

# **2023: markets or the market**

Practice Papers: Economics 'B'

Paper 3: The economic environment and business

By Gerald Wood

## **Contents**

- These Practice Papers are designed to give teachers both formative and summative assessment tools for Year 13 in the spring and summer of 2023. They are based around the 2022 pre-release material on the subject of *Markets or The Market*.
- Overleaf the 24 practice questions are listed in specification order, with links to the relevant topic and also the Practice Paper where the question may be found.

## **Key features of each Practice Paper**

- They are laid out in the general format of the Paper 3 examination, and so will be familiar to students.
- Accompanying each Practice Paper is a mark scheme, based around Edexcel's own mark scheme. These both assist teachers in marking students' work, and help students understand what they need to do to improve their mark.
- Also accompanying each Practice Paper is a set of suggested answers. These are rather longer than most students would have time to produce in an examination setting, and also contain more analysis and detail than students would be expected to know. They inevitably contain some points of view personal to the author. With the exception of multiple choice questions, there is of course no such thing as a single 'right' answer.

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## **Disclaimer**

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February 2023

Spec. Ref.	Specification topic	Question	Paper /Q. No.
1.3.3	Price determination	Using a suitable diagram, discuss the impact of the destruction of the Nord Stream pipelines on the equilibrium price and quantity of gas in Europe.	1-1a
1.3.3	Excess demand	Using a suitable diagram, assess the likely impact of the Covid-19 pandemic on healthcare markets	3-1b
1.3.5-6	Understanding consumer, competition	Assess the importance of understanding consumers and competitors for a company like Monzo.	1.2b
1.5.1	Market failure and externalities	Assess the reasons for government intervention in the market for health care.	3-1c
1.5.2	Gov't intervention, subsidies	Evaluate the decision by the British government to subsidise the price of gas and electricity in 2022-23.	1-1d
1.5.2	Government intervention	Evaluate possible government responses to the market failures generated by the tobacco industry.	3-1d
1.5.2b	Gov't intervention, regulation	Discuss the likely reasons behind the government's plan to ban all new petrol and diesel driven cars from 2030.	2-1a
2.1.1	Business growth, shortages	Discuss the view that countries should build spare health care capacity in order to avoid shortages when the next pandemic arrives.	3-1a
2.1.2	Methods of business growth	Assess possible strategies oil companies could adopt as demand in the UK for petrol and diesel falls.	2-1b
2.1.4	How the digital econ. affects markets	Evaluate the impact of the digital economy on markets.	1-2d
2.2.1	Significance of PED for pricing	Assess the significance of inelastic demand on the market for gas.	1-1b
2.5.4	Market failure, geographical immobility	Discuss whether geographical immobility is still a cause of market failure given the trend towards home-working.	1-2a
3.1.2	International trade and growth	[Preamble, then:] Assess the likely economic consequences of this reduction in international trade.	1-1c
3.3	Global markets and cultural factors	Discuss how multinationals might adapt their marketing to local cultural and social conditions	3-2a
3.4.1	Impact of MNCs on local labour market	Assess the likely impact of multinationals on local labour markets.	3-2c
3.4.2	Ethical issues, impact on markets	Assess the extent to which a commitment to ethical behaviour on behalf of businesses might change market prices around the world.	3-2b
3.6.1a	Absolute and relative poverty	Discuss whether absolute poverty or relative poverty is the more serious market failure.	2-2a
3.6.2	Reducing poverty	Assess the extent to which free markets are the best way of reducing poverty.	2-2c
4.1.1	The spectrum of competition	Assess the benefit to consumers of different market structures.	2-2b
4.2.3	Costs and benefits of regulation	Evaluate the costs and benefits of regulating markets, such as water, which are not competitive.	2-2d
4.3.1e	Imperfect information	Assess the extent to which imperfect information prevents markets from working effectively.	2-1c
4.3.3	Policies to deal with market failure	With reference to Figure 1, evaluate possible government responses to sharp increases in the price of essential commodities.	2-1d
4.4.3	Policies to reform the labour market	Evaluate the supply-side policies open to government to reform the labour market.	3-2d
4.5.2	Central bank regulation of banks	With reference to Extracts D and E, assess the extent to which financial markets should be regulated.	1-2c

