Gains from Trade

International Trade

Prof. Harris Dellas

Lecture Slides

February 16, 2017

Outline

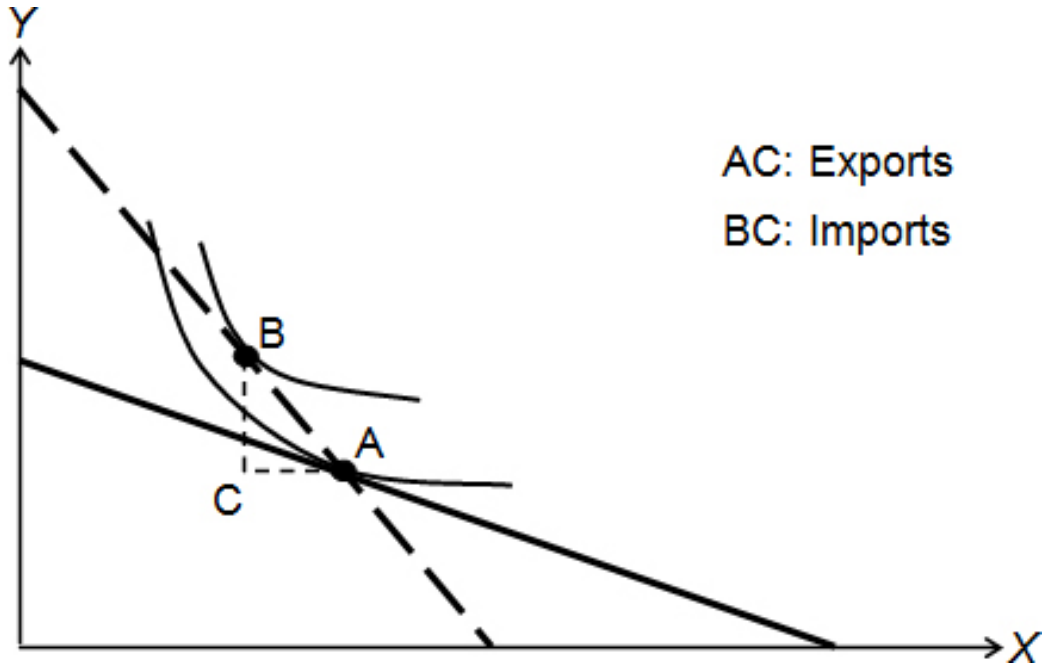
GFT without production adjustments

Review of consumption choice theory
Select consumption x,y to maximize utility subject to budget constraint
$I = p_x x + p_y y$
Relative (p_x/p_y) vs absolute prices

GFT without production adjustments

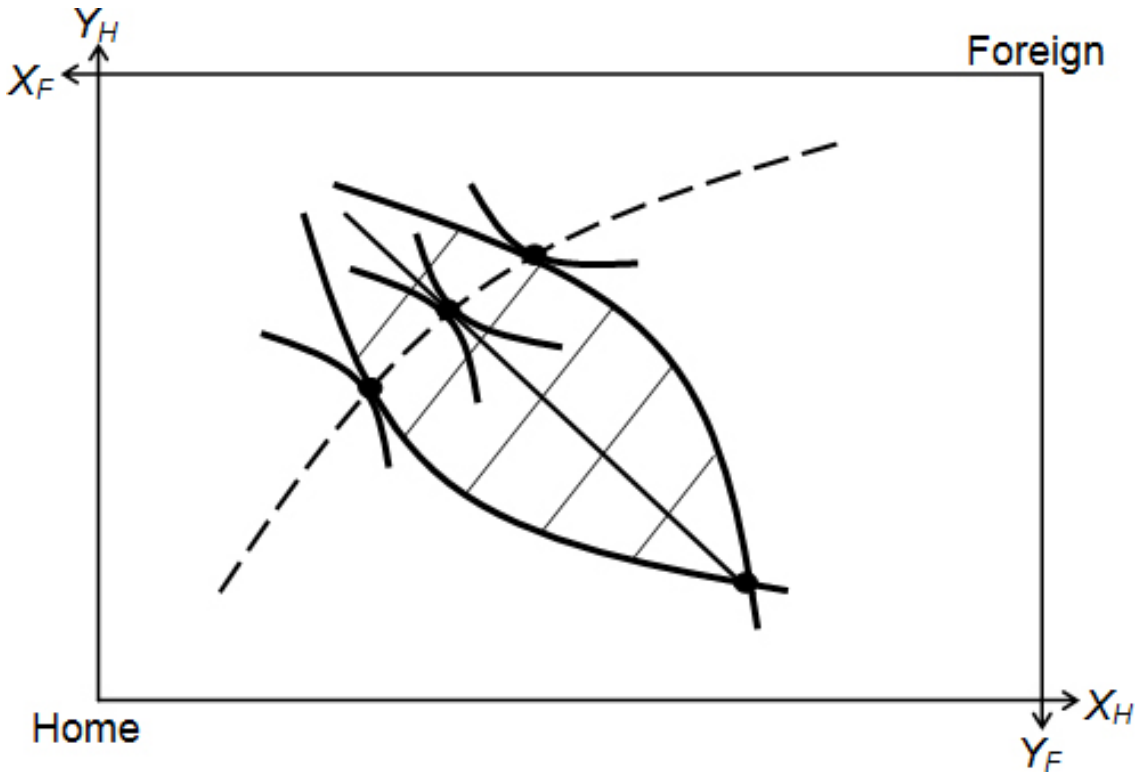
Source of gains: International differences in pre-trade prices.

