

Economics 101 – Section 5

Lecture #21 – April 6, 2004

Monopoly – Chapter 9
Price discrimination

Chapter 10
Monopolistic Competition
Oligopoly
Game Theory

Figure 4
Comparing Monopoly and Perfect Competition

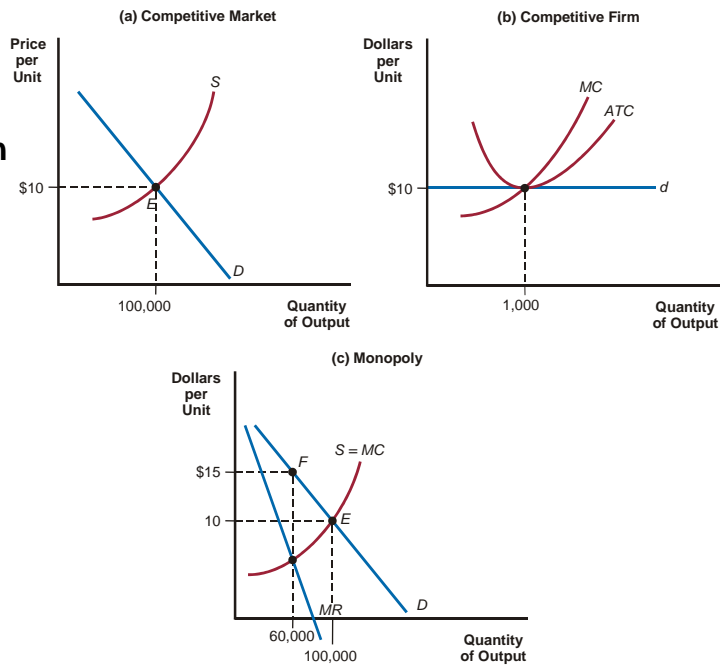
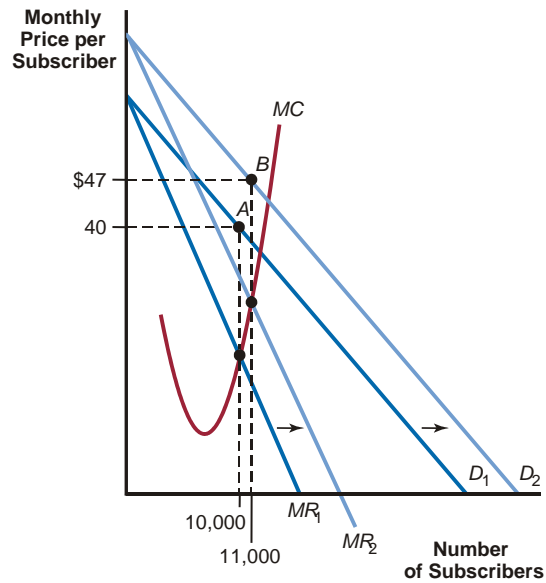


Figure 5 A Change in Demand



Monopoly

- If there is an increase in demand, the monopolist will
 - Charge a higher price, produce more quantity
 - Earn higher profit
- If there is a decrease in demand, the monopolist will
 - Charge a lower price and reduce output
 - Earn smaller profit

Monopoly – Price discrimination

- Price discrimination
 - Charging different people different prices
- If a monopolist can charge different prices to different groups of people they would generally like to do so.
 - Why?
 - By distinguishing between the low and high demand individuals they are better able to charge a higher price to those individuals with higher demand

