

2024 Paper 1: Markets and Business Behaviour for Edexcel Economics A | Model answers

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Notes on the responses:

- Answers are likely to score full marks or close to this.
- To find the questions, the question paper is available on the Edexcel website, linked [here](#) (external link to Edexcel).
- I recommend having the question paper and answers up at the same time.
- Do not simply copy the answers. Instead, attempt the questions yourself and compare your responses to the model answers, as well as using the mark scheme.
- For many questions, there are multiple ways to score highly.
- Answers are not to be copied without permission from the author.
- Some answers feature extra commentary from me. These are marked separately in a “tutor’s commentary” box.
- I am not affiliated with any exam board. These model answers are written independently of the exam board.

Contents

Section A (short answer questions) starting on page 2.

- For multiple choice questions, some working or commentary has been included.

Section B (data response questions) starting on page 5.

Section C (25 mark questions) starting on page 14.

- I have written model answers for both 25 mark questions.
- In the actual exam, you only need to attempt one of the two 25 mark questions.

More resources for Edexcel Economics A are linked on page 20.

Section A

Question 1

Tutor's commentary

The first question is about the price elasticity of demand (PED). I recommend learning an acronym to remember the different determinants of the PED. One example is the SNAPS acronym (substitutes, necessity, addictiveness, proportion of income spent and short run/long run). Here are [my notes](#) on the PED which include this.

(a) The price elasticity of demand (PED) is the responsiveness of demand to a change in price. The PED for adults is more inelastic at -0.4 than that for 18+ students at -0.7. This could be because of differences in the proportion of income spent on bus tickets. Adults may be more likely to be in work, so may have a higher income. So the bus ticket price (change) is a smaller proportion of adults' income.

(b) Working:

$$PED = \frac{\% \text{ change in demand}}{\% \text{ change in price}} \quad -0.4 = \frac{\% \text{ change in demand}}{4.8\%}$$

$$\% \text{ change in demand} = -0.4 \times 4.8\% = -1.92\%$$

Therefore the answer is **option B**.

Question 2

(a) The price elasticity of supply (PES) is the responsiveness of supply to a change in price. The PES of housing in Texas is more elastic at 1.8 than that in New York at 0.5. This could be because of differences in available factors of production. There is a greater availability of land, a factor of production, in Texas, which is less dense than New York where land is already fully utilised.

(b) Working:

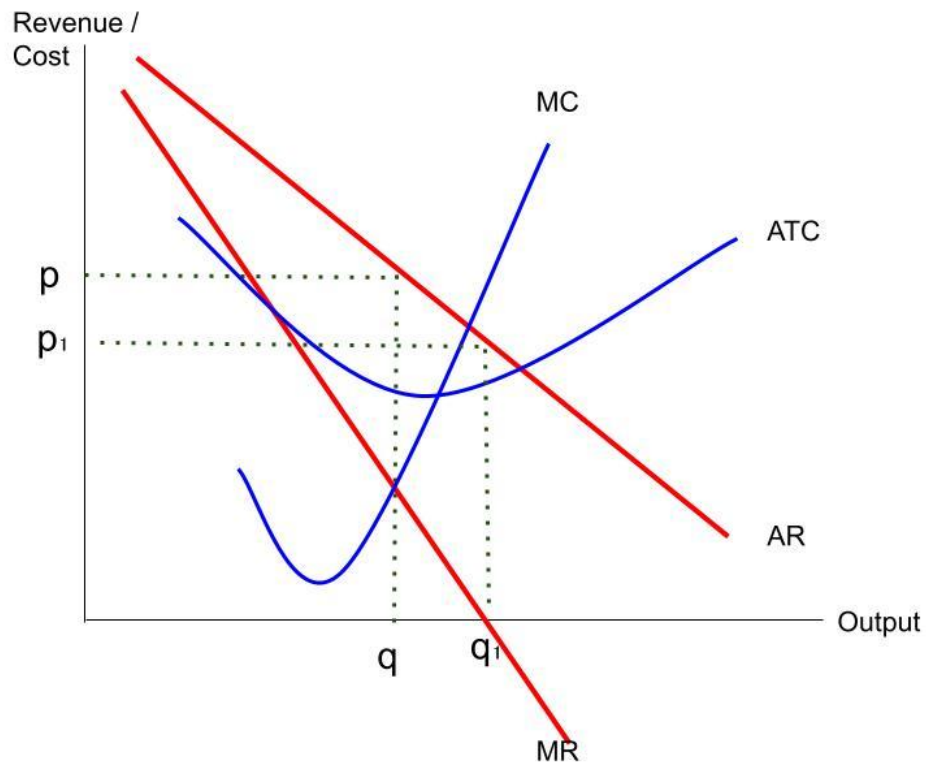
$$PES = \frac{\% \text{ change in supply}}{\% \text{ change in price}} \quad 1.8 = \frac{12\%}{\% \text{ change in price}}$$

$$\frac{12\%}{1.8} = \% \text{ change in price} = 6.67\% \text{ (3sf)}$$

Therefore the answer is **option C**.

Question 3

3.(a) In the diagram below, (q, p) is profit maximisation. (q_1, p_1) is revenue maximisation where $MR=0$.



