

### Examiners' Report/ Principal Examiner Feedback

January 2014

Pearson Edexcel International Advanced Level in Economics (6ECA1) Paper 01 Competitive Markets



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### International Advanced Level Economics (6ECA1) January 2014

#### Introduction

The majority of candidates revealed a reasonable knowledge and understanding of the fundamentals of market economics; a small minority demonstrated a high level of ability in terms of critical analysis and evaluation. However, a number of candidates were so under-prepared that they were unable to make a serious attempt at the paper. Despite the relatively small number of candidates who took the paper considerable differentiation between the qualities of responses arose.

The supported multiple choice and data response questions were accessible to most candidates and covered mainstream economic concepts and models. The mean score for the exam paper was below that of January 2013.

In the supported multiple choice section, Q1 (opportunity cost), Q3 (consumer surplus) and Q5 (income elasticity of demand) candidates scored relatively high marks; Q4 (price elasticity of demand), Q7 (guaranteed minimum price) and Q8 (carbon emissions trading scheme) candidates scored relatively low marks.

In the data response section, 76% of candidates attempted data response Q9 (The market for black tea and 24% of candidates attempted Q10 (The extraction of gas from underground rock). Overall, the responses for Q9 were better than for Q10. The reason why many candidates did not fare so well in Q10 appears to be Q10(d) and Q10(e), where answers on external costs and regulation were limited.

#### Section A: Supported Multiple Choice Questions 1-8

The overall quality of responses in this section of the paper was varied. Some candidates demonstrated good technique, which included defining key economic terms, annotating and constructing relevant diagrams and applying their answers to the context of the question. Rejection of incorrect options was also used although less successfully. As with previous exam series, the questions on market failure proved to be more challenging as revealed in the mean scores for Q7 (guaranteed minimum price) and Q8 (carbon emissions trading scheme).

#### Question 1 (Option B): Opportunity cost on a Production possibility frontier

The highest mean score was recorded on this question, offering a gentle introduction to the paper. Most candidates selected the correct option and defined both opportunity cost and production possibility frontier. The best answers offered suitable diagrammatic analysis depicting a change in output from capital to consumer goods.

One interesting feature was the large number of responses that successfully rejected option D, where an outward shift in the production possibility frontier represented economic growth.

Students should remember to define key concepts accurately and ensure a movement along a production possibility frontier is explained in regards to opportunity cost.

#### Question 2 (Option D): Advantages of a free market economy

This was another question where most candidates were able to select the correct key and define the key concept (free market economy). The best answers explained the benefits of competition to consumers in terms of lower prices, increased consumer choice, product quality and consumer surplus.

Students should remember to answer the question set and ensure that the benefits to consumers of a free market economy are referred to rather than a list of characteristics of this type of economic system.

#### Question 3 (Option B): Consumer surplus

Another well answered question with most candidates annotating the diagram to show an inward shift of the supply curve and a higher equilibrium price. This was usually followed by identifying the original and new areas of consumer surplus.

Students should remember to label the new consumer surplus area and ensure an accurate definition of the concept.

#### Question 4 (Option A): Price elasticity of demand for meat

This proved to be a more challenging question with many candidates selecting an incorrect option and struggling to explain the relationship between price elasticity of demand and total revenue from the data provided. Quite often just 1 mark was achieved by defining or showing the formula for price elasticity of demand.

Students should remember to explain the significance of a price elasticity of demand for meat of -0.3, in terms of how a fall in price would lead to a proportionately smaller rise in demand, so reducing total revenue. Diagrammatic analysis could be offered here.

#### Question 5 (Option C): Income elasticity of demand for tobacco

This proved to be one of the most accessible questions on the paper and the majority of candidates were able to achieve full marks, by accurately defining income elasticity of demand (or showing its formula) and then correctly applying it to tobacco. It was clear that candidates understood that a negative income elasticity of demand for tobacco in the US means it is an inferior good.

Students should remember to outline an inferior good, for example, as income rises then demand for tobacco falls, and, as income falls then demand for tobacco rises.

#### Question 6 (Option D): Occupational immobility of labour

It was surprising that a significant number of candidates struggled to answer this question, revealing confusion between the occupational and geographical mobility of labour.

The best answers defined occupational immobility (or mobility) of labour, explained how a reduction in training programmes would limit the ability of the unemployed to achieve suitable work skills and then applied to a real world situation; for example, the difficulty an unemployed textile worker would face in trying to take available work as a bricklayer.

Successful use of the rejection technique was also offered, particularly with regards to incorrect options A and B that concern the geographical mobility of labour.

Students should remember to offer an application to the type of jobs that unemployed people might take if there had been adequate funding of training schemes.

#### Question 7 (Option C): Guaranteed minimum price for wheat

Many candidates found it difficult to identify the size of the excess supply of wheat from the table provided, at the guaranteed minimum price of £300 per tonne. Consequently, incorrect options were often selected.

However, a significant minority of candidates achieved full marks by defining a guaranteed minimum price and then showing the calculations for the amount of government expenditure on the scheme ( $\pm 300 \times 4000 = \pm 1\ 200\ 000$ ). Occasionally suitable diagrammatic analysis was offered which was also credited with marks.

