(1) Micro III [Chp 1]

IV] p12]

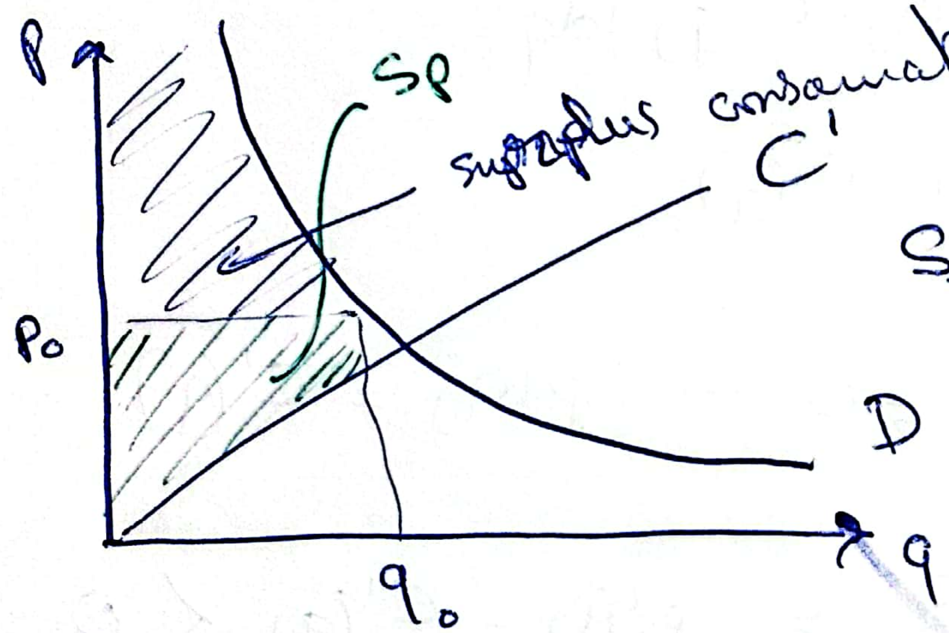
C : fonction de coût

$D(p)$: demande

$q = D(p) \Leftrightarrow p = P(q)$

↳ demande ↳ demande inverse.

si $D \searrow \Rightarrow P \searrow$ (et vice versa).



$S_T = S_P + S_C$

$$S_C = \int_0^{q_0} P(q)\,dq - \underbrace{P_0}_{= P(q_0)} q_0$$

$$= \int_{P_0}^{P_{max}\ (+\infty)} D(p)\,dp$$

$S_P \begin{cases} \Pi = P_0 q_0 - C(q_0) \\ \text{avec } C(q_0) - C(0) = \int_0^{q_0} C'(q)\,dq \end{cases}$

② Monopole

$$\pi = p_0 q_0 - C(q_0)$$

$$C(q_0) - \underbrace{C(0)}_{CF} = \int_0^{q_0} C'(q)\,dq \,.$$

Théorie [p 13]

$$S_T = S_C + S_P = \int_0^{q_0} P(q)\,dq - p_0 q_0 + p_0 q_0 - \int_0^{q_0} C'(q)\,dq$$

