

Inflation, pt. 2

EC 103–003

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Motivation

Housekeeping

- **Required reading:**

- Inflation Expectations, the Phillips Curve, and the Fed's Dual Mandate (FRED)
- The Fed Wants to Quash Inflation. But Can It Do It More Gently? (NYT)

A trade-off

When thinking about *policy priorities*, economists (and the general population) usually **agree** on the following:

- **Low unemployment** and **low (or stable) inflation** are desirable.
- However, the **bitter truth** is that, usually, when unemployment is *low*, inflation tends to *rise*.
 - Why?
- And when unemployment is *high*, inflation tends to *fall*.

Therefore, experiencing a **sustainable** scenario with both variables at low rates is almost impossible.

Then, we face a **trade-off**:

- How to balance people's jobs and the price level?

A trade-off

This issue is of special importance during **election** times.

How the economy is going—and this has a lot to do with *unemployment* and *inflation*—may define (re-)election results.

- This resonates directly with the general public, who feels the effect of both variables in their **daily lives**.

That said, how to find the **balance** between unemployment and inflation?

The usual belief within economic policy is that **a little bit of inflation** *does not hurt*.

- As long as it remains **stable**!

Inflation vs. unemployment

Inflation vs. unemployment

In a dynamic economy, increases in **nominal** wages may mask a fall in **real** incomes, when inflation is low and/or stable.

However, a **reduction** in nominal wages, on the other hand, will never go unnoticed.

But how does this process *actually* unfold?

We will study this through a **conflicting claims** approach.

First, let us assume an economy with:

- Several small to medium-sized firms;
- And their employees (ignoring Government, for the time being).

Inflation vs. unemployment

The firms **set** their market prices based on **costs**, plus a **markup** consistent with them making profits.

At the same time, firms try to pay *nominal wages* consistent with their targeted profits, but enough to keep workers *motivated*.

- Moreover, workers **negotiate** each year their target wages.

The more **market power** a firm has, the more it can charge for its goods and/or services.

- Resulting in a **decreasing** real wage!

And the more organized workers are (via unions and other labor market institutions and policies), the more they can **bargain** for better nominal wages (and consequently, better real wages).

Inflation vs. unemployment

So can we say that **higher employment** will lead to **higher inflation**?

In 1958, A. W. Phillips (1914–1975) **empirically** found that low rates of unemployment were associated with high rates of inflation, and high unemployment with low inflation.



This relationship has since been referred to as the **Phillips curve**.

Inflation vs. unemployment

[Link to original paper](#)

