Section :C Case Studies Questions

Question 4: Singapore's big telcos face rising competition

Questions:		
(a)	**Comment if Figure 2 supports the data shown in Figure 1.**	**[3]**

Suggested Response:

There is a positive relationship between the mobile penetration rate and Singtel's operating revenue because when more people sign up for mobile plans, Singtel will be selling more units of mobile plans, leading to higher revenue. Hence, Figure 2 supports the data shown in Figure 1 from 2009 to 2012 as both show an increasing trend.

However, from 2013 to 2014, Figure 2 does not support Figure 1 because Singtel's operating revenue decreased when the mobile penetration rate increased. The inverse relationship between Singtel's operating revenue and mobile penetration rate could possibly be due to new and existing users of mobile services preferring to patronise new telcos.

Note:
It is also acceptable for candidates to assert that that Figure 2 generally supports the data shown in Figure 1 for time period 2009 to 2018.

Mark Scheme:
1m: Giving evidence for support for time period 2009 to 2012
1m: Giving evidence for did not support for time period 2013 to 2014
1m: Provide explanation for one of the above cases

(b)	**(i)**	**Explain the barriers to entry a new entrant like TPG would face in the mobile network market.**	**[4]**

Suggested Response:

<u>Legal BTE:</u>
One of the barriers to entry faced by a new entrant like TPG would be legal barriers. As suggested in Extract 1, there are licensing and regulatory requirements that TPG would have to meet before they are able to operate in Singapore.

<u>Financial BTE:</u>
Another type of BTE faced by TPG would be financial barriers. As mentioned in Extract 1, TPG intends to get the funding it requires to operate its business in Singapore. As such, the entry of TPG into the Singapore market is contingent on its ability to raise funds from investors to finance its capital outlay.

Note:
It is also acceptable for candidates to assert that there are contrived barriers to entry. Candidates who associate telcos' strategy of cutting prices of data plans as a contrived barrier must explain the following. Incumbent telcos respond to the entry of new telcos by adopting

predatory pricing such that it forces the new entrants – when compete on the basis of price - to operate at a loss. ***Mark Scheme:*** 2m: Identify + explain each type of BTE			
(b)	**(ii)**	**Consider why it might be a rational decision for a new firm like TPG to enter the mobile network market.**	**[3]**
Suggested Response: The costs to the firm would be the cost of setting up its infrastructure in a way that satisfies the licensing and regulatory requirements. The benefit to the firm is the revenue it would earn when selling its mobile plans to consumers. While the initial costs of starting up as a new firm is very high, the potential revenue it might gain upon successful penetration of the market is possibly higher. In Extract 1, it is mentioned that there is still room for competition and innovation in the market to cater to consumers. Furthermore, TPG intends to first target the senior citizens by tailoring its plans for them. The above implies that the market is large enough for a new entrant like TPG to still benefit. Therefore, since the potential revenue is likely to outweigh the costs, it would be a rational decision to enter the market. ***Mark Scheme:*** 1m: Examples of costs 1m: Examples of benefits 1m: Evidence/justification of why it is rational to enter the mobile network market, i.e. benefits outweigh costs			

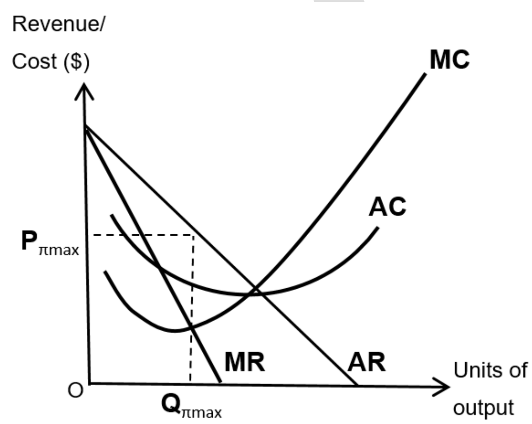
(c)	With the aid of a diagram, explain how a firm might determine its price and output.	[4]

Suggested Response:

The objective of a firm is to maximise profits. To do so, the firm would produce an output level of $Q_{\pi max}$ where MC = MR. The price will be determined by the AR curve at that given output level of $Q_{\pi max}$ because AR curve represents all points which consumers are willing and able to pay. Thus, the price is set at $P_{\pi max}$.

MC = MR is the profit maximising condition because when output is smaller than $Q_{\pi max}$, the marginal revenue is larger than the marginal cost, hence it is beneficial for the firm to continue raising its production to gain profits. The firm will stop raising production when marginal cost is equals to the marginal revenue, giving rise to the maximum profit level.

<u>OR</u> If the firm produces at any output that is higher than that at MC = MR, its marginal cost is greater than the marginal revenue, leading to a net loss. Therefore, the firm can reduce its losses if output is decreased to $Q_{\pi max}$.



Mark Scheme:
1m: Diagram (should include AC curve for completeness)
1m: Output determined by MC = MR condition
1m: Justify why MC = MR is the profit max condition by citing the case of either MC > MR **<u>or</u>** MR < MC
1m: Price determined by AR curve

(d)	**Comment on the likely impact on the profitability of incumbent firms like SingTel, following the entry of competitors into the telco market.**	**[6]**

Suggested Response:

Profitability is measured by revenue gains versus costs incurred. The impact on Singtel's profitability following the entry of competitors depends on the strategies adopted by Singtel and its competitors. It is possible for Singtel's profit to be eroded away such that either P = AC or P < AC where the firm earns normal and subnormal profit respectively. However, it is also possible for Singtel, given that it operates in an oligopoly, to continue earning supernormal profit where P > AC.

<u>Negative impact of increased competition on profitability:</u>

Singtel's supernormal profit would be eroded by the entry of TPG should existing Singtel consumers be enticed by TPG's offer of unlimited data for a period of a year. The switching of consumers to a rival telco would result in **a drop in demand** as fewer consumers would be willing and able to purchase the services provided by Singtel. Moreover, with more firms and different types of services available, Singtel's product will be **more substitutable**, making the **demand for their services more price elastic** than before.

