# PART I - Comparative Advantage

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1:30 PM

One Agent Economy

- Model assumptions:
  - There are only two possible activities
  - There are only two individuals
  - No transaction costs or other barriers to trade
- The amount of resources used to perform an activity determines **productivity**
- Since resources are scarce, we operate in a **constrained environment**
- **Production possibility curve:**
  - Captures all **maximum output possibilities** for two (or more) goods, given a set of inputs (resources) if inputs are used **efficiently**
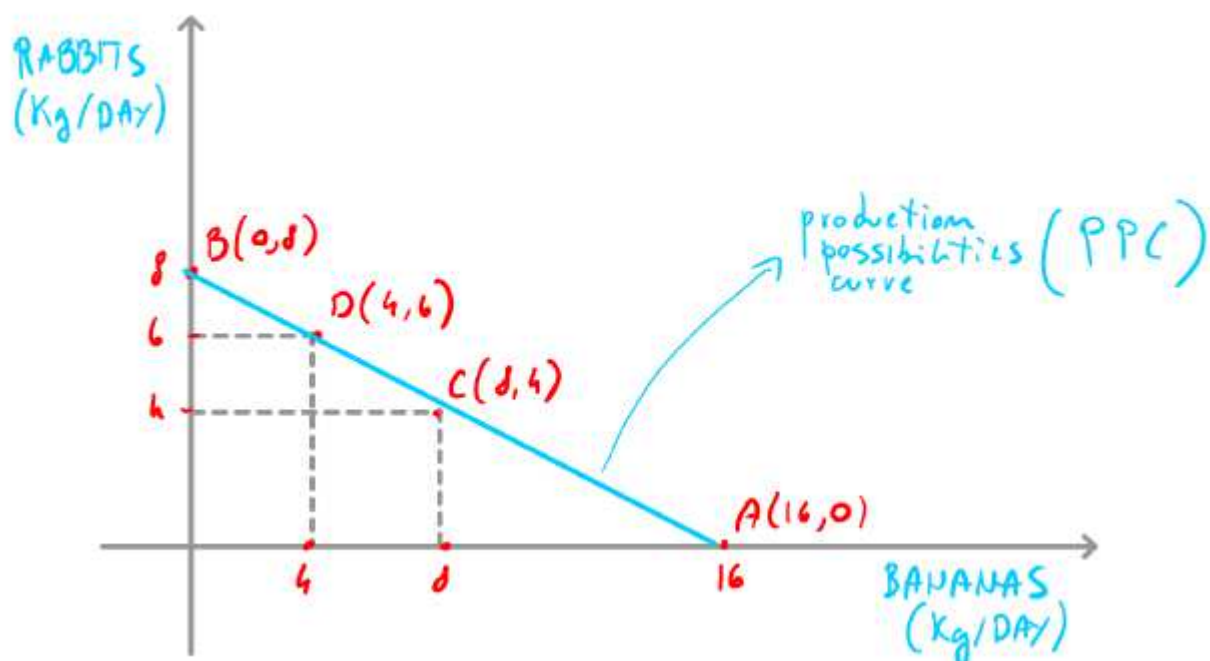
  - **Efficient production point** is a combination of goods for which currently available resources do not allow an increase in production of one good without a reduction in the production of the other, i.e. all points on the PPC are efficient
  - **Inefficient production point** is a combination of goods for which available resources allow an increase in the production of one good without a reduction in the production of the other, i.e. all points below the PPC
  - **Attainable production point** is any combination which can be produced with the available resources, i.e. all points on or below the PPC
  - **Unattainable production point** is any combination which cannot be produced with currently available resources, i.e. all points above the PPC

Two Agent Economy

- **Absolute advantage:** an agent is able to carry on a productive activity with less resources than another agent
- **Opportunity cost:** the value of the next best alternative to a particular action

- o It is the **slope of the PPC**, e.g. 16 bananas and 8 rabbits, opportunity cost of producing a banana is 8/16 = 0.5 rabbits
- **Comparative advantage:** an agent can carry on a productive activity with a lower opportunity cost of carrying this activity than another agent
    - o This is much more important than absolute advantage according to Ricardo, because it allows **two agents to both consume outside of their PPC**
- Every agent is better off if each agent **specialises** in the activities for which they have a comparative advantage (*Principle of Comparative Advantage*)
    - o Gains from specialisation increases as the **difference in opportunity cost increases**

