Unemployment, pt. 1

EC 103–004

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Motivation

Housekeeping

Required readings:

- `OpenStax, ch. 8`

    - Sections 8.1 and 8.2.

- `How the Government Measures Unemployment (BLS)`

Required listening:

- `FRED's Economic Lowdown podcast series: Unemployment`

- `Planet Money podcast: Car parts, celery & the labor market`

A look at the data

`Offical US unemployment data`

A plural phenomenon

Unemployment is much **more** than an *economic* statistic.

Not only do its consequences affect one's **financial** provision, but also **familiar** relations, and **mental** and **physical** health.

An **analogy** to understand unemployment is to compare it with a functional, but unused *factory*.

Thus unemployment is a **signaling** measure that output (i.e., GDP) may be falling short of **potential** output—that is, the *maximum* the economy can produce without rising inflation or completely depleting raw materials.

Basic definitions

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In the US, the **Bureau of Labor Statistics** tracks and reports all unemployment-related data over time.

- `BLS website`

Defining who is unemployed is more **complex** than just calculating the share of the total population that is currently not working.

- A person is considered **unemployed** if they do not have a job, but are currently available to work, and actively looking for work in the previous four weeks;

- A person is **employed** if currently working for pay.

Basic definitions

Every month, the US government carries out the **Current Population Survey** (CPS), off of which the unemployment rate for the previous month is based.

- It began in 1940, and in 1942 the US Census Bureau took over the CPS.

There are about **60,000** eligible sample households, and the Bureau employees ask several labor-market-related questions regarding the reference week (which usually includes the 12th day of the month).

Every *first* Friday of each month, the unemployment rate for the previous month is announced.

- `See the latest numbers`

Basic definitions

Despite being incredibly complex and representative, measuring the unemployment rate is *not* free from **criticism**.

- What about care work? Cleaning? House chores? (Both paid and unpaid)

Basic definitions

For unemployment computing purposes, a useful concept is the **labor force**.

The labor force includes all individuals that are **currently** employed *and* the **unemployed** (i.e., actively looking for a job).

- To be considered **out of the labor force**, one has to have either **given up** looking for work *or* not been currently available to work (due to a parental leave, injury, etc.).
- Also, full-time students, retirees, institutionalized individuals, those staying home to take care of children, and discouraged job seekers are considered **out** of the labor force.