Students should remember to identify excess supply from the table when the price is set at £300. It requires subtracting quantity demand (104 000 tonnes) from quantity supply (108 000 tonnes).

#### Question 8 (Option C): Carbon emissions trading scheme

This was another question where many candidates found difficult to accurately define a carbon emissions trading scheme and explain its purpose. A significant number of responses selected incorrect option B which revealed confusion between total and marginal social costs and social benefits.

However, there were some good answers which explained both the 'cap and trade' aspects of the scheme as well as application to the reduction of external costs from flying. Quite often marks were secured by explaining how the purchase of permits would reduce the overall number of air flights.

Students should remember to define carbon emissions trading scheme and how it gives airlines an incentive to reduce pollution from flying.

#### Section B (Data Response) Questions 9 and 10

Question 9 (The market for black tea) was more popular than Question10 (The extraction of gas from underground rock) by a ratio of 3 to 1 among candidates. This appears due to the familiarity of commodity markets, a regular feature of data response questions. Despite this imbalance, there were some good answers to both questions.

#### Question 9: The market for black tea

# (a) Explain the likely effect on total revenue for the producers of black tea following a growing taste for the drink among newly affluent Chinese consumers (Extract 1, lines 1-2). Use a supply and demand diagram in your answer. (6 marks)

A straight forward question which gave candidates an opportunity to gain marks through defining total revenue, identifying that it is likely to increase and explaining this through a relevant diagram. The best answers achieved either 5 or the maximum 6 marks. Although most responses correctly shifted the demand curve for tea outwards, many failed to identify the original and new levels of total revenue.

Students should remember to ensure the axes and curves on the diagram are carefully labelled, and, identify the original and new levels of total revenue.

### (b) Explain the likely impact of a growing taste for black tea on the workers who produce it. (4 marks)

This was another straightforward question where most candidates gained marks. The best responses identified that the demand for tea workers is derived from the demand for tea

and then proceeded to explain how wages and employment might both increase. Some perceptive comments referred to the idea that existing workers might have to work longer hours or increase their productivity to meet growing demand. Diagrammatic analysis was quite popular and credited with marks.

Students should remember to keep focused on how the tea workers are likely to be affected rather than stray into the reasons why the demand for tea is increasing.

### (c) With reference to Extract 1, Figure 2 and your own knowledge, discuss whether the world supply of black tea is likely to be price elastic or price inelastic. (10 marks)

This proved to be quite challenging for many candidates despite the information provided in Extract 1 and Figure 2. A common error for some was to confuse the determinants of price elasticity of supply with those for price elasticity of demand. Consequently, over twenty percent of candidates gained zero or just 1 mark.

However, there were some excellent answers which made use of the information to suggest the supply of black tea is price inelastic due to a shortage of suitable land, the long time period required to grow tea bushes and the uncertainty created through price fluctuations. This was usually followed up with discussion on the level of tea stocks, their perishability, quality and the ease of entry into the industry. A common theme of the better answers was discussion on the distinction between the short run and long run price elasticity of supply of tea.

Students should remember to read the question carefully and avoid confusing price elasticity of supply with price elasticity of demand.

## (d) Assess the likely success of a buffer stock scheme for stabilising the price of black tea. Use an appropriate diagram in your answer. (14 marks)

The quality of responses varied enormously, ranging from superb evaluative and searching answers to little more than brief and basic comments.

In order to achieve full marks candidates had to draw a relevant buffer stocks diagram and explain how it might be used to stabilise the price of black tea. There was considerable flexibility in the marking of the diagram to take account of the variety of responses.

Unfortunately, many responses confused the buffer stocks scheme with a guaranteed minimum price scheme and so achieved few knowledge, application and analysis marks. Ironically it appeared easier for candidates to gain evaluation marks by using the prompts in the text concerning problems of funding, storing and reaching agreement with all black tea growers across different countries. These points required further development but offered a guide to why buffer stock schemes tend fail.

Students should learn how to draw a buffer stocks diagram, showing agency intervention to buy and sell stocks in the market.

## (e) With reference to Extract 2, evaluate the possible private benefits and external benefits resulting from consumers switching from coffee to tea. Illustrate your answer with an appropriate diagram. (14 marks)

A significant number of candidates seemed unprepared for this question and almost a quarter achieved zero marks. One main limitation was drawing an inaccurate diagram where the benefit and cost curves were incorrectly labelled and so made no sense.

Another limitation was the failure to distinguish between the private benefits and external benefits from consuming tea – often candidates just referred to benefits in general, repeating points in extract 2 but offering no value added. Also many responses made no reference to the effects of consumers drinking less coffee.

However, there were some excellent answers which combined accurate diagrammatic analysis with an explanation of the private benefits (such as improvement to personal health and life expectancy, higher earnings and higher profits for firms that sell tea) and an explanation of external benefits (increased productivity from healthier workers and less pressure on national healthcare services). Suitable evaluative comments focused on the uncertainty of the benefits from drinking tea and the negative impact on the coffee market.

