

Examiners' Report
June 2013

GCE Economics 6EC01 01

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Introduction

Overall, the paper was well received and it was pleasing to note a good standard of responses. Indeed, it reflects improved use of diagrammatic analysis. There were a significant number of superior answers which scored very high marks, particularly in the supported choice section of the paper. Very few candidates struggled to answer at least some of the questions on the paper.

Most candidates completed the paper in the time available though some struggled to develop their answers for the very last question. It is important to practise past unit 1 papers under timed conditions to strengthen exam skills. The performance on individual questions is considered in the next section of the report and there are two examples of candidate work for each one. These examples act as a guide as to why a question was well answered and also on how to improve further.

Section A: supported multiple choice questions

Most candidates found this method of testing highly accessible. The mean score for the supported multiple choice questions was 22.99 marks, more than 1 mark higher than the June 2012 mean of 21.77. In both of these series candidates scored highly compared to previous series. This appears in part, to reflect greater use of relevant diagrammatic analysis to support answers, particularly for Q2 (increase in price of eggs), Q3 (producer surplus), Q4 (derived demand for labour), Q6 (removal of government rail subsidies) and Q7 (external costs from a stone quarry).

The key to success involves defining the main concept(s) in the question (awarded 1 or 2 marks) and applying appropriate economic theory and analysis (usually awarded up to 2 marks).

Annotation of diagrams and tables is a good strategy, for example, Q1 (specialisation and production possibilities), Q3 (producer surplus), Q4 (the labour market for app programmers), Q5 (Income elasticity of demand) and Q7 (External costs from a stone quarry). In addition, Q2, Q6 and Q8 offered scope for candidates to introduce diagrammatic analysis as a means of demonstrating their knowledge and understanding of the issues at hand.

The foundation of this paper is an understanding of the price mechanism model and its limitations. Any suitable opportunity to apply the model should be taken. In order to maximise candidate performance it is possible to achieve the full 3 explanation marks even when an incorrect option is selected. This occasionally arose, particularly Q8 (market failure in education).

Some candidates gained marks by using the rejection technique. Up to 3 marks are available for successfully eliminating 3 incorrect options (provided that three separate reasons are offered). There seemed to be an improvement in the use of the rejection technique compared to previous examination series, although a simple reversal of an incorrect option is insufficient to gain a mark. It requires candidates to explicitly state the option key being rejected and then to offer an appropriate explanation. Unfortunately, some candidates still fail to identify the incorrect option key and so the examiner may not be aware that the rejection technique is being offered.

Several examples of how to successfully eliminate incorrect options are provided in the candidate responses shown in the report. A certain skill is required for this and it is important to practise the technique. As mentioned earlier, marks are not awarded for responses that simply reverse the incorrect option sentence without further explanation. Some value must be added to the answer. The mark scheme offers guidance on how to reject incorrect options.

Note it is perfectly acceptable to use a combination of techniques for securing the 3 explanation marks, for example, explaining the correct answer, diagrammatic analysis and eliminating one or more incorrect answers.

Section B: data response questions

The data response questions have a substantial weighting for evaluation marks (16 out of 48 marks). Consequently, it is vital that candidates make evaluative comments when required by the question. A 14 mark question comprises 6 evaluation marks (2+2+2) and a 12 or 10 mark question comprises 4 evaluation marks (2+2). An 8 or 6 mark question includes 2 evaluation marks. Attention should be directed to the quality of written communication (QWC), especially in those questions identified by an asterisk in the question paper. Here, candidates should attempt to develop a coherent argument and take into account grammar and presentation.

Although no explicit marks are awarded for QWC, it forms part of the overall impression that examiners take into account when awarding marks. Both data response questions were accessible to candidates. Question 9 (The price of cocoa) was a more popular choice with most candidates selecting this, compared to Q10 (The proposed expansion of Heathrow Airport). The scores for these questions indicated they were comparable in terms of the demand placed upon candidates and in the marking process. A higher mean score was recorded for Q9 than Q10. This was due to a significant difference in the quality of answers for the first question (a). In Q9(a) many responses offered suitable diagrammatic analysis of the reasons for the decrease in cocoa prices over recent years, shifting both demand and supply curves accurately. However, in Q10(a) many responses offered few economic reasons for the forecast increase in passenger demand at Heathrow Airport over the next few years.

Finally, an attempt has been made to break down and justify how the marks were awarded in the candidate responses used in this report. One should note however, that the answer to each question is really considered in its entirety rather than relying solely upon the mechanical breakdown of individual points. The latter exercise is for the benefit of candidates and teachers reading this report as to how the mark scheme is interpreted in practice. The examiner develops an impression of the quality of each response and uses the mark scheme as a guide to award marks accordingly.

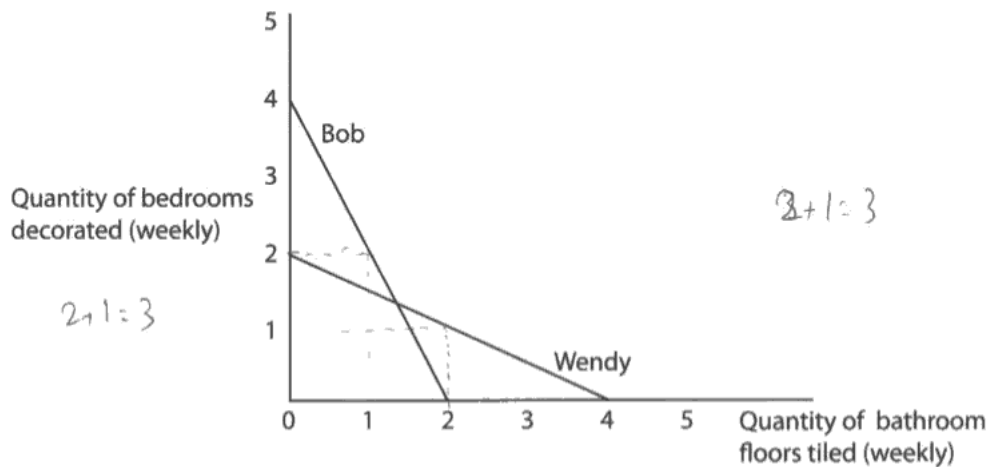
Question 1

The question on specialisation and production possibilities proved to be surprisingly difficult for many candidates. Incorrect option C was a popular choice, where candidates mis-interpreted the opportunity cost calculations for Bob and Wendy in decorating a bathroom floor. However, marks could still be gained by defining production possibilities and specialisation of labour. A further mark could be achieved by stating that Bob should specialise in decorating bedrooms and that Wendy should specialise in tiling bathroom floors in order to maximise their joint output. Stronger answers used the figures in the diagram and identified that total output could increase from 3 to 4 decorated bedrooms and tiled bathroom floors.

Section A: Answer all the questions in this section

You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1



The diagram shows the weekly production possibilities of two builders, Bob and Wendy. They **each allocate half** their working time to decorating bedrooms and the **other half** to tiling bathroom floors.

From this information it can be deduced that

(1)

- A the opportunity cost of decorating a bedroom is the same for both builders
- B Wendy can decorate more bedrooms and tile more bathroom floors than Bob in a week
- C the opportunity cost of tiling a bathroom floor is lower for Bob than for Wendy
- D Wendy and Bob could increase their combined total weekly output through specialisation

Answer

0

Specialisation is when each worker carries out a single task that they are good at to increase overall output.

At present - Bob decorates 2 bedrooms and tiles 1 bathroom } 3 of each completed
- Wendy tiles 2 bathrooms and decorates 1 bedroom }

Wendy is better at tiling and Bob at decorating if they devoted all of their time to their best task. ∴ Wendy tiles 6 floors

Bob decorates 6 bedrooms

output is increased by 1 in floors & bedrooms.

B is wrong as Bob can decorate more bedrooms than Wendy in a week ($4 > 2$)

A is wrong as the cost for Wendy is 2 floors but the cost for Bob is 0.5 floors
 $0.5 \neq 2$



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Examiner Comments

This answer achieved 4 out of 4 marks.

Correct option D (1 mark). An explanation of specialisation of labour (1 mark) is supported with figures to show how this could lead to an increase in total output of bedrooms decorated and bathroom floors tiled from 3 to 4 of each per week (1 mark). The candidate makes clear that Bob should concentrate his efforts on decorating bedrooms and that Wendy should concentrate on tiling bathroom floors. Rejection of incorrect option B is successfully undertaken by stating the output figures involved (1 mark).



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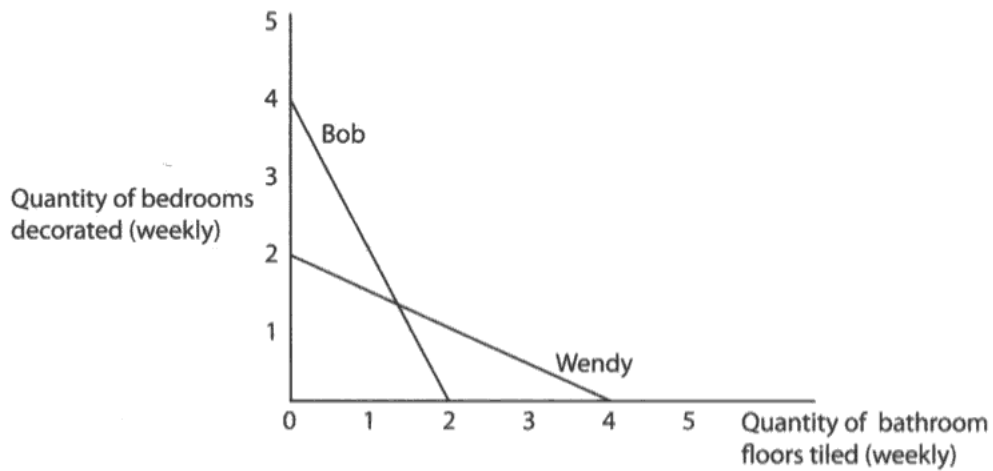
Examiner Tip

Use the data provided in rejecting incorrect options. For example, many candidates failed to secure a mark in rejection of option B by not referring to the number of bedrooms decorated and bathrooms tiled by Wendy and Bob. It is clear that Bob can decorate up to 4 bedrooms a week whereas Wendy can only decorate 2 bedrooms a week.

Section A: Answer all the questions in this section

You should spend 35 minutes on this section. Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1



The diagram shows the weekly production possibilities of two builders, Bob and Wendy. They **each allocate half** their working time to decorating bedrooms and the **other half** to tiling bathroom floors.

From this information it can be deduced that

(1)

- A the opportunity cost of decorating a bedroom is the same for both builders
- B Wendy can decorate more bedrooms and tile more bathroom floors than Bob in a week
- C the opportunity cost of tiling a bathroom floor is lower for Bob than for Wendy
- D Wendy and Bob could increase their combined total weekly output through specialisation

Answer



Explanation

(3)

Opportunity cost is the alternative forgone when making a choice. Specialisation occurs when a person repeatedly does a task and becomes extremely good at it. Division of labour is the splitting up of a single job into small jobs to increase specialisation. In this case it can be seen that Bob is better at decorating bedrooms and Wendy is better at tiling floors. Currently in a week, Bob decorates 2 bedrooms and tiles 1 floor while Wendy decorates 1 bedroom and tiles 2 floors so total output is 6 units. If Bob specialises in decorating bedrooms and Wendy specialises in tiling floors then Bob would decorate 4 bedrooms and while Wendy would tile 4 floors increasing weekly output to 8. Production possibility frontier shows how different combinations of economic goods can be produced given that all resources are fully and efficiently used.



ResultsPlus

Examiner Comments

This answer achieved 4 out of 4 marks. Correct option D (1 mark).

This is an answer which defines specialisation of labour in a more developed way (1 mark) and then proceeds to use the data in the graph to show that Bob should concentrate on decorating bedrooms and Wendy on tiling bathroom floors (1 mark). In doing so, total combined output increases from 6 to 8 rooms per week (1 mark). A definition of a production possibilities curve is also awarded (1 mark).



