

## LECTURE 12: UNEMPLOYMENT

- I. Consequences of unemployment
  - a. People are suffering.
  - b. The longer you remain unemployed, the harder it is to find a job.
  - c. When a person worries about money, it's hard to think of anything else.<sup>1</sup> In other words, not having a job can lead to many other poor decisions.
  - d. Unemployed workers don't contribute to GDP.
- II. Are you unemployed?
  - a. On the surface it should be easily to calculate the unemployment rate. But it quickly becomes clear it's not that simple. Do we really consider a baby, or a retired person, or a student, or a homemaker unemployed?
  - b. We defined the *unemployed* as adult (16 years and older) workers who do not have a job but are willing to work, able to work, and actively looking for work. Combine them with the employed (those with full or part time jobs) and you have the *labor force*.

$$\text{Unemployment Rate (\%)} = \frac{\text{Unemployed}}{\text{Unemployed} + \text{Employed}}$$

$$\text{Unemployment Rate (\%)} = \frac{\text{Unemployed}}{\text{Labor Force}}$$

- i. Thus the unemployment rate does not consider people in prison. When an unemployed person goes to jail, the unemployment rate goes down!
  - c. The unemployment rate is a little suspicious because it doesn't include *discouraged workers*—workers who have given up looking for work but who would still like a job.
    - i. Thankfully, the good folks at BLS calculate unemployment in different ways (all values are as a percent):<sup>2</sup>

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<sup>1</sup> <http://www.smithsonianmag.com/smart-news/when-you-dont-have-enough-money-its-hard-to-think-about-anything-else-3162408/>

<sup>2</sup> <http://www.bls.gov/news.release/empsit.t15.htm>

Measure	Seasonally Adjusted	
	Jan. 2023	Jan. 2024
U-1 Persons unemployed 15 weeks or longer, as a percent of the civilian labor force	1.2	1.3
U-2 Job losers and persons who completed temporary jobs, as a percent of the civilian labor force	1.5	1.8
<b>U-3 Total unemployed, as a percent of the civilian labor force (official unemployment rate)</b>	<b>3.4</b>	<b>3.7</b>
U-4 Total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers	3.6	3.9
U-5 Total unemployed, plus discouraged workers, plus all other persons marginally attached to the labor force, as a percent of the civilian labor force plus all persons marginally attached to the labor force	4.2	4.6
U-6 Total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force	6.7	7.2

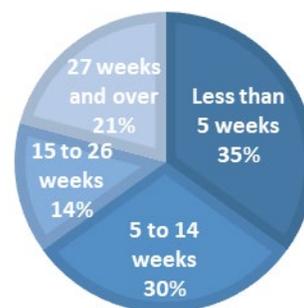
*NOTE: Persons marginally attached to the labor force are those who currently are neither working nor looking for work but indicate that they want and are available for a job and have looked for work sometime in the past 12 months. Discouraged workers, a subset of the marginally attached, have given a job-market related reason for not currently looking for work. Persons employed part time for economic reasons are those who want and are available for full-time work but have had to settle for a part-time schedule. Updated population controls are introduced annually with the release of January data.*

### III. Types

- a. *Frictional*—this is unemployment that derives from people between jobs. Even when the economy is strong, it takes time for individuals who are changing jobs or for new entrants in the workforce to find their first job. At least some degree of frictional unemployment is inevitable.
  - i. Typically short-term.
  - ii. Frictional unemployment occurs because it takes time to match employers with employees. Anything that makes this matching easier or more difficult changes frictional unemployment. For example, the internet makes it easier for a firm to find the right match; frictional unemployment is lower.
  - iii. The optimal level of unemployment is not 0%. A very low unemployment rate suggests too much rigidity.
  - iv. Most of U.S. employment is short term, suggesting that it's frictional. In 2024, 65.0% of the unemployed were unemployed

**UNEMPLOYMENT BY DURATION, 2024**

■ Less than 5 weeks ■ 5 to 14 weeks  
 ■ 15 to 26 weeks ■ 27 weeks and over



fourteen weeks or less (and 34.9% were unemployed less than five weeks).<sup>3</sup>

