$$X_0 \quad X_1^a \quad X_2^a \quad \ldots \quad X_n^a$$

$$\frac{X_1^a}{1+r}$$

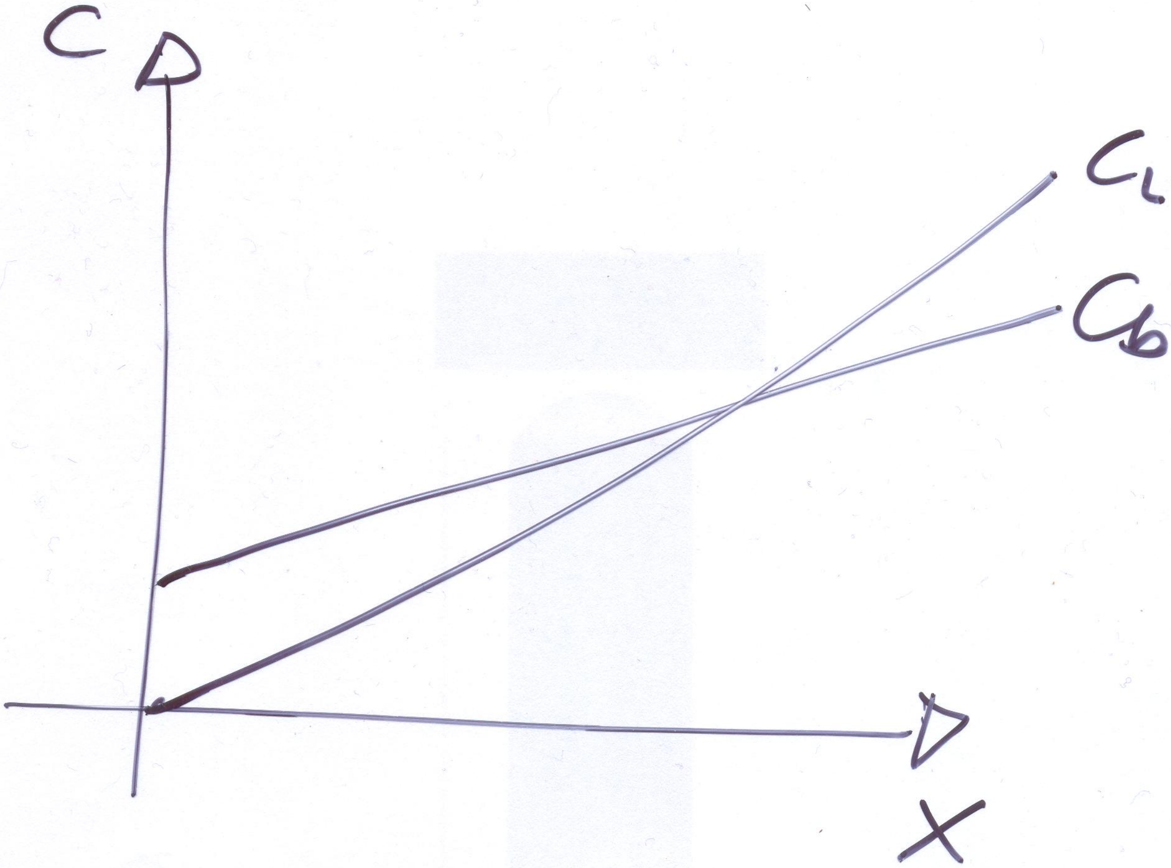
$$\frac{X_2^a}{(1+r)^2}$$

$$\ldots$$

$$\frac{X_n^a}{(1+r)^n}$$

$$W = \Sigma$$

$$C = (r, X, W)$$



$$0 < c' < c^* < 1$$

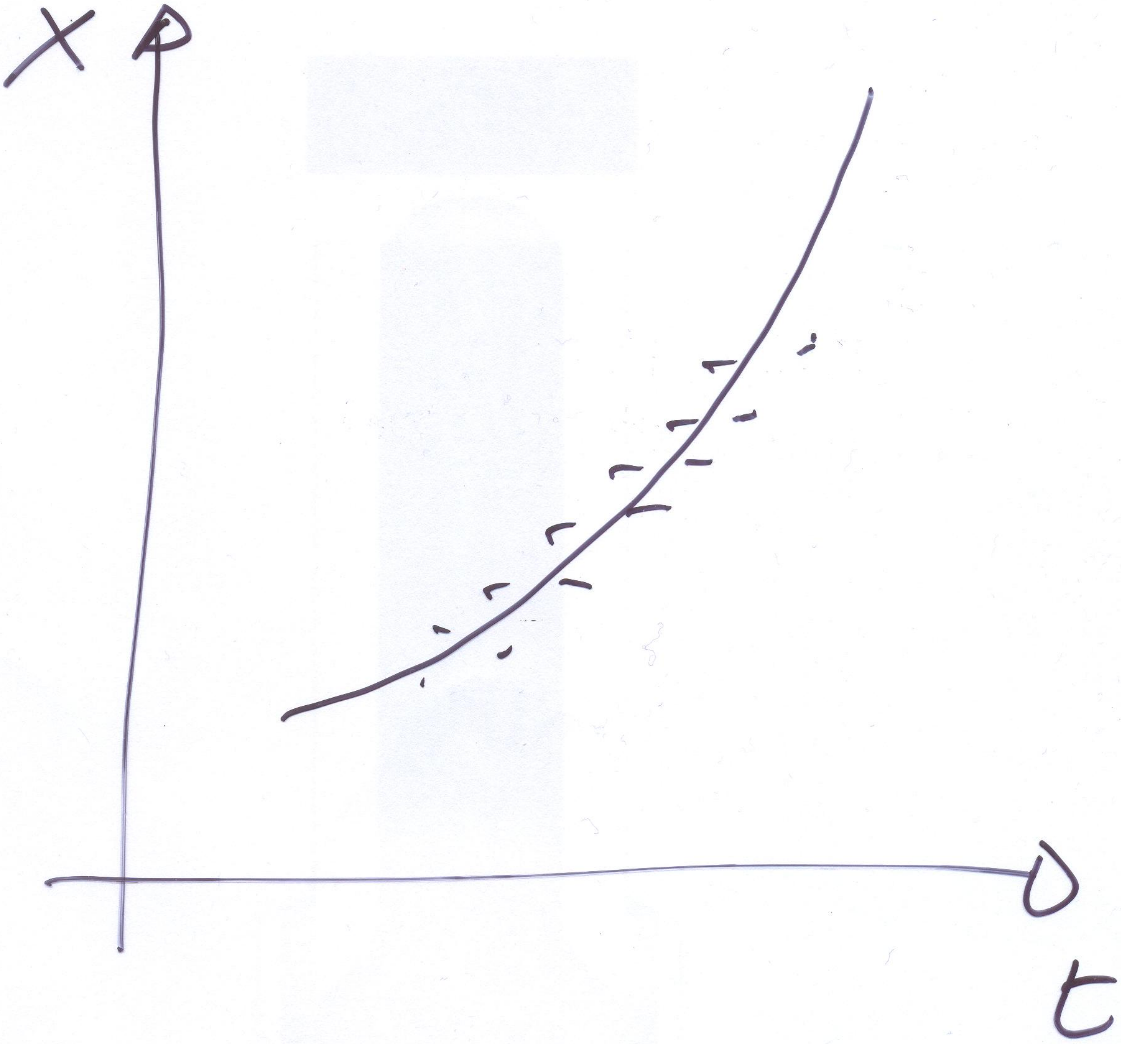
$$0 < \underbrace{c' = c} < 1$$

$$W = X_0 + \frac{X_1^a}{1+r} + \frac{X_2^a}{(1+r)^2} + \dots + \frac{X_n^a}{(1+r)^n} =$$

$$= X_{pe} + \frac{X_{pe}}{1+r} + \frac{X_{pe}}{(1+r)^2} + \dots \frac{X_{pe}}{(1+r)^n} =$$

$$= X_{pe} \left(1 + \frac{1}{1+r} + \frac{1}{(1+r)^2} + \dots \frac{1}{(1+r)^n} \right)$$

