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Candidate surname

StemUp Model Solution

Other names

Pearson Edexcel
Level 3 GCE

Centre Number

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Monday 13 May 2019

Morning (Time: 1 hour 30 minutes)

Paper Reference **8EB0/01**

Economics B

Advanced Subsidiary

Paper 1: Markets, consumers and firms

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A, B and C.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Answer ALL questions

SECTION A

Read the following extracts (A and B) before answering Question 1.

Write your answers in the spaces provided.

Extract A

Float-ology: Ultimate relaxation at *The Sanctuary*

Floatation is a way of achieving deep physical and mental relaxation as well as having other benefits such as relief from chronic pain. When you float, you lie in a specially designed 2.5 m x 1.5 m pod filled with a 30 cm deep salt water solution. The 1,000 litres of water and the air inside the tank are heated to skin temperature and, with over 500 kg of Epsom salt dissolved in the water, you are able to float effortlessly without the burden of gravity acting on your body. Current publicity is very favourable regarding the mental and physical health benefits of floatation.

5

Donna and Danny set up a small business, *The Sanctuary*, more than five years ago. It is currently the only one of its kind in the county of West Yorkshire. The partners have been very successful, even paying off the full purchase costs of the pod. They are now planning to purchase a second pod, which will cost £20 020, despite the risk of losing business during installation.

10

The Sanctuary is open long hours; 10 am - 10 pm daily. Sometimes it opens as early as 6 am in order to provide greater flexibility for clients. Installing a second pod would increase its capacity. Variable costs are very low, at only £1 per client for a one hour session. The atmosphere in the pod must be maintained throughout the day but the initial set-up is expensive.

15

(Source: adapted from © Float-ology 2018)

Extract B

Selected financial data from *The Sanctuary*

	£
Fixed costs	34 720
Variable costs per one hour session	1
Price per one hour session	36

(Source: based on © Sanctuary Group 2018)



1 (a) What is meant by the term 'fixed costs'?

(2)

Fixed costs are costs that do not vary with the level of output in the short run, so they have to be paid even if nothing is produced, for example rent or the cost of buying the pod.

(b) Using Extract B, calculate the break-even point for *The Sanctuary*. You are advised to show your working.

(4)

Break-even point = fixed costs ÷ (selling price – variable cost per unit)

= £34 720 ÷ (£36 – £1)

= £34 720 ÷ £35 contribution per session

= 992 sessions (clients)

The Sanctuary must sell 992 one hour sessions to break even.



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Instead of purchasing the second pod outright, *The Sanctuary* is considering leasing the pod.

(c) Explain **one** likely benefit of leasing for *The Sanctuary*.

(4)

Leasing means renting the second pod for a fixed monthly payment instead of buying it, so The Sanctuary gets the use of new equipment without owning it, and repairs and maintenance are often included in the lease.

The pod costs £20 020, which is a large sum of money for a small business such as The Sanctuary to find in one go, especially as the partners have only just paid off the first pod.

By leasing, this large cash outflow is spread into smaller regular payments, which improves cash flow, means they do not need to take out a loan, and makes it easier to plan ahead as the costs are known.

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- (d) Using Extracts A and B, discuss whether the decision to open *The Sanctuary* for long hours was based on financial reasons.

(8)

The Sanctuary is open long hours, from 10 am to 10 pm every day, and sometimes from as early as 6 am. There are strong financial reasons for this. With only one pod and a price of £36, it can earn a maximum of £36 revenue per hour, so the more hours it is open, the more revenue it can bring in and the greater its earning potential. Extract B shows that most costs are fixed (£34 720) while variable costs are only £1 per session, so each session gives a contribution of £35. Because the atmosphere in the pod must be maintained throughout the day anyway, the extra cost of staying open an extra hour is very small. Opening for 12 hours means up to 12 sessions a day, so fixed costs are spread over more sessions and the break-even point of 992 sessions can be reached more quickly, in about 83 days at full capacity, after which almost all of the £35 per session is profit.

