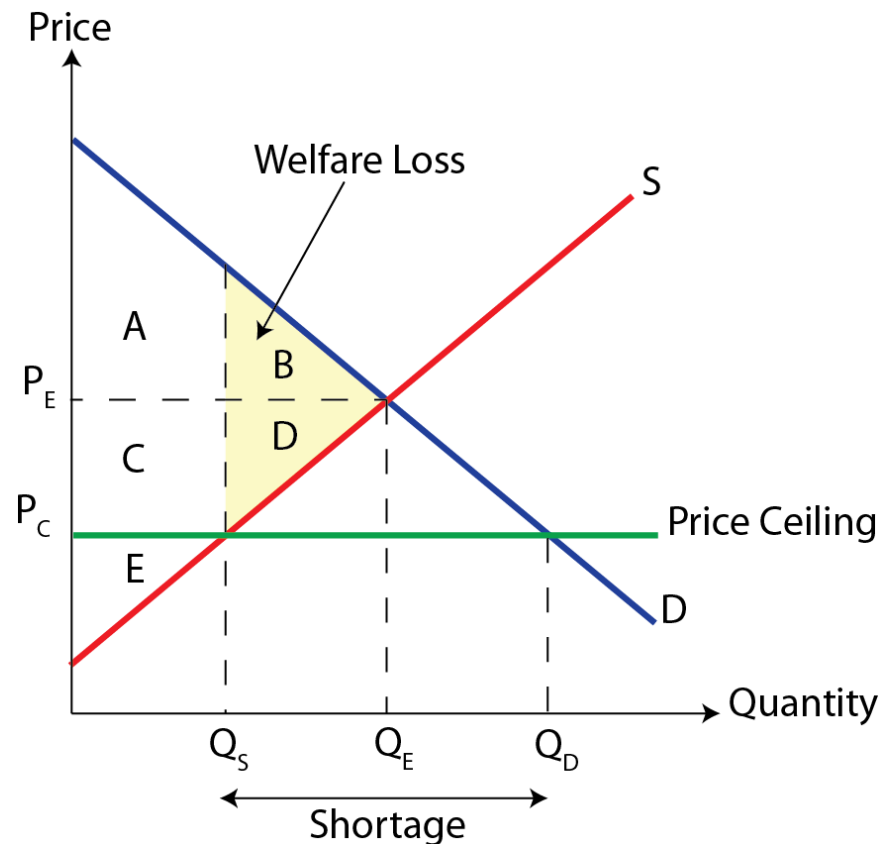


# Price Ceilings & Price Floors

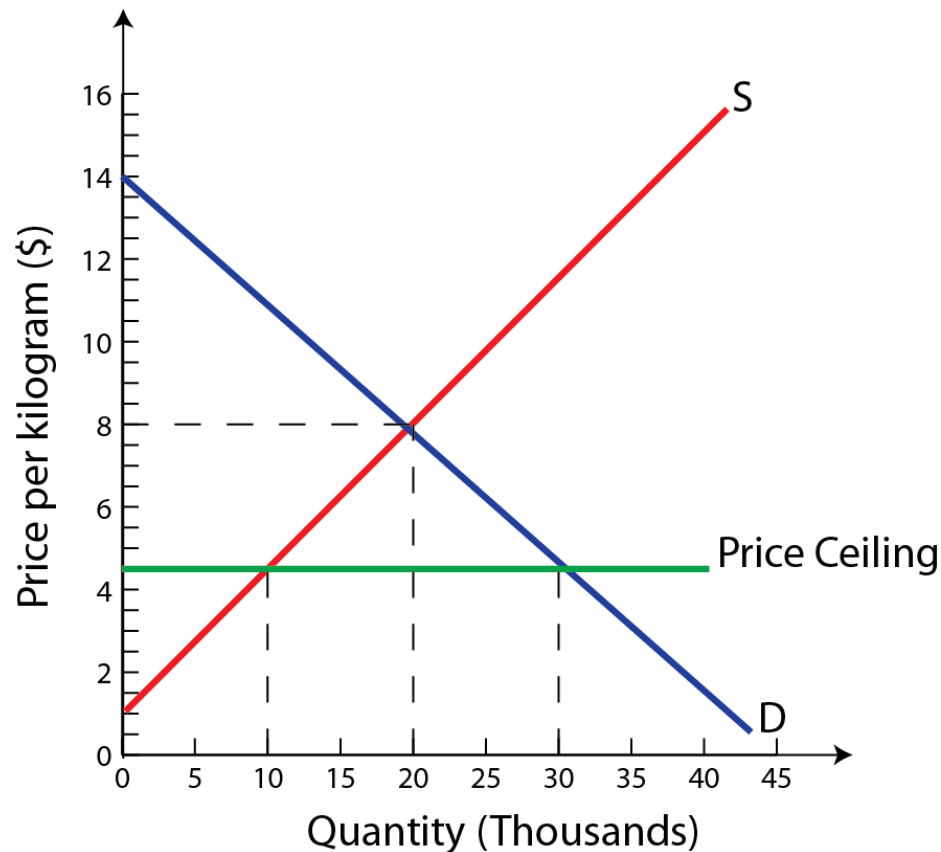
# Recap- Price Ceiling

- **Price Ceiling**- is a government imposed legal maximum price set below the market equilibrium.



# Price Ceiling

- **Example;** Suppose the government imposes a price ceiling on rice of \$4.50 per kilogram. This may be done to make basic food staples more affordable to low-income households.



## Calculate

- 1) Shortage (Excess demand)
- 2)  $\Delta$  Consumer Spending
