Market Interventions

Topics

- Taxes
- Price floors & ceilings
- Externalities
  - Taxes
  - Quotas
    - Tradable permits
- Public goods
- Monopoly
- Information

Sales Taxes

- Imposed on buyer, seller doesn’t matter
- Either shifts demand down, or supply down, by the amount of the tax
Effect of Tax

Dead Weight Loss

Quantification: Constant Elasticity

\[ p_b = (1+t) p_s \]

\[ a((1+t)p_s)^-\varepsilon \times b p_s = q_d(p_b) = q_s(p_s) = b p_s^\eta. \]

\[ p_s = \left( \frac{a}{b} \right)^{\frac{\eta}{\eta+\varepsilon}(1+t)} \]

\[ q^* = q_s(p_s) = b p_s^\eta = a^{\frac{\eta}{\eta+\varepsilon}} b^{\frac{\varepsilon}{\eta+\varepsilon}} (1+t)^{-\frac{\varepsilon \eta}{\eta+\varepsilon}}. \]
Linearize (Small Tax)

\[ \Delta p_b = \frac{\eta t}{\varepsilon + \eta} \quad \Delta p_s = -\frac{\varepsilon t}{\varepsilon + \eta} \quad \Delta q = -\frac{\eta \varepsilon t}{\varepsilon + \eta} - \frac{t}{\varepsilon + \eta} \]

- Incidence to the more inelastic party
- Quantity change small if either buyer or seller inelastic

Price Floors & Ceilings

- Price floor is a minimum price
  - Minimum wage
  - Agriculture: Cheese, peanuts, tobacco
  - Screen Actor’s Guild
- Price ceiling is a maximum price
  - Rent control
  - Usury laws
  - Price controls

Price Floor

![Diagram of price floor with deadweight loss](image)
**Price Floor**

- Usual goal: increase seller revenue
  - tobacco, actors
  - works if demand inelastic
  - Organized labor support for minimum wage reduces effectiveness of substitute
- Dead weight loss of potential gains from trade
- Too much produced
- Inefficient production

**Price Ceiling**

- Misallocation of resources
- Bribery (“Key money”)
- Australian experience with cars
- Subsidizing discrimination
- Housing for 200,000 abandoned in NYC
Rent Control: Small Effects at First

Rent Control: Long Run

Price Supports
Quota

• Tobacco, peanuts, NY taxis
• Some imported goods (sugar)
• Puts maximum quantity
• Generally production allocated by historical output
• Can become wildly inefficient
• Quota value becomes asset
  – No benefit to later producers