However, the long hours may be for non-financial reasons. Opening early and late gives greater flexibility for clients, so people who work long hours can float outside their own working hours, and more new clients may try the pod. This is about customer service and the health benefits of floating, such as relief from chronic pain.

Also, The Sanctuary is currently the only business of its kind in West Yorkshire, so it may be trying to build up its customer base and loyalty as much as possible before new entrants come into the market.

Overall, the decision is mainly financial, because high fixed costs and a tiny marginal cost make every extra hour profitable if it is booked. Even the non-financial reasons, such as flexibility and building loyalty, ultimately lead to more revenue, although this depends on demand: if the early and late sessions are rarely booked, the long hours add little revenue.



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(e) Assess the potential benefits for *The Sanctuary* of purchasing a second pod.

(12)

At the moment *The Sanctuary* has one pod, so it can only recoup its costs from one client at a time, limiting revenue to a maximum of £36 per hour, or £432 per day over its 12 opening hours. A second pod would double its capacity, so it could earn up to £864 a day. As variable costs are only £1 per session, each extra session adds £35 of contribution, so the £20 020 pod would be paid back after 572 extra sessions, which is about 48 days of full use.

A second pod would also reduce risk. If the existing pod breaks down or needs maintenance, the business currently cannot bring in any revenue at all. With two pods, it could keep trading, protecting its cash flow and its reputation with clients.

The Sanctuary is already well established. It has been trading for more than five years and the partners have paid off the full cost of the first pod, so they have a track record and loyal clients, which should make it easier to fill the extra capacity. Existing clients may bring a friend so that they can float at the same time, and current publicity about the health benefits of floatation is very favourable, so demand is likely to be growing.

It is also currently the only business of its kind in West Yorkshire. Extra capacity could allow it to meet demand at peak times instead of turning clients away, and could act as a barrier to entry, making it harder for a competitor to take its unmet demand.

However, the benefits may be smaller than expected. The business may need to close while the pod is installed, losing revenue and possibly clients. Having seen its success, competitors may set up in the area, which would reduce demand for both pods. *The Sanctuary* may already have reached its potential in terms of the number of clients it can attract, so the second pod may often be empty, and it would also raise fixed costs, increasing the break-even point.



P 5 8 3 2 5 A 0 7 2 0

We also do not know whether Donna and Danny would need to borrow money to buy the pod, as interest payments would reduce the benefit, or whether leasing would be cheaper.

Overall, the benefits are likely to outweigh the costs, but it depends on the time frame and on demand. In the short run it may be difficult to cover the extra costs and lost trade during installation, but if the business continues to be successful over several years, with sessions already selling well at peak times, the second pod should raise profit and reduce risk, so it is likely to be beneficial.

(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS



SECTION B

Read the following extracts (C, D and E) before answering Question 2.

Write your answers in the spaces provided.

Extract C

House prices rise at fastest rate since January, says Halifax bank

Halifax reported that UK house prices continued to rise, with data showing an increase of 2.3% from the second to third quarter of 2017. On an annual basis, this makes property prices 4.5% higher than the previous year. The average house price in November 2017 of £225 826 is the highest on record. This is an increase of £5 000 since the start of the year. 5

Halifax said the price increases were due to a lack in the supply of houses in the market because there is a shortage of land. The high employment rate has increased the demand for houses. At the same time homelessness is on the rise, 255,000 people were recorded without a home at the last count. 10

The Bank of England raised interest rates in November 2017 for the first time in 10 years in order to reduce the high inflation affecting UK households. The base rate increased from 0.25% to 0.5%, with many mortgage lenders reacting by immediately increasing the rates on their mortgage repayments. This prompted fears that homeowners could face significantly higher bills, which could also put off potential first-time buyers. 15

(Source: House prices rise at fastest rate since January, says Halifax - By Sophie Christie © The Telegraph, November 2017)

Extract D

£10bn new funding for Help to Buy Loan scheme

The government will invest a further £10bn in the Help to Buy Loan scheme, due to its popularity across the country. It works by the government providing a loan of up to 20%, which is repaid when the home is sold, or after 25 years, whichever comes first.

