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RECHERCHE ET EXPERTISE  
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# The Phillips Curve Is Not What You Think: A Relationship Between Real Exchange Rate Growth and Unemployment?

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CEPII Club, April 29, 2021

- Definition: A **relationship** between inflation and unemployment.
  - Originally (Phillips): wages. Today: often prices.
  - Empirical correlation or “structural relationship” = causal relationship.
  - Example of a causal relationship: when unemployment is low  $\Rightarrow$  nominal wages rise because bargaining power increases.
  - Not straightforward: economic theory determines relative prices, not the general price level. Monetary issues are very difficult in macroeconomics.
- Importance of the Phillips curve:
  - A pillar of New Keynesian economics: a trade-off.
  - Stabilizing inflation means stabilizing economic activity.
  - There is a **trade-off** between inflation and unemployment: one should not push unemployment below its structural level, so as not to trigger inflation.
  - Example: the Biden plan(s).

# Recent doubts about the Phillips curve, much more widespread across the Atlantic (Fed)

FEDERAL RESERVE

## The Fed chairman says the relationship between inflation and unemployment is gone

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## Central bankers have one job and they don't know how to do it

Matthew C Klein OCTOBER 18 2017

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U.S. MARKETS MAY 16, 2019 / 6:18 PM / UPDATED 2 YEARS AGO

## Fed's Brainard: Breakdown in inflation-unemployment relationship poses challenge

By Reuters Staff

3 MIN READ



WASHINGTON (Reuters) - The relationship between slack in labor and other core resource markets and inflation has "broken down," posing risks for the Federal Reserve if it fails to lift the pace of price increases to its announced target, a top Fed official said on Thursday.

The Economist

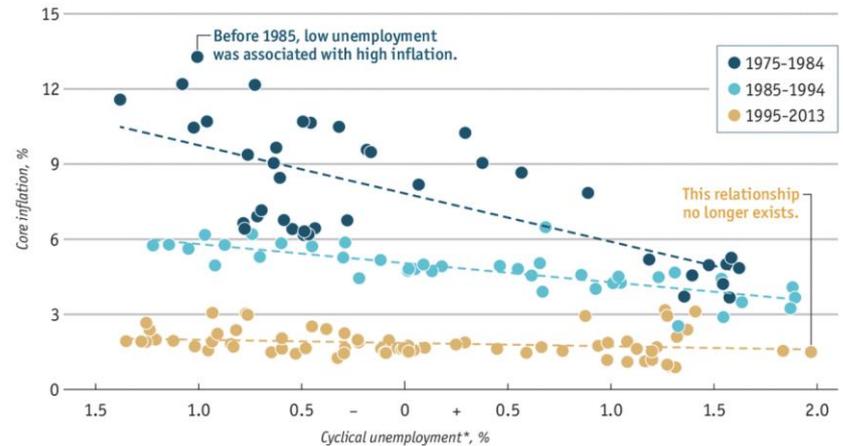
Daily chart

## The Phillips curve may be broken for good

Central bankers insist that the underlying theory remains valid

### Flatlining

Inflation and cyclical unemployment, average across advanced economies, quarterly



- No deflation during the 2007-09 financial crisis. Krugman (2018):

## Good enough for government work? Macroeconomics since the crisis

Paul Krugman\*

### IV. The case of the missing deflation

I've just argued that the lack of a major rethinking of macroeconomics in the aftermath of crisis was reasonable, given that conventional, off-the-shelf macroeconomics performed very well. But this optimistic assessment needs to be qualified in one important respect: while the demand side of economy did just about what economists trained at MIT in the 1970s thought it would, the supply side didn't.

As I said, the experience of stagflation effectively convinced the whole profession of the validity of the natural-rate hypothesis. Almost everyone agreed that there was no long-run inflation–unemployment trade-off. The great saltwater–freshwater divide was, instead, about whether there were usable short-run trade-offs.

But if the natural-rate hypothesis was correct, sustained high unemployment should have led not just to low inflation but to continually declining inflation, and eventually deflation. You can see a bit of this in some of the most severely depressed economies, notably Greece. But deflation fears generally failed to materialize.

