**Question 1**

***Indian Railways is an Indian state-owned railway company, in 2012, India's Railway Minister Dinesh Trivedi has announced a price hike in railway fares which would have a negative impact on most passengers.***

***http://www.bbc.co.uk, 14th March 2012***

**Contrast the features of perfect competition with those of monopoly. [10]**

Introduction

State that the perfect competition differs from the monopoly as there are perfect market information and mobility of resource in the perfect market competition while there are imperfect market information and immobility of resources. These two forms of market structures will differ in term of the structure, behaviours and performance

Main Body

**1. Explain how the types of market structure will differ in term of the structure or characteristics**

In the PC market, there are many firms and these firms produce goods which are homogeneous while there is only one firm in the monopoly market. Firms in the PC market has ease of entry and exit while there are strong barriers to entry in the monopoly market

**2. Explain how the types of market structure will differ in term of the behaviours of the firm**

The firms in the PC market abide to the price set by the industry but it will determine the production level based on profit maximisation. As such, its MR and AR are perfectly-elastic as there is perfect information on the price level which will influence the value of AR and MR. As for the monopoly, the MR and AR are downward sloping, given the presence of market power which will allow the monopoly power to conduct price setting. As such, the presence of market power will create a price-inelastic demand which means that it can set price at a higher level.

Firms in the PC and monopoly markets can make subnormal profit, normal profit and supernormal profit in the short run but firms in the PC market will only make normal profit while the monopoly can make normal and supernormal profit in the long run. Both firms do not engage in price competition as there is perfect market information and homogeneous product while the monopoly does not need to set pricing as it has complete market power to control the market. However, the monopoly will conduct non-price competition such as the creation of barriers to entry to block contestable market while firms in the PC market need not conduct non-price competition as the product is homogeneous, ignoring the need for product differentiation.

The firms in the PC market will be able to attain production and allocative efficiency in the short run and long run due to perfect market information, enabling the firm to adjust production equilibrium to social equilibrium. However, it may not be able to reap dynamic efficiency and has very little capacity to reap economies of scale due to the small scale of production. On the other hand, the monopoly may not achieve allocative efficiency in the short run since the firm’s market equilibrium at profit-maximisation level, where MC=MR, is not equal to social equilibrium at social optimisation, where P=MC. Since the monopoly’s MR and AR are downward-sloping due to the presence of market power, the monopoly is unable to achieve production efficiency as it is producing at excess capacity in the short run when it produces at profit-maximising level. However, the monopoly will attain production efficiency in the long run, given that production level of the respective level is lowest. Nonetheless, the monopoly is able to have lower average cost, since it has greater capacity for economies of scale.

Conclusion

In conclusion, it can be observed that the characteristics of the imperfect market and perfect market and the size of the firm in the two types of market structure will have strong influence in the behaviours and performance of the firm in these markets.

**(b) Discuss the view that there should be more regulation of monopolies in an economy. [15] (TPJC Q4)**

Introduction

The regulation of the monopoly is needed when there are adverse impacts on the economy but the advantages of the monopoly may defuse the rationale to regulate monopoly. When the monopoly does act in the interest of the society, there is no need for the government to regulate the monopoly.

Main Body

**1. Explain why the government needs to regulate the monopoly in the interest of the economy**

* Prevent consumer exploitation – high degree of market power – price-setting behaviour – P>MC, higher price / lower output 🡪↓consumer surplus
* Regulate price discrimination in the interest of the society – MRT and Bus fares
* Ensure that the natural monopoly acts in the interest of the society – affordability to lower income group / assurance of the provision of services
* Prevent the firm experiencing X-inefficiency / improve the innovation

**2. Explain why the government need not regulate the monopoly because there are benefits for the monopoly to exist**

* Advantages of large firm
* Can reap EOS
* Achieve optimal rationalization of capacity of production
* Benefits of MES at very large output

**3. Explain the circumstances that government regulation may not be needed**

* Natural monopoly is a state enterprise – direct provision – produce at MC pricing 🡪 maximisation of net social benefit gain
* Use of public fund for the development of the firm – accountable to the state only

Conclusion

**Essay Question 2**

**Singapore Airlines, caught between the rapid emergence of airlines from the Gulf countries (for example, Emirates) and low cost Asian rivals, is attempting to revive growth by cutting prices.**

**Source: CNBC**

**(a) Using appropriate examples, explain the various internal economies of scale enjoyed by an airline company. [10]**

Approach

* + Explain what it means for an airline company to expand.
  + Followed by this, explain 3 sources of IEOS, using examples, which can result from such an expansion.
  + Explain using a diagram how LRAC is lowered when there is such an expansion.

