

**Suggested Answers**

**ai. Given the information contained in Table 1, identify the region that had the greatest impact on world oil prices. Justify your answer. [3]**

- **Middle East [1]**
- Total consumption in the Middle East had an overall percentage increase of 1.31 percent (**DD**↑), which was outstripped by its total production which had an overall percentage increase of 5.44 percent (**SS**↑)
- It had the **greatest net increase** in oil production (i.e. increase in SS outweighs the increase in DD) compared to the rest of the regions given, causing world **oil prices to fall**.

[Award 1m for identifying the region; 2m for justifying the answer]

**aii. Besides the return of US oil and Libyan oil pushing up supply, explain one other reason that has contributed to the change in world oil prices. [2]**

- According to Extract 1, given the current slowdown in the Chinese and EU economies have led to a **poor outlook**, consumers are not optimistic about their employment prospects for the future. Thus, **expectations of lower future income** will lead to a fall in their current **demand for final goods and services** like cars. The **derived demand for oil**, which is a factor input in the production of cars, will thus fall.

**b. What can you conclude from the evidence in Extract 1 about the likely value of the price elasticity of demand of oil? [2]**

- The value of price elasticity of demand of oil is likely to be less than one (i.e. demand is price inelastic)
- Given the increase in supply of oil, according to Extract 1, due to the return of US oil and Libyan oil to the market, if demand for oil is price inelastic due to it **being a necessity since it (an industrial raw material and commodity) is a key factor input in the production of many goods and services**, there will be a sharp fall in prices.

**c. Explain how OPEC can ‘stabilise prices by cutting production’ of oil. [3]**

- OPEC, the cartel of major oil producers’ supplies over 30% of the world’s oil (i.e. market share) would fix production quotas among member states. Through the agreement, OPEC effectively acts as a monopoly for oil setting quantity to be at the profit-maximizing level of output where  $MC = MR$ .
- However, when price of oil fell, it threatened the survival of smaller cartel members/ “more vulnerable members”.
- If OPEC were to cut the production of oil, it will reduce the total market oil supply, propping up oil prices, achieving the effect of stabilising prices.

**d. Describe the likely market structure of China’s electric car industry. [2]**

- Oligopoly. There are a few large dominant firms (Volkswagen, BMW & General Motors). OR high barriers to entry (economies of scale, Extract 2) and branding (Extract 4).

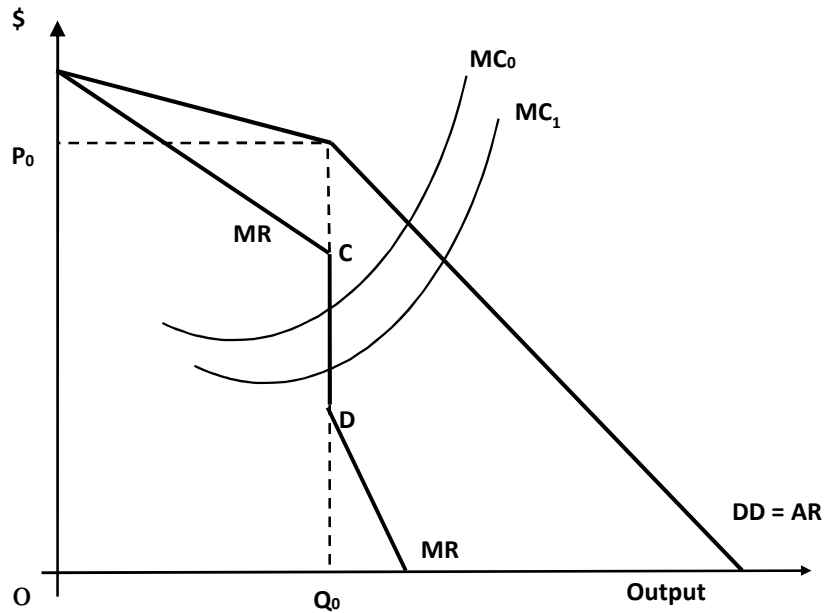
**e. Discuss the factors affecting the choice of competition strategies in China’s electric car industry. [8]**

Firms within the electric car market can undertake competition strategies to increase the level of profits earned. The choice of competition strategies can be explained by factors such the type of market structure and government regulations.