Furthermore, unemployment statistics only include the **adult** population (16-and-over).
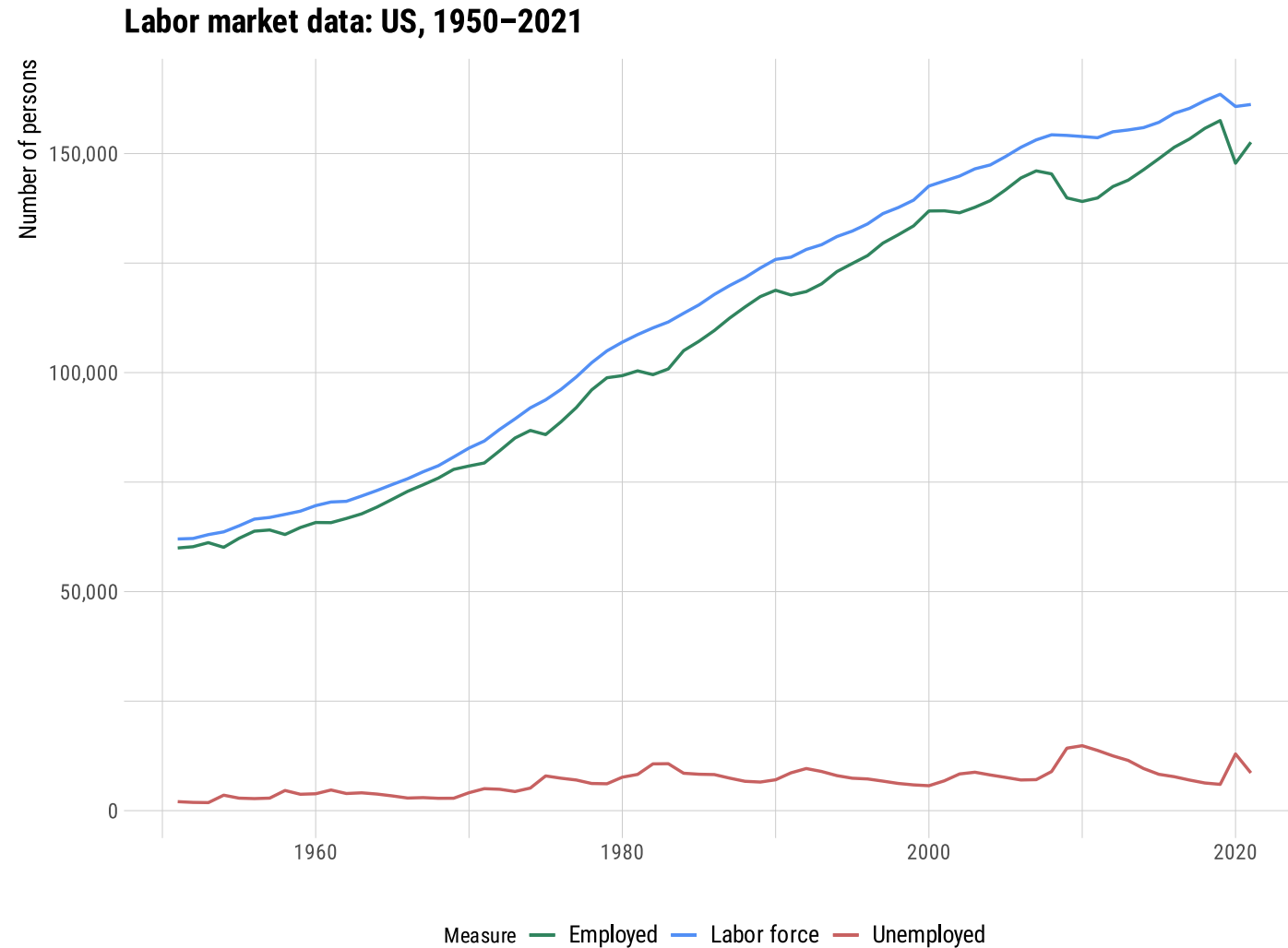
Thus, the **unemployment rate** is the percentage (%) of adults who are in the labor force but who **do not** have jobs:

$$\text{Unemployment rate} = \frac{\text{Unemployed}}{\text{Total labor force}}$$

