

Businesses in the UK are still not able to cope with the dual blow of Brexit and Covid-19, and face falling profit levels. Supply disruptions remain a lingering concern, which has driven up prices of many items including petrol and a basic haircut. The Competition and Markets Authority found that high petrol prices could not be solely blamed on global factors and found evidence of weakening competition. Amidst these developments, businesses have taken various measures, with petrol retailers moving towards mergers while barbers are offering attractive discounts on their haircuts.

- (a) Explain whether the higher petrol price is due to collusion or other factors. [10]
- (b) Discuss whether lowering prices is the most appropriate strategy for firms in different industries when faced with the above challenges. [15]

Part (a)

Introduction

- Clarify market structure petrol retailer operate in – oligopoly

Elaborate briefly.

- i) **High barriers to entry**
 - Firms in the petrol retailing industry tend to face high natural/structural barriers which essentially arises from the differences in production and costs between the incumbents in the petrol retailing industry such as Esso and a potential entrant. These natural barriers to entry include high rental / lease of land particularly in northern parts of UK and central London areas. In addition, infrastructures such as fuel dispensers, submersible pumping systems as well as technology to adopt digitalisation to facilitate payment processes to enhance operational efficiency and improve customer experience incurs very high overhead costs → lack of financial capital/loans prevents firms from entering
 - Given the large scale of operation of incumbent firms such as BP, Shell and Tesco, they tend to have high minimum efficient scale (MES) of production. As such, they are fully able to exploit available internal economies of scale to enjoy significant low unit cost of production of their petrol and consequently allowing them to price them at a competitive level.
 - As a result, potential entrants may find it difficult to compete effectively as they tend to operate on a relatively smaller scale and may not be able to spread the high overhead/startup costs of setting up a petrol station over the output produced, incurring a relatively higher unit cost of production compared to the incumbent. Therefore, potential entrants may not be able to match the price of their petrol at the same level as the incumbents without incurring losses. This deters the entry of new firms since they are less able to compete on cost and may incur losses due to the significant differences in the cost conditions.
- ii) **Few dominant firms**

As a result of the high barriers to entry, there are only a few large firms dominating the industry and for example, the 3-firms market concentration is relatively high in the UK. For example, the UK petrol retailing industry may be characterised by 3 dominant firms such as Shell, BP, and Esso.
- iii) **Nature of Product**
 - Differentiated – services?

Body:

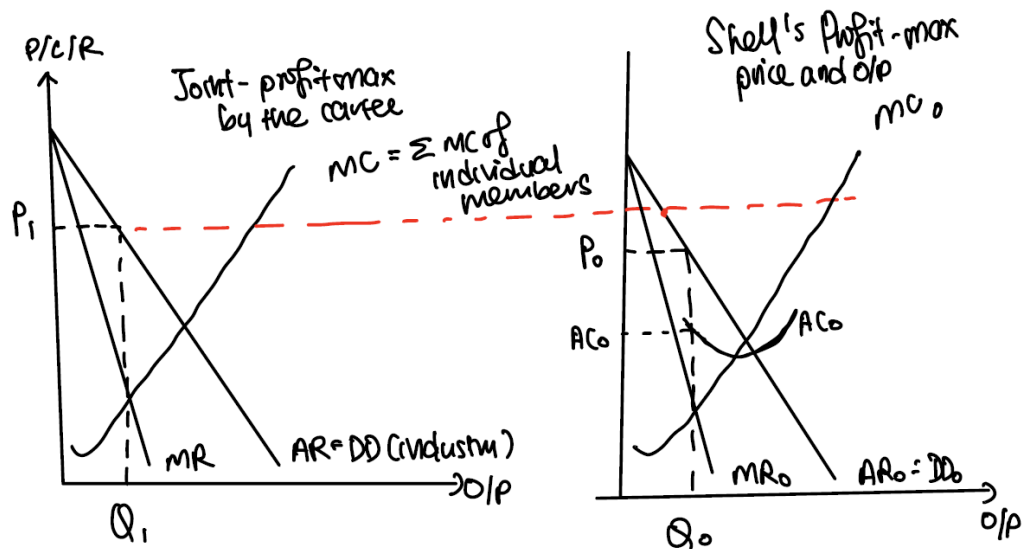
R1: High petrol price due to tacit collusion of petrol retailers.