- b. *Structural*—related to frictional unemployment, this kind of unemployment describes workers who are unemployed persistently and for a long period of time.
  - i. Typically medium-term.
  - ii. Sometimes this involves a skill mismatch: a new technology might transform what employers want but it takes time for workers to cultivate those skills.
  - iii. It can also involve a geographic mismatch: the oil boom in North Dakota in the 2010s led to a labor shortage because so few people lived in the state.
  - iv. Labor regulations can also cause this sort of long-term unemployment. Well-meaning laws can pervert incentives. Unemployment benefits functionally pay people to not work. Minimum wage laws decrease the demand for labor. Regulations on whom and how you can fire make firms hesitant to hire in the first place.
- c. *Cyclical*—this type of unemployment originates from declines in the business cycle and is typically what people think of when they hear “unemployment.” It occurs when many businesses across many sectors cannot justify hiring people due to low demand for their goods or services.
  - i. Typically long-term.
  - ii. The cyclically unemployed are unemployed not because they are undesirable workers or because they haven’t put in enough time to find a job.
  - iii. However, some economists point out there’s a supply solution to this problem (rather than just increasing aggregate demand). Unemployed workers should be willing to accept a lower wage than they had in the past, but for whatever reason they hold out for something better. Such persons should be distinct from those who don’t have such an option.
- d. The so-called *natural rate of unemployment* is frictional plus structural unemployment divided by the labor force. This unemployment is unavoidable, and can be a good sign in the long run. An economy that never has any structural unemployment because technology never improves is not a good sign.

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<sup>3</sup> <https://www.bls.gov/news.release/empsit.t12.htm>

- i. The classical view considers the natural rate as an inevitable sign of an economy in equilibrium; it's the natural result of the market doing its job.
- ii. Empirical estimates of the natural rate vary from time period to time period and the estimates are often imprecise.
  - 1. There are two kinds of “natural rates of unemployment.” We’re focusing on the long-run version, which estimates the lowest level of unemployment after shocks to the economy have fully dissipated and the world has adjusted. This one might be about 3.4% to 4.5%.
  - 2. The other kind is short-run in nature. It describes how low unemployment can be before inflation sets in, and is thus called NAIRU (non-accelerating inflation rate of unemployment).
- iii. When the current unemployment level is at the natural rate, we refer to this state as *full employment*.

#### IV. Labor Force Participation Rate

- a. The *labor force participation rate* is the percent of the noninstitutionalized, civilian, adult population (adults for short) in the workforce.

$$\text{Labor force participation rate (\%)} = \frac{\text{Labor force}}{\text{Adult population}}$$