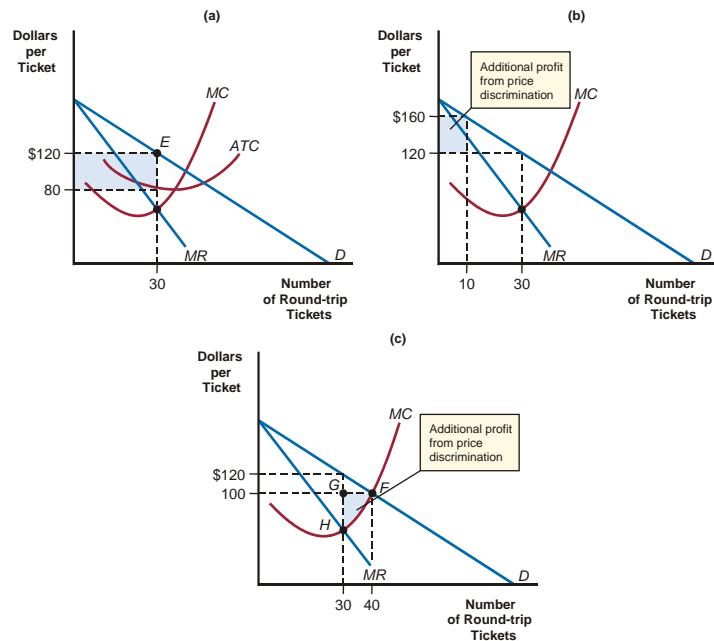
Monopoly – Price discrimination

- High demand groups are willing to pay more for the same quantity than a low demand group
- The monopolist will always like to price differently for these two groups since
- Also, the option to price discriminate should never make a monopolist worse off
 - More choice is always better for a firm

Monopoly – Price discrimination

- When price discrimination raises the price as compared to just the single price monopoly consumers are worse off
- When price discrimination lowers the price as compared to just the single price monopoly, those consumers will be better off.

Figure 6 Price Discrimination



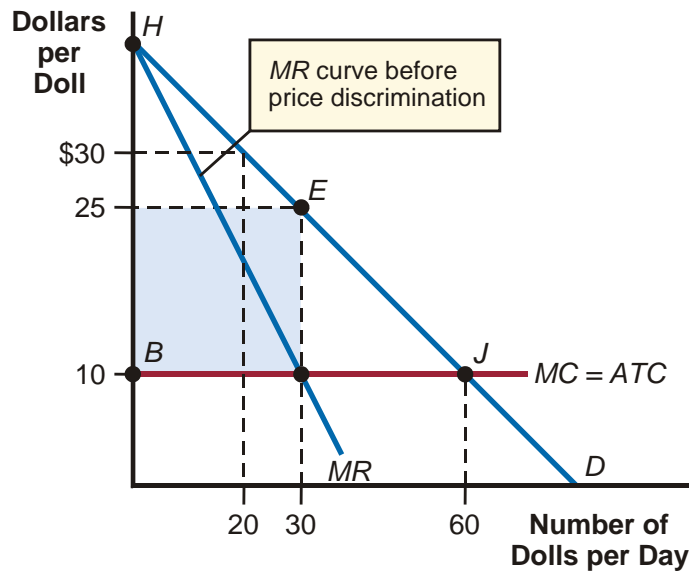
Monopoly – Price discrimination

- Perfect price discrimination
 - Under perfect price discrimination the monopolist will charge each consumer the highest price possible they would be willing to pay for each unit bought
 - Hypothetical example with water in the desert
 - Willing to pay allot for the first glass – the monopolist charges you this price
 - Willing to pay a little less for the second glass – the monopolist now charges you this price
 - This will continue until the price you pay per glass of water is equal to the cost of providing the glass of water by the monopolist

Monopoly – Price discrimination

- For a perfect price discriminator:
 - Marginal revenue (MR) is equal to the price of the additional unit sold
 - A firms MR curve is actually the demand curve when the firm is practicing perfect price discrimination