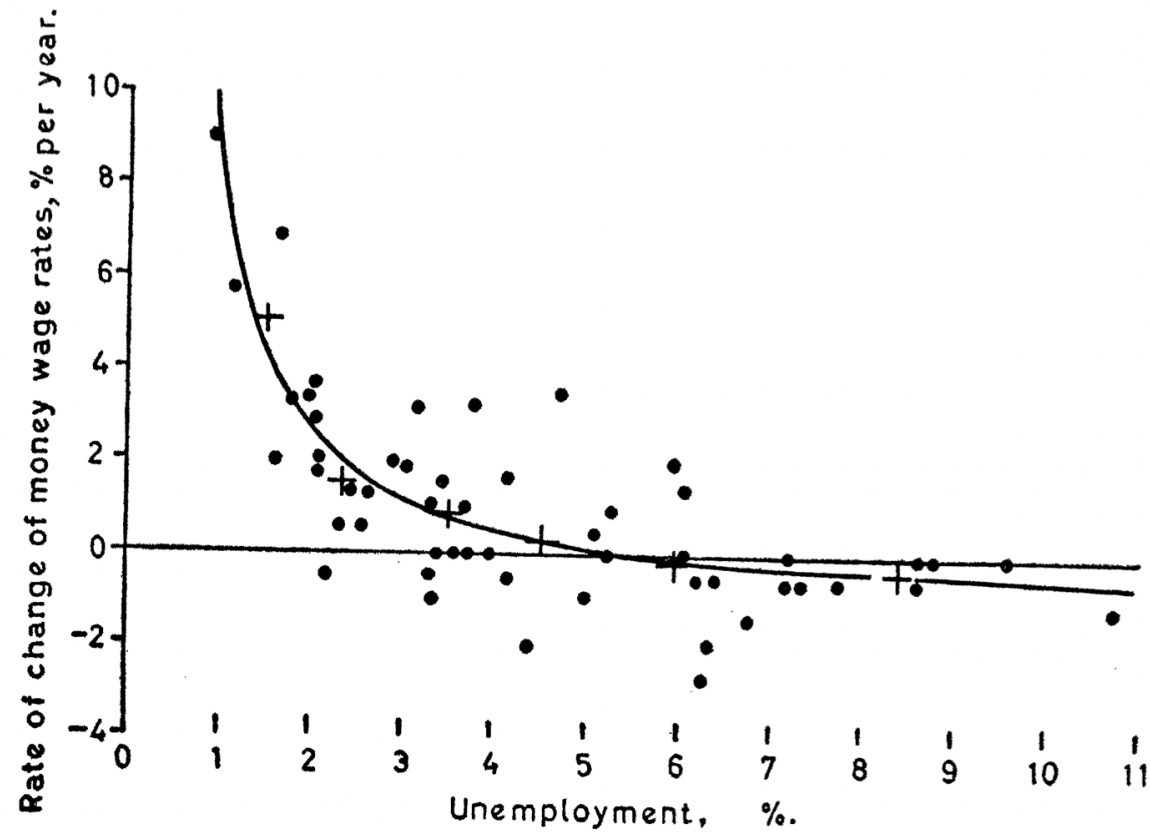


Fig.1. 1861 - 1913

Inflation vs. unemployment

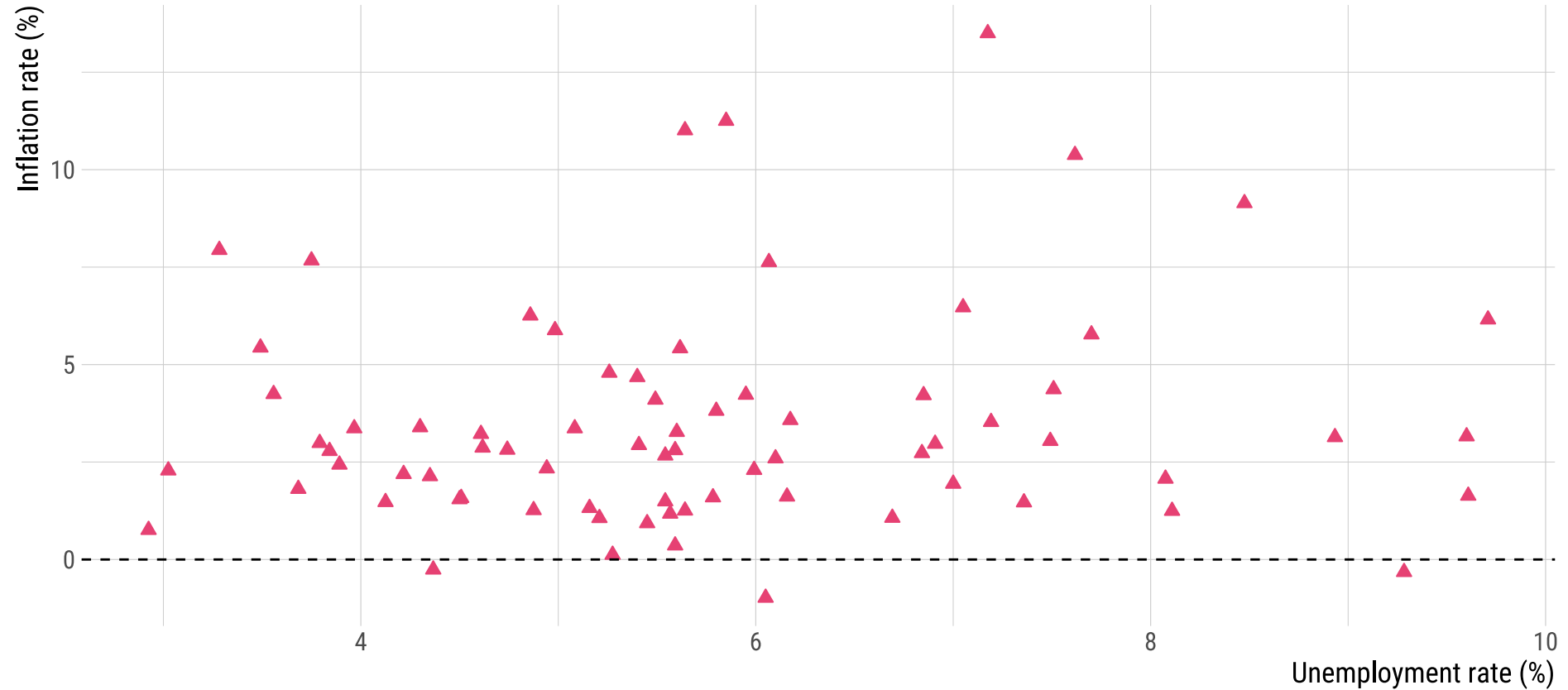
How much additional inflation one gets for a one point acceleration in GDP growth, or a one point fall in unemployment, depends on

- The **current values** of the variables;
- On the country's **historical** period;
- And **how long** that period is.

