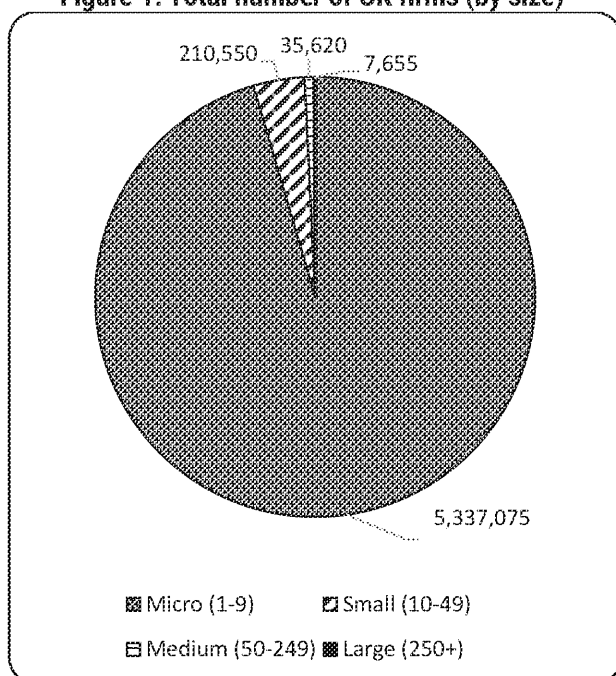
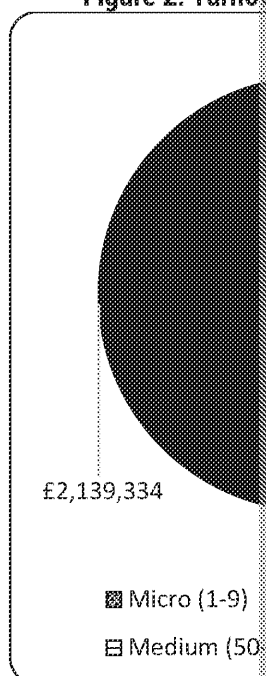


Figure 2: Turnover



The main source of credit for SMEs is high-street commercial banks. If the wider economy is unfavourable, banks are less likely to lend money and investment can dry up. This leads to changes in the wider economy.

The difficulty of accessing credit for SMEs has forced many into finding new ways of raising funds. Start-ups looking to operate in niche markets is crowdfunding. Goods and services with a strong ethical cause or serving a specific community interest are more likely to be able to generate interest. This method has secured survival for many SMEs and widened consumer choice by creating new niche markets across the economy.

³ Data source <https://www.gov.uk/government/statistics/business-population-estimates-2021/business-regions-2021-statistical-release-html>

Use the data

1. Calculate the percentage of businesses in the UK which are considered 'micro' businesses.
2. What do Figure 1 and Figure 2 tell us about the importance of small to medium enterprises to the UK economy?

Test your knowledge...

1. Explain the difference between share capital and venture capital.
2. Explain **two** non-financial motivations for entrepreneurship.

Extended-response question

1. Discuss whether secured loans are beneficial for an entrepreneur starting a business.

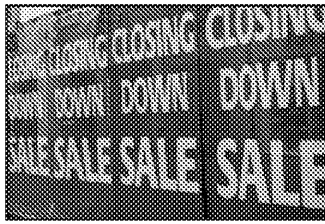
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Falling demand: decline of the high

1.3 Introducing the market



High-street shops in the UK have long been viewed as a barometer of consumer habits changing in response to new technology. In 2020, in response to the accelerated this trend. In that year alone, major brands *Dorothy Perkins*, *Peacocks*, *Harveys*, *Monsoon*, *Debenhams* and *Oasis* fell into administration.

These big firms are just the tip of a larger iceberg. Store closures in the first six months of 2020 numbered over 11,000, and are taking place disproportionately in more deprived regions of the country. The extent to which high-street retailers have suffered is at their worst year in recent history.

The other side of the coin is online retail, which has grown dramatically in the UK. From barely registering a presence in the retail market at the start of the new millennium, online sales in 2020 had shot up to a third of market share, with no sign of the trend being temporary. As Figure 2 demonstrates, even before the coronavirus pandemic, online retail was growing at a consistent rate. Moreover, since the UK has reduced coronavirus restrictions on retail, online sales remain stable at a significantly higher level than the historic trend rate.

High-street stores have struggled to adapt to these rapidly changing consumer trends, though some have embraced online retail more successfully than others. The online retailer *Next*, for example, was an industry pioneer and has built a strong and competitive online presence alongside its high-street operations. This was evident during the pandemic, in which it managed to keep its 498 high-street stores open despite the forced closure of its 498 high-street stores.

Online retail offers a range of non-price competitive advantages for consumers; however, its main advantage remains lower prices. Online retailers can charge less due to low production costs and no high-street competitors.

Figure 1: UK store openings

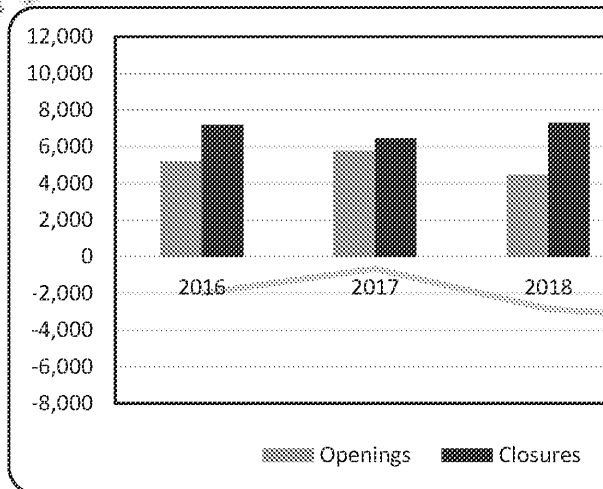
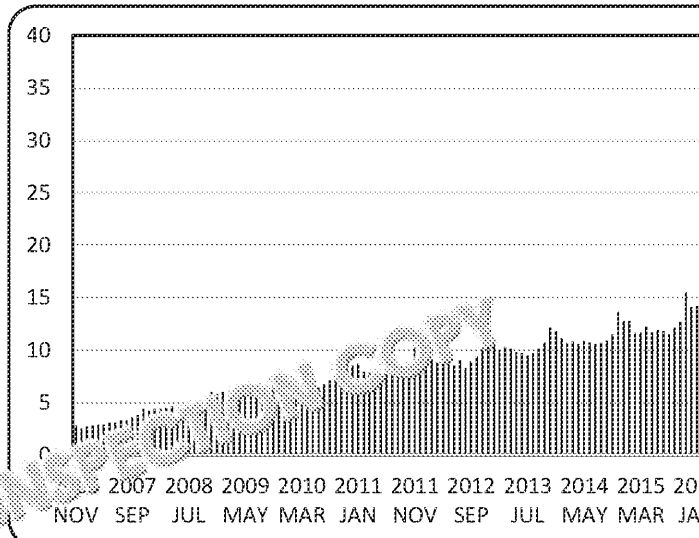