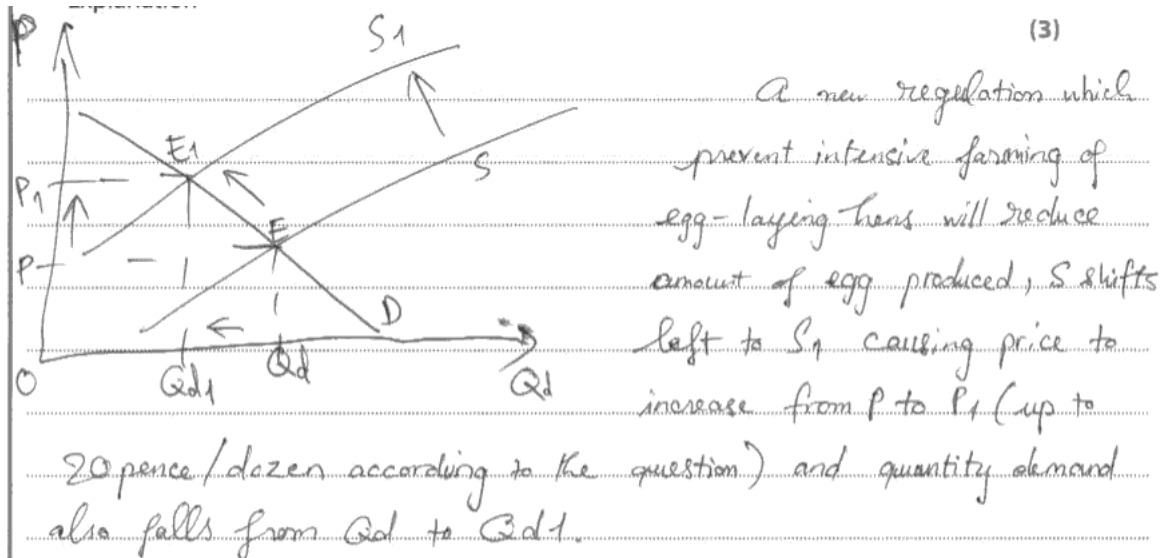
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Examiner Tip

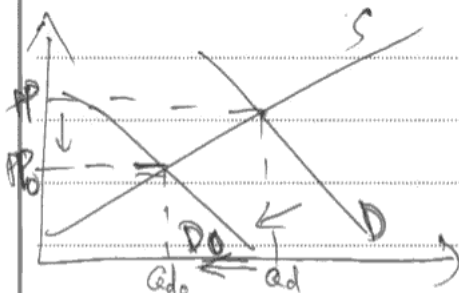
Use the data provided in supported choice questions as there is usually one or two application marks available.

Question 2

This question was generally well answered with many candidates offering diagrammatic analysis to show the effects of new regulations that reduce intensive farming of egg-laying hens and so leads to an increase in the price of eggs. It was quite common for candidates to successfully use the rejection technique in this question, particularly for incorrect option A.



A is wrong because scares that eating eggs might be unhealthy will reduce demand, D will shift left like the diagram below:



Price will fall from P to P_0 if D shifts left, not increase so correct answer is not A.



ResultsPlus Examiner Comments

This answer achieved 4 out of 4 marks.

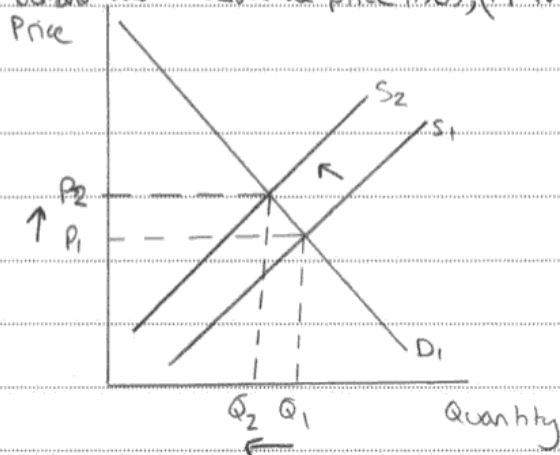
Correct option D (1 mark). A suitable diagram of the egg market depicting a decrease in supply of eggs and an increase in price from P_e to P_1 (1+1 marks) is supported by a rejection of incorrect option A (1 mark). It is a good example of how to use the rejection technique to gain a mark.



ResultsPlus Examiner Tip

Always state the incorrect option key when using the rejection technique as the candidate has done in this case (option A).

New regulations on intensive farming for eggs would decrease supply and therefore cause a rise in price. A rise in price would cause less demand and therefore the price rises, (P_1 to P_2).



ResultsPlus

Examiner Comments

This answer achieved 3 out of 4 marks.

Correct option D (1 mark). A brief explanation and relevant diagram of the impact of new regulations on the egg market is provided. It shows a decrease in supply and increase in price from P_1 to P_2 (1+1 marks). However, the answer requires more development. This could be achieved by explaining how the regulations would increase production costs for egg farmers who then try and pass this on to their customers by higher prices.

Another way to gain marks is through application to the context of the question. In this case candidates could refer to organic farming or free range farming which means that each hen has more space to move about in and so increases production costs. Less intensive egg-farming means lower yields per acre of land.



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Examiner Tip

Apply to the context of the question, that is, refer to less-intensive egg farming and how it might increase production costs for farmers. This approach is worth a mark.

Question 3

The question on producer surplus proved to be highly accessible to most candidates. Many annotated the diagram depicting the market for potatoes by shifting the demand curve outwards and identifying the new producer surplus and equilibrium price.

- Producer surplus is what a producer gets above what they are willing to sell at.
- It is the area below the price level and above the supply curve.
- Original producer surplus = $P_e Y X$
- New producer surplus = $P_1 Y M$
- Change in producer surplus = $P_1 P_e X M$
- price will rise because the demand curve will shift to the right.



ResultsPlus Examiner Comments

This answer achieved 4 out of 4 marks.

Correct option B (1 mark). The candidate successfully explains the answer through annotation of the diagram. The original producer surplus and new area of producer surplus are clearly identified (1+1 marks). The demand curve is also shifted outwards to D1 and the new equilibrium price identified as P1 (1 mark).

The candidate proceeds to explain the answer further despite full marks already being secured. Note that a definition mark of producer surplus would also be awarded if full marks had not already been achieved (the area below the equilibrium price line and above the supply curve).



ResultsPlus Examiner Tip

Be prepared to annotate diagrams shown in the question and offer a key to explain what is going on.

Producer surplus is the difference between the amount a producer receives from supplying a good and the minimum price they are willing to receive.

Producer surplus increases from triangle P_eXY on the diagram to P_1BY .

Not D because consumer surplus also increases from triangle P_eXZ to triangle P_1BA .



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Examiner Comments

This answer achieved 3 out of 4 marks.

Incorrect option D (0 mark). A correct definition of producer surplus (1 mark) is supported by identifying its original area P_eXY (1 mark) and its new area P_1BY (1 mark). The explanation is quite sound. Unfortunately the candidate has made a mistake by selecting option D in the answer box despite properly rejecting it in the explanation. Only three explanation marks are available.



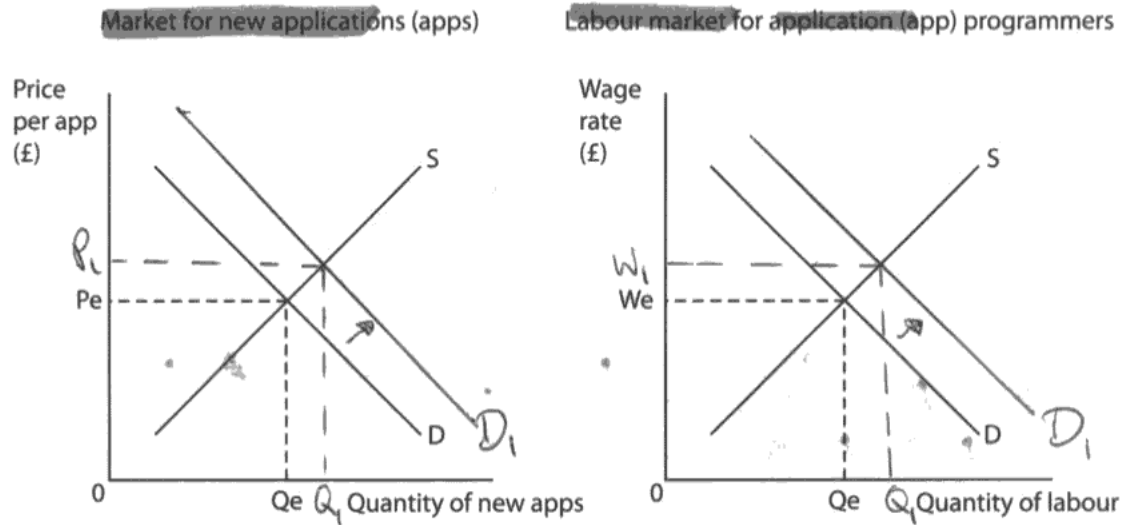
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Examiner Tip

Be careful to check your answers so that mistakes can be corrected.

Question 4

The question on the labour market for app programmers proved to be highly accessible to most candidates. As with the previous question, the best answers annotated the diagrams provided.



The diagrams show the market for new apps (software used on mobile phones and tablet computers) and the labour market for app programmers.

Other things being equal, an increase in the demand for new apps is most likely to

(1)

- A affect the wage rate of app programmers
- B decrease the demand for app programmers and mobile phones
- C decrease the supply of app programmers
- D decrease the total revenue of tablet computer manufacturers

Answer

A

Demand is the amount consumers are willing and able to buy at any given price. As demand increases for Apps, ~~the~~ the quantity increases from Q_0 to Q_1 and the price for app increases from P_0 to P_1 . Because the quantity increases, companies need more programmers in order to meet their new demand. This means that the demand for labour also increases and so the quantity of labour increases from Q_0 to Q_1 and the Wage rate will also increased from W_0 to W_1 . The labour market is a derived demand and derives from the demand of the market (in this case, the apps market.) which is why when the demand for apps increases so does the demand for labour.



ResultsPlus

Examiner Comments

This answer achieved 4 out of 4 marks.

Correct option A (1 mark). Correct annotation of the diagrams, particularly the labour market diagram, depicting an increase in the demand curve of D_1 , a higher wage rate of W_1 and a greater quantity employed of Q_1 (1+1 marks). An explanation of the demand for labour being derived from the demand for the product it makes (derived demand) covers the key concept in the question (1 mark).

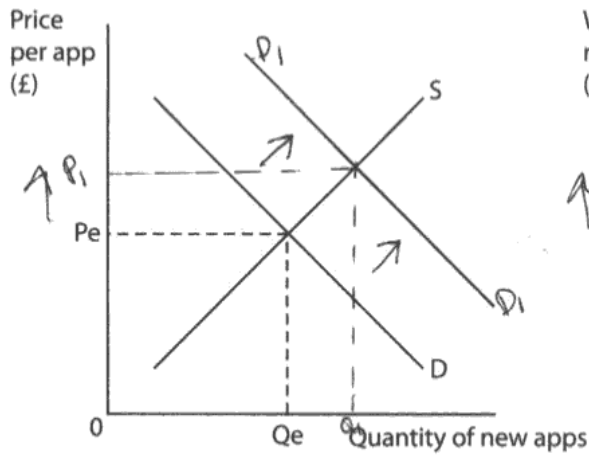


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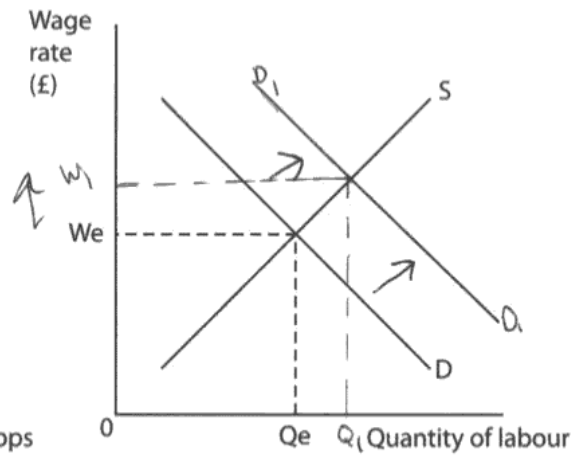
Examiner Tip

Consider explaining the key economic concept behind the question. In this case it is the derived demand for labour.

Market for new applications (apps)



Labour market for application (app) programmers



The diagrams show the market for new apps (software used on mobile phones and tablet computers) and the labour market for app programmers.

Other things being equal, an increase in the demand for new apps is most likely to

(1)

- A affect the wage rate of app programmers
- B decrease the demand for app programmers and mobile phones
- C decrease the supply of app programmers
- D decrease the total revenue of tablet computer manufacturers

Answer

A

An increase in demand for new apps will shift the demand curve to the right $D \rightarrow D_1$, therefore increasing the quantity of new apps and the price per app. As a result the demand for labour will increase $D \rightarrow D_1$, and therefore the quantity of labour and wage rate will increase.



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Examiner Comments

This answer achieved 3 out of 4 marks.

Correct option A (1 mark). The candidate explains and annotates the diagrams provided, in particular, shifting the demand curve for labour to D_1 , showing the increase in wage rate to W_1 and employment to Q_1 (1+1 marks). Further development is required, for example, an explanation of the derived demand for app programmers, to secure another mark.



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Examiner Tip

Be prepared to annotate diagram(s) provided in the question.

Question 5

The question on income elasticity of demand recorded the highest mean mark of all the supported multiple choice questions on the paper. It required candidates to distinguish between normal and inferior goods, using the data provided on cereals in Sri Lanka and the UK.

- A the demand for tobacco is income inelastic in both countries ✗
- B the demand for fish is more responsive to changes in income in both countries than the demand for tobacco ✗
- C cereals are a normal good in Sri Lanka but an inferior good in the UK ✓
- D a 10% increase in income would cause a more than 10% increase in demand for fish in both countries

Answer

C

Explanation

(3)

$$YED = \frac{\% \Delta \text{Quantity demanded of good}}{\% \Delta \text{ incomes}}$$

An inferior good has negative ^{YED} ~~YED~~ so its ^{YED} ~~YED~~ is less than 0 in which the UK's it -0.02. A normal good has positive ~~YED~~ YED and its YED is > 0 so in Sri Lanka cereals YED is 0.46 which is positive and more than 0 so is a normal good. It cannot be D as an increase in incomes of 10% will lead to 6.2% increase in demand of fish in Sri Lanka and 3.6% increase in demand of fish in UK for this to be true the YED needs to equal 1.
(Total for Question 5 - 4 marks)



ResultsPlus

Examiner Comments

This answer achieved 4 out of 4 marks. Correct option C (1 mark).

