KING'S UNIVERSITY COLLEGE ECONOMICS 020 Answers to Review Questions

G. Copplestone

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1. Describe the first and second round effects of an increase in government expenditure. ANS: An increase in government expenditure will first shift the AD curve to the right. The increasing real GDP raises the demand for money, leading to higher interest rate. The higher interest rate lowers interest-sensitive expenditure, which moves the AD to the left. Besides, the rising price level moves the supply of real money to the left, which in turn raises the interest rate further and decreases expenditure. (Diagram is required: Textbook p. 646-647)

2. Describe the first and second round effects of an increase in the money supply (i.e. an expansionary monetary policy).

ANS: The initial increase in the money supply decreases the interest rate and stimulates investment. This increases AD which means GDP and the price level increase. The increase in real GDP raises real money demand. The increase in price level decreases the real money supply. As a result, the interest rate begins to rise. This discourages investment and shifts the AD to the left.

(Diagram is required: Textbook p. 650-651)

3. What would happen in the following scenario? Economy A and B are identical except that an 1% change of interest rate results in 0.1 billion change in interest sensitive expenditure in economy A but 10 billion change in the economy B.

- a) In which country is fiscal policy more effective? (A or B)Why?
- b) In which country is monetary policy more effective? Why?
- c) What about the crowding effect of fiscal policy in each economy.

d) Which economy would you say is likely to be Keynesian and which monetarist? ANS: Note that everything is the same in the two countries except that the slope of the IE curve (for a given change in interest rates we get greater change in IE in B than in A. Therefore, the IE curve is flatter for B than A). Also since the Md and Ms curves are identical, the change in interest rates in A is identical to the change in interest rates in B. The first round effects are identical in both countries. It is only the second round effects that differ.

(a) Since the IE curve is steeper in A, for the same change in interest rates we get less of a reduction in IE, therefore, less crowding out and thus fiscal policy is more effective in A than in B..

- (b) Since the IE curve is flatter in B, then a given change in interest rates due to a change in Money supply produces a larger change in IE in B than in A. Therefore, Monetary policy is more effective in country B.
- (c) Since the IE curve is steeper in A than in B, following an increase in government spending and a subsequent increase in interest rates, there is less of an offsetting reduction in IE in A than in B. Therefore, there is less crowding out in A than in B.
- (d) Country A is more likely to be Keynesian because Keynesians believe that the IE curve is relatively interest rate inelastic (i.e., steep) and Monetarists believe the IE curve is more sensitive to changes in interest rates and therefore should be flatter.
- 4.

Inflation (percent	per year)	Unemployment	(percent)
12		4	
11		5	
10		6	
9		7	
8		8	
7		9_	

- (a) The above table illustrates a short-run Phillips curve for the country of Ruritania. If the expected rate of inflation is 10 percent, and the rate of inflation unexpectedly rises to 12 percent, what is the unemployment rate?
 ANS: 4 percent.
- (b) If the expected rate of inflation is 10 percent, and the rate of inflation unexpectedly falls to 8 percent, what is the unemployment rate? ANS: 8 percent.
- (c) If the expected rate of inflation is 10 percent, and the rate of inflation unexpectedly rises to 12 percent and stays there for some period of time, what will be the rate of expected inflation and the unemployment rate?
 ANS: Expected inflation adjusted to 12 percent with unemployment rate at 6 per cent (i.e., the Phillips curve shifts upwards vertically by the change in inflation expectations or 2%-- Therefore, each level of unemployment is now associated with an inflation rate 2% higher. So when inflation expectations equal actual inflation which is 12%, the unemployment rate is 6%).
- (d) If the expected rate of inflation is 10 percent, what is the natural rate of unemployment for this country?ANS: 6 percent.

5. If the level of GDP is \$400 million and the price level is 200 and the velocity of money is 20:

(a) What is the initial level of the quantity of money? ANS: Note that price level is expressed as a GDP deflator (relative to certain base year, which is the ratio of Nominal GDP to real GDP multiplied by 100). Therefore, we need to divide the price index by 100 (removing the influence of the base being set at 100) Consequently, the price level is adjusted to be 200/100 = 2. (textbook p. 486). So Nominal GDP = 400mil*200/100 = 800 mil. By the quantity theory of money, the quantity of money = 800 mil/20 = 40mil.

(b) If the quantity of money rises by 20 %, what is the new quantity of money ANS: New quantity of money = 1.2 * 40mil = 48 mil
(c) What is the new price level?
ANS: New price level = 200 * 1.2 = 240
(d) What is the new level of GDP?
ANS: In the long run, real GDP stays at the potential level.

6. Assume that we have a perfectly flexible exchange rate (i.e., no intervention by the Bank of Canada to influence the exchange rate). Moreover, assume the exchange rate is defined as the value of the Canadian dollar (i.e., US \$ per Canadian \$). With the use of a demand and supply diagram for the market for Canadian dollars, determine the impact on the demand curve, the supply curve and the equilibrium exchange rate if:

(a) the international community expects the Canadian dollar to depreciate in the near term.

If it is expected that the Canadian dollar will depreciate then Canadians anticipating the need for foreign currency (to try and buy foreign goods) will try to sell their Canadian dollars now on the foreign exchange market, thus increasing the supply of Canadian dollars. (ie., the supply curve shifts outwards to the right) At the same time, foreigners anticipating that the Canadian dollar will depreciate will buy fewer Canadian dollars now so the demand curve for Canadian dollars shifts leftwards. The result of a rightward shift in Supply and a leftward shift in Demand produces a lower equilibrium value for the exchange rate – ie. the Canadian dollar does depreciate

(b) the Bank of Canada decides to slow the rate of inflation by reducing the rate of growth of the domestic money supply.

If the growth rate of Canadian money supply falls (eg. the rate of increase in M1 falls) then Canadian interest rates will increase. This will produce a positive interest rate differential favouring Canadian assets. Foreigners will increase their purchases of Canadian bonds (since the interest rates have increased) and therefore increase their purchases of Canadian dollars to do so – the demand for Canadian dollars increases or shifts to the right. At the same time, Canadians will prefer to buy domestic assets given their relatively higher rate of return and choose to buy fewer foreign bonds thus reducing the amount of Canadian dollars supplied to the foreign exchange market – shifting the supply curve to the left. The

combination of a leftward shift in supply combined with a rightward shift in demand produces a higher equilibrium value for the exchange rate (ie., the Canadian dollar appreciates)