

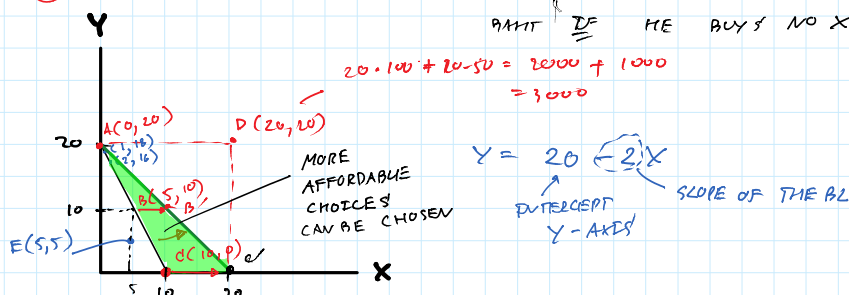
BUDGET LINE

CONSIDER 2 GOODS : X & Y

 P_x = PRICE OF GOOD X P_y = PRICE OF GOOD Y M = MONEY INCOMESUPPOSE THAT $P_x = 100$ BAHT/UNIT $P_y = 50$ BAHT/UNIT $M = 1000$ BAHT/WEEK

$$\frac{M}{P_x} = \frac{1000}{100} = 10 \text{ UNITS} \rightarrow \text{MAXIMUM AMOUNT OF X HE CAN AFFORD W/ HIS 1000 BAHT IF HE BUYS NO Y.}$$

$$\frac{M}{P_y} = \frac{1000}{50} = 20 \text{ UNITS} \rightarrow \text{MAXIMUM AMOUNT OF Y HE CAN AFFORD W/ HIS 1000 BAHT IF HE BUYS NO X.}$$



FACT#1 LINE AC IS SO CALLED "A BUDGET LINE": A COLLECTION OF ALL CONSUMPTION BASKET HE CAN PURCHASE AND MONEY IS SPENT UP.

FACT#2 BASKETS OUTSIDE THE BL ARE INFEASIBLE CHOICES/BASKETS

FACT#3 BASKET INSIDE THE BL ARE FEASIBLE BUT MONEY INCOME IS NOT SPENT UP.

FACT#4 THE SLOPE OF THE BL ABOVE IS EQUAL TO -2 .

-2 REFLECTS OPPORTUNITY COST OF HAVING ONE MORE UNIT OF X MEASURED IN TERM OF HOW MANY OF Y HE MUST FORGO.

FACT#5 $Y = 20 - 2X$ IS THE BL EQUATION

EX: IF $X=0$, $Y=20$ OPP. COST OF X
 IF $X=1$, $Y=20-2(1)=18$
 IF $X=2$, $Y=20-2(2)=16$
 IF $X=10$, $Y=20-2(10)=0$

MAX. AMOUNT OF Y HE CAN AFFORD IF HE BUYS NO X

FACT#6 IF GOOD X BECOMES CHEAPER: $P_x = 100 \rightarrow P'_x = 50$ BAHT/UNIT, THE BL WILL ROTATE OUTWARD FROM AC TO AC'.

- MORE AFFORDABLE CHOICES
- OPP. COST OF X BECOMES CHEAPER:

YESTERDAY : - 2Y FOR + 1X

TODAY : - 1Y FOR + 1X ☺

FACT #7

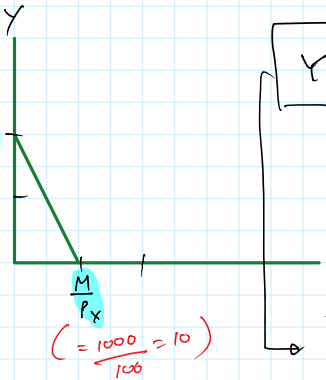
LET'S DO SOMETHING IN ABSTRACT FORM (W/O NUMBERS)

• M, P_X, P_Y

• $\frac{M}{P_X}$

• $\frac{M}{P_Y}$

($20 = \frac{1000}{50} = \frac{M}{P_Y}$)



$$Y = \left(\frac{M}{P_Y} \right) - \left(\frac{P_X}{P_Y} \right) \cdot X$$

[$\approx Y = 20 - 2X$]

MAX.
Y HE
CAN AFFORD
IF BUYING
NO X.

= RELATIVE PRICE
= PRICE RATIO
= OPP. COST OF GOOD X

BUDGET LINE EQUATION

REARRANGING THE BL EQUATION ABOVE GIVES :

$$Y = \frac{M}{P_Y} - \frac{P_X}{P_Y} X$$

$$Y = \frac{M - P_X \cdot X}{P_Y}$$

$$P_Y \cdot Y = M - P_X \cdot X$$

$$P_X \cdot X + P_Y \cdot Y = M$$

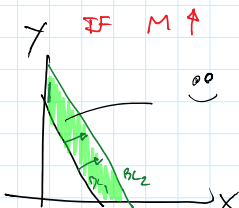
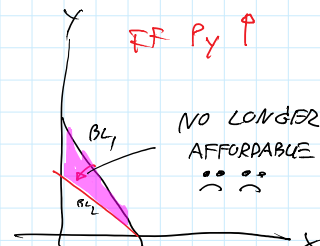
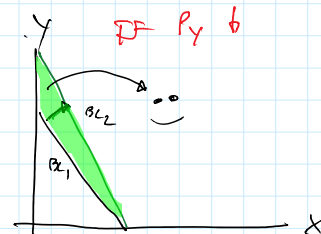
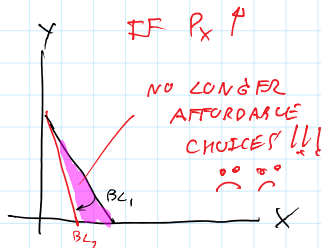
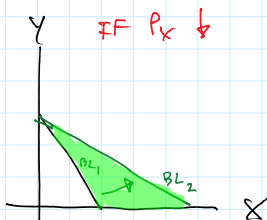
EXPENDITURE ON X + EXPENDITURE ON Y = MONEY INCOME
TOTAL EXPENDITURES

W/ $P_X = 100, P_Y = 50, M = 1000$: $100 \cdot X + 50 \cdot Y = 1000$

(10, 0) → $100 \cdot 10 + 50 \cdot 0 = 1000$ ✓

(0, 20) → $100 \cdot 0 + 50 \cdot 20 = 1000$ ✓

MORE ABOUT BL



NOTE : SLOPE REMAINS THE SAME
AS NOTHING HAPPENS TO P_X, P_Y .

APPLICATION : FOOD STAMPS

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CONSIDER TWO GOOD :

$$P_x = 100 \text{ BAHT/UNIT}$$

$$P_y = 100 \text{ BAHT/DISH}$$

$$M = 1000 \text{ BAHT/DAY}$$

NOW FOOD CRISIS OCCURS.

GOVT. GIVES FOOD STAMPS

TO THIS GUY : 5 STAMPS
(COUPONS)

(= 5 DISHES)