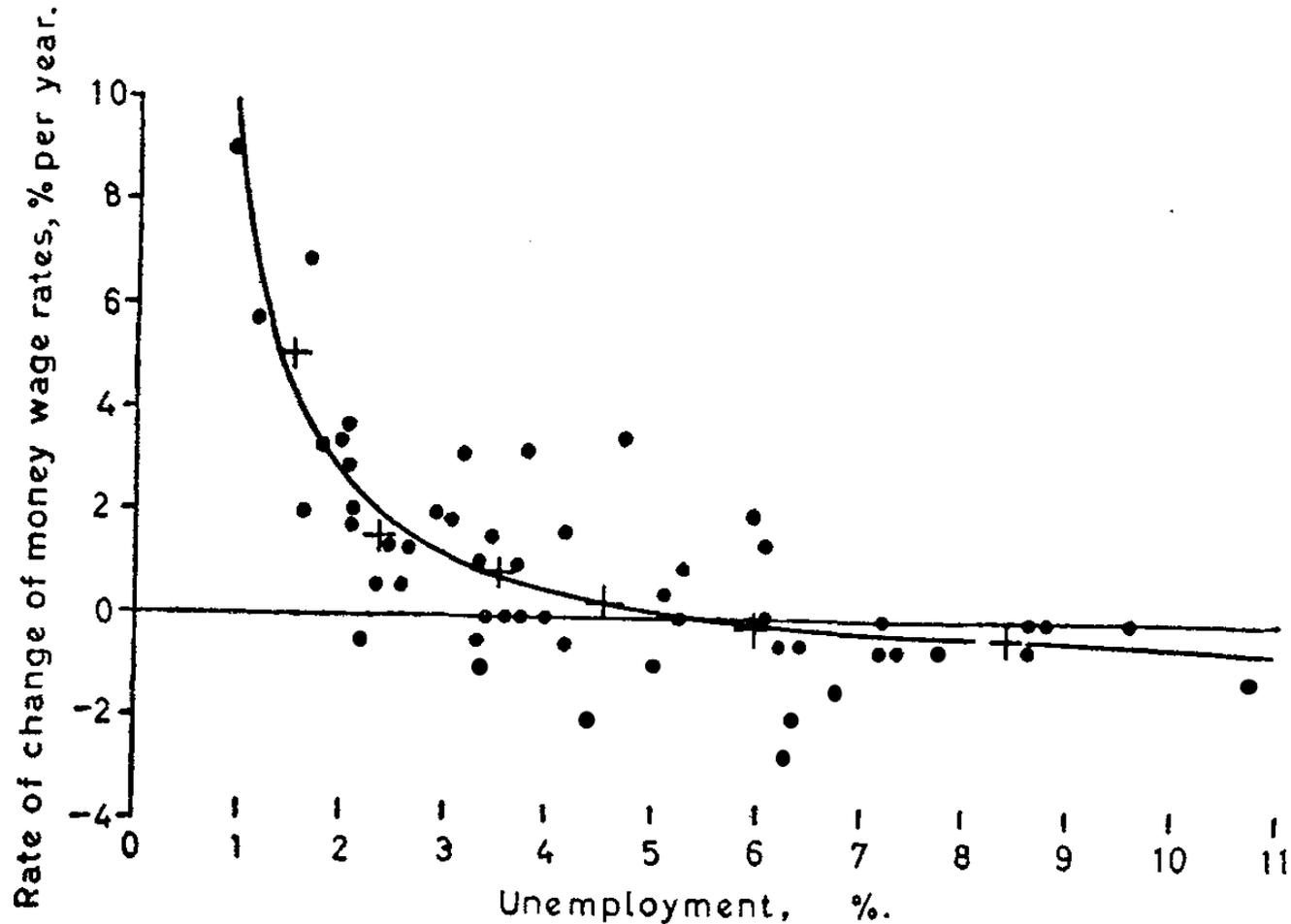
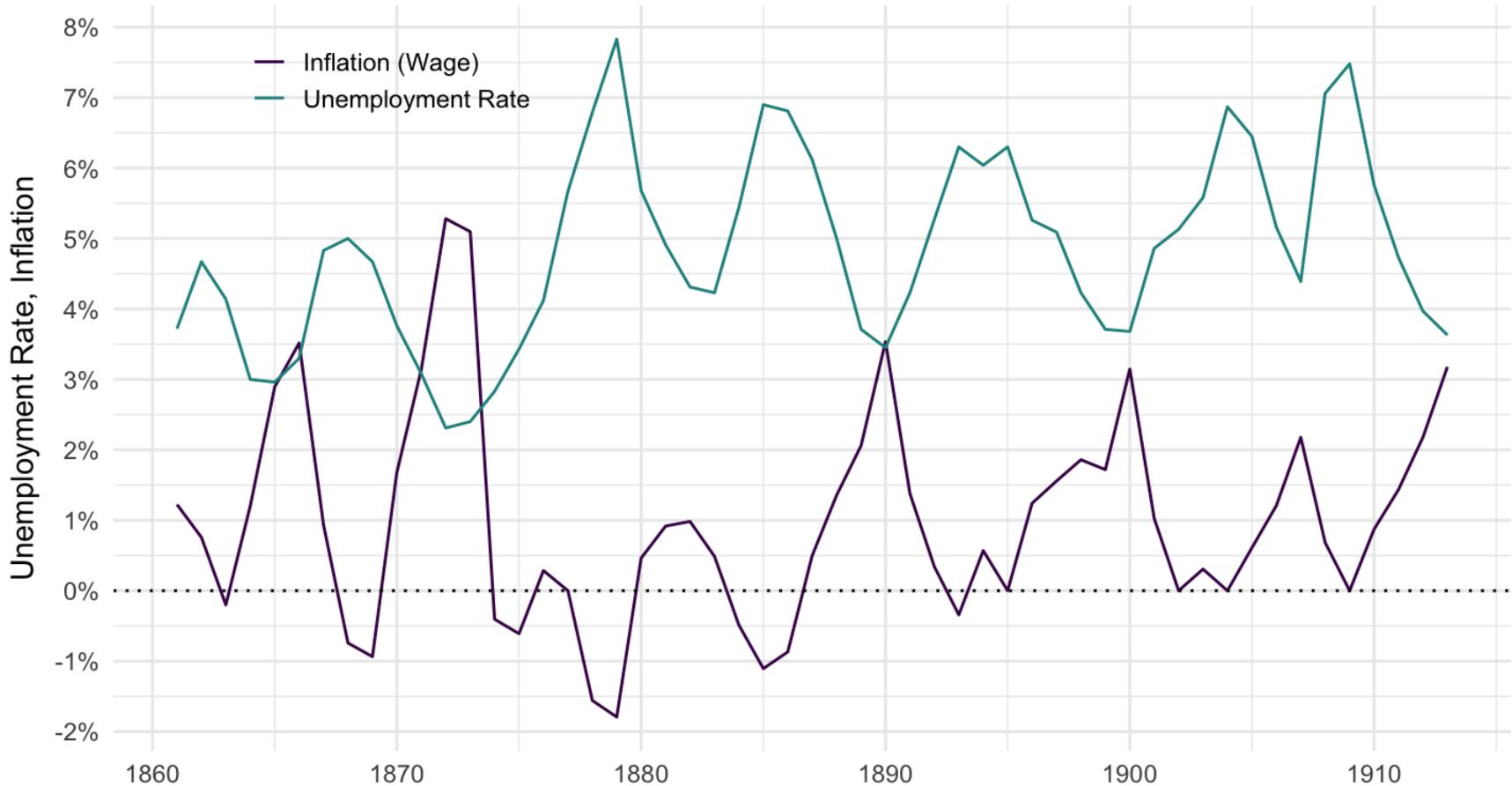


