

2004 Macroeconomics Qualifying Examination, Section 7007

Long Question:

1. Evaluate Kaldor's trade cycle theory and discuss Chang & Smyth's formulation of it.
 - a. Explain in what way it is more consistent with the structure of the argument in Keynes' *Treatise* than that in the *General Theory*.
 - b. How it differs from Samuelson or Hicks' 'multiplier – accelerator' models of the business cycle.

Short Question: Answer one of the following two questions.

1. In what way does the heterodox approach to the theory of value and distribution differ from that of the mainstream neoclassical theory.
2. Critically discuss Keynes' *marginal efficiency of capital* schedule in the *General Theory* in relation to his theory of investment.
 - a. What does it mean?
 - b. Why does it have the shape it has?
 - c. What are the different interpretations it has given rise to in the literature in the later years?

Econ 7008
2004 Qualifier

All parts are equally weighted.

PART A: Answer one of the following questions:

1. Consider the following economic model:

- (1) $Y = F(N, \bar{K}), \quad F_N > 0, F_K > 0$
- (2) $\frac{W}{P} = F_N(N, \bar{K}), \quad F_{NN} < 0, F_{NK} > 0$
- (3) $N = N\left(\frac{W}{P}, i - \bar{\pi}\right), \quad N_{W/P} > 0, \quad N_{i-\pi} > 0$
- (4) $Y = C + I + \bar{G}$
- (5) $C = C(Y - \bar{T}), \quad 1 > C' > 0,$
- (6) $I = I(i - \bar{\pi}), \quad I' < 0$
- (7) $\frac{M}{P} = L(Y, i) \quad L_Y > 0, \quad L_i < 0$

where endogenous variables are: Y (GNP), N (employment), W (nominal wage), P (price level), i (nominal interest rate), C (consumption), I (investment); exogenous variables are: K (capital stock), π (expected inflation rate), M (money stock), G (government expenditures), T (taxes).

- a. Suppose M rises. Analyze the effects on $Y, P, i,$ and N .
- b. Suppose G rises. Analyze the effects on $Y, P, i,$ and N .
- c. Suppose π rises. Analyze the effects on $Y, P, i,$ and N .

2. Consider the macroeconomic model where aggregate supply and portfolio balance equations are:

$$y_t = \gamma(p_t - {}_{t-1}p_t^e) + \varepsilon_t, \quad \gamma > 0,$$

$$m_t - p_t = \tau y_t + u_t$$

$${}_{t-1}p_t^e = E(p_t | I_{t-1})$$

where m is the money supply, p is the price level, y is real GNP (all in logs); τ one minus the marginal income tax rate; u_t and ε_t are serially uncorrelated, mutually uncorrelated random error terms; E is the mathematical expectation operator and I_{t-1} denotes available information at $t-1$.

- a. Prove that in this model, Friedman's "no feedback" rule is as good as any other rule from the point of view of the objective: minimize $E(y_t - y^*)^2$ where y^* is given.
- b. Determine whether the tax parameter τ influences $E(y_t - y^*)^2$. If it does, what value of τ minimizes this objective?
- c. Determine whether the tax parameter τ influences $E y_t$. Would your answer change if τ were permitted to depend on time and be determined via a feed back rule?

PART B: Answer one of the following two questions.

1. Compare and contrast the quantity-constrained and efficiency wage models in terms of their explanations of the source of unemployment. Make sure to pay attention to commonalities and differences regarding both methodological foundations and analytical frameworks.
2. According to some economists, the hallmark of Keynesian economics is “price” rigidity. (The term price is used here generically, including wage and interest rate as well). Write an essay discussing this view, paying attention to different types of rigidities observed in the economy and their implications. Use as much economic theory as you can.

PART C: Answer one of the following two questions.

1. It is commonly observed that an increase in nominal money supply initially raises the real GNP and only subsequently change prices and wages. Explain how each of the following models explain this observation. How are these alternative models similar/different?
 - a. New Classical macroeconomics
 - b. Monopolistic competition model
 - c. Bargaining model.
2. One ongoing debate in macroeconomics is whether the monetary authority should follow rules or have discretion in the conduct of monetary policy. Write a rigorous essay presenting the two sides of this debate, presenting both theoretical and empirical arguments.