The Help to Buy Loan can be used by first-time buyers to purchase a new build property up to the value of £600 000, with a maximum loan of £120 000 (20%). It helps people buy a new build home with only a 5% deposit who would otherwise have been unable to afford to get on the property ladder. 5

The new funding means that the Help to Buy Loan scheme could help around 135,000 more first-time buyers to buy homes by 2021. This would bring the total number of households supported through the scheme since it began in 2013 to around 360,000. 10

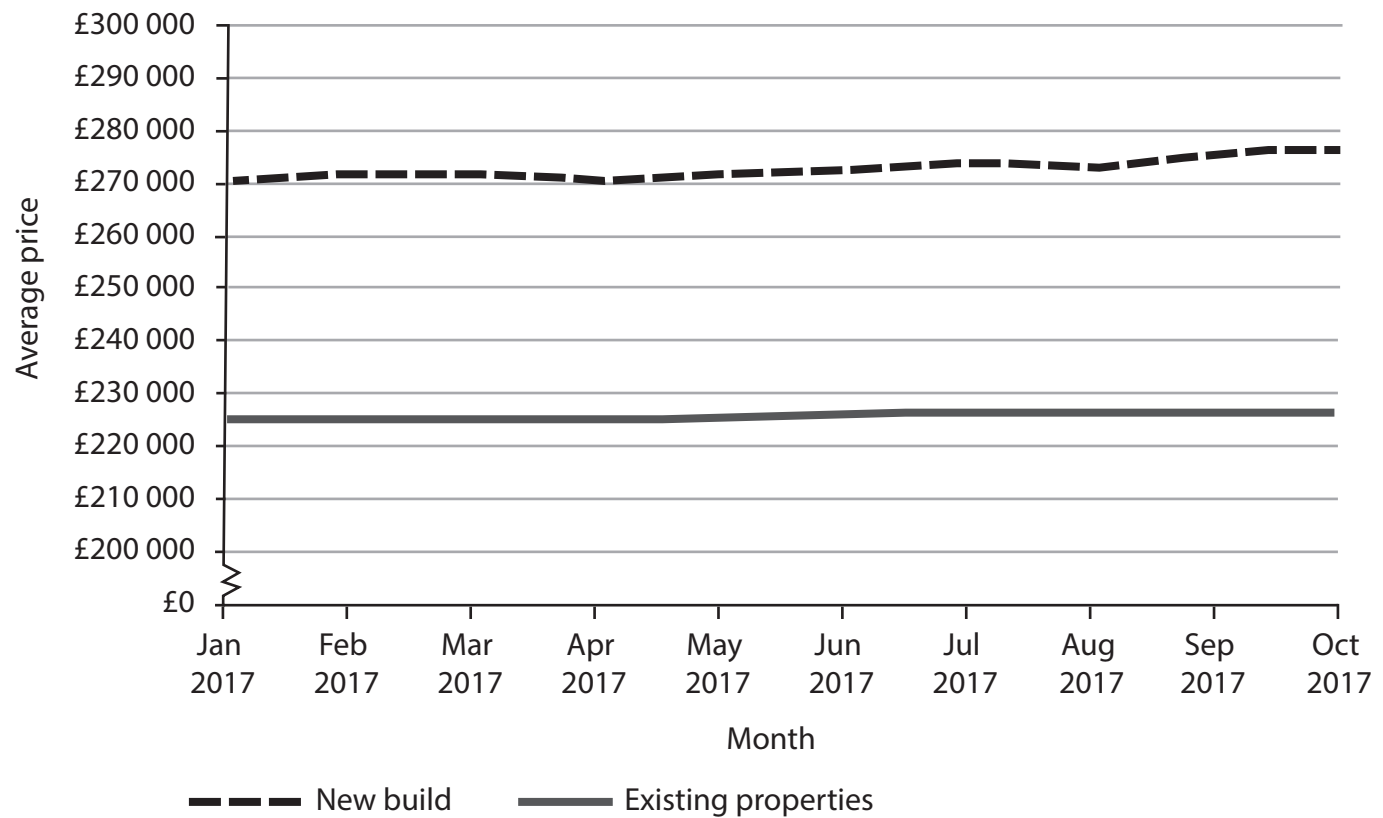
(Source: © Crown Copyright)