Figure 2: Online sales as a % of UK retail sales



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Use the data

1. Calculate the percentage increase in online sales according to Figure 2 between 2006 and January 2021.
2. Draw and annotate a demand curve demonstrating the trend in Figure 2.

Test your knowledge...

1. Explain **two** non-price competitive advantages online retail has over high-street retail.
2. Explain why the production costs for online retailers are lower.

Extended-response question

1. Discuss whether online retail reduces asymmetric information.

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Supply-side shocks: rising fertiliser

1.3 Introducing the market

Perhaps the most important goods that are traded in global supply chains are crops. Cereals are themselves both staple ingredients for human consumption and integral to the feeding of livestock. The overall food supply, and any kind of disruption to the production of crops can easily cause food prices to skyrocket. Rising food prices are frequently a key cause of social unrest and political instability.



Fertilisers play a key role in the production of crops. When demand for crops is high and prices begin to rise, and thus ensuring that crops are produced. They are, therefore, a fundamental input in the agricultural sector. Roughly half of the world's food supplies are reliant on fertilisers, which are produced in a process that is highly energy-intensive.

In 2021, following the coronavirus pandemic crisis, the price of natural gas began to rise sharply. This drove up the price of synthetic fertilisers dramatically. The scale demonstrated in Figure 1 is – for many farmers – unsustainable. They will simply use less fertiliser, which in turn will reduce their crop production of food. Of course, we can then expect reduced crop production to drive up food prices.

Some farmers are also concerned that reduced use of fertilisers will lower the quality of food. Less fertiliser use may also expose crops to greater vulnerability during periods of drought. Fertilisers help crops to survive dry spells.

Figure 2 shows the proportion of the global population who are now reliant on synthetic fertilisers for the production of their food supply, which has grown rapidly since 1950. It also shows the number of people whose food supply is produced using non-synthetic fertilisers, which has remained relatively static given the overall increase in food production.

Non-synthetic fertilisers are natural products derived from plants or animals and are often waste products from food production. As a result of their diffuse sources, they are far less exposed to supply-side shocks and thus less likely to trigger price spikes. However, natural fertilisers are difficult to scale up quickly, and also carry significant environmental costs, such as water pollution.

Figure 1: Global fertiliser price index

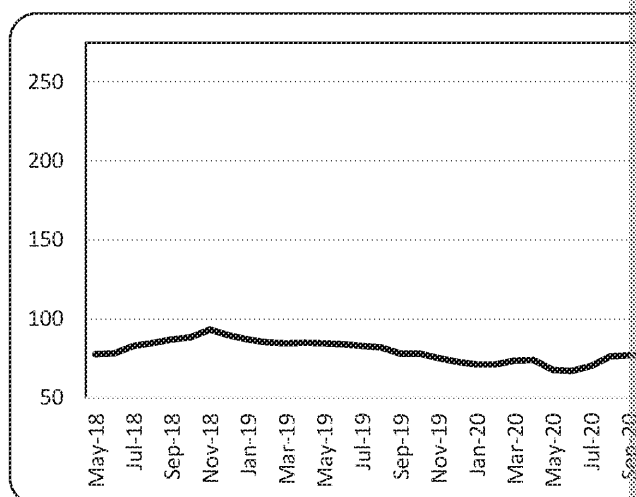
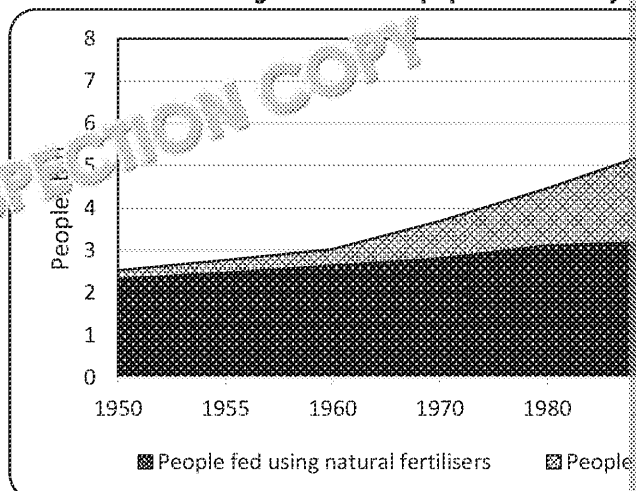


Figure 2: Global population fed by



⁴ Source: https://ycharts.com/indicators/fertilizers_index_world_bank#:~:text=Fertilizers%20Price%20Index%20is

⁵ Source: <https://ourworldindata.org/fertilizers>

Use the data

1. Using Figure 2, explain why abandoning synthetic fertilisers might be difficult.
2. Draw the impact of the trend in Figure 1 on the supply curve.

Test your knowledge...

1. Explain the likely elasticity of supply for fertilisers.
2. Explain whether fertilisers are a consumer good or a capital good.

Extended-response question

1. Using a supply and demand diagram, assess whether a price ceiling could be introduced

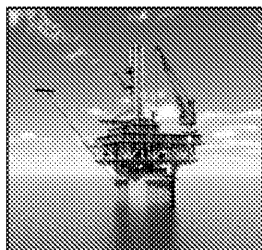
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Volatile prices: negative oil

1.3 Introducing the market



In the middle of April 2020, at the height of the coronavirus pandemic in Europe and North America, something very odd happened to oil markets: it turned negative. On 20th April 2020, a barrel of oil was valued at -\$36.98. In other words, anyone wishing to sell oil on the futures market was expected to pay the buyer an additional \$37 simply to take the oil off their hands.