$$W = X_{pe} \; a_{r\rceil n}$$



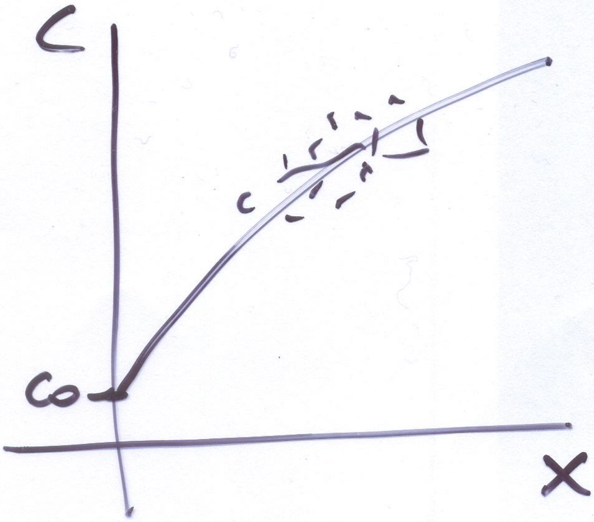
$$C = C(r, x, w)$$

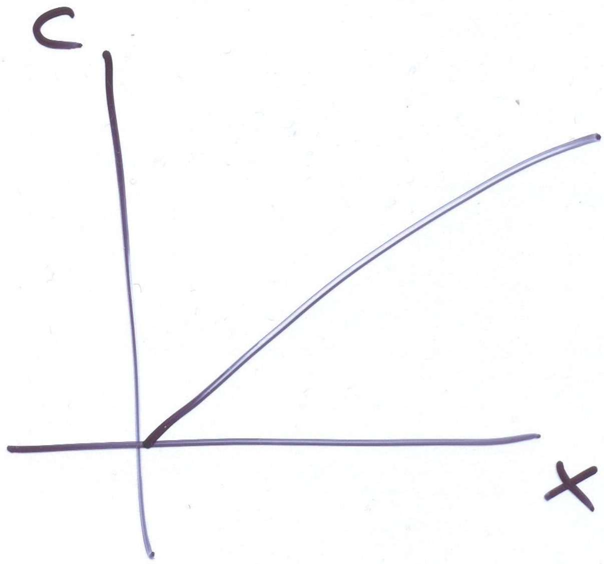
$$C = c(r, x, x_{pe})$$

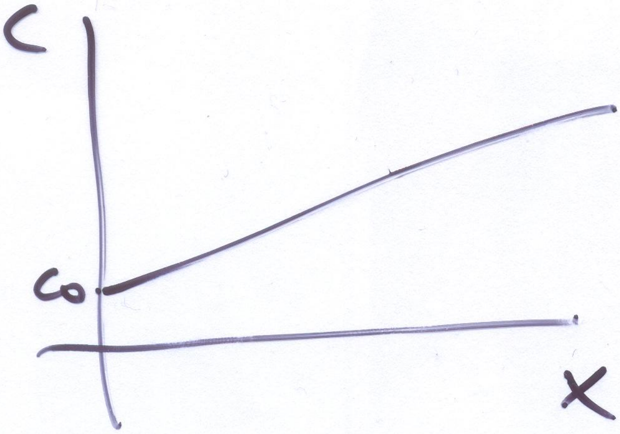
$$C(r, \dot{p}, P, X, w)$$

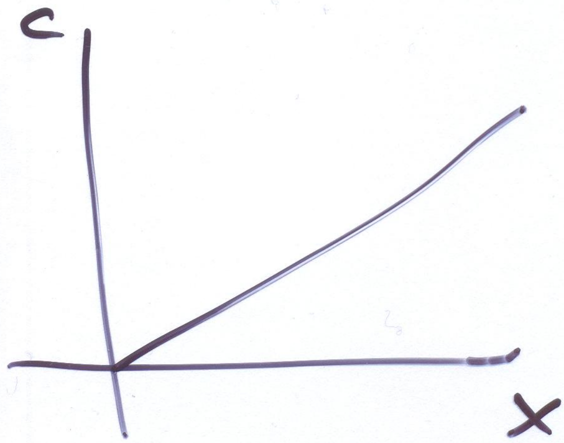
$0 < c' < 1$

$0 < c' < c < 1$



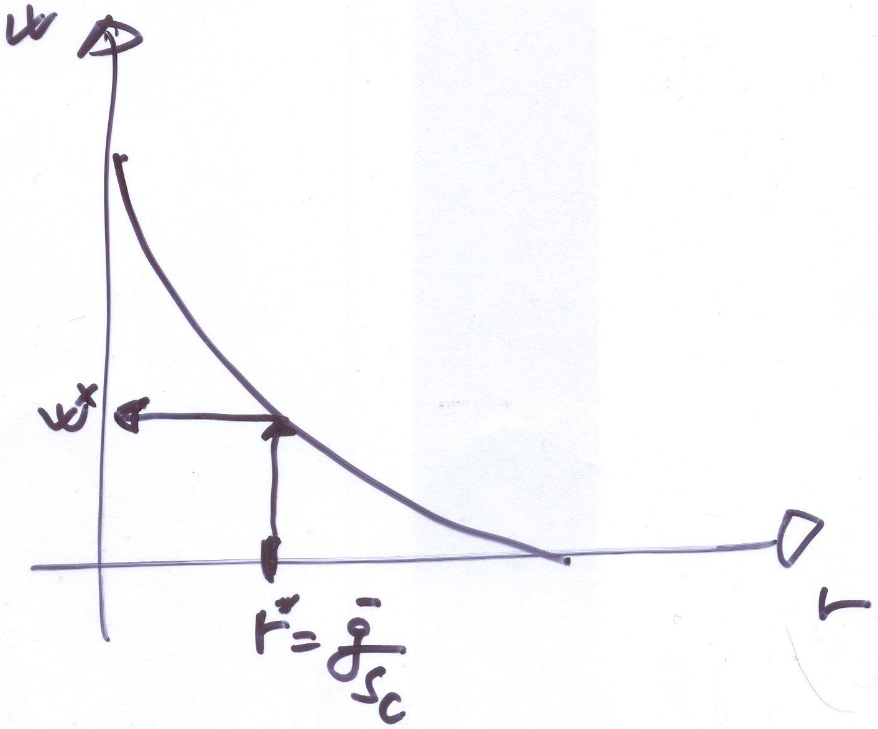






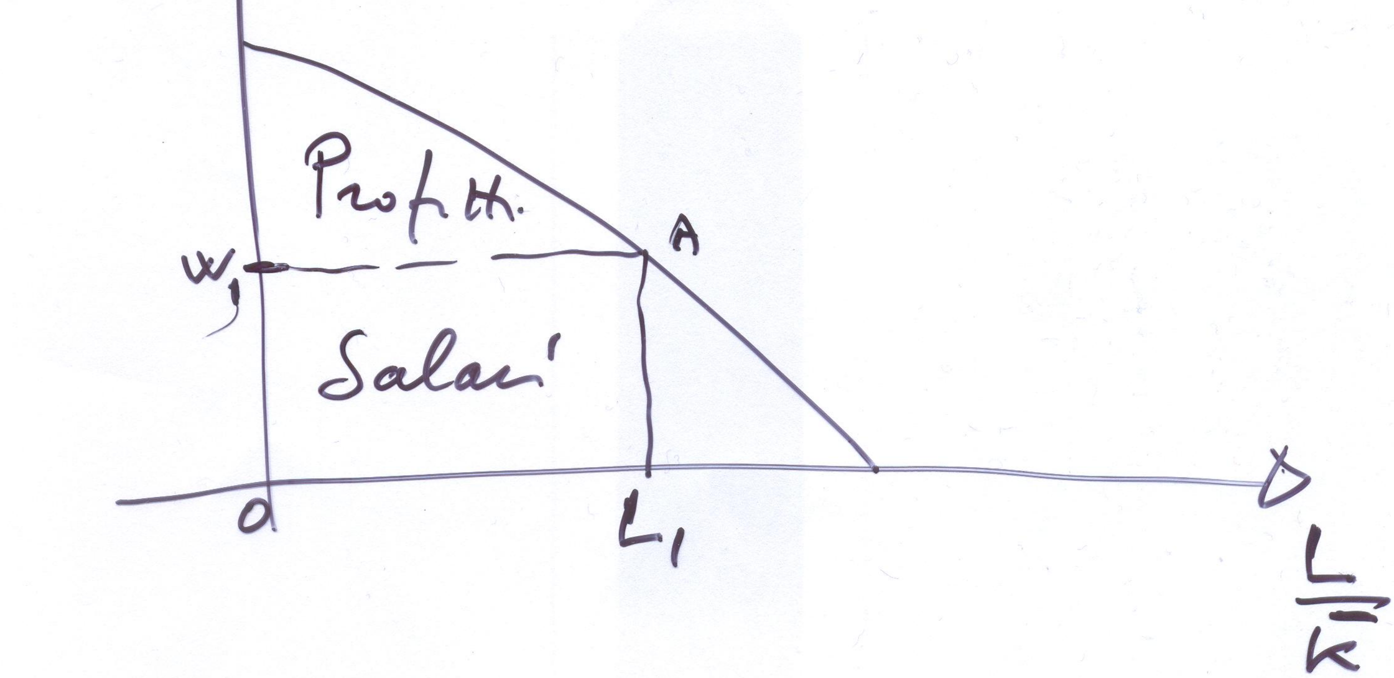
$$g = s_c r$$

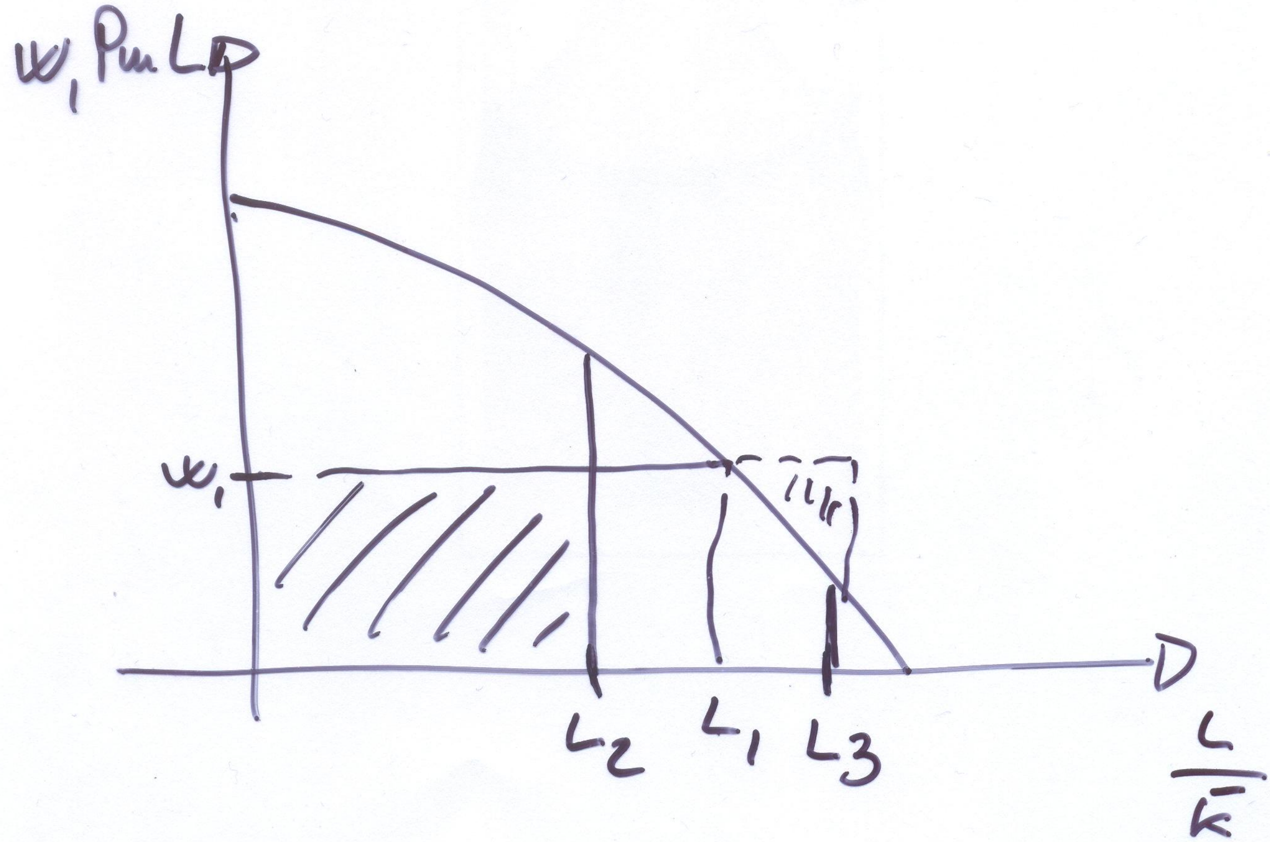
(4) $$r = \frac{\bar{g}}{s_c}$$



Ass.: Il Pr Marg dei fattori è decrescente.

$$X = W + \Pi$$





- teorie classiche (Smith, Ricardo)
- Marx
- teorie classiche "monetarie"
- "volgari" [1830 - 1860]
- teorie neoclassiche [1870 - ...]
- teorie Postkeynesiane
    - classiche
    - Kaleckiane
