Why study the labor market?

Key to the supply side of the economy.

Usual indicator: the unemployment rate (based on the Current Population Survey)

Unemployment is the ratio of people looking for jobs but not employed to total work force (unemployed plus employed)

Two facts about unemployment:

1. It changes dramatically over the business cycle

2. Close association between changes in unemployment and growth (Okun’s Law)
Wage determination:

Some basic points:

1. People care about their **real** wage \((W/P)\)

2. Workers have more bargaining power, employers are more anxious to pay high “efficiency wages” when unemployment is low

3. Most wages are fixed for some length of time (a year or more)

Implied wage equation:

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

\(P^e = \text{expected price level. Price level because workers care about real wage. Expected because wages must be set in advance.} \]

\(u = \text{unemployment rate. } dF/du < 0 \text{ because of bargaining, efficiency wages} \)

\(z = \text{all other stuff} \)
Price determination

Output depends on input - the production function

Ignore inputs other than labor; simplified production function is

\[ Y = AN \quad (N = \text{employment}) \]

So producing one more unit requires \( \frac{1}{A} \) additional workers

Cost of producing one more unit is therefore \( \frac{W}{A} \)

Price is a markup on this cost:

\[ P = (1+\mu)\frac{W}{A} \]
Long run determination of real wage and unemployment

In the long run, $P = P^e$

So $W = P F(u, z)$ or $W/P = F(u, z)$

Meanwhile

$P = (1 + \mu)W/A$ or $W/P = A/(1 + \mu)$

“Natural” rate of unemployment
Why the demand side matters: because $P \neq P^e$ in the short run.

In the long run $u = \text{natural rate}$

But

“In the long run we are all dead”