Let us now evaluate the **behavior** of the Phillips curve for the US economy over time.

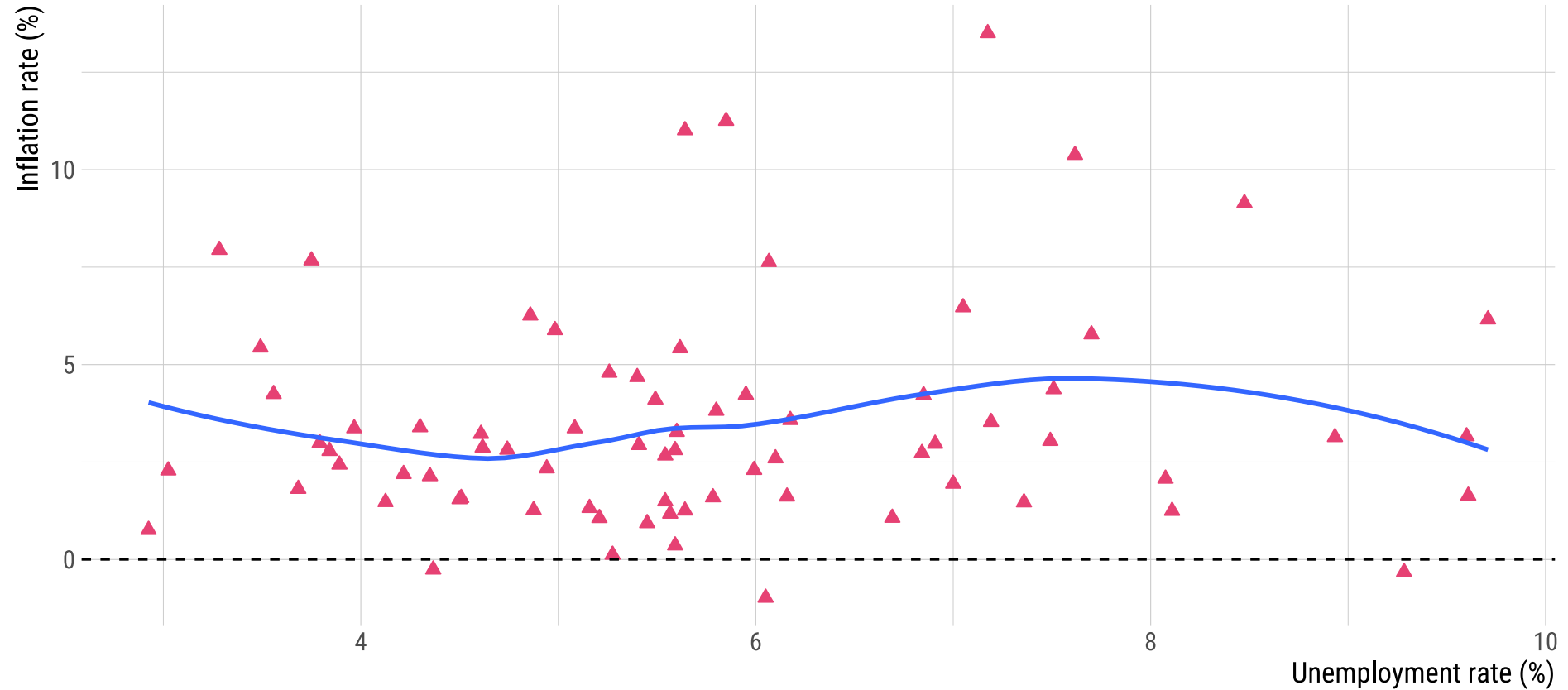
Inflation vs. unemployment

Phillips Curve: US, 1948–2021