    - PK della distr. e distr.
      (Kaldor, Pasinetti)

$$S = S_w + S_c$$

$$I = I_w + I_c$$

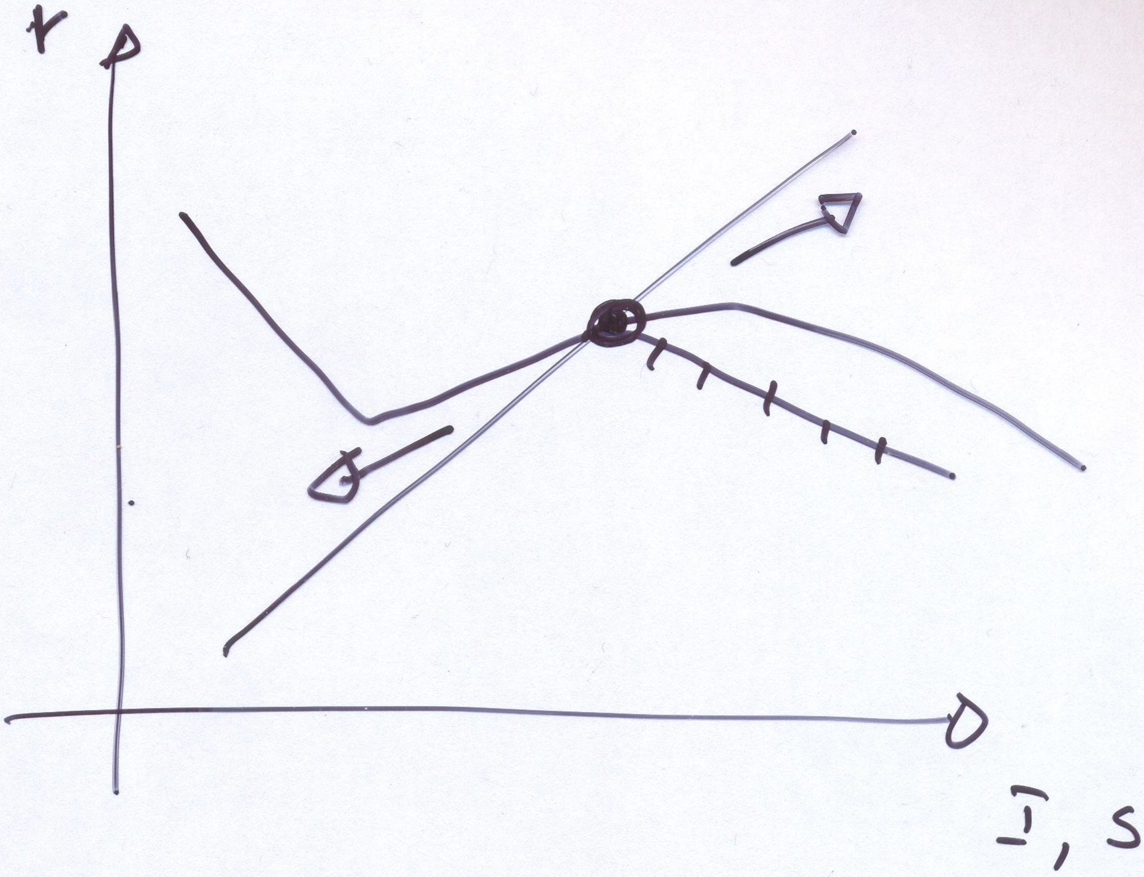
$$S_w = I_w = g K_w$$

$$K = K_w + K_c$$

$$S_w = g K_w$$

$$s_c = \underbrace{g K_c = s_c r K_c}$$

$$\Pi_c = r K_c$$



r
I, S

Def: Prod. marg di un fattore è ΔX dovuta alla variaz. dell'impiego del fattore, fermo restando l'impieg degli altri fattori

$$PmL = \frac{\Delta X}{\Delta L}$$

$$PmK = \frac{\Delta X}{\Delta K}$$

I livelli delle variabili distributive dipendono dalla disponibilità di risorse, capitale e lavoro, ~~(k)~~ e quindi dalla scarsità relativa dei fattori.

La scarsità relativa dei fattori si ~~p~~ misura con $k = \frac{K_1}{L}$, ma si può anche misurare con la produttività marginale dei fattori.