Figure 7 Perfect Price Discrimination



Monopolistic Competition

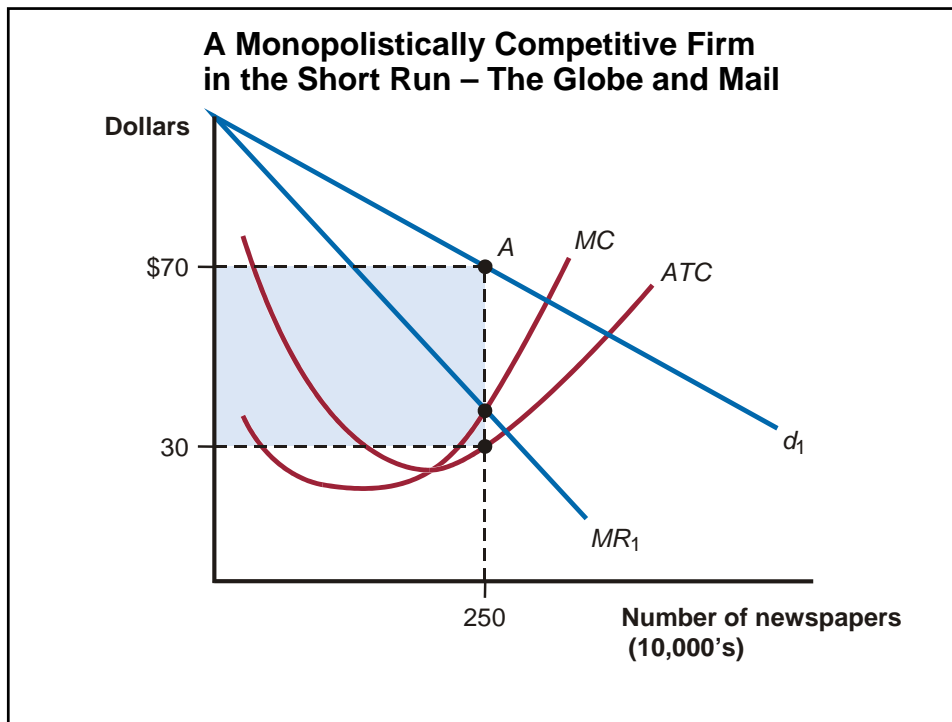
- 3 characteristics of a monopolistically competitive market
 - 1) Many buyers and sellers
 - 2) no major barriers to entry or exit
 - 3) differentiated products
- Note that point 3) is different from perfect competition

Monopolistic Competition

- What is a monopolistically competitive firm?
- A monopolistic firm is the only producer of a differentiated product but there are still close substitutes
 - Examples
 - Restaurants - McDonalds vs. Burger King
 - Magazines
 - Newspapers – Des Moines Register vs. Ames Tribune

Monopolistic Competition

- Under monopolistic competition the firm still faces a downward sloping demand curve
 - When it raises the price it charges the quantity demanded will decrease but not to zero
 - Remember that under PC, if a firm raised its price then the amount it could sell went to zero
- The firm will, as always, have the objective of maximizing profit
 - The firm will maximize profit where $MR=MC$ and
 - $P>AVC$ in the SR, or
 - $P>ATC$ in the LR



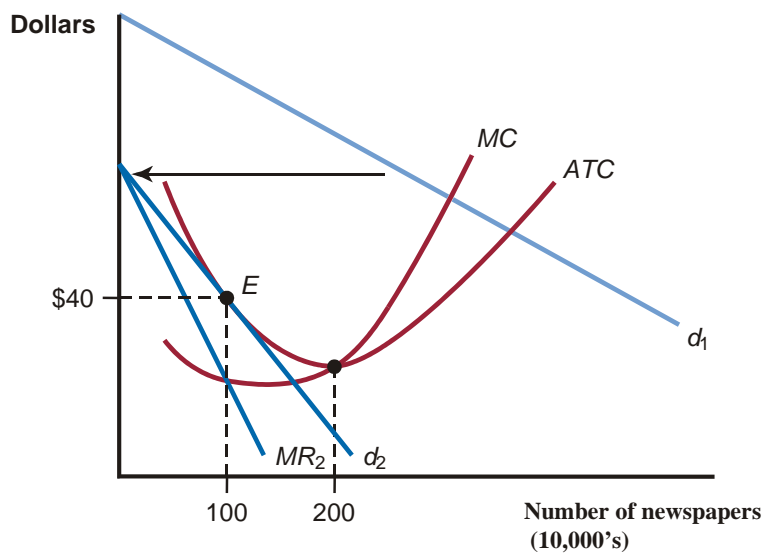
Monopolistic Competition

- If there are excess profits then other firms will enter
 - These new firms will not be producing the same products, but they will be close substitutes
 - Foreign example with magazines – The Globe and Mail vs. the National Post
 - In the 80's Canada had one major national paper – the globe and mail, and many regional papers
 - The excess profits enticed (Lord) Conrad Black to launch another paper – The National Post

Monopolistic Competition

- The presence of the other The National Post caused demand for the Globe and Mail to decrease since the two papers were close substitutes
- This decrease in demand will reduce how much revenue can be earned
- In the LR and entry of additional firms, profits are driven to zero

