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Macroeconomics

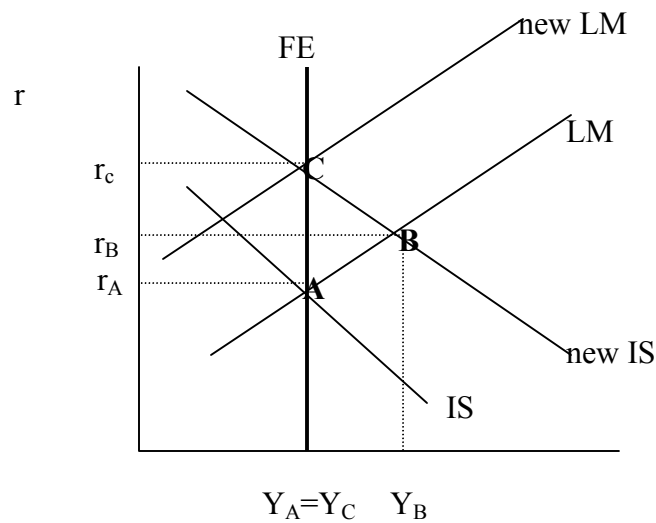
Study Question: IS-LM Model with Full Employment Line  
(Answers on subsequent pages)

1. A closed economy is humming along a full employment GDP, but Congressman Swelled Head says “Let’s cut tax rates; this will not only grow our economy in the short run but it will also stimulate long term investment and be a swell thing for generations to come. Oh, boy!”

Analyze the congressman’s claim using the IS-LM model with full employment line. Assume that the economy begins at full employment GDP; then tax rates are permanently cut. (No other changes in government behavior ever occur.)

- a) Use an IS-LM graph to illustrate the short run and long run effects of the tax cut.
- b) What has happened to investment in the long run? Has it *increased*, *declined*, or *stayed the same* (relative to its level prior to the tax cut)? Explain your answer.
- c) Was the tax cut wise? Explain in two or three sentences.

a)



b) Recall that in macroeconomics, investment is defined as purchases of physical capital by firms plus new housing construction. Both of these things are quite sensitive to the cost of borrowing—the interest rate. According to the IS-LM model, the long run effect of a permanent tax cut is higher interest rates (as seen in the graph above in the movement up from  $r_A$  to  $r_C$ ). This reduces *investment*!

c) As with all actions, there are benefits and costs associated with it. Consumers benefit, at least for a while, since the tax cut leaves them with more private disposable income and hence more consumption. But, over time, the drop in investment will have negative consequences; as evidenced by the Solow growth model and the growth accounting equation, a drop in investment means a slower growing capital stock over time, and this will reduce the average growth rate of the economy in the very long term, reducing the standards of living of future generations.