

I. Simple (Ricardian) Comparative Advantage:

A. 2x2x1 Model:

1. 2 countries (**A** & **B**)
2. 2 goods (**X** & **Y**)
3. 1 factor of production (Labor, **L**)

B. **A** absolute advantage over **B** in production of **X**, if it can produce **X** more efficiently (w/ less **L**).

1. Production function: equation that maps input, **L**, into output, **X** or **Y**.
2. Examples: $X = a_X L$ and $X = b_X L$
3. **A** has absolute advantage in production of **X**, if $a_{LX} > b_{LX}$
4. Gains from Absolute Advantage in Trade: If $a_{LX} > b_{LX}$ & $a_{LY} < b_{LY}$, i.e., if **A** has absolute advantage in **X** and **B** has absolute advantage in **Y**, then rather intuitive that each would from specializing in production of good it produces more efficiently and trading for the other.

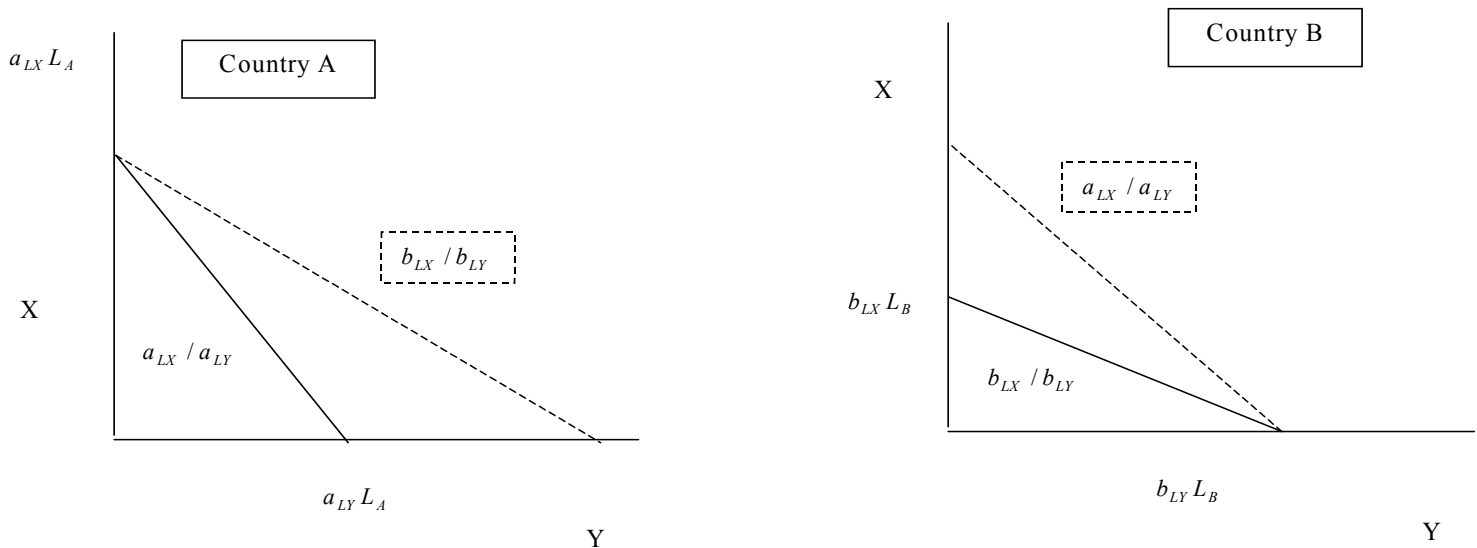
C. **A** comparative advantage in production of good **X**, relative to **B**, if **A**'s opportunity cost of producing **X** in terms of good **Y** is less than **B**'s, or in terms of production functions, if $(a_{LX} / a_{LY}) < (b_{LX} / b_{LY})$.

1. Country specialized in & exports its c.a., not it's a.a.'s and, doing so, both countries better off, regardless of a.a.
2. Since c.a. relative, every ctry has a c.a.: **A** c.a. in **X** \Leftrightarrow **B** c.a. in **Y**

D. Production Possibility Frontiers (PPF's): maximum **X** ctry can produce for each level of **Y** produced & v.v. I.e., the limits of output capacity given tech (coefficients) and resources (**L**).

