Topic 2
Consumer Choice

Preferences vs Choice

- Preferences

- Choice

Key Idea:

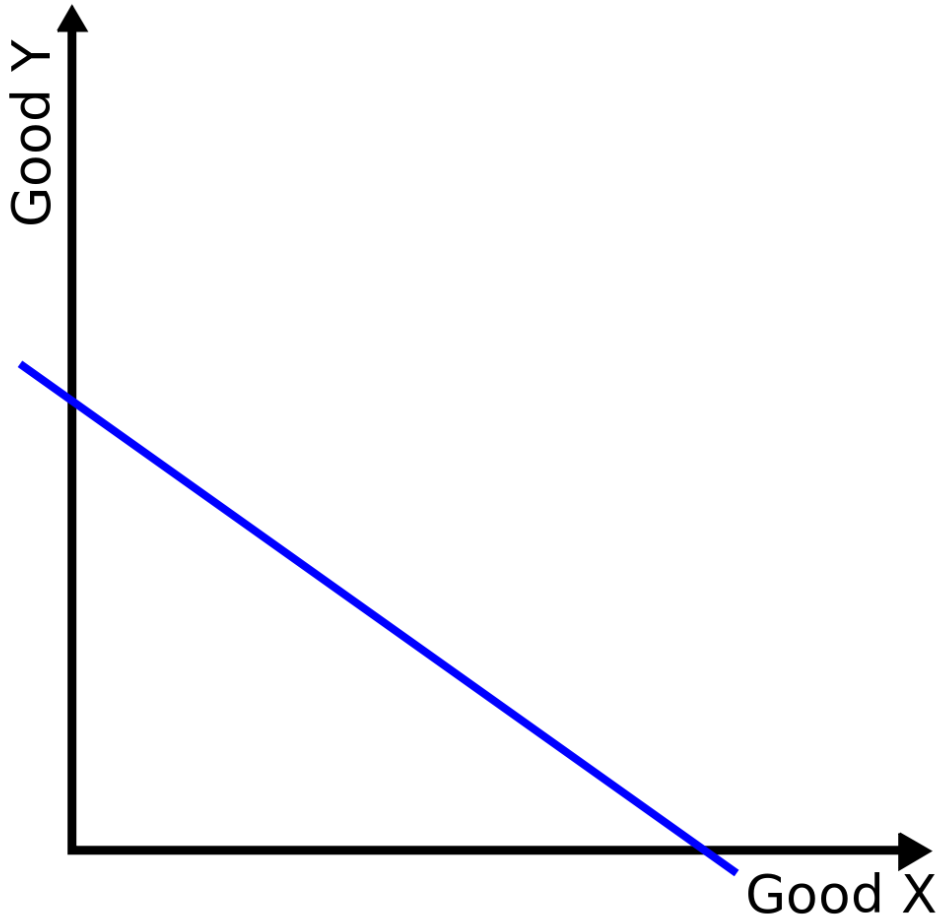
Notation

- Assume only two goods: X and Y

- Price of X: Px
- Price of Y: Py
- Income: I

- Expenditure on basket (X,Y):

Definitions



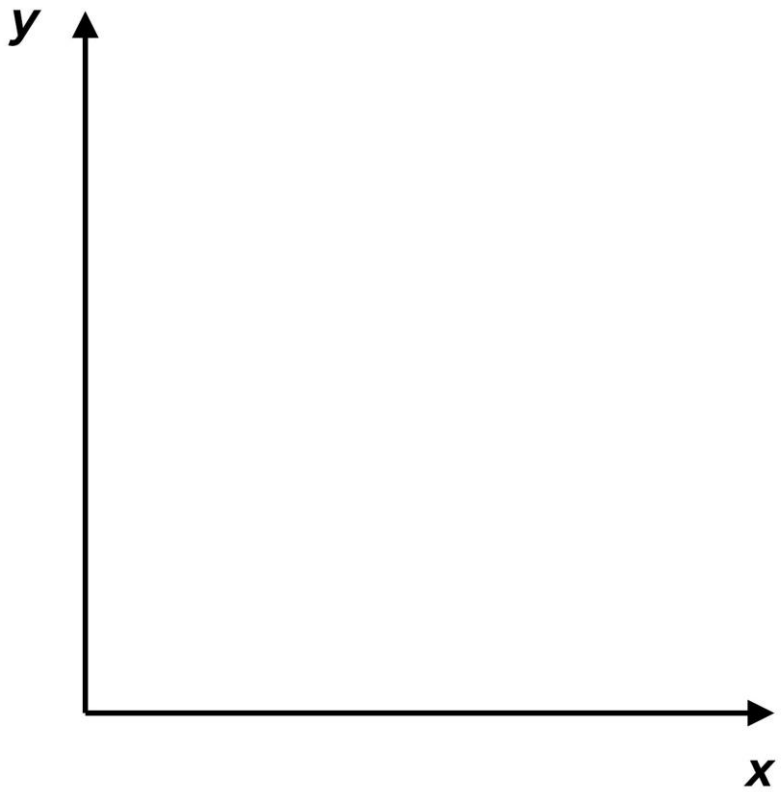
- Budget constraint / Budget set
- Budget line