Produttività marginale e curve di domanda dei fattori

(1) $w = x - r\,k$

(2) $x = \bar{x}$

(3) $k = \bar{k}$

(2) $x = x(r)$

(3) $k = k(r)$

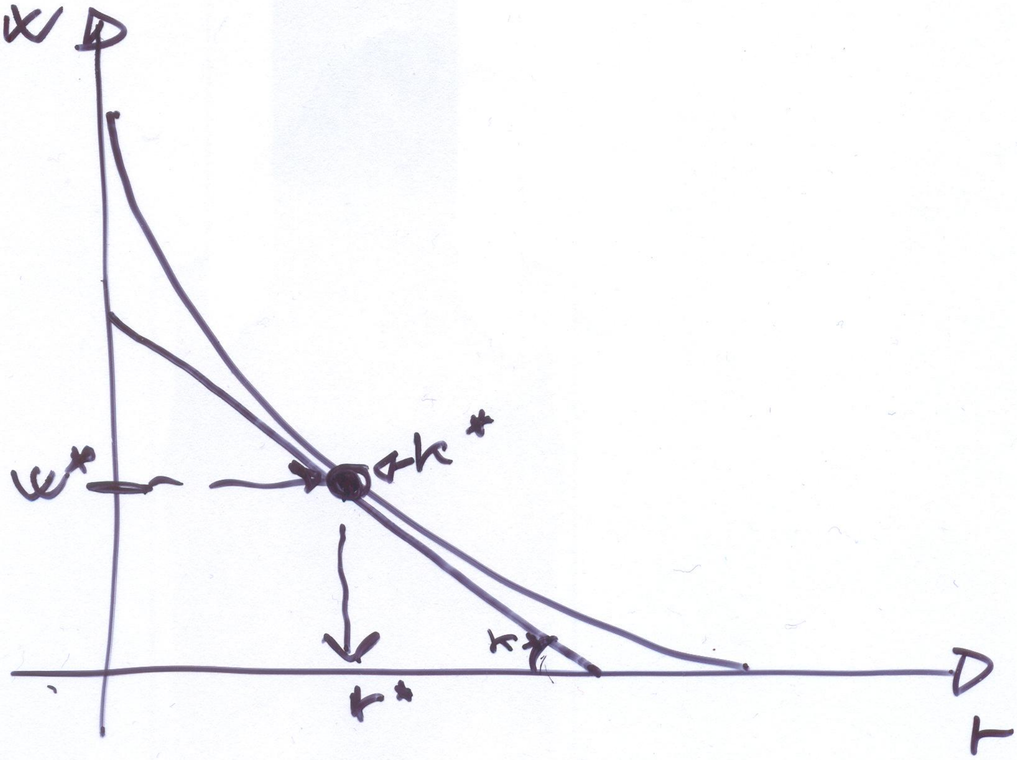
(4) $w = w^*$

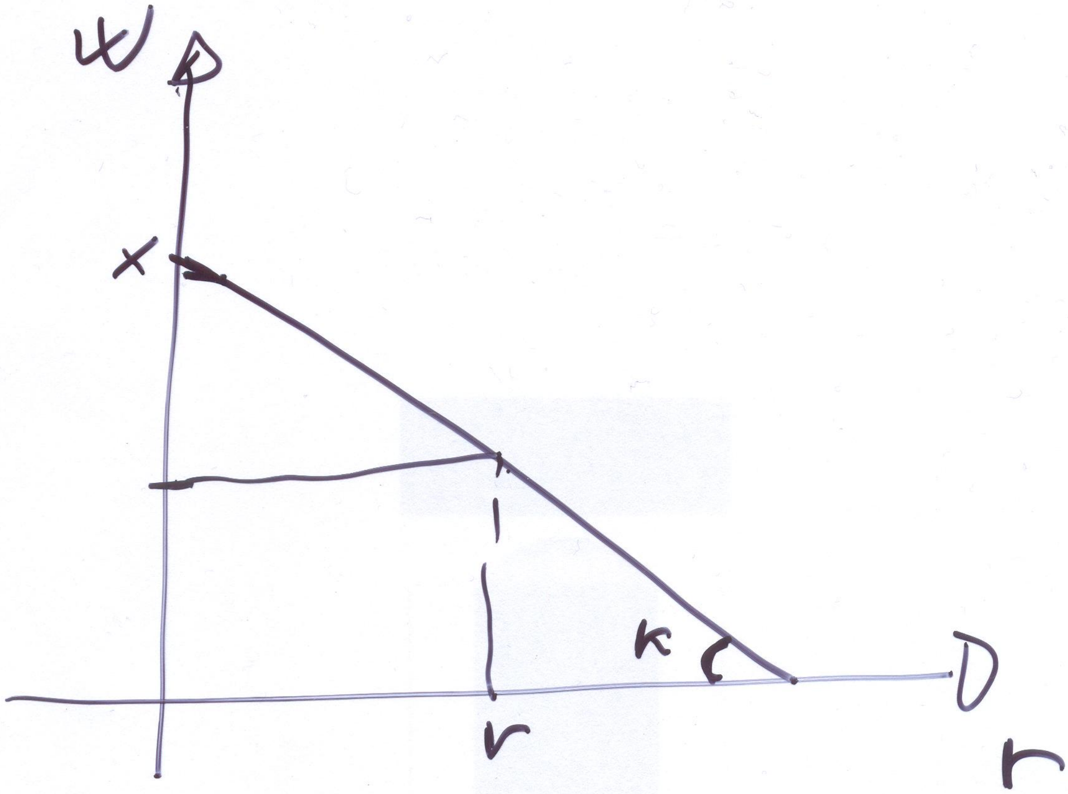
(4') $r = r(i^*)$

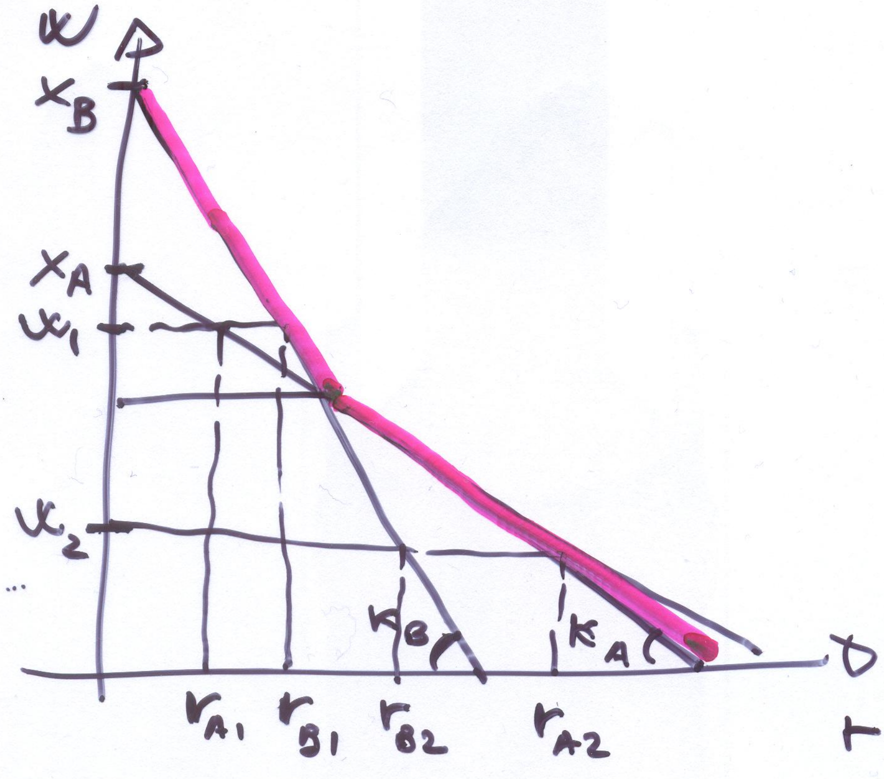
(4'') $k = k^*$

$$\boxed{w = \bar{x} - r\,\bar{k}}$$

$$\boxed{w = x(r) - r\,k(r)}$$







wr

1. Affermazione ....
2. Quadro istituz. e contab.
3. Equazioni di equilibrio
4. Equazioni di comport.
5. Contare n° equaz. e incogn.
6. Problema di esistenza di soluzioni
7. " " della stabilità degl. equilibri

ΔI	ΔX	ΔC	ΔS
100	100	80	20
	80	64	16
	64	--	--
	--	--	--
	500	400	100

(1) Le variazioni di X riportano in equilibrio S e I

---

(1) $$I = S$$

Ass I = le dec. di risp. variano nella stessa direz. di X

Ass. II = le dec. di inv. sono esogenamente date.