P 5 8 3 2 5 A 0 9 2 0

Extract E

Average price by property in the UK



(Source: © Crown Copyright)



2 (a) What is meant by the term 'supply'?

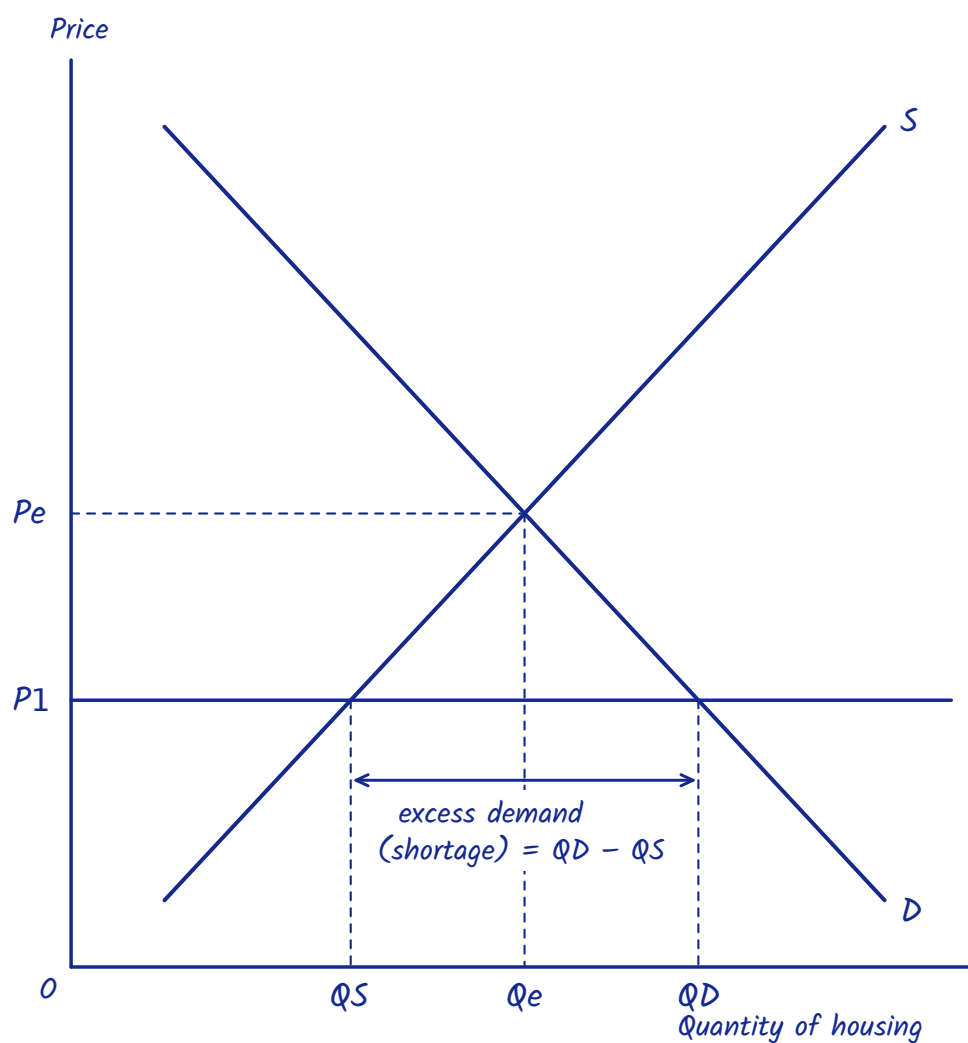
(2)

Supply is the quantity of a good or service that producers are willing and able to sell at a given price in a given time period.