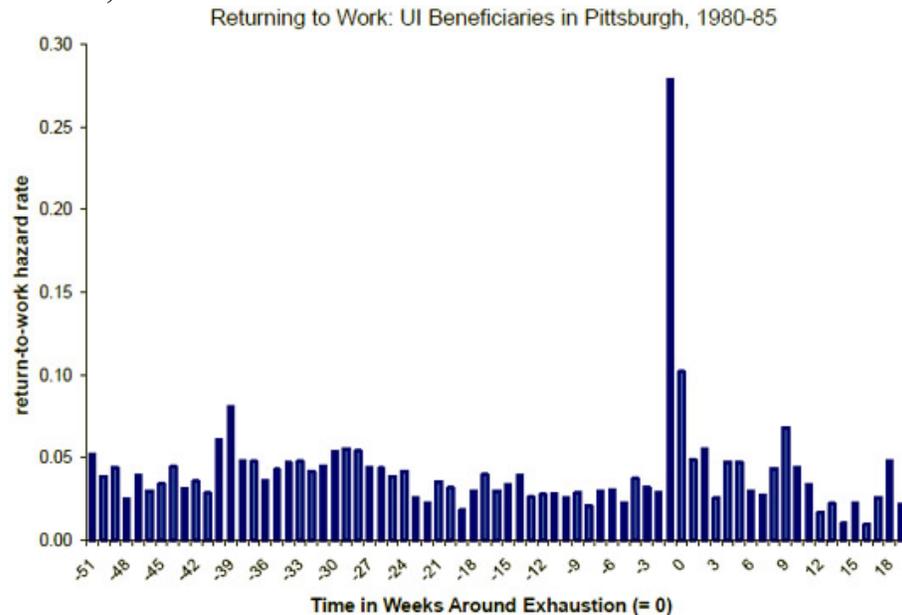
#### b. Determinants

- i. *Demographics*. Because certain groups are more likely to be interested in working than others, changing demographics change the participation rate. For example, as the baby boomer generation retires, the labor force participation rate falls.
- ii. *Incentives*. A host of incentives can change the calculation for if someone participates in the labor force. Some examples:
  - 1. Bigotry and culture. The rise of feminism contributed to the leap of women in the work force between the 1950s and the 1990s.
  - 2. Economic changes. But so did the changes in the economy, which emphasizes fewer jobs in manufacturing (a male dominated industry) and more jobs in professional industries, such as accounting and law (a female dominated industry).

3. Technological changes. Economists Goldin and Katz argued the birth control pill lowered the costs to getting an advanced degree for women and *that* contributed to their increased participation.
4. Taxes and benefits. In the United States, your Social Security are not reduced by your earnings<sup>4</sup> but many countries do not allow workers to also collect a government pension. Thus the labor force participation rate for men aged 55-64 (in 1998) was 68.1%. In countries like the Netherlands, Italy, France, and Belgium it was 46.9%, 43.5%, 41.3%, and 33.9%, respectively.

c. Unemployment insurance

- i. This is a particularly hot topic on the incentives front. When a recession hits employment is typically slow to recover compared to, say, the stock market. That's because hiring someone is expensive for companies to do and carries a fair amount of risk of hiring the wrong person.
- ii. So many governments offer some form of unemployment insurance. As long as you're not working, the government gives you money based on your previous paychecks (assuming you didn't quit). That means the government's paying you to not work, which sounds like a terrible incentive structure:



<sup>4</sup> Between the ages of 62 and 65, there is a reduction of payments if you are working but starting at 65, your payments are increased by about the same amount so the overall work penalty is roughly zero.

- iii. Taking a long time to find a job could be a good thing. We don't just want people to have a job, we want a good match. If there's a lot of structural unemployment, maybe giving people the time they need is the right decision.
- iv. Moreover, unemployed people are most likely to spend money which goes back in the economy and could trigger growth. This is a big idea—something we'll talk more about later—but since it comes up a lot in these conversations about UI, I wanted to mention it here.

V. Other issues

- a. JOLTS—the Job Openings and Labor Turnover Survey describes the amount of “churn” that goes on in the economy. It tracks job separations and job hires through randomized sample of employers.
  - i. The media reports the net amount of jobs gained or lost each month. For example, in December 2013, the U.S. economy added, on net, 75,000<sup>5</sup> nonfarm jobs.<sup>6</sup>
  - ii. But that hides the fact that in December there were about 4.437 *million* hires and about 4.370 *million* job separations.<sup>7</sup>
- b. System of counting someone as unemployed is becoming irrelevant. People have jobs that are just a cobble of various projects. If you don't work for a month, that's not a big deal because it could be a month off.

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<sup>5</sup> <http://www.bls.gov/news.release/pdf/empst.pdf>

<sup>6</sup> The BLS excludes farm jobs because it did when it started keeping track of these numbers back in 1915 (when it would have been really costly to collect such data). They keep excluding to allow comparison across time periods. Since farming is a small part of the U.S. economy, it likely makes little difference.

<sup>7</sup> <http://www.bls.gov/jlt/data.htm>; note the difference between 4.44 million and 4.37 million is 67,000, not 75,000. This discrepancy is likely caused by slightly different methods of data collection and re-evaluations. Sometimes the JOLTS numbers suggest there is more net jobs added than the and sometime it suggests there is less.