Inflation vs. unemployment

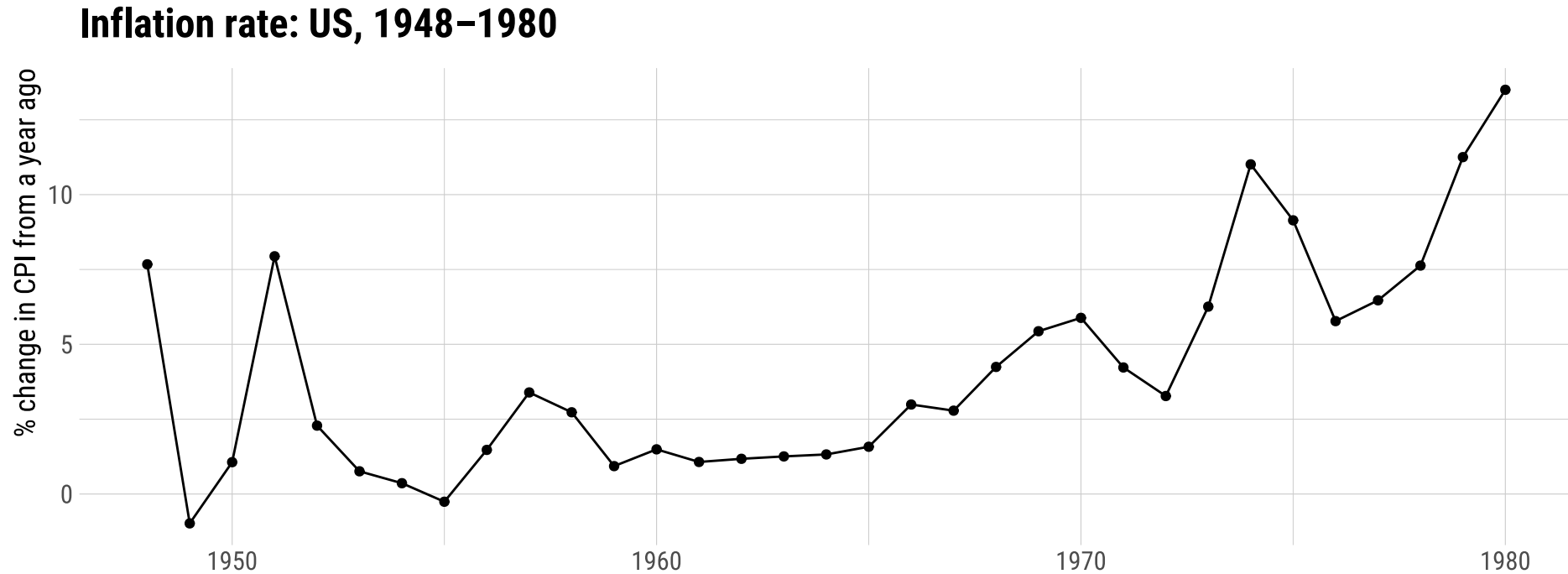
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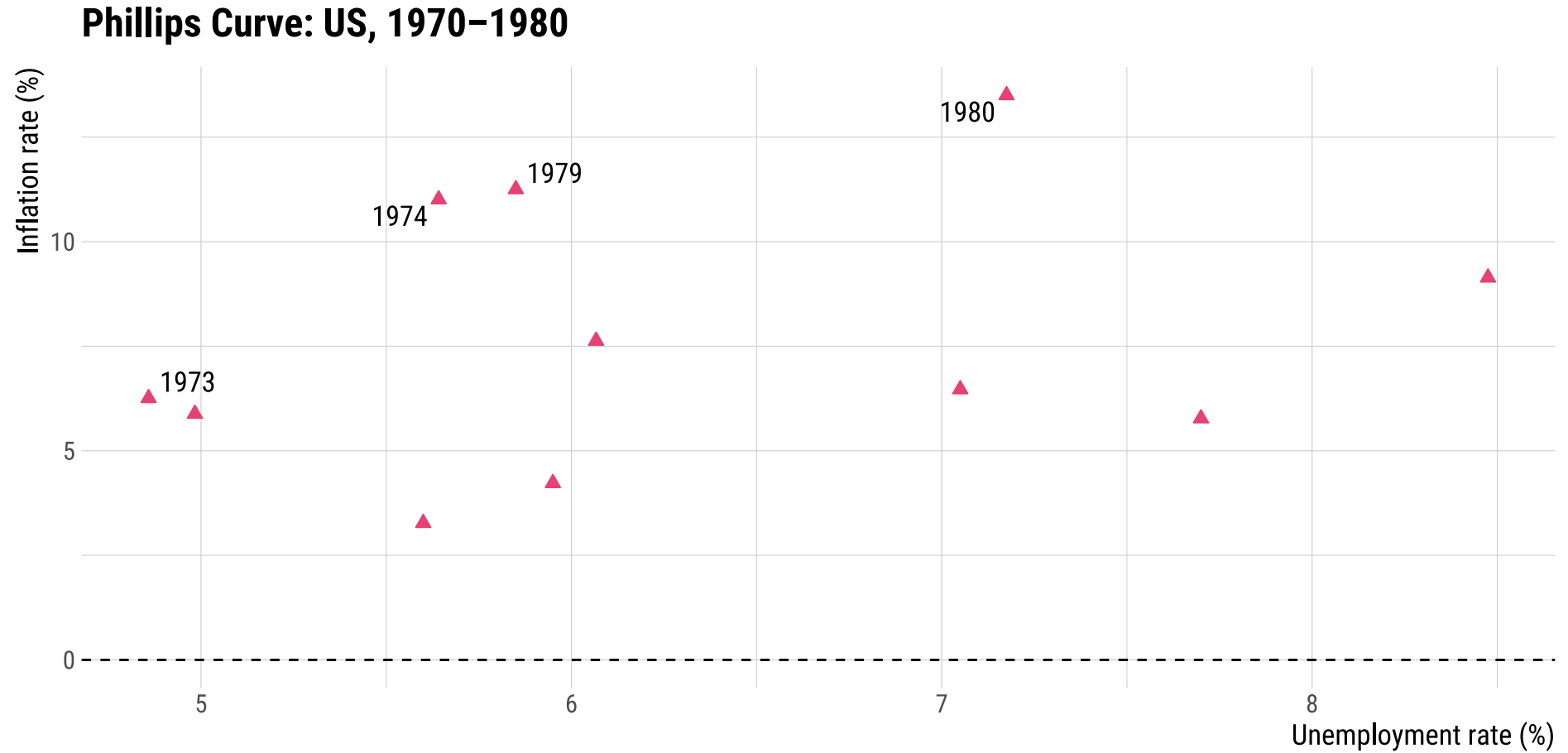
Inflation vs. unemployment

