• INTRODUCING HOUSEHOL ECONOMY

Becker: "Not necessary change in preferences but a in the opportunity cost of time"

MODEL

$u = u(x, \ell)$

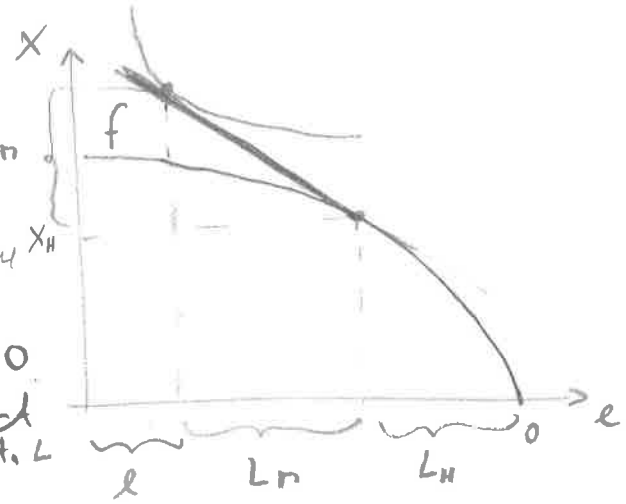
$x = x_H + x_m + x_0 \; ; p = 1$

$T = \ell + L_H + L_m$

$x_H = f(L_H) \; ; f' > 0, f'' < 0$

$x_H = \; + wL_m \; ; x_m$ & x_H perfect substit. L

$\rightarrow \frac{\partial f}{\partial x_m} = 0$ assum



what affects participation on the L_m?

$f' \gtrless w$ ⟶

FONC in CASE ③

$$\frac{\partial u/\partial L_m}{\partial u/\partial x} = w = \frac{\partial f}{\partial L_H} = \frac{\partial u/\partial L_H}{\partial u/\partial x} = \frac{\partial u/\partial L_m}{\partial u/\partial x}$$

READINGS

$$\mathcal{L}(x, \ell, u, \lambda) = u(x, \ell) + \lambda[x_0 + wL_m + f(L_H) - x] + u[T - \ell - L_m - L_H]$$

$$\left.\begin{aligned} u_x - \lambda &= 0 \\ u_\ell - u &= 0 \end{aligned}\right\} \quad \boxed{\frac{u_\ell}{u_x} = \frac{u}{\lambda} = f' = w}$$

$$\left.\begin{aligned} \lambda w - u &= 0 \\ \lambda f' - u &= 0 \end{aligned}\right\} \quad \frac{w}{f'} = 1 \rightarrow w = f'$$

$$f' = \frac{u}{\lambda}$$

You have 1 unit of time Δt to be used in three ways: l, L_H, L_M

leisure: $\Delta t \to \Delta l \to \Delta U^l = \frac{\partial U}{\partial l} \Delta t$ (i)

X home: $\Delta t \to \Delta L_H \to \Delta U^H = \frac{\partial U}{\partial X}\frac{\partial X}{\partial L_H}\Delta t$

$= \frac{\partial U}{\partial X} f' \Delta t$ (ii)

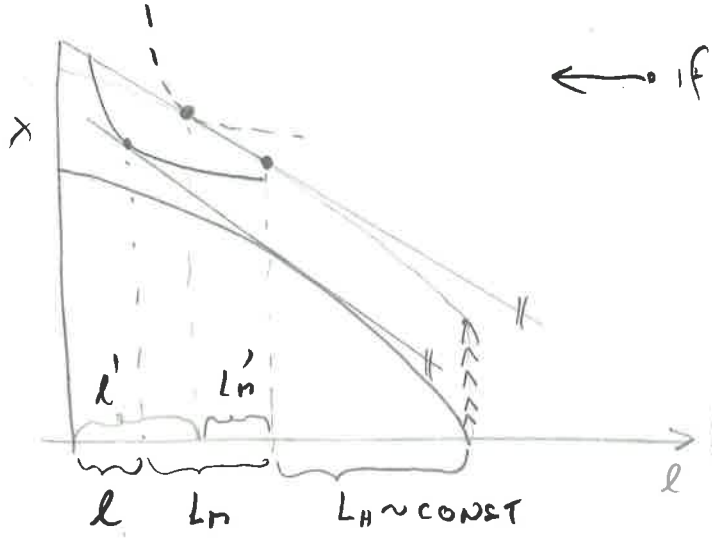
X mkt: $\Delta t \to \Delta L_M \to \Delta U^M = \frac{\partial U}{\partial X} w \Delta t$ (iii)