In practice, not many exchanges happened quite like that – and the price fell to a still historically low, but at least positive, \$8.91. So what caused this negative valuation related to the ongoing reverberations of the external shock that the pandemic created: the closure of large parts of the economy.

One side of the story is the collapse in demand. Hundreds of millions of people who would ordinarily be working or travelling were staying at home, foregoing billions of oil-consuming car journeys. In addition, most commercial premises had been closed by the pandemic, which suddenly reduced the demand for energy. And most significantly, with borders being closed to prevent the global spread of the virus, international flights had been grounded. Aviation is a huge consumer of oil, and faced with such a massive collapse in demand the price of crude oil went tumbling.

So that's the demand side – but that doesn't on its own explain the negative price. For this we need to look at supply. At the outset of the pandemic, we can identify what economists might call a 'glut' (an abundance, or overproduction) of oil. This excess needs to be stored somewhere while it is not being consumed, but storage capacity for crude oil is limited and under these circumstances was running out quickly.

Figure 1: WTI crude oil price

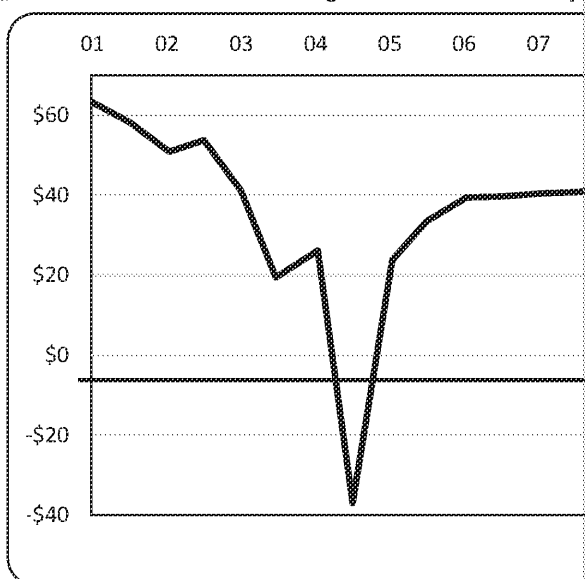
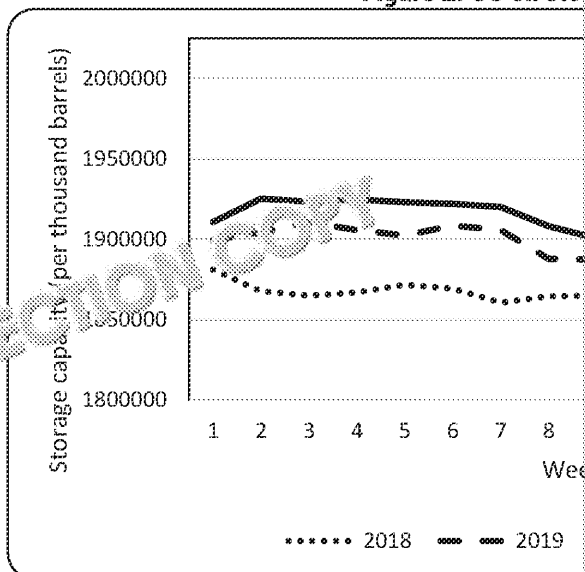


Figure 2: US oil storage capacity



⁶ Source: <https://fred.stlouisfed.org/series/DCOILWTICO>

⁷ Source: <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WTTSTUS1&f=W>

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On top of that, the specificities of the coronavirus pandemic crisis meant that there was a risk of a glut of oil when demand might start to pick up. For oil traders in possession of a good for which there was no demand, and reducing storage, their asset was quickly becoming a liability.

And as they tried to offload their product at ever cheaper prices, they realised that the value of the good was falling. Thus the market determined – on the basis of the day's interaction of supply and demand – that the cost of failing to store unwanted crude was greater than the value of the good itself.

Spooked by the market crash, the major oil producers quickly slashed their production to reduce the global supply of crude oil and end the glut. The move successfully restored the price to pre-pandemic levels by June. But the collapse into negative prices remains a memorable development, even for a famously volatile market like crude oil.

Use the data...

1. Calculate the percentage decrease in the value of crude oil between January 2020 and its lowest point in April 2020 (give your answer to the nearest whole percentage).
2. What does Figure 1 indicate about the elasticity of oil?

Test your knowledge...

1. Explain the events of 20th April 2020 on a demand and supply diagram.
2. Explain why commodity markets are so volatile.

Extended-response question

1. Assess the likely impact of the renewable energy sector on the oil market.

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Indirect taxation: hospitality's VAT

1.5 Market failure and government intervention

At the height of the coronavirus pandemic crisis in July 2020, the UK government made the decision to give the hospitality and tourism sector a 15% cut in value added tax (VAT), a duty on goods. Whereas the standard rate of VAT is 20%, government would reduce this rate to just 5%. This would be to help support a sector that was particularly hard hit by the closure of large parts of the consumer economy. A lower rate of VAT remained in place for the industry until March 2022.

The VAT cut enabled providers to choose either lowering their prices or retaining the extra 15% of sales for themselves. Some pubs chose to reduce the price of their alcohol, but the cut did not apply, and recoup those losses by raising their food prices, in the hope that

While these measures were temporary, many in the hospitality and tourism sector believe they should be kept in place permanently. One reason for this is that many other European countries have lower domestic hospitality sectors, as seen in Figure 1. In addition, the industry is highly profitable and a large employer.

Figure 1: VAT rates across

However, VAT exemptions are controversial and their economic benefits are contested. Critics point to the increased administrative costs of such schemes, and argue that instead of offering a range of special reduced rates, the economy would be better off with a lower standard rate.

VAT was first introduced in the UK in 1973 at a rate of 10%. In 1978, VAT generated 7% of the UK's revenue – this figure had more than doubled by the 2000s, making it a key source of government revenue. But higher prices also suppress consumer demand, which in turn can mean less employment and lower profits, which reduces government revenue in the long run. Figure 2 shows how income tax has fallen as VAT has increased.

