

# FOUNDATION COURSE IN MANAGERIAL ECONOMICS

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Lecture 30: Monopolistic Competition

# Questions that we address are:

- What is monopolistic competition? How is it different from monopoly and competition?
- What kind of demand curve do firms face and how do they decide price and quantity?
- How is welfare affected? Can it be improved by government intervention?
- What is the role of advertising in this type of market structure?

# Monopolistic competition

- Monopolistically competitive market structure lies somewhere between the two extremes of perfect competition and monopoly
- Like competition, there are many sellers and buyers
- Entry and exit are easy
- However, products are differentiated but substitutable to some extent
- Like monopoly firms have some amount of market power over its buyers, though not absolute

# Product differentiation

- Unlike monopoly the product while not unique, is differentiated from other substitutes in the market (e.g. toothpaste, soap, movies etc)
- Differentiation can be done through:
  1. Actual differences in the products
  2. Differences in marketing or celebrity endorsements
  3. Attractive packaging
  4. 2. and 3. show that perfect information does not exist as in competition
  5. Location

# Demand curve

- Unlike a competitive firm, a monopolistically competitive firm faces a negatively sloping demand curve
- The firm has some control over its price
- The demand curve is relatively flat or elastic
- Buyers are sensitive to price changes

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Lecture 31: Monopolistic Competition – Choosing  $P$  and  $Q$

# Determining P and Q

- Like in all market structures, a firm in monopolistic competition maximizes profit at  $MR=MC$
- As in monopoly, the firm faces a negatively sloping demand curve and hence,  $MR < P$
- Firm chooses to produce that level of Q where  $MR=MC$
- The P is determined along the demand curve for the profit maximizing level of Q

# Profit and loss

- Profit or loss depends on the ATC of the firm at  $Q$
- If  $P > ATC$ , the firm's economic profit  $> 0$
- If  $P < ATC$ , the firm's economic profit  $< 0$ , or the firm is making loss
- If  $P = ATC$ , the firm's economic profit  $= 0$
- In the short run, the firm minimizes its loss
- In the long run, the firm will exit the market if it is making a loss
- If some of the firms are making a positive economic profit, new firms will enter the market



# Long run outcome

- As new firms enter the market in the long run, consumers have more choices in the market.
- Hence some of them shift to other firms
- The demand curve facing every firm shifts inwards and prices and profits fall for everyone
- In the long run all firms end up operating at that level of  $Q$  where  $P=ATC$
- Hence in the long run, economic profit reduces to zero for all existing firms
- For some firms demand curve may shift inwards so much that they no longer cover their economic costs and hence may have to leave the market

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Lecture 32: Monopolistic Competition – Efficiency and Welfare implications

# Long run outcome and Efficiency

- In the long run, entry and exit happens till  $ATC=P$  for all firms and hence economic profit = 0
- But, unlike perfect competition,  $P$  is not equal to minimum  $ATC$  in the long run
- Hence,  $P=ATC>MC$ , i.e. the firm continues to charge a markup of price over marginal cost in the long run

# Monopolistic competition is less efficient than perfect competition

- The monopolistic competitor operates at excess capacity
- It operates at downward sloping part of the cost curve and hence produces less than cost minimizing output
- Production does not happen at minimum cost as in perfect competition
- Since  $P > MC$  market quantity is less than socially efficient quantity
- However, government cannot intervene to reduce prices or increase quantity because the firms are already operating a zero economic profit

# Welfare implications

- There are broadly two welfare implications of monopolistic competitive market outcome:
  1. **The product variety externality of consumers:** Introduction of new products and new entrants in the market raises surplus for consumers
  2. **The business stealing externality faced by producers :** When new firms enter the market, existing firms may lose customers, face losses and sometimes may have to leave the market
- The net result of the above are hard to measure and hence there is not much that the policy makers can do

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Lecture 33: Monopolistic Competition – Advertising

# Role of advertising in different market structures

- Advertising helps in shifting the demand curve to the right
- But advertising also increases costs of firms
- In competition and monopoly industry level advertising may be done to shift the overall demand curve of the market to the right
- But the competitive firm will not engage in advertising since it is a price taker and would not like to increase its cost
- In monopolistic competition, firm level advertising will be done to differentiate products
- So also in the case of oligopoly with differentiated product