(i) & (ii): $\frac{\frac{\partial U}{\partial l}}{\frac{\partial U}{\partial X}} = f'$

(i) & (iii): $\frac{\frac{\partial U}{\partial l}}{\frac{\partial U}{\partial X}} = MRS_{l,X} = w$

(ii) & (iii): $f' = w$ / p

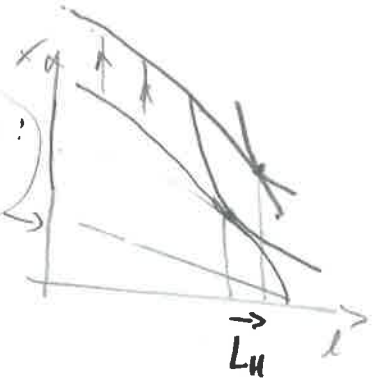
CASE Increase in non-labor income x_0



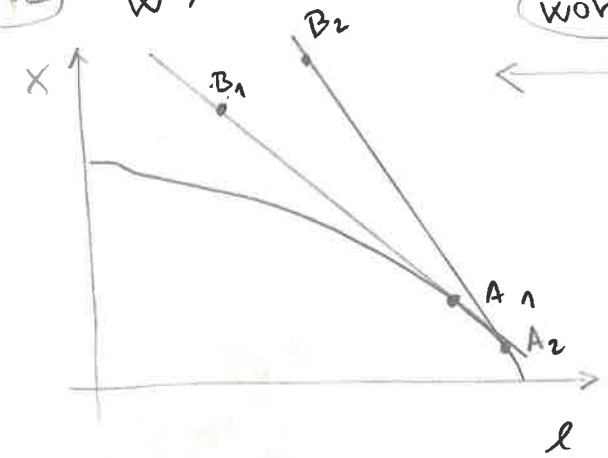
← if NORMAL GOOD, L_H will stay cons.

↗ l'
↘ Ln

IF not on the LM:
$L_H \searrow$, $l \nearrow$



CASE W ↑



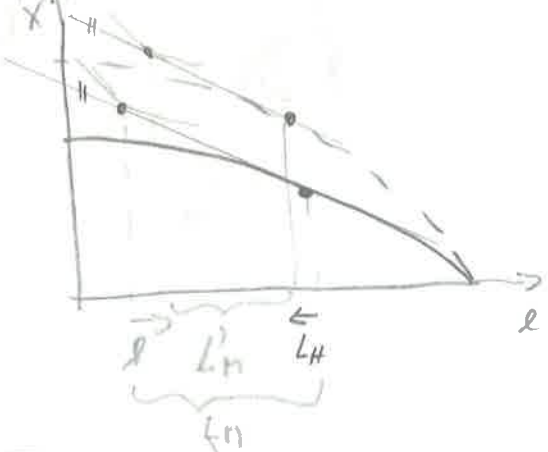
working person

← • $L_H \searrow$, L_H ?, l ?

• if not on the LM

• ↗w ⇒ • no effect
or
• participation
$L_H \searrow$, l ?, L_n ?

CASE Growth of home productivity (wash machine, vacuum cleaner)



$L_H \nearrow$, $L_n \downarrow l \uparrow$

but empirically, we observe $L_H \searrow$

why?

CASE SCHOOLING - increases not only w but also shift $f(L_H)$ ↑