



Rewarding Learning

ADVANCED
General Certificate of Education
January 2014

Economics

Assessment Unit A2 1

assessing

Business Economics

[AE211]

FRIDAY 17 JANUARY, MORNING

**MARK
SCHEME**

General Marking Instructions

This mark scheme is intended to ensure that the A2 examinations are marked consistently and fairly. The mark scheme provides examiners with an indication of the nature and range of candidate responses likely to be worthy of credit. It also sets out the criteria which they should apply in allocating marks to candidates' responses. The mark schemes should be read in conjunction with these general marking instructions which apply to all papers.

Quality of candidates' responses

In marking the examination paper, examiners will be looking for a quality of response reflecting the level of maturity which may reasonably be expected of 18-year-olds, which is the age at which the majority of candidates sit their A2 examinations.

Flexibility in marking

The mark scheme is not intended to be totally prescriptive. For many questions, there may be a number of equally legitimate responses and different methods by which the candidates may achieve good marks. No mark scheme can cover all the answers which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then examiners should seek the guidance of the Supervising Examiner for the paper concerned.

Positive marking

Examiners are encouraged to be positive in their marking, giving appropriate credit for valid responses rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected for 18-year-old candidates. Conversely, marks should only be awarded for valid responses and not given for an attempt which is completely incorrect and inappropriate.

Types of mark schemes

Mark schemes for questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication. These questions are indicated on the cover of the examination paper. Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided. Some material may be included in the mark scheme for the benefit of teachers and pupils preparing for future examinations. Candidates are not expected to have provided this information. Such material is printed in the mark scheme in italics.

Levels of response

Questions requiring candidates to respond in extended writing are marked in terms of levels of response. In deciding which level of response to award, examiners should look for the "best fit" bearing in mind that weakness in one area may be compensated for by strength in another. In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement. The following guidance is provided to assist examiners.

Threshold performance: Response which just merits inclusion in the level and should be awarded a mark at or near the bottom of the range.

Intermediate performance: Response which clearly merits inclusion in the level and should be awarded a mark at or near the middle of the range.

High performance: Response which fully satisfies the level description and should be awarded a mark at or near the top of the range.

Marking calculations

In marking answers involving calculations, examiners should apply the “own figure rule” so that candidates are not penalised more than once for a computational error.

Quality of written communication

Quality of written communication is taken into account in assessing candidates’ responses to all questions that require them to respond in extended written form. These questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication. Where the quality of candidates’ economics is not matched by the quality of written communication, marks awarded will not exceed the maximum for Level 2 in questions which have three levels of response or the maximum for Level 3 in those which have four levels of response.

For conciseness, quality of written communication is distinguished within levels of response as follows:

Level 1: Quality of written communication is limited.

Level 2: Quality of written communication is satisfactory.

Level 3: Quality of written communication is of a high standard.

Level 4: Quality of written communication is excellent.

In interpreting these level descriptions, examiners should refer to the more detailed guidance provided below:

Level 1 (Limited): The candidate makes only a limited attempt to select and use an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 (Satisfactory): The candidate makes a reasonable attempt to select and use an appropriate form and style of writing, supported with appropriate use of diagrams as required. Relevant material is organised with some clarity and coherence. There is some use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning evident.

Level 3 (High Standard): The candidate successfully selects and uses an appropriate form and style of writing, supported with the effective use of diagrams where appropriate. Relevant material is organised with a high degree of clarity and coherence. There is widespread use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a sufficiently high standard to make meaning clear.

Level 4 (Excellent): The candidate successfully selects and uses the most appropriate form and style of writing, supported with precise and accurate use of diagrams where appropriate. Relevant material is extremely well organised with the highest degree of clarity and coherence. There is extensive and accurate use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of the highest standard and ensure that meaning is absolutely clear.

1 Case study: UK Dairy Farming

- (a)
- The number of registered dairy farms has fallen by 10 137 from 24 930 in 2002 to 14 793 in 2011. This represents a 40.7% decrease.
 - The average size of dairy herd has increased by 36 from 89 cows per farm in 2002 to 125 cows per farm in 2011. This represents a 40.4% increase
 - The average milk yield per cow has increased from 6 449 litres per annum in 2002 to 7 406 litres per annum in 2011. This represents an increase in average yield of 957 litres per annum or a 14.8% increase.
 - The total UK milk production has fallen over the period from 14 373 million litres in 2002 to 13 683 million litres in 2011. This is a fall of 690 million litres or a 4.8% reduction.