(a) *Trade pattern:* Consider an economy with an endowment of two goods X and Y given by point A (**A**utarcy). Let there be also the rest of the world (ROW).



If $\left(\frac{p_X}{p_Y}\right)_H < \left(\frac{p_X}{p_Y}\right)_{ROW}$, then H exports X and imports Y (see trade triangle). The country will **export the good which is relatively cheap** compared to the ROW.

(b) *The box diagram:* Let's now consider two countries H and F which are endowed with a specific amount of each good.



Opening the two countries up for trade makes them better off.

(c) World prices will lie between autarkic prices:

$$\left(\frac{p_X}{p_Y}\right)_{H,A} < \left(\frac{p_X}{p_Y}\right)_{W} < \left(\frac{p_X}{p_Y}\right)_{F,A}$$

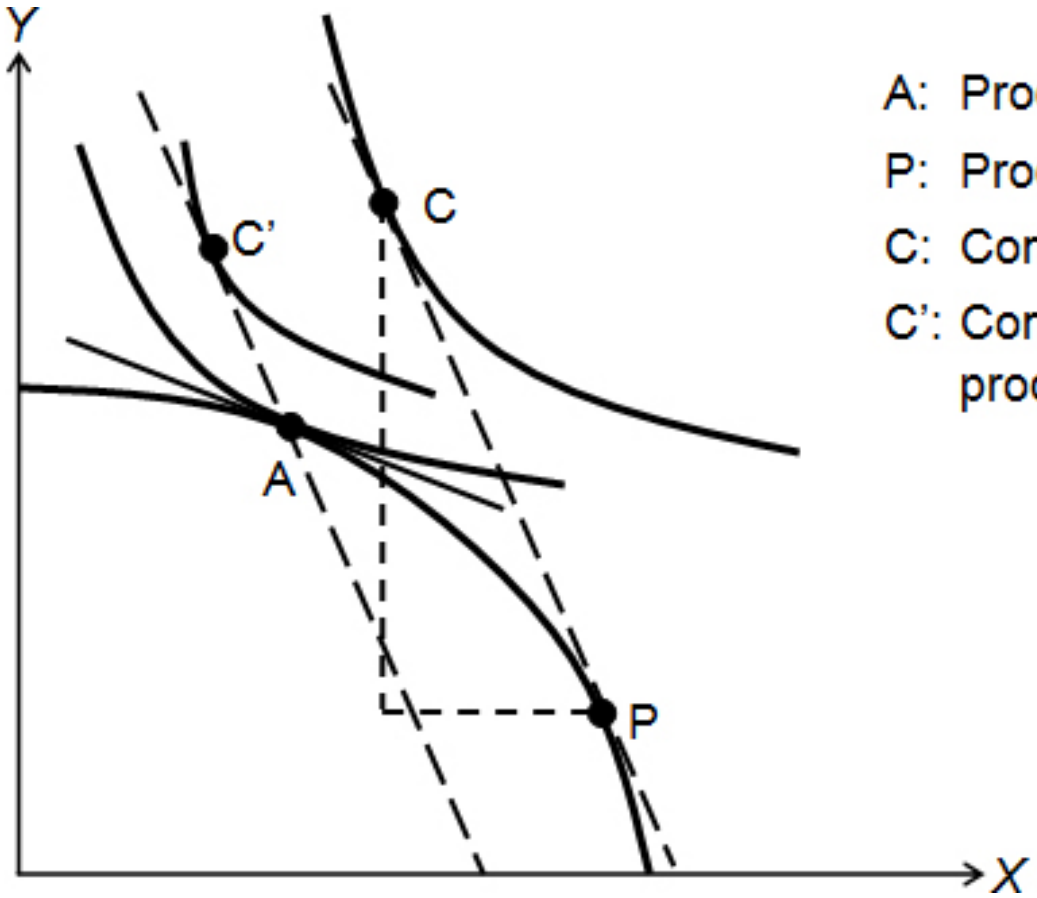
Suppose $\left(\frac{p_X}{p_Y}\right)_{H,A} = 1$, $\left(\frac{p_X}{p_Y}\right)_{F,A} = 3$ and $\left(\frac{p_X}{p_Y}\right)_{W} = 4$. Then both H and F would want to sell X and buy Y. The excess supply of X (excess demand for Y) would lead to a decrease of $\left(\frac{p_X}{p_Y}\right)_{W}$

(d) Individual *losers* from trade: Are there enough gains to make everybody better off? Yes. Compensation.

