

## Year 12 – 13 A-Level Economics SIL

The purpose of the SIL work is to ensure that you are prepared for a good start to your second year of Economics by reviewing key topics for Paper 1. All work must be uploaded onto Teams by Friday 15<sup>th</sup> September. Some of your first CEDAR assessment will be based upon this SIL work, and you will be presenting some of your SIL work to the rest of the class in groups.

Completing these tasks will also help you develop the following skills:



Organisation



Problem Solving



Initiative



Communication

## The Pomodoro Technique

### THE POMODORO METHOD

#### ABOUT

**POMODORO** is a productivity method created by Italian developer Francesco Cirillo.

The name originates from the tomato-shaped timer that he used to track his time when he was completing assignments as a student.

"Pomodoro" is Italian for tomato

- ✓ A simple time management and productivity technique
- ✓ Involves breaking a large task down into smaller tasks (called "pomodoros")
- ✓ Trains the brain to focus for short periods
- ✓ Over time it can build your attention span and ability to concentrate

#### HOW

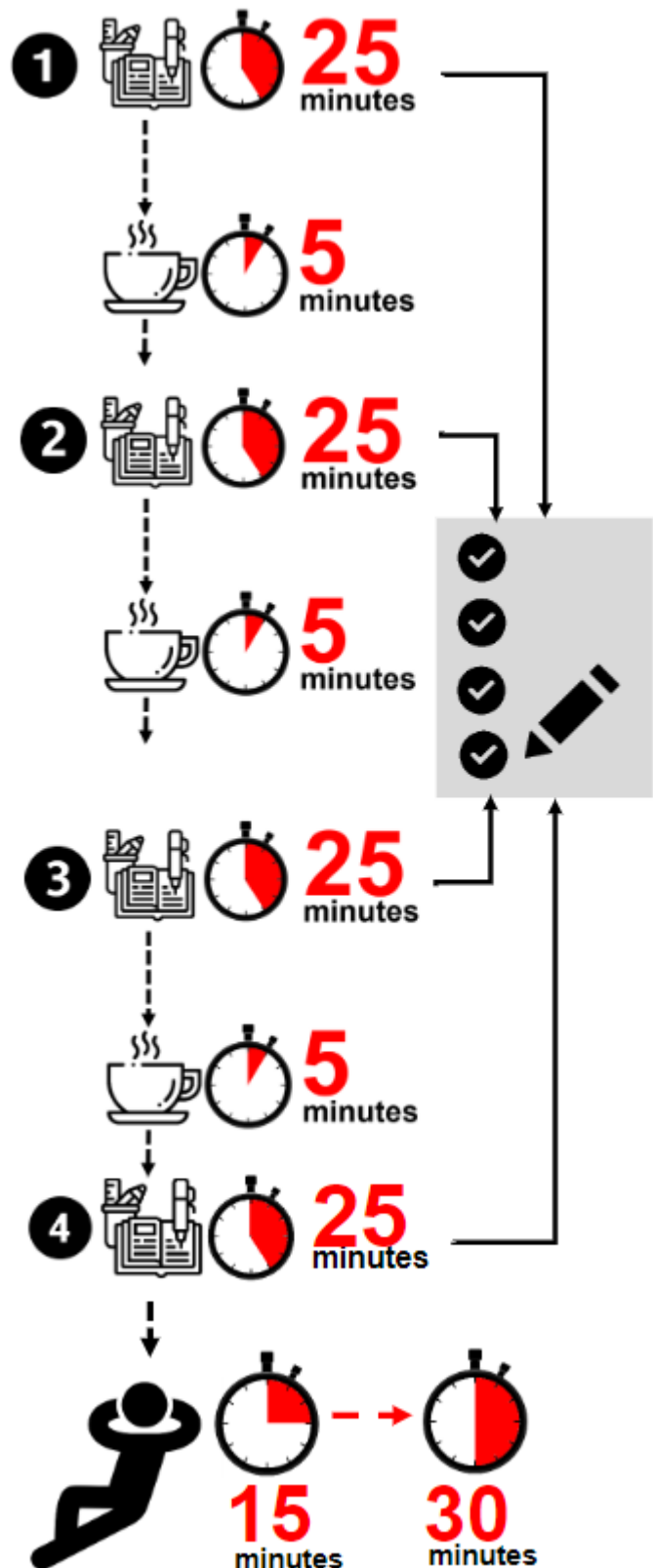
Choose the task that you wish to complete

Set a timer and work on that task for 25 minutes

When 25 minutes have elapsed, place a tick on a sheet of paper

Take a 5 minute break

Repeat this process 3 times, taking a longer break (15 – 30 minutes) after your fourth session



# Retrieval Practice



Why should you review Year 1 content again? How can you do it?