- Due to small number of large firms dominating the industry, there is high degree of mutual interdependence/rival consciousness between the firms. Hence, every action taken by a single firm, for example Esso, will affect the sales and profits of all the other firms such as Tesco, Morrisons, and Shell, triggering a reaction from them to protect their market share.

- As such, firms in the petrol retailing industry need to consider the rival's reactions when deciding to set a price for their petrol due to the high degree of mutual interdependence. As a result, there is a strong temptation to collude in the petrol retailing industry to increase profits and reduce the degree of uncertainty that may arise from the incomplete information about the motivation of the rivals, particularly considering the rising costs which could be negatively affecting profitability of these large firms. Furthermore, there signs of weakening competition which may imply firms may be moving further away from behaving competitively to colluding to increase their profits further.
- In the petrol retailing industry, firms tend to engage in tacit collusion where smaller firms tend to follow the price set by the market leader who tends to be the dominant firm in the industry with the largest market share. The decision to follow the price set by the leader instead of undercutting them arises from the fear that a price war may erupt if they do not keep sync with the leader's price. As such, they may not be able to compete with the dominant firm with the large supernormal profits and will incur heavy losses if they engage in a price war, exiting the industry.
- For example, in the petrol retailing industry, a price set by the dominant firm such as Esso is accepted as the market price by the followers/fringe firms even though the price deviates from their individual profit maximising price and out. Hence, **if Esso were to increase the price of petrol in their petrol stations across the UK further (due to changes in cost conditions or any other reason), other firms will also follow suit and increase the prices of petrol at their stations too in a move aligned with the dominant firm.** Such coordinated price increase of petrol by retailers in the UK is deemed as the best way of maintaining or even increasing their profits further in view of weakening competition instead of initiating a price war in response to a further hike in price of petrol by Esso.
- As a result, the higher petrol prices in the UK could be due to a possible tacit collusion by petrol retailers.

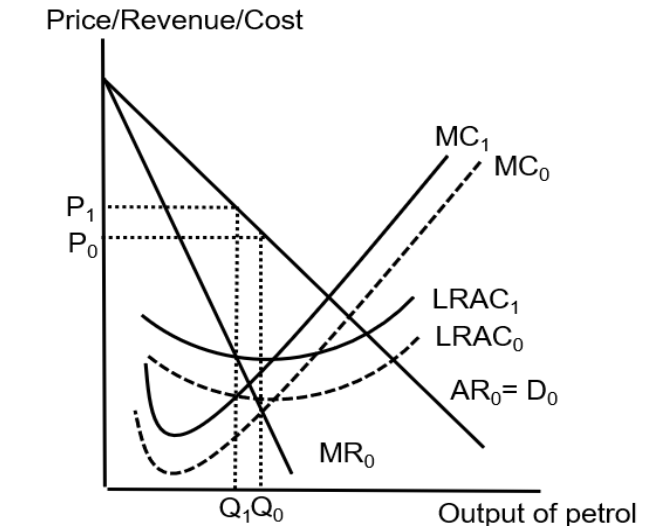
ALTERNATIVELY, students can also explain collusion in terms of cartels.

- Petrol retailing firms such as Shell, BP, Asda and Tesco can form a cartel to determine the output and price that jointly maximises their profits and hence address the falling profits.
- If these petrol retailers form a cartel, they will act like a monopoly and jointly face a downward sloping demand curve (like a monopolist) and its corresponding MR. Meanwhile, the cartel's marginal cost curve will be given by the horizontal sum of the individual members' marginal cost curves.
- As such, the cartel's profit-maximizing decision is the same as that of a monopolist at P_1 and Q_1 when the industry's MR equals the industry's MC. Consequently, members in the cartel such as Shell, BP and Asda will sell the petrol at the agreed price of P_1 which is higher than their individual profit maximising price of P_0 .
- Meanwhile, the cartel members choose their combined output at the level where their combined marginal revenue equals their combined marginal cost at Q_1 . Each member will sell an output based on the production quota given by the cartel which is dependent on the individual firm's market share, and this output will be lower than their profit maximising output which is at Q_0 .
- Therefore, the higher price of petrol is likely to be due to petrol retailers deviating from individual profit maximisation price to a higher price that maximises the joint profits under a cartel. **The Competition and Markets Authority found evidence of weakening competition, suggesting that more petrol retailers are likely to collude to increase profits.**



R2: High petrol prices could be due to rise in average cost of production of petrol retail firms due to Brexit and Covid-19.