- 3)  $\Delta$  Producer Revenue

- The original market equilibrium price was \$8.00, at which 20,000 kilograms of rice are sold.
- The price ceiling reduces the price to \$4.50, which increases the quantity demanded to 30,000 and reduces the quantity supplied to 10,000 kilograms. Thus the price-ceiling results in a shortage.

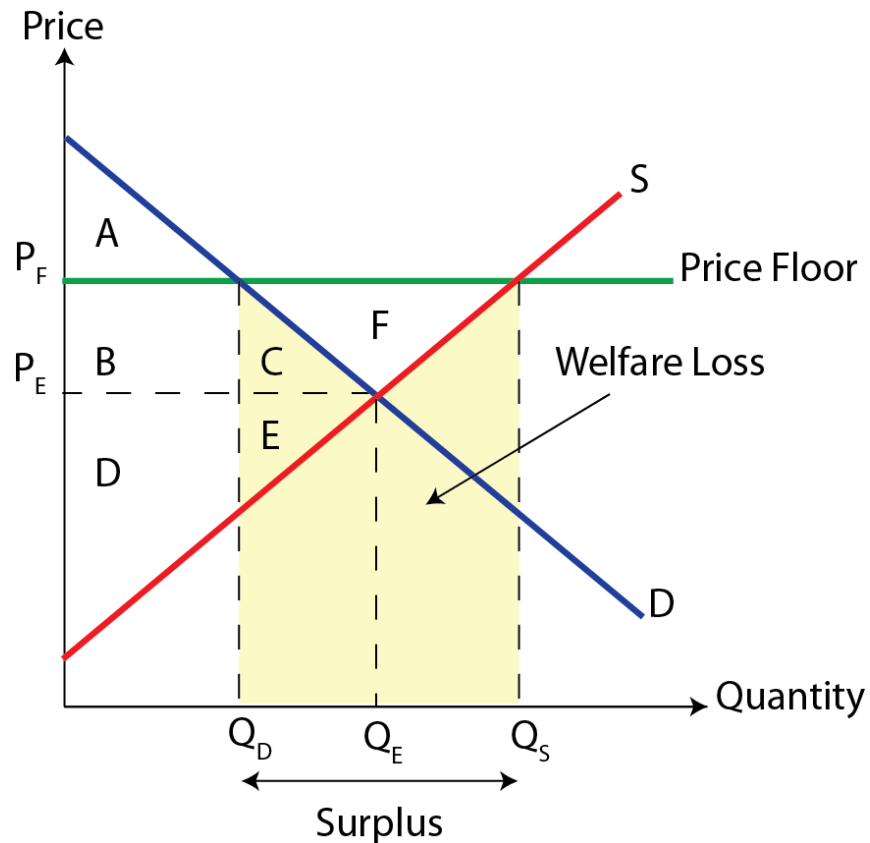
- **Shortage:**  $Q_D - Q_S = 30,000 - 10,000 = 20,000$  kilograms

- We can also analyze the impact of the price ceiling on the change in consumer expenditures or firm revenues.