The market for housing is not currently in equilibrium.

(b) Using a supply and demand diagram, illustrate the excess supply or demand created by the housing shortage.

(4)



At P_1 (below P_e) $Q_D > Q_S$, so there is excess demand.



P 5 8 3 2 5 A 0 1 1 2 0

(c) Using Extract C, explain the problem of scarcity.

(4)

Scarcity is the basic economic problem that there are limited resources to meet unlimited wants, so choices have to be made about what to produce and who gets it. In the housing market there are insufficient affordable houses to meet demand, because there is a shortage of land, while high employment has increased the demand for houses. As there are only enough resources (land) to build a finite amount of housing, many people miss out, so homelessness is on the rise, with 255,000 people recorded without a home at the last count.

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Help to Buy Loans are a type of government intervention.

- (d) Using the data in Extracts D and E, discuss the merits of this type of government intervention in dealing with market failure in the housing market.

(8)

Government intervention is action taken by the government to correct market failure in the free market. In the housing market, market failure exists because houses are expensive, leading to inequality in who can own a home and to rising homelessness. The Help to Buy Loan is a subsidy-type intervention, an alternative to regulation, indirect taxation or voluntary agreements.

The loan covers up to 20% of the price, so buyers need only a 5% deposit. On a £300 000 house, £60 000 could be put forward by the government and the buyer needs just £15 000. Extract E shows the average new build price was about £276 000 in October 2017, so a typical new build is well within the scheme, which helps people who would otherwise be unable to get on the property ladder.

The scheme appears effective: around 360,000 households are predicted to be helped by 2021, eight years after it began in 2013, including 135,000 more first-time buyers. As it only applies to new builds, it also gives builders an incentive to build more homes, increasing supply, which tackles the shortage directly.

However, homes up to £600 000 can be bought, more than double the average new build price shown at the end of the data, so some of the money may help better-off buyers who do not need it. The loans cost the government an extra £10bn, about £74 000 for each of the 135,000 households; this money has an opportunity cost, as it could be spent on education or health, or on building social housing.

Extract E also shows new build prices rising from about £270 000 to £276 000 while existing property prices stayed around £225 000 to £226 000, suggesting the extra demand may push up new build prices, reducing affordability. Some people may still struggle to find the 5% deposit or to repay the loan after 25 years, so government



P 5 8 3 2 5 A 0 1 3 2 0

grants may be more effective for the poorest.

Overall, Help to Buy has merits in helping first-time buyers, but as it mainly boosts demand rather than supply, it is only a partial solution to the market failure.

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(e) Assess whether a shortage of land is the main reason for rising house prices.

(12)

Halifax stated that the increase in house prices was due to a lack of supply of houses because there is a shortage of land. The average house price in November 2017 was £225 826, the highest on record, an increase of £5 000 since the start of the year and 4.5% higher than the previous year.

Resources are allocated by the price mechanism. Wants for housing are infinite, but land is a scarce resource, so it must be rationed by price. Because the demand for land is greater than the supply of land, the price of land rises, which reduces the quantity demanded until equilibrium is reached. The price of land is one of the main factors in determining the price of a house, so higher land prices raise builders' costs and are passed on in higher house prices. Supply of housing is also price inelastic, because it takes time to find land, gain planning permission and build, so increases in demand lead mainly to higher prices rather than more houses.

