Unemployment, pt. 2

EC 103–003

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Motivation

Housekeeping

- **Required reading**:
  - `CORE, ch. 13, section 13.2`

Last time

Last time, we looked at some official US **data** on unemployment, as well as some basic **definitions**.

Now it is time to investigate some of the most relevant **relationships** that unemployment shares with other **macroeconomic** variables.

Lastly, we will also study some of the main **explanations for** unemployment, since it may come from different phenomena.

Unemployment and other aggregates

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When output grows *quickly*, unemployment tends to **fall**.

When output grows *more slowly* or *falls*, unemployment tends to **rise**.

- Why would this happen?
- Lower unemployment → higher wages → increased workers' bargaining power → better income distribution.

`How do the data look?`

This association is known as **Okun's law**.

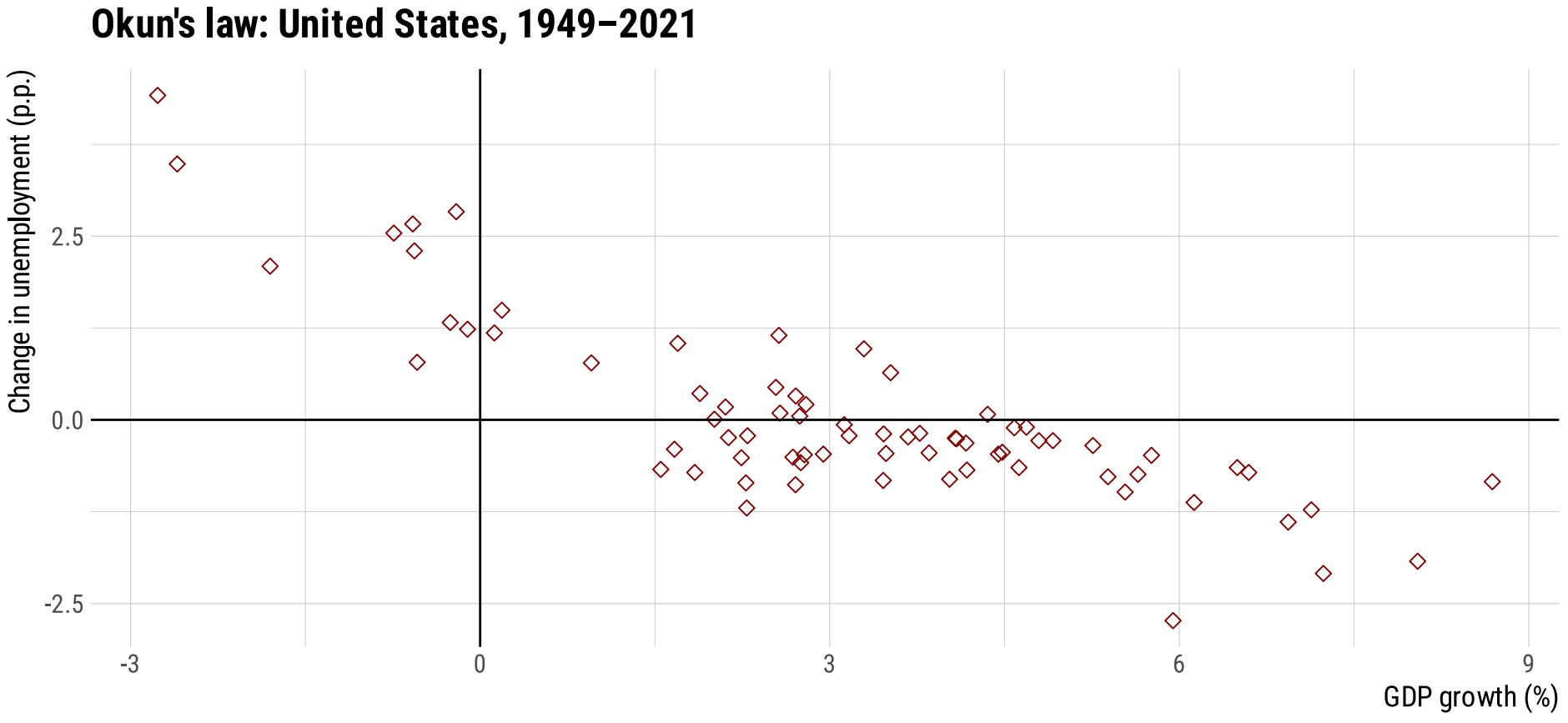
Unemployment and other aggregates

In more detail, Okun's law claims that there is a stable relationship between the **change in the unemployment rate** (Δu) and **real GDP growth** (g_y).

