



Essay Question 2: 2003 A-Levels Q2

In 2001 there was a world-wide reduction in airline business. Smaller airlines with lower costs and cheaper discount fares suffered less than the high-cost larger airlines such as Air France, Swissair and Lufthansa.

- (a) Explain why, according to economic analysis, there are benefits from large scale organisations. [12]
- (b) Discuss to what extent the above extract concerning costs disproves that economic analysis. [13]

Examiners' Report

A popular question that overall produced disappointing marks. This was due, in part, to a lack of development in the answers to part (a), but more important were the weak answers to part (b).

(a) Few candidates achieved Level 3 marks, and overall the answers were disappointing. A surprisingly large proportion failed to recognise the long-term nature of economies of scale and more importantly their effect on long-run average costs. **Level 3 marks were reserved for those who clearly showed the link to long-run average costs.** Diagrams were often poorly labelled if presented at all. Many candidates were quite happy simply to state that costs would fall because of these economies and take the explanation no further. The best answers not only explained, **with the aid of a good diagram, the effect of economies of scale on falling long-run average costs but also examined other potential benefits from large scale organisations.** Level 2 answers, in the main, explained lists of alternative types of economies of scale.

(b) This was probably the worst answered question on the examination paper. There was little if any attempt to discuss the question within the context of falling demand, and the revenue side was largely ignored. Most were therefore left struggling and many simply asserted that economic theory was disproved but did not explain why or how they came to this conclusion. Too many answers were little more than an expansion of the stem of the question. Analytic approaches attempted to use diseconomies of scale but these failed to see that their responses were, in the main, illogical. A minority stumbled in the right direction with bits and pieces of useful application to the airline industry.

Suggested Answers

(a)

INTRODUCTION (Key Terms, Issue and Approach)

*There are many large scale companies that exist in an economy, such as Air France, Volkswagen and Giant Hypermarket. The size of these firms are often determined by quantity of output sold, sales revenue or market share. As firms' traditional objective is to maximize profits, their existence do show that there are advantages enjoyed by large scale companies. These large companies tend enjoy cost savings due to **internal economies of scale (EOS) and revenue advantages.***

*Internal EOS is cost savings enjoy by a firm when it expands its scale of production while revenue advantages are in terms of **pricing power and ability to practice non-price competition**market power.*

This essay will explain the above benefits enjoyed by large companies.

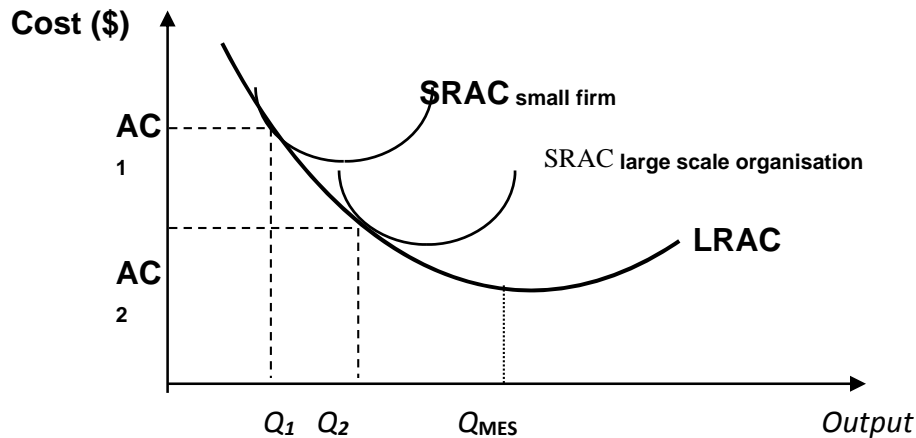
Note: Students can explain and illustrate internal economies of scale in the context of the airline industry - such as Air France, Swissair and Lufthansa OR use a variety of examples since the question is on 'large scale organisations'.



BODY

Part 1: Explanation with diagram on how large firms experience lower unit cost of production through its ability to reap internal economies of scale.

Figure 1: Internal Economies of Scale are reaped by Large Scale Organisation



Large scale organisations usually have high MES relative to the industry demand. MES occurs at the output level where LRAC first stops falling, and it corresponds to the lowest point on LRAC.

(Definition of MES from Economics, John sloman 7th Ed, p 150) - The MES is the size beyond which no significant additional economies of scale can be achieved: in other words, the point where the LRAC curve flattens off.)

As firms get bigger by increasing scale of production, the high cost savings they enjoy from the various internal EOS can offset the higher cost that may occur due to some mismanagement and the overall unit cost will fall.

Any 3 points:

Technical economies (indivisibilities):

With such higher annual revenue and large international consumer base, international airline such as the American Airline (merged with US airways in 2013) is able to reap **technical economies of scale** through indivisibilities. For example, large airlines have the financial ability to purchase large aircrafts such as Airbus A380, which is a double deck aircraft with maximum capacity of 500 seats.

A380 is now able to have double the load factor (depending on the proportion of luxury suites), its cost associated with fuel cost has increased, but in fact is less than proportionately. This is because airlines are now able to fly a single flight, rather than 2 separate flights to a location. Furthermore, Some 25 per cent of the A380 structure is made of composites, generating a total weight saving of 15 tonnes, which contributes to its low fuel consumption.

Therefore, large airlines which are able to purchase such aircrafts are able to make its average cost of production (provision of service) lower, as shown by a downward movement along the LRAC from AC₁ to AC₂.

Marketing economies:

The car manufacturing industry is considered to be highly capital and labor intensive. The major costs of car manufacturer such as Volkswagen for producing and selling automobiles include labour cost, raw



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materials to be purchased such as steel, aluminium, seats, tires. They can buy raw material such as steel in bulk at favourable (discount) rates. It is also able to dictate its requirements with regard to quality and delivery much more effectively than smaller firm. All these mean that the firm can sell their product and/or services at a reduced unit cost.

In addition, Volkswagen can spend billions on print and broadcast advertising. They spent large amounts of money on market research to anticipate consumer trends and preferences in order to strategise and compete with other rivals. These advertising cost can only be spread across large output (of cars), reducing their average cost from AC1 to AC2.

Administrative and managerial economies:

In a large supermarket, it is possible to practice functional specialisation by employing specialist such as accounting manager, sales manager, finance manager, departmental manager, etc. These middle-management staffs are allocated to tasks according to their skills and abilities thus raising productivity and lowering unit costs.

Different expertise are required, such as to examine market trends and do market research, finance management, etc. The cost of employing these managers and expertise is also spread over a larger output. This means that cost per unit of output is lower.

Financial economies:

It is cheaper for big airlines to raise capital either through bank loans or issue shares. They have a higher sales volume and more assets to offer as collateral, is deemed by lenders to be more credit-worthy compared to a small airlines. Hence banking & financial institutions are more willing to offer loans or extend credit to them. They could get access to capital through public listing of their companies.

All these **cost savings can be translated to lower pricing to capture larger market share.**

Most important of all – link these internal EOS to fall in per unit costs.

Part 2: Explain how large scale organisations enjoy revenue advantages

A large firm is likely to be one that controls a significant share of the market. American Airlines (after merger with US airway for eg) is now the largest airline in US, taking up about 25% of the domestic market. Thus it has market power and is able to set the price at a level that generates more revenue than a small firm. The large firm can increase price if demand is price-inelastic and output will fall less than proportionate since consumers have few substitutes to turn to. (Note: In traditional firm theory, we assume firms aim to maximize profits.)

A large Firm is able to set aside a bigger budget for advertising. A successful advertising campaign establishes a strong brand name, increases product awareness and fosters consumer loyalty e.g. Singapore Airline - The Singapore Girl. The demand for the firm's product increases and becomes more price inelastic. Thus, at a given price, a large firm is able to sell a substantially larger quantity than a small firm. Since demand is relatively price-inelastic, the firm can increase its price to raise total revenue.

A large firm earns supernormal profits (due to barriers to entry) and thus have the avenue to do R&D and will be able to improve the quality of its services and thus compete better especially when the market is getting more contestable.



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CONCLUSION

(b)

In 2001 there was a world-wide reduction in airline business. Smaller airlines with lower costs and cheaper discount fares suffered less than the high-cost larger airlines such as Air France, Swissair and Lufthansa. Discuss to what extent the above **extract concerning costs** disproves that economic analysis. [13]

Step 1: Paraphrase the question in the context:

This question requires me to discuss whether smaller airlines can have costs savings which help them to suffer less than bigger airlines even though the latter are the ones which enjoy internal EOS and revenue advantage as explained in part (a).

