Chapter 9

Monopoly

This chapter provides some insight into how monopolists operate. Additionally, time is spent discussing the welfare losses associated with some monopolies as well as the welfare gains when a natural monopoly is present.

- Pure Monopoly assumptions
  - Only one producer in a market
  - No close substitutes
  - Entry of new firms is blocked (e.g., patents, scale, secret formulas)

- examples: USPS, Amtrak, public utility companies

9.1 Price and Output Under Monopoly

1. Output

- As under perfect competition, producers maximize profits where \( MR = MC \)
- Tend to operate on the elastic portion of the demand curve
• No consistent or linear supply curve

[Insert Exhibit 10.1 here]

2. Price

• Monopolist can sell the optimal output quantity \((MR = MC)\) at a point on demand curve
• MR curve lies everywhere below the demand curve

3. Lerner Index

• Measuring monopoly pricing power

\[
LI = \frac{P - MC}{P} = \frac{P - P \left(1 - \frac{1}{|\eta|}\right)}{P} = \frac{1}{|\eta|} \quad (9.1)
\]

4. Sources of Monopoly Power

• Natural monopoly
  – industry where AC curve decreasing at point where crosses market demand
  – Industry survives only if monopolized
• Patents (e.g., biotech, pharmaceuticals, etc.)
• Resource monopolies - single firm controls productive input
• Legal barriers to entry
• Government granted
  – may be welfare improving
  – USPS, Xanterra (Yellowstone), utility companies

[Insert Exhibit 10.6 here] - natural monopoly
5. Welfare

- Social welfare is typically lost when comparing Monopolist to perfectly competitive market
- Deadweight loss (net loss to society)
- Consumer surplus falls
- Producer surplus increases

[Insert Exhibit 10.2 here]

6. Subsidies and Public Policy

- Subsidies can be provided so that monopolist provides price and quantity as in perfectly competitive market

[Insert Exhibit 10.3 here]

7. Price Discrimination

- First-degree - Charging each customer the most they are willing to pay
  - Typically a fair bit of haggling is involved
  - Examples: ticket scalping, used car sales
- Second-degree - Charging same customer different prices for identical items
  - quantity discounts for energy, discounts for larger sized boxes of cereal, sodas and french fries at fast food
- Third-degree - Charging different prices in different market segments
  - Must be able to discriminate consumers into homogenous subgroups
– Examples: senior discounts, student discounts, etc.
– More elastic demand group receives lower price