Consequently, both equilibrium price and output determined by profit maximising condition of MC = MR. Profits would decrease as total revenue falls, ceteris paribus. Depending on the extent to which price fall, Singtel may earn a smaller supernormal profit, normal profit, or subnormal profit.

<u>Evaluation: How the impact of profitability may not be significant:</u>

In light of falling demand, Singtel can adopt cost-cutting strategies to lower its total cost in an effort to maintain or improve profitability. Cost-cutting strategies include automating business processes such that it reduces the need for labor. Such strategies would reduce total costs if assuming that automation is less costly than labor. Singtel's profitability could improve If the fall in total costs outweighs the fall in total revenue due to the abovementioned reasons.

OR

Singtel may have established themselves as a reliable service provider. Moreover, consumers might continue to have strong preference for Singtel because of the customized plans, big discounts and product bundling (mobile, TV, internet) that it has to offer. Unless the new firms are aggressive in differentiating themselves, the impact on Singtel's profits might be minimal.

2m for how demand and PED for Singtel's services are affected
2m for linking to how profit is affected
2m for evaluation (any relevant comment that casts doubt on the view expressed)

(e)	**Assess whether increased competition in the market for telecom services bring about more benefits than disadvantages to consumers.**	**[10]**

	Key words from the question	**Meaning of the key words**
Command	"Assess…whether.. more benefits than disadvantages"	Answer that provides balanced perspectives with evaluative statements on whether it is more beneficial or less beneficial Compare the extent of benefits or harms to consumers
Content	"increased competition" "benefits than disadvantages to consumers"	• Entry of new firms led to an increase in competition • Benefits to consumers include consumer surplus, lower prices and greater quality and variety of service • Disadvantages include higher prices and lower quality and variety of services
Context	"Market for telecom services"	Examples from the extracts to substantiate arguments

Introduction:

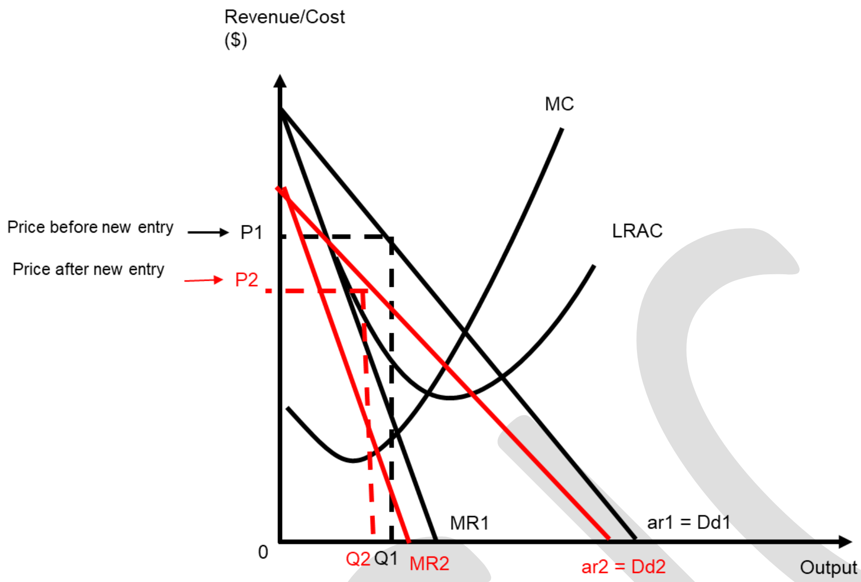
The entry of new firms such as TPG, MyRepublic etc., have increased the competition in the market for telecom services. To assess if there more benefits than disadvantages to consumers, the impact on prices, quality and variety of services need to be weighed.

<u>Requirement 1: Benefits to consumers: Increase variety and reduced prices</u>

Consumer welfare could improve following an increase in competition due to improvements in product variety. The presence of competitors would force telcos to embark on strategies to **maintain and grow its market share** by retaining existing consumers and attracting new ones. Telcos could do so by **engaging in product differentiation to distinguish itself** from their competitors. For example, telcos could offer more variety of data plans and bundle deals. As such, consumers' welfare would improve by virtue of there being more choices.

Consumer welfare could also improve following an increase in competition as a result of **lower prices**. Demand for each firm would decrease and the demand would be more price elastic due to more available substitutes (DD1 to DD2). This will lower the price setting ability for each firm too. Price competition exists in more competitive markets as firms try to gain a larger market share by making their products cheaper than their competitors'. Price competition is evident in

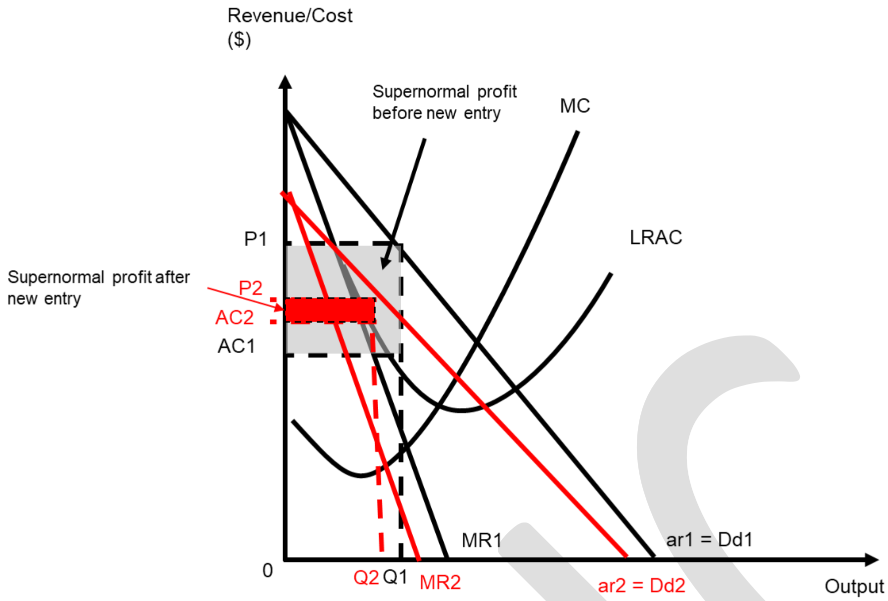
Extract 2, which mentioned that telcos have been reducing the price (P1 to P2) of their data plans. As such, consumer welfare would improve by way of lower prices.



