

June 2006

MACRO QUALIFIER – PART 1

copy

Each section below is equally weighted.

Section I:

Answer one of the following questions:

1. The demand side of an economy is described by the following set of equations:

$$(1) \quad Y = C + I + \bar{G}$$

$$(2) \quad C = C(Y - \bar{T}), \quad 1 > C' > 0,$$

$$(3) \quad I = I(r), \quad I' < 0$$

$$(4) \quad r = r(Y, \pi) \quad r_Y > 0, \quad r_\pi > 0$$

where endogenous variables are:  $Y$  (GNP),  $r$  (real interest rate),  $C$  (consumption),  $I$  (investment); exogenous variables are:  $\bar{G}$  (government expenditures),  $\bar{T}$  (taxes). Equation (4) is the Central Bank rule. The Central Bank raises the real interest rate when output or the inflation rate rises.

On the supply side, the inflation rate is given at any point in time. It rises if output is above the natural rate  $\bar{Y}$  and declines if the output is below  $\bar{Y}$ . Thus,  $\pi$  (inflation rate) is exogenous in the short-run but responds to the GDP gap in the long-run.

- Show mathematically and graphically (on the  $r$ - $Y$  plane) how real interest rate and output are determined in the short-run, using the product market equilibrium and monetary rule.
- Use your answer to (a) to derive mathematically and graphically the aggregate demand curve as a relationship between  $\pi$  and  $Y$ .
- Suppose that the economy is in the long-run equilibrium with positive inflation. Explain the short- and long-run effects of a fiscal expansion on output, inflation, and real interest rate.
- Suppose that the economy is in the long-run equilibrium with positive inflation. Explain the short- and long-run effects of a monetary contraction on output, inflation, and real interest rate.
- Suppose that monetary rule (4) takes the form  $r = a + b\pi + c(Y - \bar{Y})$ . What is the rate of inflation in the long-run? How is it affected by the Central Bank's responses to the inflation rate and the GDP gap?

(P.S. This is D. Romer's Keynesian model without the LM curve. You can read about it in *JEP*, Spring 2000, 149-169.)

MACROECONOMICS II QUALIFIER EXAM

ECON 7008, SPRING 2006

Reply only TWO of the questions ONE from part A and ONE from part B. Good luck!

Part A

1. Explain the Kaleckian model of the cycle and Kaldor's non-linear model and emphasize differences and similarities between them.
2. What is the main difference between Ramsey and Solow's growth model? In what sense did Solow solve (or not) the Harrodian problems? Explain.

Part B

3. What is the main contribution of heterodox growth models? How do the Kaleckian models (e.g. Rowthorn, 1981) relate to the Kaldorian models (e.g. Thirlwall, 1979)?
4. What are the consequences of the Equifinality Theorem for growth accounting and New Growth Theory?