<https://www.youtube.com/watch?v=wrDOoBuP9A8>

Watch the YouTube video and summarise the three ways you can use retrieval practice.

Which of these techniques do you use regularly?

Briefly explain why you should use retrieval practice

## **PART ONE**

**Focus of the work:** Theory of the Firm and Market Failure. (PREVIEW)

### **Tasks:**

**Task 1** View each video clip (12 links below) and **make a one page profile of the 3 underlined points** - <https://medium.goodnotes.com/study-with-ease-the-best-way-to-take-notes-2749a3e8297b>

Answer the practice questions to test yourself. You can access the videos by clicking on each hyperlink. You may need to play, pause and rewind.

The full set of online videos are hosted at:

<http://mruniversity.com/courses/principles-economics-microeconomics>

The screenshot shows a video player interface. At the top, the title is "Introduction to the Competitive Firm" with a "Next Video" button. Below the title, it says "INSTRUCTOR: Alex Tabarrok, George Mason University". A short description follows: "How does a company really behave? We tend to assume profit — the bottom line — is the main motivation for a firm's actions. For most firms most of the time, this is ... more". The main video area features a thumbnail with the text "PRINCIPLES OF ECONOMICS" and a play button. The thumbnail also shows two men, Professor Tyler Cowen and Professor Alex Tabarrok. At the bottom of the player, there are icons for "Download", "Options", "Translate", and "Share". A red circle highlights the "Practice Questions" icon, which is a question mark inside a circle.

### **Costs and Profit Maximization under Competition**

- Introduction to the Competitive Firm
- Maximizing Profit Under Competition
- Maximizing Profit and the Average Cost Curve
- Entry, Exit, and Supply Curves: Increasing Costs
- Entry, Exit, and Supply Curves: Constant Costs
- Entry, Exit, and Supply Curves: Decreasing Costs

## Competition and the Invisible Hand

- Minimization of Total Industry Costs of Production
- The Balance of Industries and Creative Destruction

## Monopoly

- Maximizing Profit Under Monopoly
- Office Hours: Calculating Monopoly Profit
- The Monopoly Markup
- The Costs and Benefits of Monopoly

## **Task 2**

Revise these topics for an **initial assessment test** covering *Theory of the Firm* when you start the course in September. Review your micro booklets on these topics and make Cornell Notes on each topic.

3.1.3 Production, costs and revenue

3.1.4 Competitive and concentrated markets

Produce and complete a revision clock for each of the above

## **Task 3**

### **Preparation for June 2019 Paper1**

Complete the preview research on the 'Economics of sand' by making concise learning notes.

- **Review material**

Scarcity and the price mechanism <https://www.economicshelp.org/blog/586/markets/scarcity-in-economics/>

The price mechanism <https://www.tutor2u.net/economics/reference/functions-of-the-price-mechanism>

Externalities [https://www.economicsonline.co.uk/Market\\_failures/Externalities.html](https://www.economicsonline.co.uk/Market_failures/Externalities.html)

- **Preview material**

#### **Explainers**

<https://theconversation.com/the-world-is-facing-a-global-sand-crisis-83557>

<https://www.weforum.org/agenda/2017/09/the-world-is-running-out-of-sand>

<https://www.businessinsider.com/world-running-out-sand-resources-concrete-2018-6?r=US&IR=T>

#### **Economist video**

<https://www.youtube.com/watch?v=8J78ezpadFo>

#### **Campaigners view**

<https://www.greenpeace.org/international/story/19351/sand-depletion/>

#### **Extension – construction industry**

<https://www.theguardian.com/cities/2019/feb/25/concrete-the-most-destructive-material-on-earth>

# Complete the Exam paper – Data section June 2019

Context 1

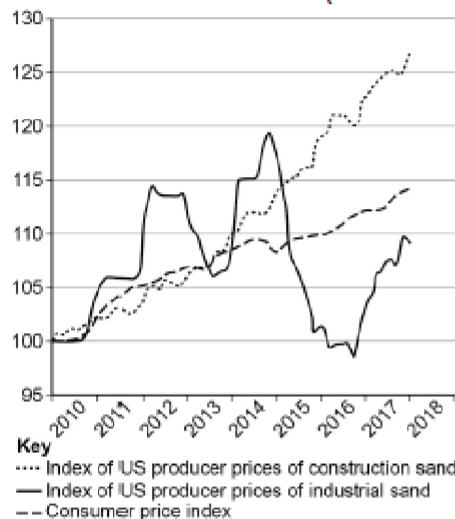
Total for this context: 40 marks

## The market for sand

Study Extracts A, B and C, and then answer all parts of Context 1 which follow.