(b) Working / thought process: Sales maximisation means the firm makes a normal profit. This means average revenue is equal to average cost.

So the answer is **option A**.

Question 4

4. (a) A maximum price is the ceiling above which the price cannot go. With the maximum price for university tuition in England at £9250 per year, assuming this is lower than the free market price, there will be an extension along the demand curve for university tuition, making university more affordable for those on low incomes. This could enable more worker training which could boost worker productivity.

(b)

Tutor's commentary

There are four types of government failure in the syllabus to know. One of the types is when price signals are distorted. This means the price is not set so that demand meets supply, which can result in surpluses or shortages emerging. Here are my notes on [government failure](#).

Therefore the answer is **option B**.

Question 5

(a) The market structure is oligopolistic. The five firm concentration ratio is 64% in the market for mortgage lending, so a few firms dominate the market. This could lead those banks to collude on setting higher interest rates for lending, leading to higher profits for the banks and lower consumer surplus for borrowers.

(b)

Working: £1601 billion $\times$ 0.195 = £312.195 billion.

Therefore the answer is **option C**.

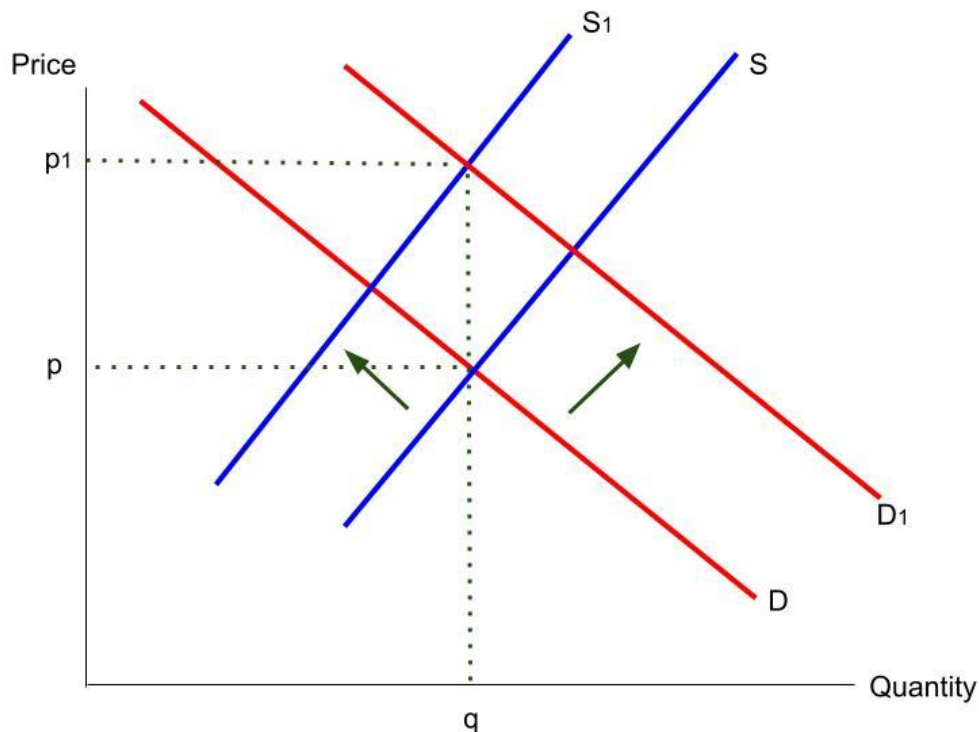
Section B

Question 6a (5 mark question)

Tutor's commentary

Note this question asks for “reasons” (plural) for electronics changing in price. So you should aim to give two brief reasons.

Demand for electronic devices has increased, shifting right from D to D_1 . Higher “popularity of home entertainment” increases demand for devices such as smart TVs. Supply of electronic devices has decreased, shifting left from S to S_1 . The costs of computer chips increased from \$0.20 to over \$1, a key input for producing electronic devices. So costs of production for electronic devices increase, reducing supply. So overall, the price of electronic devices rises from p to p_1 .



Question 6b (8 mark question)

Tutor commentary

This eight mark question asks for two determinants of labour supply. I'd recommend having two separate, short, analysis paragraphs to signpost the two separate points.

In this response, the two determinants mentioned are early retirement and the wage rate. Note the importance of referring back to labour supply throughout the response.

When explaining labour supply or labour demand, I also recommend referring back to the labour supply or demand curve to support the analysis. This helps anchor the point in economic theory. See below for examples.

[Link to notes on labour supply](#)

First, more workers may leave the labour force to retire early from the electronics industry. The extract states “highly skilled and experienced employees in the electronics industry retire”. This could be because of the new requirements for technical skills required, which some of the workers retiring may not have. More retirements would shift the labour supply curve left.

However, training schemes for workers in the new technical skills required could reduce early retirements.

Another factor is falling wages. “As production becomes more automated”, this could mean capital replacing labour, (lowering labour demand and) reducing the equilibrium wage. This lower wage leads to a contraction along the labour supply curve, as there is less incentive to supply labour in electronics. The disutility from working is no longer worth the lower wage for some workers.