1. Production fcn's & $L=L_x+L_y \Rightarrow X = a_{LX}L_A - (a_{LX} / a_{LY})Y$ and $X = b_{LX}L_B - (b_{LX} / b_{LY})Y$

2. Graphically (dark lines are PPF's):



a) A has *c.a.* in X \Rightarrow steeper PPF than B.

b) A specializes in X, trades X for Y, (at a price somewhere b/w 2 autarky prices (i.e., b/w a_{LX} / a_{LY} & b_{LX} / b_{LY} , i.e. slopes PPF's).

c) This line is A's *consumption* possibility frontier, which we now easily see is higher than if had to consume & produce same bundle.

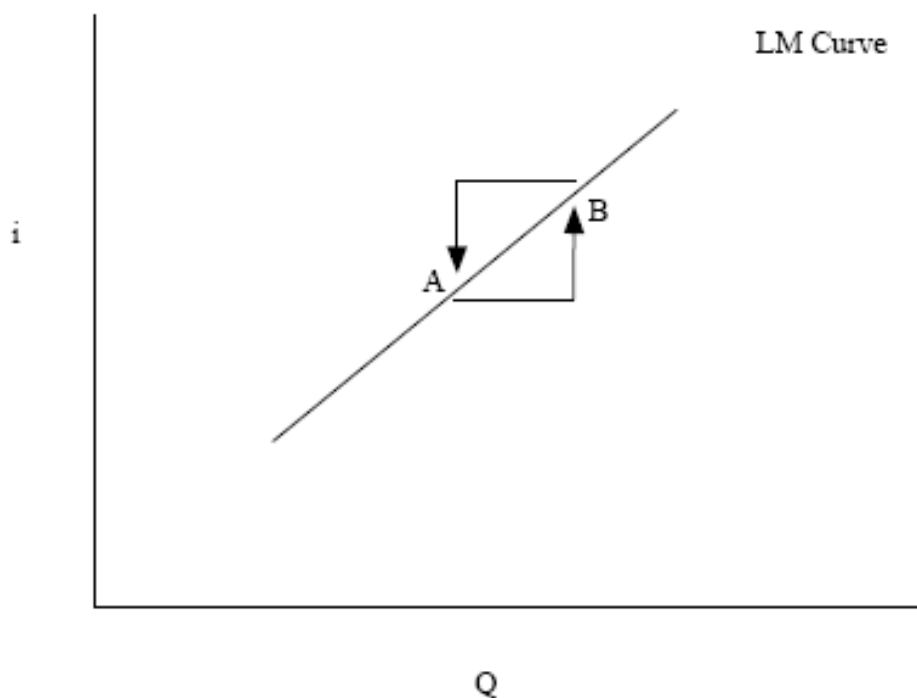
II. Open-Economy Macroeconomics (IS-LM-BoP Model)

A. Simultaneous eqbm in money mrkt (LM), goods mrkt (IS), and balance of payments (BoP); i.e., interest rates (i) & national income (Q) that clear money & goods markets, & balances external accounts.

B. The LM (liquidity mrkt) Curve (eqbm in money market)

1. For any given money supply (M^s), some interest rate, i , needed for folks to demand exactly that quantity of money given their income, Q .

2. Slopes upward: if more income, Q , demand more g&s, want more money, but for a given M^s , price money (i) must rise:



3. From A, $\uparrow Q \Rightarrow \uparrow$ demand money, stock fixed, so i rises to pt B, say. From B, $\downarrow Q \Rightarrow \downarrow$ demand money, stock fixed, so i falls to pt A, say.