Step 2: Dissect using 3 Cs

Command	Discuss... use a thesis/anti-thesis framework/approach
Content/concept	Focus on the advantages of small firms
Context	Airline industry

Schematic Plan

INTRODUCTION	
BODY	
Thesis: YES, the extract seems to disprove the economic analysis in part (a)	Anti-thesis: NO, the extract does not disprove/contradicts the economic analysis in part (a).
<p>Smaller airlines seem to have:</p> <p>(a) lower costs – contradicts/disproves the concept of internal economies of scale</p> <p>(b) cheaper discount fares – contradicts/disproves the concept of pricing power which bigger airlines enjoy.</p>	<p>(a) Performance by Big Airlines during a Recession</p> <ul style="list-style-type: none"> • Fall in Demand for Premium Services during a Recession • The fall in demand leads to excess capacity and thus higher unit costs • Big airlines are more bureaucratic & inflexible in responding to solve the problem of excess capacity <p>Note: They key problem to why the extract contradicts the theory in (a) is that there's the assumption of a LARGE output that may not hold during a recession for national carrier services.</p> <p>Evaluation?</p> <p>(b) Performance by SMALL AIRLINES, i.e. LOW-COST or Budget Airlines during a Recession</p> <ul style="list-style-type: none"> • Rise in Demand for No-Frills Services during a Recession • Niche or specialised markets. • Nimble and flexible
CONCLUSION	

Suggested Answers:

INTRODUCTION
<p>Key words: For this question the link between (a) and (b) is almost seamless. There is therefore no necessity to begin with key words all over again.</p>



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Contextual Issue: Better to start off by bridging (a) + (b), linking them to a common contextual issue:
Economic analysis as explain in part (a) suggests that larger airlines such as Air France, Swissair and Lufthansa enjoy both cost and revenue advantages and thus should incur less losses than smaller airlines. However, it is stated in the extract that smaller airlines actually suffered less than the high-cost larger airlines.

Approach:

Thus in this essay, I shall discuss the extent the extract disproves the economic analysis in part (a) of my answer.

BODY

Thesis: YES, the extract seems to disproves the economic analysis in part (a)

The extract seems to disprove the economic analysis in part (a) for 2 key reasons:

Smaller airlines seem to have:

- (a) lower costs – contradicts/disproves the concept of internal economies of scale**
- (b) cheaper discount fares – contradicts/disproves the concept of pricing power which bigger airlines enjoy.**

In theory, the big airlines should have lower average costs because they can reap potential internal economies of scale. Hence it would be much easier for them to lower or cut fares or offer cheaper discount fares without sustaining losses.

Small firms in theory on the other hand, do not have as much pricing power as their bigger counterparts because of their lack of resources to sustain losses. With vast reserves of accumulated supernormal profits, it is easier for big airlines to sustain temporary losses by cutting fares.

However, in the context of the question what actually happened is the exact opposite of what economic analysis suggests/predicts. It was the smaller airlines and not the big airlines that were able to operate at lower costs and offer cheaper discount fares.

So the extract does seem to disapprove the theory.

Anti-thesis: NO, the extract does not disproves/contradicts the economic analysis in part (a).

HOWEVER,

on closer examination of the circumstances related to the extract/context/stem it can be inferred that the ability of small airlines to operate at lower costs and offer cheap discounted fares do not disprove the economic analysis in part (a).

In the context of the extract, the entire industry was hit by a world-wide reduction in airline business – fall in demand due to probably the fear of travelling since the terrorist attack and also the recession that followed.

(a) Performance by Big Airlines during a Recession



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Thus, in the context of falling demand in a recession, big airlines tend to suffer more for the following reasons:

- **Fall in Demand for Premium Services during a Recession**

Big airlines that provide premium services (i.e. luxury goods) tend to suffer drastic fall in demand due to the fact the YED for luxury travel tends to be high and positive (income-elastic).

- **The fall in demand leads to excess capacity and thus higher unit costs**

State	<p>Higher Costs faced by Larger Carriers due to Excess Capacity Big airlines would suffer from excess capacity. Large planes tend to be under-utilised when demand falls. Even though the seats are only half filled, the planes still have to take off as scheduled. Thus, whilst revenue falls, unit costs rises for big airlines.</p>
Elaborate by linking to part (a)	<p>Economies of scale and Market size The economic analysis in part (a) suggests that big airlines can enjoy cost savings in terms of various forms of technical and non-technical. However these cost savings assumes/presupposes that the airline is able to operate on a big scale and produce a LARGE output. Thus, like “big fishes” they can better survive or thrive in an ocean environment. However, when the market size shrinks, as it will in a recession, these big firms find themselves with excess capacity (i.e. over-size scale) and hence they become inefficient in utilising the existing over-sized capacity. For example, unlike small airlines that use smaller planes, big airlines use jumbo jets.</p> <p>In times of recession, it is much harder for big airlines using jumbo jets to sell enough tickets to fill up all available seats. Many big aeroplanes fly half-empty (unable to fully utilise load factor). Moreover overcapacity in the industry makes it difficult for big airlines to reap potential economies of scale.</p> <p>During such times, it is best for such big firms to “downsize” or right-size to be efficient in producing the output.</p> <p>In short big firms thrive when the market is large enough for them to reap potential economies of scale. However when the market size shrinks (e.g. recession) they faced more problems to stay afloat compared to small firms as their unit costs rises whilst their revenue falls.</p>

- **Bureaucratic & inflexible**

Large airlines are more bureaucratic and take a longer time to response to changes in market conditions. They are less flexible due to the need to upkeep the reputation and image they have built up over the years. They find it a struggle to generate enough revenue to cover their high fixed costs (e.g. large fleet of aircrafts and crew).

Evaluation: Larger Carriers do survive in such a situation

- Ways to cut costs - retrench redundant workers
- Ways to minimise loss and increase revenue - cut services to some cities and shift focus to money-making destinations (may want to concentrate on services like long-haul flights which face little/no competition from the smaller rivals).



- Continue to exhaust the revenue advantages by using the funds they have to attract more customers - continue their frequent flyer programmes, provide good services which smaller counterparts cannot provide, emphasize the safety of travelling on reputable airlines, etc

(b) Performance by SMALL AIRLINES, i.e. LOW-COST or Budget Airlines during a Recession

- Overall demand might fall less than the big airlines

Demand rose during recession

During bad times, business for small airlines assuming budget air travel services tends to grow. This is because the demand for such so-called cheap or inferior goods has negative YED. As incomes fall due to recession, demand increases because consumers tend to switch to consuming more of a cheaper/inferior substitute. (DD↑)

- Ability to charge a lower fare due to no-frills services & niche/specialised markets

Lower cost for providing no frills/budget services. Lower overheads or fixed costs. No need to spend a lot on differentiating the product e.g. advertising cost is saved; no in-flight entertainment; catered food etc.

Small airlines cater to niche markets e.g. short-haul rather than long-haul operations, using smaller and cheaper airports, lower pay scale and more flexi-working hours, small airlines do have an edge over the bigger counterparts in cost savings even without much internal economies of scale of that of bigger airlines.

- Nimble and flexible

Small airlines are quicker to respond to changes in market conditions. They have less overheads or fixed costs to worry about in bad times (e.g. small fleet of aircrafts and crew to maintain). They are usually budget airlines and thus they can be more flexible in their airfare and number of flights. For example, they could more easily cut fares and cancel number of flights without much worry about reputation in response to an economic downturn.

To conclude, budget airlines probably suffered a lesser overall fall in demand as compared to their bigger counterparts and together with the lower costs due to the no-frills services, they are able to survive during the worldwide reduction for airline services.



CONCLUSION

Synthesis

It is clear from the above discussion that in theory/principle, big airlines do enjoy cost advantages in the form of potential economies of scale. However this potential economies of scale cannot be realised in a depressed market (i.e. 2001 recession) when the market size or industry is shrinking.

Thus in the context of the extract, they appear to suffer more than small airlines. {Analogy: Like putting a big fish in a small tank. The big firms are just “too big” to survive in a small tank}.

On the other hand, a depressed market (2001) offers opportunities for small airlines to take advantage of the demand for no frill travel services. Thus small airlines are likely to suffer less because the nature of their business enables them to operate at lower costs (no frills) and still be able to offer cheap discounted fares to boost sales.

Stand:

Thus I would say the above extract does not disprove the economic analysis related to benefits from large scale organizations.



Essay Question 3: 2010 A levels Q2

Retailers in Singapore supply a wide range of services of services and products in a variety of market structures.

- (a) Explain the key differences between oligopolistic competition and monopolistic competition. [10]
- (b) Consider different retailers in Singapore and discuss which of these two market structures best explains their market behavior. [15]

Part (a)

IMPORTANT NOTE

Avoid **descriptive responses**, ie. listed the obvious differences between the two types of market, such as number of firms, barriers to entry and so on.

You should examine the **implications of these differences** ie. able to **explain pricing decisions, the effect of entry and exit etc. in an analytic manner.**

In the case of **monopolistic competition** the **AC curve is important to show the long-run equilibrium solution where normal profit is made, and it could be argued the AC curve is also important to show long-run abnormal profits in oligopoly.**

Introduction

Key Words	An oligopolistic market structure consists of few dominant players with high entry barriers. Whereas with no or little barriers to entry, monopolistic competition is characterized by a large number of small firms, each of which produces/provides a slightly differentiated product/service.
Issue & Approach	The key differences between oligopolistic competition and monopolistic competition can be explained under contrasting features, market behavior and performance in terms of profit levels in the long run.