<u>Disadvantages to consumers: Reduced consumer welfare</u>

However, the ensuing price war could have a detrimental effect on consumer welfare. Price war may lower firms' profit margins because of lower revenue. The profit maximizing price MC=MR will be lower now, as demand as has decreased. Assuming average costs per unit remains the same, total profit will decrease (from grey to red shaded area). Firms may each earn a lower supernormal profit.

Firms may be left with **insufficient profits** to make valuable and necessary investments to serve consumers. In the particular case of telcos, high amount of financial resources is required for the maintenance of an extensive mobile network infrastructure. With the market being more competitive, telcos may not have the requisite profit to reinvest and upgrade its infrastructure. As such, smaller profit margin **limits significant improvements that telcos can offer to consumers.** Such improvements could come in the form of better network coverage and faster internet speeds.



***note: students can show the change in the supernormal profit on the same diagram instead of drawing a second diagram.**

<u>Conclusion:</u>

In conclusion, it could be the case that consumer welfare will be improved in the **short term** but may eventually deteriorate in the **long term**. In the short term, firms will be able to release differentiated products and services at competitive prices. However, firms will be able to model after rival firms and release similar types of products and services. For instance, all telcos may offer similar types of mobile data plans in the long term. Moreover, firms may also find that it is not sustainable for them to slash prices and may choose to engage in tacit collusion instead. In such a scenario, a price leader is identified and firms would implicitly agree to set a higher price. The probability of such a scenario unfolding also depends on the governments' ability to snuff out such anti-competitive behavior.

	Level Descriptors	Marks

L2	An answer which
	• Provides **clear** and **well elaborated** explanation on benefits and disadvantages to both:
	  ○ Prices
	  ○ Quality / Variety of services
	• Answer is supported with **economic analysis** and case evidence.
		4-7

L1	An answer which
	• Provides **clear** and **well elaborated** explanation on only benefits to either:
	  o Prices
	  o Quality / Variety of services
	OR
	• Provides **an undeveloped** explanation on benefits and disadvantages to either:
	  o Prices
	  o Quality / Variety of services
	
	• Lacking in case evidence to support answers
		1-3

	Evaluation	
E2	For an answer: • For an answer that attempts to evaluate by arguing on the **extent** of benefits AND disadvantages • That weighs and gives a judgement on the overall impact on consumers based on the context.	3
E1	• For an answer that attempts to evaluate by arguing on the **extent** of benefits OR disadvantages	1

<u>Some notes to students:</u>

The following 2 anti-thesis points were raised frequently by students. However, they are not the most relevant to question.

(1) increase in competition would be disadvantageous to consumers because this might cause firms to have tacit collusion, resulting in higher prices for consumers.

This point is not that valid because with increased competition, collusion becomes more difficult and less likely. Moreover, the extract mentions that there are a total of 11 firms now, further substantiating why collusion may not be so likely. Also, the question is focused on the effect of increased competition. Collusion is writing about less competition. Nevertheless, if students mention that there could be tacit collusion after firms experience negative impact on profits due to price wars, disadvantaging consumers in the LR, we can award as evaluation marks.

(2) increase in competition would be disadvantageous to consumers because incumbent firms will adopt predatory pricing, driving new firms out of the market, leading to high prices charged by remaining firms.

This is a related, but not the most significant point. This is because if incumbent firms do manage to drive out new entrants, the market will reset back to square 1, as if there were no increase in competition. This is not so much disadvantageous, but more of limiting the benefits *gained to consumer. They will also not charge "extremely" high prices because the incumbent firms will then set price at their usual profit maximising price.*

Other points to note:

- *Students need to improve on their evaluation. Evaluation in this question would refer to any judgement regarding whether benefits outweigh the disadvantages to consumers using a criteria e.g. SR vs LR effects.*
- *It is inaccurate to state the rise in unemployment as a disadvantage of increased competition. This is because telco employees is a different group from consumers of telecom services.*

[Total: 30 marks]

Skills Mastery 3: Essay Questions

Question 5 (ACJC 2018 Promo)

In recent years, firms face increasing competition from new entrants in many industries.

(a) Explain the key differences between monopolistic competition and oligopolistic competition. [10]

(b) Discuss the strategies that an oligopolistic firm could adopt in response to rising competition from new entrants. [15]

Part a

Question analysis	**Requirement**
Command word	**"Explain… the key differences" (explain "what" question type)** • **No need for thesis – antithesis approach or evaluation** • **Identify, explain and compare concepts**
Concept	**Differences (in characteristics, behaviours and/or performance) between monopolistic competitive and oligopoly**
Context	**General**

<u>Introduction</u>

Monopolistic competition describes a market which has relative ease of entry and therefore a large number of small firms dealing with slightly differentiated products while oligopolistic competition describes a market with substantial barriers to entry with a few large firms selling differentiated or homogenous products.

Topic Sentence 1 / Requirement 1: The key difference between the two markets is the level of barriers to entry and thus leading to the second key difference of the number and size of sellers in these markets.

Oligopolistic markets have high barriers to entry while monopolistic competition markets have low barriers to entry.

Barriers to entry are obstacles which prevent the entry of new firms into a market and they can be economic such as financial barriers of high start-up costs or legal barriers like patents or copyrights. There are strong barriers to entry in an oligopolistic competition market but low barriers to entry in a monopolistically competitive market. For example, in the pharmaceutical industry which is an oligopoly, there are high costs of R&D, conducting experiments as well as patents for new drugs, resulting in strong financial and legal BTEs. On the other hand, in a monopolistic competitive industry like the bubble tea market, only an easily obtained food safety license and a low rental cost is required, which means that the barriers to entry to this industry is low.

Given the high barriers, it is hard for new firms to enter an oligopoly market, and thus there can only be a few large firms, whereas the low barriers to entry allows ease of entry by new firms into the monopolistically competitive market, resulting in a significantly greater number of firms.

Link: The level of barriers to entry and hence the number and size of firms is a key difference between monopolistic and oligopolistic competition.