However, there are other reasons on the demand side. The high employment rate means more consumers have higher disposable incomes and job security, so they are able to demand more housing and obtain mortgages, shifting demand to the right.

Government intervention such as the Help to Buy Loan scheme, with £10bn of new funding to help 135,000 more first-time buyers, helps people to afford housing, but this increases demand rather than supply, which pushes prices up further.

Although interest rates rose in November 2017, the base rate is still only 0.5%. Low interest rates make mortgages cheaper and deter people from saving, as they are not likely to receive a good return, so they may invest in housing instead, including buy-to-let, raising demand. High inflation is also likely to lead to higher costs of materials and labour for builders of housing, and this may be passed on in the form of higher house prices.



P 5 8 3 2 5 A 0 1 5 2 0

In evaluation, the importance of land depends on the area. In places such as London, where land is very scarce, the shortage of land is likely to be the main factor, while elsewhere demand factors may matter more. The recent rise in interest rates may reduce demand in the future, which suggests that demand factors are significant, as prices could slow even though the land shortage remains.

Overall, although a shortage of land is likely to be a major factor, as it limits supply and makes supply inelastic, it is probable that rising house prices are caused by a combination of factors, with strong demand from high employment, low interest rates and Help to Buy acting together with the restricted supply.

(Total for Question 2 = 30 marks)

TOTAL FOR SECTION B = 30 MARKS



SECTION C

Read the following extract (F) before answering Question 3.

Write your answer in the space provided.

Extract F

Yet more growth in the coffee shop market

Costa Coffee, Starbucks Coffee Company and Caffè Nero remain the UK's leading chains in the coffee shop market. They added 445 new shops in 2016 to reach 6,940 branded outlets between them.

There is an estimated total of 22,845 coffee shop outlets in the UK, a growth of 6% in 2016, with an annual turnover of £3.7bn. 5

The UK has become a nation of coffee drinkers, with coffee shop visitors purchasing an estimated 2.3bn cups of coffee per year. Consumers are more knowledgeable and empowered with choice than ever before. Leading chains continue to respond to this trend with improved store experiences and products. The desire for premium quality and speciality coffee allows for higher prices. 10

With new coffee shops opening almost weekly, it is predicted the total UK coffee shop market will exceed 32,000 outlets and a turnover of £16bn by 2025, with an annual outlet growth of 6%.

After 18 years of considerable continued growth, the coffee shop market is one of the most successful in the UK economy. 15

(Source: adapted from © World Coffee Portal Ltd 2018)



P 5 8 3 2 5 A 0 1 7 2 0

- 3 The functions of the price mechanism to allocate resources are rationing, incentives and signalling.

Evaluate which of these functions is likely to have had the biggest impact on the coffee shop market in the UK.

(20)

The price mechanism allocates resources through the interaction of demand and supply. It has three functions. The rationing function applies because resources are scarce and wants are infinite: if quantity demanded is greater than quantity supplied, the price increases to reduce the quantity demanded until equilibrium is reached, so the good goes to those most willing and able to pay. The signalling function occurs when a change in price signals information to producers and consumers, so a price increase signals producers to increase production, as they can obtain higher profits. The incentive function is when higher prices and profits act as an incentive to producers to expand output and for firms in other markets to leave those markets and move into markets with higher prices because of the profits that can be made.

Extract F shows that demand for coffee has grown strongly. The UK has become a nation of coffee drinkers, buying an estimated 2.3bn cups a year, with an annual turnover of £3.7bn, roughly £1.60 per cup. As shown in the diagram, an increase in demand shifts D to D_1 , so at the original price P_1 there is excess demand, and the price rises from P_1 to P_2 , while quantity extends along the supply curve from Q_1 to Q_2 .

