

MORE THAN TEN (10) SERIOUS SPELLING MISTAKES WILL BE TAKEN NEGATIVELY INTO ACCOUNT

Introduction to Macroeconomics · Final exam · 6 June 2013 · Part 2

1. [15%] Define briefly the following concepts.

Real GDP

The real GDP is a value that indicate the constants prices of goods and services that are producing in an economy

Macroeconomic equilibrium

Macroeconomic equilibrium indicate the relation between the aggregate demand and aggregate supply

Fisher effect

The Fisher effect indicate the relationship between production of an economy and interest rate inflation

Expansionary open market operation

An expansionary open market operation would influence positivity in economy. AS buying bonds increase the quantity of money

GDP deflator

The GDP deflator is the relationship between nominal GDP and real GDP:
$$\text{GDP deflator} = \frac{\text{nominal GDP}}{\text{real GDP}}$$
 what is it expunging?

The neutrality of money principle

For neutrality a complicated situation of money, the government and central banks can use fiscal and monetary policies

Okun's law or Goodhart's law

Okun's law indicate the relationship between unemployment rate and inflation rate.

Expansionary fiscal policy

A government do a expansionary fiscal policy when increase the G and TR, and reduce taxes (T)

Real exchange rate or real interest rate

The real interest rate is the percentage which there is pay for determinate loan in a determinate time

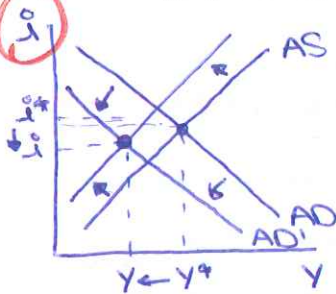
Monetary base

The monetary base is the cash which are in economy and bank reserves:
$$M_0 = E + R$$

2. [6%] Justify the answer given to multiple choice question 16 from Part 1 and explain why the discarded options are incorrect.

If the prices of goods and services reduced, the inflation rate will down because the prices are less. The other options are incorrect because those measures aren't relation with the prices of goods, as don't affect to inflation rate.

3. (i) [8%] The government decrees that even days are no longer working days, so workers are forbidden to be at work any such day and firms are legally obliged to close factories and facilities every such day. Using the aggregate supply and aggregate demand model, determine graphically the effect of that measure on the macroeconomic equilibrium when a whole year is considered and explain the changes in the aggregate functions that cause the effect determined.

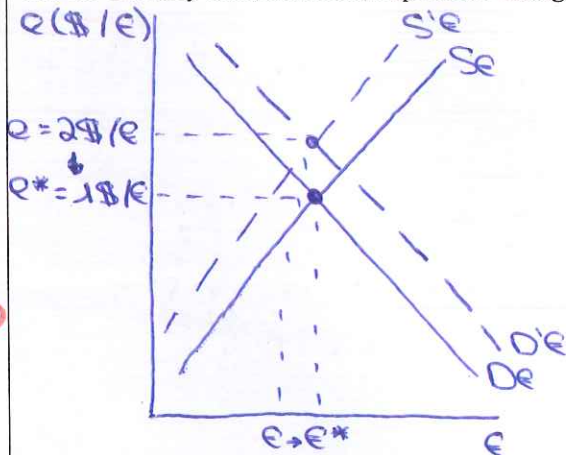


This situation affect to economy negatively. The first effect that we can see is that the aggregate demand and aggregate supply shift to the left. This make that there is less production because has reduced, the demand as there is less pieces of job, and reducing of interest rate.

[5%] (ii) Assuming that the economy is big enough, how would that measure affect the macroeconomic equilibrium, the aggregate supply function, and the aggregate demand function of the rest of the world? Explain your answer.

of the rest of the world the aggregate demand function increase because up the imports and the aggregate supply down as there are less things for will cleared.?

4. [10%] The US and the eurozone are autarkic economies. The US price level is $P^* = 200$, whereas the eurozone price level is $P = 100$ (both computed adopting the same basket of goods). The governments of the two economies agree to open them and initially set the exchange rate at $e = 1$ $\$/\epsilon$. Assuming that the conditions under which purchasing power parity theory holds, and using the AS-AD and the currency market models, explain the changes that are likely to occur in P^* , P , and e .



$e_{PPP} = P^*/P = 200/100 = 2 \$/\epsilon$ → This result indicate that with 2\$ you can buy 1€. As the euro will be devalued respect dollars.

If the two economies would initially set the exchange rate at $e = 1 \$/\epsilon$, the P^* will be reduce and P will be equal.

Either moneys cost the same and it adapt an equilibrium situation.

7.25

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1. [15%] Define briefly the following concepts.

1.25 Real GDP It is an indicator that measures the production of goods and services of a country with base period prices not like nominal GDP that uses current prices. It is more likely to be used because prices may change from period to period and it's more helpful at the time of analyze an economy.

0 Macro-economic equilibrium The macroeconomic equilibrium is the objective that economist follows and uses the fiscal and monetary policies to reach what? ?

0 Fisher effect It is determined by $i = r + \pi$ and it's useful to determine the interest rate for the ECB.

1 Expansionary open market operation An Expansionary OMO it's use to add more fuel on an economy, it consist consist on the purchase of loans from the central bank that increase the amount of money in markets. Central banks buy financial assets in exchange of money.