Note: It is not meaningful to compare profits in the short-run as all firms can earn any of the 3 types of profits, namely, supernormal/abnormal, normal and subnormal profits in the short-run.

Body

Note: To explain the differences, it is important that candidates do not contrast the individual characteristic by itself. A good answer will attempt to link related points together. E.g. Oligopoly has a few dominant firms due to the high barriers to entry in contrast with monopolistic competition as there are no barriers to entry.



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Differences in Characteristics/Features leading to different behaviour and profits in the long-run

Features	OLIGOPOLISTIC COMPETITION	MONOPOLISTIC COMPETITION
Number of firms	<p>Market dominated by a few large producers and each with significant market share.</p> <p><i>*Examples:</i> A few major players in fast-food chain and telecommunication retailing.</p>	<p>Large number of small firms and each with insignificant market share.</p> <p><i>*Examples:</i> Many small players in local food business, hawker stalls and bubble tea shops.</p>
Barriers to entry and exit	<p>High barriers to entry/exit Firms are unable to enter freely the industry. The barriers are high enough to prevent entry of new firms.</p> <p><i>Examples:</i> Telecommunications retailing characterized by high legal barriers, high start-up costs, extensive EOS etc.</p>	<p>low barriers to entry/exit New firms are free to enter an industry and existing firms can leave the industry without much difficulty.</p> <p><i>Examples:</i> Food stalls, bubble tea shops – relatively low start-up costs, low legal barriers, limited EOS</p>
Nature of Product	<p>Product can be homogenous OR differentiated.</p> <p>Homogenous product The products sold by the firms are identical and of the same quality. <i>Example: Crude oil - The product is so highly standardized to the point that consumers are assured the quality is the same no matter which seller supplies this product. Consumers are not brand-conscious.</i></p> <p>Differentiated products For differentiated products – Real and/or imaginary (perceived) differences can exist. Products may vary in terms of attributes, service, accessibility, branding and packaging. <i>Example: Cars</i> Cars are deemed to be a means of transportation to carry one from a destination to another. Yet, different brands and models are meant differently to the consumers. From the engine power, the design, safety concerns and even the brand names are different.</p>	<p>Differentiated product. Though similar to oligopolistic competition for differentiated product, generally, the products/services here are only slightly different.</p> <p><i>*Examples:</i> Local hawker food - Real differentiation in terms of cooking style and ingredient and imaginary based on packaging.</p> <p><i>As firms do not have high supernormal profits like the oligopoly as there are numerous of firms selling similar products, the differentiation is not prominent.</i></p>



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<p>Implications for Profits in the long-run</p>	<p>Explain firms are able to retain the supernormal profits in the long-run due to high barriers to entry.</p> <p>Figure 1 Rev/Cost(\$)</p> <p>From Figure 1, at the profit maximizing output where $MC=MR$, the firm has a total revenue of $0PbQ_e$ and total cost of $0abQ_e$ and will earn supernormal profit of $Paba$.</p>	<p>Explain firms only earn normal profits in the long-run as supernormal profits in the short-run will result in entrance of new firms and the existing firms will experience a drop in demand as consumers turn to substitutes.</p> <p>Figure 2 Rev/Co</p> <p>From Figure 2, at the profit maximizing output where $MC=MR$, the firm has a total revenue of area $0P_eAQ_e$ and is the same as total cost, $0CAQ_e$, thus earning normal profit.</p>
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Conclusion

As a result of no barriers to entry, firms in a monopolistic competition sell slightly differentiated products, and though they are price-setter and independent, they earn only supernormal profits in the long-run. On the other hand, there are huge barriers to entry in an oligopoly and thus there are a few dominant firms and they are price-setter. As there are few large firms, they are mutually dependent in their pricing strategy and able to retain supernormal profits in the long-run.

(b) Consider different retailers in Singapore and discuss which of these two market structures best explain their market behavior. [15]

Important note

Ensure that your example used should be on RETAILERS, not manufacturers.

Good analysis with exemplification includes **comparison online blog-shops with petrol retailers**. This response gave excellent insights into both types of retail business and linked the discussion to the good comparative theory that had been presented in part (a).



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Focus on the **Application based on what has been analysed in part (a)**. Students need to apply specific contexts of retail (not manufacturing!) businesses in Singapore for this question.

Schematic diagram

Introduction	
Retailing refers to the sale of products and services to the final/end consumers. Retailing covers a broad spectrum of industries ranging from petrol retailing, telecommunication companies, hawkers to online blogshops. Using appropriate examples, I shall discuss why retailers in Singapore could either be operating in oligopolistic as well as monopolistically markets.	
Body	
Thesis	Anti-Thesis
Oligopoly can explain the market behavior of many retailers in Singapore Case 1 – Petrol retailing (petrol kiosks) Case 2 – Supermarket chains	However, some forms of retailing exhibit the market behavior of monopolistic competition. Case 1 – hawker food; bubble tea retailing Others – hairdressing/haircuts; beauty salons etc.
Synthesis	
There can be “transition” of market structures in certain case.	
Conclusion	
Provide final judgment that oligopoly explains the market behavior of many large retailers in Singapore. Smaller retailers tend to exhibit behaviours of monopolistic competitive firms.	

Introduction

Key Words	<ul style="list-style-type: none"> • Retailing refers to the sale of products and services to the final/end consumers and the retail industry is a major sector of the Singaporean economy. • Retailing covers a broad spectrum of industries ranging from petrol retailing, telecommunication, hawkers to online blogshops. • Oligopoly and monopolistic competition are the two common market structures among retailers in Singapore.
Issue & Approach	I shall discuss why retailers in Singapore could either be operating in oligopolistic or monopolistic competitive markets.

Body

(I) Thesis: Oligopoly best explains the market behavior of retailers in Singapore

In retail markets where the firms are few and large, I shall highlight 2 good examples found in Singapore context

CASE 1A- PETROLEUM RETAILING

Market features:

- Few large firms relative to market size (e.g., Singapore Petroleum Company (SPC), ExxonMobil, Shell, Caltex)
- Significant barriers to entry (e.g. petrol stations, storage facilities, tank trucks)
- Differentiated (Note: Though petrol itself maybe rather homogeneous, they are sold under different “iconic” brand names and together with different service, they are deemed different by consumers.)
- Petrol kiosk chain operators e.g. SPC, ExxonMobil and Shell are notable examples of **non-collusive (competitive) oligopolies** due to the unique characteristic of **mutual interdependence (should be elaborated in part (a))**.
- Pump prices tend to be “uniform” at various petrol kiosks throughout the year for the 3 different grades of petrol, 92, 95 and 98.



	92UL	95UL	98UL	PREMIUM	DIESEL
CALTEX	2.030	2.080	NA	2.215	1.630
ExxonMobil	2.030	2.080	2.140	NA	1.630
Shell	NA	2.080	2.140	2.340	1.635
SPC	2.030 ▲	2.080 ▲	2.130 ▲	NA	1.620 ▲

- This **price rigidity** can be explained using the **kinked demand-curve model**.
 - In a competitive oligopoly, rival firms will match any price decrease initiated by any one firm among them, but will not match any price increases.
 - If firm X raises the price of its product above the current ruling price of P_E , rival firms are not likely to follow suit because then they can gain the customers who switch away from buying from the higher-priced firm X. This means that if firm X raises its price, it would experience a substantial or more than proportionate fall in its quantity demanded or sales, and thus a fall in its total revenue. Thus, firm X would be reluctant to raise its price.
 - However, if firm X were to lower its price, rival firms would also lower their prices to prevent loss of their customers and to preserve their market share. Firm X would thus experience only an insignificant or less than proportionate increase in quantity demanded or sales, such that it would experience a fall in total revenue. Thus, firm X would be reluctant to lower its price.
 - Since any price change above or below OP_E results in less total revenue than before, firm X and similarly, any oligopolist would have no incentive to alter the market price.
 - If there is no significant change in the marginal cost of the oligopolist, the oligopolist will absorb the higher costs and leave the existing price-output combination unchanged.
 - This theory helps to explain the phenomenon of **price stickiness** or **price rigidity** under oligopolistic market structures. This is the behaviour in which prices in the oligopolistic industry tend to change very little over time.

Note: Cambridge has given feedback numerous times on the inaccuracy of the diagram. Make sure AR and MR are not parallel. The AR is twice the slope of MR.

Price-leadership

However, it does not mean the petrol companies do not change price at all.

For example, in the recent pump price revision in Jul 2011, the Petrol 92 and 95 are priced S\$2.03 and S\$2.08 in all the petrol stations in Singapore. Why? No explicit collusion (e.g. price fixing or cartel because it is outlawed). But, there seems to be tacit collusion in the form of **price leadership**. The revision of prices among the various firms occurred within days after one raised its price.