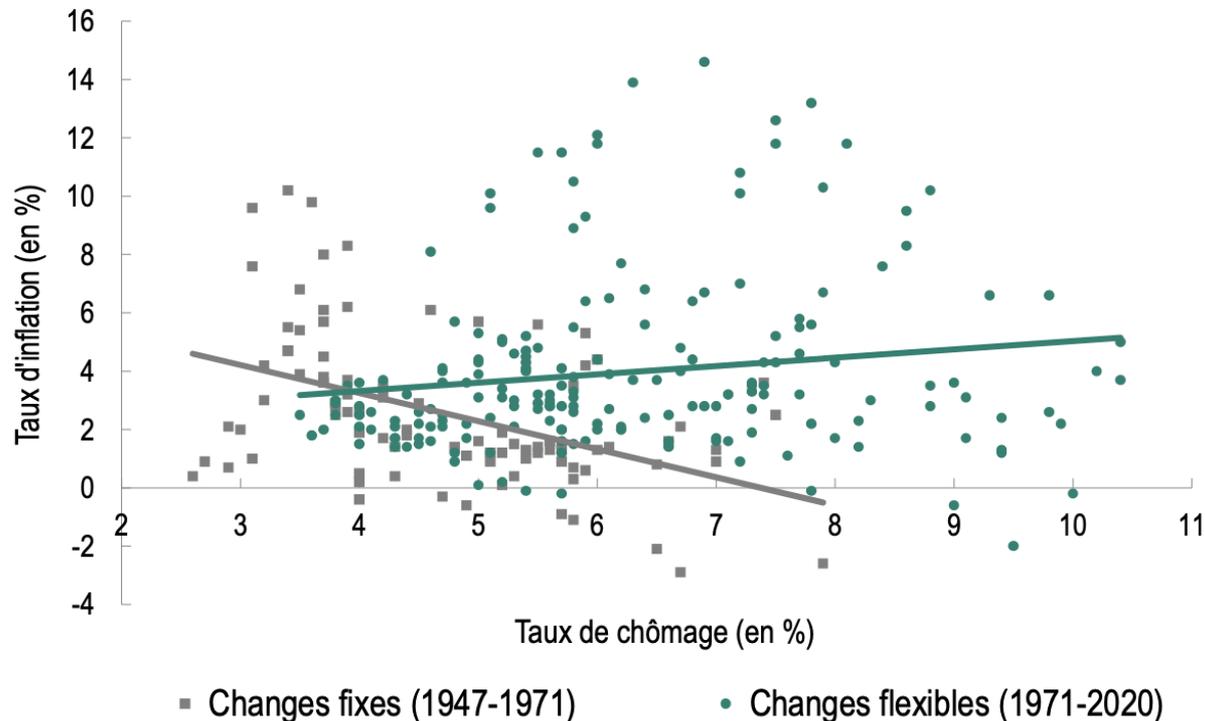
Fig.1. 1861 – 1913

# Phillips' original correlation in the United Kingdom (1861-1913): Gold Standard !



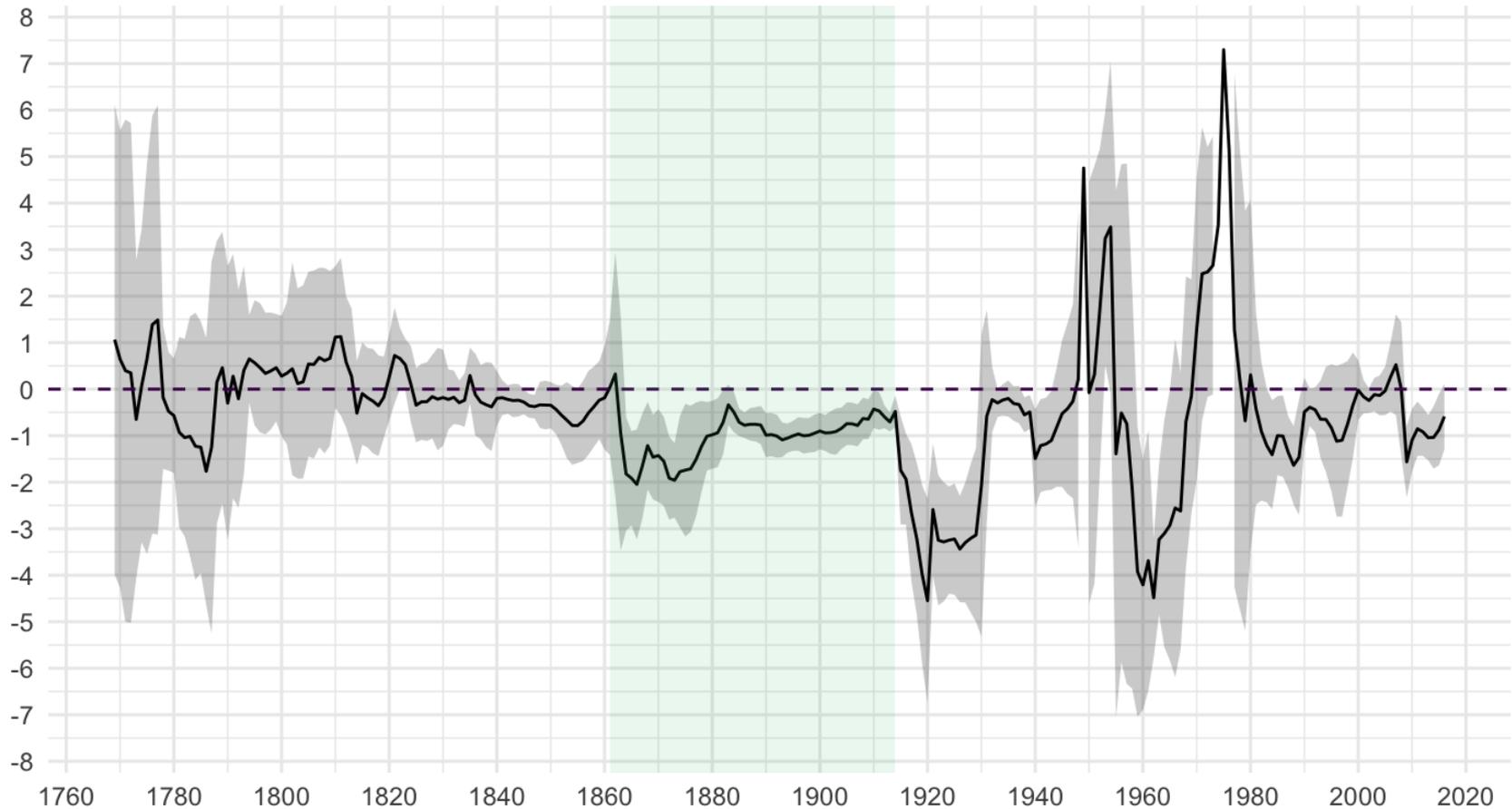
# One example of a Phillips Curve (US) During and after Bretton