The formula for income elasticity of demand is provided (1 mark), followed by an explanation of inferior and normal goods (1 mark). The application to cereals being a normal good in Sri Lanka with a YED of 0.46 and an inferior good in the UK with a YED of -0.02 is also credited (1 mark).

The attempt to reject option D is not quite correct. The candidate should have mentioned that for this option to be correct then income elasticity of demand for fish had to be above 1.0 in both countries. The very last sentence refers to income elasticity of demand being equal to 1.0 or unitary. This reveals how careful one has to be in rejecting incorrect options.



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Examiner Tip

Be careful using the rejection technique as answers have to explain why the key being knocked out is incorrect.

Income elasticity of demand is the ⁽³⁾ responsiveness of the quantity of good demanded to a change in income.

A normal good is the good that if the income of people rise, they choose to purchase more. An inferior good is the other way round.

Normal goods have positive income elasticity of demand, when inferior goods have negative. Correct answer is C



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Examiner Comments

This answer achieved 3 out of 4 marks.

Correct option C (1 mark). The candidate defines income elasticity of demand (1 mark) and proceeds to explain the meaning of normal and inferior goods (1 mark). Note that a maximum of 2 marks are available for definition of economic concepts. Unfortunately there is no application to the information in the table, for example, use of the figures for cereals in Sri Lanka and UK.



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Examiner Tip

Always apply economic concepts to the context of the question. There is usually at least one application mark available. For example, cereals in the UK are an inferior good because of the negative income elasticity of demand but a normal good in Sri Lanka because of the positive income elasticity of demand.

Question 6

The question on the effects of removing government subsidies to train operating companies was very well answered by most candidates. Many responses offered suitable diagrammatic analysis that shifted the supply curve inwards, reducing output and raising price of rail travel. Use of the rejection technique to knock out option C was also very popular. However, some candidates selected incorrect option A, confusing rail travel with motor vehicle travel.

A decrease external costs from motoring

B increase the price of train services

C increase demand for train services

D decrease air fares in Europe

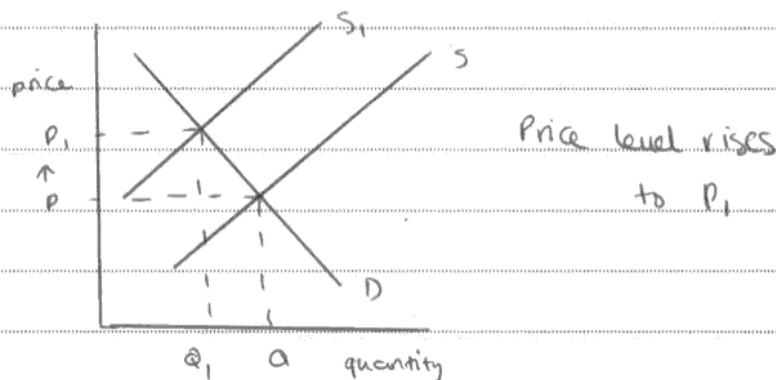
Answer

Explanation

(3)

Re A subsidy is a grant payed by the government to producers to encourage an increase in production. If subsidies are removed, costs of production for firms increase so they make less profit and hence reduce supply.

This will cause the price for train services to rise. The subsidies may have otherwise been used to pay for staff wages.



ResultsPlus Examiner Comments

This answer achieved 4 out of 4 marks.

Correct option B (1 mark). A definition of a subsidy (1 mark) is developed with an explanation of its impact on production costs for firms when it is withdrawn (1 mark). A diagram depicting the effects of withdrawing the subsidy is shown, shifting the supply curve inwards and increasing price from P to P_1 (1+1 marks).



ResultsPlus Examiner Tip

Be prepared to use diagrammatic analysis with questions on subsidies. It is an effective way of scoring marks.

- A decrease external costs from motoring
- B increase the price of train services
- C increase demand for train services
- D decrease air fares in Europe

Answer B

Explanation

(3)

A subsidy is a amount of money provided by the government to firms to encourage production and shift the supply to the right.

If the train operating companies are left with no subsidies, then the cost of running trains will rise.

To compensate this loss of money they will then increase the price of train services.



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Examiner Comments

This answer achieved 3 out of 4 marks.

Correct option B (1 mark). The candidate explains a government subsidy (1 mark) and then refers to how its withdrawal will increase the cost of running trains and so to compensate for this, the price of train services are increased (1 mark). There is not quite enough to gain all three explanation marks. More explicit reference is required on the funds or revenue falling for train operating companies and so they are forced to cut supply and raise price.



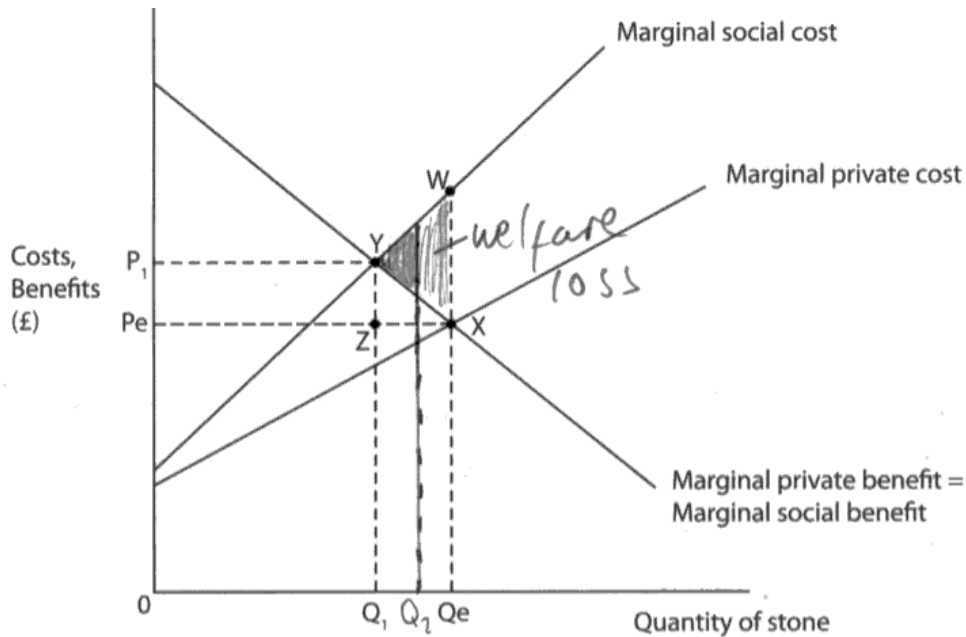
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Examiner Tip

Be prepared to use the rejection technique when an answer appears too brief or lacking sufficient development. A popular rejection key was option C. Many candidates scored a mark by mentioning that an increase in rail fares will cause a contraction in demand for train services since they are less affordable - knocking out the idea that demand for train services will increase.

Question 7

As with previous exam series, candidates tend to find questions on market failure more challenging compared to questions on the operation of markets. This proved to be no exception, although many selected the correct option C but then did not develop their answers well. One notable mistake was for candidates to define external benefits rather than external costs in regards to extraction of stone from a quarry.



The diagram shows the market for the extraction of stone from a quarry. Assume there are no external benefits.

Which of the following is true?

(1)

- A** The social optimum quantity exceeds the free market equilibrium quantity
- B** The area of welfare loss at the free market equilibrium is XZY
- C** A decrease in the quantity from Q_e towards Q_1 will reduce the net welfare loss
- D** At the free market equilibrium quantity, marginal social benefit exceeds marginal social cost

Answer

C

(3)
A negative externality is an ~~social~~ external cost to a transaction, meaning that ~~some~~ it is incurred by a third-party. Original welfare loss is WXY. If the Quantity contracts from Q_e to Q_1 , then the area of this triangle will contract, ~~from~~ to the darker shaded triangle when less is being demanded at Q_2 . It cannot be B, as XZY is not the area of welfare loss, WXY is.



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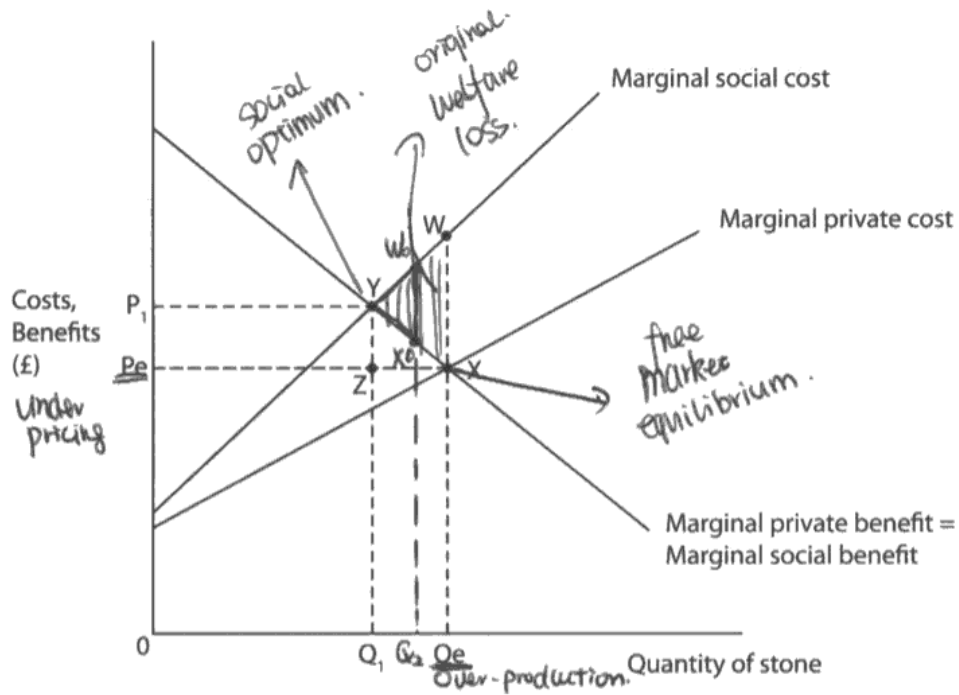
This answer achieved 4 out of 4 marks.

Correct option C (1 mark). A definition of external costs (1 mark) is supported with identification of the area of welfare loss WXY (1 mark). Note that the candidate proceeds to reject option B as showing the incorrect area of welfare loss, but double awarding of marks was not available here. However, the candidate offers excellent marginal analysis on the diagram to show how the triangle of welfare loss would fall if output is reduced from Q_e towards Q_1 (1 mark). This is a sophisticated way of explaining why option C is correct.



ResultsPlus Examiner Tip

Be prepared to annotate diagrams provided in the question. It offers an opportunity for candidates to demonstrate their knowledge, understanding and application skills of the topic at hand.



The diagram shows the market for the extraction of stone from a quarry. Assume there are no external benefits.

Which of the following is true?

(1)

- A The social optimum quantity exceeds the free market equilibrium quantity
- B The area of welfare loss at the free market equilibrium is XZY
- C A decrease in the quantity from Q_e towards Q_1 will reduce the net welfare loss
- D At the free market equilibrium quantity, marginal social benefit exceeds marginal social cost

Answer

C

External costs is the negative third party effects that are outside of the market transaction. Extraction of stone from a quarry ~~is~~ could lead to ~~pollution~~ pollution etc. There will be over production of ~~Q~~ Q_1 and under pricing P_1 .
 A decrease in quantity from Q_1 to Q_2 is moving towards the social optimum level from X to Y and it will reduce the net welfare loss effectively from YWX to W_0X_0Y .



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Examiner Comments

This answer achieved 4 out of 4 marks.

Correct option C (1 mark). A definition of external costs (1 mark) is supported by application to the pollution created from extracting stone from a quarry, leading to over-production and under-pricing (1 mark). Excellent annotation of the diagram also gains marks - this includes identifying the social optimum (Y) and free market (X) equilibrium positions (1 mark), the area of welfare loss (WXY) (1 mark) and finally marginal analysis (1 mark). It is a shame that a maximum of four marks is available for this question.



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Examiner Tip

Be prepared to apply economic concepts to the context of the question. Very few responses mentioned the type of external costs that might be caused from extraction of stone from a quarry, for example, air and noise pollution, traffic congestion from lorries or the negative impact on surrounding property prices. This was an easy way of scoring a mark.

Question 8

This particular market failure question was well received by most candidates. Many gained marks by defining market failure and a free market economy. A popular method of securing a mark was to reject option D which refers to government failure. One notable limitation was the relatively small number of responses which offered application to the question set, that is, explain the likely external benefits from education.

