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

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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

\[ L_t = X_t + V_t \]

\[ = X_t + \frac{1}{q_t} L_t \]

- 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

\[ W_t \]

\[ W_t^* \]

\[ L_t \]
The new labor market
The new labor market
• 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

<table>
<thead>
<tr>
<th></th>
<th>2008 Q3</th>
<th>2008 Q4</th>
<th>2009 Q1</th>
<th>2009 Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>−1.0</td>
<td>−2.0</td>
<td>−2.3</td>
<td>−0.3</td>
</tr>
<tr>
<td>Real compensation per hour</td>
<td>−0.4</td>
<td>2.9</td>
<td>−0.6</td>
<td>1.3</td>
</tr>
</tbody>
</table>
“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

\[ H_t = 1 \]

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

\[ U_t = H_t - L_t \]

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

\[ p_k = \frac{MPK}{R-1} \]

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

\[ Y_t = C_t + G_t \]