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Surname	Other name
<b>Economics B</b>	
Centre Number:	Candidate Number
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<b>Paper 3: the economic environment and business</b> <b>Practice Paper No. 1 of 3 (for 2023)</b>	
<b>Date:</b>  <b>Time: 2 hours</b>	Paper Reference <b>9EB0/03</b>
<b>You do not need any other materials.</b>	Total Marks

### Instructions

Use **black** ink.

Fill in the boxes at the top of this page with your name, centre number and candidate number.

Answer **all** questions.

### Information

Total marks for this paper is 100.

The marks for each question are shown in brackets.

### Advice

Read each question carefully.

Keep an eye on the time.

Try to answer every question.

Check your answers if you have time at the end.

**Answer all questions.**

## **SECTION A**

**Read the following Extracts (A to C) and Figure 1 before answering Question 1.**

### **Extract A: The European market for gas**

Natural gas is used for three main purposes. Firstly, it is a common method of heating homes. Over 80% of houses in the UK have gas pipes running into them and then use gas-powered boilers to heat up water for radiators and for cleaning and cooking. Secondly, it is used in a number of industrial processes as a major source of power, such as manufacturing chemicals and plastics.

Finally, over one-third of Europe's generation of electricity comes from power plants relying on gas as their fuel. This means that the market for gas and for electricity is closely connected. When the price of one goes up the price of the other is likely to follow.

Much of Europe's gas has traditionally come from Russia, Norway and Algeria and is then transported all over the continent through a series of pipelines. However, gas also comes from the USA, Nigeria and Qatar in the Middle East. In this case it is cooled down to minus 161 Celsius to turn it into a dense liquid known as LNG (Liquefied Natural Gas), and then transported by ship.

Roughly one-quarter of Europe's gas supplies have traditionally come from Russia, one quarter from Norway and one-quarter by ship in the form of LNG, with other suppliers making up the remainder.

*Sources: UK press reports, 2022*

### **Extract B: Sabotage of the Nord Stream gas pipelines**

Two major gas pipelines have been built under the Baltic Sea to connect Germany and the EU directly with Russia. Nord Stream 1 was completed in 2011, and its sister Nord Stream 2 in 2021. These pipelines substantially increased the ability of Germany and neighboring countries to access large quantities of cheap Russian energy for homes and industry.

However, following Russia's invasion of Ukraine in February 2022 the EU began to limit its purchases of Russia's gas as the revenue was being used by Russia to fight the war. But even these reduced purchases came to a dramatic stop on 22<sup>nd</sup> September 2022 when both pipelines were blown up with explosives. It seems unlikely that these pipelines will ever become operational. Repairs have been estimated to cost in the region of \$500 million, and would have to be done quickly before the insides of the pipes are permanently corroded by sea water.

Britain is particularly vulnerable to disruptions in gas supplies, having closed half its gas storage capacity in 2017 in a cost reduction exercise.

*Sources: UK press reports, 2022*

**Figure 1: UK natural gas prices (pence per therm), January 2019 to February 2023**

Source: trading economics

### Extract C: Help with your energy bills

Households can get a £400 discount to help with your energy bills for winter 2022 to 2023. This is called the Energy Bills Support Scheme. You'll usually get the discount automatically - you do not have to apply. Each month, from October 2022 to March 2023, £67 will be deducted from your electricity bill.

Businesses and other organisations can get help with their energy bills as part of the Energy Bill Relief Scheme. This is available to all eligible businesses, charities and public sector organisations such as schools, hospitals and care homes.

For all business energy users in Great Britain and Northern Ireland this government supported price has been set at:

- electricity - 21.1p per kilowatt hour
- gas - 7.5p per kilowatt hour

For comparison, when the scheme was announced, wholesale costs in England, Scotland and Wales for this winter were expected to be around 60p per kilowatt hour for electricity and 18p per kilowatt hour for gas.