Nonetheless, petrol companies do not compete base on price or revise pricing frequently (usually only when crude oil price is exceptionally high). Usually, they focus on non-price competition.



Non-Price Competition

- Instead of price competition, the petrol retailer would focus more on non-price strategies.
- For example, petrol kiosks branding their unique quality of their product as well as offering complementary services like car wash, mini-supermarkets; gifts; contests and credit facilities to draw customers.
- Thus, the petroleum retailers' market behaviour adheres to the kinked-demand curve model of a non-collusive oligopoly to a large extent.

Evaluation

- However, occasionally wars do erupt or breakout among the retailers especially in a downturn. But again, this is only temporary and last only for a few days. It seems to be more of a publicity stunt than real price-war.
- Other non-price behavior of petrol retailers that strengthen the case of oligopoly: Merger (exxon-mobil in 1999), market penetration (presence of many outlets at key traffic junctions, expressways)

OR CASE 1B - TELECOMMUNICATION COMPANIES

Market features

- Few large firms relative to market size (Market Concentration Ratio of 3 firms of SingTel, Starhub and M1 is 100%)
- Significant barriers to entry (e.g. satellites, government license, etc)
- Pricing for basic subscription plan is the same and similar pricing for others.
- Focus on non-price competition such as the quality of reception, joint promotion with mobile phones brand/models, number of incoming calls/SMS, customer loyalty points and lots of advertising.

Evaluation

Nowadays, to make pricing 'ambiguous' to the customers, the companies have been trying to bundle services together. Offers such as a 'promotional package' of mobile phone line with land-line, internet and pay-TV services are bundled and charge a seemingly attractive pricing.

***Another area that students may want to highlight is that large firms have the ability to practice price discrimination.*

Note: Given time constraint, you may not be able to use another example to further exemplify/substantiate your analysis. So the tip is to use ONE GOOD example to illustrate all the main points (kinked demand curve, price-leadership, price war and non-price competition). Do not choose an example that can only illustrate one point and not the others. Nonetheless, it is acceptable to use different retailers to illustrate different main points.

(II) Anti-Thesis: Oligopoly does not fully explain market behaviour of some retail firms in Singapore

Besides big retailers there are **small retailers** that operate in other industries in Singapore where the market structure resembles monopolistic competitive model rather than oligopoly.

CASE 2A: ONLINE BLOGSHOPS SELLING LADIES APPAREL

- **Many** blogshops selling ladies apparel in the Internet with **insignificant market shares**.
- **Low to zero barriers to entry/exit**: Internet start-up costs is minimal – setting a blog is free and the only thing is the knowledge to set up a blog. The cost of the items sold on the internet can be low, depending on the quality and quantity the owner wants to sell. As a result, the cost of exit is low too as sellers can exit



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without much penalty. She can simply sell the clothes to other sellers, wear the clothes herself or give away as gifts.

- **Slight product differentiation:** Sellers can try to scout for different designs in other countries that cannot be easily found on other blogshops together with customized service such as free delivery, award points for consumer's loyalty, etc. It can also advertise in different websites.
- As a result, the owners of the blogshops can **price independently** and prices are not the same for the blogshops. This means, they need not lower price when a competitor lowers its price.
- In fact, even if they were to undercut their rivals the impact is unlikely to be significant as their share of the total market is negligible.
- Typically such firms earn **normal profits in the long run** limiting their ability to expand the scale of the businesses and to innovate.

OR CASE 2B: CHICKEN RICE SOLD IN HAWKER CENTRES

- Dining at hawker centre is part of the Singapore culture. There are hawker stalls such as chicken rice stalls located in hawker centres spread across Singapore. Each of these stalls has only an insignificant market shares.
- Barriers to entry relatively low (e.g. inexpensive to rent a stall space, buy cooking equipment; usually small family business)
- Product (Services) tend to be slightly differentiated (e.g. in location, different styles of cooking; service etc)
- Price is not the same for every stall.
- As monopolistically competitive firms, their selling point is in “differentiating” their products from those of their rivals e.g. personalized service; good location; yummy chilli sauce, etc

Evaluation

In some industries, small retailers co-exist with big establishments. Examples, Breadtalk and Four Seasons with huge market shares are found in the midst of the confectionary shops, Jean Yip amongst the beauty salon, etc. In fact, with franchising and internal expansion, more and more traditionally monopolistic competitive industries are turning oligopoly.

Conclusion:

In Singapore, oligopoly best explains the market behaviour of big and mid-size retail enterprises where barriers to entry are high, Economies of scale are extensive, with firms exhibiting mutual interdependence in pricing behavior. For industries where barriers to entry are low and economies of scale are limited, firms exhibiting independence in pricing behavior, the monopolistic competition model seems to be more applicable.



Essay Question 4: 2008 A levels Q2

Firms' pricing and output decisions depend on barriers to entry and the behaviour of competitors.

- (a) Explain why barriers to entry are a key determinant in firms' pricing decisions. [10]
- (b) Discuss the extent to which the behaviour of firms depends in reality on the actions of their competitors. [15]
-

Important note

Part (a) required the application of standard book work whilst part (b) required an assessment of the appropriateness of applying theoretical models to the real world.

(a) The majority of candidates appreciated the need to make the contrast between a market structure with strong barriers to entry and one with low barriers or none. Most candidates, however, struggled to achieve higher than a Level 2 mark because they gave only descriptive explanations of the linkage between barriers and pricing decisions.

The best answers used diagrams (including AC curves) to show how profit-maximising pricing decisions are made within a range of market structures. These clearly showed the dynamics of price-setting in the short run for a perfectly competitive firm, i.e. the impact of entry to the industry when firms made excess profits or exit from it when they made losses.

Weak answers tended to explain barriers and maybe link them to different market structures but did not discuss pricing decisions.

Recommendations

- This is a manageable Microeconomic question.
- For part (a), candidates that attempted are to link the theoretical concept of barriers to entry to pricing behaviour. In short, the higher barriers to entry, the higher ability to set price. Need to contrast perfect and imperfect competition.
- For part (b), candidates need to link the concept of firm's interdependence in the oligopoly characteristics and contrast with that of other market structures.



Part (a)

Suggested framework/Outline

Answering the question:

- This difference in the level of barriers to entry determines how firms in the respective market structures set their prices, with a perfectly competitive firm as a price taker and a monopoly as a price setter.
- In general, firms in all market structures set price to profit maximize at $MC=MR$.
- Important to focus on Long run: because, in theory all firms regardless the market structure can earn supernormal, normal and subnormal profits. It is only in the LR that new firms may be enticed by supernormal profits made by incumbent firms to enter the market or firms may leave if they earn subnormal profits and unable to cover variable costs.

Summary of key differences in Pricing policy	
No Barriers to entry (e.g. Perfect Competition)	High Barriers to entry (e.g. Monopoly)
Price taker	Price setter
Normal profits in the long run: $P = \min LRAC$	Supernormal profits in the long run: $P > LRAC$

Introduction:

Key Words	Barriers to entry refer to the various forms of restrictions or obstacles which prevent/deter new firms from entering a market to compete with incumbent firms. They could either be natural (e.g. economies of scale/ownership of key resources) or artificially erected (e.g. legal barriers; branding).
Issue & Approach	The level of competition and hence the market structure is determined to a significant extent by absence or existence of strong barriers to entry . I shall explain why they are a key determinant of a firm's pricing behaviour in the context of the perfect competition and monopoly.

Body

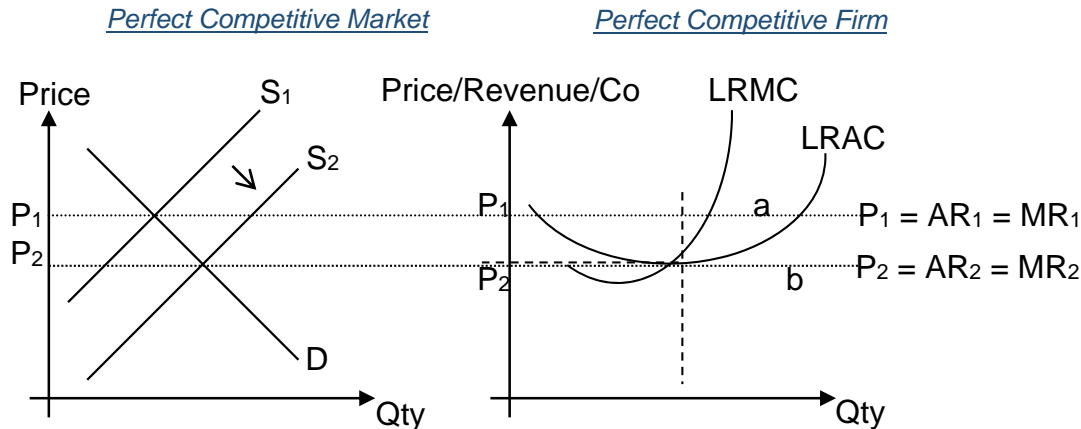
Number of firms, hence the degree of market power and price setting power in a perfectly competitive industry

In a perfectly competitive market, the non-existence of barriers to entry allows for a large number of firms, each with very limited market power and is a price taker.

