Fall 2009

Review 1 Answers

Economics 203

PART A

1	D		**6**	C		**11**	D		**16**	B
2	C		**7**	C		**12**	D		**17**	B
3	D		**8**	A		**13**	A		**18**	C
4	B		**9**	D		**14**	D		**19**	B
5	B		**10**	B		**15**	D		**20**	E

PART B

1. Provide the expressions for the structural, cyclical and total deficits:

(a) $D_s = G - T_0 - tY_N$
(b) $D_c = t(Y_N - Y)$
(c) $D = D_s + D_c$

By inspection, a reduction in G will $\downarrow D_s$. Since this policy change will also $\downarrow Y$. Hence it will $\uparrow D_c$. Without more analysis, all we can say is that the total deficit, $D = D_s + D_c$ may increase or decrease.

The other way to answer the question is more specific and preferable.

Equation (a) implies: $\Delta D_s = \Delta G < 0$.

Equation (b) implies: $\Delta D_c = -t\Delta Y$. Now, since the government spending multiplier is $\frac{\Delta Y}{\Delta G} = \frac{1}{MLR}$, we know that $\Delta Y = \Delta G/MLR$.

Hence equation (b) now implies: $\Delta D_c = -\left(\frac{t}{MLR}\right)\Delta G > 0$.

These results in equation (c) imply: $D = D_s + D_c = \Delta G - \left(\frac{t}{MLR}\right)\Delta G = \left(1 - \frac{t}{MLR}\right)\Delta G < 0$.

So now we know that the total deficit declines since $\left(1 - \frac{t}{MLR}\right) = \left(\frac{s(1-t)+n}{MLR}\right) > 0$.

2. $E_p = 1060 + 0.55\,Y$

a) If $Y = 2{,}600$, $E_p = 2490$. $\therefore \Delta INV^u = Y - E_p = +110$

b) In equilibrium, $Y = E_p$. $\therefore$ $Y = 1060 + 0.55\,Y \rightarrow \mathbf{0.45}Y = 1060 \rightarrow Y = 2355.56$
Note that the $MLR = \mathbf{0.45}$ in the equation above.

c) G = 310; $T = 100 + 0.2Y$
If $Y = 2355.56, T = 571.11$
$\therefore G - T = -261.11$

d) $NX = 115 - 0.05Y$.
If $Y = 2355.56$, If $NX = -2.78$

e) $S = Y - T - C$.
$Y = 2355.56$, $T = 571.11$, and $C = 1788.34$
Hence $S = -3.89$.

f) $Total\ Saving = S + (T - G) - NX$.
Based on answers (c) - (e), $Total\ Saving = 260$.
This should also equal investment.

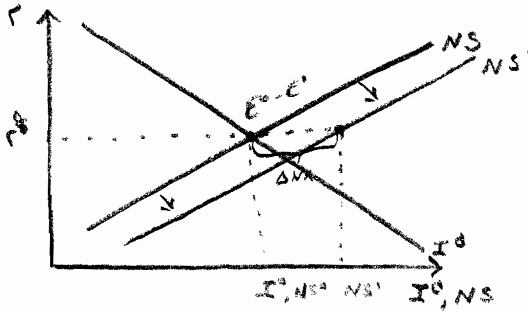
g) $Y_N = 2{,}600$ and $Y = 2355.56$. $\therefore \Delta Y = 244.44$
Since the $MLR = \mathbf{0.45}$ from (b), the multiplier is $k = {}^{\Delta Y}/_{\Delta G} = {}^{1}/_{0.45} = 2.22$
$\therefore \Delta G = {}^{\Delta Y}/_{2.22} = +110$

3. Two sample answers from your classmates are on the following pages. Together with my comments, they summarize key points the question asks for.

(T-G)+S

NS =

3*a*. Suppose the government increases taxes in a small open economy. Explain the likely effect of this policy change on domestic investment as well as on domestic and foreign savings.



