1 Price Discrimination

- Nicholson, Ch. 14, pp. 513-519

- Restriction of contract space:
  - So far, one price for all consumers. But:
  - Can sell at different prices to differing consumers (**first degree** or perfect price discrimination).
  - Self-selection: Prices as function of quantity purchased, equal across people (**second degree** price discrimination).
  - Segmented markets: equal per-unit prices across units (**third degree** price discrimination).

1.1 Perfect price discrimination

- Monopolist decides price and quantity consumer-by-consumer

- What does it charge? Graphically,

- Welfare:
  - gain in efficiency;
  - all the surplus goes to firm

1.2 Self-selection

- Perfect price discrimination not legal

- Cannot charge different prices for same quantity to A and B

- Partial Solution:
  - offer different quantities of goods at different prices;
  - allow consumers to choose quantity desired

- Examples (very important!):
  - bundling of goods (xeroxing machines and toner);
  - quantity discounts
  - two-part tariffs (cell phones)

- Example:

- Consumer A has value \$1 for up to 100 photocopies per month

- Consumer B has value \$.50 for up to 1,000 photocopies per month

- Firm maximizes profits by selling (for ε small):
  - 100 photocopies for \$100-ε
  - 1,000 photocopies for \$500-ε

- Problem if resale!

1.3 Segmented markets

- Firm now separates markets
- Within market, charges constant per-unit price
- Example:
  - cost function $TC(y) = cy$.
  - Market A: inverse demand function $p_A(y)$ or
  - Market B: inverse function $p_B(y)$

- Profit maximization problem:

$$\max_{y_A, y_B} p_A(y_A)\, y_A + p_B(y_B)\, y_B - c(y_A + y_B)$$

- First order conditions:

- Elasticity interpretation

- Firm charges more to markets with lower elasticity

- Examples:
  - student discounts
  - prices of goods across countries:
    * airlines (US and Europe)
    * books (US and UK)
    * cars (Europe)
    * drugs (US vs. Canada vs. Africa)

- As markets integrate (Internet), less possible to do the latter.