Mark Scheme (Results)

Summer 2016

Pearson Edexcel GCE in Economics (6EC03) Paper 01 Business Economics and Economic Efficiency

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Please note we are introducing 'drag and drop' annotations to the sampling process for this session. When you enter the annotation screen you will able to toggle between a number of options. These will be short abbreviations for longer phrases. Please drag the relevant option (by holding down the right mouse button) and then dropping it onto the relevant part of the script. This shows your Team Leader where you have awarded your marks and lead to you being passed to mark more quickly.

The options are below:

Option	Meaning
NR	Not Relevant
OMS	Outside Mark Scheme
BOD	Benefit of Doubt
QWC	Quality of Written Communication
ILL	Illegible
AP	Application
KAA	Knowledge, application & analysis.
EV	Evaluation
2CAP	Cap the multiple choice question at 2 because the key is wrong
RPT	Repeating a point already made so do not award again

General marking guidelines 6EC03 Supported Choice Questions

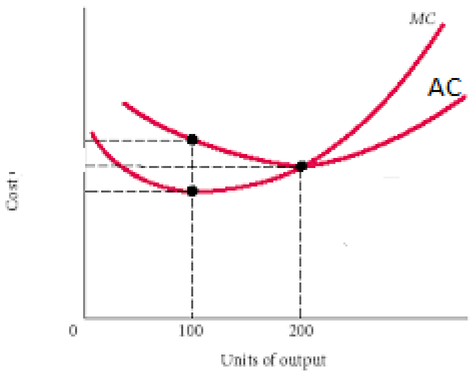
Maximum score: if an incorrect key has been chosen, the maximum score is 2 out of 4.

Knocking out incorrect options:

Incorrect options can be knocked out, if relevant economic reasoning is given, for 1 mark each time. Up to two knock out marks can be awarded for each supported choice question. If more than one key is knocked out for the same reason this will earn one mark only.

Knock out marks are **not** awarded if the reasoning is that 'it's not A because it is B' – there must be some valid ***economics rationale*** to the answer in order to earn a mark.

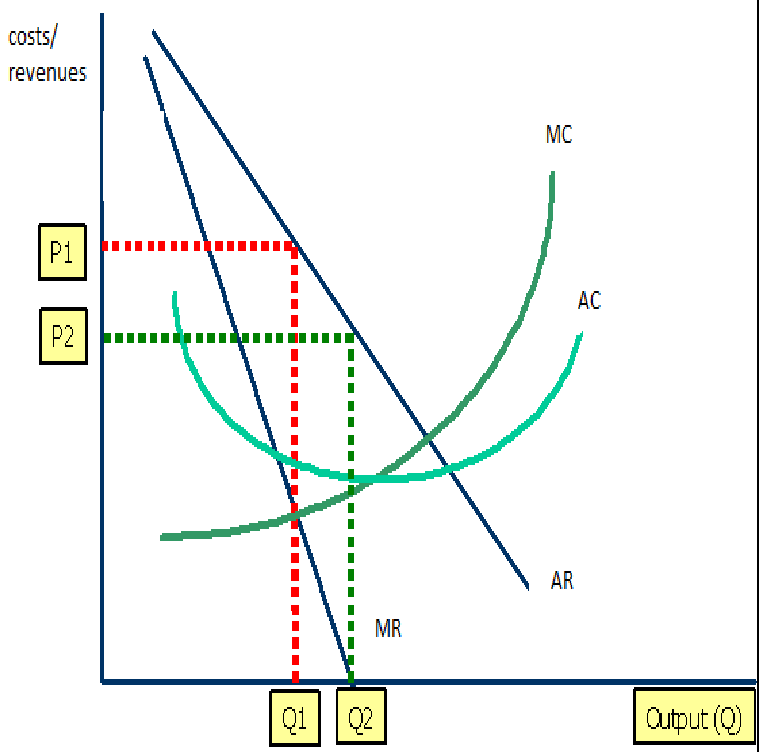
Question Number	Answer	Mark
1	Key: D	**(1)**
	Vertical integration – merging with firms at different stages of the production process (1) Backwards – towards the raw materials (1) Application to context/benefits to Rolls Royce, e.g. full control, cutting out the mark up (1) why engines are previous stage of production (1) Knock out of incorrect options up to 2 marks available. For example: It is not B because it is not merging with a firm at the same stage of production (1) It is not C because this would have involved buying a business at next stage such as car sales dealership (1)	**(3)**