Woods (Fixed vs. Flexible)

Graphique 1 – La courbe de Phillips était bien visible aux États-Unis pendant Bretton Woods, après elle disparaît



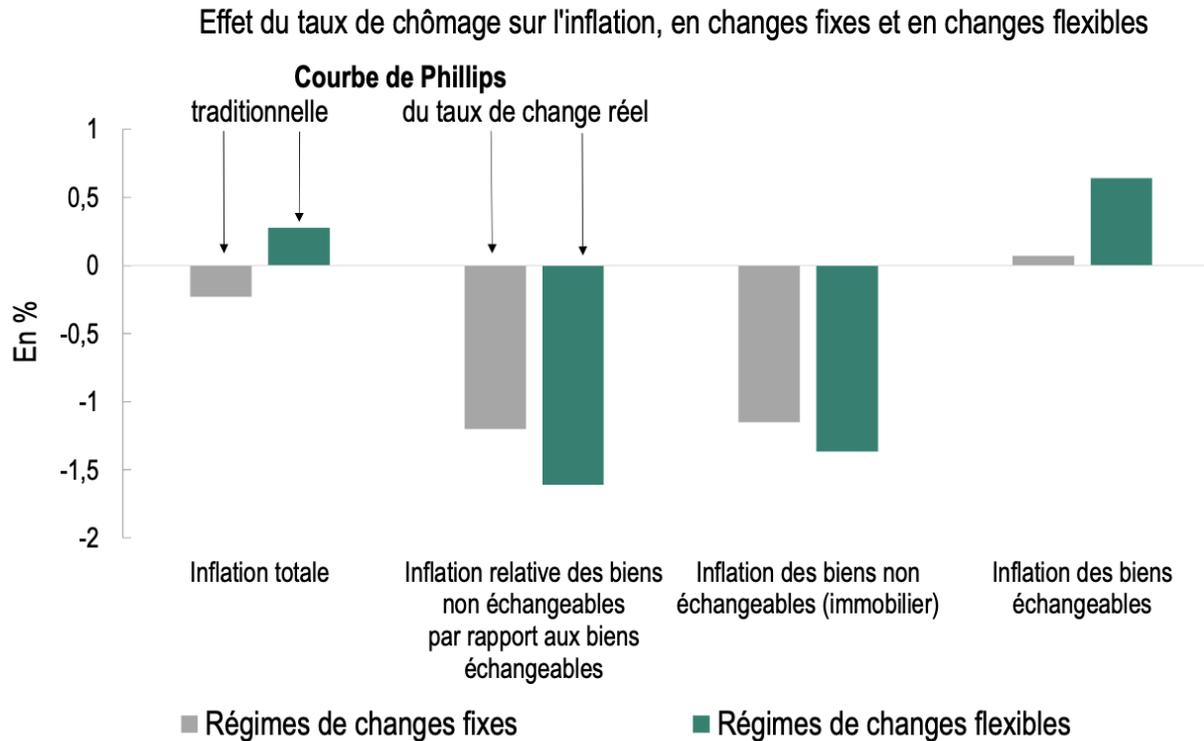
Source : Calculs de l'auteur, à partir de la base de données FRED.