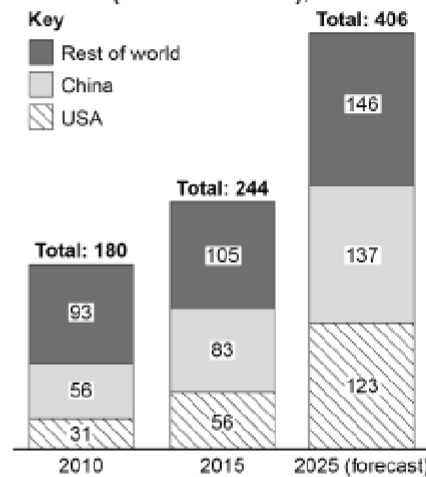
### Extract A

**Figure 1: Indices of US producer prices for sand, Jan 2010–Jan 2018 (Jan 2010=100)**



Source: Federal Reserve Economic Data, 2018

**Figure 2: Global demand for sand (millions of tons), 2010–2025**



Source: The Freedonia Group/National Post, 2018

### Extract B: Is the world running out of sand?

Sand is in high demand. Sand accounts for up to 85% of all mining and the global depletion of sand is rapidly exceeding its natural renewal rate. Sand is mostly used in the construction industry to make concrete and asphalt. Chinese demand has risen significantly, reflecting the country's rapid pace of construction: it built 32.3 million houses and 4.5 million kilometres of road between 2011 and 2014. Sand also has industrial uses: it is used to make glass, electronics, and to help extract oil in the fracking industry. While market demand for industrial sand has tracked overall economic growth in the USA, the demand for fracking sand has been as volatile as oil prices.

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Vast quantities of sand are dumped into the sea to reclaim land: Singapore, for example, has expanded its land area by over 20% since the 1960s. Much of this sand originates from Indonesia, where sand miners have completely erased over 20 islands since 2005. The Maldives and Kiribati have used sand to shore up their islands against rising sea levels. The United Nations forecasts that, by 2030, there will be over 40 'megacities', home to more than

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10 million inhabitants (up from 31 in 2016), which means more housing and infrastructure will need to be built. Also, sea levels will continue to rise and so sand will only become more sought after. But why is there a shortage when sand seems so abundant? Desert sand is too smooth, and so cannot be used for most commercial purposes. Australian sand was shipped to a faraway desert to build Dubai's Burj Khalifa tower, made possible by cheaper transportation. Most countries have rules in place about where, and how much, sand can be mined. However, surging demand has sparked a lucrative illegal trade in many rapidly developing countries which is damaging the environment, causing pollution and harming local biodiversity.

Source: News reports, February 2018

### Extract C: The need for international action

There are currently no international conventions to regulate sand extraction, trade and use. Critics argue that the international community needs to treat sand like a resource on a par with clean air, biodiversity and other natural endowments that nations seek to manage for the future.

In the developed world, concerns have led to restrictions on where sand can be mined. In the USA, for example, mining it offshore or near large residential areas is restricted. Regulations are also in place in many developing countries. Indonesia, Malaysia and Cambodia have all placed restrictions on exports, although the rules are not always enforced. There is a particular problem of ineffective enforcement in India, with organised criminal networks ignoring rules and conducting unregulated sand mining.

Substitutes for sand do exist. Mud can be used for land reclamation, straw and wood for building houses, and crushed rock for making concrete. In some rich countries a shift towards these alternative production processes is already under way as sand prices rise. In the UK, sand demand is 25% less than in 2007, and 28% of building materials used in the UK in 2014 had been recycled. Rising prices will eventually also force builders in developing countries to explore alternatives to sand. But without better law enforcement, high sand prices also make illegal mining more profitable.

Source: News reports, February 2018

**0 1** Using the data in **Extract A** (Figure 1), calculate the percentage change in the price of construction sand between January 2014 and January 2018. Give your answer correct to **one** decimal place.

[2 marks]

**0 2** Explain how the data in **Extract A** (Figures 1 and 2) show that expansion in the global sand market is leading to prices of construction sand rising in real terms.

[4 marks]

**0 3** **Extract B** (line 18) states that the global trade in sand has been 'made possible by cheaper transportation'.

With the help of a diagram, explain how cheaper transportation **and** a construction boom in East Asia have led to growth in the market for sand.

[9 marks]

**0 4** **Extract C** (lines 14–15) states that 'Rising prices will eventually also force builders in developing countries to explore alternatives to sand.'

Use the extracts and your knowledge of economics to assess the view that the increasing scarcity of sand is a problem best solved by market forces, rather than through government intervention.

[25 marks]



## **PART TWO**

### **Task 4**

To be successful in Year 13 you need to be able to research current topics and apply your own economic understanding. There have been many economics stories in the news recently.