Question Number	Answer	Mark
2	Key: E	**(1)**
	Definition/formula of marginal (cost of producing one more unit) **or** average cost (1) Explanation that if marginal cost is below average cost it pulls down the average cost (1). Explanation of the short run, e.g. there is at least one fixed factor or there are fixed costs (1). Rising marginal costs means that the law of diminishing returns has set in(1) Diagram illustrating range where MC<AC (1) with MC rising while AC falling clearly demonstrated (1) with arrows or sections of the curve marked as follows:  Knock out of incorrect options up to 2 marks available. For example: A is wrong as economies of scale occur in the long run where more factors of production can be changed (1) Not B as the rising marginal costs imply diminishing returns have set in (1) Not C because there will be fixed costs, with examples or definition of fixed costs (1)	**(3)**

Question Number	Answer	Mark
3	Key: E	**(1)**
	Definition of normal profit (1) e.g. AR=AC or TR=TC or making just enough profit to keep factors in their current use. Award 1 mark for correct calculation of the columns and filled in up to at least 5 units, for TC (1) AR or MR (1) MC (1) or total profit if added (1). Observation that MC=MR is profit maximisation (1) The firm is a price taker, or faces perfectly elastic/horizontal demand (1) The firm makes normal profits where AR=AC in the long run (1) Defining characteristic of perfect competition, if not included above, e.g. very many firms in the industry, perfect knowledge, no barrier to entry or exit, homogeneous product (1) Diagram showing price taking firm, or perfect competition firm with industry diagram determining the price (1) Total revenue is increasing at a constant gradient indicating firm is a price taker (1) Knock out marks: e.g. it is not A because this is a price taker with horizontal demand curve whereas monopolistic competitor would have downward sloping demand curve due to differentiation (1) D is wrong because £3 loss is made at 3 units	**(3)**

Output per day	Total revenue (£)	Average revenue/Marginal revenue (£)	Total cost (£)	Average cost (£)	Marginal cost (£)
0	0	-	12	-	-
1	10	10	22	22	10
2	20	10	28	14	6
3	30	10	33	11	5
4	40	10	40	10	7
5	50	10	50	10	10
6	60	10	81	13.5	31

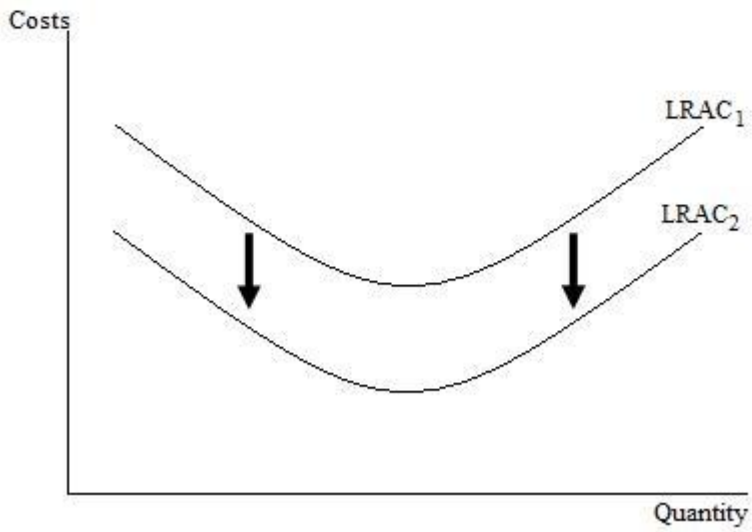
<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>4</td><td>Key: B</td><td>(1)</td></tr>
<tr><td></td><td>Firm has monopoly power or is a price maker (1). Revenue maximising occurs at MR=0 (1). A change to profit maximising means MC=MR (1) and MC is positive because there are at least some variable costs or MC>0 (1).