- Brexit has led to higher COP
 - With Brexit, petrol retailing firms have faced severe shortage of workers given that they largely depend on lower cost labour from the Eastern European countries. Petrol stations need workers to dispense the fuel, maintenance of machineries, collection of payments, checking engine oil levels, and performing other routine tasks.
 - In addition, UK petrol retailers such as Tesco, Asda and Sainsbury's who do not own their own petrol refineries, they need to purchase/procure the fuel from countries such as Norway and Netherlands. Post-Brexit, the price of petrol has increased due to the higher import prices as UK no longer enjoys the same trade deals as before.
- Covid-19 has led to higher COP
 - With the pandemic, health and safety of employees and customers have become an integral part of the entire operation of a petrol retailing firms. This will require petrol retailers to invest in technology to conduct frequent deep cleaning and sanitation.
 - Furthermore, shortage of factors of production such as crude oil due to supply disruptions, has resulted in a significant increase in the cost of production of petrol for petrol retailers in the UK.
 - At the same time, higher energy prices due to supply disruptions have increased the price of electricity significantly, further increasing the operational cost of petrol retail firms such as Sainsbury's, Asda and Tesco that have large number of forecourts spread across the UK.
- As a result, the increase in the cost of production due to the rise in the price of the factors of production faced by the petrol retailers in the UK will increase the average and marginal cost of production, shifting them up from AC_0 and MC_0 to AC_1 and MC_1 , respectively.
- Assuming that the petrol retailers are profit maximisers, they will produce at their profit maximising output level at Q_0 where $MC_0=MR_0$ and charge their profit maximising price of P_0 .
- However, with the higher average and marginal cost of production, the petrol retailers will produce at Q_1 and charge a higher price of P_1 as given by $MR_0=MC_1$. As such, the higher petrol prices in the UK could be due to the cost factors, owing to the changing domestic and external factors.



▪ **Conclusion**

- Hence, the higher petrol prices in the UK could be due to changing cost conditions arising from the global factors but is further aggravated by petrol retailers colluding to increase price to reduce uncertainty and maintain their profitability.

Mark Scheme:

Knowledge, Application, Understanding, Analysis		
L1	• Answer is irrelevant in analysis <u>or</u> contains little economic <u>analysis</u> or contain a few relevant statements that are stated briefly/superficially. • Contains fundamental conceptual errors in analysis.	1 – 4
L2	• Demonstrates some general understanding of features of oligopoly and are able to explain the factors that may have resulted in the higher prices of petrol. • An explanation of tacit collusion and one other factor that may have resulted in a higher prices of petrol in the UK using the firm-level analysis. Some gaps in explanation and limited application to the context of petrol retailing industry.	5 - 7
L3	• Answer is rigorous and shows detailed economic analysis with the use of economic framework. ➢ Clear analytical structure to the answer. ➢ Good understanding and explanation of the possible reasons of the higher petrol prices in the UK – collusion and rising cost conditions. • Relevant and accurate use of economic concepts. • Good use of real-world examples to support the analysis.	8 - 10

Examiner's Report

- Most students were able to explain how the weakening competition in the petrol retailing industry is likely to suggest that firms re colluding to set higher prices. However, majority did not manage to explain the change in the price of petrol when firms deviate from their individual profit maximising price to the higher agreed price under the cartel arrangement.
- Conceptual errors:
 - Collusion is not a merger.
 - Cartel arrangement reduce the number of firms in the industry and hence the price elasticity of demand facing the cartel.
 - The number of firms in the industry remains the same even with the cartel arrangement. They behave like a monopolist, but they do not merge to become a monopolist.

