

# APEC 1101: Summary Week 1

## By Julieth Santamaria

**Cost-Benefit Principle:** An economic agent should pursue a choice or action if and only if the benefits derived outweigh the costs

**Marginal principle:** An economic agent should pursue a choice or action up to the point where the marginal benefit (MB) is greater than or equal to the marginal cost (MC).

$$MB \geq MC$$

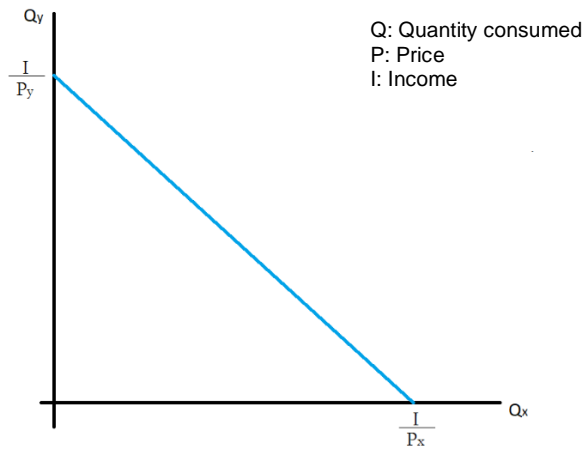
$$Net\ Benefit = MB - MC$$

**Opportunity cost (OC):** The value of the good service, or time forgone to obtain something else.

### Consumers

- Unlimited wants
- Limited income

**Budget line (BL):** It shows different combination of two products a consumer can purchase given prices and income.



$$OC\ of\ good\ x = \frac{p_x}{p_y} = slope = \frac{rise}{run}$$

$$OC\ of\ good\ y = \frac{p_y}{p_x} = \frac{1}{slope} = \frac{run}{rise}$$

#### BL Shifts

- When income changes
- When prices of *both* goods change proportionally

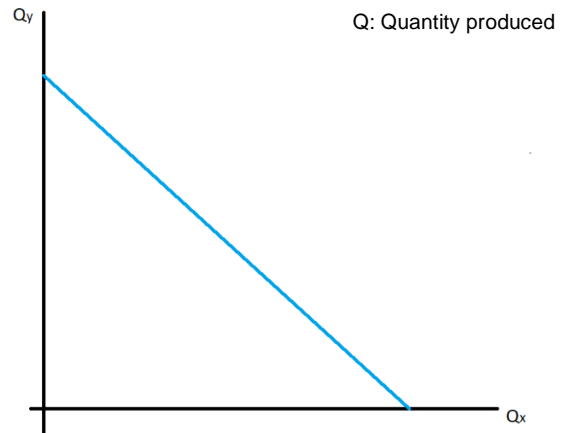
#### BL Pivots

- When the price of only *one* good changes
- When the prices of *both* goods change but not proportionally

### Producers

- Unlimited production schedule
- Limited resources or inputs

**Production possibilities curve (PPC):** Combinations of two goods that can be produced using all available resources.



Note: Notice that the axes of this graph represent quantities produced. If you are given the inputs (hours of labor, hectares of land, etc.), you must transform those inputs into quantities produced to be able to draw the PPC.

$$OC\ of\ good\ x = \frac{inputs\ for\ x}{inputs\ for\ y} = slope = \frac{rise}{run} = \frac{Q_y}{Q_x}$$

$$OC\ of\ good\ y = \frac{inputs\ for\ y}{inputs\ for\ x} = \frac{1}{slope} = \frac{run}{rise} = \frac{Q_x}{Q_y}$$

#### PPC Shifts

When there are changes in resource quantities, resource productivity or technology improvements in both goods.

#### PPC Pivots

When there are changes in resource quantities, resource productivity or technology improvements in one of the goods.

Note: The slope of the budget line is the opportunity cost of good x. Similarly, the slope of the production possibilities curve is the opportunity cost of good x.

## Trade

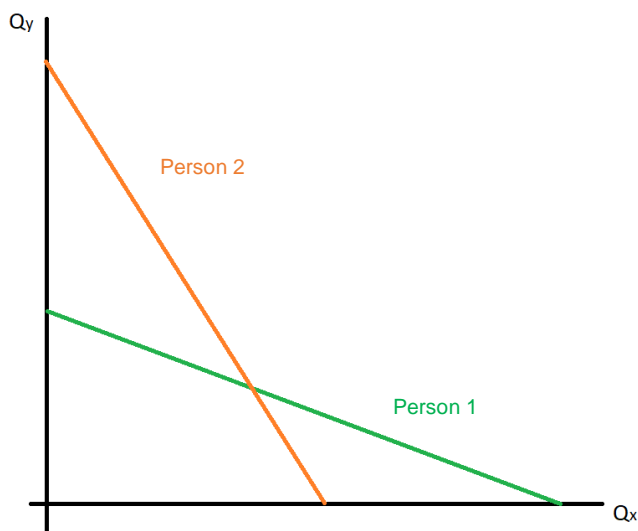
When two agents have different opportunity costs, there is potential for both to benefit if they specialize.

A person has the **absolute advantage** if they can produce more given the same amount of resources.

A person has the **comparative advantage** of producing a good if they can produce it at a *lower opportunity cost*.

**When are two people willing to trade good x?**

Suppose the individual PPCs of two people are:



As shown in the graph:

- **Person 1** has the comparative advantage on the production of **good X**
- **Person 2** has the comparative advantage on the production of good Y

Then,

**Person 1** is willing to trade X if they receive **at least** their OC of good x ( $OC_x^1$ )

**Person 2** is willing to trade X if they have to pay **up to** his OC of good x ( $OC_x^2$ )

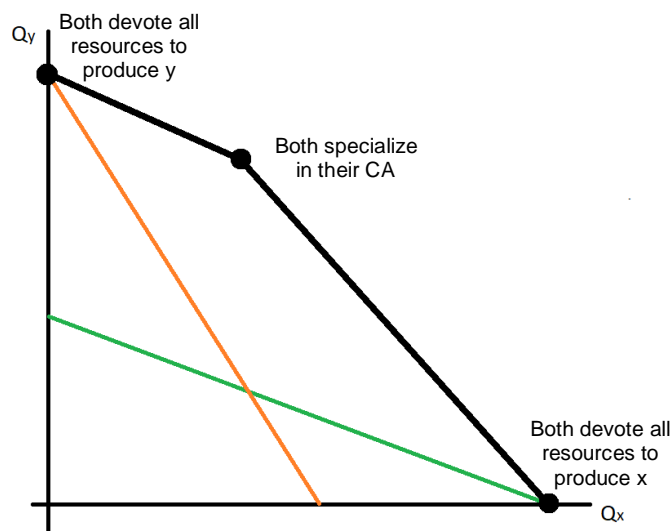
So, the Zone of Possible Agreement (ZOPA) for trading one unit of **good X** is:

$$OC_x^1 < \Omega < OC_x^2$$

Following a similar analysis, the ZOPA for trading one unit of **good Y** is:

$$OC_y^2 < \Omega < OC_y^1$$

How does the economy's PPC look like?



Notice that the downward sloping PPC of the economy reflects the *increasing opportunity cost*.<sup>1</sup>

<sup>1</sup> This summary contains extracts and direct quotes from Kenn Chua's slides and from McConnell et al (2019) textbook.