Use of diagram to illustrate these points, up to 2 marks. NB diagram must include correct change in P and Q based on correct equilibria (1+1) e.g. where P1 Q1 is profit max (1 mark) and P2Q2 is revenue max (1 mark):


</td><td>(3)</td></tr>
</table>

Question Number	Answer	Mark
5	Key: E	**(1)**
	Oligopoly definition, e.g. a few firms dominate the industry (1) Interdependence (1) Explanation of a price war, e.g. firms react to another firm's price cuts by cutting their own prices (1) Use of data to demonstrate that some firms dominate, e.g. Verizon has 34%, or use of a concentration ratio e.g. the 4-firm CR is 98% (1) Reasons why a price war is likely to occur (1+1). This might be developed using game theory: Use of pay off matrix to show short term reasons for a price war e.g. short term gains by under-cutting rival (1) and the effect, e.g. both firms lose revenue(1) Kinked demand curve (1) if interrupted MR curve is illustrated (1) Knock out of D: if (kinked) demand were relatively inelastic in relation to a price cut then this would be a reason NOT to lower price (1)	**(3)**

Question Number	Answer	Mark
6	Key: A	**(1)**
	Knowledge mark: **price discrimination** is occurring **or** definition/formula of PED (1) Explanation: When demand is relatively inelastic, price can be raised without significant loss of revenue/demand is unresponsive (1) Two sub-markets have been identified with different elasticities, which is a condition of price/product discrimination (1) Reasoning for higher/lower PED, e.g. there is more choice before 6pm, or people who have been working have higher incomes to spend than the people who can eat out during the day (1+1) Use of **diagram** to illustrate relatively elastic demand before 6pm and relatively inelastic demand after 6pm (1 mark for correct elasticities, 1 mark for correct prices **in each sub-market**) Knock out of E: It cannot be E because if arbitrage is possible then price discrimination is not possible (1)	**(3)**

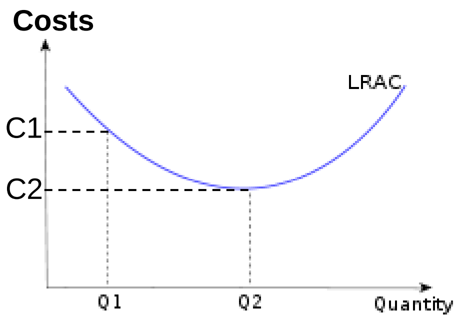
Question Number	Answer	Mark
7	Key: A	**(1)**
	Definition of **external** economies of scale (1) e.g. benefits to a firm when an industry as a whole grows, or geographical location improves, or benefits of being a large firm while still being a small firm Increasing number of firms suggests firms are being attracted to the industry (1) Firms are likely to be small and benefit from large industry rather than being large themselves (1) Low barriers to entry (1) Profits are acting as a signal to entry (1) Application (1) to likely external economies which might arise in this context – e.g. knowledge sharing, skilled local computer technicians, improved local infrastructure such as super-fast broadband, use of data to show increase in industry size Diagram (1) AC accepted: 	**(3)**

Question Number	Answer	Mark
8	Key: D	**(1)**
	Definition of a price cap, e.g.: a price cap limits the amount by which firms can increase prices (1) Role of regulator (1) e.g. a surrogate for competition Reason for or function of a price cap (1) e.g. to prevent monopoly exploitation/higher prices, or to stop prices rising more than a certain amount RPI+k or 1% explanation (1) e.g. to allow firms to invest in rail infrastructure Explanation that **real** terms have had the effects of inflation removed, that is, the RPI element is in the equation so that the inflation impact can be ignored (1) Explanation that **nominal** terms means current prices, or that prices are rising in line with inflation (1) The reduction in price cap means that the rail operating companies have less scope for raising prices (1) The price cap increases consumer surplus at the expense of producer surplus (1) The regulator perceives that there are efficiency gains to be made/less investment to be made compared to the previous period (1) Knock out e.g. B rise 1% real terms was the annual increase in the previous regulated period not the current period (1)	**(3)**