However, automation may increase demand for skills required to fix AI and robotics, increasing wages for electronics workers, leading to labour supply extending.

Question 6c (10 mark question)

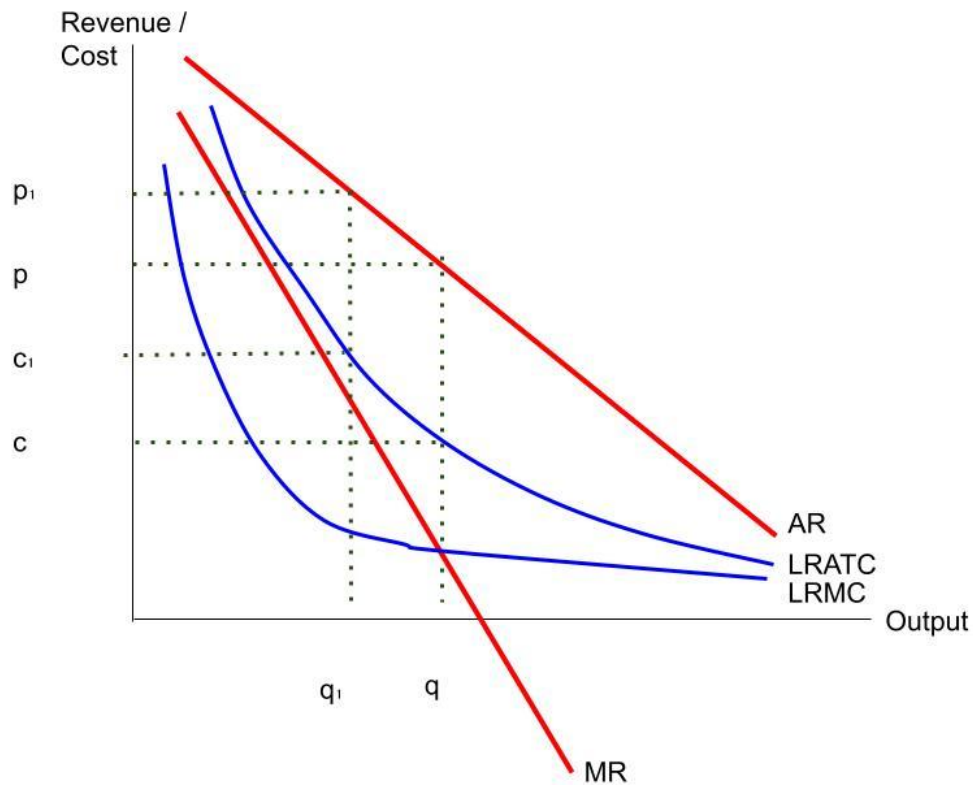
Tutor commentary

For the economies of scale topic, I recommend practising explanations of a few types of economies of scale and how exactly they lead to lower long-run average cost for the firm.

This question in particular is after the impact of economies of scale for the companies. So make sure to discuss the effect of economies of scale on the firm, for example on their profits.

[Link to notes on economies of scale](#)

Firms in electronics benefit from economies of scale: when firm output increases, long-run average cost (LRAC) falls. Large electronic firms benefit from technical and advertising economies of scale, so they are “able to finance high-risk innovation and global advertising”. For example electronics firms Nvidia can spread their costs from R&D and advertising over their larger user base, leading to lower LRAC as output rises. Larger electronics companies “reliant on computer chips” can also bulk-buy computer chips as a key input in all electronic devices at a per-unit discount, lowering LRAC. A larger firm has a higher output at q compared to a smaller electronics firm at q_1 , enabling LRAC to fall from c_1 to c . This results in larger firms passing on cost reductions to consumers with lower prices, as the price of electronic goods falls from p_1 for a smaller firm to p for a larger electronic firm, allowing the firm to increase its market share by increasing demand. Supernormal profits also rise as a result from $(p_1 - c_1)q_1$ to $(p - c)q$.



However, there may be diseconomies of scale in the electronics industry. For example, as electronics firms increase their output, it may become more difficult to coordinate the marketing and manufacturing teams for computer chips within Nvidia. These different teams may need more time to communicate to agree on decisions about innovation. So larger electronics firms may be slower to innovate. As a result, productivity could fall as output rises, increasing LRAC, which could decrease profits for Nvidia. This is most likely if electronics companies produce at an output level above their minimum efficient scale. Hence electronics firms may not benefit from economies of scale.

