

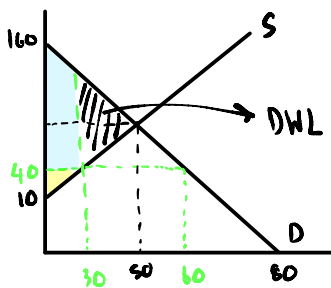
Example 3.K Price control and Welfare

Consider the market for apartment rentals in Chicago. The price of rent is determined by the following system of equations.

Demand: $p = -2q_d + 160$

Supply: $p = q_s + 10$

- What is the equilibrium price and quantity in the market for apartment rentals?



$$q^d = q^s = q^*$$

$$-2q^* + 160 = q^* + 10$$

$$\rightarrow 50 \text{ units}$$

- Suppose the government tries to control the rent prices through a price ceiling of \$40. Discuss the implication of this policy. Is there any deadweight loss?

CS $\rightarrow$ Price ceiling : price is too high $\rightarrow$ need to limit P

PS $\rightarrow$ Price floor : the minimum price to be purchased $\rightarrow$ set minimum p

$$Q = \min(Q^s, Q^d) \text{ when } P = 40$$

$$P = 40 \rightarrow Q^s = 30 \text{ units}$$

$$Q^d = 60 \text{ units}$$

$\therefore$ There is an excess demand under the price ceiling policy in the free market equilibrium since $Q^s = 30 < Q^d = 60$.