Source: adapted from gov.uk

### Questions

**1a** Using a suitable diagram, discuss the impact of the destruction of the Nord Stream pipelines on the equilibrium price and quantity of gas in Europe. (8)

**1b** Assess the significance of inelastic demand on the market for gas. (10)

**1c** The invasion of Ukraine has led to a reversal of trade liberalisation and of globalisation, as Russian

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## Paper 3, Practice Paper No. 1 – Mark scheme, Section A

General marking guidance:

1. The ‘possible content’ below gives suggestions for what a candidate might write. However, any relevant content should be rewarded.
2. Where a question directly mentions some of the stimulus material then this must be referred to in the answer in order to get full Application marks. Other references based on the candidate’s own knowledge may also be rewarded.
3. Markers should use the full range of marks. They should not hesitate to give full marks for any question where the requirements of the mark scheme have been fully met. Equally, an answer that meets none of the criteria should always be given zero.

Question 1a	Deciding on the correct level	Mark
Level		Max: 8
	An answer with no merit.	0
Level 1	Occasional elements of knowledge, very little application, unconvincing arguments, no clear answer to question.	1-2
Level 2	Some knowledge and application, developed arguments, limited judgement.	3-5
Level 3	Convincing knowledge and application, well-developed arguments and balanced judgement.	6-8

Question 1a	Possible content: Using a suitable diagram, discuss the impact of the destruction of the Nord Stream pipelines on the equilibrium price and quantity of gas in Europe.	Mark scheme
Level		
Knowledge	Diagram showing inward shift of supply curve, all three curves and both axes labeled.	2
Application	Clear indication of increased equilibrium price and reduced equilibrium quantity.	2
Analysis	Explanation that reduced supply will always tend to reduce equilibrium quantity as less is available. The price is forced up until demand shrinks to the reduced supply.	2
Evaluation	In the long-run the impact may be less as new sources are exploited, for example increased shipments of LNG. <i>Ceteris paribus</i> assumption holds: there may be other factors, such as a global recession which reduces demand and so price does not rise.	2

Question 1b	Deciding on the correct level	Mark
Level		Max: 10
	An answer with no merit.	0
Level 1	Occasional elements of knowledge, very little application, unconvincing arguments, no clear answer to question.	1-2
Level 2	Some knowledge and application, developed arguments, limited judgement.	3-4
Level 3	Convincing knowledge and application, well-developed arguments and some attempt at balanced judgement.	5-7
Level 4	Convincing knowledge and application, well-developed and evaluated arguments, impressive focus on question throughout, and an informed, personal and balanced judgement.	8-10

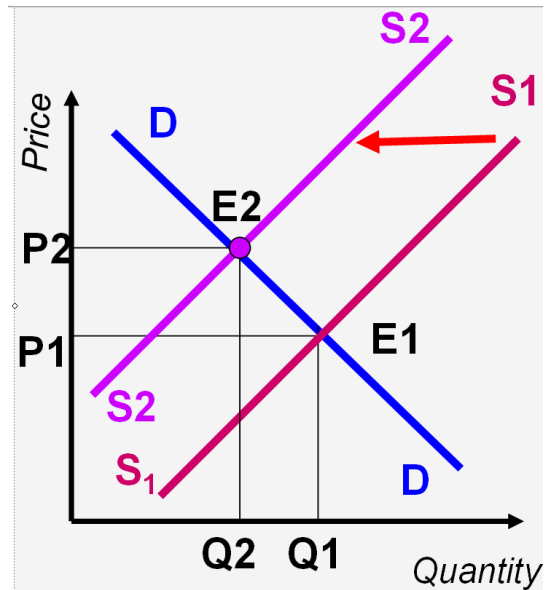
Question 1b	Possible content: Assess the significance of inelastic demand on the market for gas.	Mark scheme
Level		
Knowledge	PED measures the percentage change in demand following a 1% increase in price. If demand is inelastic, this means the percentage change in demand is less than the percentage change in price giving PED a value of between 0 and minus 1.	2
Application	Natural gas has inelastic demand as there are few substitutes e.g. in Extract A we read that over 80% of UK houses have gas-fired heating. The readily available substitutes are few and not particularly close substitutes e.g. wear more warm clothing.	2
Analysis	Inelastic demand leads to more volatile prices. When supply falls, prices have to rise further to choke off the demand required to match the reduced supply. This is illustrated in Figure 1, where we see price 'spikes', each one likely to correspond to fears surrounding the future security of supply.	3
Evaluation	Demand for gas may be inelastic in the short-term but not so much in the long-term. New technology like solar panel heating and heat pumps and new building regulations requiring better home insulation enable households to switch out of gas in the medium-term. Additionally, inelastic demand less important if supply is elastic e.g. if LNG imports quickly make up for reduced gas supply from Russia.	3