***Complete (at least) 4 of the following 8 research questions.***

### **Economics Enrichment Tasks no.1**

**Use the concepts of game theory and behavioural economics to explain why people feel the need to stockpile items such as toilet roll.**

**Is such behaviour rational?**

As well as many reports of community support and altruism, the Covid-19 crisis in the UK caused many shoppers to ‘panic-buy’ and to stock up on items they believed might become unavailable – including toilet rolls. News reports were full of pictures of empty shelves, and distressed shoppers who were unable to find the basic goods that they needed – this BBC report from 21 March has many good examples <https://www.bbc.co.uk/news/uk-51989721>.

In the Second World War, food rationing was introduced at the beginning of 1940 to ensure that goods were available to everyone. So far, the government has preferred to allow the market to find ways to ration goods. There are a number of aspects of economic theory being demonstrated in these problems – the long queues at supermarkets, the distinct shortage of toilet rolls, and crowded parks, mountains and beaches over the weekend of 21-22 March may or may not be demonstrations of rational behaviour.

This article by Tom Chivers on the Unherd website examines the issues from the perspective of game theory and the tragedy of the commons: <https://unherd.com/2020/03/would-you-take-a-coronavirus-risk/>

Using the articles referenced above, and your own research, answer this question:

**Use the concepts of game theory and behavioural economics to explain why people feel the need to stockpile items such as toilet roll. Is such behaviour rational?**

## Economics Enrichment Tasks no.2

### Wage differentials, and the remuneration of key workers

The coronavirus outbreak has brought a re-evaluation of jobs previously classed as low-value, and now seen as key workers. The government has drawn up a list of occupations which are now seen as essential in the economy. You can find the full list here <https://www.gov.uk/government/publications/coronavirus-covid-19-maintaining-educational-provision/guidance-for-schools-colleges-and-local-authorities-on-maintaining-educational-provision>

It is summarised as:

- Frontline health workers, not only doctors and nurses but also the support and specialist staff required to maintain the UK's health and social care sector, and those working as part of the health and social care supply chain
- Some teachers and social workers
- Workers in key public services including those essential to the justice system, religious staff and public service journalists
- Local and national government workers deemed crucial to delivering essential public services
- Workers involved in food production processing, distribution, sale and delivery
- Public safety workers including police, armed forces personnel, firefighters and prison staff
- Essential air, water, road and rail transport workers
- Utilities, communication and financial services staff, including postal workers and waste disposal workers

As we turn to online shopping to buy things from the shops we cannot visit, the likes of Amazon, with its army of box packers and delivery drivers, are talked of as an extension of the emergency services.

Tutor2u's website has a reference article which looks at the reasons for Wage Differentials in an economy, and can be found here:

<https://www.tutor2u.net/economics/reference/labour-market-wage-differentials>

It is notable that many of those 'essential workers' receive very low wages. A 'free-to-read' article in the FT ([highlighted by Geoff on the Economics blog](#)) considered the range of roles now classified as key workers, particularly those which are the lowest paid and working on zero-hours contracts, and looks at how they might be better paid in the future – and the costs of doing so. You can find that article (which is essential reading) here: <https://www.ft.com/content/2b34269a-73f8-11ea-95fe-fcd274e920ca>

The ONS Annual Survey of Hours and Earnings for 2019

(<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2019>) showed that:

- Median weekly earnings for full-time employees reached £585 in April 2019, an increase of 2.9% since April 2018.
- In real terms (after adjusting for inflation), median full-time employee earnings increased by 0.9% in the year to April 2019.

It also includes an interactive graphic which allows you to compare the annual pay of people in a wide variety of occupations:

<https://www.ons.gov.uk/visualisations/dvc696/occupationpay/index.html>

Consider the following 'key worker' roles, and research the pay available for them:

- Hospital porters and cleaners
- Childcare assistants in nurseries
- Care workers in care homes and visiting patients in their own homes
- Supermarket shelf-stackers
- Warehouse staff at Amazon
- Delivery drivers for Amazon or other delivery services

Using this research, the articles referenced above, and your own further research, answer this question:

**Should the role of 'key workers' be recognised with higher pay, after the Covid-19 crisis is over? How should such a change be funded?**

### Economics Enrichment Tasks no.3

#### **Would nationalisation of the commercial banking sector be the most effective way to achieve the aims of the government's emergency loans scheme?**

On 18 March Chancellor Rishi Sunak said that UK-based small and medium-sized business could apply for an interest-free loan of up to £5m to help them with Covid-19 related difficulties, and that the government would guarantee 80% of the loan.

