

$$MU_Y \cdot \Delta Y = -MU_X \cdot \Delta X$$

$$* \quad MRS_{xy} = \frac{\Delta Y}{\Delta X} = \left(\frac{-MU_X}{MU_Y} \right) \quad *$$

RELATIVE MARGINAL UTILITY BETWEEN THE TWO GOODS

SO, THE CONDITION ABOVE: $MRS_{xy} = -\frac{P_x}{P_y}$

CAN BE WRITTEN AS

$$\frac{-MU_X}{MU_Y} = -\frac{P_x}{P_y}$$

SCORE OF IC = $\frac{MU_X}{MU_Y}$ = $\frac{P_x}{P_y}$ = SCORE OF BL

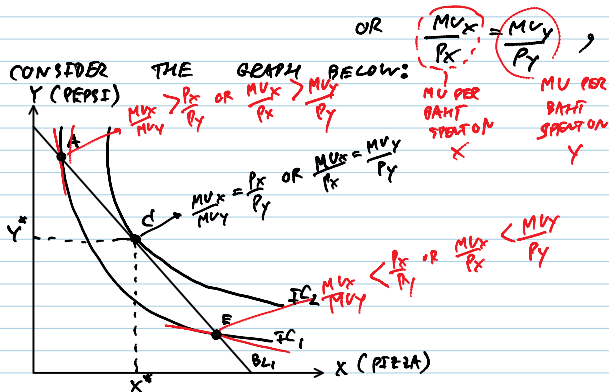
OR

$$\frac{MU_X}{P_x} = \frac{MU_Y}{P_y}$$

MARGINAL HAPPINESS FROM LAST PAINT SPENT ON GOOD X = MARGINAL HAPPINESS FROM LAST PAINT SPENT ON GOOD Y

31.10.2012

TO GET A BETTER UNDERSTANDING ON THE RATIONAL SPENDING RULE: $\frac{MU_X}{MU_Y} = \frac{P_x}{P_y}$



- IF A CONSUMER ADMS AT MAXIMIZING UTILITY OR SATISFACTION GIVEN AVAILABLE RESOURCES, HE SHOULD SPEND SUCH THAT ONCE HE USES UP HIS RESOURCES, MARGINAL UTILITY FROM LAST PAINT SPENT ON GOOD X ($\frac{MU_X}{P_x}$) = MARGINAL UTILITY FROM THE LAST PAINT SPENT ON Y ($\frac{MU_Y}{P_y}$)
- THE ABOVE RULE IS CALLED "RATIONAL SPENDING RULE"

OR

THE ABOVE RULE IS CALLED

" RATIONAL SPENDING RULE "

OR
GOLDEN RULE OF UTILITY MAXIMIZATION

• WHEN $\frac{MU_x}{P_x} > \frac{MU_y}{P_y}$ (FOR INSTANCE, AT A),

HE SHOULD REALLOCATE HIS BASKET

BY BUYING MORE OF X AND LESS

OF Y. (SINCE, NOW LAST PAINT

SPENT ON X GIVES

HIGHER MARGINAL UTILITY

THAN LAST PAINT

SPENT ON Y.

• AT POINT E,

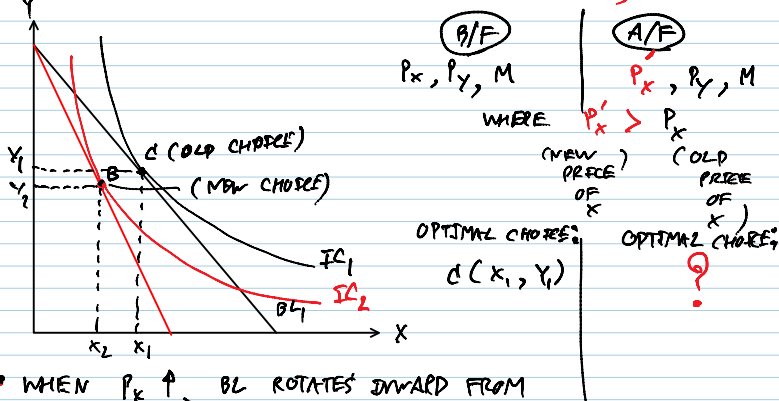
NEXT, THE FOLLOWING ISSUE IS QUITE

TOUGH: INCOME EFFECT & SUBSTITUTION EFFECT

ISSUE #1: WHAT IF PRICE OF GOOD X RISES?

WE WANT TO SEE THE EFFECT OF AN INCREASE IN P_x ON

CONSUMER'S OPTIMAL CHOICE (OR EQUILIBRIUM)



• WHEN $P_x \uparrow$, BL ROTATES INWARD FROM BL_1 TO BL_2 .