Topic Sentence 2 / Requirement 2: Due to the number and size of firms, there is thus another key difference in terms of mutual interdependence behaviour in the oligopolistic market but not the monopolistic markets.

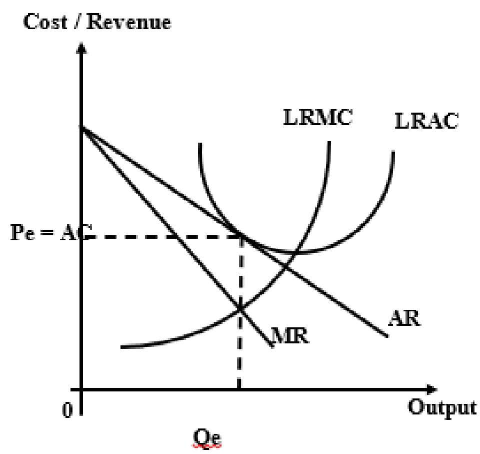
As there are only a few large firms in the oligopolistic market, it is easier to coordinate certain pricing and output decisions, which allows for collusion to take place more easily. It is also easy to monitor the actions of one's rivals, since there are very few of them, and react to strategies used by them. In contrast, since there many small firms in the monopolistic competition market, it would be harder to coordinate any firms' strategies amongst so many producers, and thus it is hard to observe any collusive behaviour. In addition, as there are so many rivals, it would be logistically too difficult to constantly monitor their actions and react to any strategies undertaken.

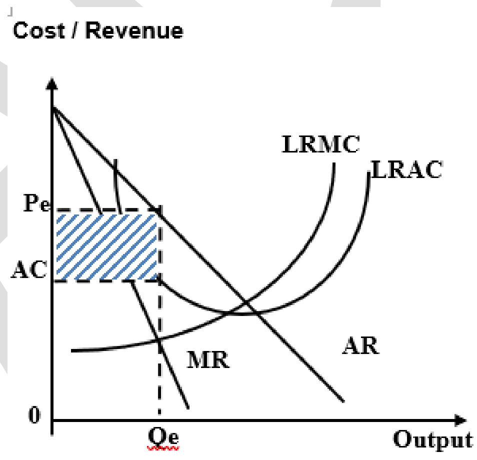
Furthermore, as oligopolistic firms are large and possess large market shares, any actions by one firm would have a significant impact on the other firms' demand and thus revenue, and thereby affecting their profits. This creates a greater incentive for any firm to react and respond to the actions taken by a rival firm, e.g. following to lower price, in order to protect its market share and profits. On the other hand, each monopolistic competitive firm is very small and holds very little market share. Thus, any actions by one firm would have an insignificant impact on all the many other firms' profits. Therefore, a MC would not have much incentive to respond to any strategies used by a rival firm, since it does not reduce their market share or profits much.

Link: Barriers to entry determine the existence of mutual interdepdence behaviour in oligopolies but absence it in Mcs. It also causes another key difference between the two market structures - the type of profits a firm can enjoy in the long-run.

Topic Sentence 3 (optional): The difference in the level of barriers to entry in monopolistic and oligopolistic competition also affects the type of profits made in the long run, which is another key difference.

Substantial barriers mean that monopoly would be able to earn supernormal profits even in the long run since it is not easy for new firms to enter the industry and compete away the profits. They will be able to maintain and keep their supernormal profits in the long run, as shown by the shaded area in the diagram below. However, for monopolistic firms, they will earn only normal profits in the long run as low barriers to entry allow many new firms to enter and erode any supernormal profits enjoyed in the short-run. When new firms enter the market, the market share of each existing firm falls and demand becomes more elastic due to the greater availability of substitutes as shown in the diagram below. This causes the price charged and quantity sold by each MC firm to decrease, until its total revenue equals its total cost, for normal profits.





<u>Conclusion</u>

The key difference is the barriers of entry which influence the number and size of firms in the industry. It also allows the oligopoly to have greater market power to charge higher prices than the monopolistic competitive firm. Furthermore, the different level of BTEs allow oligopolies to continue enjoying supernormal profits even in the long run, while monopolistic firms can only earn normal profits in the long run.

Marking Scheme

Level	Descriptors	Marks
L3	• Well-developed: clear explanation of the differences between monopolistic and oligopolistic firms • Good scope: includes differences in the terms of features and its implications on long run profits / Mutual interdependence behaviour among oligopolies • Supported: Good use of appropriate examples	**8-10**
L2	• Well-developed but bad scope: clear explanation of the differences, but only in terms of the features (aka no long-run profits or mutual interdependence) • Good scope but underdeveloped: points are not well-explained or contain some inaccuracies • Supported: with some use of examples, but stated rather than used	**5-7**
L1	• Misinterpretation of question: a scattering of points • Descriptive answer • Many inaccuracies and misconceptions	**1-4**

Part b

Discuss the strategies that an oligopolistic firm could adopt in response to rising competition from new entrants. [15]

	Requirement
Command word	**"Discuss… the strategies"** • **Explain how at least 2 strategies firms can adopt to increase profits** • **Explain the limitations of the strategies** • **Needs evaluation**
Concept	• **Start point: Firm Strategies** • **End point: Increase profits / prevent a fall in profits (inferred based on the objective of firms)**
Context	• **Oligopoly, but no specific industry** • **Undserlying problem: rising competition**

Introduction

Rising competition from new entrants would mean each existing oligopolistic firm would see a fall in demand and a less price inelastic demand, due to more substitutes available in the market. (Assuming the new entrants are able to offer an attractive product that appeals to consumers.) Current firms will likely see a fall in total revenue, and a decline in their supernormal profits. They can thus use price and non-price strategies to protect, and possibly increase their profits.

Since oligopolies have the characteristic of mutual interdependence, they have some strategies that are more feasible and suitable for their market structure, such as collusion and research & development.

Topic sentence 1 / Requirement 1: ***Firms can adopt price strategies to increase profits in response to rising competition.***

The firm can implement price strategies to increase Total Revenue, in order to **keep or increase its profits**, in view of the increased competition. These strategies could also help the firm to **maintain or increase its market share**, in an attempt to prevent its market share and hence market power from being eroded by the new firm.