(2) $$S = s'X \qquad 0 < s' < 1$$

(3) $$I = I_0$$

$$\underline{I} = S$$

$$S = s'X$$

$$\underline{I} = \underline{I}_0$$

$$\Delta \underline{I} = \Delta S = s' \Delta X$$

$$\Delta X = \frac{1}{s'} \Delta \underline{I}$$

$$0 < s' < 1 \qquad \frac{1}{s'} > 1$$

$$x = \frac{X}{L}$$

1 bene

$$k = \frac{K}{L}$$

(risorse nat. libere)

(x, k) (ni inf tecnol.)

$$X = W + \Pi = wL + r\underline{K}$$

$$\frac{X}{L} = w\frac{L}{L} + r\frac{K}{L}$$

$$\boxed{x = w + r \cdot k} \qquad \boxed{w = x - rk}$$

Le variaz. di r riportano in equil. S e I

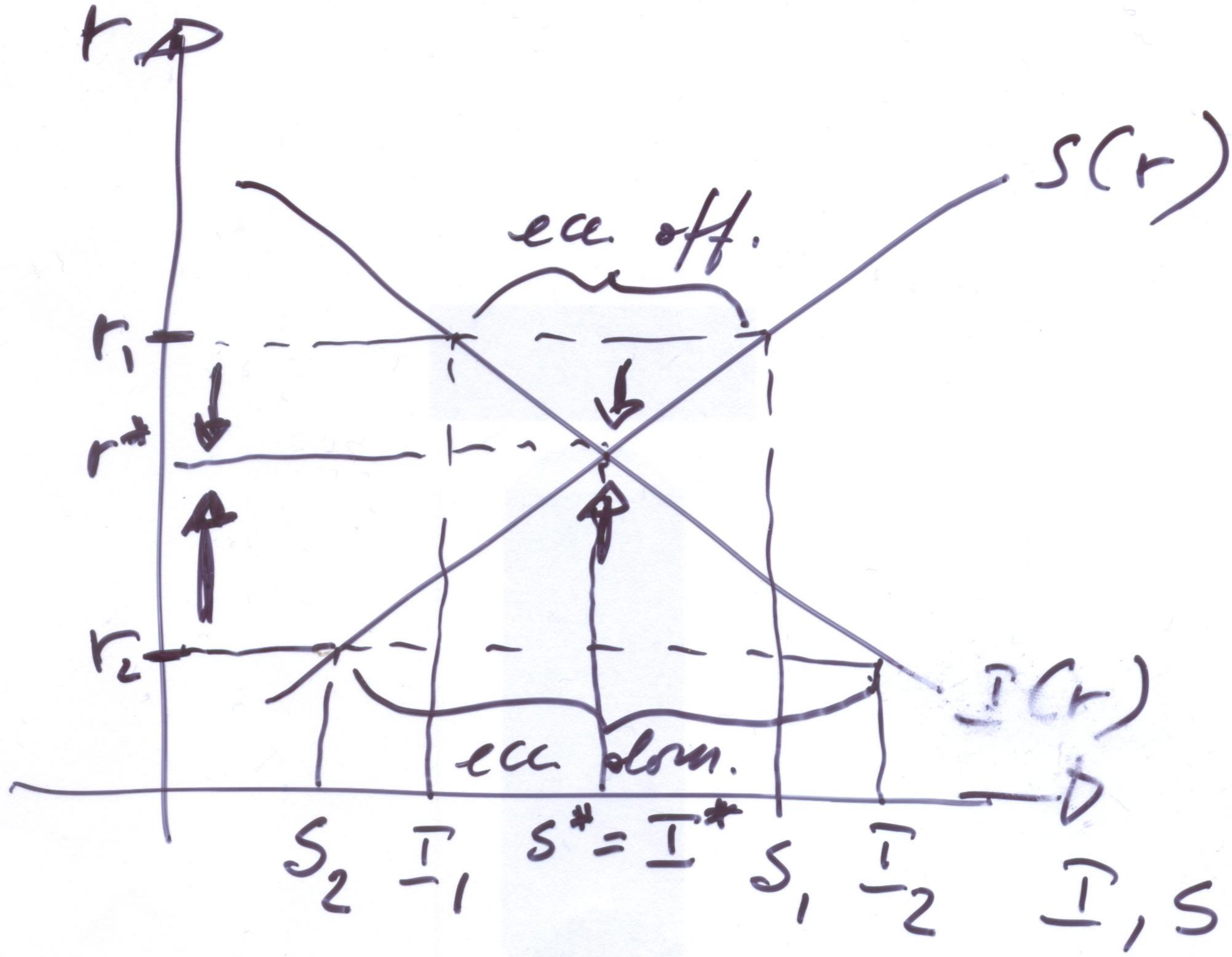
$$(1) \quad I = S$$

Ass. 1 : Le dec. di risp. variano nella stessa direz. di r

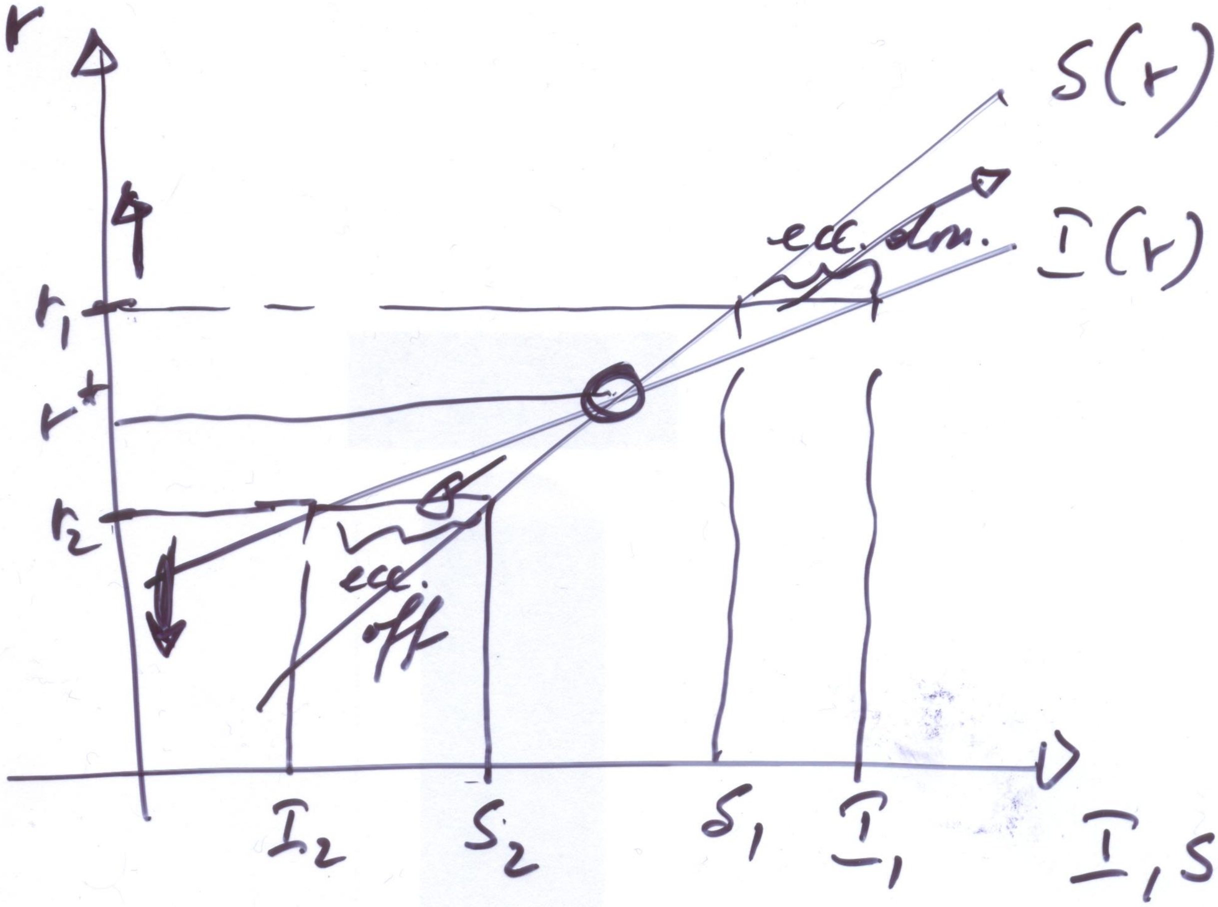
Ass. 2 : Le dec. di Inv. variano nella direz. opposta al r