- The demand facing the cartel does not increase, and hence does not shift AR and MR upwards.
- The cartel behaves like a monopolist and as such, the demand facing the cartel is obtained through the summation of individual members' demand curve. There is no change in the market size of the petrol retailing industry.
- Students should not include the demand facing an individual firm and the industry demand on the same diagram to show the change in price. They should draw two separate diagrams to show how the formation of cartel will result in the higher price of petrol as individual members deviate from their profit maximising price.
- The agreed price sold by firms within the cartel is obtained by the intersection of the industry MC and industry MR curves, whereas the individual profit maximising price for firms is obtained based on their individual MC and MR. Hence, cannot use the industry MC to determine the profit max price and output for both the cartel and individual firms.
- A large number of the students used the incorrect framework to explain the higher prices of petrol brought about by Brexit and the pandemic. Given the context of the question, students should have identified that the petrol retailing industry operates in an oligopolistic market structure, hence, need to use the firm-level analysis to explain the higher petrol prices charged by retailers.
- Some students explained higher demand for petrol post-Covid as the reason for the higher petrol prices. While conceptually it is not incorrect, students need to apply to the context given in the preamble to answer their questions.
 - The preamble states that petrol retailers are still struggling with the dual blow of Brexit and Covid-19, facing falling profits [could be caused by falling revenue and/or rising cost]. As such, demand for petrol may not have picked up significantly as consumers are faced with high unemployment and falling income. Thus, the argument using a possible post-Covid resurgence is unlikely to be relevant in this context to explain the higher price of petrol.
- Some students wrote in detail why collusion is likely/unlikely to be the main factor driving the higher prices of petrol. There is no need to provide a significant amount on elaboration on this, one key idea to justify the main factor is sufficient as a conclusion.

Part (b)

Introduction:

- **Clarify different industries** – the petrol retail industry and the hair salon service industry.
- **Clarify challenges faced by firms in these industries:**
 1. Brexit results in higher average cost of production and lower profits for firms in both industries in view of shortage of workers which results in higher wages, higher price of imported factors of production such as crude oil, hair colour/wash/treatment products and accessories (dryers, hair steamers, straighteners, colour applicators) needed to provide hair cut services. This will result in higher profit maximising price but lower profit maximising output, resulting in lower profits.
 2. Supply chain disruptions due to Covid-19 will have similar impact on cost and profits of firms in both industries.

Covid-19 pandemic reduces the movement of people as they work from home, fall in tourism, increase unemployment which will lead to a fall in demand/average revenue facing firms in these industries, resulting in a fall in total revenue due to lower profit maximising price and output, and hence profits.
- **Given that price of petrol and hair salon services such as haircuts have increased based on the preamble, it is likely that the rise in cost is greater than the fall in revenue and hence profits.**
- Nonetheless, firms in these industries will respond to these challenges using **various strategies (pricing or non-pricing)** by either increasing **average revenue** or **reducing average cost** to increase the level of profits.
- **To determine the appropriateness of these strategies** – one needs to consider *yardstick of effectiveness, desirability, feasibility, and sustainability*.

Note: Students do not need to elaborate on how Brexit and pandemic leads to fall in profits.

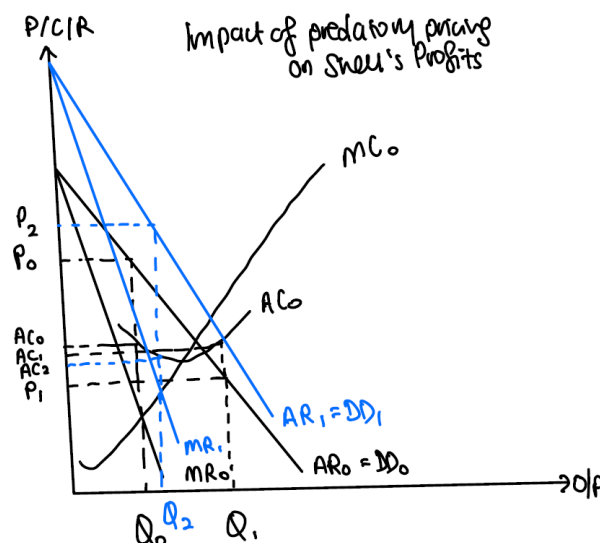
R1: Lowering prices is an appropriate strategy for firms in different industries to cope with the challenges.

Thesis: Lowering prices is an appropriate strategy to be adopted by petrol retail companies and barber firms.