However, the scheme has proved difficult to implement. In early April the head of the Federation of Small Businesses, Mike Cherry, said banks were either trying to push firms towards "standard, expensive products" or they were "simply not responsive. We can't have a situation where banks are approached by successful small firms and lenders offer up business as usual products," he said. "This is not business as usual." (<https://www.bbc.co.uk/news/business-52126658>)

On 3<sup>rd</sup> April the Chancellor revamped the scheme to make it more accessible and wider-reaching, to include loans to larger businesses and also measures to prevent banks from demanding debt-risking personal guarantees from business owners. This report sets out the changes: <https://www.standard.co.uk/news/politics/emergency-business-loans-coronavirus-revamped-after-criticism-a4405751.html>

By Wednesday 14<sup>th</sup> April the British Chambers of Commerce said that only 2% of UK firms had so far secured the loans, and three days later Andrew Bailey, Governor of the Bank of England, questioned whether the system is "too complicated" as banks struggle to cope with applications, and said that emergency lending to businesses "has to be sorted out". The same day, Carolyn Fairbairn, director general of the CBI, said on Friday that ministers needed to offer 100% government-backed loans to prevent thousands of businesses going to the wall. At the time of writing, pressure is growing for the government to do that.

Using the links below to a number of news reports, and your own research, to consider this question: "**Would nationalisation of the commercial banking sector be the most effective way to achieve the aims of the government's emergency loans scheme?**"

#### [Banks under fire for coronavirus loan tactics - BBC News](#)

30 Mar 2020 - **Banks** have been criticised by firms and MPs for insisting on personal guarantees to issue government-backed **emergency loans** to business ...

#### [Denying coronavirus loans 'completely unacceptable' banks told](#)

2 Apr 2020 - The government warns **banks** not to deny **emergency** cash to businesses that face going under.

#### [Coronavirus: Government agrees emergency funding deal with Bank of England](#)

9 April - The UK government is set to borrow billions of pounds from its emergency Bank of England overdraft to finance the fight against Covid-19.

The government will draw money from the Bank's "ways and means" facility to help workers and businesses.

#### [Most emergency coronavirus bank loan applications still being ...](#)

14 Apr 2020. Most **emergency** coronavirus **bank loan** applications still being rejected. **News**. Small Business readers say 53% of their coronavirus **emergency** ...

#### [Coronavirus: Business loans top £1.1bn - as ... - Sky News](#)

16 April - Businesses have been given more than £1.1bn so far under a government-backed **emergency loan** scheme to help small and medium sized ...

[Bank of England boss: Loans need to be sorted out - BBC News](#)

17 April - The boss of the **Bank** of England has said that **emergency lending** to businesses "has to be sorted out" amid the coronavirus pandemic.

[Pressure intensifies for 100% government-backed business loans](#)

19 April - Bank governors join Ed Miliband in urging Rishi Sunak to cut out the banks and ramp up the Covid-19 lifeboat scheme

## Economic Enrichment tasks no 4:

### Is there a 'right' price for oil? How would you go about setting that price?

Back in early March, Ian King of Sky News reported on dramatic falls in global oil prices, their impact on global stock markets and on consumer sentiment (<https://news.sky.com/story/plunging-oil-price-firmly-in-bear-market-territory-11951154>). That now seems like ancient history – by the 20<sup>th</sup> April, futures contracts for a barrel of West Texas Intermediate (WTI), the benchmark for US oil, fell as low as minus \$37.63 a barrel (<https://www.bbc.co.uk/news/business-52350082>). That means that owners of oil futures would pay someone – anyone – to take those contracts off their hands.

Oil is a good which all conventional economic theory shows to have price inelastic demand and supply. This makes its price volatile – but to reach a negative price is without precedent. We know that extracting, refining and consuming oil all carry significant negative externalities, and there are many attempts to move away from the use of fossil fuels. Low prices might sound like a good thing for industry and consumers, but is that true – what is the effect on the market for renewable fuels? And what about oil producers, who are dependent on primary products - the excellent graphics in this report from Visual Capitalist (<https://www.visualcapitalist.com/subzero-oil-price-crash-covid-19/>) show that many of the biggest oil exporters, who rely on oil income, need prices which are much higher than those currently available to balance their budgets – Russia is estimated to need \$40 a barrel, Iraq \$64, and Saudi Arabia \$85.

There are plenty of reports commenting on the causes and effects of this price crash. A few of them are listed below, including two items from the Tutor2u blog:

- Too Much Oil: How a Barrel Came to Be Worth Less Than Nothing  
<https://www.nytimes.com/2020/04/20/business/oil-prices.html>
- Why oil is still most important price in the world  
<https://www.bbc.co.uk/news/business-52382552>
- Who wins and who loses when oil prices fall?  
<https://www.bbc.co.uk/news/business-52375422>
- US oil prices turn negative as demand dries up  
<https://www.bbc.co.uk/news/business-52350082>
- Oil prices dip below zero as producers forced to pay to dispose of excess  
<https://www.theguardian.com/world/2020/apr/20/oil-prices-sink-to-20-year-low-as-un-sounds-alarm-on-to-covid-19-relief-fund>
- US oil drops as much as 20% as oversupply concerns keep roiling markets  
<https://edition.cnn.com/2020/04/28/investing/oil-prices/index.html>
- Is the oil price crash good for renewable energy?  
<https://oilprice.com/Energy/Oil-Prices/Is-The-Oil-Price-Crash-Good-For-Renewable-Energy.html>
- Why the coronavirus crisis could make Big Oil greener  
<https://fortune.com/2020/04/20/big-oil-price-war-investments-green-renewable-energy-climate-change/>
- <https://www.tutor2u.net/economics/blog/oils-amazing-moment-as-crude-prices-fall-below-zero>