4. POLICY: $\uparrow M^s \Rightarrow \downarrow i$ @ any given Q , $\uparrow Q$ for any given i ; the reverse for $\downarrow M^s$, so expand/contract monetary policy = outward/inward shift

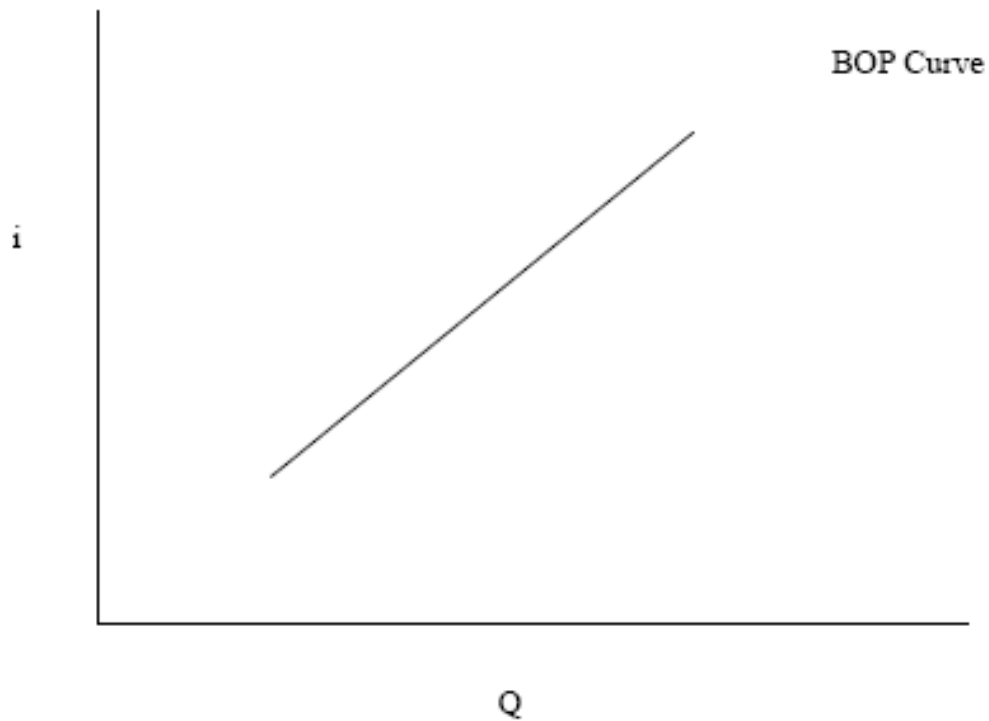
C. **Balance-of-Payments (BoP) Curve (eqbm in external accts)**

1. **Balance-of-Payments (BoP)**: Current Account (Trade Balance) + Capital Account (Cap Inflow-Outflow) = 0. I.e., $X+M+\text{NetCapFlow}=0$.

2. Thus, trade surplus matched by capital outflow (revenue invested); trade deficit matched by capital inflow (funds deficit).

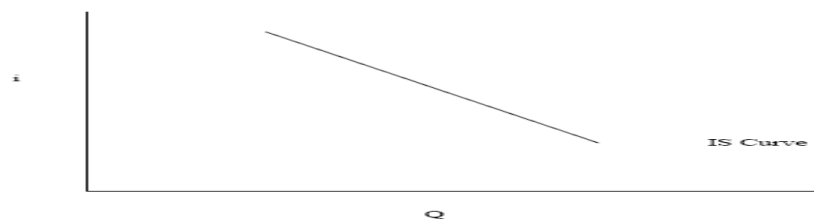
3. For any i , some Q balances Trade & Capital Accounts & v.v. Slope? If $\uparrow Q$, imports rise, exports not \Rightarrow trade deficit \Rightarrow need cap inflow, get only by higher i and v.v. for $\downarrow Q \Rightarrow$ surplus \Rightarrow need outflow, get by $\downarrow i$.

4. Importantly, this **BoP line flatter (elastic, i.e., interest sensitive) the more mobile is capital**. Perfect capital mobility \Rightarrow horizontal.