Trading in a Two-Agent Economy
- Now once specialisation is put in place the two agents will have to trade goods - but at what price?
- The seller is willing to sell at a price no less than **their own opportunity cost of the good they are selling**
    - o since if they trade for less than that they are better off producing that second good on their own
- The buyer is willing to buy at a price no more than **their own opportunity cost of the good they are buying**
    - o Since if they trade for more than that they are better off producing that good on their own
- Hence as long as the price for a good is in between the two respective opportunity costs of the agents, **both agents will benefit**
    - o It's like the **opportunity cost for the seller is the 'selling price'** (measured in units of the other good) of the good that the seller is used to (i.e. highest selling price achievable on seller's PPC)
        - Similarly the opportunity cost for the buyer is like the 'buying price' (measured in units of the other good) of the good that the buyer is used to (i.e. lowest buying price achievable on buyer's PPC)
        - The seller of the good's usual selling price **must be lower** than the buyer's usual buying price, since the seller has a lower opportunity cost (since they were the ones chosen to specialise in that good)
    - o Therefore if they trade the good at a price in between these two opportunity costs, they are trading at a price **higher than the seller's usual selling price** (the highest selling price they can achieve on their PPC) and lower than the buyer's usual buying price (the lowest buying price they can achieve on their PPC) and so **both agents will benefit**

Economy-wide PPC in a Two-Agent Economy

- The **economy wide PPC is a composite curve** formed by combining each of the two agent's singular PPCs:
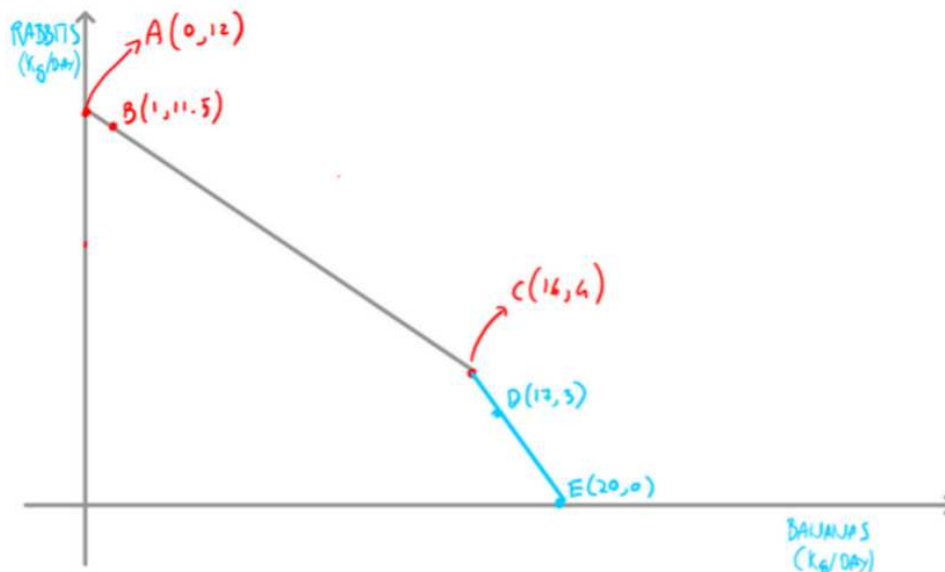

- Since the slope of the PPC reflects the opportunity cost of the good on the x-axis, we see as we attempt to produce more of that good the **opportunity cost increase**s
  - This is because, **due to scarcity**, we are forced to utilise resources (in this example, labour) which has a higher opportunity cost
- *The Increasing Opportunity Cost Principle*: in the process of increasing the production of any good, one first employs those resources with the lowest opportunity cost and once these are exhausted, turns to resources with a higher OC
  - Tl;dr to produce one new unit of a good, choose first the resources available with the lowest opportunity cost
- Three factors which push out an economy's PPC:
  - Increase in infrastructures
  - Increase in population (hence labour force)
  - Advancements in knowledge and technology