8 In a free market economy, an example of market failure would occur if

(1)

- A external benefits from education provision are ignored by the price mechanism
- B firms enter a market in response to an increase in demand
- C external costs are internalised by the price mechanism ✗
- D government intervention in healthcare leads to a misallocation of resources ✗

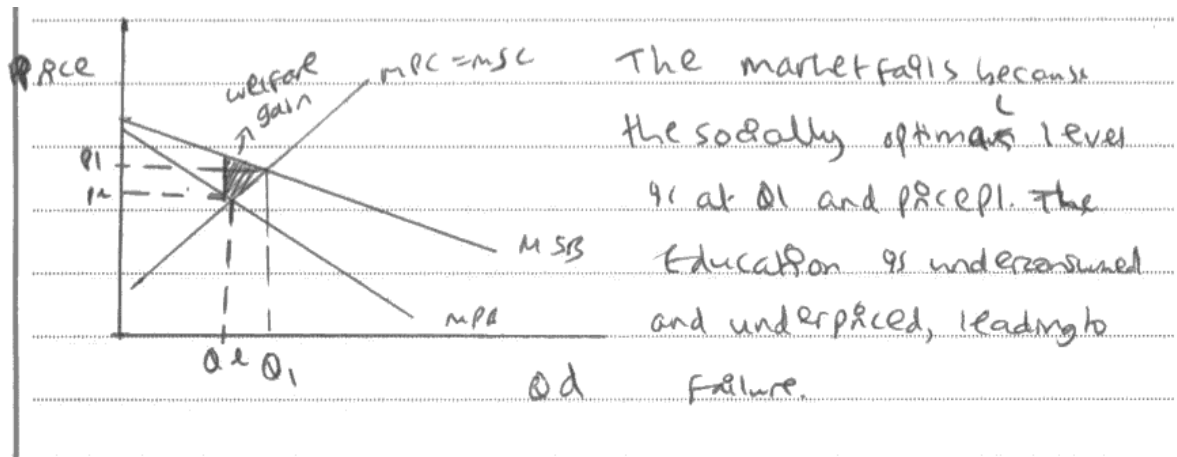
Answer

A

Explanation

(3)

A free market economy is one in which resources are allocated by the price mechanism. Market failure occurs when the price mechanism causes an inefficient allocation of resources, leading to a net welfare loss. The price mechanism ignores external benefits. External benefits, such as education are benefits enjoyed by third parties. In the case of education, external benefits could include a more knowledgeable and employable workforce.



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Examiner Comments

This answer achieved 4 out of 4 marks.

Correct option A (1 mark). The candidate offers definitions of a free market economy (1 mark) and market failure (1 mark), followed by an outline of possible external benefits from education such as more knowledge and an employable workforce. Linking this to higher productivity or profits to business would definitely secure another mark. The candidate provides a diagrammatic explanation of the external benefits from education (1 mark).



ResultsPlus
Examiner Tip

Apply the economic concept(s) to the question; in this case, an example of external benefits from education provision would secure a mark. A more educated workforce is a more productive workforce.

8 In a free market economy, an example of market failure would occur if

(1)

- A external benefits from education provision are ignored by the price mechanism
- B firms enter a market in response to an increase in demand
- C external costs are internalised by the price mechanism
- D government intervention in healthcare leads to a misallocation of resources

Answer

A

Explanation

(3)

Market failure is when the price mechanism fails to allocate the resources efficiently thereby resulting in a net welfare loss. External benefits are the benefits to society that to a third party that are ignored by the price mechanism. Education is a public good. In a free market economy it is under provided and under consumed. A free market economy is one in which the resources are allocated through the price mechanism.



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Examiner Comments

This answer achieved 3 out of 4 marks.

Correct option A (1 mark). The candidate defines market failure, external benefits and a free market economy (1+1 marks). Note a maximum of two definition marks are available for a supported multiple choice question. More application to education provision is required to secure a further mark.



ResultsPlus

Examiner Tip

Apply the key economic concept (external benefit) to the context of the question (education) to gain a further mark.

8 In a free market economy, an example of market failure would occur if

(1)

- A external benefits from education provision are ignored by the price mechanism
- B firms enter a market in response to an increase in demand
- C external costs are internalised by the price mechanism
- D government intervention in healthcare leads to a misallocation of resources

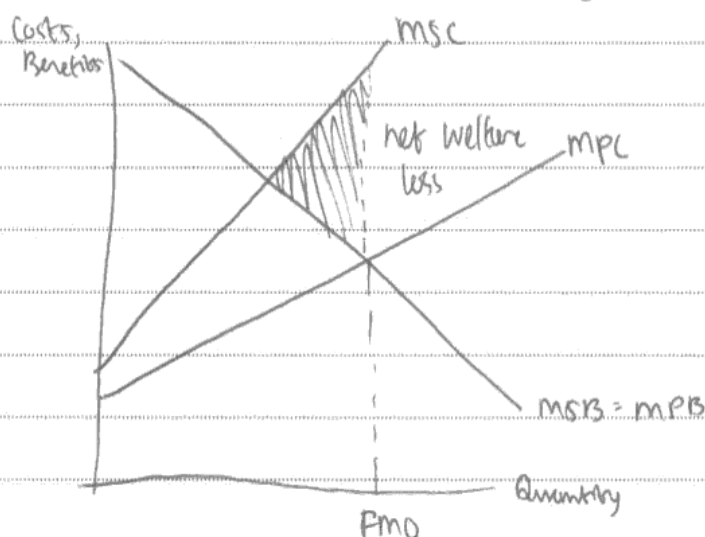
Answer

A

Explanation

(3)

Market failure occurs when the price mechanism fails to allocate resources efficiently. The correct answer cannot be option D since government intervention would lead to government failure.



ResultsPlus

Examiner Comments

This answer achieved 3 out of 4 marks. Correct option A (1 mark). The candidate defines market failure (1 mark) and just about succeeds in rejecting incorrect option D (1 mark). The diagram is not relevant since it refers to external costs rather than external benefits here.



ResultsPlus

Examiner Tip

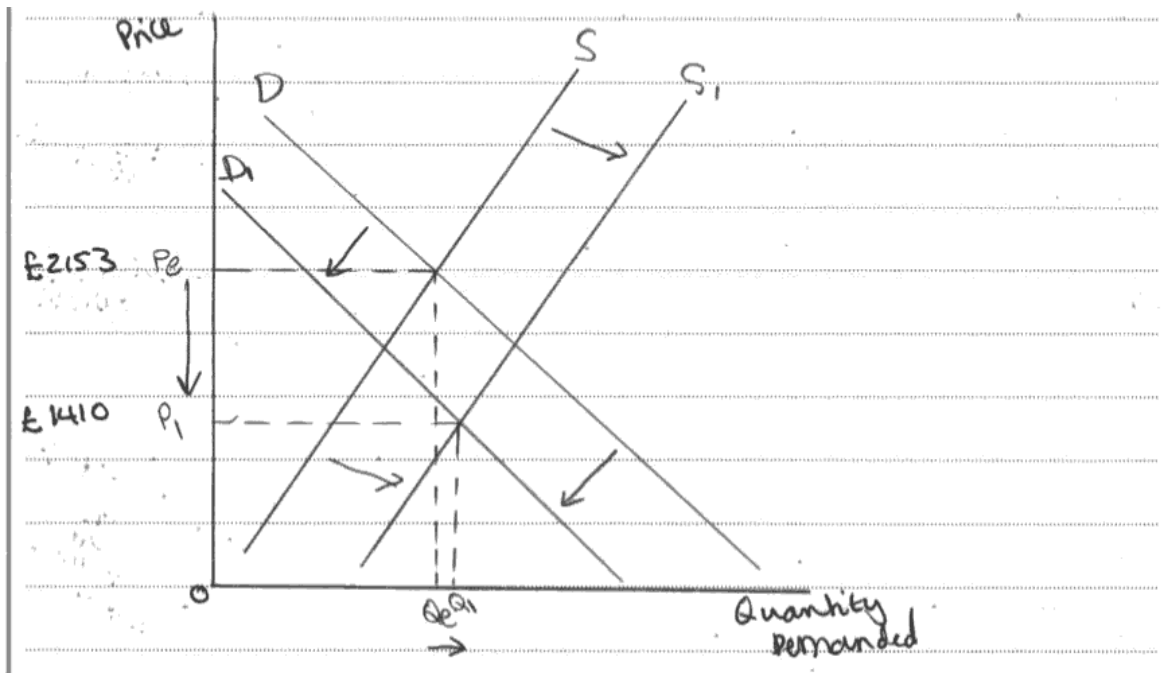
Draw the demand and supply curve shifts on the same diagram to show continuity in the price decrease. Always label the axes, curves and equilibrium positions.

Question 9 (a)

This was a data response question that most candidates were familiar with. Candidates were tested on their comprehension and analytical skills of the information provided and were then required to use demand and supply analysis to explain changes in the price of cocoa.

This was a high scoring question as many candidates brought together a series of techniques, namely: making explicit use of the data; explaining the causes of the fall in price following a decrease in demand and an increase in supply of cocoa; drawing a relevant demand and supply diagram, labelling the original and final equilibrium price positions.

One fairly common limitation in the answers was to identify and explain just one curve shifting rather than both curves shifting.



The fact that there are 'fears that Europe is entering a recession' (Extract 1) means consumption of cocoa falls as people save money and reduce spending. As Europe is a large consumer of cocoa, this makes demand decrease, shifting demand inwards from D to D_1 . A good harvest of the Ivory Coast (a main cocoa provider, providing 40% of global output) increases supply from S to S_1 . This results in the equilibrium price falling from P_e to P_1 , with P_1 being the new higher equilibrium price.



ResultsPlus

Examiner Comments

Here 6 out of 6 marks were awarded. A relevant diagram was offered which depicted a decrease in demand and an increase in supply, along with the original and new equilibrium price (4 marks). This was supported with reasons for the price decrease - fears of Europe entering a recession and so consumption falls, leading to a decrease in demand for cocoa, as well as a good harvest from the Ivory Coast leading to an increase in supply (1+1 marks). Note: a mark would also be awarded for explicit use of the data to show that price of cocoa had fallen from £2153 to £1410 per tonne over the time period - however, maximum marks have already been achieved.

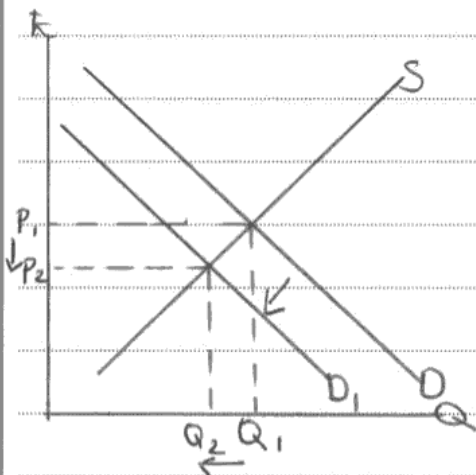


ResultsPlus

Examiner Tip

Draw the demand and supply curve shifts on the same diagram to show continuity in the price decrease. Always label the axes, curves and equilibrium positions.

Extract 1 tells us the price of cocoa fell sharply from £2153 to £1410 per tonne', and this follows a decrease in demand from Europe.



A decrease in demand means that the demand curve shifts from D to D_1 . This means that there has been a reduction in quantity, from Q_2 to Q_1 ,

and price has decreased, from P_1 to P_2 . There was a decrease in consumption of cocoa in Europe due to the fear of the recession.



ResultsPlus

Examiner Comments

Here 4 out of 6 marks were awarded. The diagram shifting demand inwards (2 marks) is supported with the reason for the decrease in consumption of cocoa (1 mark). Explicit use is made of the price data in Extract 1 (1 mark). Unfortunately, no mention is made of the very good cocoa harvest in the Ivory Coast, the world's biggest producer, supplying some 40% of global output.



ResultsPlus

Examiner Tip

Carefully read the information in the extract as it clearly refers to the very good harvest as a cause of cocoa prices falling.

Question 9 (b)

Questions on price elasticity of supply have been problematic in previous examination series. Many candidates confused the determinants of price elasticity of supply with the determinants of price elasticity of demand. In this exam a good number of candidates scored 0 marks. Another common mistake was to confuse the movement along a supply curve with shifts in the supply curve. A significant number of candidates still made this error and even showed a diagram shifting the supply curve outwards and discussed how it caused the price of cocoa to fall.

However, there were some excellent answers and some candidates were able to achieve maximum marks.

~~Price elasticity of demand~~ ^{supply} (6)
Price elasticity of ~~demand~~ ^{supply} measures the responsiveness of ~~demand~~ ^{supply} for a good or service to a change in the market price. In the short run, it is likely that the supply of cocoa will be price inelastic. This is because, in the short run, at least one factor of production will be fixed and therefore it is difficult for producers to increase their capacity in order to ~~increase~~ ^{increase} supply. However, in the long run, when all factors of production are variable, it is easier for producers to ~~increase~~ ^{increase} their capacity and therefore supply will become more price elastic. In the case of cocoa, as extract 1 states, the cocoa trees take 5 years to grow to maturity, so therefore it is difficult for farmers to ~~increase~~ ^{increase} the supply of cocoa they produce as it takes a long time to grow.