$$(2) \quad S = S^{+}(r)$$

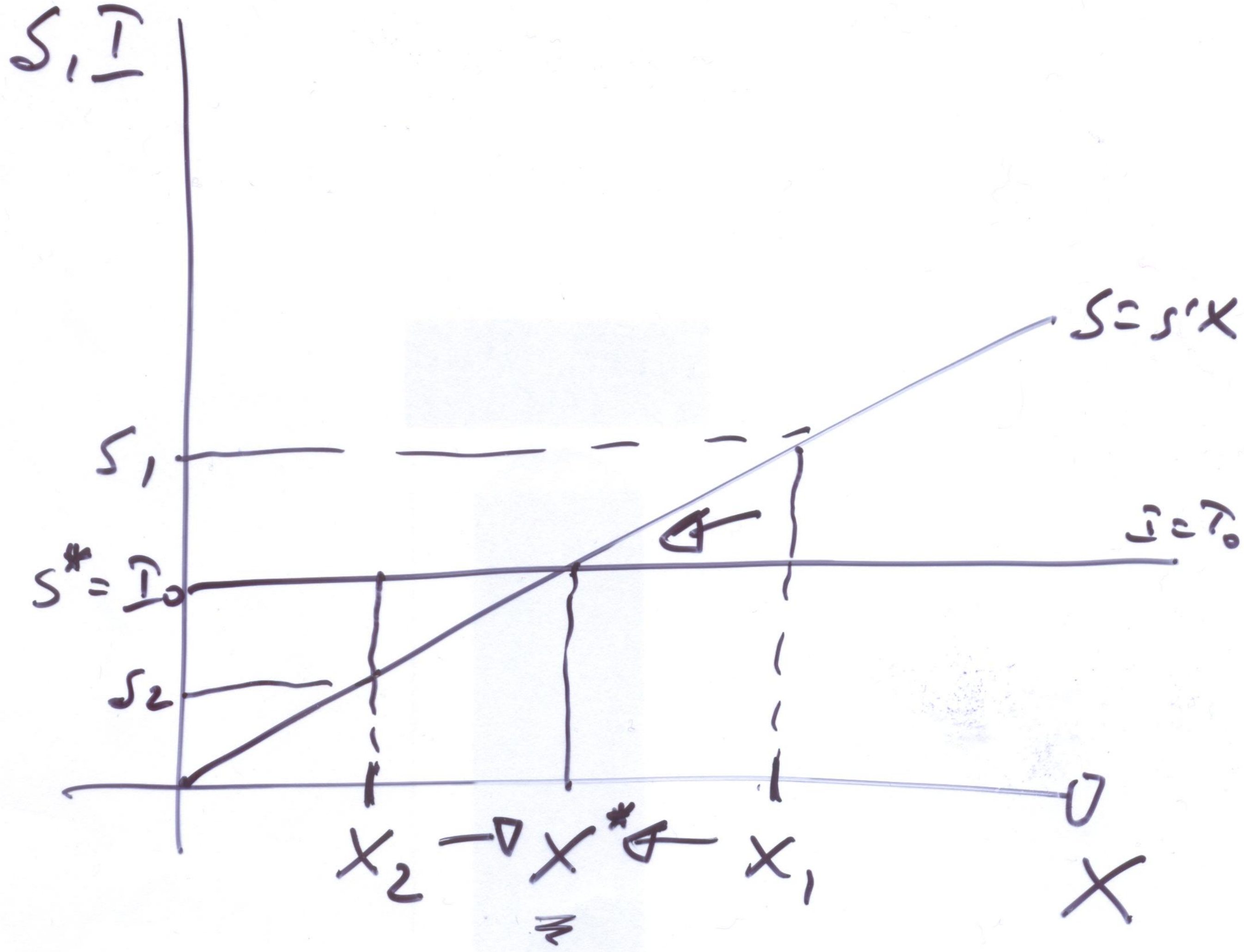
$$(3) \quad I = I^{-}(r)$$



r
S(r)
ecc. off.
r_1
r^*
r_2
I(r)
ecc. dom.
S_2
I_1
$S^* = I^*$
S_1
I_2
I, S



r
S(r)
I(r)
ecc. dom.
r_1
r^*
r_2
ecc. off
I_2
S_2
S_1
I_1
I, S


S, I
S = s'X
S_1
I = I_0
$S^* = I_0$
S_2
0
X_2
X^*
X_1
X

$$w = x - r k$$

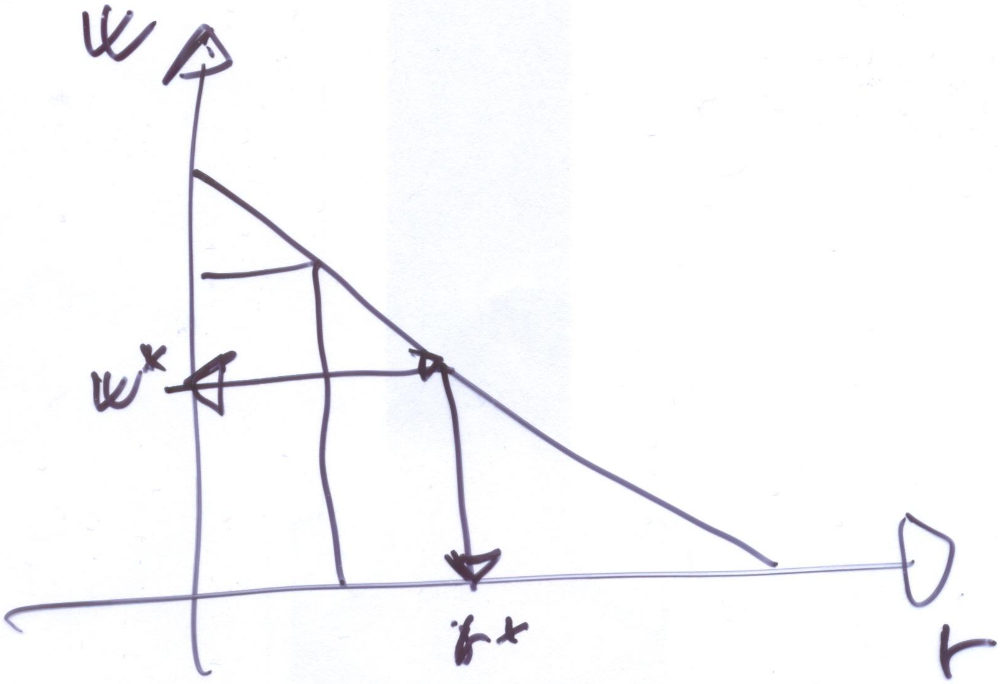
$$x = x(r)$$

$$k = k(r)$$

$$w = x(r) - r\, k(r)$$

(1) $w = f(r)$ el. mat.

