

Chapter 6 Unemployment

1. Natural Rate of Unemployment
2. Job Search and Frictional Unemployment
3. Real Wage Rigidity and Wait Unemployment
4. Patterns of Unemployment

1 Measuring Joblessness: The Unemployment Rate

Definition 1.1 *The Employed refer to those who spent most of the previous week working at a paid job.*

Definition 1.2 *The Unemployed refer to those who are not employed and are waiting for the start date of a new job, are on temporary payroll, or have been looking for a job.*

Labor force is defined as the sum of the employed and the unemployed. Those who do not have job right now and are not searching for a job either but are willing to work if a job offer falls on their doorstep are not included in the labor force.

$$L = E + U$$

Definition 1.3

$$\begin{aligned} & \text{Unemployment rate} \\ = & \frac{\text{Number of the unemployed}}{\text{Labor force}} = \frac{U}{L} \end{aligned}$$

Definition 1.4

$$\begin{aligned} & \text{Labor force participation rate} \\ = & \frac{\text{Labor Force}}{\text{Adult population}} \end{aligned}$$

Definition 1.5 *The adult population is referred to people between age 15 and 65 at this point in the US. It tries to measure the total number of people who are able to work.*

2 The Natural Rate of Unemployment

1. Why study the natural rate of unemployment?

- Unemployment is costly.
- It is a benchmark for monetary stabilization policy.

2. Why is there unemployment?

- Frictional unemployment
- Wage rigidity and wait unemployment

2.1 Frictional Unemployment

- Workers and jobs are both heterogeneous.
- Both parties have to invest time in searching, interviewing, and screening.
- In the interim, there are unemployed workers, and vacant positions.

2.2 A Model of the Natural Rate of Unemployment

s :the rate of job separation, or the fraction of employed workers who leave their jobs each month.

f :the rate of job finding, or the fraction of unemployed workers who find a job each month.

sE : the total number of employed workers who are separated from their jobs each month

fU : the total number of unemployed workers who find new jobs each month.

The natural rate of unemployment is the level at which the inflows and outflows balance:

$$fU = sE$$

Continue with the derivations:

$$\begin{aligned}\Rightarrow fU &= s(L - U) \\ \Rightarrow f\frac{U}{L} &= s\left(1 - \frac{U}{L}\right) \\ \Rightarrow \frac{U}{L} &= \frac{s}{s + f}\end{aligned}$$

Example on page 135

To lower the natural rate you have to either reduce the separation rate or increase the rate of job finding.

2.3 Unemployment Insurance Policy

Two effects on the natural rate:

1. People can search longer and hold out for better offers; probably reduces f
2. Unemployment insurance also affects s , although in this case the effect is ambiguous.
 - Firms do not pay the full cost of UI, so they have an incentive to lay off workers during temporary downturns. This increases s .
 - By enabling people to search longer, UI helps them find a better match, and this reduces the rate of subsequent separations.

The net effect on s is unknown, but the effect on f probably raises the natural rate of unemployment.

3 The Causes of Real-Wage Rigidity

- Minimum Wage Laws
- The Monopoly Power of Unions
- Efficiency Wages

3.1 Minimum Wage Laws

Minimum wage laws put a floor on the nominal wage rate, and in a low inflation environment they also limit the rate at which the real wage can fall.

Minimum wage laws are not relevant for most workers, since the equilibrium wage for most people is well above the minimum.

They are relevant mostly for teenage workers.

3.2 Unions and Collective Bargaining

In unionized firms, wages are set by collective bargaining rather than by market forces.

Unions face a trade-off between higher wages and lower employment, but are biased in favor of higher wages.

- The higher wages accrue to members of the union (insiders)
- The increased unemployment falls mostly on non-members (outsiders).

Evidence:

1. Across US States, a 10% increase in the degree of unionization is associated with a 1.2% increase in the average unemployment rate.
2. In the 1960s, about 30% of the labor forces was unionized in each country, and the unemployment rate was roughly the same.

Since then, the unionization rate has fallen to less than 20% in the U.S., but has risen to about 40% in Canada.

Real wages in Canada have increased by roughly 30% relative to real wages in the U.S., and average unemployment is higher.

3.3 Efficiency Wages

The most important difference between the labor market and other markets is that labor cares about the price that is paid. The productivity of a machine does not depend on the price you pay for it, but the productivity of a person does.

Why?

- Nutrition
- Sabotage
- Moral Hazard (provide incentives against shirking)
- Adverse Selection (keep best workers from quitting, creating a large pool of applicants)

Evidence:

1. SLAC 1975, laying off 10% workers or taking a 10% wage cut?
2. Henry Ford: In 1914, Ford offered a wage of \$5 per day, at a time when the market wage was around \$2 to \$3 per day. Why?
This reduced turnover and absenteeism and increased firm loyalty.

Effect on the labor market: a queue of workers waiting for a chance at a good job

4 Patterns of Unemployment

4.1 Duration of Unemployment

Most spells of unemployment are short, but most weeks of unemployment are attributable to long-term unemployed.

4.2 Variation Among Demographic Groups

1. Young workers have much higher unemployment rate than older ones. Why?
2. Unemployment rates are much higher for blacks than for whites.

4.3 Upward Drift in the 70s and 80s and Downward Drift in the 1990s

1. Democratic change;
2. Prevalence of sectoral change.

4.4 Transitions In and Out of the Labor Force

5 The Rise in European Unemployment

- Collective bargaining
- Generous social benefits (coupled with depreciation of human capital)
- A technology driven fall in the demand for unskilled workers.

A trade-off between *efficiency* and *equality*