Since there are no barriers to entry, new firms can easily enter the market, resulting in a highly competitive market with many sellers. Each seller only has an insignificant market share and hence does not have the ability to set prices. Instead, each perfectly competitive firm becomes a price taker and sells at a profit-maximizing level of output, Q_{pc} where $MC=MR$.



Figure 1: Long run adjustment of the Perfect Competitive firm



- From Figure 1, we see that the market demand and supply initially determined the price at P_1 where demand = supply.
- A perfectly competitive firm which is a price-taker was initially enjoying supernormal profits in the short-run where price was set at P_1 , where $MC=MR_1$ and P_1 is above average cost (AC). Such supernormal profit, represented by the area P_1abc attracted new firms into the market.
- With no barriers to entry in a perfectly competitive market, firms can enter easily to compete away the supernormal profit.
- When new firms are attracted into the industry, the market supply increased from S_1 to S_2 and the market price fell from P_1 to P_2 .
- Firms will continue entering the industry until each firm charges P_2 and earns only normal profit in the long-run, with profit-maximizing price P_2 equals to average cost (LRAC and LRMC).
- The firms are price takers both in the short-run and long-run.
- This is unlike a monopolist's who is a price setter and its long-run profit-maximizing price can be set above AC.

Summary of key outcomes in terms of Pricing Behaviour:

- Perfect competitive firms are price takers both SR and LR
- Price charged is equal to MC ($P=MC$) => Allocative efficient
- Price charged in the LR is equal to min LRAC => normal profits and optimal capacity output.

(B) High entry barriers and Pricing behaviour

Conversely, the existence of high barriers to entry protects a monopoly from potential competitors, limiting the market to one sole seller with strong market power to set prices. (e.g. Microsoft for Windows DOS and "office")

As a result, the industry demand curve is in fact the monopolist's demand curve, which is downwards sloping demand in Figure 2. This means that a monopolist can lower prices in order to sell more output



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or restrict its output and sell at higher price, thus showing its ability to set its own price, unlike a perfectly competitive firm which has to be a price taker.

Similarly, a monopolist profit-maximizes at $MC=MR$, with price P_1 and quantity Q_1 .

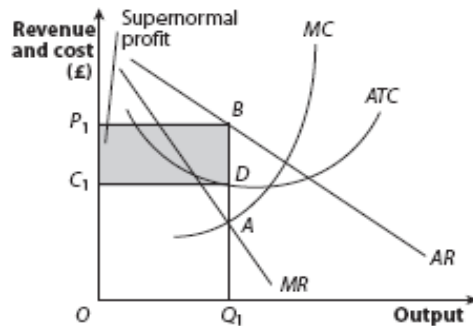


Fig 2: A monopolist equilibrium (short and long-run)

Summary of key outcomes:

- (1) Monopoly is a price setter
- (2) $P > MC \Rightarrow$ underallocation
- (3) $P > LRAC$

Conclusion:

From the above analysis it is clear that barriers to entry play a key role in pricing behaviour of firms in a market. In general, firms will have greater pricing power or market power if barriers to entry are high.

- (b) Discuss the extent to which the behaviour of firms depends in reality on the actions of their competitors. [15]

Important note

The best answers contrasted this with other market structures and evaluative discussion focused on whether these market structures were likely in reality and on whether firms would actually take account of a competitor's behaviour in the real world. Non-price strategies were also often referred to as examples of reaction to competitor behaviour.

Weak answers tended to describe oligopoly and monopolistic competition but did not apply this knowledge to the question set.

Suggested framework:

Use 2 contrasting models for analysis:

- (A) Oligopoly (mutual interdependence in formulating business strategies)
- (B) Monopolistic Competition (Moc) (Independence)



Introduction

Key Words	The behaviour of firms refers to the formulation of business strategies or policies in order to compete with rivals in the market. Broadly these strategies revolve around pricing and output as well as non-price strategies such as product development and promotion.
Issue & Approach	In some circumstances firms' strategies are very much influenced by the actions and reactions of their rivals whereas others could make such decisions independently. I shall discuss and elaborate using 2 contrasting models viz oligopoly and monopolistic competitive market structures that serve to explain mutual interdependent and independent behaviours by firms respectively.

Body

Thesis: The behaviour of firms depends, in reality, closely, on the actions of their competitors

Explain why, theoretically, oligopolistic firms are the most dependent on the actions of their competitors be it price strategies (rigidity or price-war) or non-price strategies (due to their characteristics)

Few large firms dominating the industry:

- each has a significant degree of market power
- actions of rival firms will affect the sales of other firms which will in turn react to the actions of rival firms.
- substantiate with real world examples – petrol retailing and telecommunication.
- Refer to 2010 Q2 essay plan for details.

Collusive versus Non-Collusive Behaviour

Given the high degree of mutual interdependence (rival consciousness) oligopoly firms might opt to either collude or compete.

Non-Collusive models:	Collusive models:
Kinked Demand Curve Theory	Price-fixing (cartels) and Price Leadership

Oligopolistic firms try to **avoid price wars as suggested by the kinked demand curve theory** due to possible fall in TR: firms engage in **non-price competition** (substantiate with real world examples – similar rewards and loyalty programmes by different petrol companies & aggressive advertising by SingTel & M1)

Note: Price Wars may erupt occasionally, when the market becomes too small /overcrowded with too many players e.g. recession or economic downturn.

Anti-Thesis 1: The behaviour of firms does not depend closely on the actions of their competitors

Explain the existence of other types of market structures (monopolistic competition & monopoly) where firms may not be dependent on the actions of their competitors

Monopolistic Competitive firms – independent of other's behaviour



- There are many **monopolistically competitive markets** such as hawker food and optical shops. For instance, hawker food stalls in Singapore, each with very **insignificant market power** and **sells differentiated products**, are much **less mutually independent**.
- Refer to 2010 Q2 essay plan for details

Evaluation:

- Monopolistic Competitive firms – may be dependent on rival's behaviour
- Unlike as proposed in theory, the behaviour of these firms can be dependent on the actions of competitors if the shops are within vicinity and there is a lack of real product differentiation.
- Occasionally, we do see hawkers trying to follow each other's price cut. Nonetheless, it is usually temporary.
- Conceptually, these hawkers may be behaving like "localized oligopolists" (market defined as the neighbourhood not the country Singapore)

Anti-thesis 2: Other factors other than competitors' behavior can affect firms' price & output decisions.

- Constraints of location, funding, small & niche markets, etc., preventing firms from maximizing profits. Some firms may choose to remain small (keep output low).
- Government policies such as price controls and regulations. Use appropriate diagrams to explain how government regulations such as AC & MC pricing affect the P&Q of firms.

Conclusion:

In reality the behaviour of firms in formulating business strategies depends on the actions of rivals if there is a high degree of mutual interdependence or rival consciousness. This is most evident in an oligopolistic market where the market is dominated by a few big firms, each with a significant market share. In such a market the actions of one firm may pose a significant threat to sales of other rival firms. Thus they cannot afford to ignore the actions of their competitors!



Essay Question 5: 2011 VJC Prelim Essay Q2

Barriers to entry confer more market power on firms in their pricing and output decisions and behavior.

(a) Using examples, explain how barriers to entry will confer more market power on firms. [10]

(b) Discuss whether greater competition should be introduced into markets in Singapore. [15]

Part (a)

Cue words: Explain

Concepts: Barriers to Entry and Market Power

Context: Firms & Market Structure

(a) Using examples, explain how barriers to entry will confer more market power on firms. [10]

Introduction

Barriers to entry are obstacles or restrictions that make it difficult or impossible for new firms to enter an industry. Barriers to entry can be artificial or natural. The degree or extent of barriers to entry will determine the level of market power and competition in an industry. Typically for industries with high barriers to entry, the firms will generally have higher market power.

Body

Market power: The extent to which a firm can exercise its influence on market output and price is an indication of its market power. The number and size of firms, nature of product and barriers to entry contributes to a firm's market power. The more market power a firm has determines the slope of the demand curve (more price inelastic demand and less substitutes - higher price a firm can charge)

Explain some barriers to entry that confer firms such power.

Example 1

• **Natural Barriers – enjoy EOS**

- Industries such as telecommunications and utilities usually have very high fixed cost and often requires a large output to spread out the large sunk costs (i.e. reach MES). As the marginal cost or variable cost of supplying extra output is very low relative to the fixed cost, the AC is falling throughout the entire range of the market demand curve. For example, setting up the extensive network of power stations and cables to distribute electricity is very high but distribution of an additional kW of electricity is very much lower in comparison.
- Often the whole market is only able to support a single firm as the AC will be substantially higher if the market share was divided (illustrate with diagram).
- Therefore, only 1 single firm tends to serve the entire market and it therefore has substantial market power.

