

MACROECONOMICS IN THE OPEN ECONOMY

Let X be exports of domestic goods, Q imports of foreign goods

The trade balance *measured in terms of domestic goods* is

$$NX = X - \epsilon Q$$

(why ϵ ? Quantity of foreign goods \times price = value in terms of foreign currency; \times exchange rate = value in domestic currency; divided by price of domestic goods to get it in **Real** terms. So $Q \times P^* \times E / P = \epsilon Q$)

Real demand for domestic goods is

$$Z = C + I + G + NX = C + I + G + X - \epsilon Q = Y \text{ in equilibrium}$$

DETERMINATION OF Y IN THE OPEN ECONOMY:

We suppose $C = C(Y-T)$

$$I = I(Y, r)$$

$$X = X(Y^*, \varepsilon)$$

$$Q = Q(Y, \varepsilon)$$

Hold r and ε fixed for the moment; then

$$Y = C(Y-T) + I(Y, r) + G + X(Y^*, \varepsilon) - \varepsilon Q(Y, \varepsilon)$$

Rewrite as

$$Y - C(.) - G - I(.) = X(.) - \varepsilon Q(.)$$

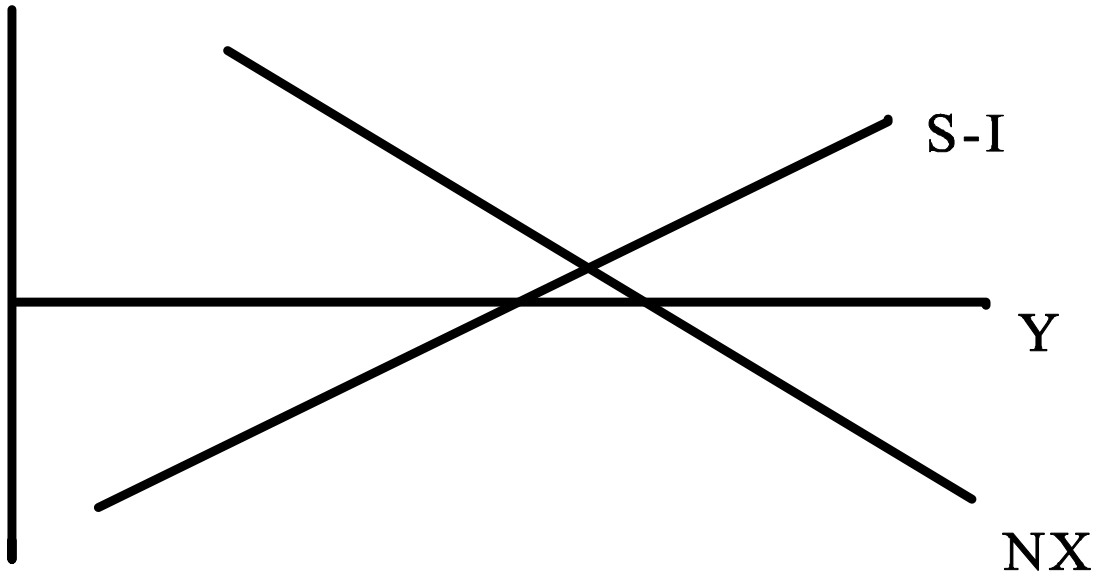
$$\text{or } Y-T - C(.) + T - G(.) - I(.) = X(.) - \varepsilon Q(.)$$

or

$$S(Y-T) + (T-G) - I(.) = X(.) - \varepsilon Q(.)$$

Private saving + Government saving - Investment = Net exports

$$S - I = NX$$



fiscal expansion: S-I shifts down \Rightarrow Y up, NX down

Increase in Y^* : NX shifts up \Rightarrow Y up, NX up

The logic of policy **A**coordination@: my country would like to pursue expansionary policy, but are afraid of the adverse impact on trade balance. Your country has the same problem. So we get together someplace nice and agree that both of us will expand, each one's expansion raising the other's exports. Hence the **AGs**@:

G7: 7 rich countries that supposedly cooperate on macro policy

G10: 10 rich countries that cooperate on macro policy

G24: 24 not so rich countries that complain about **G7** policies

G77: 77 poor countries that complain about rich countries

G30: 30 guys (gov't officials, bankers, and a couple of pet academics) who pontificate about the other **Gs**

EFFECTS OF EXCHANGE RATE CHANGES

Higher ϵ leads to higher X , lower Q ; hence NX increases - or does it

$$NX = X(Y^*, \epsilon) - \epsilon Q(Y, \epsilon)$$

Volume effects work in the **Aright@** direction - but **Avalue@** effect works in the **Awrong** direction@

Are volume effects **Astrong** enough@? This is the **AMarshall-Lerner** condition@ (turns out to be that sum of elasticities of export and import demand exceed one) Evidence suggests yes, and it is usually assumed

Effect of real depreciation: NX shifts up, just like increase in Y^* ; Y increases, so do net exports

An example: Brazil

THE J-CURVE (an important practical point)

Remember $NX = X - \varepsilon Q$

given time, X and Q respond enough to ε to make $dNX/d\varepsilon > 0$.

But in the short run X and Q are slow to respond

Result: NX usually *falls* initially when ε increases

Typical estimate: negative for first 6 months, roughly zero for 1st year, full impact not until 3rd year.