

# Monopolista

$$P = s(1-q) \rightarrow \text{CURVA DE DEMANDA INVERSA}$$

$$s \in [0, 1] \rightarrow \text{CALIDAD}$$

$$q \in [0, 1] \rightarrow \text{CANTIDAD}$$

$$C(q, s) = s^2 q$$

$$\pi = \underbrace{s(1-q)q}_{\text{INGRESO}} - \underbrace{s^2 q}_{\text{COSTO}} = s(q - q^2) - s^2 q$$

## CFO

$$\frac{\partial \pi}{\partial s} = (1-q)q - 2sq = 0$$

$$\frac{\partial \pi}{\partial q} = (1-s) - s^2 = 0$$

$$\frac{\partial \pi}{\partial q} = s(1-2q) - s^2 = 0$$

$$\begin{aligned} 1) (1-q)q &= 2sq \Rightarrow 1-q = 2s \\ 2) s(1-2q) &= s^2 \Rightarrow 1-2q = s \end{aligned} \quad \left. \begin{array}{l} 1-q = 2s \\ 1-2q = s \end{array} \right\} \times (-2)$$

$$\underline{-2 + 2q = -4s}$$

$$-1 = -3s$$

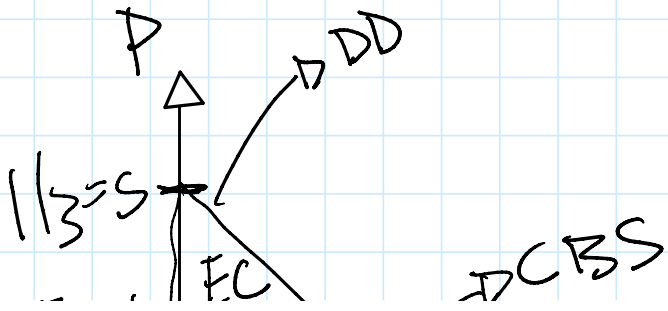
$$s = 1/3$$

$$1 - 2s = q$$

$$1 - 2/3 = q$$

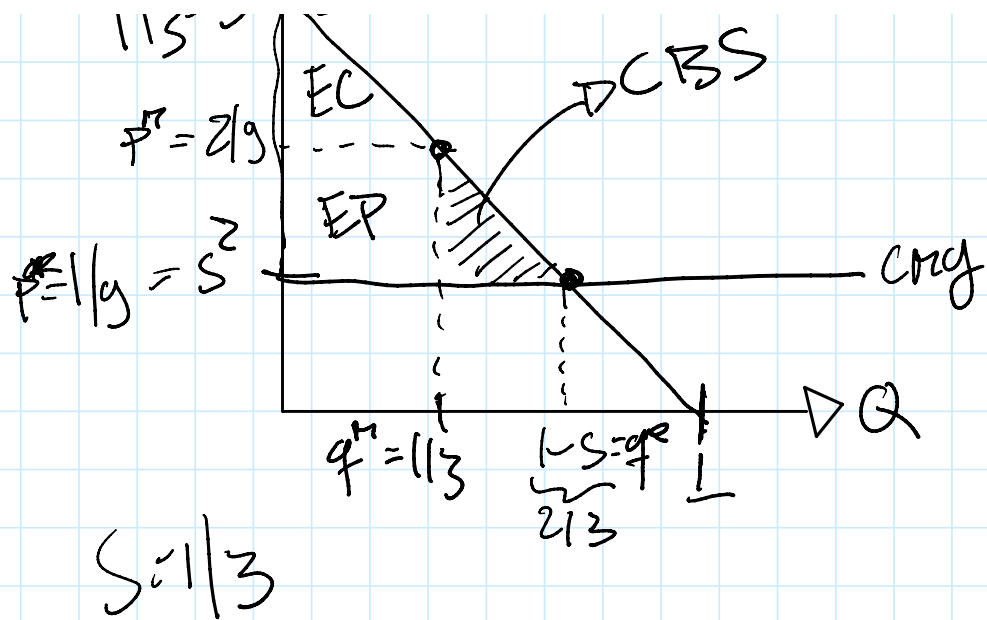
$$q = 1/3$$

$$\begin{aligned} P &= s(1-q) \\ &= 1/3(2/3) = 2/9 \end{aligned}$$



No Monopolio (Competencia Perfecta)

$$s(1-q) = r.m.d = s^2$$



$$s(1-q) = cmg = s^2$$

$$\boxed{1-q = S}$$

$$\boxed{1-s = q}$$

$$\pi = Pq - s^2q = 0$$

$$= s(1-q)q - s^2q = 0$$

$$= s(1-q) - s^2 = 0$$

$$= (1-q) = s$$

$$\pi(K, L) \rightarrow \pi(\lambda K, \lambda L) = \lambda^\alpha \pi(K, L)$$

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ECONOMIA DE INTERCAMBIO

- NSZ

•  $N > L$

- 1) FALSA (EG SI  $N \neq 0$ , NECESITAMOS 3 RESTRICCIONES EN EG)
  - 2) FALSA (NO ES WALZAS, ES HOMOGENEIDAD  $X^*(P)$ )
  - 3)  $\sum_{i=0}^I D_i - O_i = 0$  FALSA (FALTAN PRECIOS)
  - 4) ✓
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$$\begin{array}{l} \pi = P_1 q_1 + P_2 q_2 - C(q_1, q_2) \\ \downarrow \\ \text{C.P.} \\ \text{DADO} \end{array} \quad \begin{array}{l} \\ \\ \\ \hline - C_1 q_1 - C_2 q_2 \\ \hline C_1 q_1 + C_2 q_2 \end{array}$$