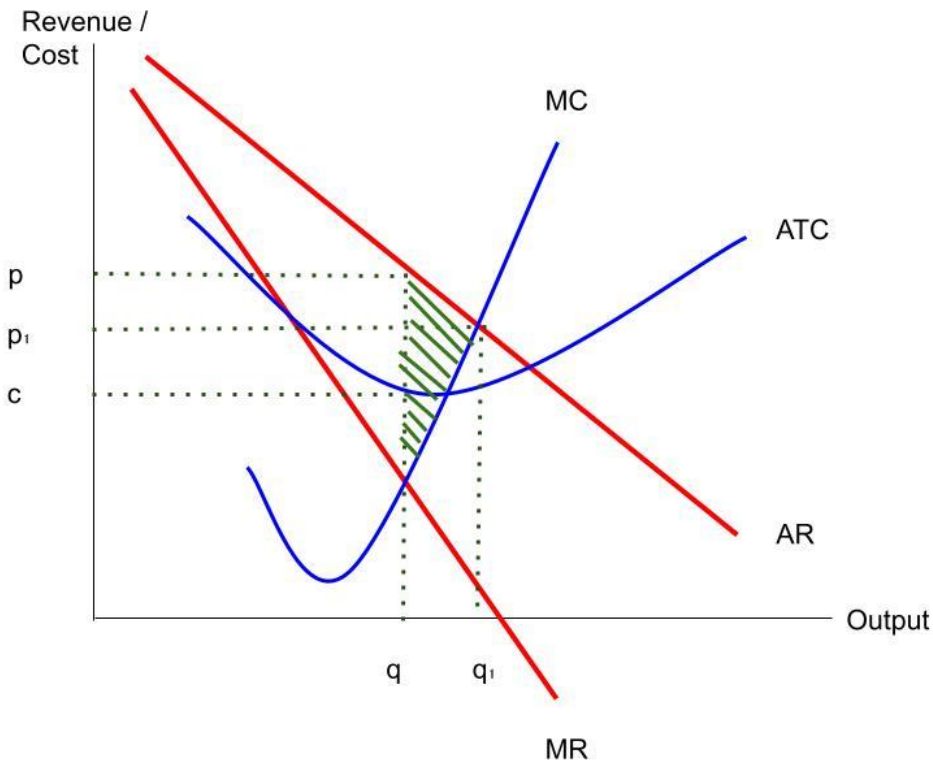
Question 6d (12 mark question)

Tutor's commentary

Note in the question the plural “concerns” is used. This means you should aim for two points for this question.

One way to think about this question is that the merger could lead to an increase in market power. What might market power be problematic, especially for consumers that the Competition and Markets Authority may want to protect?

One concern is higher prices of computer chips. Nvidia may be willing to pay £29.5bn for the acquisition of a “rival” to increase its market power, as there would be fewer substitutes to Nvidia’s computer chips. This allows Nvidia to become a price maker, allowing the firm to raise prices of computer chips to price p , above the allocatively efficient price p_1 in the diagram below. This leads to allocative inefficiency in the market for computer chips, reducing consumer surplus and creating a welfare loss shown by the green shaded area. This occurs because of underproduction of computer chips by $q_1 - q$. Consumers of computer chips include producers of cars and games consoles, who could see higher costs of production as a result of computer chip prices increasing.



However, Nvidia may not increase prices after the merger if the merger allows it to exploit economies of scale, such as spreading global advertising costs over a larger amount of output. Thus LRAC may fall after the merger, which could be passed on to consumers of computer chips with lower prices.

A second concern is less choice for firms reliant on computer chips after the merger. A reduction in choice could reduce the incentive for firms like Nvidia to improve the quality of their computer chips, as Nvidia knows there are fewer alternatives for customers to switch to. This could result in the capacity and speed of computer chips not improving or even degrading over time due to the lack of innovation. This could make buyers of computer chips, such as car and mobile phone producers, worse off as their devices may be slower. End consumers who buy the cars and mobile phones would suffer from slower devices.

However, Nvidia could argue that by increasing the price of computer chips after the merger due to its greater market power, it increases its profits and becomes dynamically efficient. This gives Nvidia more profit to reinvest in improving the quality of computer chips, so quality may rise after the merger.

Question 6e (15 mark question)

Tutor's commentary

For this question, we are thinking of methods to intervene with a good with a negative externality. We should start immediately thinking of policies mentioned in Section 1.4.1 of the course on government intervention. In particular the policies for demerit goods. These could include:

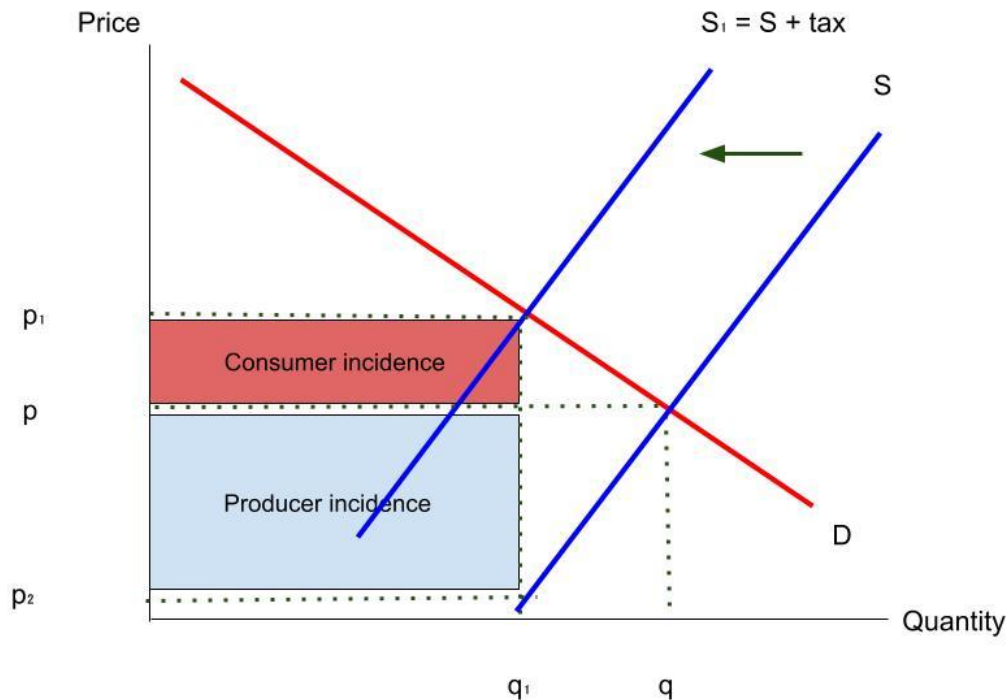
- Taxes.
- Information campaigns.
- Minimum pricing.
- Regulations.
- Tradable permits (though this may be more challenging to explain in this context).