**A Monopolistically Competitive Firm
in the Long Run – The Globe and Mail**



Monopolistic Competition

- Note that in the LR the monopolistically competitive firm will always operate at a point to the left of the minimum of the ATC
 - The firm will not produce enough output to reach the minimum cost to produce per unit
 - i.e. it will not achieve the minimum efficient scale
- Recall the LR result for
 - 1) Competition
 - 2) Monopoly

Monopolistic Competition

- Final point on monopolistic competition
 - Under monopolistic competition firms can use methods other than price to sell more goods
 - This is non-price competition
- Why does this not work under perfect competition?
- Would a perfectly competitive firm use non-price competition actions?
- Would a monopolist ever use non-price competition?

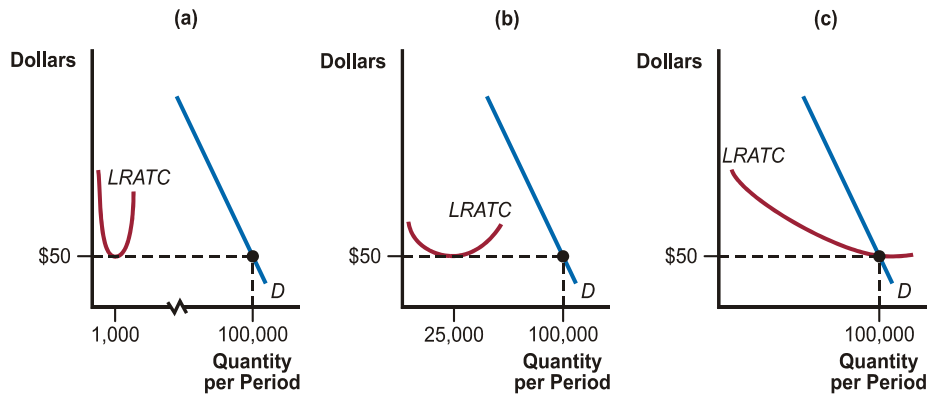
Oligopoly

- An oligopoly is a market dominated by a small number of strategically inter-dependent firms
 - Strategic here since the firms actions directly affect those of the other firms
 - Since there are a small number of firms, they realize the interaction amongst themselves
 - This creates an incentive to act strategically since:
 - “They know that I know that they know that I know that...”
- Under monopolistic competition and perfect competition there were so many buyers and sellers that no one firm could affect any other firm

Oligopoly

- Why do oligopolies exist?
 - 1) economies of scale – arise because of minimum efficient scale
 - Construction companies at the local level
 - Biotech companies
 - Multinational corporations
 - Railroad companies

Figure 3 Minimum Efficient Scale and Market Structure



Oligopoly

- Why do oligopolies exist?
 - 1) economies of scale – arise because of minimum efficient scale
 - 2) Reputation as a barrier
 - Strategic barriers
 - Government created barriers
 - US steel companies
 - Zoning

Oligopoly

- How to capture this strategic interaction among firms?
- Mostly use **Game Theory**
 - This captures explicitly the strategic interaction between firms
 - Strategies
 - Dominant strategy
 - Weakly vs. strictly dominant strategy
 - Dominated strategy

Oligopoly

- Classic example of the prisoners dilemma
 - Two people (Colin and Rose) have committed a crime – say murder
 - They were both seen beating two people – one person got away and the other - less fortunate, person was actually murdered
 - No body was ever found – only these two people know where it is.
 - If they both keep their mouths shut then they will only get convicted of assault – each gets 5 years
 - However, if one (i.e. Colin) confesses and agrees to a plea bargain then they get 3 years but the other individual (Rose) gets 30 years
 - If they both confess then they each get 20 years

Oligopoly

- Classic example of the prisoners dilemma
 - Also assume they Colin and Rose did not really know each other before the crime and do not really care what will happen to each other in the future.
 - What is the solution here?
- Consider the payoff matrix where Rose's sentence is in orange and Colin's sentence is in purple

Figure 4 The Prisoner's Dilemma

		Colin's Actions	
		Confess	Don't Confess
Rose's Actions	Confess	Colin gets 20 years Rose gets 20 years	Colin gets 30 years Rose gets 3 years
	Don't Confess	Colin gets 3 years Rose gets 30 years	Colin gets 5 years Rose gets 5 years