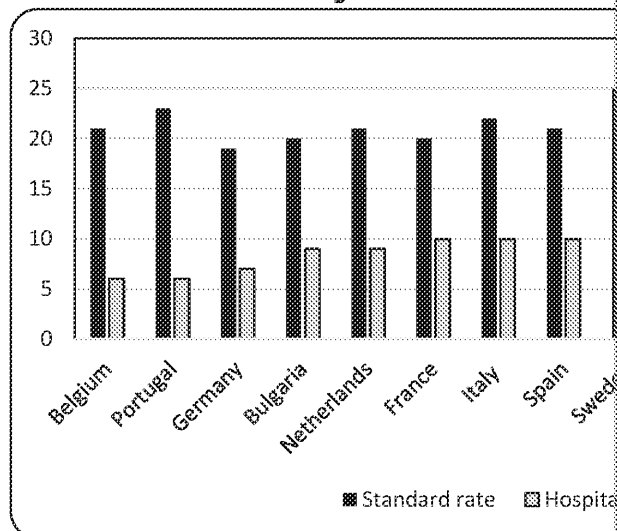
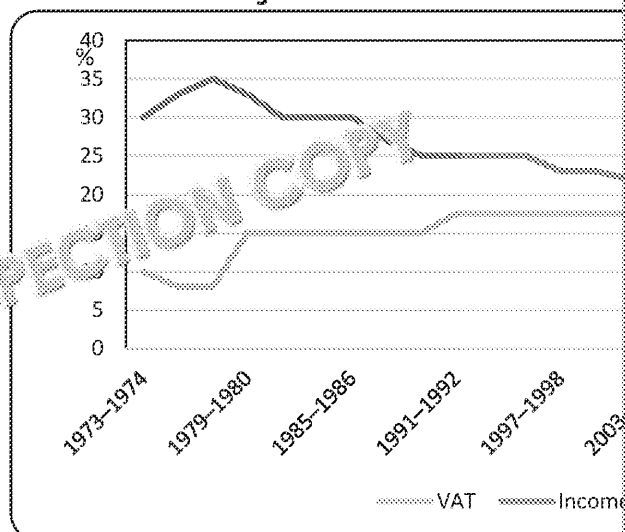


Figure 2: Historic UK rates of VAT



⁸ Source: <https://www.ukhospitality.org.uk/blogpost/1721400/392803/VAT-Rates-for-Hospitality--Leisure>

Use the data

1. What is the median VAT rate of the 14 European countries in Figure 1, and how does it compare to the UK?
2. Give **two** reasons for trends of taxation displayed in Figure 2.

Test your knowledge...

1. Explain why the hospitality and tourism sector is price sensitive.
2. Using a diagram, explain the welfare loss associated with VAT on hospitality.

Extended-response question

1. Discuss the costs and benefits of indirect taxation.

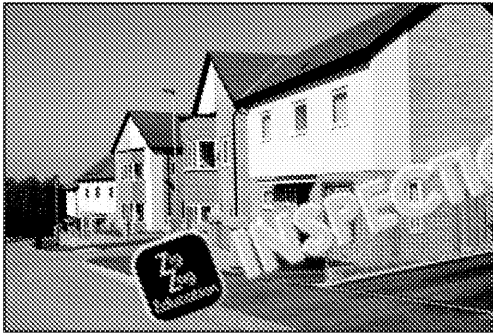
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Inequity in free markets: UK housing

1.5 Market failure and government intervention

Rising house prices have been among the defining characteristics of the UK economy. Between 1990 and 2020 house prices grew by almost 350%, compared to inflation of 130% over the same period. As a result, the average house is now worth 7.8 times the average wage, leaving first-time buyers often saving for more than a decade before being able to afford a house.



There is a notable generational divide in home ownership. In 1990, 67% of 25–34-year-olds owned their own home, but this declined to 35% by 2014. For the 16–24 age group, home ownership has fallen from 36% to 9% over the same period. Home ownership accounts for 82% of the UK's property wealth, with the majority being second homes. Second home ownership has increased, with one in 10 people owning more than one home. The combination of high house prices and mortgage costs pushing up the price of a second home.

The rapidly rising prices can be attributed to a lack of housing supply.

Figure 2 demonstrates that the supply of new housing has fallen since the 1970s. The marketplace has largely taken over the role of property construction. In the 1970s, when housing was built jointly by the market and the state (through local government), the supply of new yearly houses was almost double the level it is now.

The housing market in the UK could thus be seen as an example of the marketplace delivering an inefficient allocation of resources, and also failing to ensure equity among the population. Lack of access to property creates a generational socio-economic divide between asset owners receiving rental income and workers reliant on wages to pay their rents. This can be seen as an example of market failure which produces a range of negative externalities.

Figure 1: Average house prices in UK

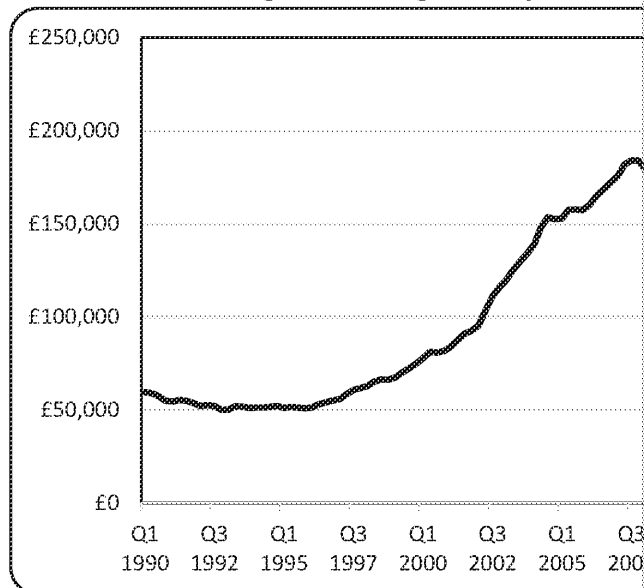
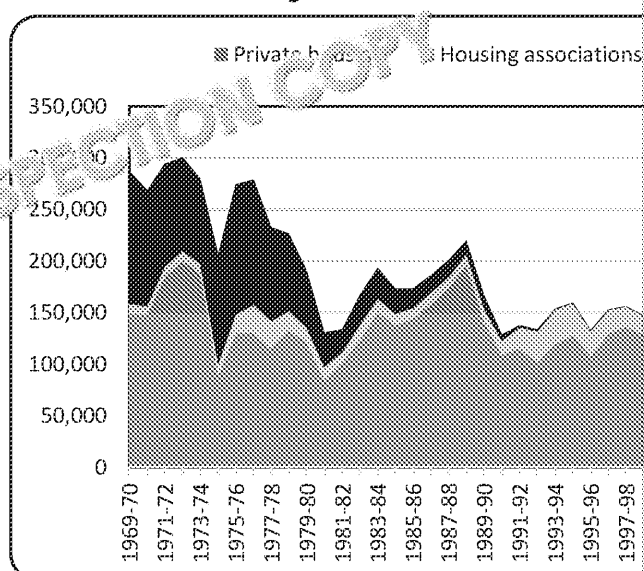