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LATZ (L)  $\rightarrow$  DG

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•  $I = 2$

•  $I = Z$

$$U_1 = 2X_1 + Y_1 \rightarrow W_1 = (10, 0)$$

$$U_2 = \ln X_2 + \ln Y_2 \rightarrow W_2 = (0, 20)$$

a) Def EQ.

UN EQ COMP. ES  $(X_1^*, Y_1^*, X_2^*, Y_2^*, P_x^*, P_y^*)$

T.Q.

$$1) X_i^*, Y_i^* = \text{ARG MAX}_{X_i, Y_i} U_i \quad \text{s.t.} \quad P_x X_i + P_y Y_i \leq W_x^i P_x + W_y^i P_y$$

$$2) X_1^* + X_2^* = W_1^x + W_2^x$$

$$Y_1^* + Y_2^* = W_1^y + W_2^y$$

b)  $\text{MAX } 2X_1 + Y_1 \quad \text{s.t.} \quad P_x X_1 + P_y Y_1 \leq 10P_x$

$$\frac{P_x}{P_y} > z \rightarrow \text{Todo } Y = 10 \frac{P_x}{P_y} \\ X = 0$$

$$\frac{P_x}{P_y} < z \rightarrow \text{Todo } X = 10 \\ Y = 0$$

$$\frac{P_x}{P_y} = z \rightarrow \text{ME DA IGUAL}$$

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$$\text{MAX } Cx + Cy \quad \text{s.t. } \underline{P_x X + P_y Y \leq z_0 P_y}$$

CFO

$$\frac{\partial \mathcal{L}}{\partial X} = \frac{1}{X} - \lambda P_x = 0$$

$$\frac{\partial \mathcal{L}}{\partial Y} = \frac{1}{Y} - \lambda P_y = 0$$

$$Y - \underline{P_x} \Rightarrow Y = X \underline{P_x}$$

$$\frac{Y}{X} = \frac{P_x}{P_y} \Rightarrow Y = \frac{X P_x}{P_y}$$

$$\begin{aligned} \hookrightarrow 20 P_y &= P_x X + P_y Y \\ &= P_x X + P_y \frac{X P_x}{P_y} \\ &= 2 P_x X \end{aligned}$$

$$\begin{aligned} Y &= X \frac{P_x}{P_y} \\ Y &= 10 \frac{P_x}{P_x P_y} \end{aligned}$$

$$\begin{aligned} 10 \frac{P_x}{P_x} &= X \\ Y &= 10 \end{aligned}$$

MCDOS SE VACIEN

$$Y_1 + 10 \frac{P_x}{P_y} = 20 \Rightarrow \frac{P_x}{P_y} > 2$$

$$\begin{aligned} & \begin{array}{c} \swarrow \downarrow \searrow \\ 10 \frac{P_x}{P_y} + 10 = 20 \end{array} \end{aligned}$$

$$\frac{P_x}{P_y} = 1$$

$$\Rightarrow \text{SI } \frac{P_x}{P_y} < 2 \quad \parallel \quad \text{K}_Y$$

$$0 + 10 = 20$$

$$\Rightarrow \text{SI } \boxed{\frac{P_x}{P_y} = 2}$$

$$\begin{bmatrix} 0 & 20 \\ 0 & \frac{10P_x}{P_y} \end{bmatrix}$$

$$Y_1 + 10 = 20$$

$$Y_1 + 10 = 20$$

$$Y_1 + = 20$$

$$\boxed{Y_1 = 10}$$

$$\text{EN } \text{EQ. } \frac{P_x}{P_y} = 2$$

$$\boxed{\begin{matrix} Y_1 = 10 \\ Y_2 = 10 \end{matrix}}$$

$$\boxed{\begin{matrix} X_1 = 5 \\ X_2 = \frac{10P_y}{P_x} = \frac{10 \cdot 1}{2} = 5 \end{matrix}}$$



$\bar{P}_y$

$\{ Y_2 = 10 \}$

$\{ \frac{10}{P_x} = \frac{10}{2} \}$

$$P_y = 1, P_x = 2$$

Curva De Contratao



$$\textcircled{e} U_2 = -2X_2 + 2\ln Y_2$$

$$W_2 = (0, 20)$$

$$X_2 = 0$$
$$Y_2 = 20$$