## Practice Paper 1 - suggested answers

**1(a)** Using a suitable diagram, discuss the impact of the destruction of the Nord Stream pipelines on the equilibrium price and quantity of gas in Europe. (8)

**Answer:** The destruction of the gas pipelines from Russia to Europe will reduce European supply, shifting the supply curve inwards as indicated in the diagram. As supply falls from  $S_1$  to  $S_2$  so the equilibrium quantity falls from  $Q_1$  to  $Q_2$ . This fall is less than the total reduction in supply because demand also falls as the price is forced upwards from  $P_1$  to  $P_2$ .

Just how far the quantity falls depends on a number of factors, not least what proportion of European gas went through these pipelines. We read in Extract A that total Russian supply accounted for ‘roughly one-quarter’ of European supplies, but of course some of these supplies may still be making their way to Europe through other pipelines. The impact also depends on the time period we are looking at. Extract A tells us the gas can be transported by ship in liquid form (called LNG), so it may well be that a few weeks are all that are needed to divert supplies in our direction. Another possibility is that Europe makes up the temporary shortfall from its gas reserves. However, these might not be large enough to do the job, particularly as we read in Extract B that Britain ‘closed half its gas storage capacity’ five years ago. To conclude, price will go up and quantity will fall but the extent and duration of these changes will depend on a wide variety of factors.



**1(b)** Assess the significance of inelastic demand on the market for gas. (10)

**Answer:** Price elasticity of demand (PED) measures the percentage change in demand following a 1% increase in its price. If demand is inelastic this means that the percentage fall in demand will be less than the percentage increase in price, and its value will therefore lie between 0 and minus 1.

Natural gas has inelastic demand because it has few substitutes. If your house is heated by gas and the price of gas goes up you can't suddenly change to electric heating or install a heat pump. These changes take time, and inertia often rules. Most households will shrug their shoulders, perhaps turn down their thermostat a degree or two and then continue as normal. Heating your home is like filling up our car with petrol: most consider these to be essential services and are as a result relatively price insensitive.

Inelastic demand leads to volatile prices. If supply suddenly reduces and most consumers are determined to go on using it than the price has to rise an awfully long way before demand is choked off. This is illustrated in Figure 1 three sharp spikes in 2022 saw gas prices double each time, most likely as a result of news that Russia's invasion was likely to lead to a sharp reduction in supplies. These spikes lead to hardship, particularly among less-well-off households whose budgets are already stretched.

However, while prices in the gas market are volatile in the short-term there is reason to believe they may be less volatile longer term. For one thing, the link between gas prices and electricity prices will become weaker as renewable energy becomes a larger part of the mix. At the moment gas provides ‘over one-third’ (Extract A) of electricity generation but this proportion will steadily decrease as we turn away from fossil fuels to mitigate climate change. Then of course while ‘over 80%’ of UK households are tied to gas heating at the moment (Extract A again), this proportion will come down as more households install heat pumps and solar panels. Additionally, as new houses are built to higher insulation standards increases in gas prices will be less significant for these householders as a smaller proportion of their total income will be spent heating their homes.

We may therefore conclude that the sharp gas price increases of 2022, responding to inelastic demand, are unlikely to recur again to such an extent and that if they do the impact on European households is likely to be far less.