and so on. You could also consider initiatives specific to this scenario of waste, such as a way to encourage or require recycling.

Note the question is about methods to bring down the amount of waste. So, it would be helpful to link the analysis back to its impact on the amount of waste.

Links to government intervention notes [part 1](#) and [part 2](#)

One policy is a tax on devices where most parts cannot be recycled. This shifts the supply of these devices left from S to $S+\text{tax}$ in the diagram below. This could apply to small items such as toasters, hairdryers and headphones. This increases the price of hard-to-recycle devices from p to p_1 , reducing the quantity from q to q_1 . The consumer incidence of the tax is shown by the upper area shaded in red, as the higher price from the tax is a burden for consumers, disincentivising purchases of such devices. This forces consumers to internalise the external harm of consuming such devices in terms of the electronic waste produced, such as soil and water pollution. So electronic waste may fall, reducing the extent to which non-recyclable electronic devices are overconsumed.



However, the price elasticity of demand (PED) may be inelastic for some goods that are not made of recyclable materials. Toasters and hairdryers may be seen as necessities for some people, e.g. someone who eats toast for breakfast each day, making their PED inelastic. In this case, a tax would not reduce the quantity demanded as significantly for such goods, remaining overconsumed. So electronic waste may not fall as much after the tax.

Another policy is for the government to fund an educational campaign through social media. This could inform consumers about how much waste comes from unrecycled electronic devices, sharing facts such as 24.9kg of electronic waste per person per year, nearly 10kg more than the EU average. This could shift demand left for wasteful electronic devices for consumers that care about reducing their environmental impact. This reduces the equilibrium quantity of such devices, reducing the amount of waste produced. The lower price and quantity would also reduce producer surplus. This encourages firms to switch to producing electronic devices that do not generate as much waste to prevent a fall in revenue.

However, some social media users may not care about the impact of electronic waste. A rational consumer may only care about private benefits and not about external harms from the waste from electronic devices such as water pollution. As a result, demand for wasteful electronic devices may not shift left as much following the information campaign. So electronic waste may not fall as much.

Section C

Question 7 (25 mark question on energy)

Tutor's commentary

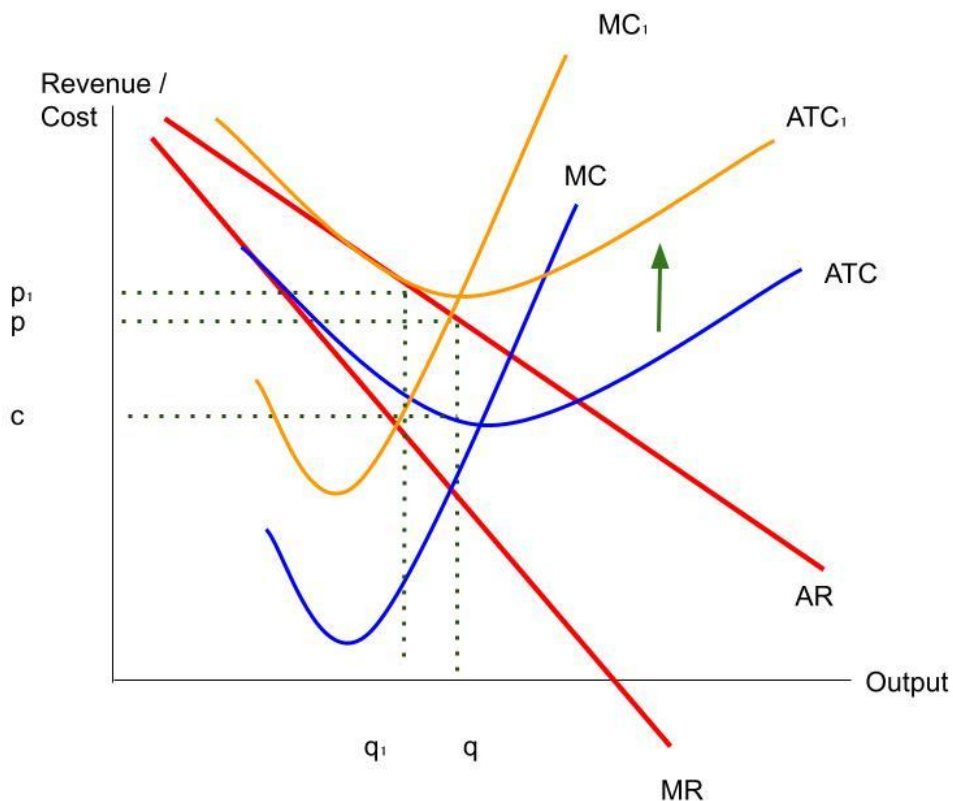
This is a question that enables you to bring in economic theory from all across the course.