International Trade

- **Consumption Possibility Curve (CPC):** represents all possible combinations of two goods that the **economy can feasibly consume** when it is open to international trade
- If a country is a **closed economy**, the agents must consume whatever they produce, **hence PPC = CPC**
- If a country is an **open economy**, CPC is greater than PPC because agents are able to trade for other goods and services at **better opportunity costs** than is available on their own PPC
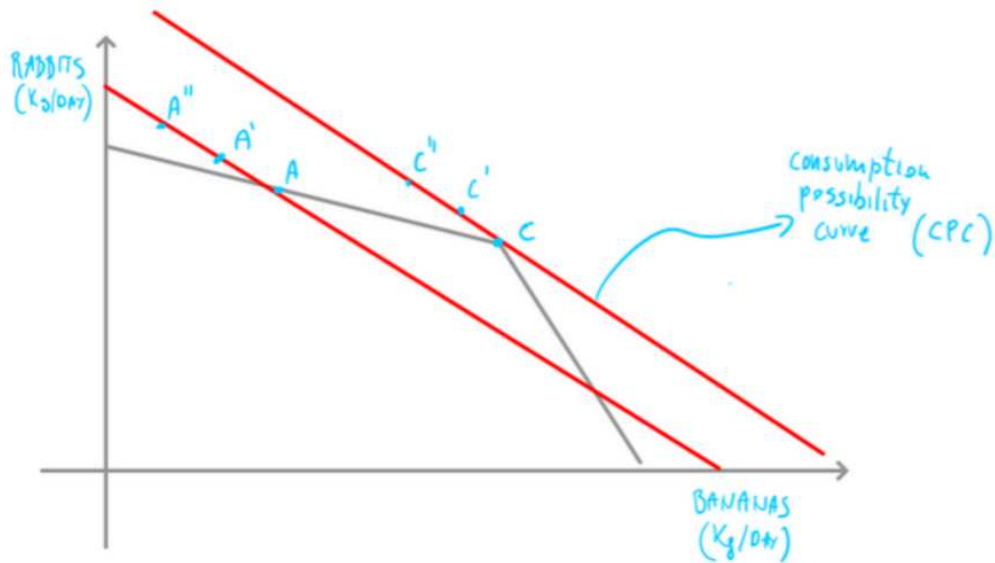
- If the world market allows an exchange of 1kg bananas for 0.75kg rabbit, an economy producing at point A would be able to trade 1kg of bananas and receive 0.75kg of rabbit for consumption, when they would usually receive 0.5kg according to their PPC, hence consumption would be at point A'
    - Selling another 1kg of rabbit would allow for consumption at A'' and so on.
- However this is not the CPC since this line cuts below the PPC if the agents were to buy 1kg of bananas for 0.75kg of rabbit (when it could be purchased for 0.5kg in their own economy)
    - The most efficient CPC is at point C, where the consumption frontier does not cut below the existing PPC
- Depending on the world price and its relation to the slope of the existing PPC, the CPC may actually touch the PPC at the edge:
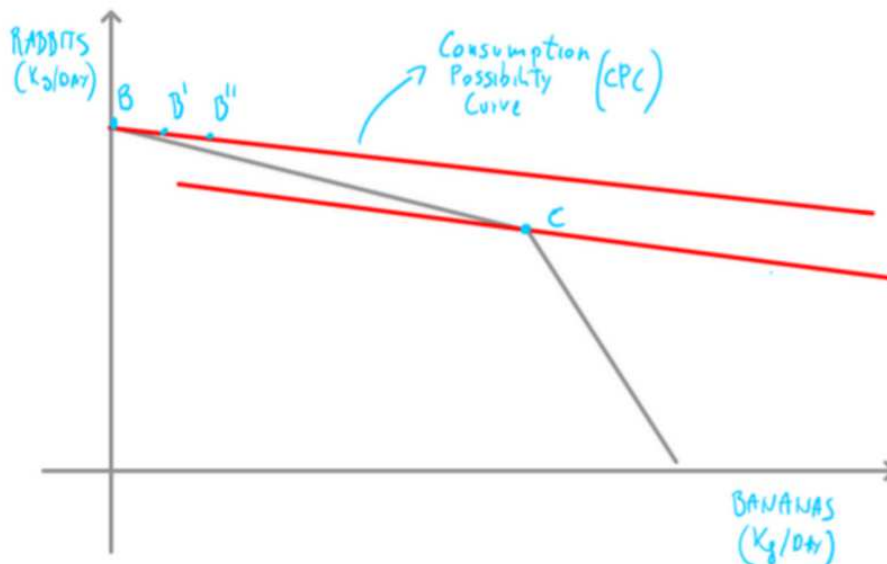

- If the exchange rate is 1kg bananas for 0.2kg rabbits, the opportunity cost of bananas is lower than any point along the existing PPF, hence the most efficient CPC would be to produce all rabbits and then trade accordingly for bananas as shown
- What particular point on the CPC should an economy consume? Depends on **preferences of the agents**

