Economics 302 (Sec. 001)
Intermediate Macroeconomic Theory and Policy (Spring 2012)
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6-1  A Tour of the Labor Market

Figure 6 - 1
6-1 A Tour of the Labor Market
The Large Flows of Workers

Figure 6 - 2


(1) The flows of workers in and out of employment are large.
(2) The flows in and out of unemployment are large relative to the number of unemployed.
(3) There are also large flows in and out of the labor force, much of it directly to and from employment.
Employment

Chart 2. Job openings and employment
Seasonally adjusted, in thousands

BLS, JOLTS (December 2011 highlights)
Separations, Hires, Employment

Chart 3. Hires, total separations, and employment
Seasonally adjusted, in thousands

BLS, JOLTS (December 2011 highlights)
Quits and Hires

Chart 3. Hires, total separations, and employment
Seasonally adjusted, in thousands

BLS, JOLTS (December 2011 highlights)
6-3 Wage, Price Determination

\[ W = P^e F(u, z) \]

- reservation wage.
- Labor market conditions (bargaining from labor, firm perspectives)
- Efficiency wages

6-4 Price Determination

\[ P = (1 + \mu)W \]
6-5 The Natural Rate of Unemployment

The Wage-Setting Relation

• Let $P^e$ equal $P$, then:

$$W = PF(u, z)$$

We can divide both sides by the price level:

$$\frac{W}{P} = F(u, z)$$

This relation between the real wage and the rate of unemployment—wage-setting relation.
The Natural Rate of Unemployment

The Wage-Setting Relation

**Figure 6-6**

*Wages, Prices, and the Natural Rate of Unemployment*

The natural rate of unemployment is the unemployment rate such that the real wage chosen in wage setting is equal to the real wage implied by price setting.
6-5 The Natural Rate of Unemployment

Equilibrium Real Wages and Unemployment

• Eliminating $W/P$ from the wage-setting and the price-setting relations, we can obtain the equilibrium unemployment rate, or natural rate of unemployment, $u_n$:

$$F(u_n, z) = \frac{1}{1+\mu}$$

The equilibrium unemployment rate ($u_n$) is called the **natural rate of unemployment**.
6-5 The Natural Rate of Unemployment

Equilibrium Real Wages and Unemployment

**Figure 6 - 7**

*Unemployment Benefits and the Natural Rate of Unemployment*

An increase in unemployment benefits leads to an increase in the natural rate of unemployment.
6-5 The Natural Rate of Unemployment

Equilibrium Real Wages and Unemployment

Figure 6 - 8

**Markups and the Natural Rate of Unemployment**

An increase in markups decreases the real wage and leads to an increase in the natural rate of unemployment.
6-5 The Natural Rate of Unemployment

From Unemployment to Employment, to Output

• Associated with the natural (or “structural”) rate of unemployment is a natural level of employment.

\[ u = \frac{U}{L} = \frac{L - N}{L} = 1 - \frac{N}{L} \]

\[ N = L(1 - u) \]

\[ N_n = L(1 - u_n) \]

\[ Y = AN \]

\[ Y = N \]

\[ Y_n = N_n = L(1 - u_n) \]

\[ F\left(1 - \frac{Y_n}{L}, z\right) = \frac{1}{1 + \mu} \]