Question Number	Answer	Mark
9a	Theory: 2 marks. Award **one** condition for up to 2 marks. 1 mark for identification and 1 mark for explanation. Conditions might include: • A powerful buyer in the market drives down the prices of supplies. Buyers are price makers. Large buyers with market power, small or competitive sellers which are price takers/low level of market power. (1+1) • Sellers do not have the power to determine prices. Sellers are price takers. Firms selling products cannot sell to other buyers. (1+1) • There are barriers to entry for firms wishing to buy products. (1+1) Application related to monopsony: 2 marks. At least one mark must relate to the data provided in Extract 1. Sense of large powerful supermarkets buying power: The middlemen or distributor's profits are being squeezed to 3% (1), distributors' price squeeze (1) and mergers of distributors are necessary to ensure the firms' survival (1) supermarkets are so powerful that can now source direct (1) producers/distributors have had to absorb cost increases (1) bananas often sold as loss leaders (1) Sense of many producers: Global banana production has doubled Ext.1 (1) there are lots of sellers e.g. Extract 1 'more competitive than ever' (1) Sense of large powerful buyers (distributors): Dole has 26% of market of distributors (or similar from Fig. 2) Deal to create largest biggest distributor (1) $1bn merger (1)	**4**

Question Number	Answer	Mark
9 (b)	KAA 4 marks (2+2 or 3+1 for effects, plus application marks) Award the best two effects. Effects might include: • Monopsony forces down prices. Distributors cannot make significant profits • Consumers have lower prices • Supermarkets may bypass the distributors by going straight to suppliers with consequent effect on distributors. • Distributors have to merge, cut costs, diversify, collude, merge to stay in business e.g. Chiquita and Fyffes (might count as 2 points) • Diagram may be awarded but not required (1+1) one mark for correct movement and one mark for impact Evaluation 4 marks (4+0 or 2+2 or 3+1) Points might include: • Fair Trade (synoptic element) • Consumers might be faced with less choice or higher prices in the long run • Mergers will enable banana distributors to fightback • has been made worse by costs increasing at the same time • compounded by other factors making it worse for them • depends on what else they distribute e.g. melons and pineapples Extract 1 • SR v LR - situation could improve in the future • SR v LR - market could become more regulated to improve the situation	**(8)**

Question Number	Answer	Mark
9 (c)	Role of regulator (1) (might be implicit) KAA 6 marks Award up to 3 problems. (2+2+2) or (3+2+1) or (4+2) Problems regulators might fact might include: • Asymmetric information, especially in a worldwide market. • Regulatory capture • Regulatory lag • Hard to prove illegal behaviour (might just be good business sense/barriers to entry are high) • International market – different authorities which might lack the power to investigate in other countries e.g. Dublin and US • Lack of accurate information on how the market will develop and how much power the newly formed firm would have • Costs of regulation, including opportunity cost • Weak power of regulators • Fines do not act as a deterrent Evaluation 6 marks (2+2+2) or (3+2+1) or (4+2) Award up to three evaluation points, which might include: • Reasons why regulation might be easy, e.g. regulatory powers have increased in recent years, symmetric information • Regulatory capture can be overcome, e.g. by fines, precedence, media coverage • Not much need for regulation e.g. because the market is providing effective competition or there are economies of scale – is it the distributors or the supermarkets at fault? • Regulation acts as a deterrent even if it does not have a direct effect • The threat of regulation is as much of an effective tool as the regulation itself (and probably the main reason this particular merger did not go ahead, although of course candidates would not be expected to know that) • The volatility of market makes it hard to decide whether profits generated are due to anticompetitive behaviour or favourable harvest • Problems of over-regulation	**(12)**

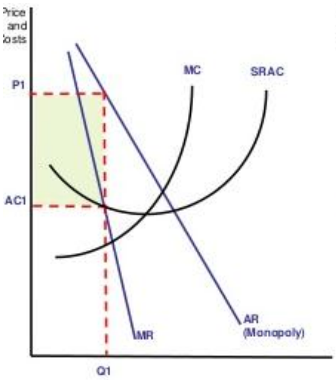
Question Number	Answer	Mark
9 (d)	KAA 8 marks Reserve 2 marks for diagram (1+1) one mark for correct movement/shift and one mark for impact The diagram can be used as part of the KAA or Evaluation or both Diagram might involve increase in AR/MR, falling in SR costs (AC or AC and MC), LRAC and a succession of SRACs (envelope curve) or a simpler version of economies of scale, e.g.:  Allow diagrams with constant costs, or diagram showing movement from competitive to monopoly situation e.g. showing benefit to firms such as increased profit Factors 2+2 +2 + 2 marks or 3+3 +2 marks or 4 + 4 marks Benefits to **any stakeholders** might include: • economies of scale (might count as more than one point) e.g. 'more bananas on fewer boats' means there are technical economies of scale • the merger would give distributors increased power in negotiating with the supermarkets e.g. raised profits for firms • rationalisation • shared networks • benefits of diversification e.g. melons and pineapples • cross subsidisation • increased market power in selling produce • job security for workers • increased consumer surplus • high tax revenue	