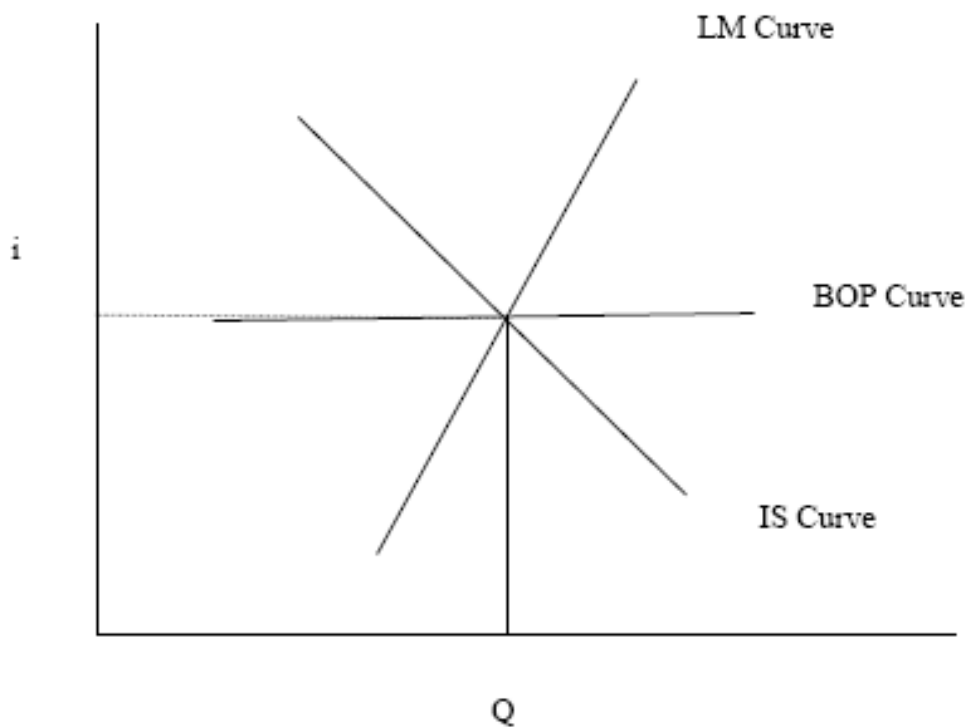


D. IS (investment-savings) Curve (eqbm goods & services mrkt)

1. National Income = National Expenditures: $Y=Q=C+I+(G-T)+(X-M)$
2. Slopes Downward: For given C , $(G-T)$ & $(X-M)$, $\uparrow i \Rightarrow \downarrow I \Rightarrow \downarrow Q$.
3. FISCAL POLICY: $\uparrow(G-T) \Rightarrow \uparrow Q$ for every i ; i.e., outward shift.



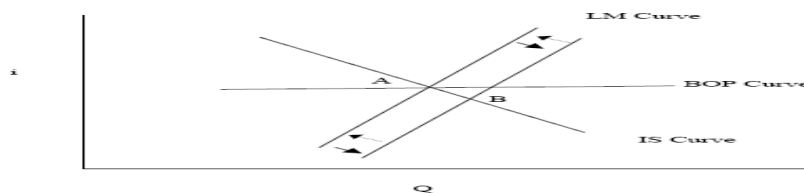
E. Gen Eqbm in IS-LM-BOP Model: All 3 Curves Intersect