Despite this, extract 1 also states that there are stockpiles of cocoa available, and that in 2012 400,000 tonnes was expected to be added to this as supply exceeded demand. In this case, supply may be price elastic as producers have the ability to dip in to these stockpiles and increase supply if price were to rise. However, it is not known how long these stockpiles will keep for, if cocoa is a highly perishable good the supply will not last long and therefore supply would be price inelastic.



ResultsPlus Examiner Comments

Here 6 out of 6 marks were awarded. A definition of price elasticity of supply (1 mark) is supported with the idea that supply of cocoa is likely to be inelastic in the short run since at least one factor input is fixed, making it difficult for producers to raise supply (1 mark). This is reinforced by the idea that cocoa trees take up to five years to grow to maturity (1 mark). The distinction between the short run and long run is also made, finishing off with the idea that all factors of production are variable over time (1 mark).

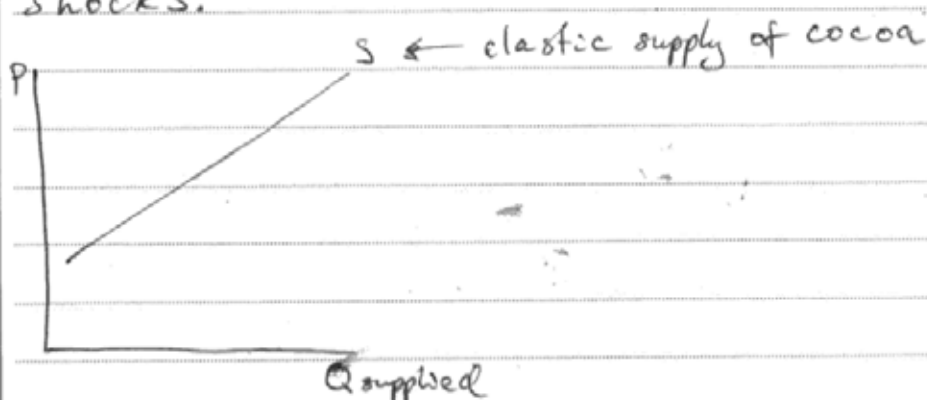
Evaluation comes in the form of a discussion of the huge stockpiles of cocoa, with more than 400 000 tonnes available, which makes supply price elastic even in the short run (2 marks). This is well explained and even includes consideration of the perishability of cocoa stocks and how that might affect price elasticity of supply.



ResultsPlus Examiner Tip

Make use of the information provided in the extract, for example, the length of time required for cocoa trees to mature and the existence of huge stockpiles. This makes it quite easy to prepare an answer for this question.

- The Ivory Coast supplies 40% of world's cocoa.
- This means that they specialise in the production of cocoa and make A LOT of it.
- Therefore their supply of cocoa is elastic as they ~~can~~ are able to create an output gap.
- PES = responsiveness of a change in Q supply to a change in price
- Cocoa is a non-perishable good
- Therefore it can be easily stockpiled
- ~~also~~ This makes it elastic as it can still be supplied in a bad harvest
- The government use Buffer stocks to stockpile the good harvests and make it even more elastic to ~~ps.~~ demand-side shocks.



ResultsPlus Examiner Comments

Here 4 out of 6 marks were awarded. The answer is a bit messy with bullet points being made, some of which are not relevant to the question. However, there is a correct definition of price elasticity of supply (1 mark), supported with the idea that supply is price elastic since cocoa is non-perishable and so can easily be stockpiled (1+1 marks). This is reinforced by the idea that cocoa can still be supplied in a bad harvest. Finally there is a diagram depicting an elastic supply for cocoa (1 mark). On balance the full knowledge, application and analysis marks are secured here but there is no evaluation.



ResultsPlus Examiner Tip

Read the instructions of the question carefully. An evaluative comment is required here to gain full marks.

• Price elasticity of supply is the responsiveness of supply for a good to an initial change in the good's own price.

The supply of cocoa is likely to be price inelastic as cocoa is a key ingredient in making chocolate products and consumers in countries such as China, India, Britain, ... they have strong taste for chocolate. Not only in these countries, ^{there are many} people all over the world, especially children are addicted to chocolate. So cocoa can never be replaced by other ingredients or in other words, there is no substitution for cocoa.

However, this depends on substitutes to chocolate. If there are many substitutes to chocolate such as sweets, biscuits, ... people may substitute away from chocolate which lead to a decrease in demand and a decrease in supply as a result. Moreover, it also depends on time. If in the near future, people find another ingredient to replace cocoa, it will become ^{more} price elastic.



ResultsPlus

Examiner Comments

Here 1 out of 6 marks were awarded. A definition of price elasticity of supply is offered (1 mark) but then the answer considers determinants of price elasticity of demand for cocoa and chocolate (tastes and substitutes). This was a fairly common error that candidates made.



ResultsPlus

Examiner Tip

Read the question carefully and make sure to differentiate between determinants of price elasticity of supply and price elasticity of demand in your revision programme.

Question 9 (c)

The question invited candidates to explore how a decrease in cocoa prices might affect the producers of chocolates such as Cadbury's Dairy Milk bar and Nestlé's Kit Kat bar. Overall, it was well answered with more than a third of responses achieving 6 or more marks out of a maximum of 8 marks. Diagrammatic analysis and evaluation were common themes.

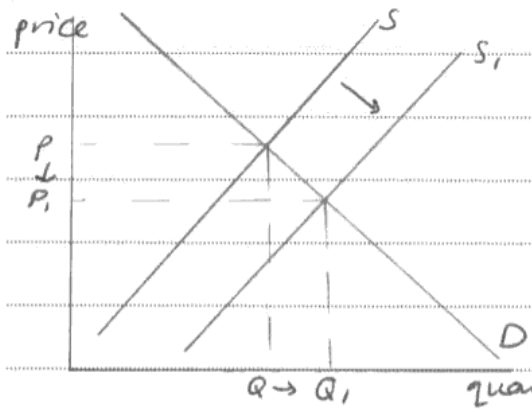
A minority of candidates misread the question and discussed the effects of a decrease in cocoa prices on cocoa producers or, discussed the effects of an increase in cocoa prices on chocolate producers. These responses achieved few marks.

(c) Examine the likely effects of a fall in the price of cocoa on the producers of chocolate products such as Cadbury's Dairy Milk bar and Nestlé's Kit Kat bar.

(8)

If the price of cocoa were to fall, the costs of production for producers of chocolate products would decrease.

This would mean an outward shift of supply, as profits are higher so there is more incentive to produce ($S \rightarrow S_1$). This would cause a fall in



the price of chocolate products ($P \rightarrow P_1$) and an increase in quantity of chocolate products ($Q \rightarrow Q_1$).

This may increase employment in areas

where chocolate

production is great eg. Switzerland, as more chocolate is being supplied to the market. Wages may increase as other costs of production have fallen.

However, Extract 1 shows how '[cocoa] only forms around 6% of the price of a bar of chocolate'. This may mean that the supply of chocolate does not increase very much as ~~the~~ costs of production are only decreased very slightly.

If the price of milk or sugar were to increase at the same time, the costs of production may increase and so supply of chocolate would decrease.



ResultsPlus Examiner Comments

Here 8 out of 8 marks were awarded. The candidate recognises that a decrease in cocoa prices will reduce production costs for chocolate producers (1 mark) and lead to higher profits (1 mark). This is developed further by explaining how prices of chocolate bars might fall (1 mark) and output increase (1 mark). This is also shown by a relevant diagram (1 mark). Consideration of how employment and wages might be affected (1 mark) offers further extension.

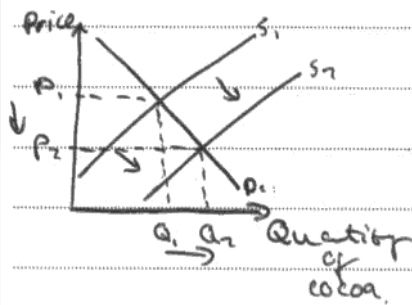
Evaluation comes in discussion of the significance of cocoa costs comprising just 6% of the price of a bar of chocolate (1 mark), and this theme is developed further, by considering how the cost of other inputs such as milk or sugar might affect chocolate producers (1 mark).



ResultsPlus Examiner Tip

Keep the economic analysis simple so that it is logical and maintains relevance to the question set. It is a good example of the effective use of the economists' toolkit. Remember to offer an evaluative comment as part of the package.

A fall in the price of cocoa, will lower the cost of productions for chocolate producers, as the costs of raw materials have decreased.



An increase in supply ~~shortly~~ causes quantity to increase from $Q_1 \rightarrow Q_2$, creating a ~~big~~ surplus in the short run. This then causes ~~the~~ price to decrease from $P_1 \rightarrow P_2$, so the costs of producing the chocolate bar decreases.

In evaluation, the magnitude in the fall of cocoa prices will effect how great the decrease in the costs of production are. If the decrease in cocoa price is relatively small then price ~~decrease~~ of the chocolate bar won't change to much. In addition, cocoa is only 6% of the price of a chocolate bar, so the prices of other ingredients such as milk and sugar will effect the cost of chocolate products too.



ResultsPlus Examiner Comments

Here 6 out of 8 marks were awarded. The candidate recognises that a decrease in cocoa prices will lower production costs for chocolate producers (1 mark). This is developed by explaining how prices of chocolate bars might fall (1 mark) and quantity increase (1 mark). This is also shown by a relevant diagram (1 mark).

Evaluation comes in the discussion of cocoa comprising just 6% of the cost of a bar of chocolate and how a change in price of other ingredients such as milk and sugar might affect chocolate producers (1+1 marks). It just about scrapes the two evaluation marks available.



ResultsPlus Examiner Tip

Be prepared to extend economic analysis, for example, consideration of producer surplus, profits, share price, employment and investment of chocolate producers.

Question 9 (d)

Candidates were required to evaluate the likely consequences of fluctuating prices for cocoa producers. This question was the most challenging on the paper. A similar question had been set on the specimen paper for this unit and so candidates should have been familiar with the requirements to achieve high marks. Some responses focused on the causes rather than consequences of fluctuating cocoa prices and so scored few marks. Other responses barely developed the pointers in the extract concerning unstable income, employment and investment for cocoa producers. Another mistake involved answers that only considered chocolate companies rather than cocoa producers.

However, there were some excellent responses which remained focused on the tasks at hand, particularly concerning the relationship between cocoa prices, producer revenues and the quality of life.

One likely consequence of fluctuating prices for cocoa producers would be the uncertainty of how much revenue they would make. This consequence would either mean a higher revenue if prices were high and a low revenue if they were low. It would mean they would have to ~~set~~ suit their standards of living, from being able to afford luxuries to being able to afford necessities. This consequence is highly likely due to the fact the supply is inelastic in the short run. It will take up to 5 years for them to switch resources and so for the short while, the uncertainty of income will stick.

A second consequence could be instability in employment. When cocoa prices are low, the producers may not be able to keep all staff employed and so to an extent it would create a type of seasonal unemployment for the producers of cocoa. More than likely when prices are high they would be able to employ more. However, this could be flipped, when prices are low it would mean there was a surplus of cocoa and so it could be the case that more workers will need to be employed to handle the high quantities of cocoa.

A final consequence would be the instability of investment in cocoa farms. When revenues are high it is likely that cocoa farms would attract more investment which would enable them to purchase more capital which could be used to farm more efficiently, improve productivity and lower unit cost. However when the revenues are low the investment in cocoa farms would look less appealing, even though a bit of investment might be all that is needed to improve the situation.

All in all, the extent of the consequences would depend on the short run or long run and the price elasticity of cocoa. For example if the PED is elastic, a reduction in price could increase revenue for the farmer and a greater quantity would be demanded. But if it was inelastic, higher prices would be preferred as quantity demanded would not change as much compared to the increase in price.



ResultsPlus

Examiner Comments

Here 11 out of 14 marks were awarded. The first paragraph considers the uncertainty over how much revenue could be made by producers depending on whether cocoa prices are high or low. Diagrammatic analysis would help here. The affordability of luxuries or necessities is raised. Some evaluation is offered in terms of the long growing period of 5 years which makes supply inelastic and there is little that can be done by cocoa farmers (2+1 marks)

The second paragraph considers how fluctuating prices cause employment to rise or fall and that it may be seasonal in nature. Evaluation comes in the form of flipping the argument and suggesting that when there is a good harvest then more workers may be required even though farm revenues are low (2+1 marks).

The third paragraph investigates the implications for investment. High prices mean more investment, leading to greater productivity, efficiency and lower unit costs. The analysis is quite well developed here (3 marks).

The final paragraph considers the relevance of price elasticity of demand and its impact on revenue for cocoa farmers. It is a good evaluative point to finish with (2 marks).



ResultsPlus

Examiner Tip

Use the prompts in the extract to help structure your answer as this candidate has done (concerning unstable income, employment and investment for cocoa producers).