$$\Delta u = a + b \times (g_y)$$

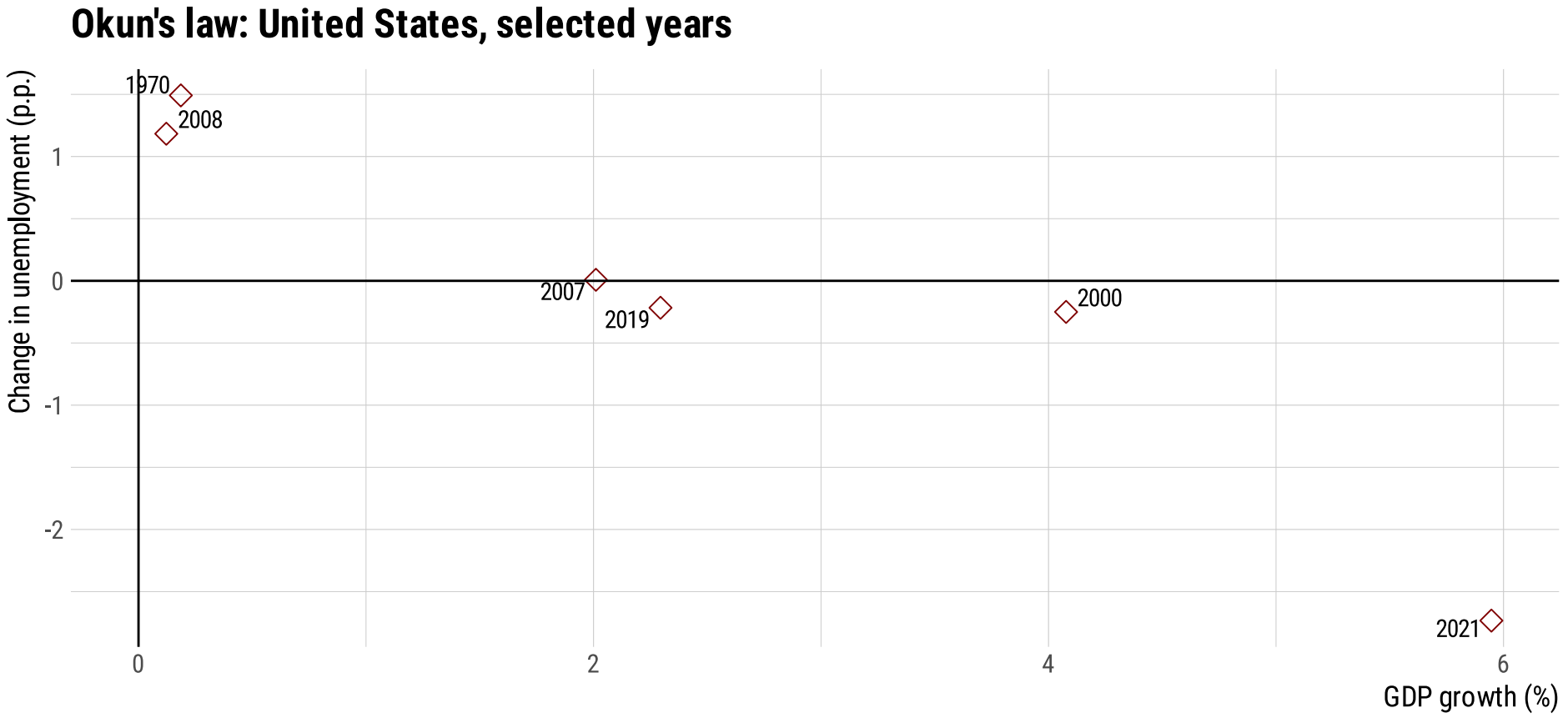
where b is called the **Okun coefficient**, and a is the change in unemployment when the economy does not grow in a given period (i.e., $g_y = 0$).

Unemployment and other aggregates



Source: US Bureau of Labor Statistics.

Unemployment and other aggregates



Source: US Bureau of Labor Statistics.

Unemployment and other aggregates

Based on these data, the *Okun coefficient* (b) equals -0.4, and a, 1.33.

- What does this mean?

And what if one wants to keep unemployment constant (meaning $\Delta u = 0$)? How much would the economy have to grow?

Unemployment and other aggregates

It would take this amount of real GDP growth just to keep unemployment constant ($\Delta u = 0$) for two main reasons:

- **Population** (and, consequently, the labor force) is still growing;
- **Labor productivity** is rising over time (implying that output per worker grows faster than employment).

In other words, each year there are more individuals *looking for jobs* (due to population growth), while technology keeps improving, so that *less people* are needed to produce the same amount of output over time (productivity growth).

Therefore, GDP has to grow to keep the change in unemployment **steady** over time.

Unemployment and other aggregates

How does unemployment relate with the **price level**?

In other words, when *less* people are unemployed, does this affect **inflation**?

This will be next week's topic.

Explaining unemployment

Explaining unemployment

The reasons for high unemployment are **manifold**.

Some of the main **causes** of unemployment may be classified by:

- **Demand**;
- **Structural**;
- **Frictional** factors.

Explaining unemployment

Some people may be unemployed because **not enough** goods or services that *require* their labor are being currently produced.