# Social value of advertising

- Criticisms against advertising:
  - Advertising increases cost for everyone
  - Advertising have the potential to misrepresent facts and influence people's tastes and choices
  - Advertising is anti competitive as it creates perception of product differentials thus increasing markup over cost
  - People end up paying higher prices for differences which are just notional



# Social value of advertising

- In defence of advertising:
  - Provides information to buyers
  - Helps buyers make more informed decision, thus choosing the best value for money available in the market
  - Information gap is reduced for all buyers, hence advertising actually promotes competition

# Examples of impact of advertising

- Case: Benham, 1972, Journal of Law and Economics
- Benham found that market prices were lower in states that allowed price advertising than states where advertising was prohibited
- Advertising as a signal of quality
  - Firm's willingness to spend on ads is a signal to the consumers that it is confident about repeat buyers
  - Expensive ads indicate that the quality of the product must be good

# Economics of Brand names

- Critics of brand names:
  - Brand names may create notional differences about products in minds of consumers
  - Consumer's willingness to pay higher for brand names is thus irrational
  - Removal of government protection of trademarks may actually reduce the markup over cost

# Economics of Brand names

- In defence of brand names:
  - Brand names provide information and assurance about quality to consumers
  - Companies have incentive to create/maintain brand names and hence they try to improve on quality to protect reputation of the brand

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Lecture 34: Oligopoly

# Questions we address here:

- What is an oligopoly?
- What does the market outcome look like in oligopoly?
- Can the few firms in a oligopoly cooperate and behave like a monopoly?
- How do competition laws prevent anti competitive behaviour?

# Oligopoly

- Few firms
- Entry and exit is relatively difficult
- Each big enough to influence price
- But unlike monopoly, firms have to worry about their competitors

# How few is few?

- Measured by market concentration
- **Concentration ratio**: the percentage of a market's total output produced by its four largest firms
- Rule of thumb:
  - Low concentration- 0% to 50% (perfect competition to oligopoly)
  - Medium concentration – 50% to 80% (likely to be an oligopoly)
  - High concentration – 80% to 100% (Oligopoly to monopoly)
- One firm Concentration Ratio of 100% implies a monopoly



# Market outcome in Oligopoly

- Firms objective is profit maximization
- Yet, there can be several market outcomes of  $P$  and  $Q$
- This is because a firm's decision about  $P$  and  $Q$  can affect other firm's choice of their  $P$  and  $Q$ .
- Hence all firms take this fact into consideration and choose their  $P$  and  $Q$  accordingly
- **Game Theory** helps us to understand a firm's strategy in such a situation

# From our understanding of market models so far...

- Potential for profit would be high as firms can fix a price higher than perfect competition or monopolistic competition since there are only few firms in the industry
- Firms will be able to maintain Profit  $> 0$  in the long run as barriers to entry is high
- Yet, firms keep watch on their rival's actions - like raising (or lowering) price or output - and plan their strategy accordingly

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Lecture 35: Oligopoly – Determining P and Q for a Oligopoly firm

# Determining P and Q for an oligopolistic firm

- “there is no theory of oligopoly in the sense that there is a theory of perfect competition or of monopoly. There is no unique general solution but merely many different behavioral models, each of which reaches a different solution.” – Furguson and Maurice
- Broadly, there are two options for the firms – i) cooperate and collude and ii) not cooperate
- When they cooperate the firms can decide to behave like a monopoly and maximize joint profit and a single market price

# What does the demand curve look like?

- Firms face negatively sloping demand curve, but,
- It is a kinked demand curve
- A flatter demand curve above the kink and a steeper demand curve below the kink

# When they do not cooperate and act independently

- Sweezy's kinked demand curve model
- Each firm faces a kinked demand curve and a broken MR curve
- $MR=MC$  principle determines price and output in general
- But there is a range of sticky prices
- Hence  $P$  and  $Q$  are relatively stable in this type of market

# Limitations of this model

- The model explains more about stickiness of prices and not price itself
- Competitors may also follow price rise instead of only price cut
- Does not address situations where firms compete on basis of product differentiation, advertising etc, thus pushing their own demand curve outwards