If you are stuck for points in 25 markers, one way to resolve this is to consider which kinds of diagrams might be relevant. For example:

- Cost-revenue diagram: higher costs and prices for consumers.
- Labour market: less employment due to lower labour demand.
- [Not used in this essay but still relevant to the question] Supply and demand: Higher costs and the effect on producer and consumer surplus.

[Link to cost-revenue diagrams and shutdown notes.](#)

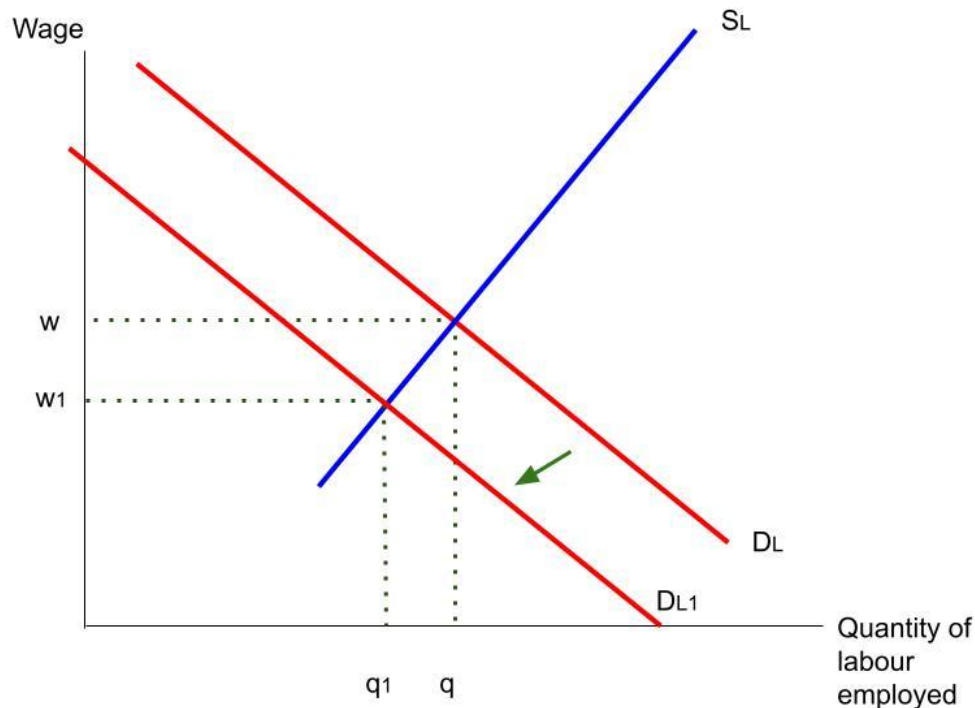
An increase in energy bills may increase a firm's production costs. For a steel-making firm such as Tata Steel, their production of steel is energy-intensive, requiring energy to create the high temperature needed to produce steel. Energy can be a fixed cost (to keep furnaces running independent of the level of output to avoid damage) and a variable cost (the more steel being produced, the more coal is typically needed to convert iron ore to steel). A higher fixed cost increases the steel firm's average cost and the higher variable cost increases the steel firm's average cost and marginal cost. So altogether, AC shifts up from ATC to ATC1 and MC shifts up from MC to MC1. This reduces Tata Steel's supernormal profit (SNP) from $(p-c)q$ to zero. The profit-maximising quantity of steel falls from q to q_1 . Steel firms may pass on higher costs to steel consumers with a steel price rise from p to p_1 . The lower SNP of Tata Steel could make Tata Steel less dynamically efficient, as it has less funds to invest in making steel production efficient or in improving steel quality. So production costs may not fall over time and steel quality may not improve over time.



However, Tata Steel is transitioning to producing “green steel”. This involves not only switching from coal to natural gas and hydrogen but also recycling more steel input and becoming more energy efficient. This could reduce steelmakers’ proportion of costs going to energy over time. So MC and AC would not rise as much if energy prices rise. So prices for steel do not rise as much and the steelmaker is more likely to remain dynamically efficient.

Higher energy costs could lead to a reduction in employment in the labour market for steelworkers. Steelmakers in the UK argue that high industrial electricity costs in the UK are higher than in France and Germany, rendering UK steelmaking internationally uncompetitive. Speciality Steel in Yorkshire has been put into liquidation for instance. Higher energy costs make a firm’s AC more likely to exceed its AR, resulting in the firm shutting down in the long run. Steel companies, having less demand for their product due to its higher price, or shutting down, may no longer need as many workers (derived demand). This shifts labour demand for steelworkers left from DL to DL1, reducing the wage from w to w_1 and employment from q to q_1 . The poverty rate among steelworkers may increase as steel may be the main employer in towns such as Port Talbot and Scunthorpe, leaving workers few alternative employers at which to find

work. Tata Steel has announced about 2000 jobs are being cut at its Port Talbot site, which could be the partial result of high energy prices.



