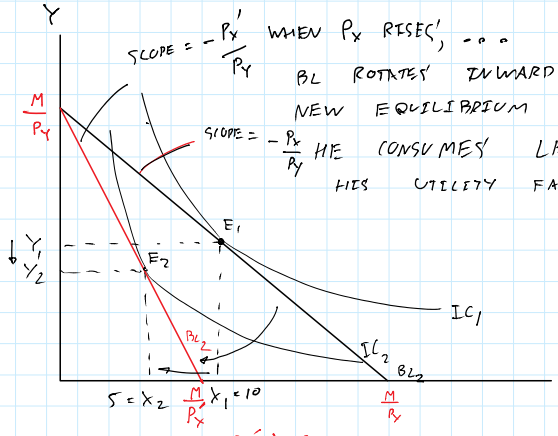
EFFECT OF A PRICE CHANGE ON A CONSUMER'S CHOICE

2 GOODS : X & Y
INCOME = M
PRICE OF X = P_X
PRICE OF Y = P_Y



WHEN P_X RISES', ...
BL ROTATES INWARD FROM BL_1 TO BL_2.
NEW EQUILIBRIUM IS AT E_2 WHERE HE CONSUMES LESS OF X AND LESS OF Y.
HIS UTILITY FALLS'...

	OLD	NEW
	$-\frac{P_X}{P_Y}$	$-\frac{P_X'}{P_Y}$
Ex:	$P_X = 100$, $P_Y = 50$	$P_X' = 200$, $P_Y = 50$
	$-\frac{P_X}{P_Y} = -\frac{100}{50} = -2$	$-\frac{P_X'}{P_Y} = -\frac{200}{50} = -4$

ΔQ^d_X FROM X_1 TO X_2 IS CALLED "TOTAL EFFECT OF A PRICE INCREASE ON GOOD X"

IN SHORT, ΔQ^d_X FROM X_1 TO X_2 => T.E.

THERE ARE 2 REASONS THAT INDUCE HIM TO BUY LESS OF X:

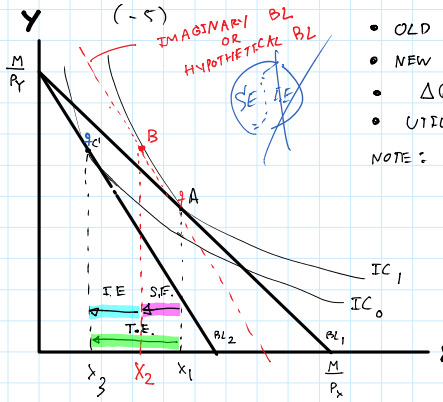
(1) SUBSTITUTION EFFECT (S.E.): HE BUYS LESS OF X PARTLY BECAUSE OF THE FACT THAT GOOD X BECOMES RELATIVELY MORE EXPENSIVE COMPARED TO GOOD Y

+

(2) INCOME EFFECT (I.E.): A RISE IN P_X MAKES HIM BECOME POORER (i.e., HIS PURCHASING POWER FALLS OR HIS REAL INCOME FALLS). IN RESPONSE TO THIS FACT, HE BUYS LESS OF X AS WELL.

T.E. = S.E. + I.E.

$\Delta Q^d_{X,\,T.E.} = \Delta Q^d_{X,\,VIA\ S.E} + \Delta Q^d_{X,\,VIA\ I.E.}$



- OLD CHOICE : A
- NEW CHOICE : C
- $\Delta Q^d_{X,\,T.E} = \Delta Q^d_{X,\,VIA\ S.E.} + \Delta Q^d_{X,\,VIA\ I.E.}$
- UTILITY FALLS'...

NOTE: SLOPE OF $BL_1 = -\frac{P_X}{P_Y}$
SLOPE OF $BL_2 = -\frac{P_X'}{P_Y}$ WHERE $P_X' > P_X$

$\uparrow P_X$ → $\left(\frac{P_X}{P_Y}\right)\uparrow$ = OPP. COST OF X IS INCREASING → S.E. → BUY LESS OF X

$\uparrow P_X$ → HIS PURCHASING POWER OR REAL INCOME FALLS → I.E → BUY LESS OF X

$Q^d_X \downarrow$ (FROM $X_1 \xrightarrow{T.E} X_3$)

→ HIS PURCHASING POWER OR REAL INCOME FALLS i.e. → BUY LESS OF X !

(8)

X IS A NORMAL GOOD

$\Delta Q^d_{X,\,T.E.} = \Delta Q^d_{X,\,VIA\ I.E.} + \Delta Q^d_{X,\,VIA\ S.E.}$

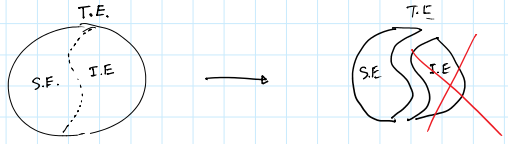
(C) X_3 ← (A) X_1 ; (C) X_3 ← (B) X_2 ; (B) X_2 ← (A) X_1

MOVEMENT FROM A → B REFERS TO "S.E."

MOVEMENT FROM B → C REFERS TO "I.E."

NOTICE THAT WHEN X IS A NORMAL GOOD, BOTH S.E. AND I.E. WORK IN SAME DIRECTION, INDUCING HIM TO BUY LESS OF X.

PROCESS OF DECOMPOSING T.E. INTO S.E AND I.E

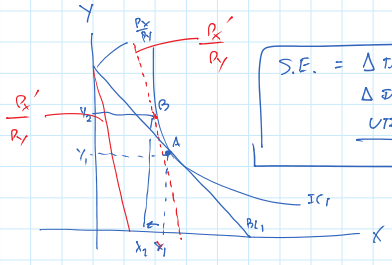


TO SEE THE PURE SUBSTITUTION EFFECT (S.E.), OUR STRATEGY IS THAT WE TRY TO "ELIMINATE" INCOME EFFECT. (HOW?)

TO ELIMINATE I.E, WE ASK THE FOLLOWING QUESTION:

IN FACING W/ THE NEW RELATIVE PRICE $\left(\frac{P_x'}{P_y}\right)$, HOW MUCH MONEY HE WOULD NEED IN ORDER TO "GET BACK" TO THE OLD UTILITY LEVEL (OR THE OLD IC)?

TO DO THIS, WE CONSTRUCT "AN IMAGINARY BL" W/ TWO PROPERTIES: ① PARARELL W/ THE NEW BL (BL_2) & ② TOUCH OR TANGENT W/ THE OLD IC.



S.E. = Δ IN QUANTITY DEMANDED DUE TO Δ IN RELATIVE PRICE TO HOLD UTILITY CONSTANT.