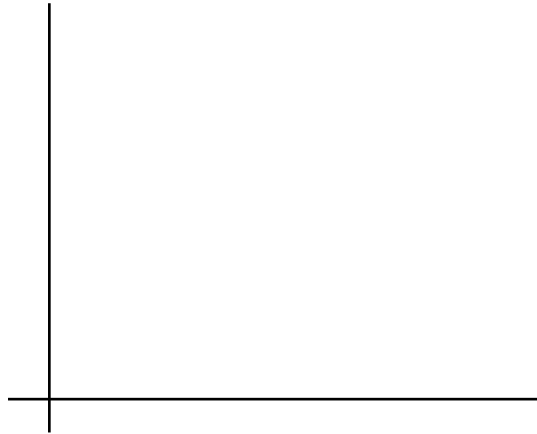


ASSIGNMENT #5
Due Wednesday February 25
(at the beginning of the class)

1. AS-AD problem

During the mid eighties, the price of oil in the United States fell. Assume that the economy was originally at its long run equilibrium Y_n^o . (Use the model of chapter 7 to answer this question)

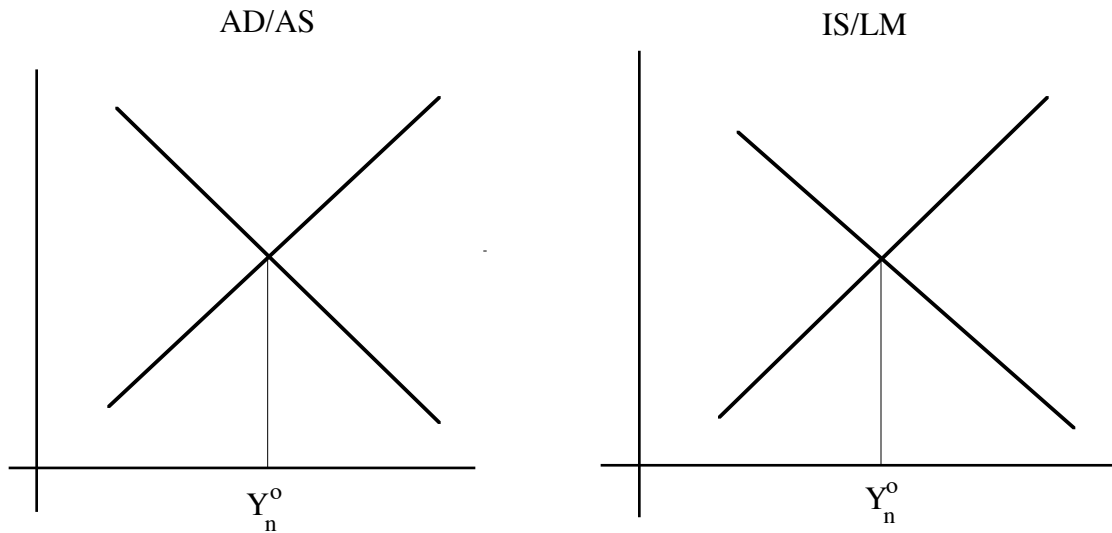
a. Show on the price setting/wage setting graph the effect of this reduction on the real wage and on the natural rate of unemployment u_n . Name the axes and the two curves and show the shifts, if any, of the relevant curve or curves.



What happens to the markup μ ?	<u>increases</u>	decreases	stays the same
What happens to the coefficient z ? (positive effects on the wage setting equation)	<u>increases</u>	decreases	stays the same
What happens to the natural rate of unemployment u_n ?	<u>increases</u>	decreases	stays the same
What happens to the real wage?	<u>increases</u>	decreases	stays the same

(underline the correct answer)

b. Now use the AD/AS graph and the IS/LM graph to illustrate the **short run** and **medium run** effects of the reduction in the price of oil. Name the axes and the curves and show the shifts, if any, of the relevant curve or curves. (use the subscript SR for the short run shifts and the subscript MR for the medium run shifts and use arrows to illustrate the direction of the shifts)



In the short run

What happens to output?	increases	decreases	stays the same
What happens to the price level?	increases	decreases	stays the same
What happens to the rate of interest?	increases	decreases	stays the same

In the medium run (from short run to medium run equilibrium)

What happens to output?	increases	decreases	stays the same
What happens to the price level?	increases	decreases	stays the same
What happens to the rate of interest?	increases	decreases	stays the same

(underline the correct answer)

2. Monetary policy in the long run

Use the following IS-LM model to calculate the effect on various aggregates of an increase in the money supply.

consumption	$C = 100 + 0.66Y_D$
investment	$I = 800 - 16.66i$
tax	$T = 600$
government expenditure	$G = 500$
real money demand	$L = Y - 100i$
money supply	$M = 1200$
price level	$P = 1$

(Y is output, Y_D is disposable income and i the rate of interest expressed as a percentage)

The IS curve is: $Y = 3000 - 50i$ and the LM curve: $i = 0.01Y - 12$ and the short run equilibrium of the economy is $Y = 2400$ and $i = 12\%$ - let's also assume that the economy is at its medium run equilibrium level.

- a. Calculate the corresponding levels of consumption, investment and the real money supply.

$$C = \underline{\hspace{4cm}}$$

$$I = \underline{\hspace{4cm}}$$

$$M/P = \underline{\hspace{4cm}}$$

- b. Now assume that the Fed doubles the nominal money supply. Solve the model i.e. what are the equations for the IS and the LM curves and the corresponding equilibrium values of Y and i in the short run.

IS curve: $Y = \underline{\hspace{2cm}}$

LM curve: $i = \underline{\hspace{2cm}}$

$Y = \underline{\hspace{2cm}}$ $i = \underline{\hspace{2cm}}$

Calculate the corresponding levels of consumption, investment and the real money supply.

$C = \underline{\hspace{2cm}}$ $I = \underline{\hspace{2cm}}$

$M/P = \underline{\hspace{2cm}}$

c. Is the economy now

beyond or below

its full employment level?

What happens to the price level in the medium run?

What is the price level consistent with the medium run equilibrium: $P = \underline{\hspace{2cm}}$

(note that in this model the price level is proportional to the nominal money supply)

Now solve the model i.e. what are the equations for the IS and the LM curves and the corresponding equilibrium values of Y and i in the long run.

IS curve: $Y = \underline{\hspace{2cm}}$

LM curve: $i = \underline{\hspace{2cm}}$

$Y = \underline{\hspace{2cm}}$ $i = \underline{\hspace{2cm}}$

Calculate the corresponding levels of consumption, investment and the real money supply.

$C = \underline{\hspace{2cm}}$ $I = \underline{\hspace{2cm}}$

M/P = _____

d. Compare the values of consumption and of investment in the 3 cases above i.e. the original position, the short run adjustment and the long run adjustment.

Consumption has ...

Investment has ...

(Finish the sentences above.)

Is monetary policy **neutral** **or** **non-neutral**

in the long run?