A. ECONOMIC INTERDEPENDENCE

Two Large Countries Model

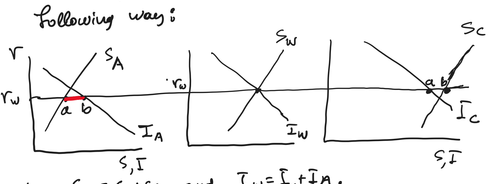
Let the two countries be America (A) and China (C). In an integrated world economy the interest rate is determined so that

$S_A + S_C = I_A + I_C$, or $(I_A - S_A) = (S_C - I_C)$, or

$CAB_A = -CAB_C$, in other words, if one country has current account (CA) surplus, then the other country must have an equal CA deficit.

Equivalently, if one country needs to borrow (i.e. the one with the CA deficit), it can only do so from the other country (the one that lends it), and has a CA surplus.

We can present this diagrammatically in the following way:

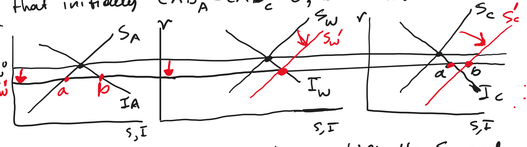


where $S_W = S_C + S_A$, and $I_W = I_C + I_A$.

The middle diagram determines the world interest rate — where $S_W = I_W$. At this world interest rate, A invests more than it saves, and thus has a CA deficit equal to ab. In contrast, C has a CA surplus of the same magnitude, which is equal to ab (right diagram).

EFFECTS OF AN EXOGENOUS INCREASE IN S_C.

In order to not complicate the diagram, we assume that initially $CAB_A = CAB_C = 0$, with r_w^0.



The increased desire to save by C, shifts the S_C and the S_W ($= S_A + S_C$) schedules to the right, to S_C' and S_W'. As a result, we see from the middle diagram that world interest rate drops to r_w'. As can be seen from the left diagram this generates a CA deficit in A equal to ab, which is exactly matched by a CA surplus equal to ab in C.

Thus, the exogenous increase in Chinese savings created a CA deficit in America, since the increased saving by C produced a fall in r_w, which in turn led to a decrease in A's saving and an increase in its investment.

NOTE TO STUDENTS: YOU SHOULD BE ABLE TO WORK OUT WHAT WOULD HAPPEN IF, FOR EXAMPLE, THERE WAS AN INVESTMENT BOOM IN A.

B. "TRIPLE DEFICITS"

$$-CAB = (I - PS) + (G - T) \qquad (1)$$

a) If the economy is closed, $CAB = 0$, and so (1) implies that $G - T = PS - I$. In other words, if there is a government budget deficit ($G > T$), and the government borrows, the private sector has a surplus of saving over investment, and it lends the excess of its saving to the government.

b) If $PS = I$, then (1) implies that $-CAB = G - T$. In other words, if the private sector invests as much as it saves, if the government needs to borrow, it must do so from the rest of the world (ROW) — i.e. there will be CA deficit.

c) If $T = G$, (1) implies that $-CAB = I - PS$, in which case if the saving of the private sector is not enough to cover its investment needs, then the private sector will borrow from the ROW (a CA deficit).

IN GENERAL, any combination between the CAB and the government budget deficit is possible, and so the "twin deficits" hypothesis may not hold — see, e.g. the case of Japan.