Example 2

• **Artificial barriers -- legal barriers**

- Artificial barriers through licensing or patents which are usually given only to very few firms or 1 firm in the case of patents confer high market power on firms. As the license is granted to only a few firms or 1 firm, the firm with the license or patent will be able to enjoy exclusive right to the market.



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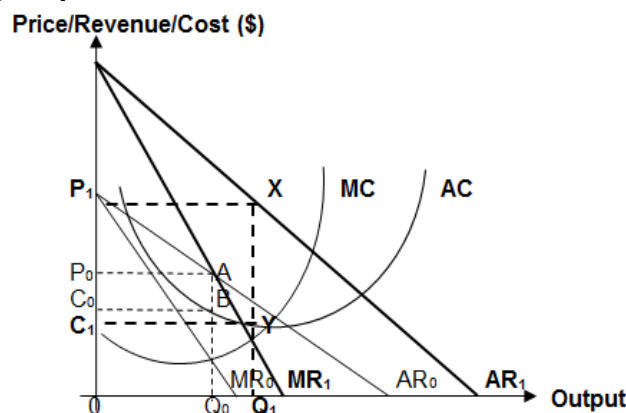
- For example, SingTel was the sole fixed line telephone services provider before the telecommunication sector was liberalized.
- This prevented new firms entering the industry and therefore created a very inelastic demand for Singtel due to a lack of substitutes available as SingTel has complete market share. → Conferring SingTel with high market power.

Barriers to entry like intellectual property rights and patents can help firm to confer more market power. Firms are unable to join a particular industry as they do not have the technology or patents and is thus unable to free ride on that of the others, e.g. Apple's distinctive touch screen capabilities enables it to gain a strong market share in the global electronics market with its iPhone, IPAD. Its competitors, like Creative Z110 and Blackberry, have seen a fall in market share as it is unable to compete due to its limited technology and thus leading to Apple acquiring more market power.

Example 3
Artificial Barriers - Strategic Entry Deterrence

Strategic entry deterrence is used by the incumbent firms to prevent entry of new firms and even drive out the other marginal existing firms in the industry. Strategic entry deterrence, like product recognition and product complexity, is used to confer more market power. The firm may engage in a lot of advertising which raises the fixed cost and it would be hard to compete with the incumbent as the very high cost discourages potential entrants. Product complexity in terms of after sales services is provided and developed e.g. BMW and Mercedes engage in a lot of advertising and extensive services. The costs of developing the brand name and dealer network may be substantive and this acts as an effective deterrent for new entrants to the market. Hence the market power they had is much more than their rivals like Kia and Toyota.

Illustration on how barriers to entry allow a firm to have a high demand and thus enabling it to charge higher price and earning higher profits.



From the above figure, high barriers to entry will result in a high demand as market shares are spread amongst the few dominant firms and thus AR and MR will be at AR_1 and MR_1 respectively. Also, since there are lesser substitutes, demand is more price-inelastic. Thus we can conclude that high barriers to entry will enable the firm to charge a **higher price of P_1 as compared to P_0** , illustrating **higher market power**. Besides, it can produce **higher output at Q_1 instead of Q_0** and unit cost falls from C_0 to C_1 . Profit increases from P_0C_0BA to P_1C_1YX .

Conclusion



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High barrier to entry makes it difficult for new firms to enter the industry and as a result of a lack of substitutes lead to a price inelastic demand for firms. The price inelastic demand allows firms the ability to restrict output in order to raise prices without losing significant market share.



Part (b) Discuss whether greater competition should be introduced into markets in Singapore. [15]

Cue words: Discuss

Concepts: Competition

Context: Firms & Market Structure in Singapore

Schematic plan (Students should include Sg examples to exemplify)

Introduction

Greater competition can be effected from government policies such as deregulation, liberalisation etc.

We shall illustrate the case for Singapore with some local examples of industries such as the telecommunications industry. This essay shall discuss if greater competition should be introduced into some of these markets by examining the costs and benefits on consumers, producers and society.

Body

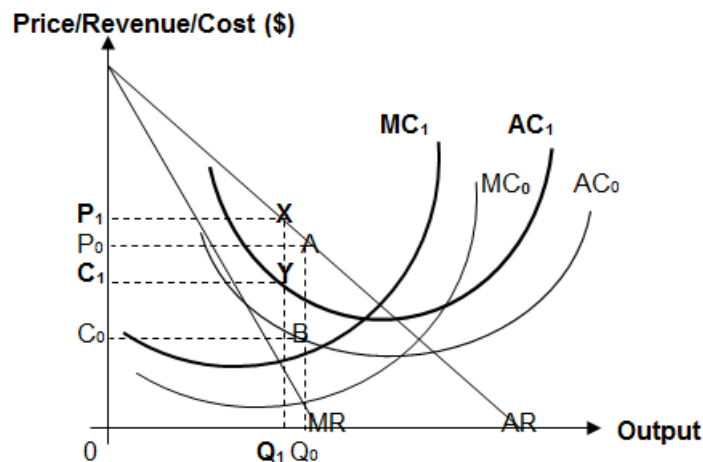
Thesis arguments (support greater competition)

Effects on consumers: With greater competition, more firms enter the industry and this results in loss of market power. **Prices of products will be lower** (can make reference to the diagram in part (a)); there will be more **variety and choices**.

Effects on society: More allocatively efficient. Firms will be less able to restrict output to increase price and the disparity between P and MC narrows.

Anti-thesis (greater competition is not beneficial for Singapore)

Effects on consumers: Higher prices – With greater competition → firms may engage in promotional efforts (e.g. advertising, trying to secure the distribution rights) or firms enjoy less internal economies of scale → firms will increase price as a result of rising cost of production → consumers will face higher prices.



From the above figure, we can see that rise in cost due to less economies of scale will increase average costs from AC_0 to AC_1 and marginal costs from MC_0 to MC_1 . These resulted in **lower output** from Q_0 to Q_1 , **higher price** from P_0 to P_1 and **unit cost increases** from C_0 to C_1 . **Profit decreases** from P_0C_0BA to P_1C_1YX . **Consumer surplus decreases** by P_0P_1XA



Less innovation & R&D – firms require incentives and ability to do R&D. With competition, **reduction in supernormal profits**, hence less innovation and R&D. Consumers to suffer from lack of effort in innovation.

Effects on producers: Lower sales revenue for producers and higher cost for producers from greater competition.

Natural Monopoly(With diagram) : Cannot sustain 2 firms in a small market for some markets

Conclusion

It is difficult to conclude that greater competition is indeed good for Singapore. There are industries whose characteristics favoured more competition, especially those which face competition from foreign firms. Those industries which generally are not conducive for reduction in competition are those such as public transport and media, utilities etc.



Essay Question 6: 2013 RJC Prelim Essay Q3

The UK Rail industry is split into franchises, in which companies are invited to bid for the rights to operate individual rail routes for a specified time period. Train operators typically sell their tickets at a lower price if they are bought in advance on the internet, and they offer both first class and economy class tickets.

- (a) Explain whether the above pricing policies could be considered to be examples of price discrimination. [10]
- (b) Discuss whether the UK government should regulate prices in the rail industry to protect society's interests. [15]

(a)

Introduction	
Price discrimination occurs when a firm sells the same product to different groups of consumers at different prices when the price difference cannot be explained by differences in the cost of production. It aims to increase the total revenue and thus profits for the firm compared to charging goods at a uniformed price.	
Body	
(A) Explain whether the context fits into the 3 conditions for price discrimination to work	
<p>Train operator selling tickets at a lower price if they are bought in advance Identify that this is 3rd degree price discrimination: Charging different prices for the same good to different groups of consumers for reasons not associated with cost differences</p> <p>No significant difference in costs Cost of providing the train ticket and cost of train travel is the same regardless of time of purchase</p>	
Elaborate on the conditions for Price Discrimination to work	Apply to context
<p>1. The firm must have monopoly power (not necessary a monopoly) - the ability to set prices.</p> <p>A producer wishing to practise price discrimination must have a degree of monopoly power so that consumers who are charged discriminatory prices <u>cannot turn to an alternative supplier who might offer lower prices.</u></p>	<p>Train operators are price setters: Each train operator acts as a monopoly for its own individual rail routes</p>
<p>2. The markets can be segregated and resale should not be possible between sub-markets.</p> <p>The firm must be able to segregate the market into separate and identifiable groups to prevent seepage between markets. That is, it is impossible or prohibitively costly for consumers to buy the lower-priced ticket and sell it in the higher-priced market.</p>	<p>Time of purchase can be used by the train operator to segment consumers</p> <p>Train tickets if bought in advance can only be collected with the credit card used for purchase and there is a possibility of names printed on the tickets.</p>
<p>3. There exists different PED in the different sub-markets with different willingness to pay.</p>	<p>Lower ticket prices for consumers who buy their train tickets earlier as they have a more price</p>



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The ability to segregate the markets according to different price elasticities of demand. These groups may be separated by transport costs, geographical boundaries, age group and etc. Price discrimination will only make economic sense if the market segments have different price elasticities of demand. **To increase total revenue, a higher price will be charged when demand is price inelastic (quantity will fall less than proportionate than price) and a lower price for demand that is price elastic (quantity will increase more than proportionate).**

elastic demand. This is because they have not fixed their travel plans yet and so they have more substitutes (other travel alternatives such as coach services) to choose from. Hence, the train operator will earn higher revenue by charging these consumers a lower price as the fall in price leads to a more than proportionate increase in quantity demanded.