- <https://www.tutor2u.net/economics/blog/should-petrol-prices-now-be-less-than-1-a-litre>

Using a selection \* of the links above and of your own research, answer the following question: **Considering the needs of all stakeholders, is there a 'right' price for oil? How would you go about setting that price?**

- \* Your answer must include an evaluation of the sources you have used, with explanation of why you chose some and rejected others in order to form your analysis and conclusions.



## Economics Enrichment Tasks no.5

### Who benefits most from online retailing – consumers or retailers?

In March 2020, as the Covid-19 crisis has become established in the UK and consumers have been forced to change their shopping habits, online supermarkets have been overwhelmed with people desperate to book a delivery of the goods that they need for daily life.

The change to online shopping in the UK was already well underway, and has been partly responsible for the closure or severe retrenchment of a large number of high street chains in 2019, from Debenhams to LK Bennett, and from Mothercare to Jamie Oliver's restaurant chains. You can find a more complete list of 2019's closures and bailouts here: <https://www.theguardian.com/business/2019/nov/06/high-street-crisis-big-names-job-losses-store-closures>

Statista is a database company that collates and reports on data collected by market and opinion research institutes and also data derived from the economic sector and official statistics. In May 2019, Statista found that online grocery shopping in the United Kingdom is the fastest growing purchase channel, both in terms of value and growth, according to retail analysts IGD. You can read some highlights of their report here: <https://www.statista.com/topics/3144/online-grocery-shopping-in-the-united-kingdom/>

The average value of weekly online sales in predominantly food stores more than doubled between 2010 and 2016, reaching 141.9 million British pounds in 2016. With the introduction of online grocery shopping, home delivery and click and collect in the nineties, the market was initially made up of the four major players on the British grocery scene: Sainsbury's, Asda, Morrisons and Tesco.

Since then, online grocery sales have skyrocketed, with the United Kingdom forecasted to become the second largest online grocery market worldwide after China by 2020. With the introduction of new players, such as purely online retailers Ocado and AmazonFresh, the online grocery market share has changed with Tesco, Asda and Ocado the leading online grocery retailers in terms of edible grocery sales.

Use these and other resources to research the market for online retailing in the UK, and to write a response to the question “**Who benefits most from online retailing – consumers or retailers?**”.

You might also find some of the resources from this search on the Tutor2u website helpful: <https://www.tutor2u.net/search?q=online+retailing>

## Economics Enrichment Tasks no.6

### **Sports finances and the virus: what is the economic impact of the shutdown of the English football season?**

For top-flight football clubs, TV broadcasting deals make up around 60% of their annual revenue. In the 2019-20 season, the English Premier League clubs were set to receive £1.665bn for domestic broadcasting, of which Sky and BT committed to £1.575bn to show 180 matches live, and Amazon a further £90m for 20 matches. However, the postponement of the season due to coronavirus means that there are no matches to broadcast, and the clubs stand to lose out on up to £762m from the broadcasters, with a further £338m from lost ticket sales. The result is that many clubs, like any other business, fear bankruptcy. At the start of April, Burnley FC warned that they faced a potential loss of £50m and that for some clubs, it could be as much as £100m in lost revenue.

<https://www.theguardian.com/football/2020/apr/04/burnley-warn-of-50m-loss-due-to-suspension-of-english-football>

This spells potential bankruptcy for a great many clubs, at all levels, and risks the jobs of all their non-playing staff, including groundsmen, maintenance staff, cleaners and restaurant staff, and thousands of jobs at the third-party suppliers in the local economy – with the risk of wide-ranging negative externalities. A number of top clubs announced that they were going to furlough their relatively low-paid non-playing staff, but not the players whose salaries range from £25,000 to £400,000 per week, and received a great deal of negative publicity because of it. By 15<sup>th</sup> April Liverpool, Tottenham and Bournemouth had all reversed earlier decisions to furlough staff members; you can read about their reasons here

<https://www.bbc.co.uk/sport/football/52287403>.

Professional footballers also faced a great deal of criticism when they were asked to take a 30% pay cut for the season, in order to protect the financial position of their clubs; the players responded by launching an initiative 'Players Together' which enables them to donate cash to a group of charities called NHS Together.