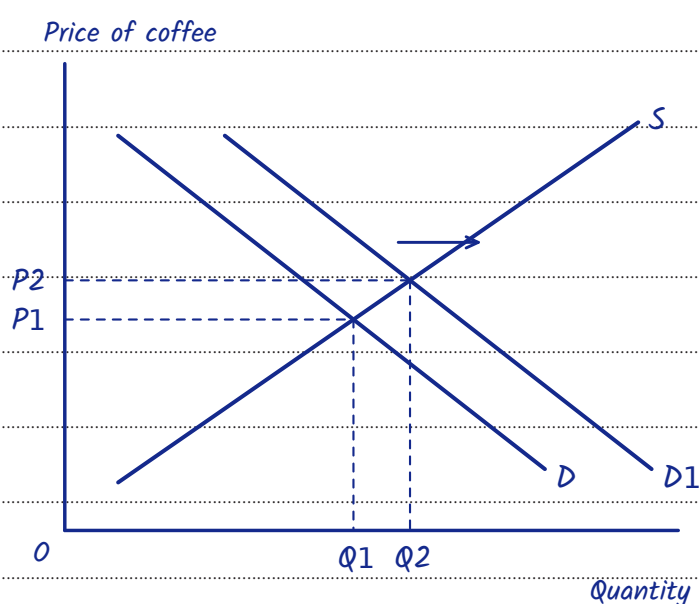
The rationing function can be seen in the higher prices for premium quality and speciality coffee. Consumers are more knowledgeable and empowered with choice, and the desire for premium coffee allows for higher prices, which ration these products to the consumers who value them most. However, with new coffee shops opening almost weekly, supply has expanded rather than being fixed, so rationing by high prices is likely to be only short term. The rationing function is probably the least important, as there



is little evidence of a shortage of coffee shops.

The signalling function can be seen in the actions of existing producers. Higher prices and growing turnover signal to firms that consumers want more coffee shops, so the leading chains, Costa Coffee, Starbucks and Caffè Nero, added 445 new shops in 2016 to reach 6,940 branded outlets, an increase of about 6.9%. They have also responded to the trend with improved store experiences and products. This shows that firms are reallocating resources towards what consumers want.

The incentive function seems to have had a very large impact. The total number of outlets is an estimated 22,845, a growth of 6% in 2016, and only about 30% of



these belong to the three leading chains, so many new firms and independents have been attracted into the market by the profits that can be made. With new coffee shops opening almost weekly, the evidence suggests more producers are entering the market. This trend looks set to continue, with more than 32,000 outlets and a turnover of £16bn predicted by 2025, and after 18 years of considerable continued growth the coffee shop market is one of the most successful in the UK economy.

However, all three functions of the price mechanism are linked and are likely to be present in the UK coffee shop market at the same time. A rise in price rations the existing supply, signals that demand has grown and gives the incentive to expand, so it



is hard to separate their impacts. Some of the growth may also not be due to price at all; firms may enter because coffee shops have low barriers to entry, and the big chains may open new outlets to gain market share and block competitors rather than in response to price signals. The growth in outlets is also partly forecast, so the predictions for 2025 may not happen if the market becomes saturated or if a recession reduces consumer spending on luxury products such as speciality coffee.

The extent of each function also depends on the time period. In the short run, when the number of coffee shops is fixed, rationing is most important; in the long run, as firms can open new outlets, signalling and incentives dominate. As the extract describes 18 years of continued growth, the long-run functions are more relevant.

In conclusion, given the rate of increase in outlets and turnover and the long-term trend, it seems likely that the incentive and signalling functions have had the biggest impact on the UK coffee shop market, with the incentive function the most important as it has drawn so many new producers into the market. Rationing has had a smaller, short-term impact on premium products. However, it depends on whether the market trends continue as forecast as to which function is most dominant: if the market becomes saturated, prices and profits may fall and the signalling function would then work in reverse, encouraging firms to leave.

(Total for Question 3 = 20 marks)

TOTAL FOR SECTION C = 20 MARKS
TOTAL FOR PAPER = 80 MARKS

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