- Thus there is a **lack of demand** for these workers.

When the available jobs in the economy are **not matched** by the current candidates (i.e., there is a a *mismatch* between jobs and workers), unemployed is classified as **structural**.

- As potential reasons, there may be a lack of the necessary skills for the job, or perhaps the necessary workers are located in different parts of the country.

Throughout a person's worklife, they may be *transitioning* between jobs, moving to a new area, entering the job market after graduating, etc.

- This kind of unemployment is considered **frictional**, comprehending just a "looking" period.

Explaining unemployment

Different **causes**, different **solutions**.

Depending on what we believe the cause of current unemployment is, we may work with different **policies/solutions**.

What are some **procedures** for each cause of unemployment?

Explaining unemployment

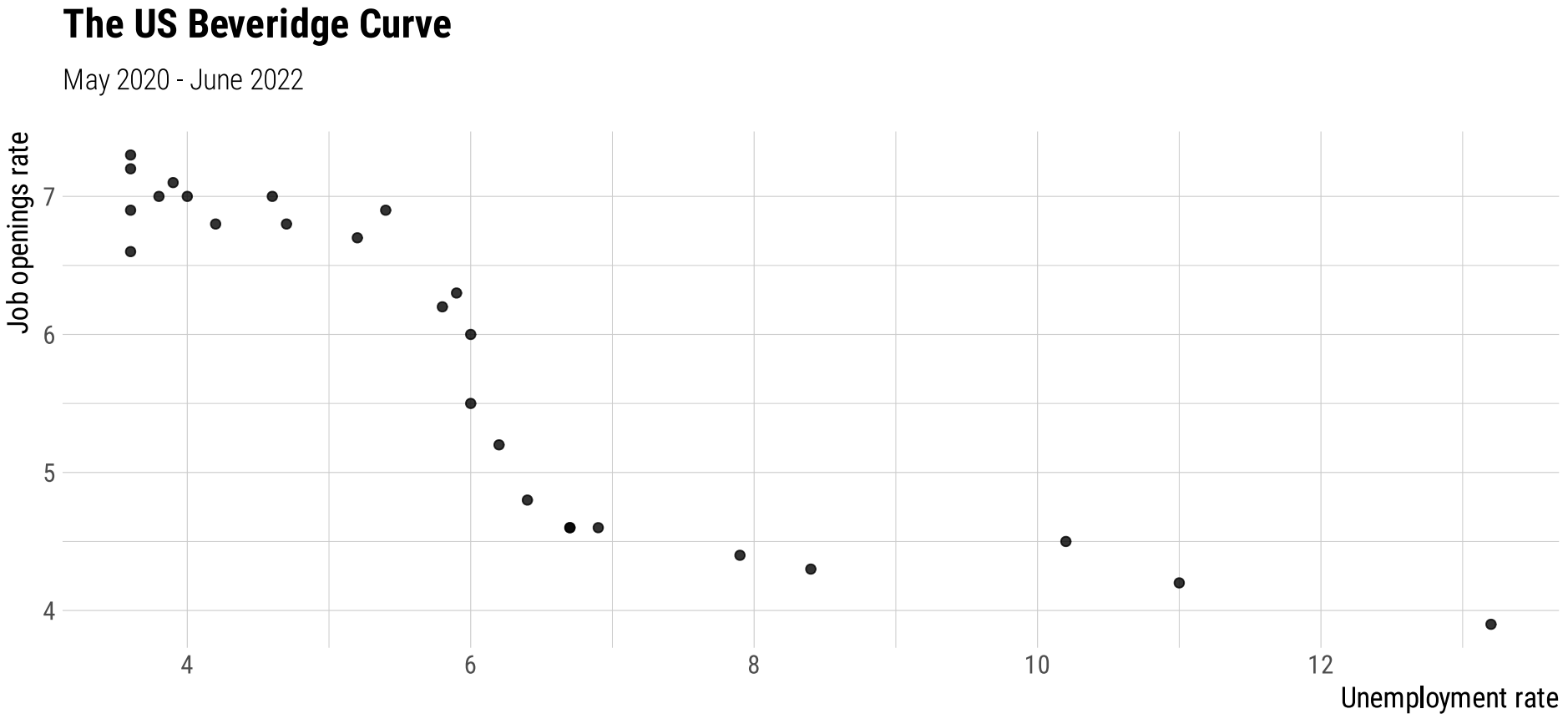
Whether unemployment is demand-driven or structural, it is a matter of policy discussion.

However, looking at the available **data** always helps.

The **Beveridge curve** is a relationship that puts together the number of **unemployed** workers and the number of **job vacancies**.

- In a scenario with *low* vacancies but *high* unemployment, the latter is probably due to the **lack of demand**.
- Conversely, with *low* unemployment and a *high* number of job vacancies, unemployment will likely be **structural**.

Explaining unemployment



Next time: Inflation 👻