This first "incarnation" of the Phillips Curve assumed a **stable** inflationary scenario.

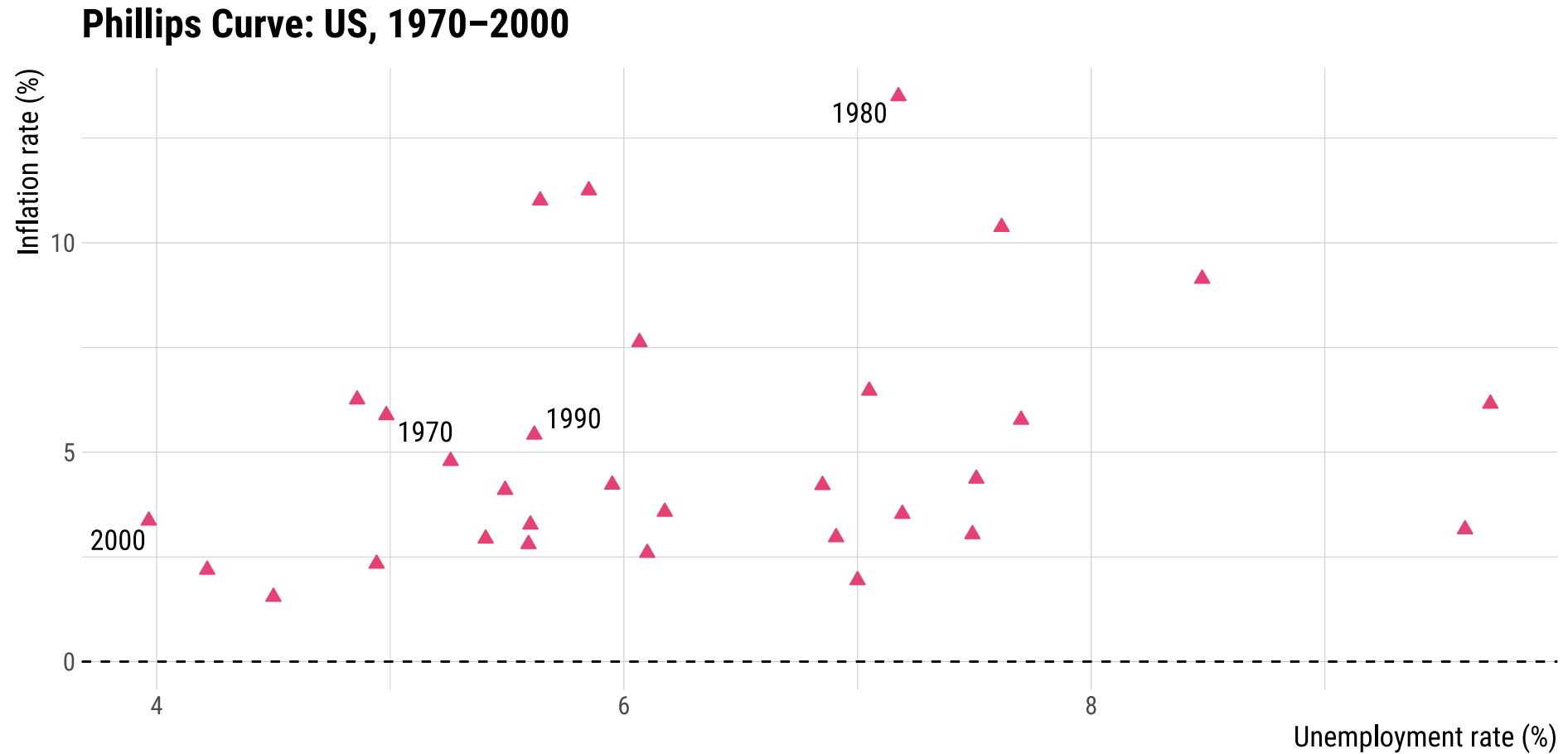
However, that was **not** the case throughout the 1970s.