Basic definitions

Labor market data: US, 1950–2021

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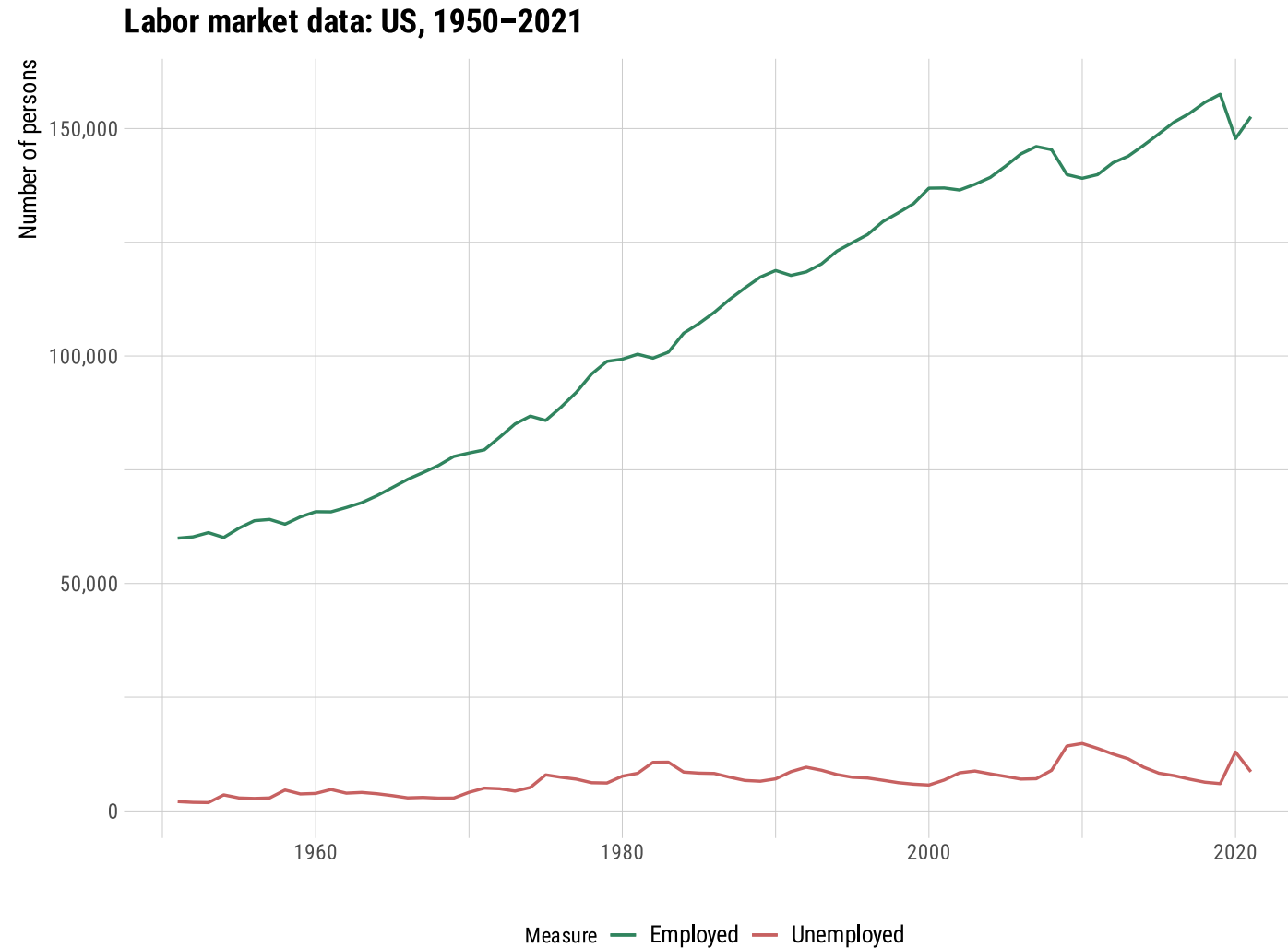
Basic definitions

Along with the unemployment rate, another important labor market statistic is the labor force **participation rate**.

This rate is obtained by *dividing* the total labor force by the adult population:

$$\text{LF participation rate} = \frac{\text{Labor force}}{\text{Total adult population}}$$
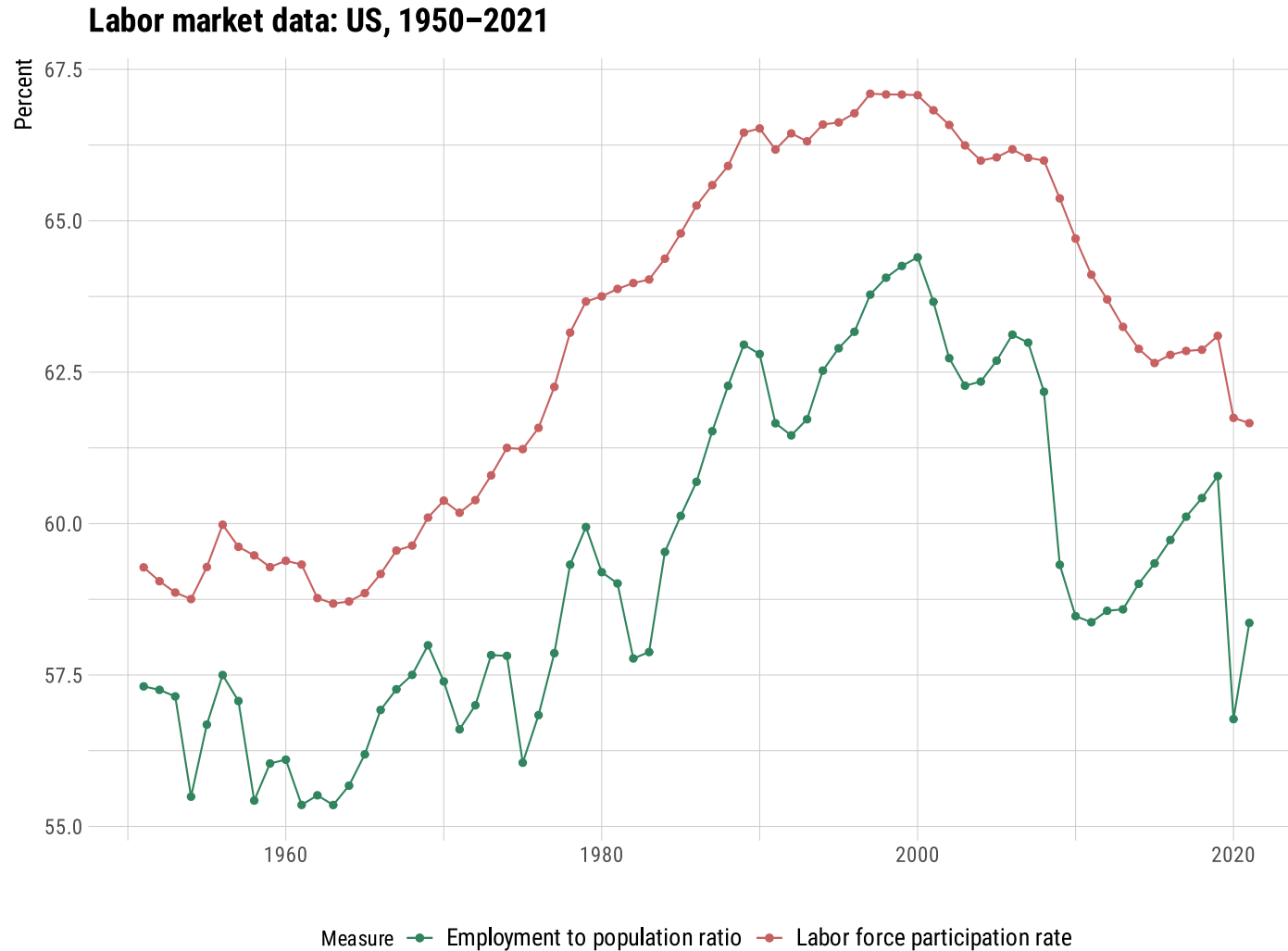
Basic definitions

Finally, we have the **employment-to-population ratio**.

As the name suggests, it is the **ratio** of individuals with paid work—of any kind—to the total population.

This measure is convenient when the goal is to **compare** (un)employment statistics across countries.

- Also keep in mind that each country has its *own* methodology to compute unemployment statistics.

Basic definitions

Labor market data: US, 1950–2021

Basic definitions

We have already talked about how unemployment can be considered a **waste of potential**.

- Both from *individual* and *aggregate* points of view!

When someone is **stuck** in a lower-paid, less productive job, they are considered **underemployed** (*aka* disguisedly unemployed).

- This situation may come about due to periods of *low demand* for jobs in general, or more specifically in a person's area of specialization.

- There is **no** actual *data* on underemployment.

Examples?

Applications

Employment data for the US: 2017–2021

Year	Adult Population	Employed	Unemployed
2017	255,079	153,337	6,982
2018	257,791	155,761	6,314
2019	259,175	157,538	6,001
2020	260,329	147,795	12,947
2021	261,445	152,581	8,623

Calculate the following statistics:

- (a) The *total labor force*;
- (b) The number of persons *not in the labor force*;
- (c) The *unemployment rate*;
- (d) The *employment-to-population ratio*;
- (e) The *labor force participation rate*.

Next time: Unemployment *vs.* other aggregates; types of unemployment