$$S_T = \int_0^{q_0} \left(p(q) - C'(q)\right)dq$$

$$\frac{\partial S_T}{\partial q} = p(q) - C'(q)$$

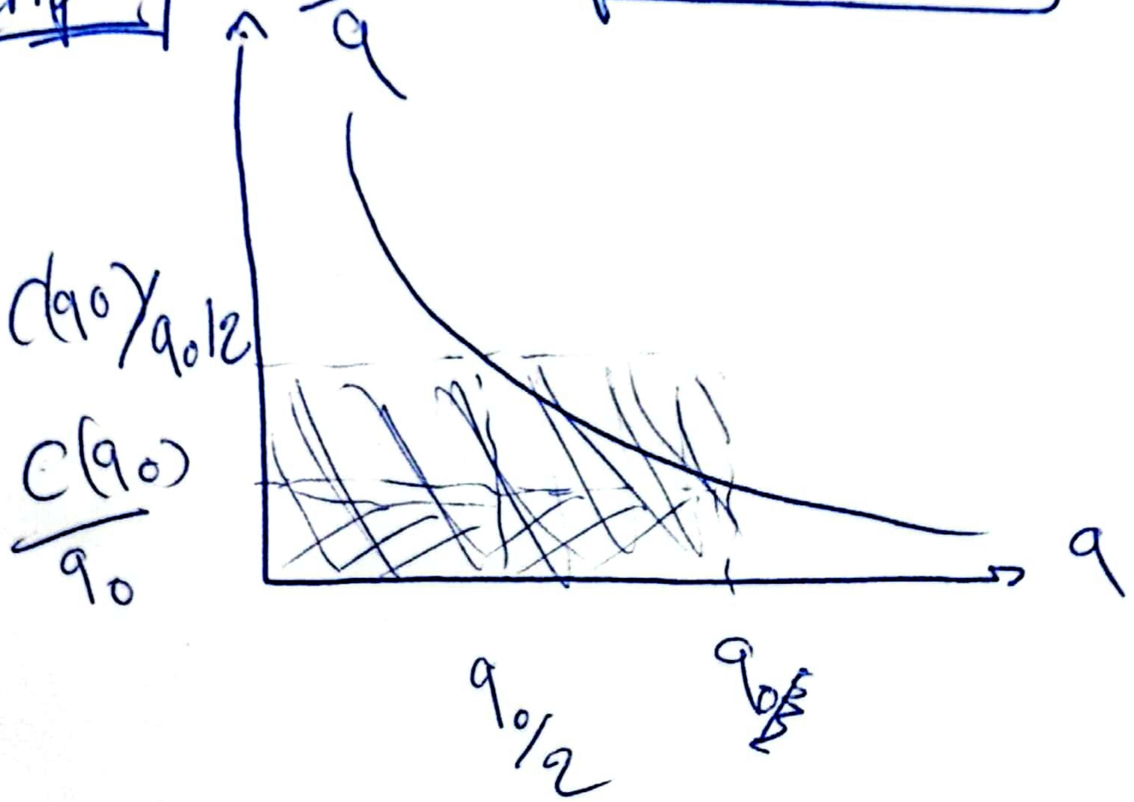
CPO : $\frac{dS_T}{dq} = 0 \Leftrightarrow \boxed{p(q) = C'(q)}$.

CSO : $\frac{d^2 S_T}{dq_0^2} = \underbrace{\underbrace{p'(q)}_{<0} - C''(q)}_{<0} < 0$

$\Rightarrow$ Il s'agit d'un maximum. $\rightarrow \boxed{p'(p) < 0}$

car $P \searrow$
car $D \searrow$

Chp2 ③ Micro III



$$\max_{q \geq 0} \; pq - C(q)$$

CPO $\frac{d\pi}{dq} = 0 \iff p = C'(q)$

$$\frac{d^2\pi}{dq^2} = -C''(q) < 0$$

équilibre offre et demande : $p = P(q)$.

$\Rightarrow P(q) = C'(q)$.

④ Micro III

2.2) Effet taxation $\boxed{p.25}$.

$$ST = \left[t \cdot D(p)\right] \leftarrow \text{ربح الدّولة}$$

$$+ \left[(p-t)\,D(p) - C(D(p))\right] \leftarrow S_p$$

eli howa profit

$$+ \left[\int_0^{D(p)} P(q)\,dq - p \cdot D(p)\right] \leftarrow S_c \; .$$

$$ST = \int_0^{D(p)} P(q)\,dq - C(D(p))$$

Ⓑ

ST est maximal : $\boxed{P_c = C'(D(P_c))}$

prix de CPP (concurrence pure et parfaite)

Ⓐ + Ⓑ $\Rightarrow$ $D(P_c) - t\,D'(P_c) = 0$

$$\Leftrightarrow t = \frac{D(P_c)}{D'(P_c)} < 0 \quad \text{car } D \searrow \Rightarrow D' < 0$$

taux taxation <0

correspondance subvention

⑤ Micro III

~~corrections~~ $\boxed{P.27}$

3.1)

$$\max_{(P_1, \ldots, P_n)} \left(\Pi = \sum_{i=1}^{n} \left[P_i D_i(p_i) - C_i(D_i(P_i)) \right] \right.$$

CPO : $\forall i = 1, \ldots, n ; \quad \frac{\partial \Pi}{\partial p_i} = 0$

$$\Leftrightarrow p_i D_i'(p_i) + D_i(p_i) - D_i'(p_i) C_i'(D_i(p_i)) = 0$$

3.2) $$\frac{\partial \Pi}{\partial p_1} = p_1 \frac{\partial D_1}{\partial p_2} + D_1 + p_2 \frac{\partial D_2}{\partial p_1} - \frac{\partial D_1}{\partial p_1} C_1'(D_1) - \frac{\partial D_2}{\partial p_1} C_2'(D_2) = 0$$

$$\frac{\partial \Pi}{\partial p_2} = p_2 \frac{\partial D_2}{\partial p_1} + D_2 + p_1 \frac{\partial D_1}{\partial p_2} - \frac{\partial D_2}{\partial p_2} C_2'(D_2) - \frac{\partial D_1}{\partial p_2} C_1'(D_1) = 0$$