(e) An extreme example with two equal size groups, each one totally specialized in X and Y.

- Review of PPF (production possibility frontier)
- Production functions $X = F(L_X), Y = G(L_Y) \rightarrow \Gamma(X, Y) = 0$
- Efficient production
- Curvature and opportunity cost (scarcity)

GFT with production adjustment



A: Production and consumption under autarky

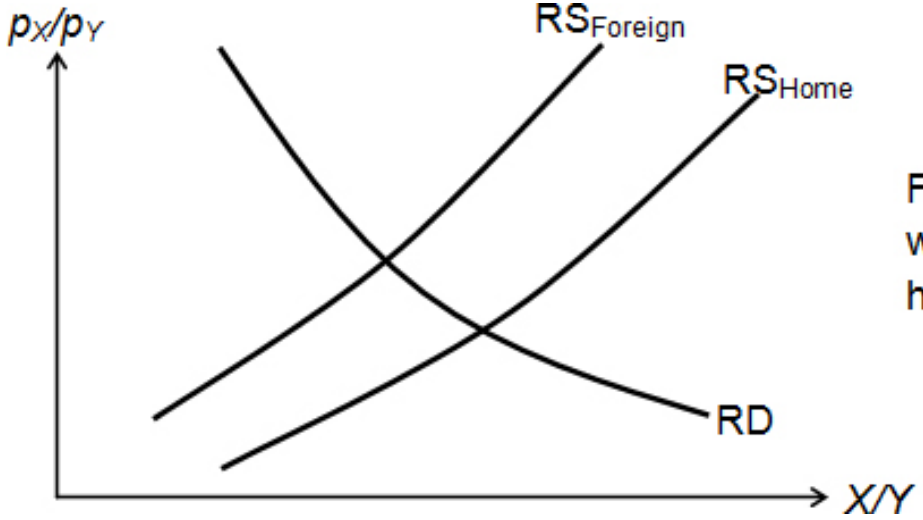
P: Production under free trade

C: Consumption under free trade

C': Consumption under free trade (without production adjustments)

(a) We abstract from the possibility that the PPF could shift out as a result of trade. Even greater gains in this case.

(b) Determination of the trade pattern: Comparative advantage Relative positions of national supply curves. Relation to the shape of PPF



For any given relative price p_X/p_Y, Home would produce relatively more of X (Home has a CA in X).

Applications of trade theory

Home demand for imports = Foreign supply of exports

The effects of an increase in foreign demand

- Higher foreign demand for the exportable of a country improves its terms of trade (makes its exportable more expensive).
- If the supply curve of net-exports is upward sloping, the price increase in accompanied by an increase in the quantity of exports.
- If the supply curve of exports became negatively sloped after some quantity then the export quantity could potentially drop.
- The analogy with the supply of labor.

The effects of supply shocks

- Supply changes can dramatically affect world prices and incomes.
- Natural resource (energy) markets seem to be characterized by severe fluctuations.
- Example: First oil crisis, US imports of petroleum in 1973 were \$7.6 billion, in 1974 \$24.3 billion. However, imported quantities remained roughly constant, so the income loss due to the oil shock amounted to roughly \$16.7 billion!

Growth and welfare

- Growth in the basic model can be shown by an outward shift of the PPF. This shift per-se would cause the income of the country to rise.
- However, keep in mind that the expansion has again an effect on the terms of trade!

- Immiserizing growth: this is a case in which a country is actually worse off after growth. When the expansion primarily takes place in the exporting sector, the terms of trade can deteriorate so much as to outweigh the initial gains from growth.
- Conditions for immiserizing growth:
  - Export biased growth
  - Inelastic demand
  - Large player
- Example: Coffee as exportable for Brazil
  Bumper crop and farmers' welfare

The transfer problem

Examples:

- German reparation payments
- Foreign aid
- Changes in asset prices
- Example: The depreciation of the USD

Two key questions:

1. Is there a secondary loss (deterioration of the TOT for the transferor)?

   Model Setup:

   - Country A exports X and imports Y $\left(TOT_A = \frac{p_X}{p_Y}\right)$
   - A makes a transfer of T to B
   - m, $m^\star$ denote A's and B's marginal propensity to spend on imports

   What happens to the world demand for X?

$$\Delta D_X = \Delta D_X^A + \Delta D_X^B = -(1-m)T + m^\star T$$

$$\Delta D_X > 0 \text{ if } m + m^\star > 1$$

   If global demand for good X increases then its price must go up and country A (the transferor) experiences a terms of trade improvement.This mitigates the income loss of the donor from the transfer

2. Is it better to give or to receive? To receive!

   But there are some subtle issues concerning foreign aid, such as the effects on incentives, dependency etc.

   Interesting applications to the mezzogiorno and also to Switzerland! (In the context of inter-cantonal transfers of income and their effects on the incentives of poor cantons to improve their situation).