1) Predatory pricing
    a. **Explain:** the oligopoly may adopt predatory pricing, lowering its price below Average Cost, to earn subnormal profits. In the context of operating in an oligopoly, there is a high degree of mutual interdependence between firms. This implies that if the rival does not set the same lower price as the incumbent, it will experience a significant fall in its demand and therefore revenue. Hence, the predatory pricing will force the in coming firm to set an equally low price. Rival firms, especially the new entrants, may not have sufficient past supernormal profits to sustain losses, and would choose to exit the market.
    b. As rivals exit the industry, the remaining firm will gain the previous customers of its rivals, increasing its demand. Also, with fewer competition and available substitutes, the firm's demand would become more price inelastic.
    c. At the original output, after the exit of rivals, the MR > MC, suggesting that profits can be increased by increasing output to Qm' where MR' = MC. At the new output, given that demand has increased, the amount consumers are willing and able to pay has also increased, allowing the firm to charge a higher price (Pm', where Qm' is along the demand curve).
    d. Assuming no change in costs, a firm would increase its unit profits (P – AC) and sell more units at the same time, allowing profits to increase unambiguously.
    e. **Limitations:** there is a limit to how much price can be lowered as predatory pricing is considered an anti-competitive behaviour and would be closely monitored by competition authorities.

In-paragraph Evaluation

However, the above analysis assumes that incoming firms tend to have a higher average cost and would therefore suffer more as a result of the incumbent's predatory pricing. In reality, however, it is possible for some incoming firms to employ entire new methods of production (e.g. being highly digitized and automated) such that they have even lower average costs than incumbents. In these situations, predatory pricing may not lead to subnormal profits for incoming firms, and would not successfully deter them.

Topic sentence 2 / Requirement 2: Firms can adopt non-price strategies to increase profits in response to rising competition.

1) R & D for new product
    a. **Explain:** the oligopoly can seek to develop new or better products → creating a competitive edge → attracting more consumers (or preventing a loss of consumers to the new entrant) → increasing the demand for its product → increase in price and quantity and hence, higher revenue and thus profits earned, as well as increase market share.
    b. This could also reduce its price elasticity of demand as its products are less substitutable, especially by the new rival → increased market power to set higher prices → total revenue and hence profits increase.
    c. **Limitations:** Uncertainty of the R&D outcome, could be modified and copied by rival firms (especially if not protected by a patent) → may not increase the oligopoly firm's market share / profits effectively.

2) Advertising / Marketing
    a. **Explain:** the oligopolistic firm can use various platforms to increase consumer's awareness of the benefits and unique features of its products. This helps to increase the demand for its products, and reduce its price elasticity of demand. Therefore, the firm would see an increase in its price and quantity sold, and thereby total revenue and thus profits, as well as strengthen its market share.
    b. In light of the new rivals, the oligopoly could also refresh its branding and look to suit any changes in tastes and preferences amongst consumers, and thus maintain its brand loyalty and market share. Therefore, consumers will be less likely to substitute away from the incumbent to the new entrant, helping the oligopolistic firm to deal with the rising threat of increased competition.
    c. **Limitations:** success of strategies is not guaranteed as it depends on consumers' responsiveness and persuasion by these efforts.

In-paragraph Evaluation

While advertising and marketing is a possible strategy, it is not as effective as R&D, as it is easily copied by rivals, and does not create a permanent change in demand. Hence, it is more effective for the oligopoly to combine these strategies, and focus its advertising on promoting the new and improved products it offers after the innovation process.

Topic sentence 3 / Requirement 3: Firms can adopt cost reducing strategies to increase profits in response to rising competition.

1) R & D for new production process
    a. **Explain:** Through Research & Development into production methods, the oligopoly can seek to develop new or more productive production process → creating a lower cost production method → fall in firm's Average Cost and Marginal Cost. The firm will then be able to enjoy higher profits, assuming total revenue remains the same.
    b. Furthermore, should the oligopolistic firm pass on the cost savings to consumers in terms of lower price; it will enjoy an increase in quantity demanded and thus a larger market share.
    c. **Limitations:** … It is a strategy that requires time to be implemented and for effects on market share / profits to be seen, and so may not help the oligopoly to respond quickly if the threat of rising competition is very urgent.

<u>Conclusion</u>

Ultimately, the effectiveness of these strategies depends on several factors:

1) Given the context of the market structure being that of oligopolies, there tends to be **reactions and strategies taken by the rival oligopolies** in response may cause the firm's strategies to be less effective. For example, if one firm attempts to differentiate its product, others may try to promote theirs likewise. Perhaps a more effective strategy in this case would be to differentiate a product that cannot be copied by rivals, e.g. by patenting a new technology as a result of RnD. This grants the firm legal rights to be the sole owner of such a feature and might overcome the problem to rival imitation.

Other possible evaluation points:

2) The effectiveness of strategies may also vary, based on the nature of the industry in which this oligopoly operates.
3) In the first place, the oligopoly's own objectives will influence the choice and effectiveness of strategies to deal with the rise in competition
4) Furthermore, the effectiveness of the strategies chosen by the oligopolies depends on the time period considered. Some strategies like price predatory pricing can only be effectively used in the short run, whereas some strategies like R&D will require time to be completed and hence only effective in the long run.

Marking Scheme

Level	Descriptors	Marks

L3	• Good scope: with at least 2 strategies across price, non-price and cost strategies • Well-developed: clear explanation of the strategies and effectiveness (by addressing limitations) of the strategies • Appropriate: attempts to address question on “increasing competition from new entrants” • Supported: with good use of appropriate examples	**8-10**
L2	• Good scope but underdeveloped, e.g. not well-explained due to some inaccuracies or brief answer • OR good scope but unbalanced (lacking effectiveness of strategies) • Well-developed but bad scope: clear explanation of the strategies and its effectiveness of the strategy, but **only** focused on 1 category of strategies • Not so appropriate: discusses strategies without really answering question • Supported: with some use of examples, but stated rather than used	**5-7**
L1	• Superficial listing of strategies • Lack of economic analysis / concepts • Many inaccuracies and misconceptions	**1-4**
Level	**Descriptors**	**Marks**
E3	• Well-supported judgement about the strategies’ effectiveness: e.g. in light of nature of firm (oligopoly), level of threat from new entrants, objective of oligopoly, time period considered, constraints faced by firm	**4-5**
E2	• Some attempt for an overall judgement about the strategies’ effectiveness, but explanation could be clearer and more specific to question	**2-3**
E1	• Some attempt for an overall judgement about the strategies’ effectiveness but unsupported	**1**

Question 6 (2015 A Level Essay Question 3)

'Market dominance is the main factor determining the profitability of firms.'