Consumers who buy tickets nearer the travel dates are usually business travellers. They have a more price inelastic demand as they are unable to change their business appointments and so there's a high degree of necessity for them to travel at a particular date/on a particular route. This enables the train operator to charge higher prices as an increase in price leads to a less than proportionate decrease in quantity demanded, so total revenue will increase.

First class tickets and economy class tickets

First class tickets are typically sold at a higher price than economy class tickets
Highlight that this is not a case of price discrimination

Different type of good (and so demand is different)

- First class seats and economy class seats are considered to be different products by customers
- First class seats provide more leg space/provide a different degree of comfort/include food and beverage
- As a different product with a higher demand, the train operator is simply just selling a different product at a higher price and so not practising price discrimination (it is not the same good)

Difference in cost of production for the train operator for first class and economy class seats

- First class seats incur higher costs due to food/beverage provided or better seats/amenities
- Given the difference in cost, it is justified for the train operator to charge higher prices for the seats.

Conclusion

The charging of lower ticket prices for advance booking on on-line is a pretty straightforward example of PD.

Knowledge, Application, Understanding, Analysis

L1	<ul style="list-style-type: none"> - Descriptive answer which contains little if any economics - Substantial/ lots of glaring conceptual errors throughout - Listing of points with little/no economic analysis 	1 – 4
L2	<ul style="list-style-type: none"> - An incomplete/underdeveloped explanation of whether the above pricing policies practised by the train operator are a form of price discrimination. 	5 - 7
L3	<ul style="list-style-type: none"> - A clear and thorough explanation of whether the above pricing policies practised by the train operators are a form of price discrimination. - Good use of economic concepts and examples pertinent to the rail industry. 	8 - 10



(b)

Introduction

Price regulation in this context refers to setting a maximum price on ticket prices. Whether the government should practise either MC or AC pricing to protect society's interests shall be discussed.

Body

Thesis: The UK government should regulate prices in the rail industry to protect society's interest.

(1) Efficiency grounds/reason

Each train operator is a monopoly for the particular train route that they are operating. This leads to allocative inefficiency.

Market failure

Rail transportation is a more efficient means of transporting masses of people to work without clogging or congesting road networks. Hence, by regulating prices to keep it low and affordable, it can be a good substitute for car ownership helping to ease road congestion. Thus making more efficient use of society's scarce resources and improving society's welfare.

(2) Equity grounds (excessive profits)

Besides, when the monopolist practices price discrimination, there is a transfer of consumer surplus from consumers (poor) to the monopoly (rich) and worsens the inequity issue.

Rail transportation is an essential service/good ie common mode of public transportation for the low-income and working class. Therefore, the fares must be made affordable to the masses who use public transport on a daily basis for work and leisure travel.

Illustrate with the aid of a diagram how market dominance leads to allocative inefficiency.

Explain how MC pricing will help to protect society's interest and it leads to allocative efficiency.

Explain how AC pricing will help to protect society's interest as it achieves equity/reduce allocative inefficiency.

Anti-thesis 1: Limitations of MC and AC pricing

Explain the limitations of price regulation.

MC pricing regulation

- Shutdown of firm. MC pricing may cause the firm to shut down and leave the industry (for the context of a natural monopoly which is applicable to the context of the UK rail industry). This leads to allocative inefficiency as an essential service is not provided.

AC pricing regulation

- Lack of dynamic efficiency. AC pricing will lead to normal profits in the LR (or price regulation will reduce the profits of the monopoly) and so the train operator will not be able to conduct R&D and hence there will not be improvement in quality of rail travel in future.



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- Government failure.
Example:
Lack of Information (e.g. MC and AC information??)
Lack of Compliance (lax enforcement and ineffective deterrence)
Lack of Political support (public might not support price regulation)
Bureaucracy (red tape- corruption)
Unintended consequences (unknowingly hurt innocent parties)
Conflicting goals (efficiency v equity)

Anti-thesis 2: A price discriminating monopolist is beneficial to society’s interests (application to UK rail industry).

- Equity. Explain how a 3rd degree price discriminating monopoly is able to allow consumers from lower income groups to consume more of the rail service at a lower price because the firm is charging a higher price to consumers in higher income groups (business travellers) and using the additional profits earned to subsidise the lower income consumers. Contrast with the case of monopolist that charges a uniform price.
- Increase R&D. The price-discriminating rail operator enjoys higher revenue and thus profits. Higher profits may benefit society if these profits are re-invested into research and development which leads to product improvement and cost reductions.
- Survival of firm. Price discriminating may be necessary for the train operator to earn the necessary profits to survive in the industry. Diagram to illustrate.
- Efficiency. Explain how a first degree price discriminating train operator (although this is highly unrealistic given the real world) is able to achieve allocative efficiency.

Conclusion:

Make a justified stand of whether the UK government should regulate prices in the rail industry based on the criteria of efficiency and equity, bearing in mind the costs of price regulation.

Yes, I support price regulation on the grounds that rail services provides an essential public transport for the masses. Therefore, it should be run efficiently and equitably for the benefit of society.

Knowledge, Application, Understanding, Analysis		
L1	<ul style="list-style-type: none"> - An answer without a clear economic framework and lack balance. - Points are not well developed to show an understanding of the issue. - Glaring conceptual error. - Lack understanding of price regulation: max 5m 	1 – 5
L2	<ul style="list-style-type: none"> - For an underdeveloped discussion. - For a two sided answer with limited scope on whether the UK government should regulate prices in the rail industry. 	6 - 8
L3	<ul style="list-style-type: none"> - For a good analytical and balanced answer. There is sufficient scope (efficiency and equity are well considered) and depth in discussion with well labelled diagrams to enhance analysis. - Good application to the UK rail industry (price discriminating firm). 	9 - 11
Evaluation		
E1	An unexplained judgment → An unexplained evaluative conclusion/comment	1 - 2
E2	Evaluative assessment supported by economic analysis → Substantiation of an evaluative comment and/or conclusion	3 - 4



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Essay Question 7: 2009 A levels Q2

A very popular band is due to play one concert at a 5000 capacity venue. The plan is to charge different prices according to the area in which the seat is located.

- (a) Explain whether this pricing policy could be considered to be an example of price discrimination. [10]
 (b) Discuss the problems that are likely to be faced in determining the prices to be charged for the seats.

[15]

Paraphrase the questions + requirements of the questions: This question asks whether the given example (context) conforms to price discrimination. It would mean that you have to consider whether the 3 conditions for Price Discrimination are satisfied. You are also required to think if the concert seats are the same good and if there is any cost difference when offering them to the audience in a concert.

Dissect Question Using the 3'Cs'	
C – Command word	Explain: Use SEE approach Consider: Both sides expected: agree & 'but' argument; and come to a reasoned stand for conclusion.
C – Concept (s)	Price Discrimination – Definitions, Examples of Price Discrimination and Conditions to be satisfied for Price Discrimination.
C – Context	Pricing of a popular concert's tickets (seats)

A simple schematic Plan:

INTRODUCTION	
BODY	
Is Effective Price Discrimination if	
Conditions for PD are met	Applications Using the context of the popular concert, explain & exemplify these conditions.
Monopoly Power	
Ability to Segregate Markets according to different price elasticities of demand	
No seepage	
Is not Price Discrimination – consider whether there is any cost difference and whether it is the 'same' product	
Though the cost of installing front and back row seats are the same, the goods are not homogenous in the eyes of the consumers (concert goers) as the experience/satisfaction sitting in front of a concert and the back is different.	
CONCLUSION	
INTRODUCTION	
Key Words	Price discrimination is the practice of charging different prices for the same product or different units of it when such price differences do not result from differences in cost.
Issue & Approach	In this essay, I shall explain whether charging different prices for different seats in a concert is an example of price discrimination. If the product/service is indeed the same and it is not a result of different costs & if the conditions for price discrimination are satisfied, this practice is considered an effective price discrimination.
BODY	
Charging of different prices is Price Discrimination	