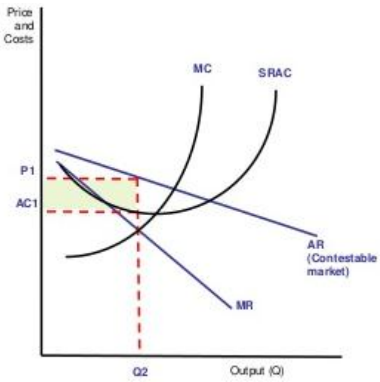
Question Number	Answer	Mark
9(d) continued	Evaluation 8 marks e.g. (2+2+2 +2) or (3+3+2) or (4+2+1+1) Factors might include negative impacts on **any stakeholder,** or other evaluation points: • Merging might lead to higher costs • Revenues might not rise • Diseconomies of scale (might be shown on diagram) – e.g. lost synergies • Fear or costs of regulation • Need more information e.g. on how other firms will react • Diagrams could be used as part of the evaluation, e.g. higher prices, lower consumer surplus • Redundancy costs • Legal costs • X inefficiency costs • Effect on workers • Impact on banana growers (monopsony) • Impact on contestability	**(16)**

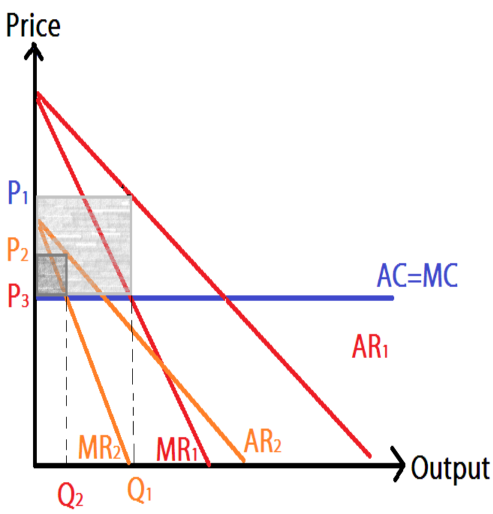
Question Number	Answer	Mark
10 (a)	**Theory: 2 marks** Firms are price makers, ability to set prices without losing all demand, price discrimination, relative inelastic demand or the use of a diagram to show a downward sloping demand curve, effectively the only supplier, there's no alternative, collusion Monopoly/oligopoly – a single or dominant firm (allow 25% legal definition) **Application (at least one reference to any information provided): 2 marks** 'Profiteering' or 'inflated prices' Extract 1 'not wanted to add extra miles' Extract 1 '15p above average price' Extract 1 'it's a complete monopoly' Extract 2 'notoriously expensive' Extract 2 'captive market' Extract 2 15 miles between MSAs or over 50 miles 'like an airport or railway station' Extract 2 'goldmine' Extract 3 'generate huge amount of cash' Extract 3 Concentration ratio from Figure 1 e.g. 3 firm CR = 87% (2 marks for correct calculation) Reduced number of options – HGV drivers forced to use MSAs	**(4)**

Question Number	Answer	Mark
10 (b)	KAA 4 marks (2+2 or 3+1). Award best 2 points given. Points might include: • High fixed costs, high set up costs, legal requirements e.g. spacing between motorway services • Fall in demand as market becomes more competitive and/or substitutes improve e.g. rail fares decrease, electric cars • Discussion of short run shut down point. The firm is covering AVC but not AFC, so is making a contribution to fixed costs. A shut down diagram with price below AVC could be used to support this point. • Increase in costs/ fall in demand due to regulations e.g. toilets, limitations on products being sold • Need for investment • Debt £376 million, Roadchef 'downgraded' • Change in consumer behaviour e.g. technological changes • Diagram may be awarded but not required (1+1) one mark for correct movement/shift and one mark for impact Evaluation 4 marks (2+2 or 3+1 or 4+0) Factors might include: • The firms seem content to survive the fixed costs into the very long run (extract 3). Discussion of how long is the long run. • Several firms have had to merge • Firms can survive while making a loss because the managers are satisficing, or the firms can make an operating profit while ignoring the cost to the capital investors • Depends on the time period under consideration • Depends if the firm can cross subsidise with other services, or find other ways to make a profit e.g. charging for parking/facilities • It says 'they generate a huge amount of cash' Extract 3 so 'what does it matter' • They may leave even if AR is greater than AVC or stay if AR is less than AVC only if they are cross subsidising • The fall in profits may be temporary e.g. rail fares might rise • Factors may be combining together, not just one thing in particular	**(8)**