(a) Explain how market dominance can influence a firm's price and output decisions. [10]

(b) Discuss whether government intervention is always needed when a firm dominates the market. [15]

Question analysis	Requirement
Command word	**"Explain… how market dominance influence firms price and output" (explain "causal" question type)** • **No need for thesis – antithesis approach or evaluation** • **Explain how the start point causes the end point**
Concept	**Start: market dominance** **End: Price and output decisions**
Context	**General**

(a) Explain how market dominance can influence a firm's price and output decisions. [10]

<u>Suggested answer: (part a)</u>

- *Candidates are expected to explain how firms produce at an output where MC = MR to maximise profits and the corresponding price is determined by market forces.*
- *They are also expected to explain how market dominance influence how firms set price and output. For monopoly and oligopolistic firms possessing significant market share and market power, market dominance allows them to set a higher price and produce at a lower output compared to firms in the perfect competition and monopolistic competition market structure.*

Introduction: Marginal principle is used by firms to maximise profits.

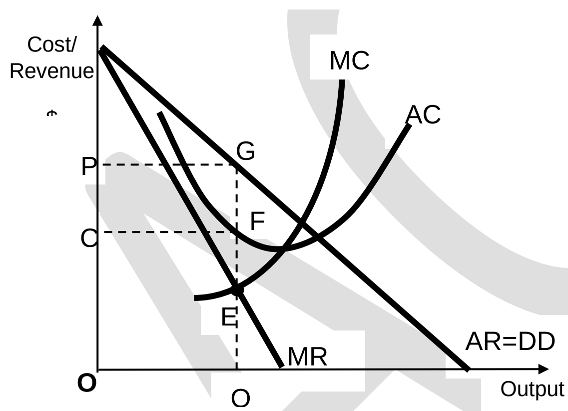
- Profits refers to the difference between total revenue and total cost.
- To maximise profits, firms in all market structures will produce at the equilibrium output level where MC=MR and the corresponding equilibrium price is determined by consumers' willingness to pay as indicated by the firm's demand curve.

- Firms with significant market share can be said to enjoy market dominance.
- Monopoly and oligopolistic firms have stronger market power compared to firms in perfect competition and monopolistic competition due to the higher barriers to entry present, thus reducing the number of competing firms in the industry. As a result, compared to PC and MC firms, monopoly and oligopolistic firms are able to set higher prices and reduce output, given their very price inelastic demand.

Topic sentence 1 / Requirement 1: Monopoly and oligopolistic firms with strong market power are able to set higher prices and reduce output at profit maximising point.

- Monopoly and oligopolistic firms enjoy market dominance due to the high barriers to entry which can be in the form of patents or government's licensing regulations.
- Although market dominance allows both monopoly and oligopolistic firms to be price setters, they are still constrained by the downward sloping demand curve.
- This means that to raise price, output level must be lowered at profit maximising point according to the marginal principle MC=MR.
- With reference to the diagram below, profit-maximising monopoly and oligopolistic firms will produce at Qe and set price at P based on consumers' willingness to pay as indicated by the downward sloping demand curve.

Figure 1



Topic sentence 2 / Requirement 2: Firms with strong market power and earning economies of scale may set predatory prices as a barrier to entry.

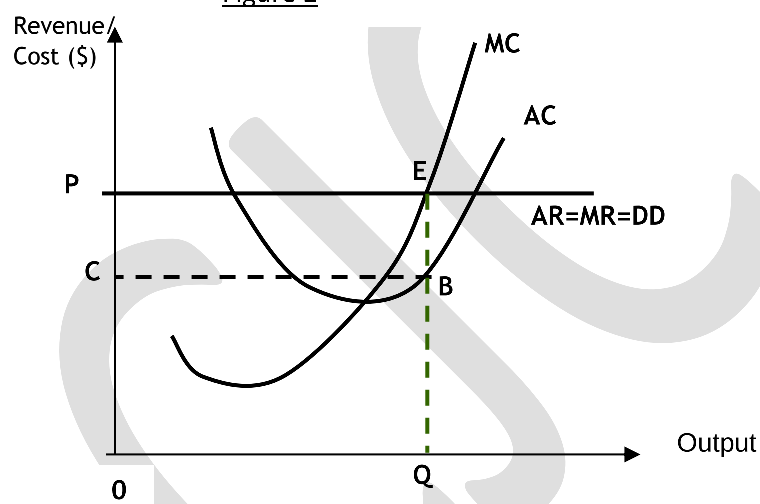
- In order to protect their market share, firms may set prices that are low, so much so that it becomes a deterrent to potential new entrants.
- Firms that enjoy economies of scale would be able to set prices that are below than their competitors since their profit margins are larger.

Note: Refer to the lecture notes on BTE and predatory pricing to see a more detailed explanation of how this works.

Topic sentence 3 / Requirement 3: In comparison, firms in more competitive market structures (perfect competition and monopolistic competition) either take price as given or set lower prices at profit maximising output level.

- PC and MC firms do not enjoy market dominance unlike monopoly and oligopolistic firms.
- MC firms possess weak market power, hence they are not able to set very high prices because of their very price elastic demand faced.
- With no barriers to entry and perfect information, there are many small PC firms in the industry and each firm only produces an insignificant amount of the total industry's output. At the market price determined by market forces, a PC firm's demand is perfectly price elastic since there are many perfect substitutes available.
- This is shown by the diagram below where profit maximising PC firms produce at Qe where MC=MR and takes price as given at P.
- If a PC firm tries to raise or reduce prices, the lack of barriers to entry will allow entry of other firms which will compete away all profits earned, forcing prices back to the initial market price.

