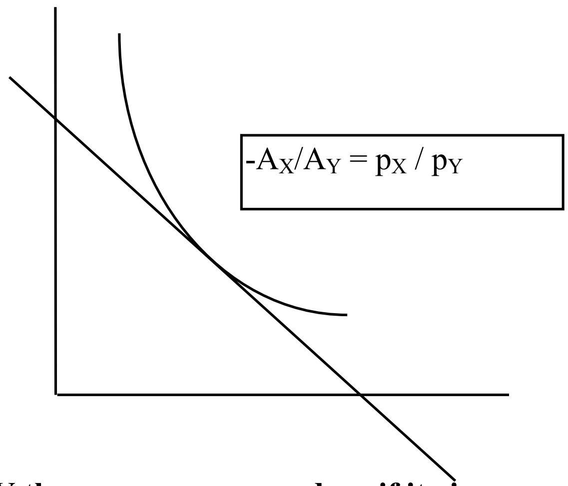
Ricardian Model

Technology

$A_X X = L_X$
$A_Y Y = L_Y$



Factor Market Equilibrium

$L_X + L_Y \leq L$

Production Possibilities Frontier

$A_X X + A_Y Y \leq L$

$Y \leq (L - A_X X) / A_Y$

$dY/dX = - A_X / A_Y$ = amount of Y the economy can produce if it gives up a unit of X

Utility Maximization

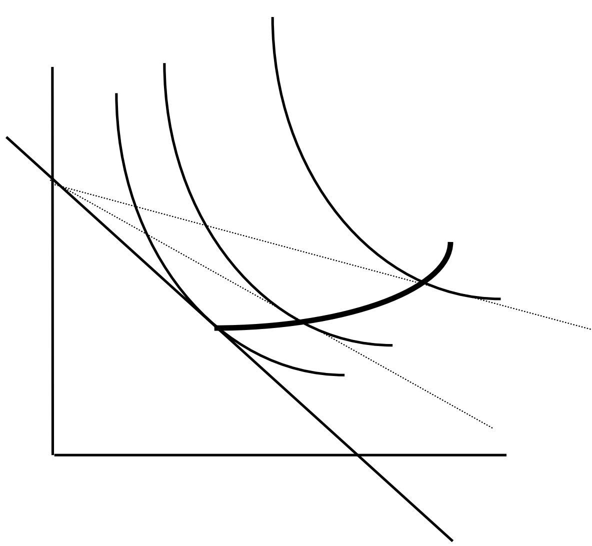
max $U(X,Y)$ subject to Income = $p_X X^C + p_Y Y^C$

$dU/dX = \lambda p_X \qquad dU/dY = \lambda p_Y$

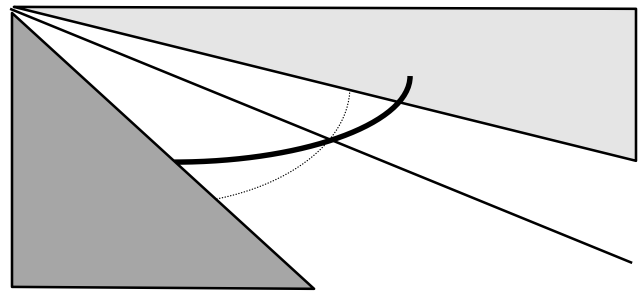
$(dU/dX) / (dU/dY) = p_X / p_Y$; Thus

$dY/dX = p_X / p_Y$ = amount of Y that is given up to get an extra unit of X.

Offer Curve



Global Equilibrium

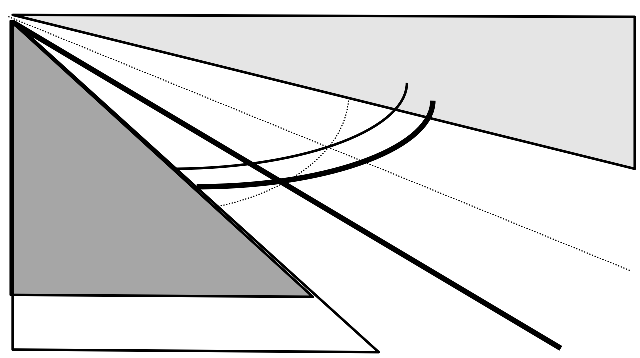


Propositions

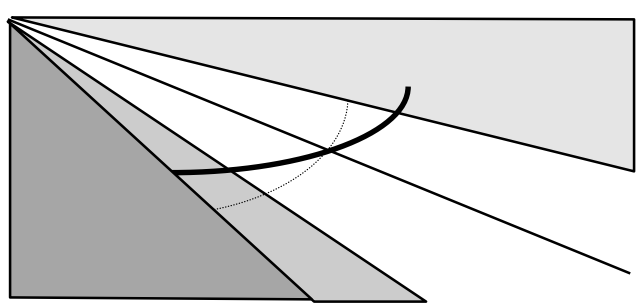
- Comparative advantage matters, not absolute advantage.
- A country exports the good in which it has a comparative advantage, which is technologically determined.
- At least one country benefits; neither is worse off.
- The terms of trade is limited by the autarchic price ratios.

Comparative Statics

Increase the labor force: Terms of Trade Deterioration (Mexican population growth)



Convergent Technology: No Change until MRT = FRT. (Japanese copying)



Closer Technologies