Students should remember to carefully distinguish between and explain the possible private benefits and external benefits from tea consumption.

#### Question 10: The extraction of gas from underground rock

#### (a) Using examples from Extract 1, distinguish between renewable and nonrenewable energy sources. (4 marks)

This was a straightforward question where most candidates scored marks. It required adding some value to the meaning of renewable and non-renewable energy sources, for example, renewable energy resources are available for future generations to consume as supply is not diminished (sometimes requiring careful management).

On the other hand, non-renewable resources are not-sustainable and may not be available for future generations as supply is being diminished through consumption of them. Relevant examples of each type of resource from Extract 1 ensured maximum marks.

Students should remember to add value to the distinction between renewable and nonrenewable resources. There is little point just stating that one is renewable and the other is not renewable. Further development is required.

### (b) Explain two possible benefits that result from the extraction of gas from underground rock. (6 marks)

This was reasonably well answered by candidates who identified two possible benefits of fracking from the text and then developed them. The most frequently explained benefits were the reduction in price of gas and the increase in employment and revenue from fracking.

The first benefit was sometimes developed by use of a supply and demand diagram depicting an increase in supply and followed by explanation of how energy could become more affordable and help reduce fuel poverty. The second benefit focused on the extra 50 000 jobs that might be created in the Blackpool area and how it may generate profit for fracking firms and extra tax revenue for government.

Students should remember to develop the benefits from fracking using an economics based viewpoint.

## (c) Referring to cross elasticity of demand, assess the likely relationship between the price of gas and the demand for coal (Extract 1, line 7). (10 marks)

It was quite easy to secure knowledge, application and analysis marks; for example, defining cross elasticity of demand, identifying that gas and coal are substitutes and that they have a positive relationship between them; direct application such as a decrease in the price of gas would lead to a decrease in demand for coal, combined with a relevant diagram depicting this relationship would help secure all the marks available.

However, evaluation proved to be more problematic and many struggled to gain marks here. The best answers discussed the strength of substitutability between gas and coal and how it takes time and money to convert power stations from one energy source to another. Evaluation also came in the uncertainty over fracking in terms of the amount of energy resources available and the ability to get planning permission to extract it.

Students should remember to apply techniques for evaluating issues in economics, for example, discussion of time period to switch from coal to gas power, the magnitude of gas resources available and uncertainty over gaining planning permission to conduct fracking.

## (d) To what extent is market failure likely to be a result of fracking? Refer to external costs of production and use an appropriate diagram in your answer. (14 marks)

Surprisingly, many answers were limited in offering a suitable definition of market failure and external cost along with a relevant diagram that identified the welfare loss area. These are relatively straightforward marks to gain but often missed. Indeed, more than forty percent of candidates scored 2 or less marks.

However, at the top end of the range, candidates combined accurate definitions and diagrammatic analysis of external costs from fracking with evaluative comments; the latter included consideration of the difficulty in quantifying and attaching a monetary value to external costs and discussion on the potential magnitude of fracking in the UK. Some pointed out the need for further research on the effects of fracking and how tight regulations could limit its external costs.

Students should learn the basics around external costs, namely, a suitable definition of the concept, an accurate diagram and relevant examples from the text.

## (e) With reference to Extract 2, evaluate two government measures to reduce the possible external costs of extracting gas from underground rock. (14 marks)

This was another question which proved difficult for some candidates to answer despite it covering familiar measures in the specification such as the use of indirect taxes and regulations to correct market failure.

Candidate explanations of how indirect taxes could be used to reduce the external costs of fracking rarely involved diagrammatic analysis or discussion of how the tax revenue could be used to compensate victims, or, to clean up the environment. Furthermore, very few responses considered price elasticity of demand for gas.

Candidate explanations of regulations were also quite limited, lacking development. However, some excellent answers were offered; these investigated the ease of imposing regulations by authorities and how they might include limits to the number of wells drilled, their location and visibility to local populations. Conditions for cleaning gas spills and restoring sites after use were also explained. The role of fines as a deterrent to firms making gas spills and how fracking operations can ultimately be closed down offered other points for development.

Students should become familiar with the use of government measures to correct market failure such as indirect taxation and regulation. Their respective advantages and disadvantages should be identified so that they can be applied to the context of the question – in this case, fracking.

#### Conclusion

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, for example, consumer surplus in Q3.
- Be prepared to draw diagrams when relevant to the question and make sure these are properly labelled and explained in the text, for example, production possibility frontier in Q1.
- Always refer to the information provided, for example, income elasticity of demand for tobacco in Q5. This helps to credit responses with application marks.
- Revise thoroughly the topic of market failure, 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(c) on the price elasticity of supply for black tea.
- 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(d) on the success of a buffer stock scheme for black tea
- Ensure diagrams are accurately drawn and relevant to the question set. For example, in Q9(d) some candidates confused buffer stocks with a minimum price diagram. Similarly, in Q9(e) and Q10(d) the external benefits and external costs diagrams often had incorrect labelling of the curves.

#### **Grade Boundaries**

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