Figure 2



Conclusion: With market dominance, monopoly and oligopolistic firms are able to set higher prices and more output compared to PC and MC firms. The high barriers to entry also help them to retain supernormal profits earned in the short run since firms are not able to enter to compete away these profits.

Level Descriptors		Marks
L3	• Conceptually correct and analytical explanation on how strong market power allows monopoly and oligopolistic firms to set higher prices and reduce output at profit maximising point compared to PC and MC firms • Good use and explanation of diagrams as conceptual framework	8-10
L2	• Conceptually correct but undeveloped explanation • Diagrams may be missing or unexplained or incorrectly labelled • Answer may contain minor inaccuracies	5-7
L1	• Conceptual errors in analysis • Absence of conceptual analysis	1-4

b) Discuss whether government intervention is always needed when a firm dominates the market. [15]

Question analysis	**Requirement**
Command word	**"Discuss… whether government intervention is always needed"** • **Explain how government intervention may or may not be needed** • **Explain the limitations of government intervention or non-intervention** • **Needs evaluation**
Concept	• **Start point: Market dominance** • **End point: benefits and harms**
Context	• **General**

<u>Suggested answer: (part b)</u>

- *Candidates are expected to explain that government intervention is needed when the market fails to allocative resources in an efficient and equitable way.*
- *They are also expected to explain the impact of market dominance on the market. When a firm dominates the market, allocative efficiency will not be achieved as price > MC and lower income household would not get to enjoy the good or service due to the high price and thus explain the need for government intervention.*
- *Candidates are also expected to explain how government intervention could introduce more competition to dilute the market share of the incumbent firm so as to reduce the price to achieve allocative efficiency and a more equitable allocation of resources. However this method may lead to government failure if the industry has significant internal economies of scale and the firm loses the ability to innovate. Therefore, while government intervention is needed when the market fails due to market dominance, how the government intervene may be more crucial.*

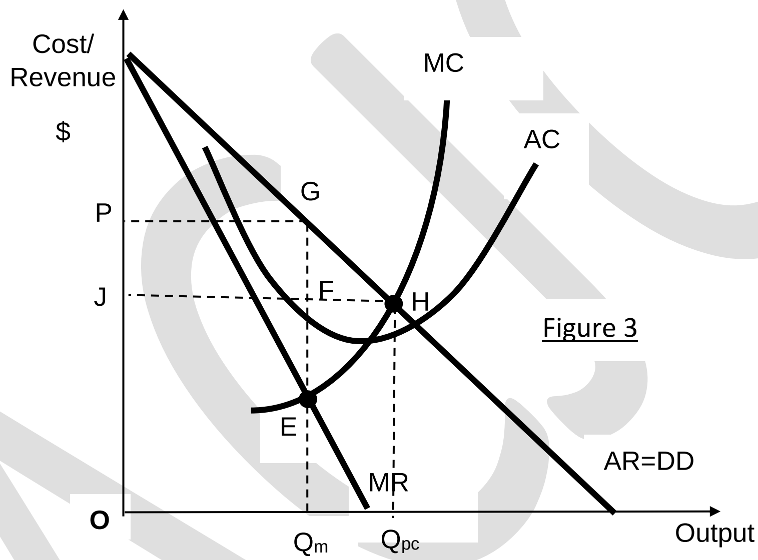
<u>Introduction</u>: Framing – unpacking context of government intervention in the case of market dominance

- Government needs to intervene when the price mechanism fails to allocate resources efficient and equitably and hence society's welfare is not maximised. That is when the assumptions of the free market or perfect competition are violated and government can implement policies to improve the allocation of resources.
- To tackle the root cause of market dominance, the government may choose to introduce more competition by lowering the barriers to entry in the industry.
- However, government intervention in the form of introducing more competition is not always beneficial as government failure may occur

- The government needs to consider the nature of the industry and use of alternative and possible more suitable policies when deciding whether to inject more competition into the industry.
    - Nature of firm: what types of goods and service the firm provides and how capital intensive the market is

Topic Sentence 1 / Requirement 1: Government intervention may be needed when a firm dominates the market based on efficiency concern

- Market dominance would result in allocative inefficiency
    - Firms with high market power is able to increase price without fear of losing all its output. Allocative efficiency occurs when it is not possible to make someone better off without making someone else worse off and the allocative efficiency output level is where Price=Marginal Cost.



    - However, when a firm manage to dominate the market by erecting high barriers to entries, it is able to charge a price that is higher than marginal cost. The more market share and thus market power the firm has, the bigger the gap between price and marginal cost. Hence the extent of market failure due to market dominance is the highest for a monopolist, where the firm is the sole producer in the market.
    - With reference to the figure 3, at the profit maximising output level of Qm, the dominant firm would charge a price which is higher than marginal cost. There is under allocation of resources in the market and a deadweight loss of area GEH is incurred to society. Hence, government intervention is needed to improve the allocation of resources and improve society's welfare.
    - Example of dominant firms include drug companies such as GSK (GlaxoSmithKline) and Pfizer with monopoly power arising from patent of medicinal drugs and they would be able to restrict output and charge a higher price. Hence government intervention may be needed to improve allocation of resources in the market.

- **Evaluation**: Even when the government intervenes through price control measures, the extent of inefficiency may continue to take place. For example, while MC-pricing (where price is at J above) may be a solution, the subnormal profits incurred by the firm may lead to a cutback in product development.