Tutorial #23: Microeconomics III – Theory of the Firm & Market Structure

It could be an example of an effective price discrimination because it fulfills the conditions of price discrimination.	
Theory	Application
<p>Monopoly power (NOT NECESSARILY A MONOPOLY): A producer wishing to practise price discrimination must have a degree of monopoly power so that consumers who are charged discriminatory prices <u>cannot turn to an alternative supplier who might offer lower prices.</u></p>	<p>The music production company that organizes the concert has monopoly power – fans cannot turn to other companies to obtain the tickets to the concert of their favorite band.</p>
<p>Ability to segregate the market The ability to segregate the markets according to different price elasticities of demand. These groups may be separated by transport costs, geographical boundaries, age group and etc.</p> <p>Price discrimination will only make economic sense if the segregated market (sub-markets) have different price elasticities of demand. To increase total revenue, a higher price will be charged when demand is price inelastic and a lower price for demand that is price elastic.</p>	<p>The seats are marked and separated hence there is clear segregation for the different seats.</p> <p>Those who buy seats with better view are those with higher income (the price is an insignificant proportion to their income) or are fans of the popular band in which they will be willing to pay anything to see their idols.</p> <p>Both groups have price inelastic demand and thus not responsive to high price and thus the music company can charge them higher price and earn more revenue from them.</p> <p>The nearer the seats are to the stage, the higher the prices. The group of people who would buy front row seats are those who must be big fans of the band. Hence their demand is very price inelastic, as there are hardly any alternatives to those seats. They would not even consider seats further up to be a substitute. Hence if price increases, the fall in quantity demanded of seats would be negligible.</p> <p>Those who settle for middle or back row seats are those who may not be such great fans of the band. Hence they face more alternatives, such as other seats or going to another concert.</p>
<p>Prevent Seepage The monopolist must be able to segregate the market into separate and identifiable groups to prevent seepage between markets. That is, it is impossible or prohibitively costly for consumers to buy the lower-priced ticket and sell it in the higher-priced market.</p>	<p>There is no seepage as those consumers who want a better view of the concert will not be attracted to buy cheaper tickets of rear seats. There is no point getting a cheaper ticket and ends up seated far from the stage.</p> <p>Note: Those who bought the tickets from the organizer and then resold to others who couldn't get the tickets means a black market exists. But this is not seepage.</p>
The marginal cost of installing front row seats and back row seats are the same and this is a case of 3 rd degree Price Discrimination. [Diagram to illustrate 3 rd degree PD, if time allows.]	



May not be a genuine case of PD

However, the view is not homogeneous. Front row seats allow the fans to get close to the action on the stage. The sound is better too. Even though those in the back rows can still enjoy the action via projectors and good sound systems, the quality of experience is much lower. Hence this contradicts the assumption of price discrimination that the good/service sold must be the same.

CONCLUSION

A popular concert would have many fans who are eager to come close to see their idols, hence their perception of the front and back seats will not be the same. Therefore this pricing policy could not be considered to be an example of price discrimination since seats with better view are not the same as those rear seats and thus warrant a higher price.

(b) Discuss the problems that are likely to be faced in determining the prices to be charged for the seats. [15]

This question requires you to consider the problems which the organizers might face in setting prices for the concert tickets. We assume that organizers are assumed to be profit maximisers. If so, then they should set price where output corresponds to $MC = MR$ where MC is rising. The information which the organizers will require would be pertaining to MC and MR .

Some practical questions you should ask yourself while attempting this question:

- How does the organizer know what price to charge to maximize profit? ($MC=MR$)
- How does the organizer know the different elasticities of the different types of audience? How does he know exactly which block of seats to be marked and separated by the elasticities?

Dissect Question Using the 3'Cs'	
C – Command word	Discuss: Thesis/anti-thesis expected; evaluation expected; conclusion with reasoned judgment expected.
C – Concept (s)	Pricing Setting
C – Context	Pricing of a popular concert's tickets (seats)

A simple schematic Plan:

INTRODUCTION
BODY
<p>2 basic information required to determine Prices</p> <ul style="list-style-type: none"> • Cost • Revenue (expected) <p>Issue : Which problem is LIKELY to be faced...</p>



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Thesis: Information on expected revenue + focus on problems to be faced

Difficulties in determining demand curve precisely

- Lacking in knowledge about demand and MR
- Information of demand often changes over time

Difficulties related to 3rd degree price discrimination.

- The difficulties in determining the price elasticities accurately and marking the different seats.

Anti-Thesis : Information on cost + focus on problems to be faced

Difficulties in determining costs

- Explicit & Implicit costs – the latter is more difficult to calculate
- To consider explicit costs predominately and in this case, it should have less difficulty in determining MC.

CONCLUSION

In reality, revenue information is more difficult to collect accurately.

INTRODUCTION

Key Words	Price setting under profit maximization principle: A profit maximizing firm will produce goods where $MC=MR$ and MC is rising and the price to be charged for this level of output is determined from the demand curve the firm faces.
Issue & Approach	In this essay, I shall consider the problems which the organizers might face in setting the different prices for the concert tickets to maximize profits.

BODY

Economic Profit is a firm's total revenue minus its total cost that include both explicit and implicit costs. In order to maximize profits, the concert organizer needs to accurately calculate the economic costs and total revenue. However, in reality there are huge difficulties to calculate implicit costs and demand. Also, to practice price discrimination, calculating the different price elasticities will be challenging.

Thesis: Collection of revenue information

Difficulties in estimating AR and MR

- Firms in reality are unlikely to know precisely or even approximately their demand curves & hence their MR curves.
- The demand curve for a firm's product does not remain static. They may change due to changes in consumers' tastes & preferences, their income levels as well as the actions of rival firms. The outcome of these changes cannot be predicted with accuracy.
- Example: As the rating of artistes is greatly influenced by the mass media, any favourable or unfavourable publicity can swing the demand for their concert performance. E.g. the popularity of male artiste among his female fans may dip after he announced his attachment to a particular girl. The organizers are not able to predict such changes in demand condition when making pricing decision.
- As price list must be printed before the actual sale of tickets, pricing is based on predicted demand. If price is set above equilibrium price i.e. too high, it will result in many vacant seats which has detrimental effects on loss in revenue as well as morale of the artistes and their fans (loss of "face" & reputation). Some organizers try to salvage the situation by giving away free tickets using various channels e.g. lucky draw events, tie-up with tour packages etc. The need to resort to such sales gimmicks itself may further reduce the rating of the artiste.



Difficulties in charging 3rd degree PD

- In the case where the organizers would like to raise TR by practicing price discrimination, he will face difficulties in determining the different price elasticities of demand.
- Formulae for price elasticities are based on small changes in its own price with ceteris paribus condition.
- If there is a large percentage change, then the estimate of elasticity may be inaccurate.
- Ceteris paribus condition in reality is almost impossible as many variables, be it income, taste & preference, etc can change simultaneously.
- As a result, these values are likely to be limited in accuracy & become obsolete very quickly.

Evaluation

For a 5000 seating capacity, it is difficult to surface all the different elasticities in accordance to where the seats are located. Hence it's difficult to allocate the correct amount of seats to different sub-markets, unless surveys are done by the event organizer prior to staging the concert so as to gauge how popular the artist is in the country.

A clear example of the difficulties faced by the firm is the emergence of black markets which involves the reselling of tickets to popular concerts at very high prices. These black markets emerge when prices are fixed at below market equilibrium, resulting in a shortage. This means the organizer could have priced the tickets higher.

Anti-Thesis: Collection of cost information

Difficulties in determining costs

- Under profit-maximization in economics theory, the organizer should consider the sum of both explicit & implicit costs.
- Explicit costs require outlays of money and examples are paycheck to the band and production crew, installation of the sound system and renting the venue.
- Implicit costs are the opportunity costs of resources the organizer makes available for production with no direct cash outlays and examples include the value of his labor and the interest that could be earned were the owners' assets not tied up in the business.
- However, in reality, the concert organizer is only concerned with explicit costs because it is easier to compute.
- Hence the concert organizer would not be able to maximise profit except by chance because he would not be aware of its true marginal cost schedule.
- In short, implicit costs are hard to compute, hence actual cost conditions are also difficult to estimate.

Most of the cost is fixed. The cost of selling an additional ticket is minimal and close to zero. Hence variable cost is minimal and can be considered to be zero. Since **maximize profits is where $MR=MC$ and in this case 0, the organizer should set price where the TR is maximum and in this case selling all the 5000 tickets.**

Evaluative comment:

In reality, concert organisers are interested only in explicit costs not economic costs, which means that they are interested only in measuring accounting profits. Thus, it is difficult to measure normal, supernormal profits or subnormal profits in reality.

Conclusion



From the sellers perspective the key information that is required for pricing tickets profitably is knowledge of consumers' **WILLINGNESS TO PAY** for the concert. Theoretically, ticket sellers must be able to derive both the demand curve as well as the price elasticity of demand for concert tickets. If ticket price is set at level that is above consumers their willingness to pay, organisers may end up with unsold tickets and losses. However, the problem is such information is often not easy to obtain accurately in a world of imperfect information.