[1] for each valid point showing change in absolute terms

[1] for each calculation showing relative (%) change

Constrained maximum of [5]

[5]

- (b) In the long run a business must cover all of its costs if it hopes to remain in business. However, in the short run, if a loss-making business can cover its variable costs of production it will stay in business, in the hope that market conditions improve sufficiently to enable it to make at least normal profits in the long run.

If a firm finds that its revenue is not sufficient to cover its variable costs it will have to shut down its operations. Since firms will have different cost structures the shutdown price will vary from firm to firm.

Source 2 states that it costs dairy farms on average about 30p to produce a litre of milk. As a result of recent price cuts announced by the big three processors, the average revenue received by each farmer will be just less than 25p per litre. This fall in the farm gate price of milk will force some firms to shut down as their average revenue will now be less than their average variable costs. However other farms will be able to remain in business in the short run as they are still earning enough to cover their average variable costs.

Areas for analysis and discussion include:

- Distinction between the long run and the short run
- Distinction between fixed costs and variable costs
- Explanation of the shutdown point in the short run and/or long run
- Reference to actual costs and revenues outlined in source 2
- Appropriate diagrams showing ATC, AVC and price

Level 1 ([1]–[3])

Candidate provides little explanation of why some dairy farmers are able to remain in business despite making a loss while others are forced to shut down. Quality of written communication is limited.

Level 2 ([4]–[7])

Candidate provides some explanation of why some dairy farmers are able to remain in business despite making a loss while others are forced to shut down. There may be a diagram to support the analysis but this is likely to contain some minor errors. Quality of written communication is satisfactory.

Level 3 ([8]–[10])

Candidate provides comprehensive explanation of why some dairy farmers are able to remain in business despite making a loss while others are forced to shut down. There will be significant application to source material. This analysis may be supported by a clear and accurate diagram. Quality of written communication is of a high standard. [10]

- (c) UK dairy farming has long been cited as an example of an industry that closely matches the characteristics of the theoretical model of perfect competition. In the UK there is a large number of dairy farms (14 793 in 2011) which produce a homogeneous product. There are no significant barriers to entry and there is almost perfect information. As a result UK dairy farmers are price takers.

However some argue that recent changes in the nature of dairy farming mean that the industry no longer resembles the model of perfect competition. They argue that a handful of supermarkets and dairy processors wield significant monopsony power. They also argue that the recent fall in the number of dairy farms (40.7% in the last 10 years) and the trend towards mega-dairies will mean that dairy farming may soon be dominated by a few large factory farms.

Areas for analysis and discussion include:

- Definition of perfect competition
- Characteristics of perfectly competitive model
- Reference to features of dairy farming that match the assumptions of the model:
 - large number of sellers
 - homogeneous product
 - price takers
 - lack of barriers to entry
 - perfect knowledge
- Reference to changes in dairy farming that result in divergence from the model:
 - monopsony power of dairy processors and supermarkets
 - reduction in farm numbers and increase in average farm size
 - product differentiation
 - development of mega-dairies
- Reference to the unrealistic nature of the model of perfect competition
- Reference to models only being used as a benchmark

Level 1 ([1]–[3])

Candidate shows little understanding of the extent to which the UK dairy farming industry could be described as perfectly competitive. Quality of written communication is limited.

Level 2 ([4]–[7])

Candidate shows some understanding of the extent to which the UK dairy farming industry could be described as perfectly competitive. There is a degree of analysis and application. Quality of written communication is satisfactory.

Level 3 ([8]–[10])

Candidate shows comprehensive understanding of the extent to which the UK dairy farming industry could be described as perfectly competitive. There is significant economic analysis and application, with some degree of evaluation and quality of written communication is of a high standard. [10]

- (d) There is a wide range of policies the UK government could use to improve outcomes for the stakeholders of UK dairy farming. These include:
- Introduce a minimum price to ensure farmers receive enough to cover the average cost of production
 - Provide subsidies for milk production
 - Force processors and supermarkets to source more of their dairy products in the UK
 - Provide low cost loans for investment in new machinery and animal welfare
 - Introduce regulations on animal welfare standards to ensure that animals are free to graze
 - Use planning legislation to restrict development of mega-dairies
 - Introduce regulations with regard to quality and nutritional value of milk
 - Reintroduce the milk marketing board to reduce the monopsony power of the big three and ensure all milk farmers receive a reasonable price

Areas for analysis and discussion include:

- Reference to different stakeholder groups – consumers, farmers, dairy processors, environment, cows (animal welfare groups)
- Welfare implications of minimum prices – consumer and producer surplus
- The difficulty in setting an appropriate price – how will this be calculated
- The opportunity cost of using subsidies
- Reference to how membership of the EU makes both subsidies and legislation, with regard to sourcing domestically, very difficult
- The costs and efficiency of government regulation
- Competing needs of different stakeholder groups mean that it is difficult to simultaneously improve outcomes for everyone
- Reference to regulatory capture
- Reference to moral hazard
- Welfare implications of government intervention
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[5])

Candidate displays little understanding of the policies that the government could use to improve outcomes for all the stakeholders of UK dairy farming. There is no significant evaluation of the issues and quality of written communication is limited.

Level 2 ([6]–[10])

Candidate provides some understanding of the policies that the government could use to improve outcomes for all the stakeholders of UK dairy farming. There is a degree of evaluation though this may lack depth or be one-sided. Quality of written communication is satisfactory.

Level 3 ([11]–[15])

Candidate provides a clear and comprehensive understanding of the policies that the government could use to improve outcomes for all the stakeholders of UK dairy farming. There is significant evaluation and judgement and quality of written communication is of a high standard. [15]

2 Theory of contestable markets is fundamentally flawed!

- (a) *William Baumol defined contestable markets as existing where “an entrant has access to all production techniques available to the incumbents, is not prohibited from wooing the incumbent’s customers, and entry decisions can be reversed without cost.”*

The model of contestable markets is based on a number of simplifying assumptions:

- The number of firms can vary from one to many
- The firms can produce homogeneous or branded goods
- All agents have perfect knowledge
- There are no barriers to entry (specifically, no sunk costs)
- All firms must compete – there is no collusion

In a perfectly contestable market the threat of competition is enough to encourage incumbent firms to produce at an output level which earns them only normal profits (where $AC = AR$). At the same time the threat of hit-and-run competition forces the firm to produce at a point where average costs are minimised (where $MC = AC$). If the incumbent firm was productively inefficient competitors would enter the market, produce more efficiently, and undercut the incumbent. Therefore a perfectly contestable market will be both productively efficient (produce where AC are minimised) and allocatively efficient (produce where $MC = P$).

Areas for analysis and discussion include:

- Definition of a perfectly contestable markets
- Assumptions of model
- Explanation of equilibrium position
- Definition of allocative and productive efficiency
- Reference to barriers to entry or sunk costs
- Reference to threat of hit-and-run competition
- Appropriate diagrams
- Appropriate examples

Level 1 ([1]–[5])

Candidate provides little explanation of why, in theory, perfectly contestable markets result in an efficient allocation of resources. Quality of written communication is limited.

Level 2 ([6]–[10])

Candidate provides some explanation of why, in theory, perfectly contestable markets result in an efficient allocation of resources. Quality of written communication is satisfactory.

Level 3 ([11]–[15])

Candidate provides detailed explanation of why, in theory, perfectly contestable markets result in an efficient allocation of resources. Quality of written communication is of a high standard. [15]

- (b) Like all economic models the model of contestable markets requires the existence of a number of highly abstract and unrealistic assumptions. These assumptions should have been outlined in part (a).

Clearly these assumptions, particularly the assumption of perfect knowledge and no sunk costs, are unlikely to be replicated in reality. *Indeed Baumol himself stated “perfectly contestable markets do not populate the world of reality any more than perfectly competitive markets do”.*

As a result some have argued that the model is of little benefit to modern economists, businesses or regulators.

These economists argue that the other models in the traditional theory of the firm are more realistic and therefore are of greater use in predicting the behaviour of modern firms. They point particularly to modern theories of oligopoly which take account of the potential for collusive behaviour as models of best practice.

Critics of the contestable markets model also argue that the rationale it provides for deregulation is fundamentally flawed. *They point particularly to the US airline industry as an example of the consolidation and inefficiency that can occur when markets are deregulated in the mistaken belief that contestability will lead to efficient outcomes.*

However other economists argue that the theory of contestable markets provides a useful framework for analysing the behaviour of firms in the real world, since it does not require specific assumptions with regard to product homogeneity nor the number of firms in the industry, as is the case in the traditional theories of the firm. They argue that globalisation, the deregulation of markets and the pace of technological change have combined to make markets more contestable. They point to the successful deregulation of telecommunication and energy markets as clear evidence that greater contestability bring benefits to consumers. Indeed it is also clear from recent decisions by both the OFT and the Competition Commission that the theory of contestable markets continues to play a significant role in their decision making.