# Phillips' Correlation in the U.K., full sample (rolling window regression). Shaded: 1861-1957

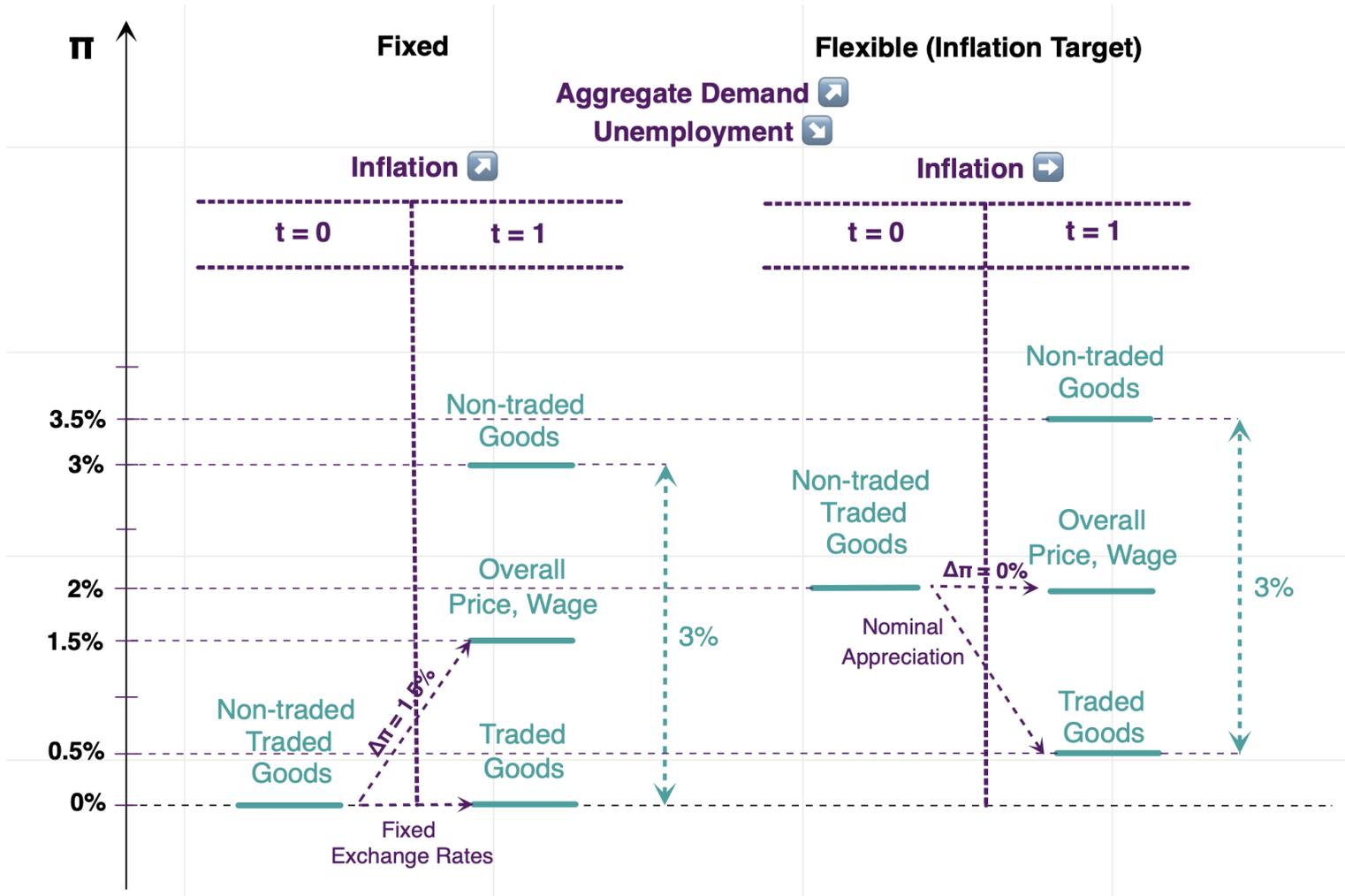


# Thesis No. 2: A Decomposition Between Non-Tradable Goods (Real Estate) and