Introduction

Internal economies of scale (IEOS) are the cost savings a firm experience as it increases its scale of production/operation. Thus, as the scale of production/operation increases, the long run average cost will fall (as the total cost is spread over a larger range of production/operation).

Main Body

There are different types of IEOS that an airline company can enjoy when they expand their scale of operation. Expansion of scale of operation in this case may refer to the number of passengers they carry, the number of flights they operate or even the number of airports they serve/fly to.

There are IEOS from organizational administrative economies. As an airline company grows its operation, there is greater flexibility to employ specialists to be in-charge of customer service management, sales and advertisement, human resource management, training of the crew, finance etc. This will help the airline company to achieve higher managerial efficiency and lower average cost of operation.

There are technical IEOS from spreading overheads and indivisibilities. As an airline embarks on R&D for more fuel efficient planes or better quality of in-flight experience, they will incur significantly large costs of embarking on such investments. Similarly, for each airline company the fleet of aircraft constitutes a huge fixed cost. An airline company also has to incur high start-up cost in terms of the technology required, routes to be chosen and setting up of the facilities (especially in terms of logistics) at different airports. Thus, all these investments in fixed costs tend to be viable and cost efficient only with a large scale of operation (such that the long run average cost is lowered with increase in scale of operation).

There are financial IEOS that can be enjoyed by an airline company. An airline company may have to obtain funds from financial institutions to carry out their operations and research projects. The larger the scale of operation (for example, SIA or Emirates which not only have aircrafts with large (passenger/seat) capacity but also serves many airports), the lower is the interest rate on loans. This is because the scale of operation directly affects their credit worthiness as a borrower (less risk of default). Thus, a lower interest rate will help to lower the average cost of the firm. Similarly, the administering of the interest rate can be spread over a large scale of output which will lower long run average costs.

An airline company may enjoy commercial EOS by enjoying cost cutting form advertisement to attract many tourists and gain market share both in the domestic market as well as the international market. As the advertisement cost can be considered to be a fixed cost, the average cost of advertising will be lower for SIA which has large scale of operation over long run.

Diagram

Description automatically generated

As seen from the diagram, the IEOS enjoyed by a firm can be shown using a LRAC curve. As the airline company expands/has a higher scale of operation from Q0 to Q1, the long run average cost falls from C0 to C1.

Conclusion

Thus, an airline company will enjoy different IEOS from large scale of operation and move down along the LRAC. However, the assumption is that the company will choose to operate on the LRAC at any given level of operation. It is important to note that as the airline company keeps expanding their scale, they may incur higher long run average cost after expanding beyond a certain scale of operation (i.e. internal diseconomies of scale).

**Essay Question 3**

**(a) In what circumstances may price discrimination be beneficial to consumers? [10]**

Introduction

* Define price discrimination
  + Price discrimination is defined as the selling of the same good at different prices for reasons not associated with differences in cost of production.
* Beneficial to consumers🡪increase satisfaction level:

(i) price and non-price

(ii) quality

(iii) variety aspects

Main Body

**1) Explain any 2 circumstances** 🡪 **with economic framework and diagram/s**

**Case 1**

* Continue production even if the company is having subnormal profit:
  + Perfect PD – continue to production under perfect PD

Price discrimination can be an advantage to the community in those situations where an essential good like medical services is not commercially viable if a single price were to be charged.

Diagram

Description automatically generated

**Figure 1: First Degree Price Discrimination**

As seen from Figure 1, a doctor may not be able to supply his medical services to a rural town if he were to charge a single price because the demand curve lies entirely below his average cost curve. However, if the doctor were to engage in 1st degree price discrimination and charge each patient according his maximum ability to pay.

* Profit-maximising output = Q0 where MC = MR1st degree PD
* TR with 1st degree price discrimination = area under dd curve = O*ad*Q0
* TC = AC × Q = OQ0*c*C0
* As long as area *a*C0*b* ≥ area *bcd*, the firm is able to at least break even. The market is able to supply the good even in the absence of government intervention.