1. Petrol retail firms:

- Large petrol retailers such as BP, Shell and Exxon may engage in predatory to reduce competition and increase profits when they are faced with rising cost conditions due to the pandemic and Brexit.
- **Firms like Shell may choose to cut prices below its average cost to drive out existing rivals to gain greater market share in the short-run and higher profits in the long run.**
- Large firms like Esso or Shell can engage in such price cuts is because they have large past supernormal profits although it may be smaller given the above challenges but that they can still rely on price competition to increase profits. As such, they may lower price of their petrol to P_1 which is below their average cost as a short-term strategy as they deviate from their profit-maximising price of P_0 . This is illustrated by a movement down along the AR_0 . As a result, Esso or Shell will sell an output of Q_1 .
 - Given the high degree of rival consciousness in the petrol retailing industry, firms will attempt to match the price cut offered by Esso and Shell to maintain their market share. Hence, rivals such as Morrison will respond by cutting prices in an attempt to protect their market share.
 - However, if the existing rivals such as Asda or Morrison or the potential entrants are unable to match the price cuts because of the lack of financial capacity or because they operate on a smaller scale (incur higher unit cost of production for the same level of output as Esso or Shell) to engage in long protracted price war where these petrol retain firms will continue to undercut each other, they will leave the industry or will be deterred from entering.
 - The demand for petrol sold by Esso or Shell increases from AR_0 to AR_1 and become less price elastic as there are fewer firms in the industry after the large firms are successfully able to drive out the rivals and deter the entry of new firms. Similarly, the corresponding MR will increase from MR_0 to MR_1 . Hence, the profit maximizing price increases from P_0 to P_2 since it will have a higher price setting ability due to the lack of competition and sell a higher output of petrol from Q_0 to Q_2 , resulting in higher profits of $(P_2 - AC_2) Q_2$ from $(P_0 - AC_0) Q_0$.
 - This will result in firms like Shell and Esso gaining a greater share of the market and enjoying higher profits in the long run, offsetting the fall in profits as a result of the pandemic and Brexit. As such, petrol firms can respond to the falling profits effectively by lowering prices, making the strategy appropriate for firms operating in this industry.

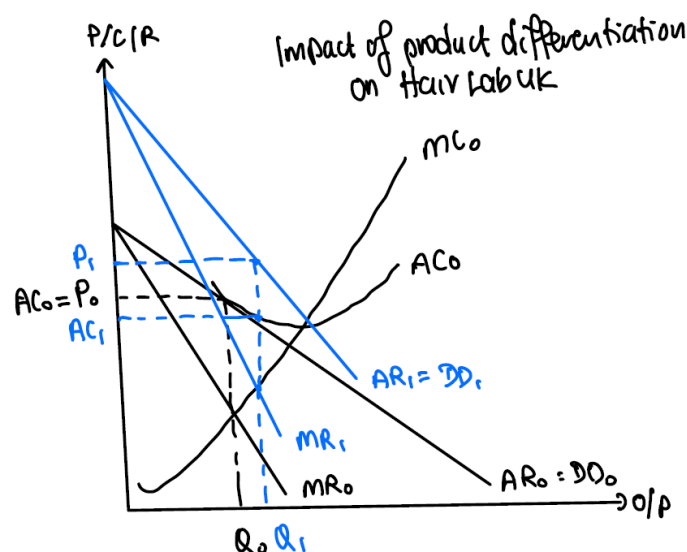
Figure 1



2. **Hair salon firms:**

- On the other hand, hair salons tend to **provide time bound discounts to attract new customers and retain the older clients** as well. For example, new clients can get discounts of £10 for their first appointment, 50% off for a 'cut & finish' with specific discount codes/coupons, limited time offer of 40% on all services.
- Such attractive time-bound discounts **target consumers aversion to loss and are able successfully able to attract new clients** to the salon who do not want to miss out on the offers as the fear of potentially losing out the savings from a lower price cut will influence their decisions more strongly than the potential gains.
- Firms in the hair salon industry operates in a monopolistic competitive market structure where there is a relatively large number of small barber shops due to lower BTE. As such, hair salons do not have to worry about the impact of their price discounts on the sales and revenues of their rivals. Hence, such price discounts offered by a hair salon for their services will not invite any retaliation by rival firms in the form of similar price cut.
- **However**, the price discounts allow barbers to attract and retain new customers, hair salons are able to enjoy a higher demand for their services even when the discounts are removed in the long term, leading to an increase from AR_0 to AR_1 and **become less price elastic since the limited time discounts are able to also establish greater existing client loyalty**. Similarly, the corresponding MR will increase from MR_0 to MR_1 . Hence, the **profit maximizing price increases from P_0 to P_1 since it will have a higher price setting ability and sell a higher output of petrol from Q_0 to Q_1 , resulting in the firm earning higher profits**. This will effectively offset the losses arising from the pandemic and Brexit.
- As such, these hair salons will be able to earn at least normal profits and survive in the industry.

Figure 2



R1: Antithesis: Such a strategy may not be effective, sustainable and desirable for firms operating in different industries.