Budget Line – Example

Suppose

- I = 800
- Px = 20
- Py = 40

Equation:



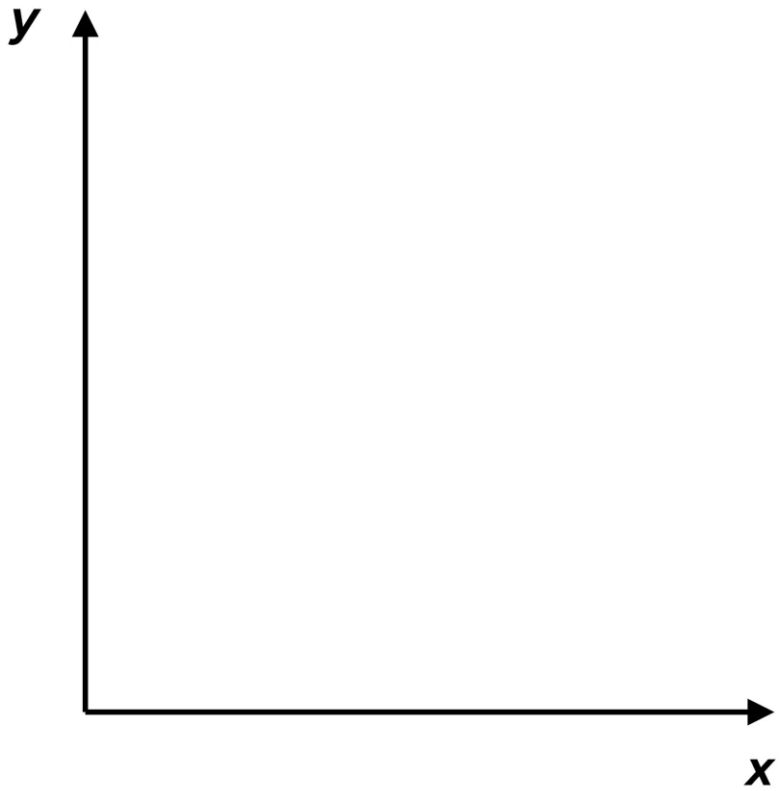
Budget Line – Example

What happens when…

income rises or falls?

Suppose

- I = 800 → I’ = 1000
  → I’’ = 400
- Px = 20
- Py = 40



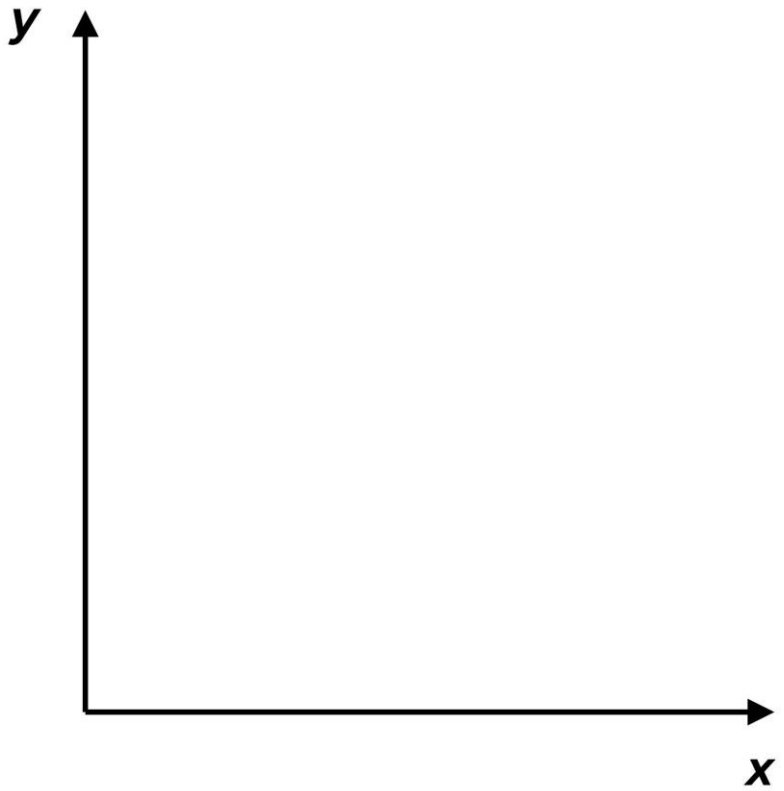
Budget Line – Example

What happens when…

Px rises or falls?