- $\Delta \text{Expenditures} = \text{Expenditures}_{\text{New}} - \text{Expenditures}_{\text{Old}}$   
 $= (\$4.50 \times 10,000) - (\$8.00 \times 20,000)$   
 $= \$45,000 - \$160,000$   
 $= -\$115,000$

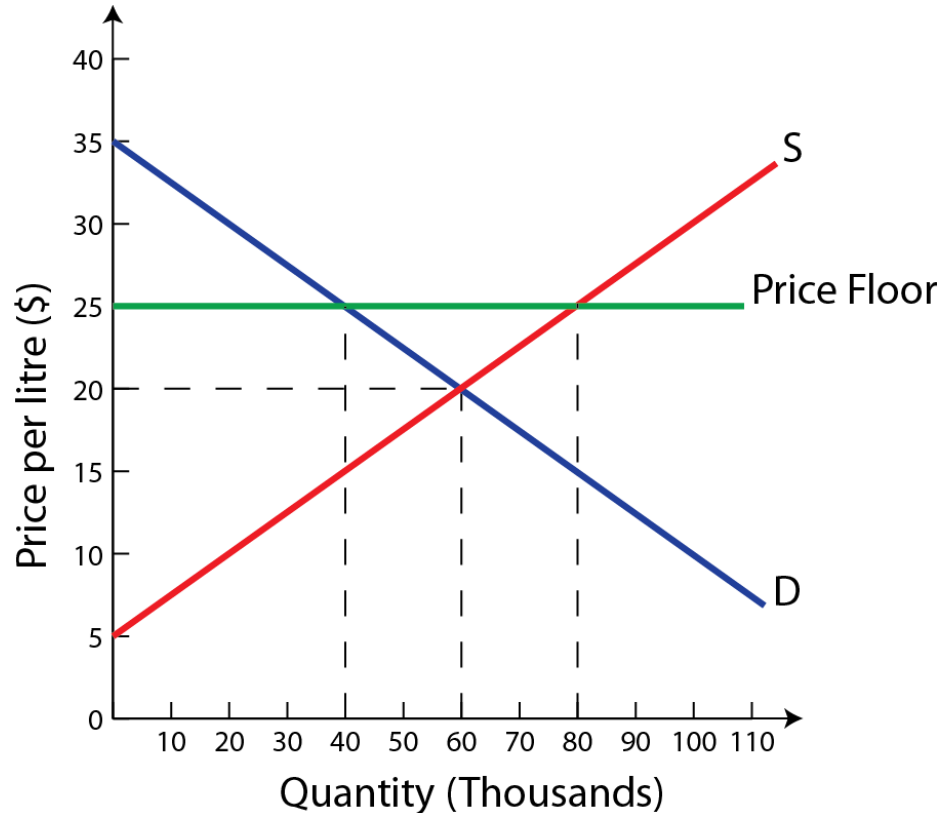
# Recap- Price Floor

- **Price Floor**- is a government imposed legal minimum price set above the market equilibrium.



# Price Floor

- **Example;** Suppose the government imposes a price floor for wine of \$25 per liter. This may be done to protect the income and employment of the country's wine producers.



## Calculate

- 1) Surplus (Excess supply)
- 2)  $\Delta$  Consumer Spending
- 3)  $\Delta$  Producer Revenue
- 4) Government Spending

- The original market equilibrium price was \$20, at which 60,000 liters of wine are sold.
- The price ceiling raises the price to \$25, which increases the quantity supplied to 80,000 and reduces the quantity demanded to 40,000 liters. Thus the price-floor results in a surplus.

- **Surplus:**  $Q_S - Q_D = 80,000 - 40,000 = 40,000$  liters

- We can also analyze the impact of the price floor on various stakeholders,

- $\Delta \text{Expenditures} = \text{Expenditures}_{\text{New}} - \text{Expenditures}_{\text{Old}}$   
 $= (\$25 \times 40,000) - (\$20 \times 60,000)$   
 $= \$1,000,000 - \$1,200,000$   
 $= -\$200,000$

- There is a reduction in consumer spending of \$200,000

- There is also an increase in the producers revenue of \$800,000 as a result of the price floor.

- $\Delta \text{Firm Revenue} = \text{Revenue}_{\text{New}} - \text{Revenue}_{\text{Old}}$   
 $= (\$25 \times 80,000) - (\$20 \times 60,000)$   
 $= \$2,000,000 - \$1,200,000$   
 $= \$800,000$

- The government must purchase the excess supply of wine to prevent the market from reverting back to the original equilibrium

- $\text{Government Expenditure} = \text{Price} \times \text{Quantity}_{\text{Surplus}}$   
 $= (\$25 \times 40,000)$   
 $= \$1,000,000$