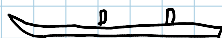


# APPLICATIONS

- WHEN GOOD X AND Y ARE PERFECT COMPLEMENTS  
SUPPOSE X (SKI SHOES) & Y (SKI BINDINGS)



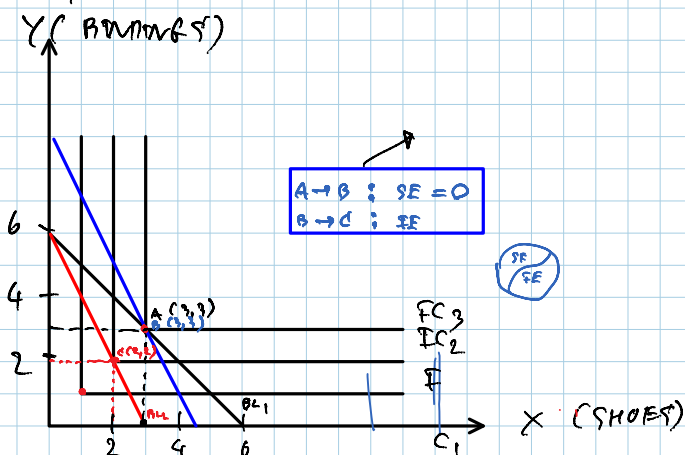
$$P_x = 200 \text{ € / PAIR}$$

$$P_y = 200 \text{ € / PAIR}$$

$$M = 1200 \text{ € / YEAR}$$

$$\frac{M}{P_x} = \frac{1200}{200} = 6 \text{ PAIRS OF SHOES}$$

$$\frac{M}{P_y} = \frac{1200}{200} = 6 \text{ PAIRS OF BINDINGS}$$



SUPPOSE  $P_x$  RISES FROM 200 €/PAIR TO 400 €/PAIR.

- OLD CHOICE : A(3, 3)
- NEW CHOICE : C(2, 2)
- THIS IS "TOTAL EFFECT (OF AN INCREASE IN  $P_x$ )."

$$TE_{(A \rightarrow C)} = SE + IE$$

IN THIS CASE, SUBSTITUTION EFFECT = 0  
ONLY INCOME EFFECT PLAYS ROLE IN  
EXPLAINING HIS BEHAVIOR.

- THE BLUE BUDGET LINE WE CONSTRUCTED IS TO "ELIMINATE" IE AND THEN CAN SEE PURE SE.

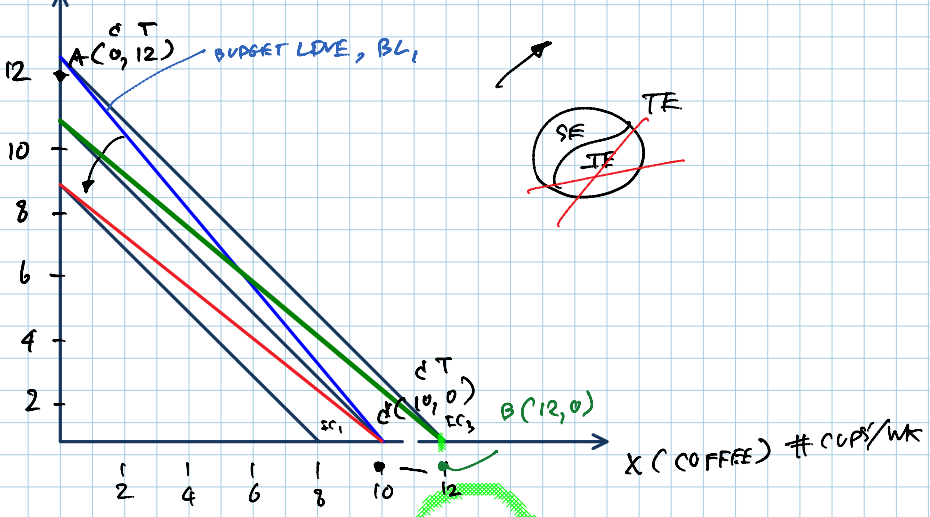
MEANING?  $\Rightarrow$  ONCE WE MAKE HIS REAL INCOME UNCHANGED (I.E., HE ARRIVED AT OLD IE), WE OBSERVE THAT HE WOULD STILL BUY "ORIGINAL BASKET A(3, 3)!"  
 $\Rightarrow$  NO SUBSTITUTION EFFECT AT ALL.

(READ ROBERT H. FRANK'S TEXT)  
IN COURSE OUTLINE \*

APPLICATION: WHEN X (COFFEE) AND Y (TEA) ARE PERFECT SUBSTITUTES.

$$\begin{aligned}
 P_C &= 30 \text{ BAHT/CUP} \\
 P_T &= 25 \text{ BAHT/CUP} \\
 M &= 300 \text{ BAHT/WK} \\
 Y \text{ (TEA) \# CUPS/WK} &
 \end{aligned}
 \left. \vphantom{\begin{aligned} P_C \\ P_T \\ M \\ Y \end{aligned}} \right\} \Rightarrow \frac{M}{P_C} = \frac{300}{30} = 10 \text{ CUPS/WK}$$

$$\frac{M}{P_T} = \frac{300}{25} = 12 \text{ CUPS/WK}$$



- GIVEN  $P_C, P_T, M$ ,  $A(0,12)$  THE ORIGINAL CHOICE.
- NOW, SUPPOSE  $P_T$  RISES BY 50%. ( $25 \rightarrow 37.5$ )  
SO,  $\frac{M}{P_T} = \frac{300}{37.5} = 8$  CUPS/WK
- GIVEN  $P_C, P_T', M$ ,  $C(10,0)$  IS THE NEW CHOICE.  
NOTICE THAT HE IS 'LESS HAPPY' (ON  $I_3$ )

• TE = S.E. + I.E.

$A \rightarrow C$   
 $(0,12) \rightarrow (10,0)$

S.E.  $A \rightarrow B$   
 $(0,12) \rightarrow (12,0)$   
SEE ...

I.E.  $B \rightarrow C'$   
 $(12,0) \rightarrow (10,0)$

② UNFORTUNATELY, HIS REAL INCOME ACTUALLY FALLS, HE COULD AFFORD ONLY  $(10,0)$  NOT  $(12,0)$ .

① AT THE NEW RELATIVE PRICE ( $\frac{P_C}{P_T}$ ), IF HE WERE TO HAVE ENOUGH INCOME TO MAINTAIN HIS ORIGINAL UTILITY, HE WOULD CONSUME ONLY COFFEE !!!

NOTICE THAT FOR PERFECT SUBSTITUTES CASE  
S.E. IS RELATIVELY HUGE COMPARE TO I.E.

## WHAT'S REMAINED:

- CASE WHERE GOOD X IS AN INFERIOR GOOD AND Y IS A NORMAL GOOD.
- CASE WHERE GOOD X IS GIFFEN GOOD<sup>-</sup>
- 3 APPLICATIONS (READ MANKIW) \*