Economy-wide PPC in a Many-Agent Economy

- As we increase the number of agents in an economy, since, in increasing the production of a good we select the next lowest opportunity cost for that good, the slope of our PPC increases (decreases technically) and is made up of millions of tangents
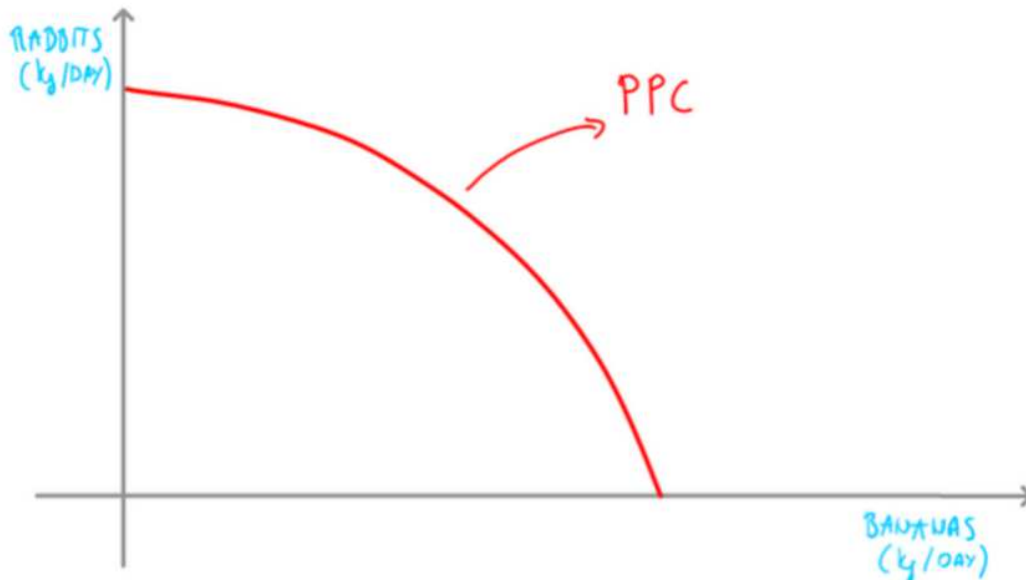
- A CPC can still be created by drawing a straight line through the curve, at the point where the curve has the same slope as the slope of the CPC
  - i.e. opportunity cost of producing the good is equal to the opportunity cost of purchasing it on the market
  - This will mean the CPC is always a tangent to the PPC
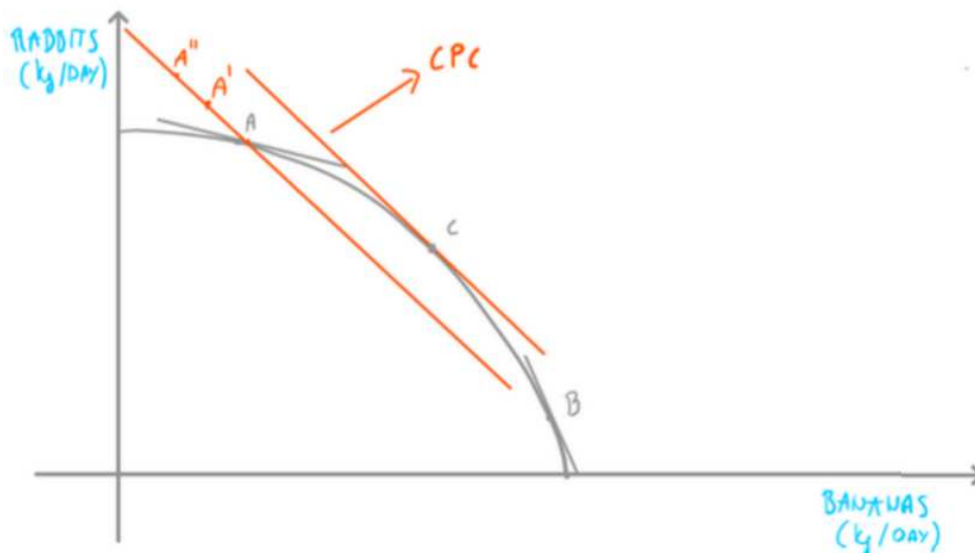
Classic Critiques to the Model

- Assumptions made:
  - **No psychological costs** from performing one activity the entire day
  - **No transaction costs** from trading, e.g. negotiation costs, transportation costs, etc.
    - **No barriers to trade,** e.g. import quotas and tariffs
  - **Sunk costs of specialisation** to acquire expertise for specialising

- - **No change in preferences**
  - **No social norms preventing trade**

- An allocation is **Pareto efficient** if we cannot move to some other allocation that makes someone better off without making anyone else worse off.

Test 1 Summary
Tuesday, 30 August 2016
2:06 AM

Chapter 1:
- PPC
  - Economy wide PPC
- Absolute advantage
- Comparative advantage
  - Principle of Comparative Advantage
- Conceptually understand gains from specialisation
- Increasing Opportunity Cost Principle (low hanging fruit)
- Factors pushing out a PPF (3)
- CPC
  - CPC in closed economy?
  - Economy-wide CPC
- Critiques to the model (5)

Chapter 2:
- Market
  - Market equilibrium
- Perfectly competitive market conditions (7)
- Cost-benefit Principle
  - Economic surplus
- Quantity supplied
- Interpreting the supply curve
  - Producer reservation price
- Law of supply

- Short run vs. long run
- Variable cost vs. fixed cost
- AVC, ATC and MC
- Can fill out table (Q, FC, VC, TC, AVC, ATC, MC)
- Profit
  - Equation
  - Conceptually and graphically, when it is maximised

- Continuous MC curve (plus ATC and AVC curves)
  - When it is equal to the supply curve
  - Why it cuts ATC and AVC at their lowest points
- Short-run shutdown condition