Figure 2: New houses built in UK



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Use the data

1. Using Figure 1 and information in the text, calculate the average income at t
2. Figure 2 shows that in 1969 almost half of all housing built was council housi
the impact of council housing construction on a supply and demand diagram

Test your knowledge...

1. Explain the difference between private, social and external costs.
2. Explain **two** private costs and **two** social costs of house construction.

Extended-response question

1. Assess whether free markets are always the most allocatively efficient means of resource allocation.

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Minimum unit pricing: alcohol in Scotland

1.5 Market failure and government intervention



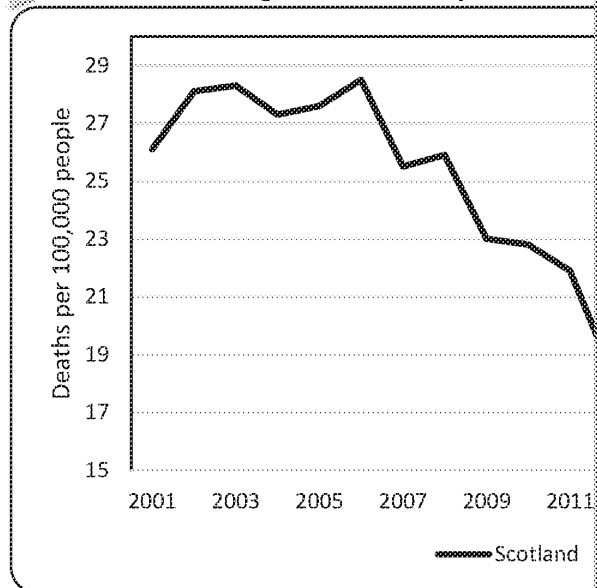
In 2018, the Scottish government introduced minimum unit pricing (MUP), a five-year legal battle with the Scotch Whisky Association. Legislation passed back in 2012 set a minimum price of 50 pence per unit of alcohol, along with high duties on all sales, and the minimum prices

The Scottish government argues that prior to the pricing, or MUP, alcohol in Scotland was sold at an exceptionally low price, which did no good. Between 1987 and 2018, alcohol became 54% more affordable across the UK. Pub drinking in popularity, and the price of alcohol

The drink-related deaths in Scotland is significantly higher than the rest of the UK.

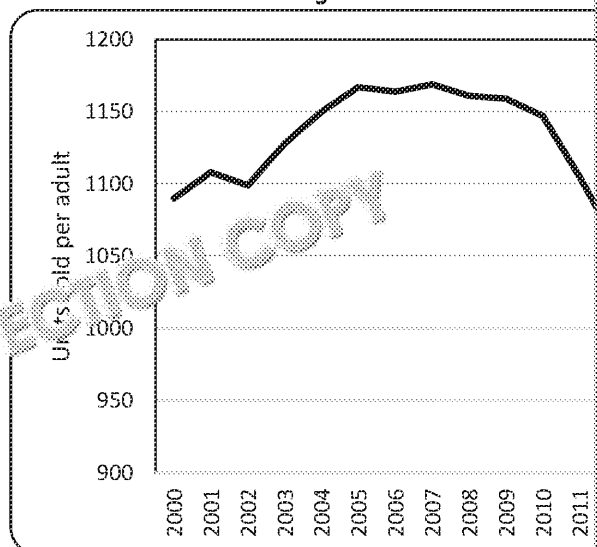
The government estimates that after five years of the minimum pricing policy, there will be 400 fewer alcohol-related deaths, and 8,000 fewer alcohol-related hospitalisations. However, a report released in June 2022 by Public Health Scotland found that there is no evidence to suggest that minimum unit pricing is changing the behaviour of heavy drinkers in a uniform way. **Figure 1** shows a small increase in alcohol-specific deaths since 2018.

Figure 1: Alcohol-specific deaths



The Scottish government argues that the minimum price needs to be set at a higher rate in order to shift the habits of heavier drinkers, favouring pricing of 65p per unit. And it argues that alcohol sales overall have reduced since MUP was introduced, as shown by **Figure 2**. However, critics argue that MUP pushed heavy drinkers into poverty and undermines economic growth.

Figure 2: Alcohol sales in Scotland



Following the policy being introduced in Scotland, Wales introduced MUP in 2020, and Ireland also adopted the policy in 2022.

⁹ Source: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/intheunitedkingdom/registeredind2020#alcohol-specific-deaths-by-uk-constituent-country>

¹⁰ Source: <https://publichealthscotland.scot/publications/mesas-monitoring-report-2022/>

Use the data

1. Using Figure 1 and Figure 2, look at the trends in alcohol-specific deaths and you think MUP is having an impact?
2. Calculate the percentage decrease in Scottish alcohol sales between 2002 and 2012. Sales were at 935 units per adult.

Test your knowledge...

1. Using a suitable diagram, explain the impact of minimum pricing on supply and demand.
2. Explain **one** cost and **one** benefit of minimum pricing.