Inflation vs. unemployment



Inflation vs. unemployment



Inflation vs. unemployment

The general price level was *steadily rising* over the 1970s.

When inflation is consistently rising over time, workers start to **incorporate** this inflationary context into wage negotiations.

- **Expectations** matter!

And how do firm owners *respond* to rising wage claims?

- Through higher *selling* prices.

Inflation vs. unemployment

In summary,

- *Higher* nominal wages lead to a *higher* price level;
- *Lower* unemployment leads to a *higher* price level this year relative to last year's price level—that is, to *higher inflation*.
- This mechanism is called the **wage–price spiral**.

Inflation vs. unemployment

Therefore, **expectations** enter the picture.

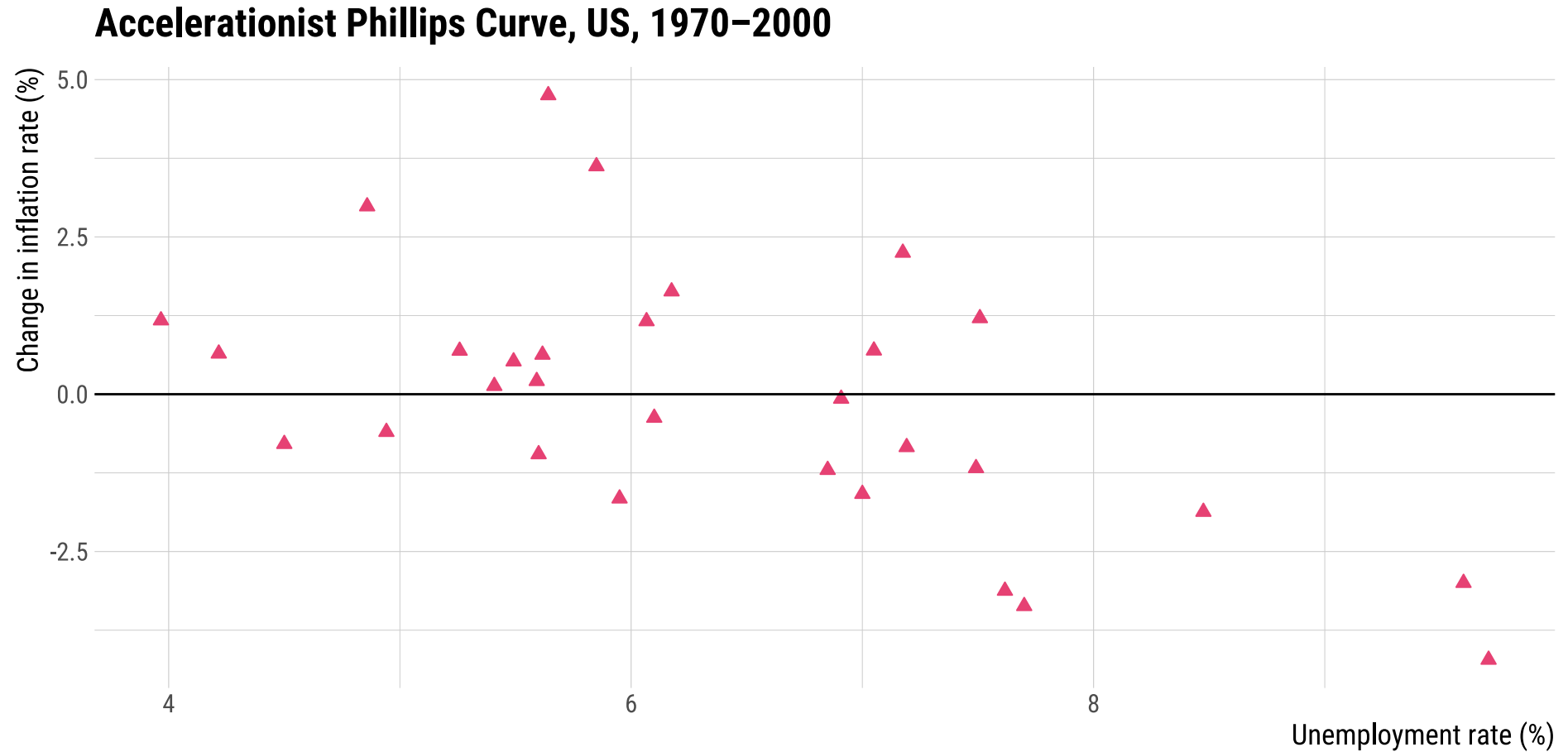
When economic agents expect higher prices in the near future, this expectation takes place in price and wage decisions.