1. **Petrol retail firms:**

- Cutting prices may culminate into a price war for firms operating in the petrol retailing industry and result in losses in the short-run [area $(P_1 - AC_1)Q_1$] as shown in figure 1.
- Long run profits may not increase, as price competition may limit its ability to further increase profits in the future.
 - While engaging in such aggressive price cuts to reduce competition in order to increase profits, it will inevitably erode the size of the past supernormal profits of firms like Esso and BP. As such, these firms will have lesser financial ability to invest in technology to increase efficiency of the infrastructure to cut cost or spend on R&D that can potentially bolster future profitability.

- For example, BP and Shell can use the funds to utilise sophisticated IT infrastructure to facilitate communication and standardise management across all the outlets across the UK as well as leverage on these tools to track and control fuel inventory which could inevitably save labour cost. Furthermore, a move towards cleaner fuel has also necessitated the need for these petrol retailers to diversify their revenue stream by investing in electric charging points and alternative fuels such as hydrogen and biofuels.
- As such, lowering prices of petrol is not a desirable measure for the petrol retail firms in the long term to overcome the decline of fuel revenues and hence profits.

2. Hair salon firms:

Meanwhile, for hair salons, offering discounts on their services is not sustainable as these firms only earn normal profits in the long run. As such, they do not have the financial capacity to engage in such measure to increase profits in the long term as it will affect the survival of these firms. When hair salons offer discounts, they are essentially selling below their profit maximising price and earn subnormal profits.

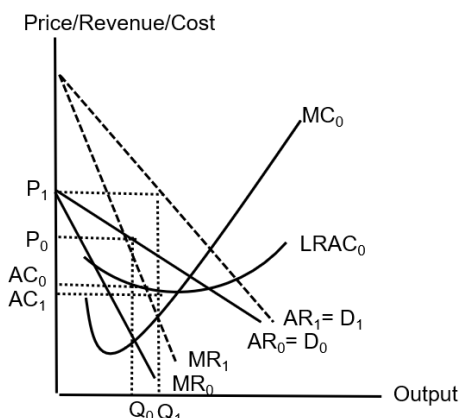
Note: Students should note that lowering prices is not a strategy that MPC firms use to increase profits in the long run or if they are profit maximisers. This may be used only as a short-run strategy for firms that are not maximising profits.

R2: Lowering prices is not the most appropriate strategy, and a merger may be better strategy adopted by petrol retail firms but not for the hair salon firms.

Thesis 1: Merger is a more appropriate strategy for petrol retail firms.

- Horizontal integration occurs when a firm combines with or takes over a similar firm at the same stage of production to form a single entity. For example, the merger of different petrol retail stations within the UK such as Jet Retail UK and Simpson Oil.
- As a result of the mergers, firms like Asda and Jet Retail UK will enjoy a larger market share as the combined market share of a merged firm will be bigger than previously. This will increase the demand facing the merged firm and make it less price elastic as there are fewer number of competitors in the industries after the acquisitions. The **demand for petrol sold by Jet Retail UK and Asda increases from AR_0 to AR_1** and similarly, the corresponding **MR will increase from MR_0 to MR_1** .
- As such, it allows the merged firm to reap greater internal economies of scale [explain at least one type of internal economies of scale enjoyed by the firm]. This is reflected by a movement along the AC curve from **AC_0 to AC_1** .
- Hence, the **profit maximizing price increases from P_0 to P_1** since it will have a higher **price setting ability** due to the lack of competition and **sell a higher output of petrol from Q_0 to Q_1 , resulting in higher profits of $(P_1 - AC_1) Q_1$ from $(P_0 - AC_0) Q_0$** .
- As such, **petrol firms can respond to the falling profits due to falling demand and rising costs effectively through a merger**, making the strategy appropriate for firms operating in this industry.

Figure 3



Antithesis 1: A merger may not be desirable as a strategy for petrol retail firms

- A merger will not be desirable and effective if the merged firm becomes too big and expands beyond its minimum efficient scale even if it is feasible for firms operating in the petrol retailing industries to merge to reduce the degree of competition. Such mergers may result in firms experiencing internal diseconomies of scale as a result of increasing difficulties in monitoring its workers and coordinating activities within a larger firm in comparison to a smaller firm as managers will find it challenging to motivate workers, hence increasing the monitoring cost as the firm may need to hire additional workers to do the task.
- Problems with motivation may become more severe when division of labour increases, the downside of job specialization tends to be that people can only do one task and can no longer multitask and adapt to a new function or need in the organization. As such, this could sap workers' creativity and spirit, leading to inefficiency and higher unit cost of production and lower profits in the longer run.

