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Macroeconomics

Study Question: Long Run Small Open Economy

The small economy of Bacon Bits is described as follows:

$$C = 5000 + .9(Y-T) - 100r$$

$$I = 4000 - 200r$$

$$G = 5000$$

$$Y_p = 20000$$

$$T = .2Y$$

$$r_w = 10$$

a) Calculate equilibrium values for C, I, private savings, government savings, national savings, NX, KA.

b) President Mashed Potato Head says “Hey, ya know, I had an economics course and I think the teacher said something about more national savings leading to more investment. So let’s raise taxes to $T = .5Y$. This should lead to more national savings, more investment, and faster long term economic growth. Right? I think? Ummm, well?

--Calculate new equilibrium values for C, I, private savings, government savings, national savings, NX, KA. Is Mashed Potato Head correct?

$$\begin{aligned} \text{a) } C &= 5000 + .9(20000 - 4000) - 100(10) = 18400 \\ I &= 4000 - 200(10) = 2000 \\ \text{Private savings} &= Y - T - C = 20000 - 4000 - 18400 = -2400 \\ \text{Government savings} &= 4000 - 5000 = -1000 \\ \text{National savings} &= -2400 + -1000 = -3400 \\ \text{NX} &= Y - C - I - G = 20000 - 18400 - 2000 - 5000 = -5400 \\ \text{KA} &= -\text{NX} = 5400 \end{aligned}$$

b) What a dunderhead! r_w is unaffected by events within Bacon Bits, so it stays at 10. This means that investment stays at 2000. It's tough being a small open economy, knowing that the interest rate is beyond your control, and that higher savings does not spur higher investment! At least the huge trade deficit is eliminated!

$$\begin{aligned} C &= 5000 + .9(20000 - 10000) - 100(10) = 13000 \\ I &= 4000 - 200(10) = 2000 \\ \text{Private savings} &= Y - T - C = 20000 - 10000 - 13000 = -3000 \\ \text{Government savings} &= 10000 - 5000 = 5000 \\ \text{National savings} &= -3000 + 5000 = 2000 \\ \text{NX} &= Y - C - I - G = 20000 - 13000 - 2000 - 5000 = 0 \\ \text{KA} &= -\text{NX} = 0 \end{aligned}$$