(2) $w = w^*$ $r = r(i^*)$

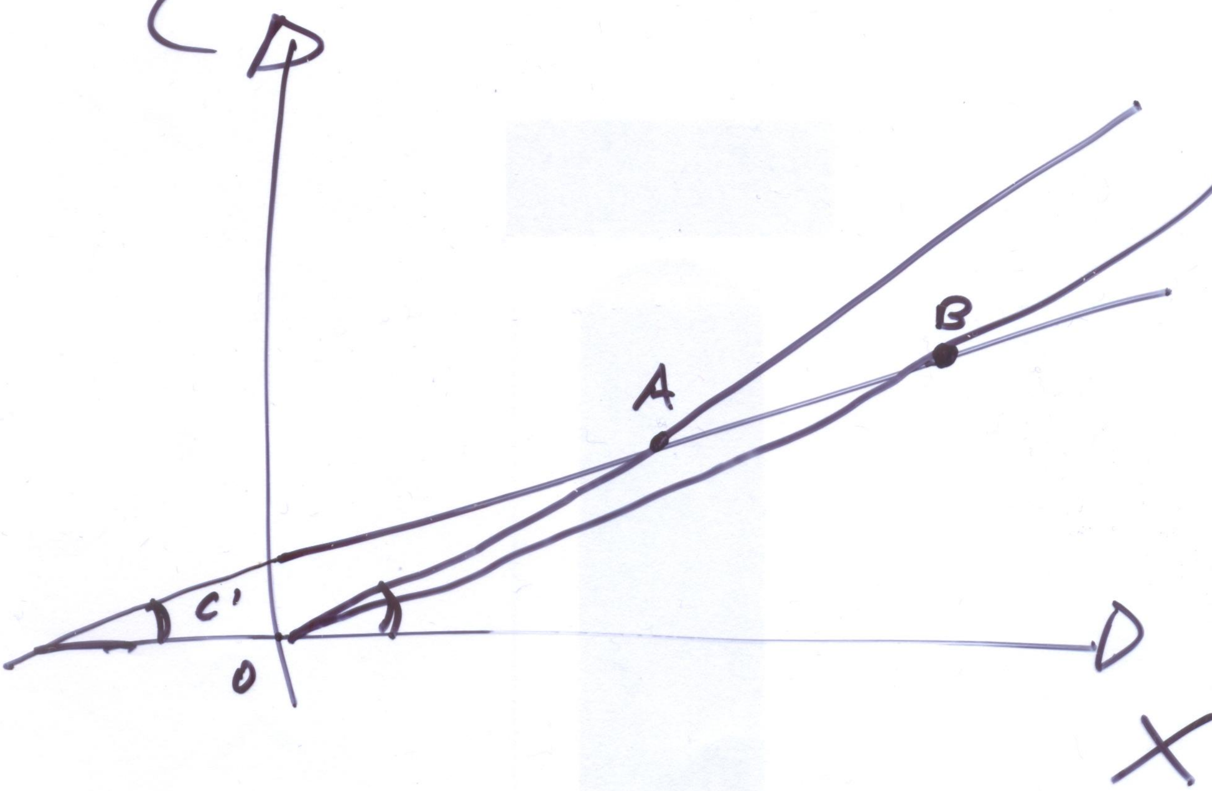


$$X_0 \quad X_1^a \quad X_2^a \cdots X_n^a$$

$$Q_1 = Q_0(1+r) \qquad Q_0 = \frac{Q_1}{1+r}$$

$$Q_2 = Q_0(1+r)^2$$

$$Q_n = Q_0(1+r)^n \qquad Q_0 = \frac{Q_n}{(1+r)^n}$$

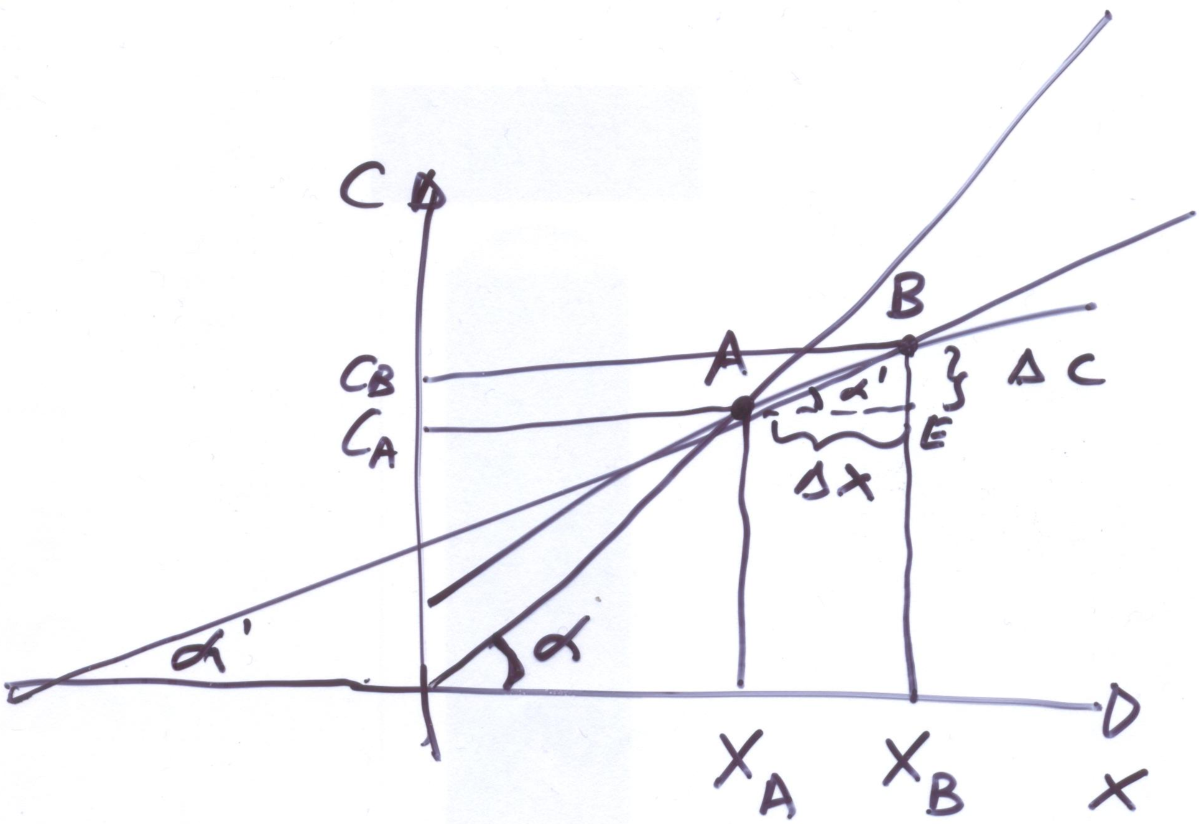


① c varia in direzione opposta X

② c' resta costante quando X varia

③ c' < c

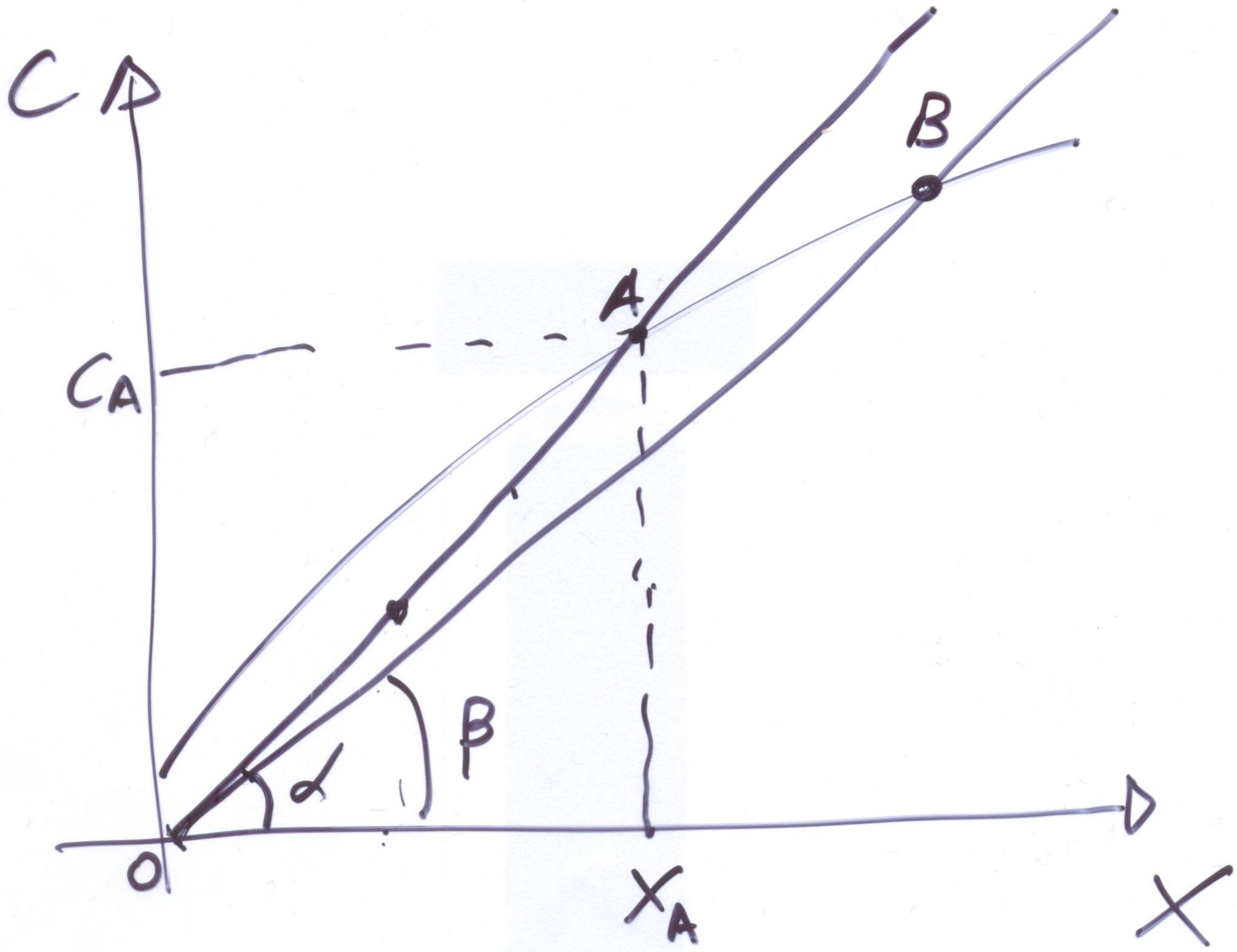
$$c' = \frac{\Delta C}{\Delta X}$$



(1) C diminuisce quando X aumenta

(2) c' " " " "

(3) c' < C



$$c = \frac{C}{X} = \frac{\overline{OC_A}}{\overline{OX_A}} = \frac{\overline{X_A A}}{OX_A}$$

$$c = \frac{C}{X}$$

$$s = \frac{S}{X}$$

$$c + s = \frac{C}{X} + \frac{S}{X} = \frac{C+S}{X} = \frac{X}{X} = 1$$

$$c' = \frac{\Delta C}{\Delta X}$$

$$s' = \frac{\Delta S}{\Delta X}$$

$$c' + s' = \frac{\Delta C}{\Delta X} + \frac{\Delta S}{\Delta X} = \frac{\Delta C + \Delta S}{\Delta X} = \frac{\Delta X}{\Delta X} = 1$$