<https://www.bbc.co.uk/sport/football/52228550>

The impact of losses for the Premier League will be felt throughout the sport, as income filters down from the top league to lower Football League clubs and beyond, to grassroots amateur football. At all levels, clubs are at risk of going under. There are further worries about the charity work that all Premier League clubs do through their community organisations, which rely on TV revenue to run free football sessions and mentoring for young people and teenagers, football themed academic support for pupils in local schools, football sessions for people with a wide range of disability and programmes aimed at helping people of all ages stay active. While they might, for example, create on-line tutorials to help local people with cancer to stay active during and after treatment throughout this crisis, most of their programmes to support the community are suspended. And there are many examples of clubs using their facilities to help the community during the crisis

<https://www.bbc.co.uk/sport/football/51973512>

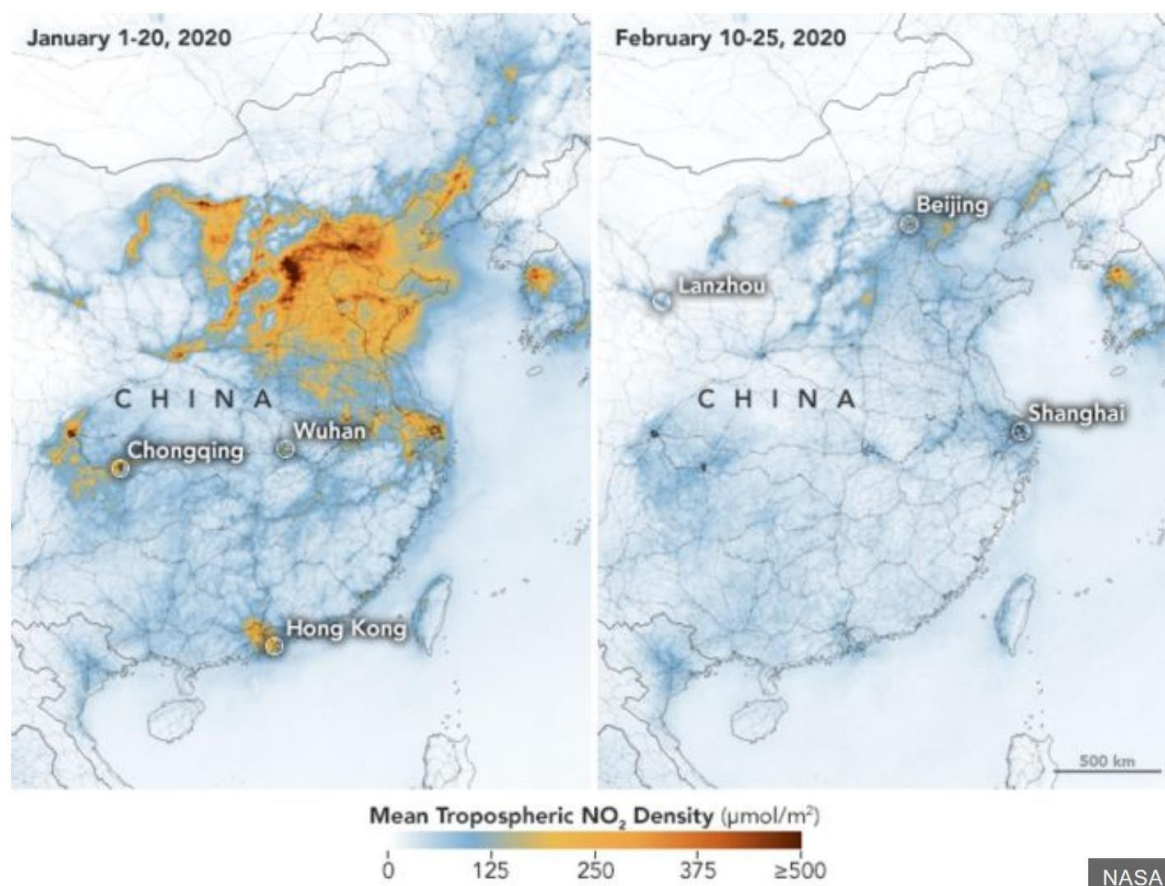
Nevertheless, there are real concerns about how, or even whether, the sports industry can survive the effects of the pandemic. Two articles in the FT explore this in more depth, which should be accessible through the FT for Schools initiative (<https://www.ft.com/content/7ab6a9ec-1e4e-11e8-aaca-4574d7dabfb6>) : [Can the sports industry survive the coronavirus shutdown](#) and [Battle for Premier League survival moves off the pitch](#)

Use these and other resources to research the impact of financial loss being experienced by football clubs throughout the economy in the UK, and to write a response to the question “**What is the potential economic impact of the shutdown of the English football season?**”

## Economics Enrichment Tasks no.7

### To what extent does the coronavirus pandemic give economies the opportunity to change direction?

Amid the bad news about the shrinking global economy, there is also the trade-off that levels of pollution are falling rapidly, and with them, the associated negative externalities. These images from NASA show that, ironically, the levels of nitrous oxide pollution in February over China were far lower than just four weeks earlier.