Extended response question

1. Assess the likely consequences of an increase of the MUP to 65p per unit for light and heavy drinkers.

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Information gaps: healthcare provision

1.5 Market failure and government intervention

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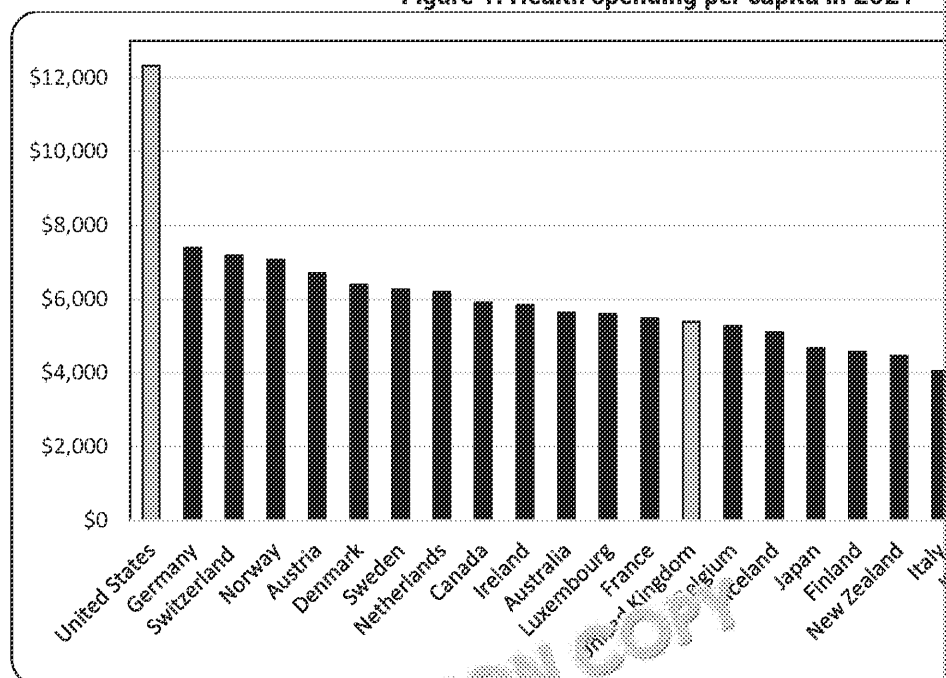
Healthcare provision is an area in which imperfect information presents a consistent problem. Regardless of the economic model that is followed for healthcare provision, there is a problem of asymmetric information: the healthcare professional is almost certain to have significantly greater knowledge of the service being provided than a patient. In particular, the patient is not well placed to judge the quality of the service they are being provided with.



In the USA, healthcare is provided as a private good, accessible through health insurance schemes. This creates a number of additional information problems. The patient is often already unable to judge the quality of the service or the value for money of the service being provided. In a private market, the incentive is not necessarily to provide the highest quality service, but rather may be to minimise costs.

This dynamic can result in a misallocation of resources. **Figure 1** demonstrates how health spending per capita, is far greater than in comparable OECD countries. One reason for the increase in healthcare professionals in the USA to overprescribe medications in order to boost revenue.

Figure 1: Health spending per capita in 2021¹²



Other information issues with a private insurance-based private healthcare system are moral hazard and adverse selection. Moral hazard refers to the incentive to take greater risks, knowing that protection is available. Adverse selection refers to information imbalance referring to consumers prone to poor health outcomes who are more likely to purchase insurance policies.

These are among the reasons why healthcare is treated as a public good in the UK. In the UK, healthcare provision is free from information failure. One problem for an organisation like the NHS is limited resources: decisions may be influenced by the availability of resources, which may reduce the quality of care offered.

¹¹ Source: <https://www.parliament.uk/globalassets/documents/commons/Scrutiny/SU-Economics-in-practice>

¹² Source: <https://www.kingsfund.org.uk/publications/public-satisfaction-nhs-social-care-2021>

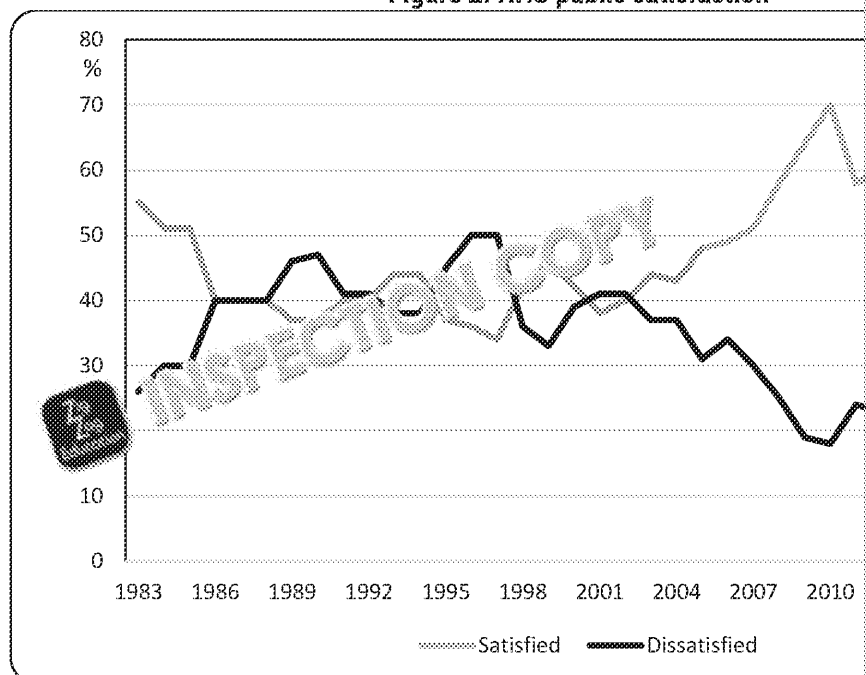
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Determining the quality of care being offered is equally difficult. Without a simple way in which the market mechanism provides, investment decisions on the part of the government are difficult. Unlike private providers, the NHS must also consider the marginal social benefit of health care. These decisions are far more complex than simply allowing market forces to determine the level of care.

Figure 2: NHS public satisfaction¹³



Use the data

1. Explain why information gaps may have led to inflated cost of US healthcare.
2. Give a possible reason for the collapse of NHS public satisfaction since 2019.

Test your knowledge...

1. Using a suitable diagram, explain the relationship between healthcare provision and productivity.
2. Explain why adverse selection in the insurance market is an unusual form of asymmetric information.