F. Using the IS-LM-BOP Model for Policy Analysis

1. Capital Mobile:

a) Monetary Policy under a Fixed Exchange-Rate Regime

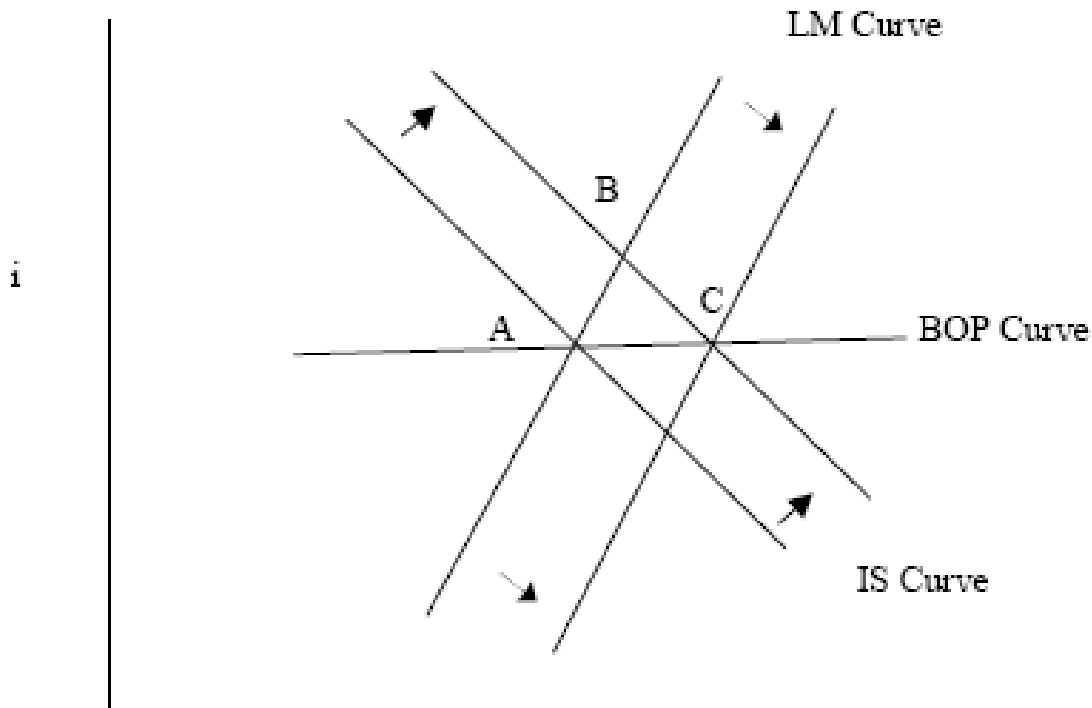


(1) $\uparrow M^s \Rightarrow$ LM shifts out, but this $\Rightarrow \downarrow i$ along IS curve, but this \Rightarrow capital outflow \Rightarrow depreciation, which violates Fixity.

(2) $\downarrow M^s \Rightarrow$...[opposite]... \Rightarrow appreciation, which violates Fixity.

(3) UPSHOT: Monetary Policy Forsaken if Cap Mob & Peg

b) Fiscal Policy under a Fixed Exchange-Rate Regime



(1) $\uparrow(G-T) \Rightarrow$ IS shifts out, but this $\Rightarrow \uparrow i$ along LM curve, but this \Rightarrow capital inflow \Rightarrow appreciation, which violates Fixity, so monetary policy must accommodate, i.e., M^s must expand to $\downarrow i$ back, which amplifies stimulus.

(2) $\downarrow(G-T) \Rightarrow$...[opposite]... $\Rightarrow M^s$ must shrink to $\uparrow i$ back, amplifies stim...

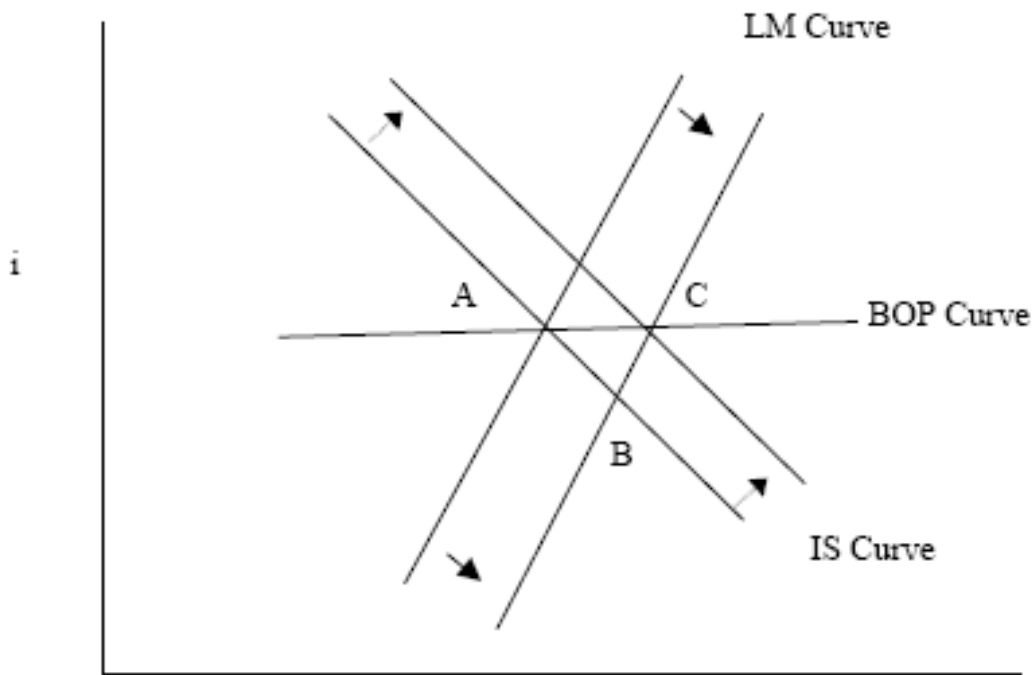
(3) UPSHOT: Fiscal Policy Doubly Effective if Cap Mob & Peg