This picture is repeated around the world, and it is not only air pollution that is reducing. Swans have been seen gliding through the newly-clear canals of Venice, which are full of fish, and The Guardian has also reported that the [Coronavirus lockdown has boosted the numbers of Thailand's rare sea turtles](#), as the tourism industry has been suspended.

Covid-19 is a respiratory disease. There is increasing evidence that its effects are worsened in areas of high air pollution – this report from the World Economic Forum explains that link: <https://www.weforum.org/agenda/2020/04/the-deadly-link-between-covid-19-and-air-pollution/> Is it possible, therefore, that government action to restart economies when the pandemic recedes, could also be used to prolong this temporary lull in production of pollution?

This idea is taken much further in a report published in The Guardian before Easter, about city government officials in Amsterdam planning to create a sustainable recovery, using economist Kate Raworth's model of 'doughnut economics'. "Amsterdam to embrace 'doughnut' model to mend post-coronavirus economy" (

[https://www.theguardian.com/world/2020/apr/08/amsterdam-doughnut-model-mend-post-coronavirus-economy?CMP=Share\\_iOSApp\\_Other](https://www.theguardian.com/world/2020/apr/08/amsterdam-doughnut-model-mend-post-coronavirus-economy?CMP=Share_iOSApp_Other) ) The article outlines the model, in which the goal of economic activity should be about meeting the core needs of all but within the means of the planet. It is notable that the authorities in Amsterdam see the period of rebuilding in a post-Covid-19 world as a time to embrace this sustainable approach.

There has been much said about the enforced economic and social slowdown giving an opportunity for rethinking our approach to all manner of things. Using the links above and your own research, answer the following question: **To what extent does the coronavirus pandemic give economies the opportunity to change direction?**

## Economic Enrichment tasks no 8:

### What is the most significant reason for crashing oil prices?

Back in early March, Ian King of Sky News reported on dramatic falls in global oil prices, their impact on global stock markets and on consumer sentiment (<https://news.sky.com/story/plunging-oil-price-firmly-in-bear-market-territory-11951154>). That now seems like ancient history – by the 20<sup>th</sup> April, futures contracts for a barrel of West Texas Intermediate (WTI), the benchmark for US oil, fell as low as minus \$37.63 a barrel (<https://www.bbc.co.uk/news/business-52350082>). That means that owners of oil futures would pay someone – anyone – to take those contracts off their hands.

Oil is a good which all conventional economic theory shows to have price inelastic demand and supply. This makes its price volatile – but to reach a negative price is without precedent. Low prices might sound like a good thing for industry and consumers, but is that true? And what about producers - the excellent graphics in this report from Visual Capitalist (<https://www.visualcapitalist.com/subzero-oil-price-crash-covid-19/>) show that many of the biggest oil exporters, who rely on oil income, need prices which are much higher than those currently available to balance their budgets – Russia is estimated to need \$40 a barrel, Iraq \$64, and Saudi Arabia \$85.

There are plenty of reports commenting on the causes of this price crash. A few of them are listed below, including two items from the Tutor2u blog:

- Too Much Oil: How a Barrel Came to Be Worth Less Than Nothing  
<https://www.nytimes.com/2020/04/20/business/oil-prices.html>
- Why oil is still most important price in the world  
<https://www.bbc.co.uk/news/business-52382552>
- Who wins and who loses when oil prices fall?  
<https://www.bbc.co.uk/news/business-52375422>  
US oil prices turn negative as demand dries up  
<https://www.bbc.co.uk/news/business-52350082>
- Oil prices dip below zero as producers forced to pay to dispose of excess  
<https://www.theguardian.com/world/2020/apr/20/oil-prices-sink-to-20-year-low-as-un-sounds-alarm-on-to-covid-19-relief-fund>
- US oil drops as much as 20% as oversupply concerns keep roiling markets  
<https://edition.cnn.com/2020/04/28/investing/oil-prices/index.html>
- <https://www.tutor2u.net/economics/blog/oils-amazing-moment-as-crude-prices-fall-below-zero>
- <https://www.tutor2u.net/economics/blog/should-petrol-prices-now-be-less-than-1-a-litre>

Using a selection \* of the links above and of your own research, answer the following question: **What is the most significant reason for crashing oil prices?**

- \* Your answer should include an evaluation of the sources you have used, with explanation of why you chose some and rejected others in order to form your analysis and conclusion