Fluctuating prices for cocoa will be a key factor for cocoa producers to consider. Fluctuating prices could be considered as a good thing for the producers. If there is a global boom, incomes are higher, people will want more luxury goods and therefore chocolate. This will create high demand for cocoa and prices will rocket high due to its responsiveness allowing for a large producer surplus and increases in revenue and profits. The obvious flaw to this is if there is a global recession, like the past few years, where demand for cocoa falls dramatically, leaving prices low and producers with very little revenue.

The three main consequences of price fluctuations are instability in income, employment and investment. Unstable employment in ~~the~~ countries like the Ivory Coast is a very worrying factor as there is great unemployment across the country anyway, it will be difficult to find a new job.

Probably the most important long-term consequence would be the lack of investment from firms to expand ~~and~~ cocoa production and the lack of investment in efficiency. Without significant investment, production of cocoa will always be unreliable in the amount harvested ~~and~~ in due to poor techniques and the accountability of the weather.

To conclude, Price fluctuations cause great instability in

cocoa producers which has ~~just~~ terrible effects including
unstable income levels, poor job security and negative
incentives for investors.



ResultsPlus

Examiner Comments

Here 7 out of 14 marks were awarded. The first paragraph considers how high cocoa prices that come from a global boom could be a good thing for farmers in terms of increasing revenue and profits. The downside to this is a recession which causes very low cocoa prices and falling revenue (up to 3 marks).

The second paragraph begins with a quote from the extract concerning unstable incomes, employment and investment (1 mark). The third paragraph focuses on implications for investment and how a lack of it leads to less efficiency, reinforcing the unreliability of cocoa production. This is considered to be the biggest problem of fluctuating prices (2 marks). The conclusion just about scrapes a mark in summing up the effects of fluctuating cocoa prices, namely: the terrible effects of unstable income levels, poor job security and negative incentives for investors (1 mark). On balance it is just about worth 7 marks in total.



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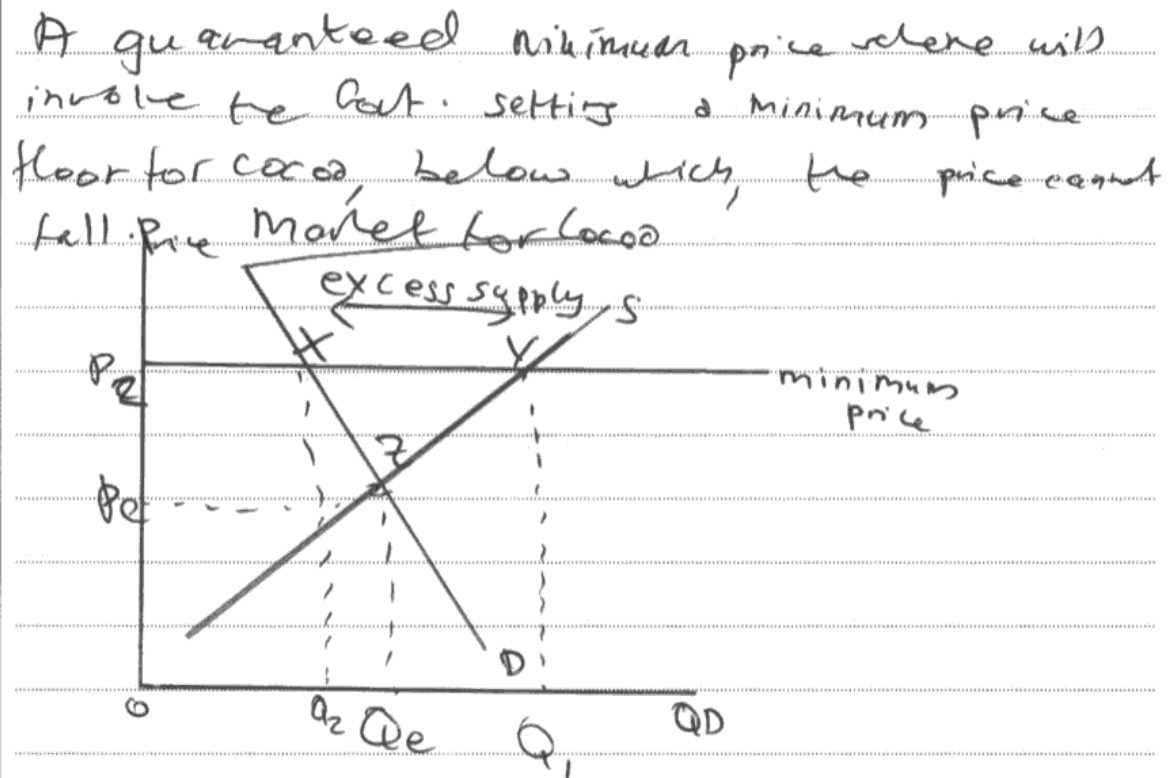
Examiner Tip

Be prepared to offer diagrammatic analysis to explain the link between price instability and total revenue for farmers. The concept of price elasticity of demand is useful here.

Question 9 (e)

The question invited candidates to evaluate the likely economic effects of a guaranteed minimum price scheme for cocoa in the Ivory Coast. A minimum price diagram was required in the answer. It proved highly effective in differentiating between the quality of responses. The best answers offered an accurate diagram depicting an excess supply of cocoa and the area of government expenditure, supported by both economic analysis and evaluation. Popular evaluation points included consideration of elasticity, opportunity cost to government and the response of major buyers and the position of the minimum price in comparison to the free market price.

However, some responses confused the minimum price scheme with a buffer stocks scheme and so few marks were awarded for the diagram and resulting analysis.



Due to the imposition of the minimum price scheme, at P_z there will be an excess supply of $Q_1 - Q_z$ as the demand contracts to point ~~X~~ X as consumers are less willing to pay the higher price for cocoa. The Govt. will then purchase the ~~surplus~~ excess supply that the cocoa farmers produce. The area XYQ_1Q_z represents the total Govt. spending on the cocoa surplus.

This will have beneficial economic effects for the producers in the Ivory Coast as their incomes will be guaranteed, since the Govt. will purchase any surplus harvested. In fact, their incomes will actually increase, as their total revenue will increase to area OP_2YQ from the original OP_1YZQ . This will also help reduce rural-urban inequality. Additionally, the increased certainty of the cocoa market in Ivory Coast will encourage greater investment in new intensive cocoa farming methods, for example. Another significant economic effect would be that the cocoa commodity would be guaranteed to Ivory Coast consumers, even in times of bad harvest.

On the other hand, there is a sufficient quantity of disadvantages that are involved when the Govt. imposes the minimum price scheme. Firstly, there is a significant opportunity cost involved to the Govt. as they are forgoing the next best alternative option of how to use the money. This may be for example reducing the fiscal deficit, lowering taxes, or even subsidising AM technology.

methods to increase supply of cocoa.

In addition, the minimum price scheme will create a dependency culture, as the producers of cocoa become economically inefficient, as they become reliant on the Govt. purchasing their surpluses. This is government failure, as Govt. intervention leads to an inefficient allocation of resources leading to a net welfare loss to society.

Furthermore, this may be a waste of the tax payer's money. Especially because the surpluses produced by the farmers may have to ~~be~~ be dumped or destroyed, which once again is an inefficient allocation of resources.

Lately, if the minimum price level that the Govt. of Ivory Coast imposes is below the free market equilibrium, then the scheme would not have any significant effect in stabilising producer incomes and increasing certainty in the market for cocoa. (Total for Question 9 = 48 marks)



ResultsPlus

Examiner Comments

Here 14 out of 14 marks were awarded. A definition of minimum price (1 mark) is supported by a relevant diagram depicting both excess supply and the area of government expenditure on purchase of the surplus (4 marks). The beneficial effects for producers include incomes being guaranteed and their revenues increasing from $OPeZQe$ to $OP2YQ1$ (1 mark) and so reducing urban-rural inequality (1 mark). It should also lead to greater investment into cocoa production as well as guarantee supplies to consumers even in times of bad harvests (1 mark). Clearly, the maximum 8 knowledge, application and analysis marks have been achieved.

Evaluation comes in the form of discussion of opportunity cost to the government in purchasing cocoa surpluses (2 marks), the danger of a dependency culture being created where farmers become inefficient and reliant on government purchases (2 marks) and consideration of government failure in terms of dumping or destroying surpluses (2 marks). This is reinforced by discussion of the position of the minimum price in relation to the free market price. The maximum 6 evaluation marks have been achieved.

Overall, it is a very sound answer that is full of relevant economic analysis, application and evaluation.

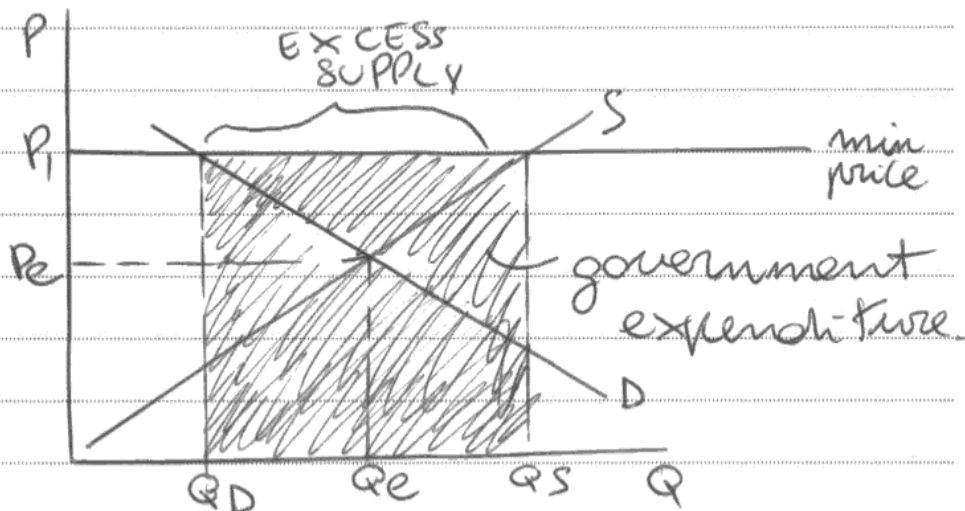


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Examiner Tip

In questions with evaluation marks, be prepared to consider the positive and negative effects of the topic at hand. In this case, the positive effects of a minimum price scheme provide knowledge, application and analysis marks whereas the negative effects offer evaluation marks.

A minimum price scheme is a floor price for producers. A government agency will set this minimum price.



With a minimum price scheme, producers will be more encouraged to produce cocoa as they will receive a fixed price per unit of cocoa which is above equilibrium price. This means that income for cocoa producers will be more stabilised and therefore they'll be able to do more investment in their machinery in order to produce more, since they are moved by the profit incentive.

This will lead to a greater producer surplus, but a lower consumer surplus.

In fact, as we can see from the diagram, quantity supplied is greater than quantity demanded.

The government will have a financial pressure as they have to keep buying the cocoa produced from producers.

However, excess supply can be thought of as a misallocation of resources and therefore government failure.

Also, if the ^{minimum} price is below equilibrium, then producers may not accept to be part of the scheme as their income would fall. This means that nothing would change at the end.

Producers If the government sells the excess supply abroad at cheap prices, then this would damage income for producers in developing countries. In fact, they would find it hard to compete against those cheap prices and as a result, their income would fall. Some may even be forced to exit the market.



ResultsPlus Examiner Comments

Here 12 out of 14 marks were awarded. A definition of minimum price (1 mark) is supported by a relevant diagram depicting the excess supply and government purchase of it (4 marks). This is followed by a discussion of producer income being stabilised and how it might lead to more investment (1+1 marks). Then a brief consideration of the impact of the scheme on producer surplus and consumer surplus is made (1 mark). A maximum 8 knowledge, application and analysis marks are achieved.

Evaluation comes in the form of discussion of the impact on government finances (2 marks), the positioning of the minimum price level (1 mark) and the possible effects of dumping cocoa overseas (1 mark). This answer achieves 4 evaluation marks.



ResultsPlus Examiner Tip

Be prepared to use the extract for obtaining ideas on evaluation. For example, the extract refers to the possible response of cocoa buyers to the minimum price scheme and whether they will seek to purchase from other major producers such as Ghana and Nigeria. This represents a good evaluation point to develop rather than solely relying on factors outside of the extract.

Question 10 (a)

Candidates were invited to explain two possible reasons for the forecast increase in passenger demand of 15 million using Heathrow Airport by 2020. It provided an opportunity to apply demand determinants to the air travel market. Some pointers were provided in the data, particularly Figure 1, concerning income elasticity of demand figures for business and leisure travellers. The more successful reasons given related to an increase in incomes, population or price competition in the air travel market. Overall, many of the answers were quite limited in development of points.

Two reasons for increased passenger demand of 15 million using Heathrow Airport by 2020 could be: increased disposable income levels leading to increased leisure holidays & ~~increased~~ globalisation of firms leading to increased business travel. As you can see from ~~the~~ Figure 1, the YED for leisure passengers air travel is ^{1.4, which is} positive & elastic meaning an increase in income levels leads to an increase in quantity demanded for air travel. In most economies, real disposable incomes rise over time so ~~this~~ this is likely to result in more demand for leisure air travel which increases the number of passengers likely to use Heathrow Airport in the future. Secondly, globalisation of firms leads to increased business travel as it requires firms employees to commute to other economies on a regular basis.

for business purposes. As you can see from figure 1, the YED for business air travel is 1.2, which is positive & elastic which result in increased demand for air travel, if the profit levels of firms increase. This will result in increased passenger demand for Heathrow Airport in the future.