Tradable Goods

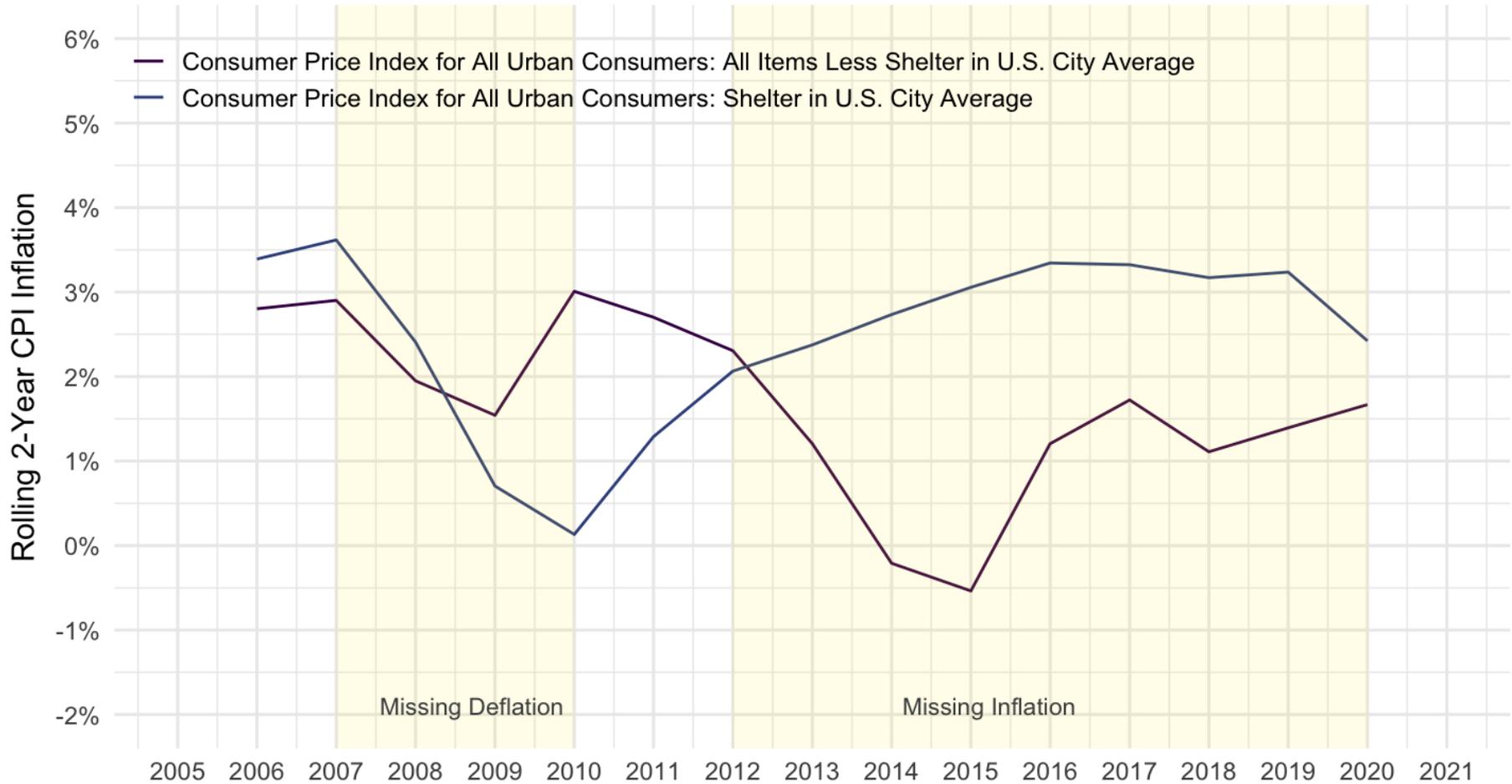
Graphique 2 – La courbe de Phillips traditionnelle ne s’observe qu’en régime de changes fixes, celle du taux de change réel quel que soit le régime de changes