Suppose

- I = 800
- Px = 20 → Px’ = 40
  → Px’’ = 10
- Py = 40



Budget Line – Example

LEARNING-BY-DOING EXERCISE 4.1

Good News/Bad News and the Budget Line

Suppose that a consumer's income (I) doubles and that the prices (P_x and P_y) of both goods in his basket also double. He views the doubling of income as good news because it increases his purchasing power. However, the doubling of prices is bad news because it decreases his purchasing power.

Problem What is the net effect of the good and bad news?

Slope of the Budget Line

BL: $P_xX + P_yY = I$

Optimal Choice

Consumer's Problem:

Optimal Choice:

Optimal Choice

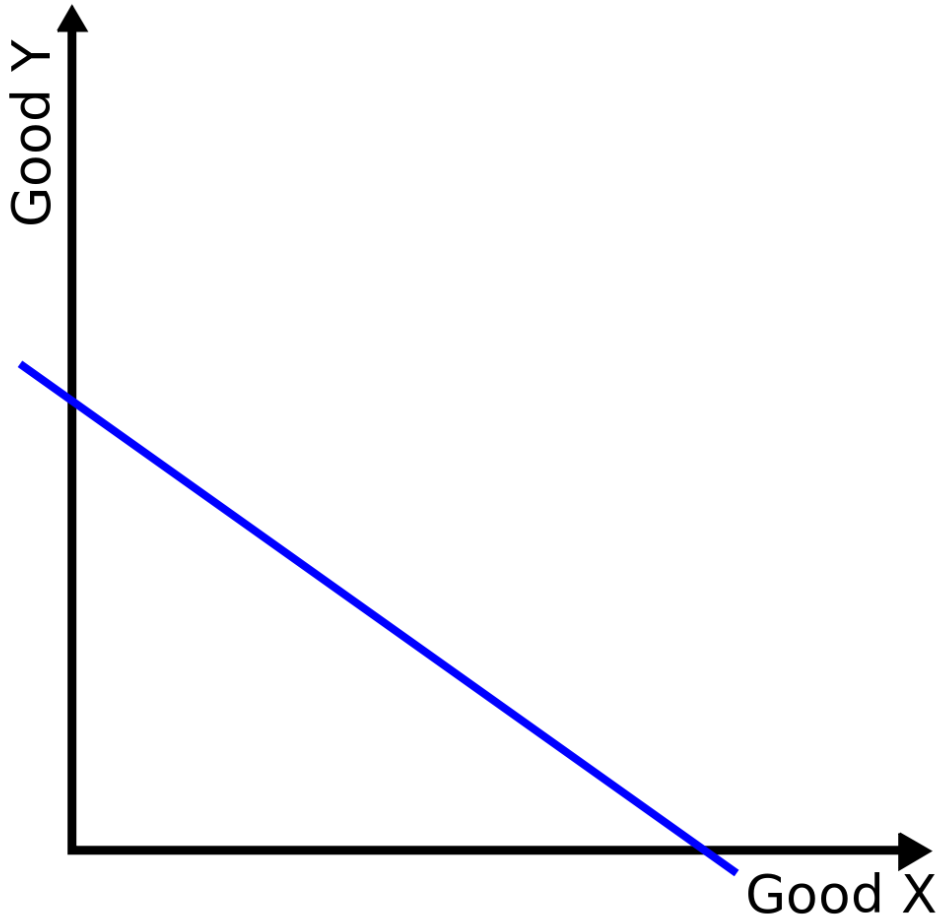
Three Possible Solutions to Consumer Choice:

1. Interior Solution

2. Corner Solution

3. Infinitely Many Solutions

Optimal Choice – Interior Solution

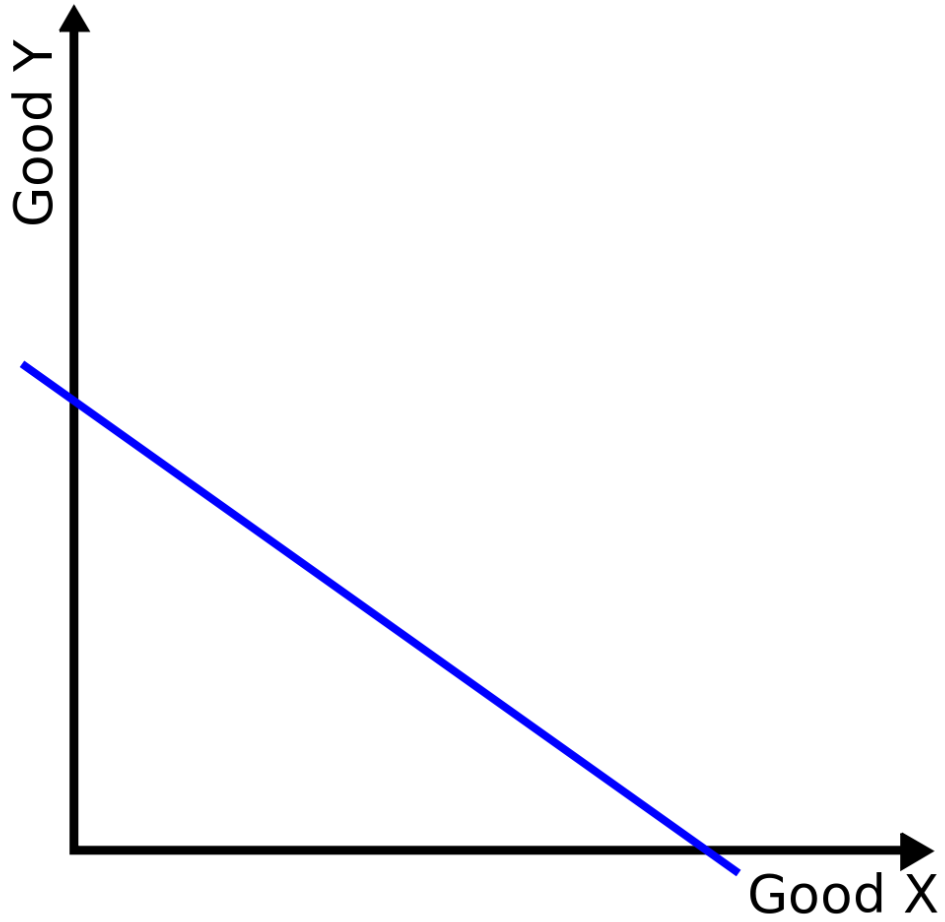


Case 1: Interior Solution

Optimal Choice – Interior Solution

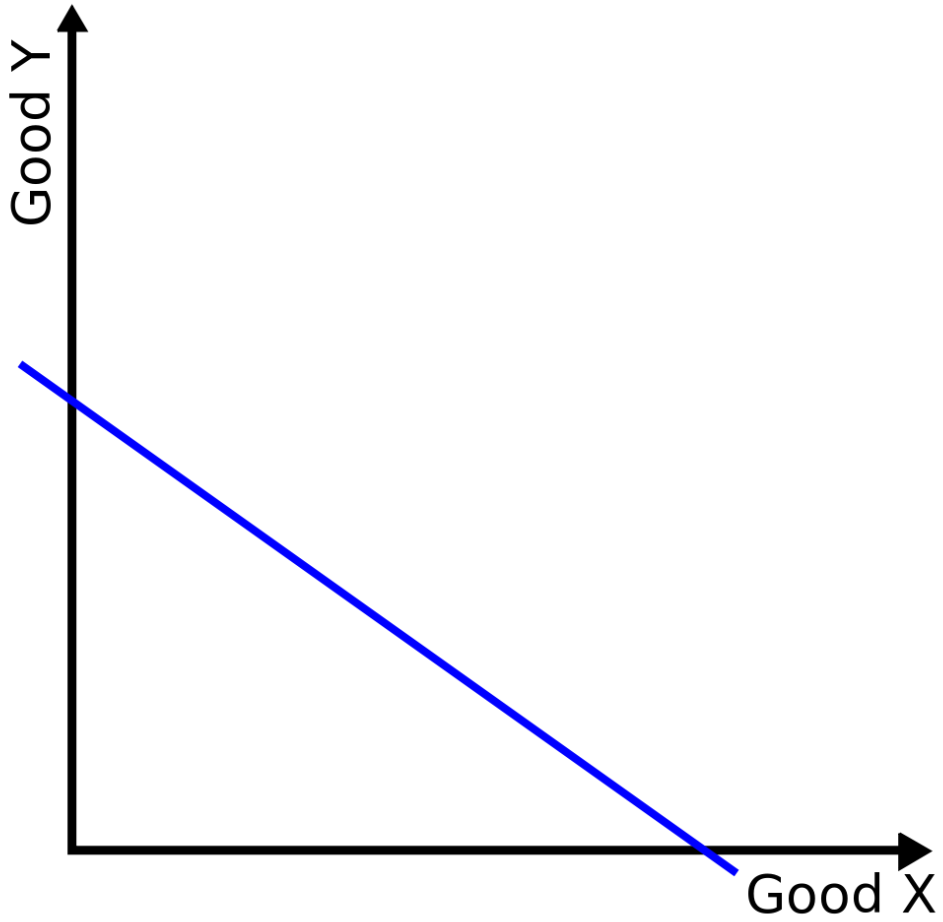
Explaining the Optimality Condition

Optimal Choice – Interior Solution



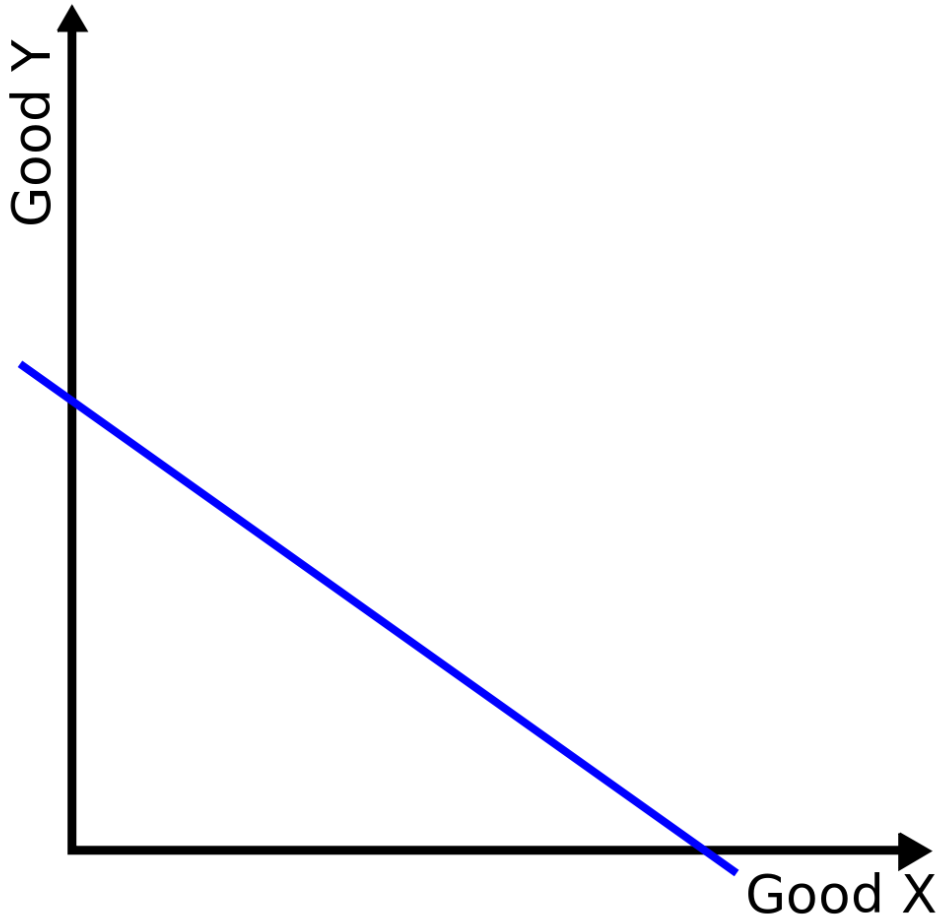
Non-Optimal Bundles

Optimal Choice – Corner Solution



Case 2: Corner Solution

Optimal Choice – Many Solutions



Case 3: Many Solutions

Optimal Choice – Exercise

LEARNING-BY-DOING EXERCISE 4.2

Finding an Interior Optimum

Eric purchases food (measured by x) and clothing (measured by y) and has the utility function $U(x, y) = \sqrt{xy}$.

He has a monthly income of \$800. The price of food is P_x = \$20, and the price of clothing is P_y = \$40.

Problem Find Eric's optimal consumption bundle.

Optimal Choice – Exercise

LEARNING-BY-DOING EXERCISE 4.3

Finding a Corner Point Solution

David is considering his purchases of food (x) and clothing (y). He has the utility function $U(x, y) = xy + 10x$, with marginal utilities $MU_x = y + 10$ and $MU_y = x$. His income is $I = 10$. He faces a price of food $P_x = \$1$ and a price of clothing $P_y = \$2$.

Problem What is David's optimal basket?