

# FOUNDATION COURSE IN MANAGERIAL ECONOMICS

---

Dr Barnali Nag  
IIT Kharagpur

Lecture 25: Monopoly

## We ask the following questions:

- How does a firm become a monopoly?
- What is the relation between marginal revenue and price for a monopoly?
- How do price and quantity produced get determined in a monopoly market?
- How efficient is the monopoly market outcome?
- What role can the government play in a monopoly market?
- What is price discrimination?

# Monopoly

- Single seller
- Very high barrier to entry
- Substitutes not available
- Price determined by the seller – price maker

# How does a firm become a monopoly?

- The firm is major holder of a key resource
- Monopoly by law – patents, copyright laws and public sector monopolies
- **Natural monopoly** - It makes sense for a single firm to produce for the entire market to utilize economies of scale and bring down price for the buyer

# FOUNDATION COURSE IN MANAGERIAL ECONOMICS

---

Dr Barnali Nag  
IIT Kharagpur

Lecture 26: Monopoly – Determining P and Q

## The demand curve, MR and P for a monopoly

- In contrast to a competitive firm, the monopoly faces the market demand curve
- So the demand curve facing a monopoly is a negatively sloping curve
- Hence, like a competitive firm,  $P=AR$  for a monopoly
- Unlike a competitive firm,  $P>MR$  for a monopoly

# More on the monopolist's MR

- Producing an additional unit of output has two effects:
  - Output effect
  - Price effect
- To sell a larger unit, monopolist moves down demand curve and reduces price
- So,  $MR < P$
- MR can even be negative

*Assumption - the monopolist can charge one price to all its customers – it does not discriminate*

# Choice of P and Q: Profit maximization

- Profit maximization condition is same here i.e.  $MR = MC$
- Monopolist chooses that level of Q at which  $MR = MC$
- P is determined from the consumer's willingness to pay for that level of Q
- P is determined from along the demand curve
- A monopolist can have a positive, zero or negative economic profit



# FOUNDATION COURSE IN MANAGERIAL ECONOMICS

---

Dr Barnali Nag  
IIT Kharagpur

Lecture 27: Monopoly: Supply and Efficiency

# Supply Curve of Monopoly

- Unlike a perfectly competitive firm, there is no supply curve for monopoly
- $Q$  for a monopoly is not determined by  $P$ , but jointly by  $MR$ ,  $MC$  and the demand curve

# Efficiency loss in case of a Monopoly

- Unlike in a competitive market where Productive and Allocative efficiency are maximized, there is welfare loss in a Monopoly market
- Productive efficiency compromised because  $Q$  does not minimize average cost
- Allocative efficiency loss because  $P > MC$
- Deadweight loss is created in case of a monopoly outcome

# FOUNDATION COURSE IN MANAGERIAL ECONOMICS

---

Dr Barnali Nag  
IIT Kharagpur

Lecture 28: Price Discrimination

# Price discrimination

- Price discrimination means charging different prices for the same product to different consumers depending on their willingness to pay
- Perfect price discrimination happens when the monopolist knows each and every consumer's willingness to pay and is able to charge that to each consumer.
- Entire consumer surplus is wiped out by the monopolist in this case, but,
- Like perfect competition, total welfare in the market is maximized in the case of the price discriminating monopolist
- There is no Deadweight Loss

# Price discrimination in real world

- Perfect price discrimination is not possible in the real world, because the buyers do not reveal their true WTP
- However, firms can categorize buyer on the basis of some observable traits and price discriminate

# Examples

- Intertemporal price discrimination
  - different prices of movie tickets for different show timings
  - airline ticket discounts to weekend travellers
  - high priced hard covers editions are launched first and low priced paperback editions are released much later
- Discriminating for price sensitive buyers
  - coupons and discounts
- Peak load pricing
  - Price of electricity consumption at different times of the day. Capacity constraint may cost MC to be high at these times

# FOUNDATION COURSE IN MANAGERIAL ECONOMICS

---

Dr Barnali Nag  
IIT Kharagpur

Lecture 29: Regulation and Public Policy



# Public Policy and Regulation

- The monopoly outcome is less desirable than the competitive outcome since  $P_M > P_{PC}$  and the  $Q_M < Q_{PC}$
- Hence, the government tries to “maintain market competition by regulating anti-competitive conduct” by firms
- India has the Competition Act (2002) replacing the old MRTP Act (1969)

# Regulation

- The government sometimes may regulate the prices that the monopoly could charge for the welfare of the consumers
- So the government may pressurize the monopoly to produce at the competitive level of output and charge a competitive price
- For natural monopolies,  $MC < ATC$  so  $P$  cannot be equal to  $MC$
- So instead of  $MC$  pricing, average cost pricing is followed by the regulator or the government subsidizes for the losses

# Public Ownership of Monopolies

- Example – the postal service or railways
- Not always efficient as absence of profit motive can result in inefficient production choices