Thesis 2: Other strategies such as product/service differentiation and advertising maybe a better strategy to cope with the above challenges.

1. Hair salon firms:

- Hair salons can differentiate its product or service from its competitors to respond to the falling demand and hence profits. A hair salon plays a very important role in its clients' self-esteem as both men and women include hair care as part of their self-care routine.
 - For example, hair salons provide a range of services from providing a basic haircut to hair treatment and hair colour. Hair salons can differentiate their service in terms of the hair treatment provided including keratin, botox, hair oil treatment. They can also differentiate their product using the different hair care/colour products they use in their services, whether it is Vidal Sasson, L'Oreal or Clairol.
- Moreover, hairstylists tend to establish strong client-hairstylist relationships by providing personalised experience, maintaining reliability and consistency in the quality of the service provided, providing follow-up and aftercare. Such lasting connections create a strong sense of customer loyalty. Once a client finds a stylist they like, they will stick with them for years, even if that means they have to drive an hour out of their way.
 - Hair salons can also differentiate their service by making it easy for clients to book their appointments online or for the same day, providing them with the convenience they value which may not be provided by their rivals.
 - Hence, customers tend to avoid switching their hair salons as the switching cost is relatively high and they value the familiarity, reliability and convenience.
 - As a result, the demand for the hair salon services provided by a firm such as Hair Lab UK or Salon Express UK will increase as such product/service differentiation may attract new customers and encourage existing customers to come more frequently for hair treatments/haircuts. Furthermore, the demand for the services becomes relatively less price elastic due to the strong customer loyalty that is developed through the course of the service provided by the hair salon.
 - As a result, demand increase from AR_0 to AR_1 and become less price elastic. Similarly, the corresponding MR will increase from MR_0 to MR_1 . Hence, the **profit maximizing price increases from P_0 to P_1 since it will have a higher price setting ability and sell a higher output of petrol from Q_0 to Q_1 , resulting in the firm earning higher profits.** This will effectively offset the losses arising from the pandemic and Brexit. [Refer to figure 3]

Alternatively, students can discuss other non-pricing strategy such as advertising and cost reducing strategies.

Antithesis 2: Product/service differentiation may not be effective as a strategy for hair salon firms.

- The strategy may not be effective as other firms can easily replicate the service provided in terms of the hair treatment of hair colour, failing to increase the demand for the hair salon service sufficiently to cover the rising operational costs.

- Moreover, to engage in product differentiation implies that the hair salon needs to invest in modern equipments such as professional ionic handheld dryer, powerful airflow for fast drying, ionic technology that minimises frizz, and standalone steamers to provide a particular service which may increase the average cost, offsetting any possible increase in profits.

**Can also include cost reducing strategies*

Overall evaluation:

- **Stand** – Decide whether lowering prices is the most appropriate for firms operating in different industries and consider alternatives for both types of firms. Whether lowering prices or other strategies are more appropriate will therefore depend on the nature and size of the industry, as well as the nature of the good sold by the firm, as well as the degree of government regulation in the industry.
- **E1: On grounds of sustainability (time) and desirability (welfare of firms in terms of profitability):**
 - For the petrol retail industry, given their trait of mutual interdependence, strategy of lowering price is a less sustainable measure since it can lead to losses/ reduced profits and should only be used as a sporadic or a short-term strategy to pursue alternative objective and not profit maximisation. Hence, it is also less desirable to be used as a strategy to gain market share in the short term in order to increase profits in the long run since sometimes firms may fail to increase market share in the short term if the rivals also have the financial capacity to sustain the price war. The strategy is most likely to be ineffective in responding to the challenges if their rivals are large conglomerates that have resources to fight back strongly and are able to absorb losses for a longer period than the firm that initiated the price cut.
 - Likewise, lowering prices is unsustainable and ineffective as a long-term measure for firms operating in the hair salon industry as they need to make at least normal profit in the long run to survive in the industry and is less desirable as a measure since this might reduce welfare of hair salons should they exit the industry.
- **E2:** On the other hand, merger as an alternative strategy may be a more **effective** strategy to increase profits for petrol retail firms to increase profits and cope with the challenges but not feasible for firms in the hair salon industry. However, the success of a merger depends on the degree of government regulation in the industry and if the government may not approve a merger if it is deemed to reduce competition in the industry since it may give rise to increase market share dominance which can hurt consumers. Furthermore, if the government aims to increase competition in the petrol retailing industry by lowering the legal barriers to entry, a merger may not be a sustainable and effective way of increasing profits as the entry of new petrol retailers, including foreign retailers like Valero Energy, may hurt the profitability of firms like Asda and Jet retail UK.
- **Meanwhile** for hair salon firms, non-price strategies such as product/service differentiation is clearly a more **effective** strategy if the increase in AR outweighs any increase in AC for the firms. However, such may also consider complementing with cost reducing strategies to further increase profits. For example, find ways to reducing the variable costs of production by banding with other salons to buy hair care/treatment products at a lower price to offset some of the rising cost due to Brexit and supply disruptions. Hair salons may also consider hiring hair stylists on a part-time basis instead of contractual basis to reduce some of their operational costs since they only need to hire more hairstylists during peak periods instead of keeping them in their payroll permanently.
- **Recommendation/ other insight:** Given that prices of haircuts and petrol have increased, it suggests that the impact of the rising cost is more significant than the falling revenue as a challenge. However, the extent of impact of the rising cost and falling revenue will affect firms in these industries differently. Hence, firms in different industries have greater imperative to reduce cost and adopt strategies that can lower cost for the firm. Therefore, lowering prices is not the most appropriate as it is a risky measure that can further reduce profits of the firms and alternatives mentioned above is better.

