

Models of Imperfect Competition

Monopolistic Competition
Oligopoly

Models of Imperfect Competition

- So far, we have discussed two forms of market competition that are difficult to observe in practice
 - Perfect Competition
 - Monopoly
- Now, we wish to address forms of market competition that lie “in-between” the two listed above.
- These two forms of “Imperfect Competition” are:
 - Monopolistic Competition
 - Oligopoly

Imperfect Competition

- **Imperfect Competition** exists when more than one seller competes for sales with other sellers of similar products, each of which has some control over price.
 - Firms have some degree of market power
 - Firms can differentiate their product, either by quality or brand
 - Firms can control price via product differentiation or via gaining large market shares

Monopolistic Competition Model

- **Monopolistic Competition** exists when many sellers compete to sell a differentiated product in a market into which the entry of new sellers is possible.
- It is similar to monopoly in that firms have some power to control the price of their product in the market
- It is similar to perfect competition in that free entry and exit prevail and each product is sold by many firms

Monopolistic Competition Assumptions

- 1) There are a relatively large number of firms, each with small share of the market demand with products that are similar, but not identical
- 2) Each firm's product is not a perfect substitute for a competitor's product
- 3) Firms in the market do not consider the reaction of their rivals when choosing product prices
- 4) There exists relative freedom of entry and exit by new firms into the market
- 5) Neither the opportunity nor the incentive exists for firms to cooperate in the market to decrease competition

Demand and Profit Max in Monopolistic Competition

- The demand curve for monopolistically competitive firms is downward sloping similar to that of a monopolist
 - This is because while you face competition, you also produce a differentiated product, so while raising your price may lead to a loss in sales, lowering price will attract new customers
- Firms set $MR=MC$ to maximize profits
- Positive profits can exist in SR, but probably will not remain in LR

LR Equilibrium in Monopolistic Competition

- Freedom of entry and exit in these industries leads to a downward shift of the firm's D and MR curves, decreasing its market share
- In LR, D and MR shift downward to the point where the price you can charge at the optimal output=AC --- normal profit condition
- As a result, the LR equilibrium is where the demand curve is tangent to the AC curve
- Thus, in LR, firm does not produce at the minimum of the AC curve – excess capacity exists

Product Development in Monopolistic Competition

- Product Differentiation is at the core of this market model
- Firms are more likely to compete by innovating and improving its products than they are by cutting prices

Advertising

- Firms face selling costs – costs incurred by firms to influence the sale of its products – these costs will increase average costs
- Free entry ensures that advertising does not ensure LR profits
- Advertising also affects product demand
- With advertising, each firm produces more than it would otherwise, and reduces excess capacity – prices do not fall because of the selling costs

Monopolistic Competition Conclusion

- Firms in this market type can set price above MC
- Price cannot exceed AC in the long run because of freedom of entry
- Firms operate in the LR at an AC that is above the minimum – excess capacity exists
- Heavy costs for product development and advertising exist – advertising contributes to higher product prices. However, product differentiation benefits can offset these costs.

Oligopoly

- **Oligopoly** is a market structure in which a few sellers dominate the sales of a product and entry of new sellers is difficult or impossible.
- The product can be differentiated or standardized.
- Ex.
 - Aluminum – Alcoa, Reynolds, Kaiser
 - Automobiles, Cigarettes, chewing gum, beer, breakfast cereals – oligopolistic markets with differentiated products

Oligopoly

- **Market Characteristics**
 - Only a few firms supply the entire market with a product that can be differentiated or standardized.
 - At least some of the firms have large market shares and can influence product price.
 - Firms in the market are aware of their interdependence and always consider rivals reactions when setting prices, output goals and advertising budgets.
 - Oligopolies are protected via barriers to entry similar to those of natural monopolies – inherent cost or technological advantages associated with large-scale production.
 - Small firms often merge or are bought-out to combine assets and lower average costs.

Price Wars

- Price policy of a given firm depends in part on how that firm believes its rivals will react to its price change.
- Price war – continual price cutting by rival firms in a market – possible consequence of an oligopolistic rivalry. Prices can be driven down to minimum of the AC curve – the same result as in perfect competition.

Contestable Markets

- Contestable Market – market in which entry of sellers is easy and exit is not very costly.
- In such a market, high profits are a signal for new firms to enter – sellers can enter and leave without incurring any high transaction cost.
- Ex. Unregulated air travel market, Free Trade
- In such markets, oligopolies know that using their monopoly power to raise price benefits them little.

Collusion and Cartels

- The possibility of price wars provides an incentive for firms to collude and keep prices high. Such collusion is illegal in most countries
Ex – OPEC, Central Selling Organization (DeBeers)
- A **cartel** is a group of firms that acts together to coordinate output decisions and control prices as if they were a single monopoly.

Cartel Formation

- Steps necessary in forming a cartel:
 - 1) Make sure that a barrier to entry exists that prevents other firms from entering market
 - 2) Organize a meeting of firms to establish target output level
 - 3) Set quotas for each cartel member.
 - 4) Make sure that no firm exceeds its quota. Set penalties for those that do.

Other Oligopoly Models

- Since behavior in oligopoly models depends upon what the firm believes its competitors will do when it changes price, there are many different outcomes in these models. Some of these different outcomes can be grouped
 - Price leadership models
 - Price-rigidity models
 - Entry-limit pricing

Price Leadership

- One dominant firm in an industry sets the its price to maximize its own profits - other firms follow its lead by setting exactly the same price
- This model may result from the fact that smaller firms fear retaliation from the dominant firm.If the larger firm can produce at a lower AC, the smaller firms will not undercut the large firm – they would lose the price war. They also may see the larger firm as having better market info.
- Ex – Automobiles (GM) in the 1960s; Banking and the prime rate

Price Rigidity

- In some markets, prices change little in response to demand or MC.
- In oligopolistic markets, price rigidity exists when firms believe that their rivals won't match a price increase but will match a price decrease.
- The result is that the demand curve for the firm's product is "kinked"
- Increases in MC of production may not cause product price increases.

Entry-limit Pricing

- Firms in oligopolistic markets may set prices that make it unprofitable for potential entrants to actually enter.
- To do this, firms do not set a price that maximizes their profits, but instead set the price below the minimum possible average cost of new entrants. They presume that the entrants will take the existing price in the market
- Here, the threat of entry keeps firms from exercising their monopoly power
