Fiscal Policy Can Reduce Unemployment: But There is a Better Alternative

By Roger Farmer

Discussion: Mirko Wiederholt

Northwestern University

January 8, 2010

A simple model with a competitive labor market

$$H_t = 1$$

$$(1-\alpha) K_t^{\alpha} L_t^{-\alpha} = W_t$$

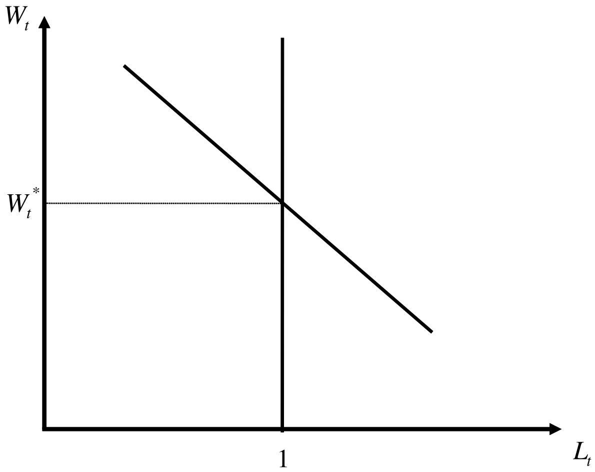
$$H_t = L_t$$

$$Y_t = K_t^{\alpha} L_t^{1-\alpha}$$

$$\frac{1}{C_t} = \beta R_t \frac{1}{C_{t+1}}$$

$$Y_t = C_t + G_t$$

The labor market



Costly recruiting

- Firms hire workers for two purposes: production and recruiting

$$\begin{aligned} L_t &= X_t + V_t \\ &= X_t + \frac{1}{q_t} L_t \end{aligned}$$

- Rearranging yields

$$X_t = \left(1 - \frac{1}{q_t}\right) L_t$$

- Substituting the last equation into the production function yields

$$Y_t = K_t^{\alpha} \left(1 - \frac{1}{q_t}\right)^{1-\alpha} L_t^{1-\alpha}$$

A simple model with Roger's labor market

$$H_t = 1$$

$$(1-\alpha)\, K_t^{\alpha} \left(1 - \frac{1}{q_t}\right)^{1-\alpha} L_t^{-\alpha} = W_t$$

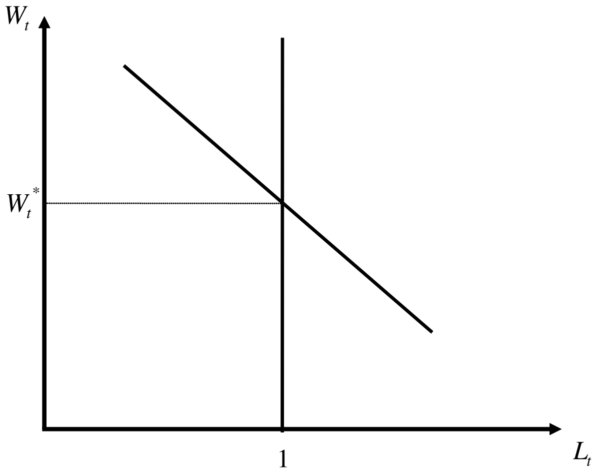
$$U_t = H_t - L_t$$

$$Y_t = K_t^{\alpha} \left(1 - \frac{1}{q_t}\right)^{1-\alpha} L_t^{1-\alpha}$$

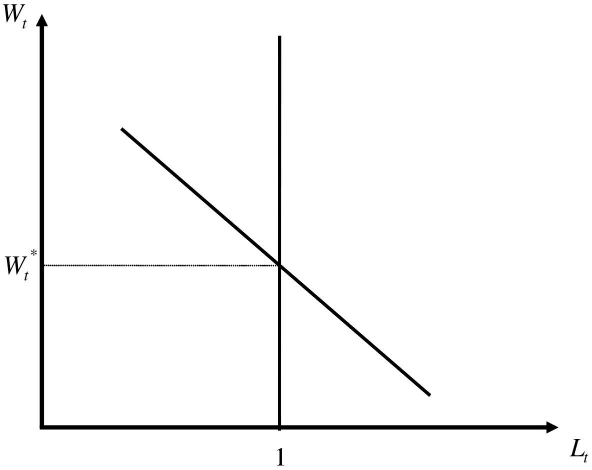
$$\frac{1}{C_t} = \beta R_t \frac{1}{C_{t+1}}$$

$$Y_t = C_t + G_t$$

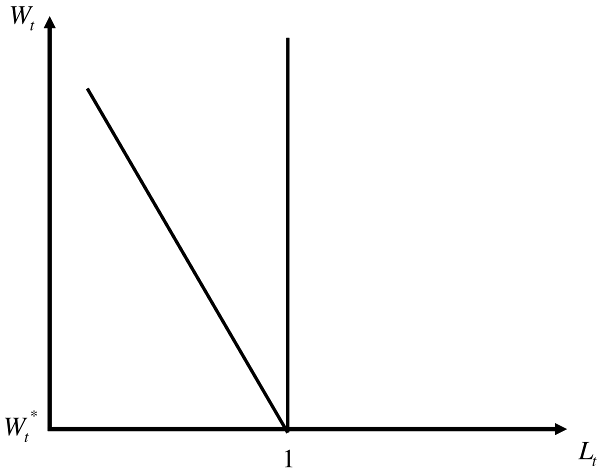
The old labor market



The new labor market



The new labor market



Comment I

- Why doesn't the wage adjust to the market clearing wage?

- Suggestion: Specify a game that market participants play with the property that the market clearing wage is not the unique equilibrium outcome.

Comment II

- The model can match (almost) any output sequence.
- Therefore, one cannot reject the model by looking at output data.
- However, one could in principle reject the model by looking at the comovement of the real wage rate and output.

Data for the nonfarm business sector

	2008 $Q3$	2008 $Q4$	2009 $Q1$	2009 $Q2$
Output	-1.0	-2.0	-2.3	-0.3
Real compensation per hour	-0.4	2.9	-0.6	1.3

Comment III

- "Fiscal Policy Can Reduce Unemployment"
- In the model, the set of equilibrium output levels is independent of fiscal policy.
- Thus, in the model, any statement about the effects of fiscal policy on output/unemployment has to be based on a particular equilibrium selection.

Comment IV

- "But There is a Better Alternative"
- There are many policies that have the property that the efficient allocation is the unique equilibrium outcome.

A simple model with Roger's labor market

$$H_t = 1$$

$$(1-\alpha)\, K_t^{\alpha} \left(1 - \frac{1}{q_t}\right)^{1-\alpha} L_t^{-\alpha} = W_t$$

$$U_t = H_t - L_t$$

$$p_k = \frac{MPK}{R-1}$$

$$Y_t = K_t^{\alpha} \left(1 - \frac{1}{q_t}\right)^{1-\alpha} L_t^{1-\alpha}$$

$$\frac{1}{C_t} = \beta R_t \frac{1}{C_{t+1}}$$

$$Y_t = C_t + G_t$$