c) Monetary Policy under a Floating Exchange-Rate Regime

(1) $\uparrow M^s \Rightarrow$ LM shifts out, but this $\Rightarrow \downarrow i$ along IS curve, but this \Rightarrow capital outflow \Rightarrow depreciation, which allowed, so $\uparrow(X-M) \Rightarrow$ IS shifts out too.

(2) $\downarrow M^s \Rightarrow$...[opposite]... \Rightarrow appreciation, which... $\downarrow(X-M) \Rightarrow$ IS shifts in too

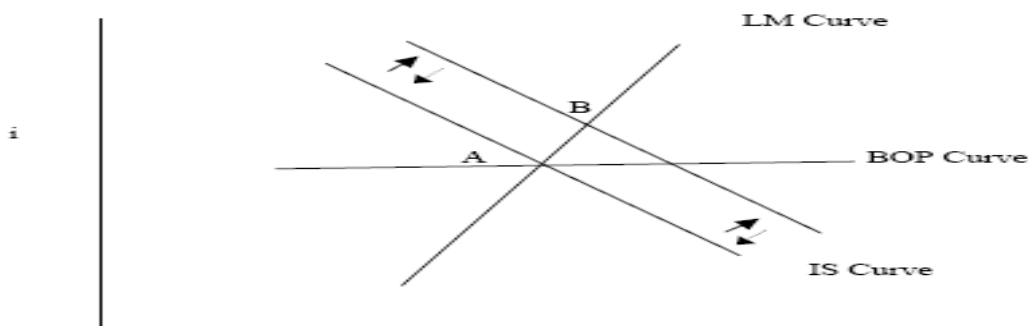
(3) UPSHOT: Monetary Policy Doubly Effective if Cap Mob & Float



d) Fiscal Policy under a Floating Exchange-Rate Regime

(1) $\uparrow(G-T) \Rightarrow IS$ shifts out $\Rightarrow \uparrow i$ along LM curve \Rightarrow cap inflow \Rightarrow apprec., which $\Rightarrow \downarrow(X-M)$, which is some, \gtrless , shift back of IS.

(2) UPSHOT: Fiscal Policy Ineffective if Cap Mob & Float



2. Capital Immobile: Model reduces to IS-LM =>

a) Can Peg or Float w/o Forsaking or Amplifying Monetary Efficacy

b) Can Peg or Float w/o Amplifying or Dampening Fiscal Efficacy

III. Purchasing-Power Parity & Interest Parity

A. PPP: $P=EP^*$ or, in logs (\ln), $p=e+p^*$

1. Given free trade, price of basket in one currency must equal price in another currency times exchange rate.

2. Logic of no-arbitrage: could make ∞ \$ if not so & trade free.

3. Empirical: holds very long run, to a constant; not at all short-run

B. IP: $i = i^* + E(\hat{e})$ (... \hat{e} =% change e.r. & $E()$ is “expected”)

1. Logic similar, relies on no-arb in dif mrkts (money mrkts) though

2. If not, all would want the better-return asset & its \hat{e} would exceed

3. Empirical: holds very well up to extremely short-run, but VERY flexible given second term on the right