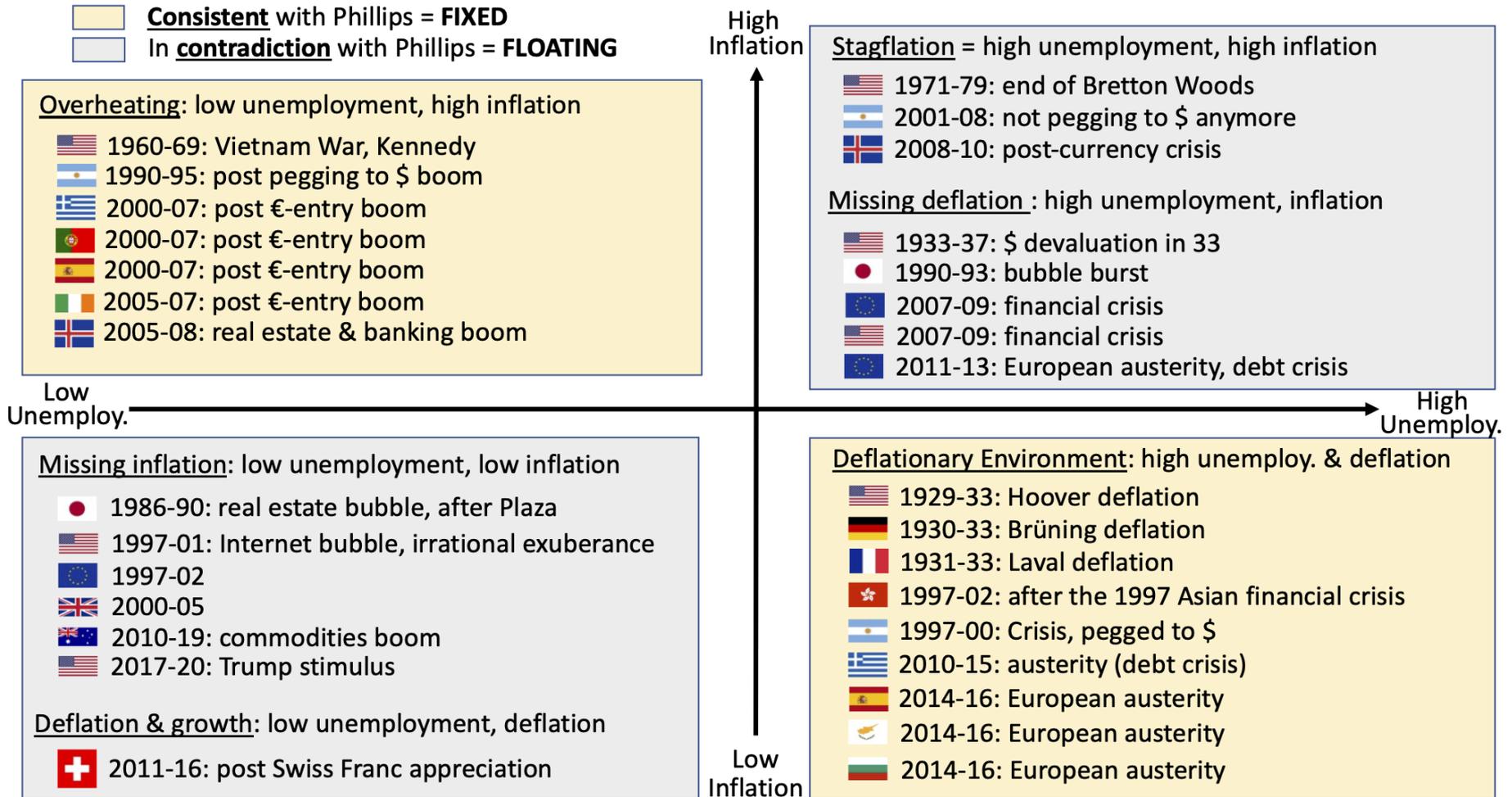
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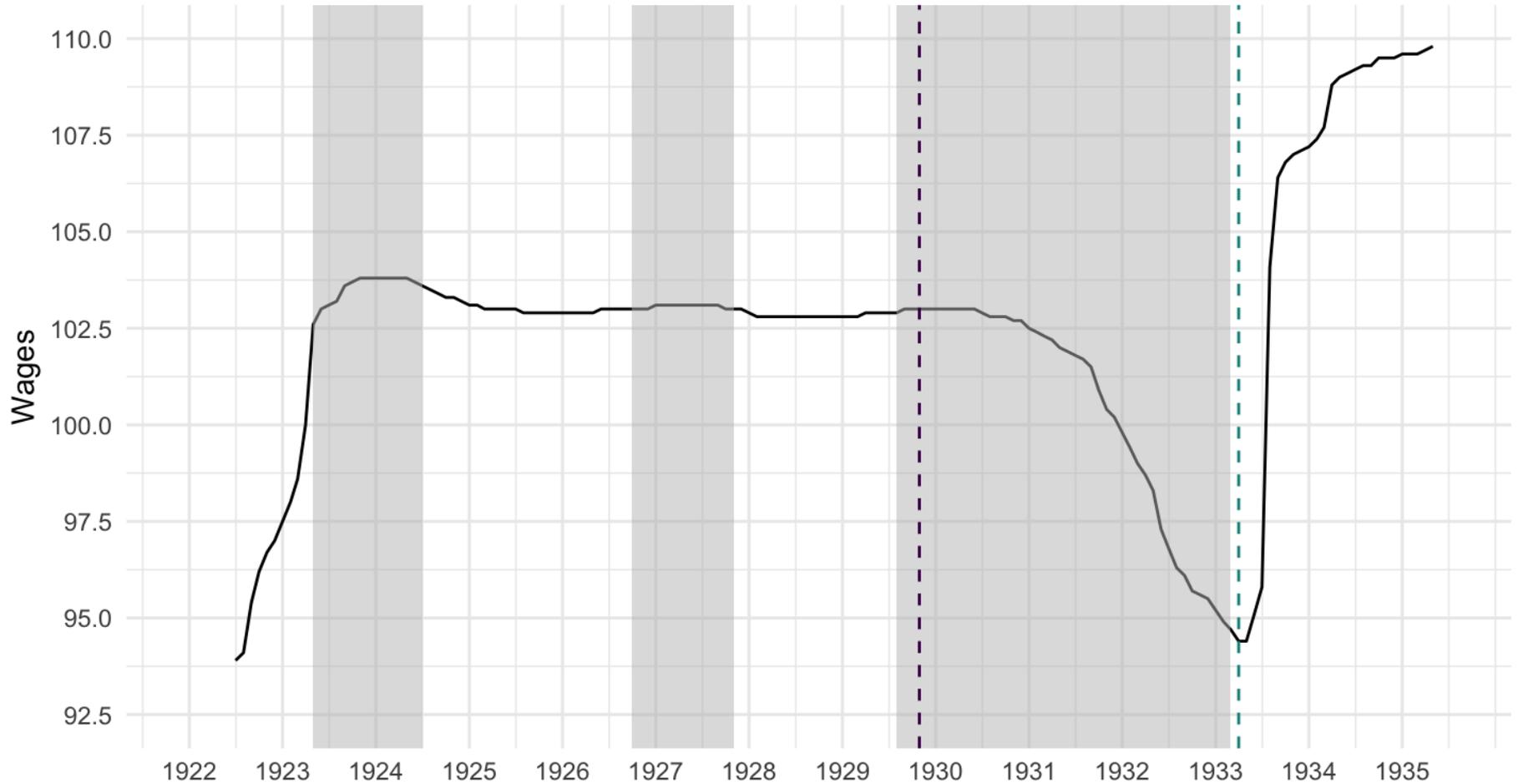