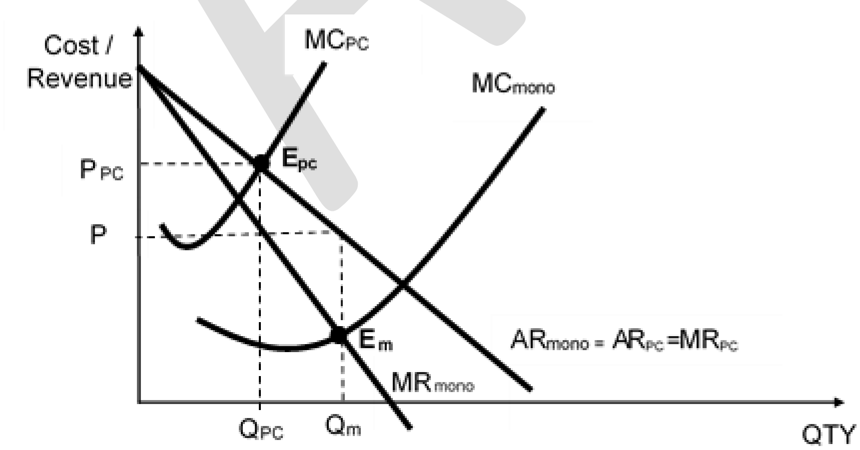
Alternative Requirement 1: (Optional – you only need one requirement 1)

Government intervention may be needed when a firm dominates the market based on equity concern

- Firms with a high degree of market dominance possess a large percentage of the industry's revenue. This implies that firms with high market dominance typically have a relatively high demand. Furthermore, high market dominance typically implies that a firm has fewer competitors, suggesting fewer available substitutes for the goods of the firm. This results in the demand of firms with high market dominance to be relatively more price inelastic.
- As a result of having a high and price inelastic demand, at the profit maximizing output of firms (where MR = MC), consumers are willing and able to pay a high price. This allows the firms to charge a high price, one that is much higher than the price had the industry been perfectly competitive instead (where P = MC). <u>Or</u> This allows the firms to charge a high price and also benefit from a high mark-up, where there is large difference between price and marginal cost.
- If the goods provided by such a firm were an essential good (e.g. healthcare), being highly priced could result in some (especially low-incomed consumers) being denied access to the goods despite needing it. This would severely impact their general well-being simply on the basis of not being able to afford a good and would be considered inequitable in most cases.

Requirement 2: Government intervention may be not needed when large internal economies of scale can be reaped by the dominant firm

- In capital intensive industry such as telecommunication and public utilities, there is large internal economies of scale to be reaped due to the enormous startup infrastructure cost involved. The firms are known as natural monopolist. When the firm is able to gain market share and dominates the market, it would expand production and enjoy the cost savings due to these internal economies of scale. This will lower its long run average costs as they produce more output and these cost savings would then be passed to consumers in the form of lower prices, increasing the consumer surplus.



<u>Figure 4</u>

- With reference to figure 4, the monopolist may have a lower MC due to the large economies of scale it enjoys. As such, the monopolist is able to produce at a larger quantity (Qm) and lower price (P) as compared to a more competitive firm, enjoying a larger consumer surplus.

- Therefore, government intervention in the form of introducing more competition is not necessary as greater competition may increase cost for the incumbent firms. This will result in lower output per firm and may result in the firm to not be able to reap all its internal economies of scale. As a result, higher price could be charged to the consumers. However it must be noted that even in the case of natural monopolies, the output produced is still allocative inefficient. Hence there might be a case where MC pricing should be introduced, alongside a subsidy, as MC pricing would mean the firm suffer sub-normal profit.

- **Evaluation:** However, due to lack of competition, dominant firm may be complacent, be lax over cost control and produces at a point above the LRAC instead, resulting in X-inefficiency. This will also lead to higher costs and hence higher prices, negating the internal cost savings enjoyed by such firms.

Alternative Requirement 2: Government intervention may be not needed when dominant firm contributes to innovation and improvement of goods and services

- The dominant firm is able to retain supernormal profit in the long run, hence giving them the ability as well as act as a source of motivation to innovate and produce new, cheaper or higher quality goods and services. This is known as dynamic efficiency.
- For example, new drugs are needed to cure incurable diseases such as AIDS or dementia and Apple's dominant position in the smartphone market has allowed the firm to continue its R&D process to create new and cheaper IPhones.
- Innovation in terms of improving production processes could help firms increase their efficiency and reduce wastage. This implies fewer factors of production are needed to produce the same amount of output, thus lowering the variable cost of production and consequently, also lowering marginal cost and average cost.
- As MC falls, at the original output MC < MR, signaling to a profit maximizing firm that it can increase profits by increasing output to Qm' where MC'=MR. At the new higher output, the price consumers are wiling and able to pay is lower, represented along the demand curve. Hence, firms would charge a lower price (Pm'), where Qm' is along the demand curve.
- **Evaluation:** The lack of competition or complacency may result in the loss in incentive for the firms to innovate, especially if the market is non-contestable. A market is considered non-contestable when the threat of competition is very low. Therefore, some degree of government intervention is still needed to ensure that there is continued innovation such as enforcement of patent laws and copyright.

Conclusion:

Whether there is a need for the government to intervene is dependent on the nature of the industry and the use of the supernormal profits enjoyed by the dominant firms. The more capital intensive the dominant firm is, the lesser the need to inject more competition as more cost saving could be reaped from the expanded production. Furthermore, if the dominant firm is able to put to good use the profits it enjoys through research and development, government intervention is also not needed in this case. Introducing more competitors would result in an even more inefficient and inequitable allocation of resources as the price is higher and the firm would lose the ability to innovate. In this case, government intervention is still needed but other more appropriate method should be considered such as MC pricing together with subsidy and the establishment of competition watchdog such as the Competition Commission of Singapore to regulate the markets.

Level	Descriptors	Marks
L3	• Balance and well-developed analysis of the need of government intervention when market fails due to market dominance. • Relevant real-world examples are used to substantiate arguments.	8-10
L2	• Balance but under-developed analysis of the need of government intervention when market fails due to market dominance. Or • Well-developed but one sided analysis of the need of government intervention when market fails due to market dominance. • Lack of real-world examples to support arguments	5-7
L1	• Essay is irrelevant in many parts. • Essay contains many conceptual inaccuracies in reasoning of ideas.	1-4

Evaluation		
E3	An evaluative discussion with sound conceptual substantiation, ending with a reasoned judgment whether government intervention is always needed when a firm dominates the market.	4-5
E2	For answer that makes some attempt at a judgement about whether government intervention is always needed when a firm dominates the market.	2-3
E1	For answer that gives unsupported statements about government intervention when there is market dominance in the market.	1