**Factor 1: Type of Market Structure**

One of the factors affecting the choice of competition strategies in the electric car industry is the **type of market structure**. As explained earlier, the likely market structure of China’s electric car industry is an oligopoly. Due to the small number of dominant firms in the industry, the electric car makers are mutually interdependent where each oligopolistic electric car maker makes its decision based on the reactions of other electric car makers in the same industry. As such, this leads to rival consciousness as they have to be aware of the decisions of other firms so that it can respond accordingly.

The behavior undertaken by a non-collusive oligopoly can be explained using the kinked demand curve theory. The model seeks to explain how it is that, even where there is no collusion at all between the car firms, prices can nevertheless remain stable.



### Figure: Profit-maximization of an Oligopolist

Based on the assumption that rival firms would match any price decrease it makes but not follow it in any price increase, the oligopolist faces a price elastic demand curve at prices above  $P_0$  and an inelastic demand curve at prices below  $P_0$ . On this assumption, each oligopolist will face a demand curve that is kinked at the current price and output as seen in the above figure. As a result, a rise in price may lead to the electric car firm experiencing a more than proportionate fall in quantity demanded, while a price cut results in a less than proportionate increase in quantity demanded. In both cases, the electric car firm experiences a fall in total revenue. Since the profit maximising output level is where  $MR = MC$ , any change in  $MC$ , for example from  $MC_0$  to  $MC_1$ , intersects  $MR$  at quantity  $OQ_0$  and price  $OP_0$ . This results in price rigidity, where the price remains unchanged over a wide range of costs. Hence, the type of market structure is one important factor that affects the choice of competition strategies.

Due to the feature of mutual interdependency in this market structure, electric car firms avoid any unnecessary price changes. Instead, they choose to compete using non-price competition, otherwise known as product differentiation, to increase demand and make demand for its electric cars more price inelastic. As seen in Extract 4, there is evidence of car firms exhibiting strategic behavior (i.e. actions taken by firms which are intended to influence the market environment in which they compete) - “traditional car makers like BMW, Volkswagen and General Motors are developing electric vehicles that are faster, cheaper and boast better range than before,” showing how a firm's research & development and marketing strategies are influenced by what its rivals are doing, in order to maintain or increase profits in the long run. Successful product differentiation increase demand for the firm's electric cars directly, and make demand for its electric cars more price inelastic, allowing firms to charge higher prices and earn higher profit.

## **Factor 2: Changes in government policies**

Lastly, **changes in government policies** could also affect the choice of competition strategies. As seen in Extract 4, the central government has also “instituted a new set of policies to encourage competition among domestic manufacturers.” Government policies favouring competition such as

“subsidies to *help smaller companies achieve large-scale* production” has helped to increase the level of competition within the industry. Prior to the new set of government policies, the established large electric car firm is able to sell its output at a much lower price which potential new firms are unable to match. This deters new firms from entering the industry as they do not have the customer base to warrant a high output level to experience the economies of scale enjoyed by an established large firm, so entry is blocked. With government intervention, small firms can now compete with the larger firms and remain in the industry. Such policies may force existing competitors to engage in further product differentiation to maintain their market share, and the evidence of this can be seen in Extract 4 where “locally produced vehicles finally reached a quality threshold”, and “traditional automakers... developing electric vehicles.. faster, cheaper, and boast better range than before.”

### Evaluation (any one):

- According to Extract 2, low oil prices will not harm sales of electric cars. This information corroborates with the fact that electric car firms avoid any unnecessary price changes. The low cost of using a conventional car would not lead to a huge substitution effect (i.e. consumers switching over to conventional cars), as owners of electric cars are not looking for “budget monitoring but status as early adopters of cutting-edge technology.” Hence, electric car firms are more likely to engage in product differentiation so that if they succeed in innovating, demand for their electric cars would rise and become more price inelastic, resulting in higher profits.