Areas for analysis and discussion include:

- discussion of unrealistic assumptions of contestable markets
- discussion of recent developments in the theory of the firm and particularly in the model of oligopoly
- discussion of the uncompetitive behaviour of markets believed to be contestable – airlines
- discussion of unrealistic assumptions of the other models in the traditional theory of the firm
- discussion of external factors making markets more contestable – technological advances, globalisation.
- discussion of economic models being used only as a framework or benchmark

- discussion of how these models are likely to be used as a tool for decision making in modern firms
- appropriate diagrams
- appropriate examples

Level 1 ([1]–[7])

Candidate provides little critical examination of the view that the theory of contestable markets is no better at predicting the conduct of real world firms than the traditional theories of firms' behaviour. There is no significant analysis or evaluation and quality of written communication is limited.

Level 2 ([8]–[13])

Candidate provides some critical examination of the view that the theory of contestable markets is no better at predicting the conduct of real world firms than the traditional theories of firms' behaviour. There is some attempt at analysis and evaluation and quality of written communication is satisfactory.

Level 3 ([14]–[19])

Candidate provides in-depth critical examination of the view that the theory of contestable markets is no better at predicting the conduct of real world firms than the traditional theories of firms' behaviour. There is significant analysis and evaluation of the arguments and quality of written communication is of a high standard.

Level 4 ([20]–[25])

Candidate provides clear and comprehensive critical examination of the view that the theory of contestable markets is no better at predicting the conduct of real world firms than the traditional theories of firms' behaviour. There is a thorough analysis and evaluation of the arguments and quality of written communication is excellent. [25]

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3 Social costs of economic activity are difficult to measure

- (a) The social cost of an economic activity is equal to the sum of all the private costs plus all external costs.

The private costs of production include the cost of machinery, raw materials and labour costs.

The external costs include the cost to society of the visual and noise pollution associated with production and the cost to the environment and local economy of any pollution or congestion.

While it is relatively easy to calculate the private costs, since they are published in the company's accounts, it is much more difficult to calculate the external costs. For example, how do we put a value on noise pollution or on the death of wildlife or the destruction of natural habitat? Calculating the external cost to the local economy is also fraught with difficulty. For example, when trying to calculate the social cost of the Shell oil spill in the North sea on local fishermen, estimates need to be made of how much fish each fisherman is likely to have caught in the period the waters were polluted and the likely market price of these fish at that time. When calculating the impact on the local tourist industry estimates need to be made of the likely number

and spending patterns of lost tourists. These estimates are clearly open to interpretation or even manipulation. It is for this reason that estimates of the social cost of any activity can vary significantly.

Issues for analysis and discussion include:

- Definition or explanation of social costs
- Definition or explanation of external costs
- Distinction between private and external costs
- Discussion of the difficulty in placing a monetary value on non-traded entities such as wildlife and natural habitats
- Discussion of time scale – external costs are not immediately apparent
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[5])

Candidate provides little explanation of how an economist measures the social cost of economic activity. There is no significant analysis or application and quality of written communication is limited.

Level 2 ([6]–[10])

Candidate provides some explanation of how an economist measures the social cost of economic activity. There is a degree of analysis and application and quality of written communication is satisfactory.

Level 3 ([11]–[15])

Candidate provides a clear and comprehensive explanation of how an economist measures the social cost of economic activity. There is significant analysis and application and quality of written communication is of a high standard. [15]

(b) There is a range of policies open to government to reduce the negative impact of economic activity on society. Each of these policies has its own benefits and drawbacks. They include:

- Subsidising environmentally friendly forms of production
- Environmental legislation
- Environmental taxation
- Tradable pollution permits
- Extension of property rights

Areas for analysis and discussion include:

- Effectiveness of legislation
- Cost of enforcement
- Impact on price
- Impact on efficiency
- Impact on and use of tax revenues
- Administration costs.
- Government failure
- Opportunity cost of subsidy
- Appropriate examples
- Appropriate diagrams

Level 1 ([1]–[7])

Candidate provides little evaluation of the range of policies the UK government could use to reduce the negative impact of economic activity on society. There is no significant analysis or evaluation and quality of written communication is limited.

Level 2 ([8]–[13])

Candidate provides some evaluation of the range of policies the UK government could use to reduce the negative impact of economic activity on society. There is some attempt at analysis and evaluation and quality of written communication is satisfactory.