Over the 1970s, high inflation in one year became **more likely** to be followed by high inflation the next year.

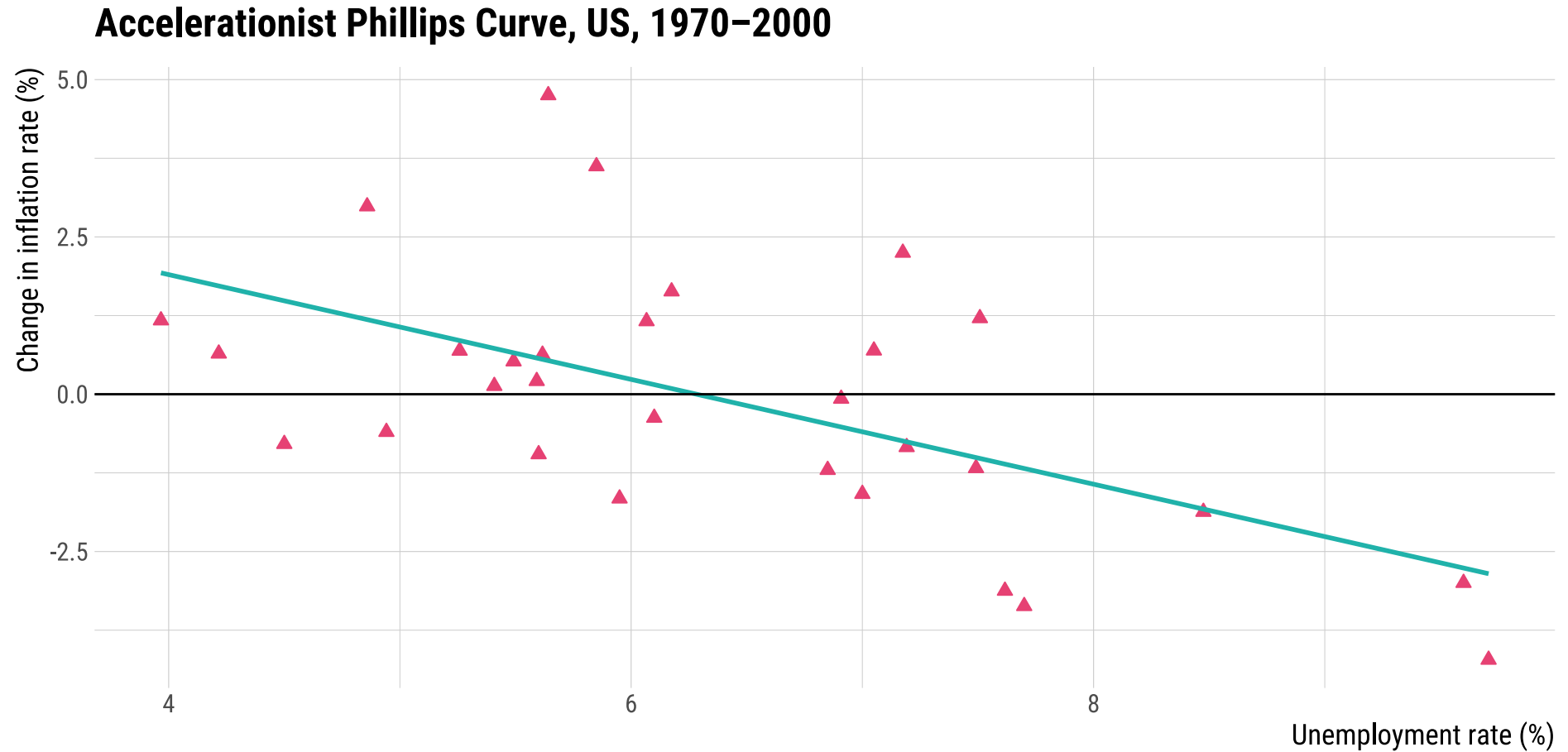
So a simple **modification** was made to the Phillips Curve setup:

- Instead of looking at the inflation rate *per se*, economists started looking at its **change** from year to year.