**Case 2**

* Produce more output in the market, and consumers with price elastic demand can purchase the good or service at a lower price level.

* 3rd degree 🡪 higher consumer surpluses for consumers with price elastic demand

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MRA+B

MRB

DDA

MRA

DDB

PA

PB

QA

QB

QA+B

MC

a) Market A with relatively inelastic demand

b) Market B with relatively elastic demand

c) Combined market

Q

Q

Q

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**Figure 2: Charging different prices in different markets**

As seen from Figure 2c, the market marginal revenue curve here is the summation of the marginal revenue curves in Figure 2a and Figure 2b horizontally at each and every price level.

To determine the total output, the monopolist will produce that level of output where the MC equals the combined MR (MRA+B) in Figure 2c. Having decided on the total output, the firm will now have to consider how to divide the output between the 2 markets. The monopolist maximises profits by equating the firm's MC with individual MR curves in the 2 markets, i.e. MC = MRA = MRB. If the MR in the 2 markets are not the same, the monopolist could increase profits by transferring output from the market where MR is lower to the market where MR is higher. Once the output in the individual markets have been determined, the price to set is simply read off the demand curve for each market – the highest price that consumers in each market is willing and able to pay for the allocated output.

The impact of 3rd degree price discrimination varies across the different groups of consumers. Those consumers with a more price inelastic demand are charged a higher price than those with a more price elastic demand. Those paying a higher price might feel this system of pricing is unfair. However, those charged a lower price may thereby be able to obtain a good or service they previously could not if a single price was charged by the monopolist. 3rd degree price discrimination is likely to increase output and make the good or service available to more consumers.

Conclusion

The extent to which price discrimination will be in consumer’s interest depends on the nature of the industry, the type of product sold, degree of openness to foreign competition, degree of government regulation/clamp down on abuse of market power, etc.

**Essay Question 4**

**(b) Assess the extent to which price discrimination is the main profit generator for firms in different market structures. [15]**

Introduction

* Profit maximisation condition
* Different Market structures
* Why PD can only be practiced in imperfect competition

Main Body

**Thesis – PD is the main profit generator for firms**

* Diagram is not required, refer to Figure 1 to 3 in question part (a).
* Explain why profit is higher than a firm charging a single price
* Exemplification 🡪 from any imperfect market structure

**Anti-Thesis – PD may not be the main profit generator for firms in different market structures.**

Explain any 2 cases:

* Firms in oligopoly 🡪 **collusion**. Need not charged lower prices for markets with PED>1
* Explain either explicit collusion – cartels or tacit collusion - price leadership
* MPC 🡪 product differentiation 🡪 niche market to earn higher profit level

Product differentiation can increase a firm’s profits in three ways:

* + - increase the demand for it its goods directly
    - demand relatively more price inelastic. Differentiating its product from its competitors’ gives the firm more pricing options (i.e. greater market power). For example, successful product differentiation allows firms to charge higher prices and earn higher profit. Recall that when demand is price inelastic, an increase in price brings about a smaller than proportionate reduction in quantity demanded which then contributes to higher total revenue. This in turn helps the firms to avoid cut-throat price competition which is crucial during times of rising cost of production.
    - reduce the degree of substitutability between its goods and its competitors’ goods (cross elasticity of demand for the good is reduced). This in turn reduces its susceptibility to competitors’ price cuts.
* Explain any other strategies, such as advertising, predatory pricing, limit pricing that lead to higher profit levels

Conclusion

* Considered the conditions and characteristics of the market structures/ industries
* Any form of government intervention in a particular economy

**Essay Question 5**

**“Oligopoly is the best market structure that is able to achieve efficiency, equity and innovation.” [25]**

Synopsis

Essay should include a comparison of the different market structures in the achievement of efficiency, equity and innovation and conclude which is the best market structure for each of the different features. It should be known that the no market structure type is able to achieve all 3 of efficiency, equity and innovation.

Introduction

Market structure is the interconnectedness of characteristics of a market such as the number and relative strength of consumers and producers, the degree and forms of competition, the extent of product differentiation and the ease of entry into and exit from the market. There are basically 4 types of market structures, namely, perfect competition, monopolistic competition, oligopoly and monopoly. Each type is unique and possess characteristics that are distinct and unique.