Level of Response Marking Scheme		
<b>L2</b>	A <u>developed</u> explanation on how the market structure affects the choice of competition strategies, linking to price rigidity and dominant mode of competition being non-price competition  AND  Any other point that affects the choice of competition strategies	<b>4-6</b>
<b>L1</b>	An <u>undeveloped</u> explanation on how the market structure affects the choice of competition strategies, linking to price rigidity and dominant mode of competition being non-price competition <b>AND</b> Any other point that affects the choice of competition strategies  <b>OR</b>  Other undeveloped points that affects the choice of competition strategies	<b>1-3</b>
<b>E</b>	For an evaluative judgement with substantiation. (e.g. on the relative importance of the factors)	<b>1-2</b>

**f. Assess how the level of contestability of the electric car market in China impacts the ability of the firms in the industry to earn excess profits in the long run. [10]**

### **Introduction**

- A contestable market is an economic concept that refers to a market in which there are only a few firms that, because of the threat of new entrants, behave in a competitive manner.

**Thesis: The level of contestability will have a negative impact on the ability of firms in the industry to earn excess profits.**

- The **leveling of access to technology** in the electric car market has increased the level of contestability, negatively impacting the ability of firms to maintain supernormal profits. The level of access to technology affects the ability of potential entrants to compete with incumbent firms.
- At the same time, **government intervention** can reduce the impact of **sunk costs** through subsidies. With a fall in the level of sunk costs, it would be less costly for firms to enter and compete with the incumbent firms.
- **Extract 4:** Tesla is facing new competitive challenges, with traditional automakers as well as newcomers like Apple quickly entering the industry to compete. China subsidises automakers to achieve economies of scale in production.
- Tesla has released several patents pertaining to the technology of electric vehicles, increasing the level of access to technology by potential entrants.
- **Effect on profits:** Increase in the level of access to technology can reduce set up costs, increase demand for the industry, making it easier for rival firms to contest the market.
- When a firm in the industry makes supernormal profits, there is an incentive for rival firms to enter the industry to compete for a share of the market and the profits.
- This leads to a fall in the profitability of the incumbent firm.

**Anti-thesis: The level of contestability will have a positive impact on the ability of firms in the industry to earn excess profits.**

- There exists **high levels of sunk costs** and **significant barriers to entry** in the industry for electric car markets in China.
- **Extract 2:** Consumers are brand conscious, look out for status as early adopters of technology. Significant EOS in producing car batteries.
- The level of sunk costs in the electric car market is likely to be high, leading to lower contestability. A potential entrant would need to obtain factories and complex machinery for the mass production of electric cars (car batteries), which is a large investment. The brand loyalty of consumers may also be significant as traditional automakers such as BMW, Volkswagen and General Motors have well-established brand names that have lasted decades.
- **Effect on profits:** The level of sunk costs of the firms in the industry affects the ability of potential entrants to enter and exit the industry to compete with incumbent firms. A high level of brand loyalty amongst consumers in the industry would lower the level of contestability as consumers would not be likely to switch to consuming products from potential rival firms.
- Both factors would reduce the likelihood of potential entrants entering the market to contest the profits of the incumbents.
- This leads to the incumbent firm having a higher ability to maintain the level of supernormal profits earned.

### Evaluation: Other factors

- **Increase in collaboration:** The industry is likely to see an increase in level of collaboration in the long run as both Toyota and Tesla call for greater investment into R&D, increasing the level of access to technology for all firms and increasing contestability.
- **Government intervention:** The Chinese government has also implemented policies to encourage competition. This can take the form of subsidies for new firms or lowering of tariffs for car imports.
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Level of Response Marking Scheme		
<b>High L2</b>	A <b>balanced and clearly developed</b> explanation and discussion of impact of contestability on the level of long run profits of firms in the electric car market in China.	<b>7</b>
<b>Low L2</b>	A <b>balanced and mostly developed</b> explanation and discussion of the impact of contestability on the level of long run profits of firms in the electric car market in China.	<b>5-6</b>
<b>High L1</b>	<b>Unbalanced or undeveloped</b> explanation of the impact of contestability on the level of long run profits of firms in the electric car market in China.	<b>3-4</b>
<b>Low L1</b>	Smattering of valid points	<b>1-2</b>

### Evaluative Comment (1 – 3 marks)

An evaluative conclusion with substantiation.

<b>E3</b>	Builds on an appropriate analysis to evaluate critically to arrive at a well-reasoned judgment and decision	<b>3</b>
<b>E2</b>	Some attempt of evaluation or a conclusion that answers the question but doesn't explain the judgement or base it on analysis	<b>2</b>
<b>E1</b>	Mainly unsupported evaluative statement	<b>1</b>