- when the government increases taxes in a small open economy, national savings increase b/c of the additional tax revenue as can be seen in the right shift of the NS curve. Since the economy is a small open economy, its interest rate remains the same after the shift of the NS curve as the economy is not large enough [illegible]

B/c there is no change in interest rate, there is no change in domestic investment [illegible] there is no change [illegible] domestic savings [illegible] the interest rate. Since there is no change in domestic investment or domestic savings, ~~the~~ foreign savings must increase by the same amt as the increase in national savings

you mean to say decrease (or US savings flow to foreign countries)

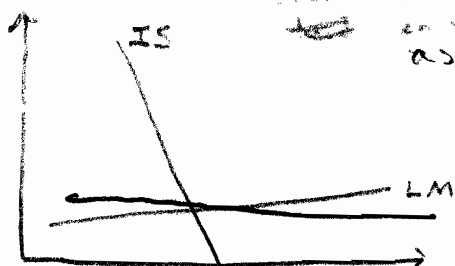
b. To dampen business cycles in this economy, would you recommend fiscal policy, monetary policy, both fiscal and monetary policies, or neither policy? Why? Explain using the IS-LM model.

Recommended policy or policy-mix: Expansionary ~~physical~~ fiscal policy

Explanation:

may not be low only fixed

In this economy, the interest rate is very low & since the rate is so low individuals believe it will go up, so people believe prices of bonds will go down in the future. So people would want to hold [illegible] bonds. This leaves the demand for money very interest sensitive [illegible] near horizontal. Also, one could say there has been a [illegible] of confidence [illegible] in the economy [illegible] firms to not invest as much even with changes in interest rates, this makes the IS curve less resistant to changes in interest rates } This is extraneous

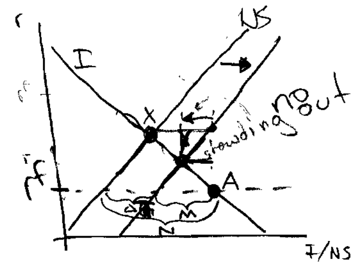


- In light of this I would use a expansionary ~~monetary~~ fiscal policy to [illegible] monetary policy is [illegible]

very [illegible]

- Additionally [illegible] so I would [illegible] a contractionary monetary policy [illegible] } ?

3a. Suppose the government increases taxes in a small open economy. Explain the likely effect of this policy change on domestic investment as well as on domestic and foreign savings.



When the government increases taxes, the national savings will increase (shown on the graph at right). In a closed economy this would shift equilibrium interest rates and investment from point X to point Y; since the economy is small and open, though, the change will have no effect on interest rates and therefore no effect on total investment (which remains at point A). The type of savings that lead to this investment will change, though. Gov't saving has increased by definition (T-G), but ~~private savings will diminish (becase saving is negatively reliant on T, S = a + b(Y-T)) and~~ Foreign saving will have decreased from N to M, effectively cancelling out the ΔT ($\Delta NS = \Delta NX$) $\Delta T + \Delta M = \Delta N$

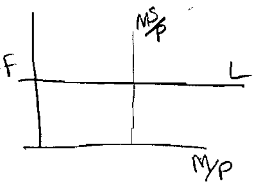
no change in private saving because no change in r.

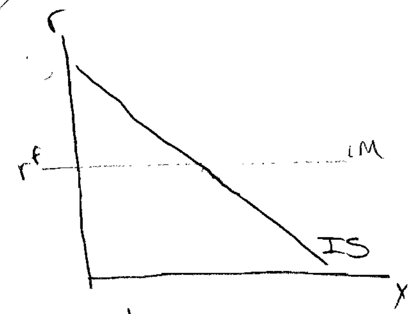
~~we can see it in the crowding out effect shown on the graph; national saving wouldn't increase by the full ΔT because of an offset in personal savings~~ nice

To dampen business cycles in this economy, would you recommend fiscal policy, monetary policy, both fiscal and monetary policies, or neither policy? Why? Explain using the IS-LM model.

Recommended policy or policy-mix: ~~fiscal policy~~ Monetary policy

Explanation:





In this economy, I think we can consider the LM curve to be horizontal. The LM curve dictates how the interest rate fluctuates given changes in money supply, money demand, and income, but in this case we know that the interest rate is locked at the international rate, so there's a single rate (rf) at which money demanded is constant. If we assume this to be true, then monetary policy will have no effect on equilibrium income, so the only instrument the government can use to affect business cycles is fiscal policy.

→ See back. This would be correct. I appreciate your insight and your mistake

(If this model is wrong, and the LM curve is positively sloping as it usually would, I'd recommend a mix of both policies)