1.5 GDP deflator It is determined by $GDP \text{ deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}}$ and measures the changes in prices, but it don't takes care about imported goods like CPI does.

The neutrality of money principle

1.5 Okun's law or Goodhart's law The Okun's law determine a relationship between the GDP growth and the unemployment rate, when GDP growth unemployment falls and viceversa.

1 Expansionary fiscal policy An expansionary fiscal policy it's a measure used to help the rate of GDP growth on an economy. A possible expansionary fiscal policy is a reduction on taxes paid by consumers.

1 Real exchange rate or real interest rate The real interest rate equals to the nominal interest rate minus the inflation rate and it's used to know the real rate of the interest.

0 Monetary base It's the quantity of money on an economy it's the sum of $M_0 + M_1$.

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1. [15%] Define briefly the following concepts.

Real GDP. It is the sum of all the goods and services produced in an economy on a certain period of time adjusted to the inflation.

Macroeconomic equilibrium. It is the point in which aggregate demand and aggregate supply functions cross themselves each other.

Fisher effect. It is the effect of the inflation over the real interest rate that state the nominal interest rate. $i = i_r + \pi$ or $i_r = i - \pi$

Expansionary open market operation. It is a monetary operation by which the central bank buys public debt emitted by the government.

GDP deflator. It is a price index that relates the nominal GDP with real GDP.

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}}$$

The neutrality of money principle. It is an statement that expresses that changes in nominal variables do not affect real variables.

Okun's law or Goodhart's law. Okun's law is an empirical evidence and economic relationship between the unemployment increase and the GDP. $\Delta u = a - b y$

Expansionary fiscal policy. It is a demand-side policy focused in shifting aggregate demand to the right modifying some variables of the fiscal-side of the economy, like taxes, consumption or investment.

Real exchange rate or real interest rate. Real exchange rate is the cost of a certain basket of goods in an economy, which can be compared to others economies with taking into account. It is the number of baskets of goods that we can buy in an economy with the same money.

Monetary base. It is the sum of the cash held in public's hands and the reserves that are held by banks. $M_0 = E + R$

5. [3%] Establish, in a well-reasoned way, the value of the exchange rate in the currency market if the purchasing power parity exchange rate is 2 \$/€, the eurozone price level is $P = 100$, and the US price level is $P^* = 200$.

$$\text{exchange rate} = \frac{P^*}{P} = \frac{2\$}{\text{€}}$$

6. [3%] Using the version of the quantity equation expressed in rates of change, calculate the inflation rate if the velocity of circulation of money remains constant, real GDP increases by 2%, and the money stock increases by 5%.

$$Y = V \cdot M_0$$

$$-3\% = \dot{c}$$

Y = real GDP

V = velocity of circulation of money

c = interest rate

M_0 = Money stock

$$\Delta Y = \Delta c + \Delta M_0$$

$$2 = \dot{c} + 5$$

7. [5%] With $M_1 = 1000$, $M_0 = 500$, reserve ratio equal to $\frac{3}{8}$, and deposits $D = 800$, find the liquidity ratio l and the currency E held by the public.

$$M_1 = 1000$$

$$M_0 = 500$$

$$r = \frac{3}{8}$$

$$d = 800$$

$$l = \frac{E}{D}$$

$$\frac{1}{4} = \frac{E}{800}$$

$$200 = \frac{800}{4} = E$$

$$M_0 = mm = M_1$$

$$500 \cdot mm = 1000$$

$$mm = 2$$

$$mm = \frac{1+l}{r+l}$$

$$2 = \frac{1+l}{\frac{3}{8}+l}$$

$$2\left(\frac{3}{8}+l\right) = 1+l$$

$$\frac{3}{4} + 2l = 1+l$$

$$l = \frac{1}{4}$$

8. [2%] Find the approximate value of the inflation rate if real GDP has increased by 4% and nominal GDP has decreased by 2%.

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} = \frac{-2}{4} = -6\%$$

$$\Delta \text{GDP deflator} = \Delta \text{Nominal GDP} - \Delta \text{Real GDP}$$

$$\Delta \text{GDP deflator} = -2 - 4$$

$$\text{inflation} = \Delta \text{GDP deflator} = -6\%$$

9. [3%] Using the fundamental macroeconomic accounting identities, find net exports if $S = 90$, $G = 40$, $TR = 10$, and $T = 30$.

$$S = I + G + TR - T + NX$$

$$90 = 0 + 40 + 10 - 30 + NX$$

$$90 = 20 + NX$$

$$NX = 70$$

10. [5%] Explain a common feature and two differences between an expansionary monetary policy and an expansionary fiscal policy.

A common feature between these two policies is that both have the objective to increase aggregate demand.

A difference is the tools they use to achieve their goals. Monetary policy uses all the tools controlled by the central bank, like interest rate, the loan market, and fiscal policy uses the tools of the government, like public expenditure and taxes.

Another difference is the goal they try to achieve. Fiscal policy usually tries to increase GDP since it is an expansionary policy, and monetary policy tries to reduce inflation.

11. [5%] Explain the exchange rate monetary policy transmission channel.

Exchange monetary policy is divided in two.

The first policy says that exchange rate must be fixed and always remain the same so central bank government try to keep the same exchange rate by buying and selling bonds.

The other policy states that exchange rate doesn't have to be fixed, that it will remain in equilibrium by itself.