$\Delta x \qquad \Delta c$

$$0 < \frac{\Delta c}{\Delta x} < 1$$

$$|\Delta c| < |\Delta x|$$

$$0 < \frac{\Delta c}{\Delta x} < \frac{c}{x} < 1$$

$$\frac{|\Delta c|}{c} < \frac{|\Delta x|}{x}$$

$$\frac{\Delta c}{\Delta x} < \frac{c}{x}$$

$C = C(r)$ $\quad$ $S = S(r)$

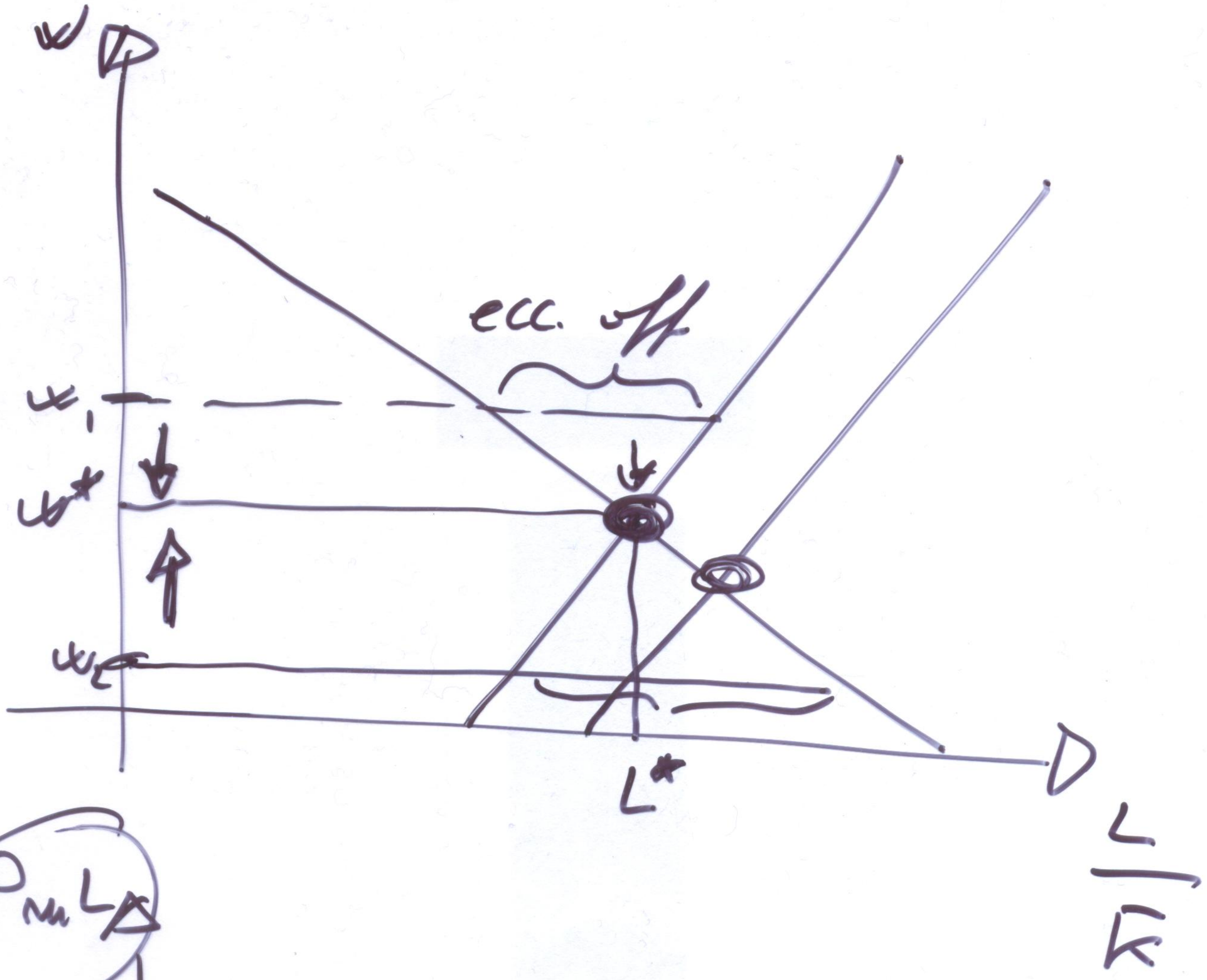
$C = C(x)$ $\quad$ $S = S(x)$

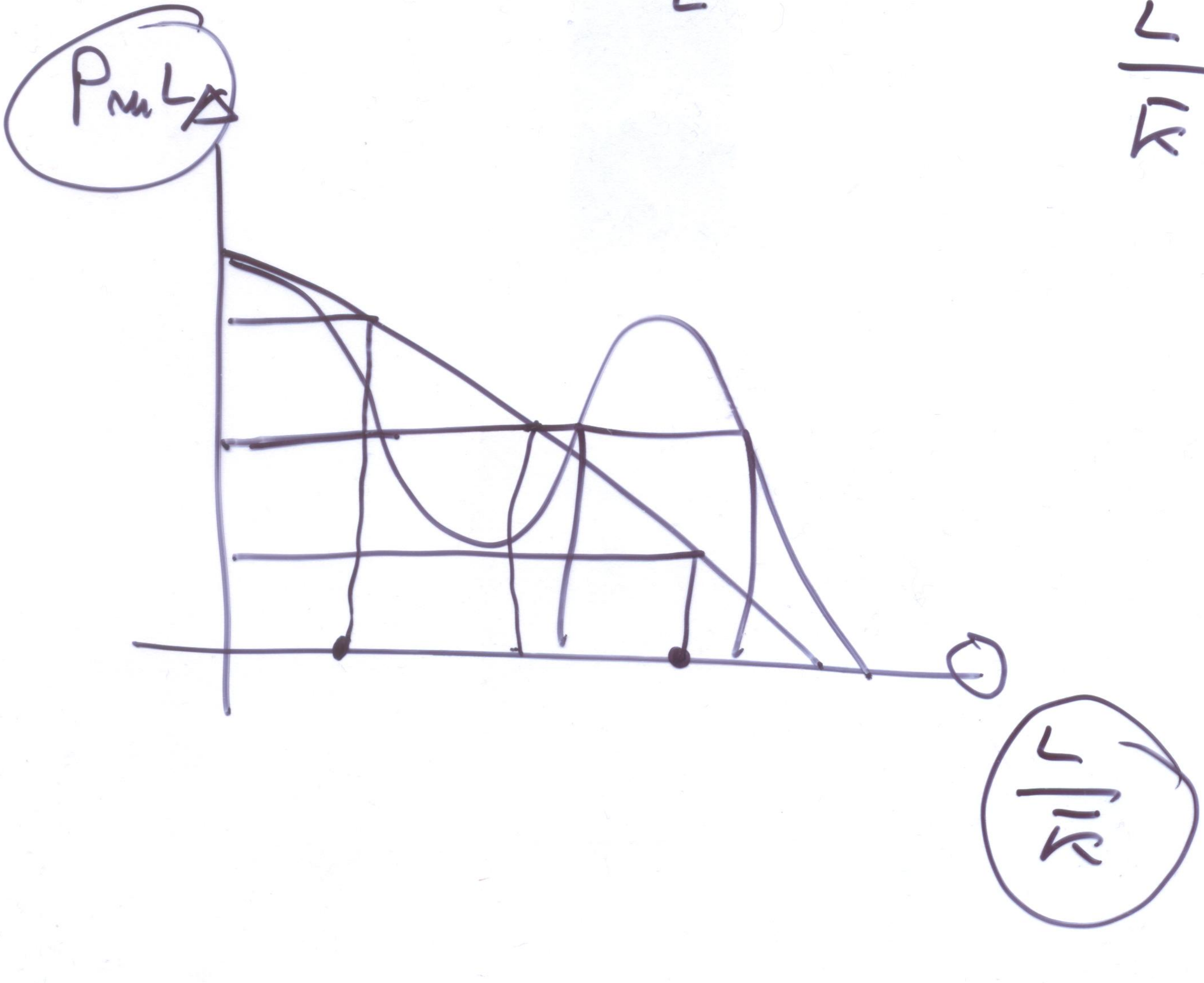
$C = C(x, r)$ $\quad$ $S = S(x, r)$

---

(1) Quando ΔX, ΔC nella stessa direzione, però non tanto quanto ~~il~~ X

(2) Quando ΔX, ΔC nella stessa direzione, però in maniera meno che proporzionale


w
ecc. off
w_1
w^*
w_2
L^*
$\frac{L}{K}$


$P_{MU}L$
$\frac{L}{K}$