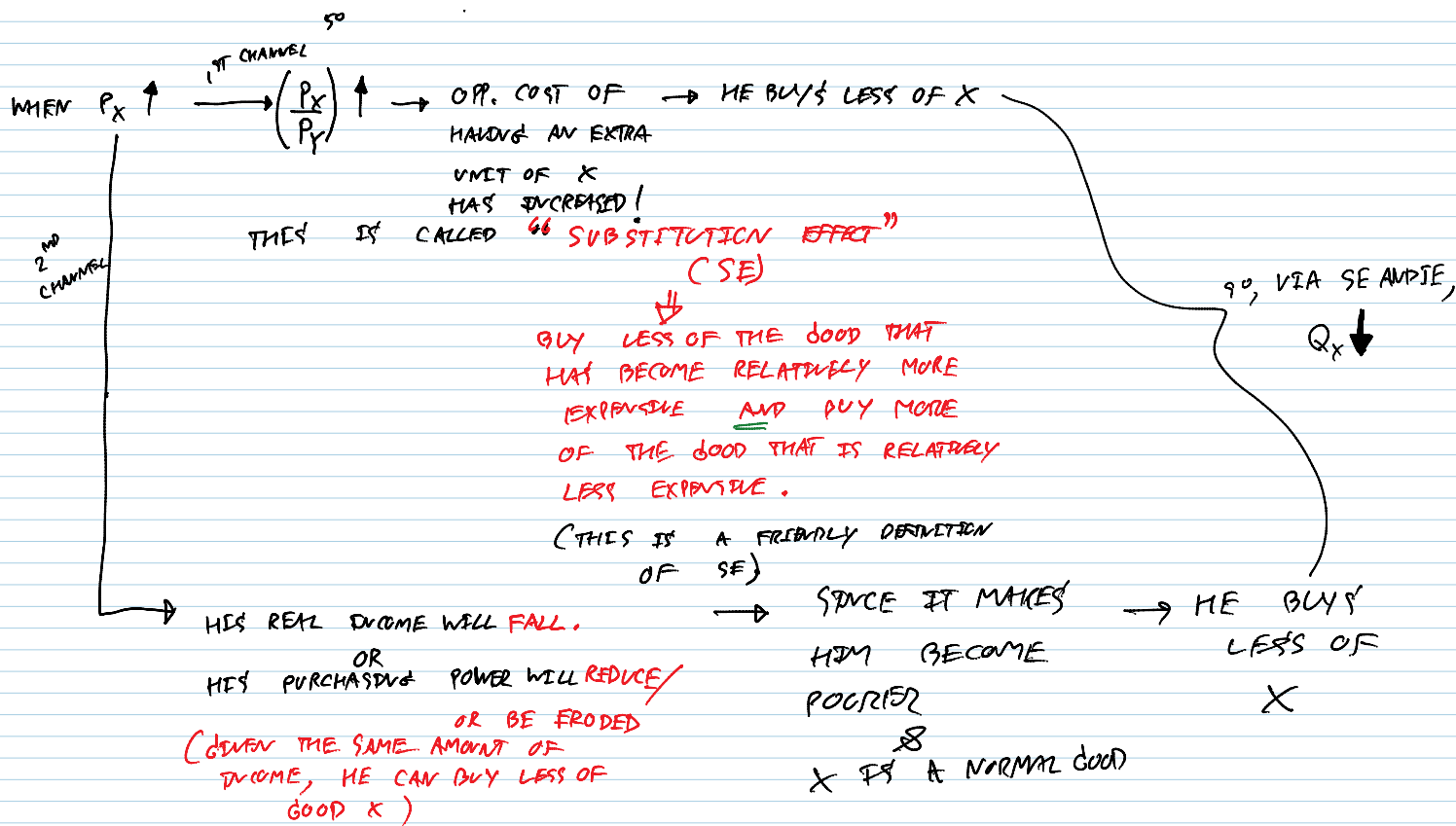
• THE "NEW" OPTIMAL CHOICE IS BASKET B (X_2, Y_2) WHILE THE NEW IC, NAMELY IC_2 TOUCHES W/ THE NEW BL, NAMELY BL_2 .

• WHEN $P_x \uparrow$, HE BUYS LESS OF X & LESS OF Y AND GETS LOWER SATISFACTION LEVEL ON IC_2 .

• ECONOMISTS WANT TO GIVE AN ECONOMIC REASONING TO THE QUESTION OF

" WHY HE BUYS LESS OF X WHEN P_x RISES ?

$$\frac{100}{P_x} = 2 \rightarrow \frac{100}{P_{x,50}} = 4$$



VIA THIS 2ND CHANNEL, THIS IS SO CALLED "INCOME EFFECT" (IE)

$$\text{TOTAL EFFECT (TE) OF AN INCREASE IN } P_X = \text{SUBSTITUTION EFFECT (SE)} + \text{INCOME EFFECT (IE)}$$

IN SHORT :

$$\boxed{TE = SE + IE}$$