Inflation vs. unemployment



Inflation vs. unemployment



Inflation vs. unemployment

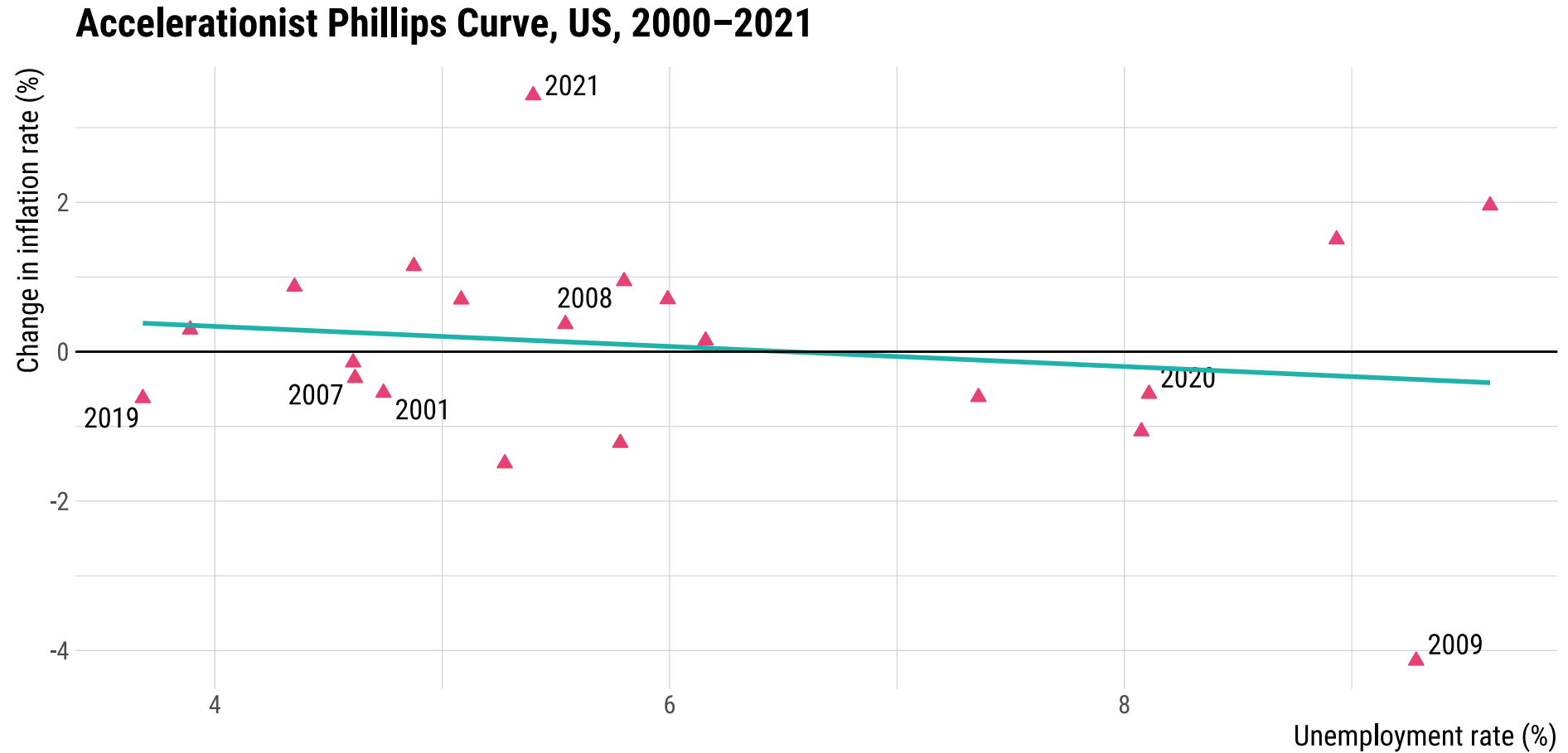
From the empirical data, it is possible to see that one can reach a certain **level of unemployment** consistent with an **unchanged** inflation rate over time.

Given that, economists started to accept the notion of a **natural rate of unemployment**.

- This rate is also known as the **Non-Accelerating Inflation Rate of Unemployment** (NAIRU).

What about today?

Inflation vs. unemployment



Inflation vs. unemployment

What are some possible **caveats** when using this *framework* to interpret reality?

Next time: Inflation policies