Chapter 12: Monopoly

I. Monopoly is an industry where one firm produces a good or service for which no close substitute exists

II. Causes of monopoly.
   A. legal barriers to entry.
      1. public franchise (e.g. gas stations on turnpike, marinas on state-owned lakes, vendors at certain events)
      2. patents for inventors of product or service (20 years)
      3. copyright for author or composer of literary, musical, dramatic, or artistic work
   B. Ownership of a key input
      1. alcoa: owned larger proportion of bauxite in 1930s.
      2. DeBeers: controls 80% of world’s supply of natural diamonds.
   C. Natural monopoly
      1. occurs when one firm can supply the entire market at a lower price than two or more firms.
      2. when ATC is downward sloping everywhere below D-curve.

III. Profit maximization: single price monopoly.
   A. marginal analysis: change in profit = change in TR - change in TC = MR - MC
   B. Demand and MR curve:
**Note:**

1. MR starts at same vertical intercept as demand but has twice the slope.
2. When MR>0, demand is elastic (i.e. cut price, TR rises)
3. When MR<0, demand is inelastic (i.e. cut price, TR falls)
C. Cost curves for natural monopoly.
   1. With natural monopoly, ATC is falling below the market demand curve and thus, MC<ATC.

D. Profit maximizing behavior.
   1. Increase output as long as MR>MC. Choose output where MR=MC and choose price that corresponds to that output.

E. Inefficiency of Monopoly Outcome.
   1. At Q*, MB>MC
   2. Deadweight loss occurs
   3. Socially efficient output would be where MB=MC.

F. Regulation and Natural Monopoly.
   1. MC pricing. Force firm to charge P where MB=MC.
i. problem: P<ATC so negative profits emerge.
ii. possible solutions to negative profits and marginal cost pricing.
   a. subsidize
   b. “fair return pricing”: set price where D=ATC.
      1) zero economic profits
      2) less than socially efficient output and deadweight loss still occurs.
      3) closer to socially efficient than unregulated monopoly.
   c. allow “price discrimination” (later).

IV. Profit maximization with price discrimination.

A. price discrimination is the practice of charging some customers a lower price than others for an identical good, or charging a different price for a large purchase than a small purchase.

B. perfect price discrimination: when a firm charges each person the maximum amount he or she is willing to pay.

1. each unit is sold for the maximum amount the consumer is willing to pay.
2. all of the consumer’s surplus that would exist at the single price that maximizes social welfare is converted into monopoly profits.
3. notice that production of output where D=MC (socially efficient) does not necessarily generate a loss even though P<ATC for last unit sold since higher prices are charged on other units of product.
4. not practical..impossible to sort consumers, discover maximum willingness to pay, and charge separate prices.
C. Profit maximizing: two prices for two markets.

Market 1: demand is relatively elastic, lower willingness to pay (vacation traveler)
Market 2: demand is relatively inelastic, higher willingness to pay (business traveler)

If charge identical prices, MR1>MR2 since demand is more elastic in first market.

sell more in market 1, less in market 2 by cutting P1 and raising P2 until MR1=MR2=MC.

result: charge the group with the more inelastic demand the higher price.

D. Other examples:
   1. dentists and high vs low income patients.
   2. discounts for senior citizens at hotels and restaurants
   3. discounts for children at movies and restaurants

E. Limits to price discrimination.
V. Summary on efficiency effects of monopoly.

A. Single price monopoly produces less than the socially efficient amount and charges “too high” a price.

B. Perfect price discrimination produces the socially efficient amount, but any consumer’s surplus that would have existed with a single price monopoly is converted into monopoly profits.

C. Regulation:
   1. mc pricing generates economic losses for a natural monopoly
   2. allowing the monopoly to price discriminate may get closer to the socially efficient outcome.
   3. fair return regulation generates zero economic profits but less than the socially efficient output.

D. Why does government allow monopolies?
   1. natural monopolies: breakup would generate economic inefficiency (costs would be higher than necessary)
   2. to create incentives to innovate (patent and copyright laws)