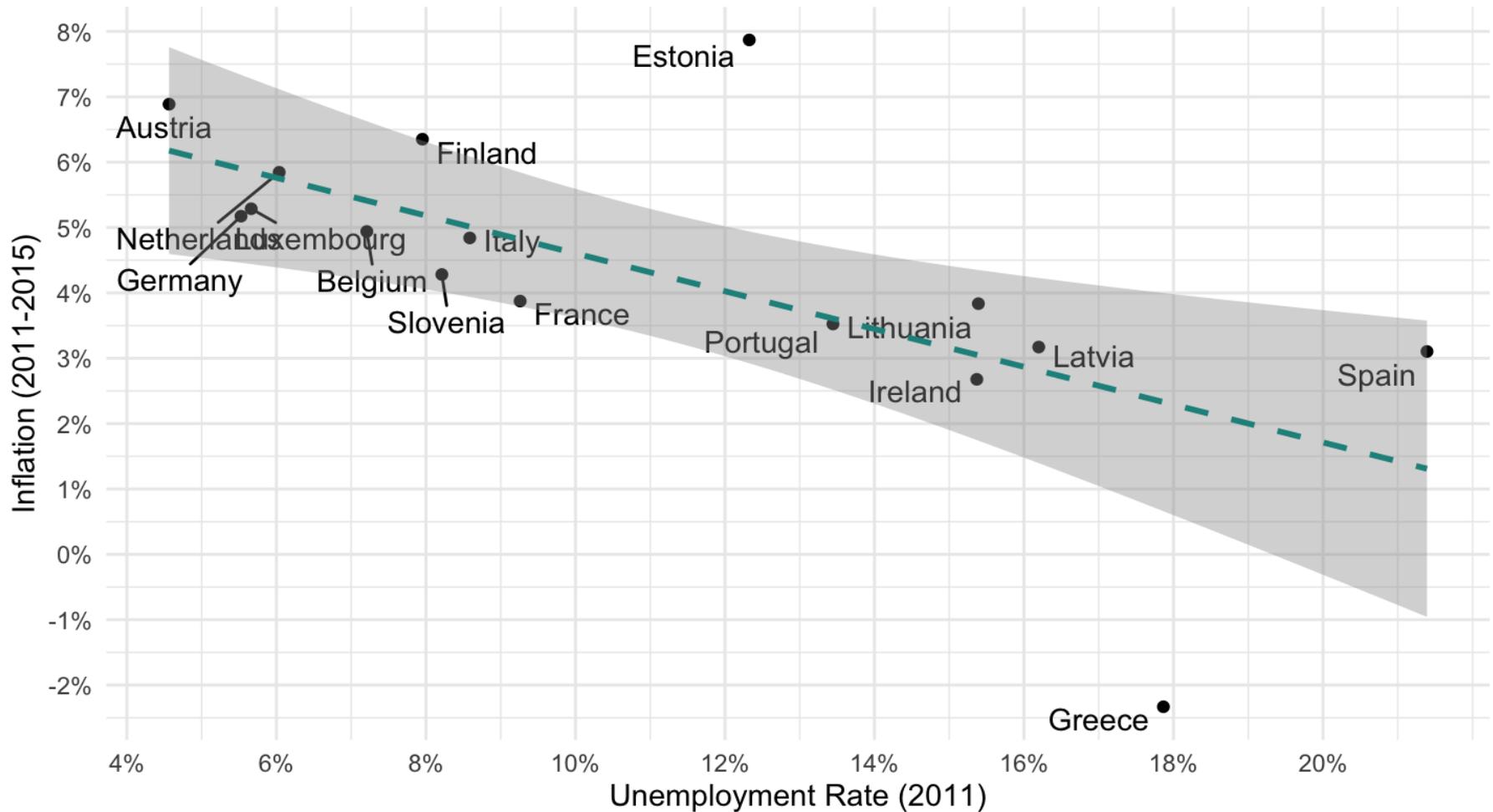
# Example of this decomposition of the price index (U.S., 2006-2020)



# The Fixed / flexible Exchange Rate dichotomy applies more generally







- The original Phillips curve was “discovered” under a gold standard (Phillips) and the Bretton Woods system (Samuelson–Solow), in which an increase in nominal wages corresponds to an increase in wages in gold (i.e., real wages).
- More generally, the Phillips curve appears to hold under fixed exchange rate regimes, but to my knowledge there are very few examples under flexible exchange rates.
- Implications: a reconsideration of monetary policy?
- The importance of competitiveness issues, trade deficits, and accelerated deindustrialization linked to demand-side policies.