

KOM Ch. 8 Problems for Parsons' YNU class Spring 2024

Home

1) $D = 100 - 20P$

$$S = 20 + 20P$$

$$D = S$$

$$100 - 20P = 20 + 20P$$

$$80 = 40P$$

$$\$2 = P \Rightarrow \underline{Q=60} \text{ with NO TRADE}$$

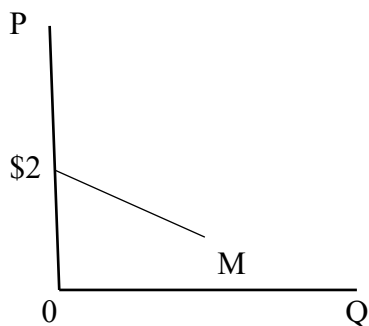
Import Demand Curve?

$$D - S$$

$$M = (100 - 20P) - (20 + 20P)$$

$$\underline{M = 80 - 40P}$$

$$\text{At } P = \$2 \quad M = 0$$



Foreign

2) $D^* = 80 - 20P$

$$S^* = 40 + 20P$$

NO TRADE EQUILIBRIUM?

$$D^* = S^*$$

$$80 - 20P = 40 + 20P$$

$$40 = 40P^*$$

$$\underline{\$1 = P^*}$$

$$\underline{Q^* = 60}$$

EXPORT SUPPLY?

2a) $S^* - D^* \Rightarrow (40 + 20P) - (80 - 20P)$

$$\underline{X = -40 + 40P}$$

2b) WORLD PRICE?

$$M = X$$

$$80 - 40P = -40 + 40P$$

$$120 = 80P$$

$$\frac{120}{80} = P$$

$$\frac{3}{2} = P \Rightarrow \underline{P = \$1.50}$$

Foreign X should equal Home's M. Check:

$$M : 80 - 40P$$

$$M : 80 - 40(1.5) \Rightarrow 80 - 60 = \underline{20}$$

$$X : -40 + 40(P) \Rightarrow -40 + 60 = \underline{20}$$

Home Imports 20 from Foreign

3) with **0.5** TARIFF BY HOME

$$M = 80 - 40(P)$$

But with tariff, becomes:

$$M^T = 80 - 40(P + \mathbf{0.5})$$

$$M^T = X$$

$80 - 40(P + \mathbf{0.5}) = -40 + 40(P)$ (note: that the "X" function does not change, only the import demand function)

Solve:

$$80 - 40P - 20 = -40 + 40P$$

$$100 = 80P$$

$$\frac{100}{80} = P$$

$$\underline{\$P = 1.25}$$

Price Exporter get is \$1.25. Lower than free trade price of \$1.5.

Price Consumers in Home pay: $1.25 + 0.5 = \underline{\$1.75}$

$1.75 > 1.50$ (pre-tariff)

New $M^T = X$ is how much?

$$M^T = 80 - 40(1.75) = 80 - 70$$

$$\underline{M^T = 10}$$

$$X = -40 + 40(1.75) = 10$$

So with free trade there was 20 exports; now with the tariff, international trade (exports) are reduced to only 10.