

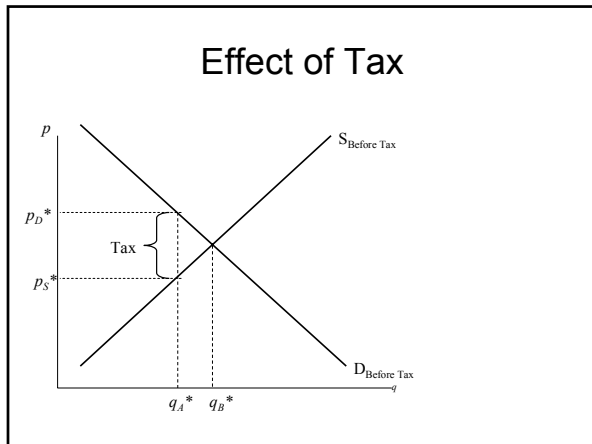
Market Interventions

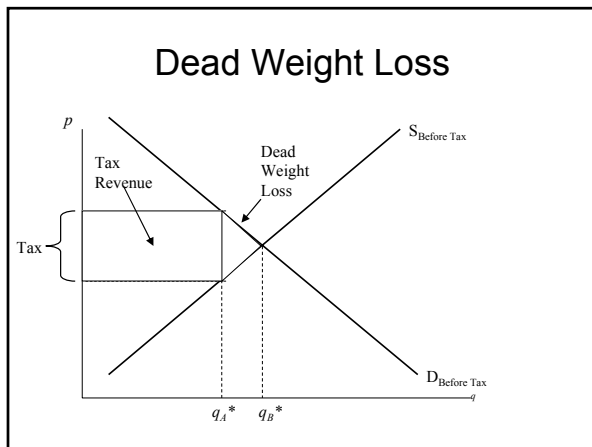
Topics

- 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





Quantification: Constant Elasticity

$$p_b = (1+t) p_s$$

$$a(1+t)p_s^{-\varepsilon} = ap_d^{-\varepsilon} = q_d(p_b) = q_s(p_s) = bp_s^\eta.$$

$$p_s = \left(\frac{a}{b}\right)^{1/\eta+\varepsilon} (1+t)^{-\varepsilon/\eta+\varepsilon}$$

$$q^* = q_s(p_s) = bp_s^\eta = a^{\eta/\eta+\varepsilon} b^{\varepsilon/\eta+\varepsilon} (1+t)^{-\varepsilon\eta/\eta+\varepsilon}$$

Linearize (Small Tax)

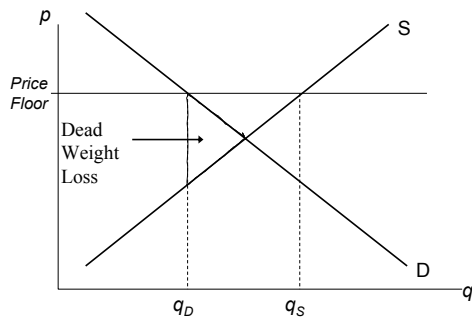
$$\Delta p_b \approx \frac{\eta t}{\varepsilon + \eta} \quad \Delta p_s \approx -\frac{\varepsilon t}{\varepsilon + \eta} \quad \Delta q \approx -\frac{\eta \varepsilon t}{\varepsilon + \eta} = \frac{-t}{\frac{1}{\varepsilon} + \frac{1}{\eta}}$$

- 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

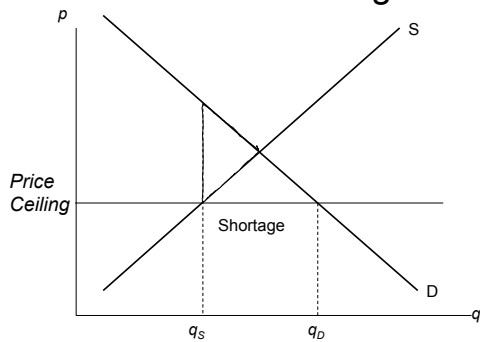
Price Floor



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

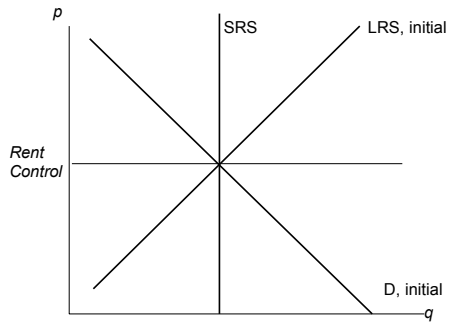
Price Ceiling



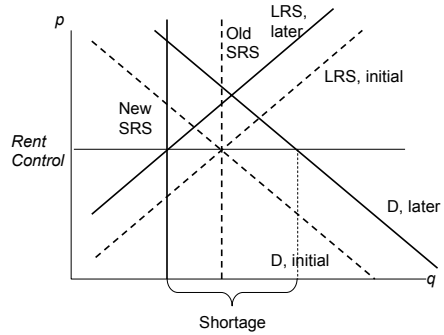
Price Ceiling

- Misallocation of resources
- Bribery ("Key money")
- Australian experience with cars
- Subsidizing discrimination
- Housing for 200,000 abandoned in NYC

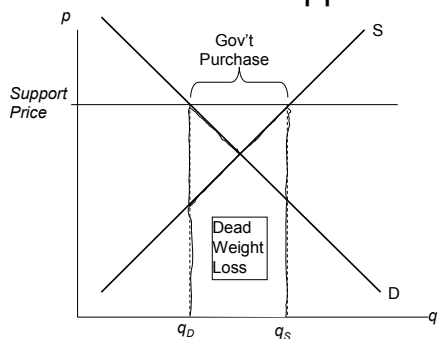
Rent Control: Small Effects at First



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