Level 3 ([14]–[19])

Candidate provides in-depth evaluation of the range of policies the UK government could use to reduce the negative impact of economic activity on society. There is significant analysis and evaluation of the arguments and quality of written communication is of a high standard.

Level 4 ([20]–[25])

Candidate provides clear and comprehensive evaluation of the range of policies the UK government could use to reduce the negative impact of economic activity on society. There is significant evaluation and judgment of the arguments and quality of written communication is excellent. [25]

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4 Apple accused of colluding with book publishers over price of e-books

- (a) Competition can be defined as “the effort of two or more parties acting independently to secure the business of a third party by offering the most favourable terms”. Firms can compete via price competition or non-price competition.

Price competition occurs whenever firms use price as the basis for attracting and retaining customers. There are a number of different pricing strategies that firms can use. These include competitive pricing, destroyer/predatory pricing, psychological pricing and penetration pricing.

Non-price competition refers to all forms of competition other than through the price mechanism. Non-price competition involves firms focusing on areas such as quality, design, after sales services and other marketing factors such as product differentiation, branding and advertising.

Collusion occurs when two or more firms act together to set price, output or other conditions of sale. Collusion is most likely to occur in oligopolistic markets where a few large firms dominate the market. Collusion can be explicit or tacit.

Explicit collusion occurs where the firms set price and output as though they were a monopolist. They then divide the output between themselves with each firm producing its allocated quota. An explicit collusive agreement is known as a cartel, e.g. OPEC

Tacit (implicit) collusion on the other hand occurs whenever firms take seemingly independent, but parallel actions that result in higher prices and

profits. This often occurs when smaller firms match the price changes of the barometric leader.

Areas for analysis and discussion include:

- Definition and explanation of competition
- Explanation of difference between price and non-price competition
- Discussion of alternative pricing strategies
- Discussion of non-price competitive strategies
- Definition and explanation of collusion
- Explanation of difference between explicit and tacit collusion
- Reference to cartels
- Use of appropriate examples

Level 1 ([1]–[5])

Candidate provides little explanation of the difference between competition and collusion. Quality of written communication is limited.

Level 2 ([6]–[10])

Candidate provides some explanation of the difference between competition and collusion however this may be incomplete or contain errors. Quality of written communication is satisfactory.

Level 3 ([11]–[15])

Candidate provides a comprehensive explanation of the difference between competition and collusion. Quality of written communication is of a high standard.

[15]

- (b) Traditional economic theory suggests that oligopolies are likely to act against the public interest by charging higher prices than would be the case under more competitive conditions. Being able to charge these higher prices allows the firm to earn supernormal profits. As a result oligopolistic firms are likely to be both allocatively and productively inefficient. Opponents of oligopoly also point out that it often leads to collusion between firms which results in higher prices and a poorer deal for consumers.

However, those in favour of oligopolies argue that they drive innovation. They argue that oligopolistic firms will use some of their supernormal profits to fund research and product development and as a result will create dynamic efficiency. They also argue that an economy will benefit from permitting oligopolistic firms to develop as it allows firms to become large enough to gain the economies of scale necessary to survive in a global marketplace.

Areas for analysis and discussion include:

- Impact of oligopoly on prices
- Impact of oligopoly on consumer and producer surplus
- Reference to economies of scale
- Reference to industries which are natural oligopolies
- Reference to supernormal profits
- Reference to research and development and product innovation
- Reference to dynamic efficiency
- Reference to importance of oligopolies in job creation
- Reference to costs and benefits of non-price competition
- Reference to costs and benefits of relative price stability

- Reference to high potential for collusion and price fixing
- Comparison with other market structures
- Appropriate diagrams
- Appropriate examples

Level 1 ([1]–[7])

Candidate provides little critical examination of the view that oligopoly is the least desirable market structure. There is no significant analysis or evaluation and quality of written communication is limited.

Level 2 ([8]–[13])

Candidate provides some critical examination of the view that oligopoly is the least desirable market structure. There is some attempt at analysis and evaluation and quality of written communication is satisfactory.

Level 3 ([14]–[19])

Candidate provides in-depth critical examination of the view that oligopoly is the least desirable market structure. There is significant analysis and evaluation of the arguments and quality of written communication is of a high standard.

Level 4 ([20]–[25])

Candidate provides clear and comprehensive critical examination of the view that oligopoly is the least desirable market structure. There is a thorough analysis and evaluation of the arguments and quality of written communication is excellent.

[25]

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Total

80