Mark Scheme:

Knowledge, Application, Understanding, Analysis		
L1	- Response is not relevant to the question. - Conceptual inaccuracies and inaccurate framework to explain the strategies to address the challenges. - Lack scope and balance	1-4
L2	- Explanation of strategies and its impact on profitability has gaps. - Lack of application using relevant examples from the petrol retailing industry and the hair salon industry.	5-7
L3	- Balanced arguments with good scope and depth. - Explained how lowering prices and merger may be appropriate for the petrol retailing industry but not for the hair salon industry to increase the level of profits. - Good use of examples throughout the essay for the different strategies and for the different industries.	8-10
Evaluation		
E1	- An unsubstantiated judgement that is relevant – only R1 or R2 or summative	1-2
E2	- Judgement that is supported by a valid reason – R1 or R2 + summative	3-4
E3	- A well substantiated judgement on the appropriateness of the strategies to increase profits in both industries – R1+R2+summative for 5m	5

Examiner's Report

- Majority of the students did not manage to explain how lowering prices of petrol and haircuts can result in higher profits in the long run. Most students simply mentioned that lowering price will cause output to increase as illustrated by a movement along the AR curve but failing to show how that will increase profits by increasing AR in the long run for firms operating in the petrol retailing industry and the hair salon industry. Students should note that lowering prices and increase in output as illustrated by a movement along the AR curve alone causes profits to fall in the short term, hence not addressing the challenges caused by Brexit/pandemic which is falling profitability of firms.
- Most of the responses were theoretical in nature – application to the petrol retailing and hair salon industry were poorly developed. A number of students went on to explain strategies to increase profits in industries that were irrelevant to the context – smartphone, tech, automobile – simply regurgitating the examples from the lecture notes.
- Some responses were descriptive/journalistic in nature as students did not show how the strategies were effective in changing revenue or costs to influence profits of firms operating in different industries.
- Some students did not demonstrate depth in their analysis as they failed to use relevant diagrams to explain the strategies. Diagrams are very important tool of economic analysis and students need to make reference to the diagrams in their analysis.
- Explanation of how merger increases profits was mainly limited to how firms will be producing on a larger scale, closer to their MES, and hence be able to exploit different types of internal economies of scale. Such analysis failed to expound on how the larger scale of production even come about in the first place – which is due to increase in market share of the merged entity. Students need to explain how the horizontal integration increases the market share of the merged entity as illustrated by a higher and steeper AR, hence they operate on a higher profit maximising output (produce on a larger scale of production).
- Conceptual errors:
 - Many wrongly stated that firms enjoy internal economies of scale, hence they enjoy lower total cost of production. AC falls, not TC.
 - Total cost of production only decreases when firms adopt cost reducing strategies as illustrated by a downward shift of the AC curve, such that firms experience a lower unit cost of production at every output level.
- Merger ≠ collusion
- When firms operate on a larger scale of production and are able to enjoy cost savings as a result of a merger, it is illustrated by a movement along the LRAC curve. (✓); not a shift of the AC and MC curves.