However, steel firms may receive subsidies from the government to help cover the costs associated with higher energy prices. For example, steel firms receive separate subsidies such as the £500m announced for Tata. This prevents steel firms' AC from rising as much, as the higher energy prices may be counterbalanced by the subsidy. So firm shut down may be prevented in the long run and demand for steelworkers may not fall, keeping wages and employment at their original level.

Overall, higher energy prices are likely to increase steel firms' costs in the short run. This could reduce profits, employment and lead to firm shut down. This is because any energy subsidies are likely to be limited, given large subsidies could increase UK government debt above 100% and spending on debt interest. While steel firms may be incentivised to invest in energy efficiency in response to higher energy costs, this investment would further increase costs in the short run. This may only reduce the impact of higher energy bills in the long run, as the energy efficiency measures take effect.

Question 8 (25 mark question on contestability)

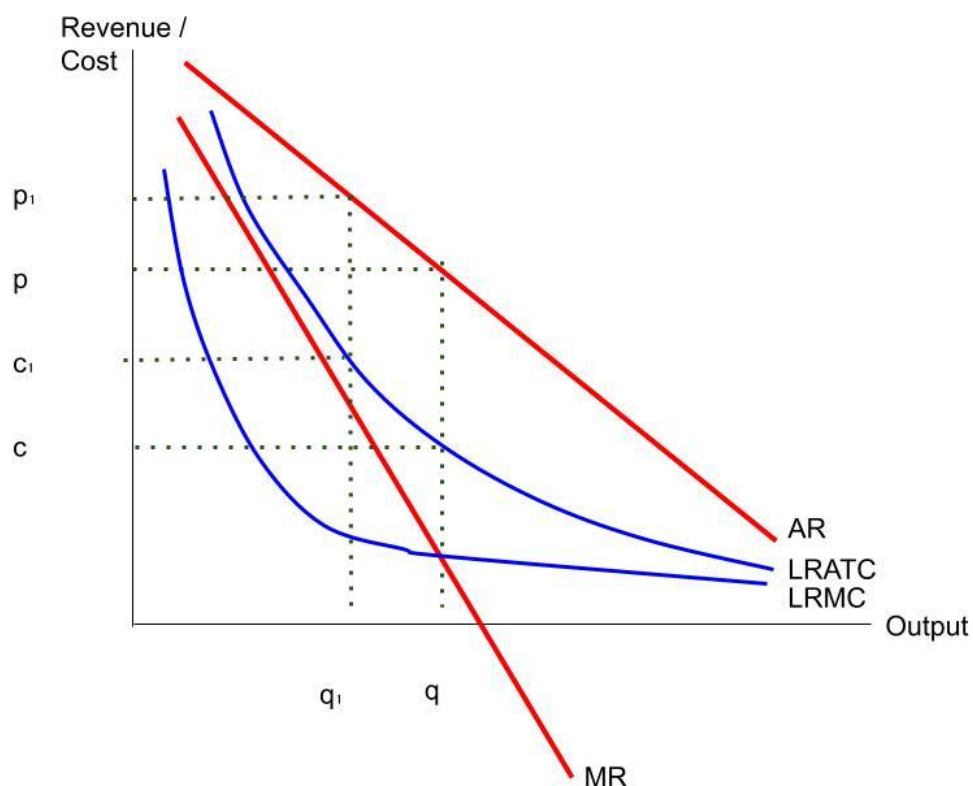
Tutor's commentary

For this question on contestability, it really helps to know an example of an industry that you know well. It could be a highly contestable industry with low barriers to entry or the opposite. In this example essay, I've picked Apple and the smartphone industry. This is a good example of an industry with high barriers to entry.

Also, it's important to be strategic in selecting your points for this question. Consider selecting points about which you can write a lot. Economies of scale are an excellent barrier to entry for this purpose.

[Link to contestability notes](#)