Main Body

Provide definition of market structure, oligopoly, efficiency particularly allocative efficiency equity, innovation

State the characteristics of different market structures.

**To achieve Efficiency:**

1. Define efficiency -

* **Productive efficiency** - any point along the LAC - as such all market structure types are able to achieve this form of efficiency in the LR. However in the SR only PC can achieve this.
* **Allocative efficiency** - achieved when P=MC - all are not able to achieve this except for the PC firm and the firms who are welfare maximising, diagrams
* The oligopolist thus would not be the best producer in this area of efficiency unless he is a welfare maximiser.
* The extent of ability to set P>MC lowered for the MC firm as compared to Oligopoly who has a higher degree of allocative inefficiency

**To achieve Equity:**

2. Define equity - relations and perceptions of fairness in distribution of resources, providing for the needs of the lower income group

* PC markets with their characteristics of perfect knowledge, no barriers to entry, identical product and the perfectly elastic demand curve is able to achieve equity of profits in the LR through normal profits earned by their firms.
* All firms in the SR are able to earn supernormal, normal or subnormal profits depending on their ability to manage their costs. Equity of profits can thus be achieved and enjoyed in the LR only by PC and MC markets.
* Equity is also seen in third degree price discrimination when the market with PED>1 (lower income group) is charged lesser. Or government regulation for provision of class C wards in hospitals.
* Cross subsidization by the richer consumers for the poorer consumers.

**To achieve Innovation:**

3. Define innovation - is the application of new solutions that meet new requirements, inarticulate needs, or existing market needs. This is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governments and society.

* Ability to innovate - the larger the firm size, the greater the ability and capacity of the firm to engage in R&D that will lead to the firms' effectiveness and efficiency to innovate. Thus the oligopolist would be most innovative as compared to the MC or monopolist.
* Ability of the oligopoly to earn supernormal profits gives incentive for them to undertake R&D and innovate.
* Oligopolies have the following merits - ability to gain EOS, greater productivity/output, price rigidity and non-price competition - these encourage innovation so as to ensure its profitability and market share. Due to the small number of firms in the industry, R&D and innovation is necessary to keep abreast and capture new markets. High BTE allows innovative actions to have more long lasting effects on profits and market share. Unlike those of MC where BTE are low, innovations could be easily copied and improved upon, rendering expenditures on R&D not profitable and ineffective.

Oligopolies have flaws thus is not the best structure that possess all features of efficiency, equity and innovation in comparison with the other market structural types - it is not allocative efficiency due to market imperfections, presence of market power results in oligopolist's ability to transfer consumers' surplus to producers' surplus thus worsening equity.

**Comparison with PC**

* **Efficiency** - PC firms are allocative and productive efficient due to the perfectly elastic demand curve of the PC firm where P=MC when the firm profit maximises.
* **Equity** - PC firm promotes equity as they all earn normal profits in the LR due to no BTE
* **Innovation** - PC firms lack ability and incentive to engage in innovation and R&D due to characteristic of perfect knowledge

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| --- | --- | --- | --- |
|  | **Allocative Efficiency (P=MC, consumer welfare maximized, no DWL)** | **Equity (Fairness in distribution of resources, measured by LR normal profits)** | **Innovation (Dynamic Efficiency)** |
| **Perfect Competition** | Present as P=MC no DWL | Equity present  LR Normal profits | No innovation  No funds available, homogenous product |
| **Monopoly** | Absent as P>MC DWL present | No equity  LR Supernormal profits  Exploitation possible especially with PD | Innovation possible  Funds available but no incentive as only seller in market |
| **Oligopoly** | Absent as P>MC  DWL present | No Equity  LR Supernormal profits | Innovation present  Incentive to innovate especially if product is differentiated and funds are available |
| **Monopolistic Competition** | Absent as P>MC  DWL present but smaller | Equity likely  LR Normal profits, some exploitation possible | Some innovation  Incentive to innovate to compete & product differentiation present but no funds available |

\*AII firms have productive efficiency as they produce on a point on their LRAC in the LR, unless they are complacent and there is x-inefficiency (like in monopoly or some oligopoly)

Conclusion

In sum, there is no best market structure that possesses all criteria - criteria statement and focus is thus important so as to help decide which should be the best type of market structure for that particular criteria type.