ResultsPlus

Examiner Comments

Here 6 out of 6 marks were awarded. The first reason offered is the rise in disposable income levels leading to increased demand for leisure holidays (1 mark) which is developed further and supported by reference to income elasticity of demand data in Figure 1 (1+1 marks).

The second reason offered is globalisation, leading to increased business travel (1 mark), as it requires employees to commute to other economies on a regular basis to conduct work (1 mark). Reference is also made to income elasticity of demand data in Figure 1 and the idea that firms could make more profits and so increase further the demand for air travel at Heathrow Airport (1 mark).



ResultsPlus

Examiner Tip

Follow the instructions of the question and focus on just two possible reasons for the forecast increase in passenger demand at Heathrow Airport. Many responses gave more than two reasons but offered little explanation.

Businessmen may choose to go to London to invest in companies. This means that they might use Heathrow Airport to get there. By 2020, there is set to be an increase of 15 million passengers as demand increases. Because more firms want to invest in London, possibly due to the cut in corporation tax, it might result in more people going to London.

Another reason for the increase in passenger demand using Heathrow Airport is because London is a global hub of the world. This means that people want to visit London for tourism, as there are ^{many sights here} ~~many sights here~~. An increase in tourism may lead to an increase in demand for Heathrow Airport as more people want to go to London, and Heathrow Airport is one way of getting there.



ResultsPlus

Examiner Comments

Here 4 out of 6 marks were awarded. The first reason is the increased investment by businesses in London following cuts in corporation tax (so more people going to London - presumably travelling by air) (1+1 marks). The second reason relates to London as a global hub where more people visit for tourism as there are many sights to see - and air travel is one way of getting there (1+1 marks). Both reasons are valid but are not sufficiently developed to secure full marks. Perhaps figures on the cut in corporation tax could be offered in the first case and an explanation of where the visitors might be coming from in the second case - linking to the growth of emerging markets such as China and India.



ResultsPlus

Examiner Tip

Offer more development of the two reasons given for the forecast increase in passenger demand at Heathrow Airport. There are 6 marks available here.

Question 10 (b)

This question required candidates to discuss why business and leisure air travel passengers have different price elasticities of demand as revealed by the data in Figure 1. It proved to differentiate effectively at the top end of responses. Few responses achieved the full 6 marks available while a good number achieved 4 marks. This reveals that many candidates struggled to offer an evaluative comment.

Price elasticity of demand is the responsiveness of demand to a change in price of a product. Flights The PED for business passengers is -0.2 , this means that the PED is inelastic as the value is < 1 , ~~whereas~~ this would be due to flights for businessmen being essential to keep the business running and profitable. However if a substitute service for flights was developed such as the ~~increased~~ development of technology which would allow business to have meetings online over ~~the~~ webcams because became easier to use the the PED of business flights would probably increase, becoming more elastic.

The PED for leisure passengers is -0.7 , this figure is < 1 but is still price inelastic. However it is not as price inelastic as business flights, this is because they are not seen as such a necessity, consumers would have substitutes available such as holidaying at home or not travelling to a country as far away.



ResultsPlus Examiner Comments

Here 6 out of 6 marks were awarded. A definition of price elasticity of demand (1 mark) is followed by an explanation of business and leisure passengers having an inelastic demand (1 mark), although leisure passengers have a less inelastic demand at -0.7 compared to business passengers at -0.2 (1 mark). The final KAA mark comes from suggesting that leisure flights are not a necessity and that substitutes are available in terms of holidaying at home or to a country not far away (1 mark).

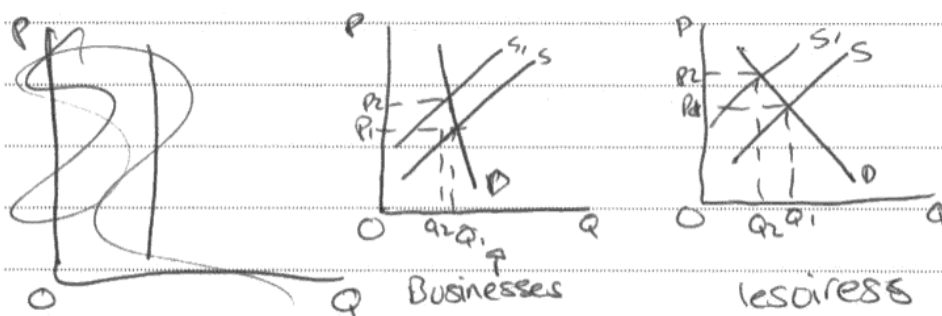
Evaluation comes in the form of suggesting that the development of new technology would allow businesses to have meetings over webcams and so business flights might become more elastic over time (2 marks).



ResultsPlus Examiner Tip

Make explicit reference to the data provided in the question, explaining the meaning of the elasticity figures. Offer an evaluative comment with questions that contain the word 'discuss'. This candidate has been successful here.

Price elasticity of demand is the responsiveness of demand to a change in price. The price elasticity of demand for Business passengers is '-0.2' which means it is highly inelastic. This means demand changes ~~at~~ only a low proportion to a change in price. It may be like this for business because ~~the~~ they have a considerable amount of money to be able to afford increased prices and also, most business travel is important business and so travel is a necessity. For leisure passengers PED is '-0.7' which means it is less inelastic due to their being more available substitutes for ~~less~~ travel such as 'conceived expansion of Eurostar rail'.



Business have a smaller decrease in demand.



ResultsPlus

Examiner Comments

Here 4 out of 6 marks were awarded. A definition of price elasticity of demand (1 mark) is supported with an explanation that both business and leisure travellers have an inelastic demand (1 mark), although leisure travellers is less inelastic (1 mark). Development comes in the form of explaining that business travel is more of a necessity and more affordable compared to leisure travel (1 mark). Some very pleasing diagrammatic analysis is offered but the maximum 4 KAA marks have already been attained. There is no evaluation here.



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Examiner Tip

Be prepared to offer an evaluative comment with 'discussion' questions no matter how vague it might be. There is always a chance of gaining marks.

Question 10 (c)

The question required candidates to use the concept of cross elasticity of demand in assessing whether train travel is an effective substitute for air travel. The mean score was less than half marks and this reflected the difficulty many candidates experienced in securing the full 6 knowledge, application and analysis marks available. The 2 evaluation marks appeared to be more accessible as many responses suggested that train travel is a weak substitute for air travel when it comes to inter-continental flights and offered real world examples.

(XED) (8)

Cross elasticity of demand is the responsiveness of ~~good~~ demand for good A to a change in price of good B.

It is calculated as
$$\frac{\text{percentage change in demand of good A}}{\text{percentage change in price of good B}} = XED$$

Substitute goods are alternative goods, they have a positive XED value, for example as an increase in the price of air travel of domestic flights e.g. London to Manchester will cause an increase in the demand for cheaper train substitutes.

It is confirmed that train travel is a substitute for air travel as most domestic routes are "well served by train".

Train travel may be seen as an effective substitute because it is likely to be cheaper ~~and~~ more affordable than air travel. ^{It is also effective} ~~and most domestic~~ because most locations are well served by "train domestically and the 'expansion' of the eurostar, most european cities are easily accessible.

However it may not be seen as effective as ~~stated~~ there are differences in the services. Train travel ~~has a~~ takes longer, therefore we must weigh up the difference in cost with the price difference. For leisure the XED may be that people rather train as the extra ^{travel time} ~~time~~ ~~travel~~ is not a constraint however for business this may be a problem as getting to place faster is key. Overall ~~it~~ it may be seen as an effective substitute as it in most cases will provide the same end result of getting to a destination ~~however~~ however the time constraint and lack of availability (e.g. you can't get a train to New Zealand) may make it a weaker substitute.



ResultsPlus Examiner Comments

Here 8 out of 8 marks were awarded. A definition of cross elasticity of demand (1 mark) is supported with the idea that such goods have a positive relationship (1 mark); application to domestic flights between London and Manchester is offered (1 mark) and reference is made to the extract, for example, air travel for most domestic routes is 'well served by train' (1 mark). Train travel may also be cheaper and so more affordable than air travel (1 mark) and that the expansion of Eurostar rail services has made many European cities accessible by train (1 mark). Overall, the answer is sufficiently developed to merit the full 6 KAA marks.

Evaluation comes in the form of discussing how train travel may take longer than air travel and so be a weaker substitute for business users compared to leisure users where time might be less important. There is also an interesting and perceptive remark on the lack of availability of train services, for example, you cannot get a train to New Zealand (2 marks). On balance, the two evaluation marks are secured.



ResultsPlus Examiner Tip

Make use of experiences with air and train travel as this could help shape your answer and gain marks. For example, the price and availability of services or the reliability and time taken to travel between certain places.

$$\text{Cross elasticity of demand} = \frac{\% \Delta \text{ quantity demanded of Good A}}{\% \Delta \text{ price of good B.}} \quad (8)$$

Extract one ~~say~~ suggests that trains may be an effective substitute ~~for~~ for air travel since it says "domestic flights and short flights to Europe could easily be carried out by train" which implies that the cross elasticity of demand could be greater than 1 and positive as the two goods are substitutes, and may be elastic on short trips as they may be cheaper and the difference in travel time could be negligible.

However, on longer haul flights the cross elasticity of demand is likely to be less than 1 and they would be weaker substitutes and the train would be a weaker substitute. This is because some routes which cross oceans for example are not possible by train which means a plane is the only realistic option for these travellers. Over long distances a train is also likely to take significantly more time when compared to planes, often ~~requiring~~ requiring changes in ~~foreign~~ ^{foreign} countries which is less appealing when compared to the direct routings many planes take.



ResultsPlus

Examiner Comments

Here 6 out of 8 marks were awarded. A formula of cross elasticity of demand (1 mark) is followed with reference to the extract where domestic and short haul flights could easily be carried out by train (1 mark). A high positive cross elasticity of demand relationship is identified for short trips (1 mark) where train travel could be cheaper and have negligible difference in time (1 mark).

Evaluation comes in the form of suggesting that train travel is not an effective substitute for long haul flights as this mode of travel is not available to cross oceans or the time taken is far too long (2 marks).



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Examiner Tip

This is a very promising answer which just needed a bit more development in terms of analysis and application, for example, a diagrammatic explanation of the XED relationship or more use of the information in the extract concerning Eurostar rail services.

Question 10 (d)

The question required candidates to evaluate the case for building a third runway at Heathrow Airport using the information provided and their own knowledge. It gave an opportunity for candidates to develop a coherent economic argument and form a point of view. Overall, it differentiated effectively between the quality of responses. The best answers considered the benefits and limitations created from a third runway, offering economic analysis and evaluation.

* Create 140,000 jobs * Lack of foreign investment
* 4.5 bn lost from GDP * £1.6 bn lost in trade
* 99.2% capacity * Demand will increase by 15 million
* could use train-extension * Extra Pollution - 900 extra flights
* other airports - Gatwick etc * Super sized airport

To some extent, building a third runway will be the best option because it will have lots of external benefits. This will provide around 140,000 jobs which will lower unemployment and bring us closer to full employment. This will also boost GDP by £4.5 billion. This could lead to future investment. Furthermore this could bring in £1.6 billion in trade. This would improve the current account balance and through the multiplier effect, this will increase. Moreover, Heathrow is ~~at~~ already nearly full, at 99.2% employment. In 2020, ~~it~~ it is estimated that nearly 15 million more passengers using Heathrow. This will push Heathrow past full capacity. Building a third runway will enable them to handle this huge amount of people. However

Here are downsides to a third runway. The 100 extra flights will cause a lot of increased pollution which will damage the environment and contribute towards global warming. Furthermore the construction of a third runway will mean many people in Sipson, Heathrow and Hatfield will lose their homes to make way for the runway. ~~This will also~~ The building work will also cause lots of noise and visual pollution. Furthermore there is already a shortage of homes and this will increase overcrowding. Therefore other alternatives should be looked at. One other alternative is to advise people to use the train for shorter journeys within the UK and to Europe ~~via~~ via the Eurostar. Another alternative is expansion of other airports such as Gatwick, Stansted and Luton where significant spare capacity exists. This will still provide the jobs however people may ~~still~~ still want to go to Heathrow as it is more accessible and is closer to central London.

This is why it might be good to look at building the supersized airport in the Thames estuary. This will ease pressure from Heathrow as it is ~~the~~ very close to central London also. However this will be expensive, costing over £50 billion and taking at least 15 years to complete.



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Examiner Comments

Here 12 out of 14 marks were awarded. A case is made for building the third runway by outlining the information provided, for example, the creation of 140,000 jobs that will lower unemployment, an increase in GDP by £4.5 billion, greater future investment and a £1.6 billion boost to trade that improves the current account (2+2 marks). Another case is made in terms of the airport running at 99.2% of capacity and how it needs to expand to meet the forecast increase in passenger demand (2 marks). Overall, 6 KAA marks are just about scraped in this answer. More development of these points is really needed to gain full marks.