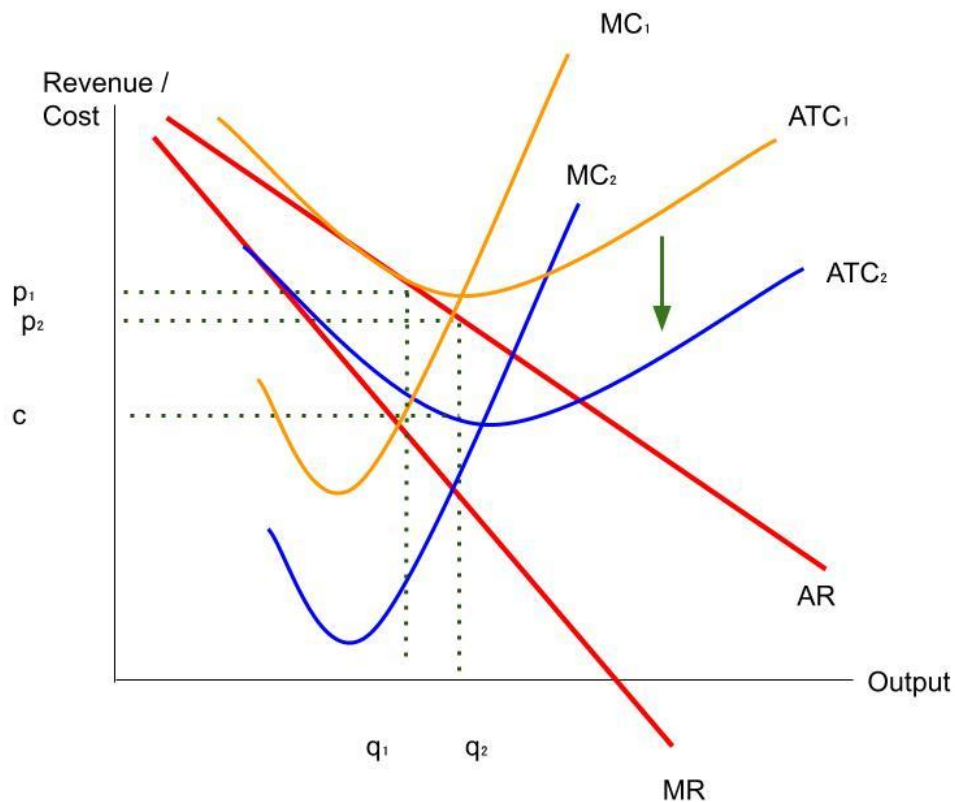
Contestability refers to the level of barriers to entry and exit in a market. The market for smartphones may have high barriers to entry, as there are significant economies of scale in smartphone production. The upfront cost of creating software for Apple's iPhone, such as the App Store and operating system, can be spread over a large number of users, leading to lower long-run average costs (LRAC) as output rises. Apple also benefits from marketing economies of scale, as it can spread its marketing costs from annual Apple Events over its larger user base, reducing LRAC as output rises. As a result, LRAC may be downward sloping for Apple. The incumbent Apple can use its economies of scale to keep prices low, at price p and output q (and LRAC at c). Yet if a potential entrant wanted to enter the market as a smaller smartphone maker with output level q_1 to begin with, their LRAC would be higher at c_1 and price higher at p_1 . The potential entrant is too small to benefit from economies of scale and so would have to price higher than Apple. This makes it more difficult for any potential entrant to smartphones to enter the market and attract customers from Apple.



However, there could be diseconomies of scale instead if Apple grows too large. Several teams for the operating system, the hardware and management may have to agree about introducing new functionality to the iPhone, slowing decision making and innovation for recent iPhones, reducing productivity growth. So LRAC rises as output rises. So LRAC could be lower for potential entrants compared to Apple, making it easier for new entrants to compete on cost and price, and making the market more contestable.

The smartphone industry is not a contestable market due to other barriers to entry, such as the level of vertical integration of Apple. Apple uses acquisitions to ensure it produces a greater proportion of parts of the iPhone. An example includes Apple acquiring Dialog, a semiconductor business, for US\$600 million. This allows Apple to save on costs for components of computer chips, as the “middle man” of Dialog no longer needs to be paid a share of the profits. This may enable Apple to make its M1 chip in house. This reduces and shifts down the average cost and marginal cost of Apple’s iPhones from AC_1 to AC_2 and from MC_1 to MC_2 . So AC and MC are lower for Apple than for a potential entrant. So Apple can price lower at p_2 than potential entrants who may price at p_1 . This makes it harder for new smartphone makers to attract new customers as Apple can outcompete them on cost and price. Apple can make a higher supernormal profit of $(p_2 - c)q_2$ whereas a new entrant that is not vertically integrated makes

only normal profit in this example. Thus vertical integration with suppliers reduces the incentive and ability for potential entrants to enter the market.



However, competition regulators could intervene to make sure vertical integration does not reduce contestability. Competition authorities could apply similar measures to the Microsoft-Activision Blizzard (AB) merger, where the CMA required a guarantee of supply of AB's games to Microsoft's competitor Sony. This kind of action could ensure other phonemakers have access to key inputs at the same cost as Apple even after vertical integration, making vertical integration less of a barrier to entry.

Overall, the smartphone market exhibits a low level of contestability (high barriers to entry). There are significant economies of scale in smartphones and while competition regulation could prevent vertical integration from being a barrier to entry, most technology acquisitions proceed without regulator intervention. Apple conducts a new acquisition every two to three weeks on average. So competition regulators do not usually intervene, perhaps because of regulatory capture where regulators are promised highly paid jobs in the private sector in the future in exchange for relaxed regulation. As a result, entry barriers remain high in the smartphone industry.

Links to other resources for Edexcel Economics A

More model answers: <https://tfurber.com/edexcel-economics-model-answers/>

Practice papers: <https://tfurber.com/edexcel-practice-papers/>

Resources by theme (including notes, model answers and more):

- Theme 1: <https://tfurber.com/theme-1-edexcel-economics/>
- Theme 3: <https://tfurber.com/theme-3-edexcel-economics/>

All Edexcel Economics A resources: <https://tfurber.com/edexcel-economics>