

QUIZ 6: Macro – Winter 2011

Name: _____

You must always show your thinking to get full credit.

Question 1

Which of the following will shift the aggregate demand curve to the right? (12 points total)

- a. An increase in government spending

Yes, an increase in G decreases the amount of resource available for firms to invest (reduces savings) for every level of output Y in the goods market. This induces higher real interest rates and shifts the IS curve up and to the right. This by construction shifts aggregate demand to the right.

- b. An increase in the nominal money supply.

Yes, an increase in M_s increases real money balances for every level of output Y . This induces lower real interest rates in the money market and shifts the LM curve down and to the right. This by construction shifts aggregate demand to the right.

- c. An increase in TFP.

Yes, an increase in TFP increases the level of desired investment for every level of output Y and level of the real interest rate (shifts the I_d curve in the goods market outwards). This induces higher real interest rates in the goods market and shifts the IS curve up and to the right. This by construction shifts aggregate demand to the right.

- d. An increase in the price level.

No, an increase in P only moves us along the AD curve. The change in prices moves real money balances in the money market (particularly it decreases M_s/P) inwards and this is precisely the movement in the LM curve we have used to construct the AD.

- e. A decrease in labor income taxes.

Let us assume that labor income taxes decrease permanently from today onwards. Let us also assume consumers are not Ricardian (that is their consumption decision does not consider that probably the government will need to raise taxes in the future if it maintains the same level of G and tax revenues go down). This is going to affect PVLR for consumers because their stream of future income has increased. Being wealthier they will be willing to consume more and this will decrease aggregate saving for every level of output. Hence IS shifts right and the AD shifts right. If consumers are Ricardian and government spending

does not change, nothing is going to happen to consumption, IS and AD. All the excess disposable income obtained out of the tax cut is going to be put in government bonds (the government needs the money to pay its purchases of G if budget is balanced and that comes either from taxes or issuing bonds).

f. An increase in wealth W .

This is ambiguous. It may shift the AD to the right or to the left. This is because the IS Curve will move to the right (due to higher consumption and lower savings) while the LM will shift to the left (because of the transaction motive of holding liquidity that is associated to having more resources available for consumption). Notice that we usually not emphasize the effect of transaction motives for movements of the LM in our examples but they are present.

Question 2

Consider the IS-LM curve modeled in class. Which of the following are true about the new short run equilibrium? (Hint: your analysis should ONLY be confined to the IS and LM curves). (14 points total)

a. An increase in TFP will increase both interest rates and output.

True. It will determine a shift outwards of the IS and we are going to move along the LM so both real interest rates and output are going to increase.

b. A decrease in government spending will increase output and decrease interest.

False. It will determine a shift downwards of the IS and we are going to move along the LM so both real interest rates and output are going to decrease.

c. An increase in the nominal money supply will increase both output and interest rates.

False. It will determine a shift downwards of the LM and we are going to move along the IS so the real interest rate is going to decrease while output increases. Basically real interest rate move us down along the IS.

d. An increase in the price level will cause both output and interest rates to decline.

False. It will determine a shift upwards of the LM and we are going to move along the IS so the real interest rate is going to increase while output decreases. Basically real interest rate move us up along the IS.

e. An equal increase in both M and P (in percentage terms) will cause both interest rates to fall and output to increase.

False. It will determine no movement of the LM curve (real balance remain constant and so the equilibrium in the money market for every Y) and we are going to remain exactly at the initial equilibrium.

- f. An increase in labor income tax rates will cause output to decrease and investment to increase.

True. An increase in labor income taxes will shift in the IS curve (because C will fall). This will cause Y to fall. As Y falls, money demand shifts in and interest rates fall (move along the LM curve). However, the fall in interest rates will spur investment. So, C will fall and I will increase. The net effect on Y is that Y will fall. We know that Y will fall because the only reason that I is increasing is because Y is falling (causing money demand to shift in and interest rates to fall – if Y didn't fall, then interest rates wouldn't have fallen!!!)

Question 3

Consider the reading “The Kiss of Life?” in the Economist. If you recall, there was some discussion about a “wealth effect” at the end of the stock market boom of the 90’s. Particularly the article mentions: *In its statement, the Fed drew particular attention to falling profits and “the possible effects of earlier reductions in equity wealth on consumption”.* (5 pts each)

- a. How can you interpret this sentence as a movement of the IS-LM equilibrium and as a shift of the AD?

This answer is similar to point f) of question 1. A negative wealth effect may shift the AD to the left or to the right (specifically Greenspan was thinking about a decrease to the left, which is more reasonable). This is because the IS Curve will move to the left (due to lower consumption and higher savings because people feel their PVLR has gone down), while the LM will shift to the right (because of the transaction motive of holding liquidity that is associated to having less resources available for consumption).

- b. Consider now the policy action the Fed took: *America’s Federal Reserve cut interest rates this week by half a point, taking the Fed funds rate to 4.5%.* Why should we consider this policy move a stabilization action?

This policy move aimed at lowering equilibrium real interest rates and foster an expansion of consumption and investment such to stabilize the negative drop in IS with a shift to the right of the IS. An accommodating monetary policy is usually associated with a stimulus to investment and consumption that in times of recession help the economy stay closer to its full-employment level.

Question 4

Why does AD slope down? (4 pts.)

The AD curve represents the level of aggregate demand in the economy for every level of prices. It is constructed as the loci in the (P, Y) space that represent an equilibrium in the goods and money market simultaneously. When prices are high, everything else given,

demand has to be low because real money balances are so scarce that interest rates need to be high to balance demand and supply of funds (and hence investment is going to be low and consumption is going to be low).