Evaluation comes in terms of external costs, for example, the increase in pollution from an extra 900 flights daily, (adding to global warming, noise and visual pollution) and the destruction of many homes in the area leading to overcrowding (2+1 marks). Discussion then turns to the merits of alternative options such as the expansion of Eurostar rail services and other airports where significant spare capacity exists (2 marks) or even the building of a new airport in the Thames estuary (1 mark).



ResultsPlus

Examiner Tip

Use economic analysis to develop the points made in the extract so that value is added to the answer.

With the third runway at Heathrow airport
Here are arguments for and against going ahead
with the construction.

As it states in Extract 1 'Britain can lose out
on ~~an~~ 140000 jobs' now this means that you miss
out on decreasing unemployment (in the future) so this
takes away the chance of 140000 people's standards of
living increasing.

However this is only in the future and the
research conducted may not be very accurate.

Also with the construction of a third runway,
this could potentially lead to '£4.5 billion of GDP' because
of a fall in foreign investment' now with that amount
of money it can help boost the economy as it decides to
invest in the UK this means more firms in the economy
/ market, so higher competitiveness, potentially leading
to prices of goods/services falling.

On the other hand this can lead to higher
noise and CO₂ pollution, 'increasing' external costs/
negative externalities.

Plus the 3rd runway would lead to people
being 'displaced' as their houses are lost so the
government may have to pay for the construction of new
houses to relocate, costing even more money for the government.

But if you go ahead with the construction, this means more employment for construction workers, so you increase the standards of living for the labour, so their disposable income increases so they spend more and leads to more money/revenue per firm and the economy.

Also you lose '21.6 billion in manufacturing... markets by 2020' but the costs of building the 3rd runway is huge, so this creates an opportunity cost as the government can use this money to spend on the NHS, education etc

Also 'substituting these flights have significant environmental benefits' so this means less pollution and better health/living standards for people nearby Heathrow.



ResultsPlus Examiner Comments

Here 10 out of 14 marks were achieved. The case for building the runway is put in terms of creating an extra 140,000 jobs and so raising living standards for many people. Other benefits are mentioned such as the £4.5 billion increase to GDP, the rise in foreign investment, competitiveness, revenue to construction firms and £1.6 billion gains to trade (referred to on the second page in terms of losing these benefits if not built) (up to 5 marks).

Evaluation comes in the form of considering the disadvantages of building a third runway, for example, an increase in noise and carbon dioxide pollution as well as people being displaced from nearby homes (2 marks). The possible opportunity cost to the government (that may help fund part of the infrastructure costs which come with the runway) is also raised (2 marks). The final sentence is credited where the candidate suggests that using substitutes (presumably rail travel) would lead to significant environmental benefits through less pollution for people living near Heathrow (1 mark).

Overall, the candidate investigates various advantages and disadvantages of Heathrow Airport expansion but never really develops them fully. Nevertheless, some value has been added to the prompts in the extract. On balance an overall mark of 10 is about right (an attempt has been made to break down these marks but appears a bit artificial).



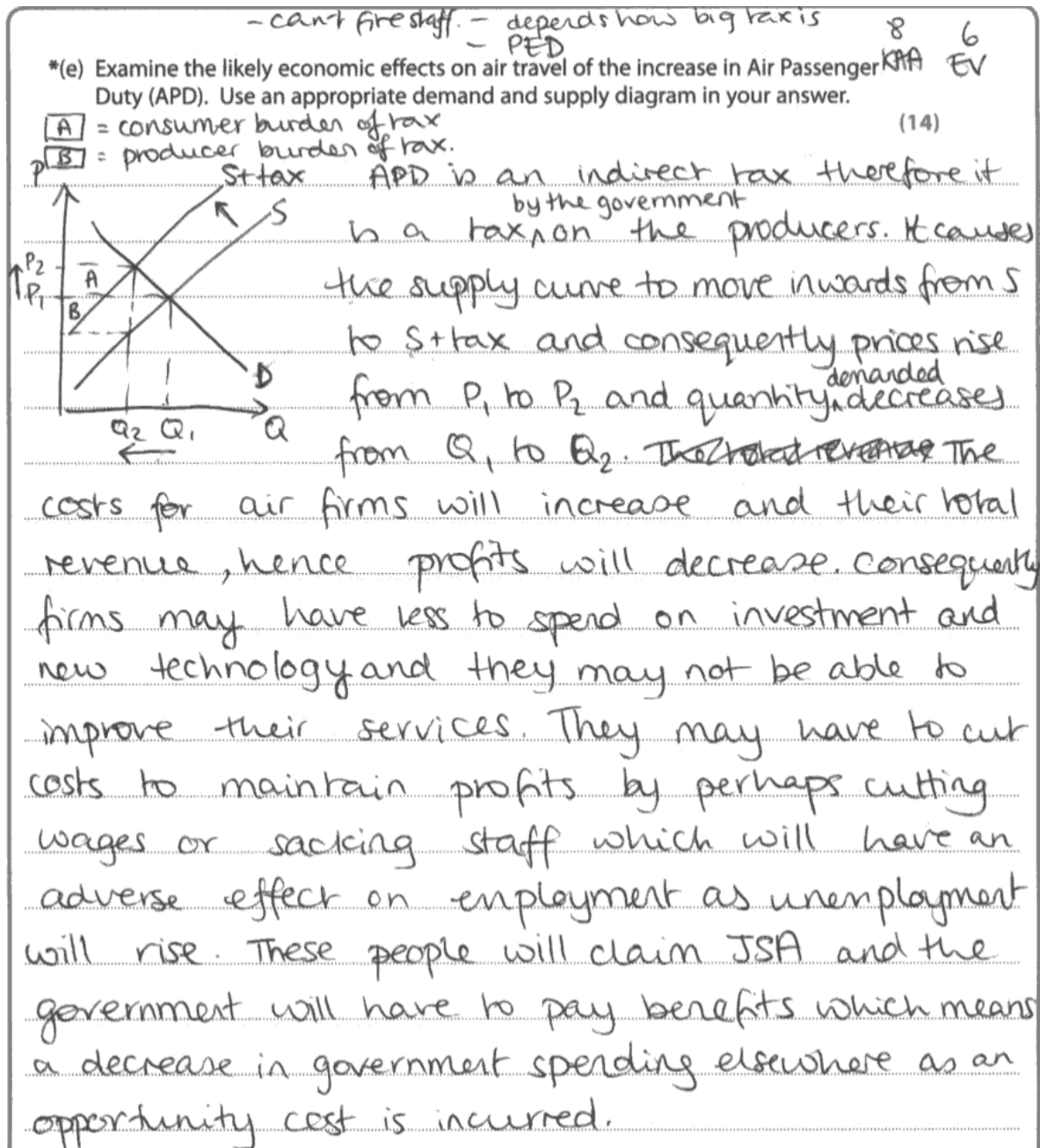
ResultsPlus Examiner Tip

Develop the points in the extract, using economic analysis and evaluation so that value is added to the answer.

Question 10 (e)

The question required candidates to examine the likely economic effects on air travel of the increase in Air Passenger Duty (APD), using a supply and demand diagram. It proved to be another question that differentiated between weak, average and strong responses. Perhaps the most notable limitation was the relatively large number of candidates that drew an incorrect diagram, shifting the demand curve inwards (rather than the supply curve). Another limitation involved responses that strayed from the question which required a focus on air travel rather than the wider economy.

However, some excellent responses were recorded that combined economic analysis and evaluation with the information provided in Figure 3.



The effect of the tax will depend largely on how big the tax is. A rise in APD in April 2012 by 8% is fairly significant but as plane tickets are very expensive, perhaps proportionally this won't seem like a large raise. The effect on the air firms will depend on whether or not the firms pass the burden of the tax onto the consumers. If PED is inelastic as it is for business travellers, -0.2 , the firms can safely pass it on and their profits won't decrease as consumers' demand won't change very much. However, if PED is elastic then the firm cannot pass the tax on as demand will decrease and so will their revenue. If PED is elastic firms will earn much lower profits. As a result of regulation and trade unions, air firms may not be able to cut wages or fire staff so they will face significant losses in revenue as costs increase. They may be able to fire staff but there is likely to be a time lag involved and in the meantime a firm will lose profits or it could even be forced to leave the business.



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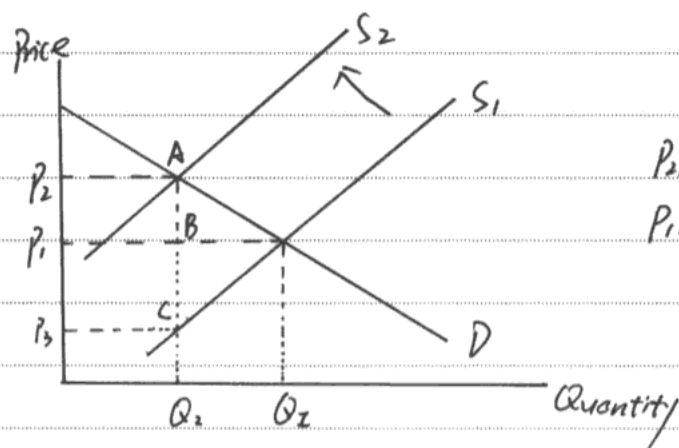
Here 14 out of 14 marks were awarded. An explanation of APD as an indirect tax (1 mark) is supported with a relevant diagram that shows the tax incidence and tax area (4 marks). The effects of an increase in APD are considered such as higher costs and lower revenue and profits for airlines (2 marks), leading to a discussion on investment and employment considerations (1 mark). The full 8 KAA marks are easily achieved on the first page.

Evaluation comes in the form of discussing the size of increase in APD as a proportion of the price of airline tickets (2 marks) and whether demand is price elastic or inelastic (2 marks). The discussion then goes on to the importance of regulations and power of trade unions in the airline business which might even result in firms exiting the market (2 marks).



ResultsPlus Examiner Tip

Offer three 'developed' evaluation points for questions comprising 14 marks.



$P_2 P_1 B A$: consumer tax

$P_1 P_3 C B$: producer tax

An indirect tax is a tax levied on the expenditure of a good or service, which have a significant external costs. When there is an increase in APD, the cost of air airlines will increase so the supply curve will shift to left. Airlines may increase the price of ticket in order to make a constant profit. when the price increases, the demand of air travel may decrease due to the higher costs. Passengers try to find substitute good. However, it depends on the proportion of total costs, if the APD only occupies a little part of total costs of a tickets, passengers can still offer it, so it will not influence demand a lot. Also, it depends on the PED of air travel, from figure 1, we can know air travel is price inelastic in terms of business and leisure travelers. So the demand of air travel will remain in a similar level. Moreover, there is no

Substitute goods for travelers who are going to America and Australia where train service can not reach, they still have a high demand for air travel.



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Examiner Comments

Here 10 out of 14 marks were awarded. An explanation of APD as an indirect tax (1 mark) is supported with a relevant diagram depicting the tax incidence and tax area (4 marks). Some discussion is offered of the effects on airline costs, ticket prices and profits (2 marks).

Evaluation comes in the form of discussion on the APD as a proportion of total costs of tickets (1 mark) and the significance of price elasticity of demand - where the candidate refers to leisure and business travel being inelastic and then considers the consequences (2 marks).



ResultsPlus

Examiner Tip

Offer three 'developed' evaluation points for questions comprising 14 marks.

Paper summary

Based on their performance on this paper, candidates are offered the following advice:

Section A: supported multiple choice

- Define accurately the key economic term(s) used in each question.
- Be prepared to annotate the diagrams presented in the questions.
- Be prepared to draw diagrams when relevant to the question and make sure these are properly labelled and explained in the text.
- Always refer to the information provided, for example, income elasticity of demand figures in Q5. This helps to credit responses with application marks.
- Revise thoroughly the topic of market failure, especially negative and positive externalities, for example, Q7 and Q8. This is an area where candidates often struggle to achieve high marks.
- Make sure 'value is added' to answers which use the rejection method. Do not simply state that a particular option is incorrect without explaining why this is the case.

Section B: data response

- Read the question instructions very carefully to make sure your answer remains relevant throughout. All too often candidate answers strayed from the questions set as revealed in Q9(d) on the consequences of fluctuating prices for cocoa producers.

It is also important to focus on the concepts mentioned in the question.

- Far too many candidates misread Q9(b) concerning price elasticity of supply and offered answers with regards to price elasticity of demand.
- Focus on developing economic analysis in the high mark base questions. Quite often candidates moved from definitions and a brief explanation of an economic issue straight into evaluation. This was evident in Q9(e) on a guaranteed minimum price scheme for cocoa and Q10(e) concerning the economic effects on air travel of an increase in the Air Passenger Duty. Economic analysis typically involves explaining the sequence of events leading up to a particular outcome.
- Ensure diagrams are accurately drawn and relevant to the question set. For example, in Q9(e) some candidates confused buffer stocks with a minimum price diagram. Similarly, in Q10(e) many candidates incorrectly shifted the demand curve inwards rather than the supply curve inwards to depict the effects of an indirect tax.

Grade Boundaries

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