<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>10 (c)</td><td>
KAA 6 marks
Reserve 2 marks for diagram (1+1) one mark for correct movement/shift and one mark for impact on profits
The diagram can be used as part of the KAA or Evaluation or both
Diagram showing decrease in demand or increase in costs.

For those firms exhibiting profits, or an increase in demand for those offering low prices. Diagrams could illustrate increasing PED as AR becomes more elastic, with profit area:




Or an inward shift of AR and MR, with 1 mark for the AR and MR shift, and 1 mark for the new profit/loss area.


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Question Number	Answer	Mark
10 (c) continued	Other KAA (4) 2+2 or 3+1 or 4+0 Factors must be linked to profit might include: • Demand will become more elastic if there are clear substitutes • Reduces monopoly power of individual firms • Infrastructure costs of the signage might be a factor, in which case a firm showing increase in AC and MC would be accepted in the diagram • Collusion • Price wars • Use of pay off matrix or other game theory to show behaviour Evaluation 6 marks (2+2+2) or (3+3) Factors might include: • There are better ways to make the market more contestable, e.g. deregulation • It depends on whether the firms are exploiting monopoly pricing and charging high prices. Firms charging relatively low prices might enjoy an increase in demand • It depends on the price differential/levels of income of drivers or economic cycle. • It depends on whether new MSAs are built. In some cases there is a large gap still between MSAs. • Signage is a one off cost • Depends on how desperate the driver is • Depends on what other firms do. Game theory may be used to develop the evaluation • Collusion will change the impact • Greater reliance on non price competition • Consumer loyalty/branding/habitual behaviour may be strong enough offset the impact of price information **NB 2 marks for correct use of pay-off matrix – can be used as KAA or Evaluation**	**(12)**

<table>
<tr><th>Question Number</th><th>Answer</th><th>Mark</th></tr>
<tr><td>10 (d)</td><td>KAA 8 marks. Award up to 4 factors e.g. (2+2+2 +2) or (3+3+2) or (4+2+1+1). Points might include:

Reasons for growth, e.g. economies of scale, benefits of horizontal integration (might count as more than one point)
Lack of contestability. Barriers to entry might include high fixed costs (might count as more than one point)
High set up costs e.g. high-cost legal requirements
Small profit margins at low output levels. Award use of appropriate profit/cost/revenue diagrams e.g. LRAC falling
Monopoly power/power of branding/non-price competition
Collusion
Limit or predatory pricing
Other anti competitive behaviour
Minimum efficient scale
Loyalty schemes and other non-price competition such as branding e.g. M&S services might attract loyal customers
Regulations e.g. planning restrictions
Debt is a deterrent e.g. £376m Extract 3
Maybe unattractive to potential competitors. Therefore few firms can dominate the market

Evaluation 8 marks (2+2+2 +2) or (3+3+2) or (4+4). Points might include:

The firms seem content to survive the fixed costs into the very long run (extract 3)
Reasons why other firms are better when small, e.g. care service industry
Several firms have had to merge or go out of business
Diseconomies of scale e.g. are synergies possible and do dis-synergies set in?
Few opportunities to increase profits are available.
Discussion of the nature of the business e.g. minimum efficient scale
MSAs are more than 50 miles apart which is a sign of failed regulation
Risk or cost of loyalty schemes
Pay off matrix or other game theory can be used e.g. to show why collusion might not work
Arguments that economies of scale don’t apply e.g. the low credit ratings of operators means that banks won’t lend
</td><td>(16)</td></tr>
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