Extended-response question

1. With the aid of a diagram, assess the benefits and costs of information gaps.

¹³ Source: <https://stats.oecd.org/Index.aspx?DataSetCode=SHA>

Growth at speed: the collapse of Carillion

1.6 Revenue, costs, profits and cash

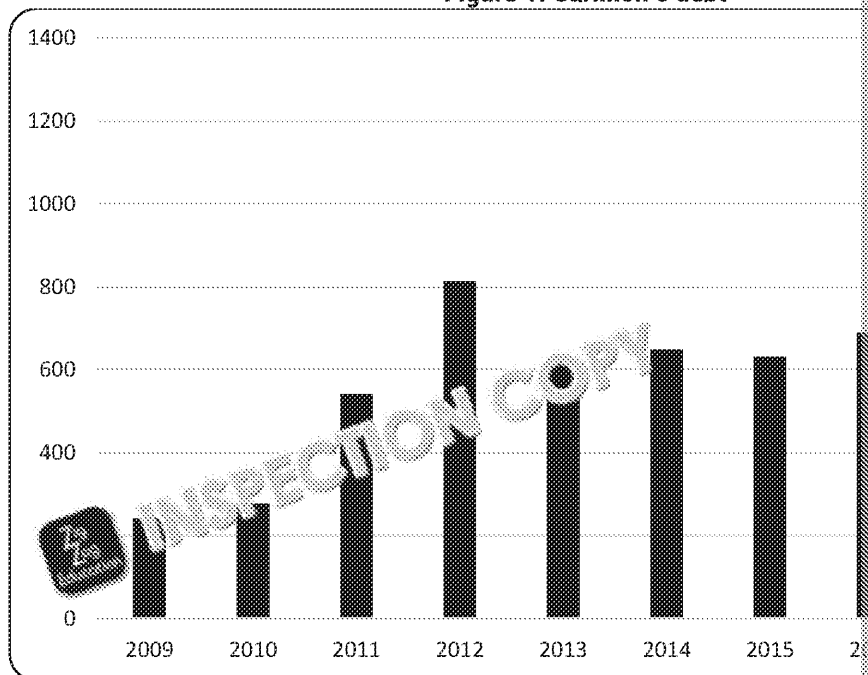
Carillion, a large UK construction and services company, collapsed in 2018 after a serious mishandling of finances and failure to keep up with contractual repayments. The company was a frequent government contractor, with a number of large obligations to build and help operate public facilities. Carillion's responsibilities included building and providing services for schools, hospitals, prisons, housing and transport infrastructure. As a result of the company's collapse, many of these important public facilities were left in limbo, facing reduced levels of service and construction delays of up to several years.

The collapse called into question the government's pursuit of public-private partnerships. Successive UK governments have contracted out responsibility for the construction of public facilities. This approach is designed to transfer the risk involved in construction from public to private hands. These sorts of projects are inherently risky because of the large scale of construction, and the frequency with which such projects exceed their initial budget and completion date.

Instead of the risk being handled by the government, the private sector is awarded a contract to build and operate a facility privately and thus also inherits the risks involved. Carillion would borrow the money to build the facility, which it would pay back in future revenue from the proceeds of operating the facility over a period of usually 25 to 30 years.

However, in this case Carillion overextended itself. It had piled up large debts from its borrowing, which quickly began to exceed its revenues from running facilities. Figure 1 highlights the growth of Carillion's debt in millions of pounds.

Figure 1: Carillion's debt



In July 2017 Carillion issued a profit warning, signalling that the company was in trouble. It issued another profit warning in September 2017, and another in November that same year. The company's unmanageable levels of debt, which compounded the firm's woes.

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Figure 2: Carillion's stock price



Carillion's quick expansion is seen as a key cause of the collapse. The firm took over firms at a rapid pace, including Citex, Mowlem, Alfred McAlpine, Vanbots and Eaga. To part to scale up Carillion's operations at pace, as they took on increasingly large numbers of projects. The firm's business model relied on constant growth – taking on large projects in order to cover borrowing costs.

Use the data

1. What does Figure 1, along with information in the text, suggest about the pace of Carillion's expansion?
2. Calculate the percentage decrease of Carillion stock between June and August.

Test your knowledge...

1. Explain the difference between fixed, variable and total costs.
2. Explain the break-even point and how it is calculated.

Extended-response questions

1. With reference to Carillion, discuss the importance of cash flow for business survival.

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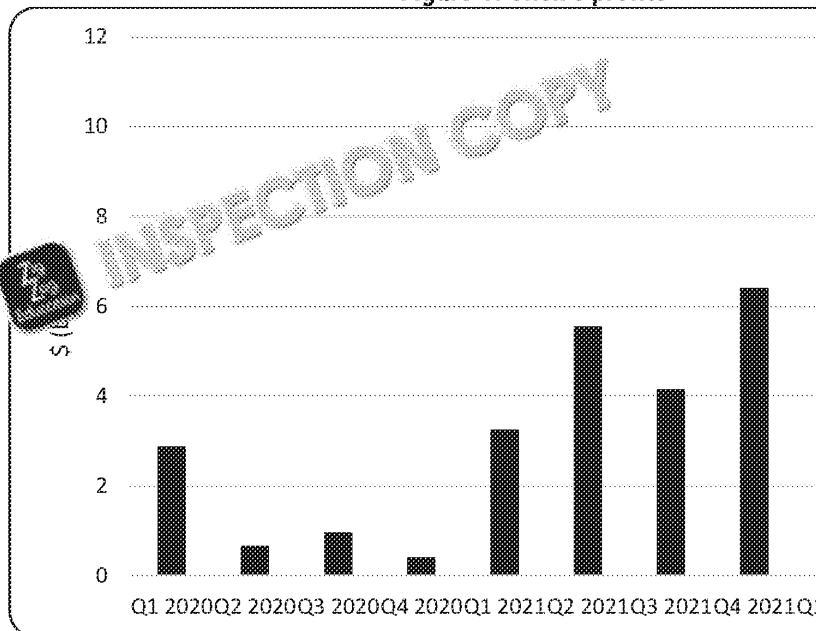


