

Foundations of Modern Macroeconomics

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Problem set for Chapter 8

Question 1

On your day off you take a ride in Vienna's *Riesenrad* and overhear a shabbily dressed economist making a number of rather strong claims. Since you are an economist yourself, you feel obliged to comment on the statements. Here are the claims:

- (a) "In order to attain full employment of labour it is absolutely essential that union power is broken down as much as possible."
- (b) "Highly centralized unions or perfect competition on the labour market are both good for the employment level in an economy. Medium-sized unions, on the other hand, are very bad for employment."
- (c) "Higher unemployment benefits lead to higher wage claims and thus to higher unemployment. The degree of corporatism influences this relationship."

Question 2

Assume that the unemployment benefits are linked to the net market wage rate. Use a simple union model to discuss the effects of the following:

- (a) Higher unemployment benefits;
- (b) More intense competition on the goods market (due to, for example, increased European integration);
- (c) A more progressive tax system;
- (d) A higher employers tax on labour (t_E);
- (e) A higher average tax rate on workers (t_A).

Question 3

Use the Blanchard-Summers model on fiscal increasing returns.

$$Y = F(L, \bar{K}), \quad (1)$$

$$w = F_L(L, \bar{K}), \quad (2)$$

$$tY = G + \beta w_0(1 - t_0)[L_0 - L]. \quad (3)$$

- (a) Provide a brief interpretation of the equations.
- (b) Assume that the after-tax real wage is constant. This may be, for example, because of union influence. Show that the model admits two equilibria, namely a “good” and a “bad” equilibrium.
- (c) In order to judge the stability properties of the model we postulate that the tax rate moves gradually over to time to re-establish government budget balance. Equation (3) is replaced by:

$$\dot{t} = \gamma [G + \beta w_0(1 - t_0)[L_0 - L] - tY]. \quad (4)$$

Show that the model is unstable around the bad equilibrium but stable around the good equilibrium. What do you conclude from this result?

Question 4

Consider the two-sector model of the labour market. In the first sector (the primary sector) unions are prevalent, whilst in the second sector (the secondary sector) the labour market is characterized by perfect competition.

- (a) Show that there will be unemployment if the unemployment benefits are “too high.” Explain the mechanism.
- (b) Show what happens if “union bashing” leads to the elimination of trade unions in the primary sector.
- (c) Show the effects of a wage subsidy on labour in the secondary sector.