Excess profits: Shell's booming sur

1.6 Revenue, costs, profits and cash

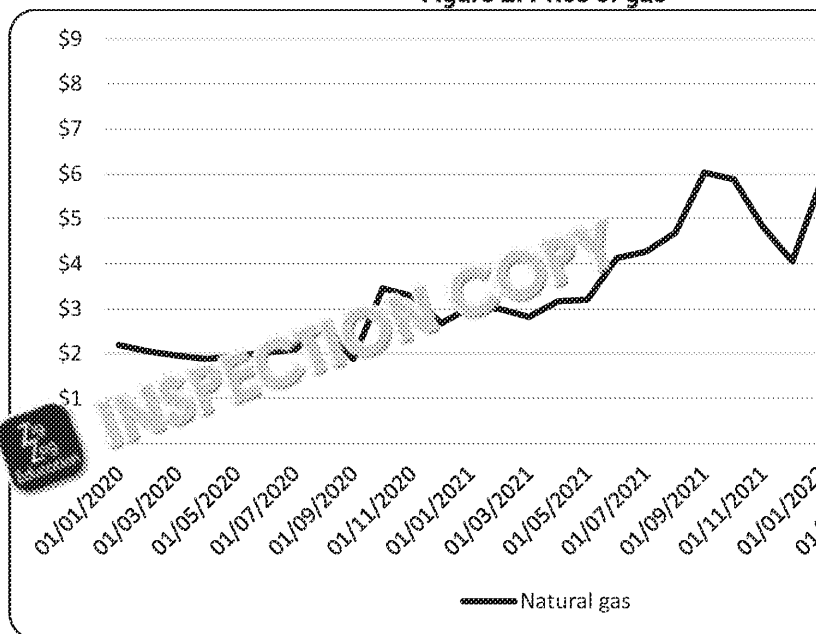
As an energy supply crisis began to emerge in 2021, the price of natural gas increased. One of the main reasons for this crisis was that firms involved in the extraction and distribution of energy began to re... Figure 1 highlights the profits made by Shell between the start of 2020 and the mid...

Figure 1: Shell's profits¹⁴



The significant increases in Shell's profits reflect geopolitical developments. Quickly following the coronavirus pandemic crisis, combined with declining supply in part due to large increases in the price of natural gas. Figure 2 highlights the rapidly rising prices as above.

Figure 2: Price of gas



¹⁴ <https://www.bloomberg.com/news/articles/2022-05-05/shell-profits-rise-to-highest-in-decade-on-soar>

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Extraction and distribution of gas is a primary part of Shell's operations. Following the record-breaking quarterly profits of \$11.5 billion in July 2022, CEO Ben van Beurden

'Our profits are very significant, I realise that. And our cash flows are also very fact that we have been working for 10 years to turn this company into a much

'At the same time, there is a responsibility with making money, and that is that energy security ... and in the energy transition.'

In May 2022 the UK government introduced an excess profits tax, widely known as a 'windfall tax', on oil and gas companies. The tax was targeted at the excess profits of companies like Shell, and designed to help fund financial support for households facing unaffordable energy bills.

Excess profits can pose a problem for economic growth as they are often extraneous to the investment needs of a firm, meaning they will often be given to shareholders or stored as reserves, thus representing a withdrawal from the national income.



Use the data

1. What is the percentage change in Shell's profits between Q1 2020 and Q2 2020?
2. What does Figure 2 suggest about Shell's record-breaking profits?

Test your knowledge...

1. Explain the difference between gross profit, operating profit and net profit.
2. Explain what is meant by a profit margin and how it is calculated.

Extended-response question

1. Assess whether a tax on excess profits is beneficial for the economy.

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Answers

Scarcity in economics: tightening labour market

Use the data

1. At the onset of the crisis, a large rise in unemployment seemed likely, given the closure of the economy, and the likelihood that businesses would struggle. However, the crisis factors – instead led to a wide-ranging reorganisation of the labour market, resulting in a fall in unemployment.
2. Reasons could include:
 - a. Lower wages, insecure or part-time work, and unsociable hours may have reduced the industry for labour – especially as prices rise.
 - b. Increased consumer demand for social activities after months spent socially isolating.
 - c. Large numbers of staff sick with COVID-19, isolating, leading to large staff shortages.
 - d. High turnover of staff is common in the industry due to primarily employing young people.
 - e. New visa rules after Brexit make most hospitality staff too poorly paid to enter the country.

Test your knowledge

1. Satisficing refers to an alternative business objective to profit maximisation (1), in which a business aims for an adequate outcome for all stakeholders involved (1), at the expense of an ideal outcome (1). It can also be applied to a consumer who chooses an acceptable option rather than the best possible one (1).
2. An internal stakeholder refers to an economic actor operating within an organisation (1). It may be an owner, an employee or a shareholder (1). An external stakeholder is an economic actor outside an organisation (1). For a firm, this might be the consumer or a government regulator (1).

Extended-response question

1. Examples of opportunity costs could include:
 - Overcrowding / undesirable population growth (evaluation point: particularly in countries with a shortage of housing supply such as the UK)
 - Diminish labour market opportunities for native workers through lower wages (evaluation point: only applies when there is a shortage of jobs to begin with, could be mitigated by migrants)
 - 'Brain drain' effect from sending countries (when countries lose their best and brightest and the remittance payments back to families)

However, higher migration will also bring benefits such as:

- Increasing size of the labour force (evaluation point: more effective in countries with a shortage of labour, more of a problem, e.g. Japan)
- Bring broader range of skills (e.g. technical skills, language skills) – boost to human capital (evaluation point: depends on skill composition of migrants)
- Migrants may be harder workers or contribute disproportionately towards industry growth (evaluation point: native workers (e.g. NHS; evaluation point here is that migration is more beneficial in sectors with shortages either generally, or in specific sectors)
- Potential to foster better trade relations between sending/host countries

Although they are not direct economic issues, you could also point out potential social issues that may arise from migration (e.g. cultural differences) and how these could be mitigated by government policies to integrate migrants (e.g. language classes). You could also draw a graph of AS/AD to show the increase in AS from migration (and a possible shift in AD if the policy in your conclusion, but for Level 3 evaluation marks you should also state if the policy could be successful/unsuccessful).

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Preview of Answers Ends Here

This is a limited inspection copy. Sample of answers ends here to stop students looking up answers to their assessments. See contents page for details of the rest of the resource.