

The Phillips Curve Is Not What You Think

François Geerolf

2021-04-29

Definition and Importance of the Phillips Curve

- Definition: A relationship between inflation and unemployment.
 - ▶ Initially (Phillips): wages. Today: often prices.
 - ▶ Empirical correlation or “structural relationship” = causal relationship.
 - ▶ Example of a causal relationship: low unemployment → nominal wages increase because bargaining power rises.
 - ▶ 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 cornerstone of New Keynesian economics: trade-off.
 - ▶ Stabilizing inflation means stabilizing economic activity.
 - ▶ There is a trade-off between inflation and unemployment: do not go below the structural unemployment rate to avoid triggering inflation.
 - ▶ Example: Biden’s stimulus plan(s).

Recent Doubts About the Phillips Curve, Much Stronger in the U.S. (Fed)

FEDERAL RESERVE

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

PUBLISHED THU, JUL 11 2019-10:45 AM EDT | UPDATED THU, JUL 11 2019-3:17 PM EDT



Yun Li
@YUNLI1626

SHARE [f](#) [t](#) [in](#) [e](#)

FT Alphaville International Monetary Fund [+ Add to myFT](#)

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

Matthew C Klein OCTOBER 18 2017



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

The Economist

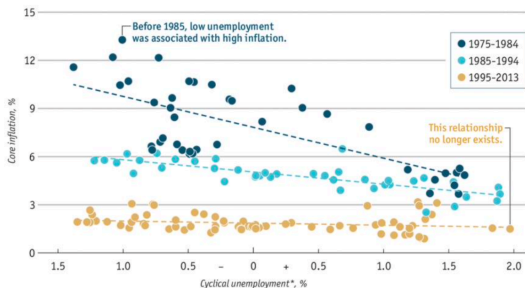
Daily chart

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



Sources: OECD; IMF

Economist.com

*Actual unemployment minus the "natural" rate of unemployment

Recent Doubts About the Phillips Curve: The 2007–09 Financial Crisis

- No deflation during the 2007–2009 crisis. Krugman (2018):

Good enough for government work? Macroeconomics since the crisis

Paul Krugman*

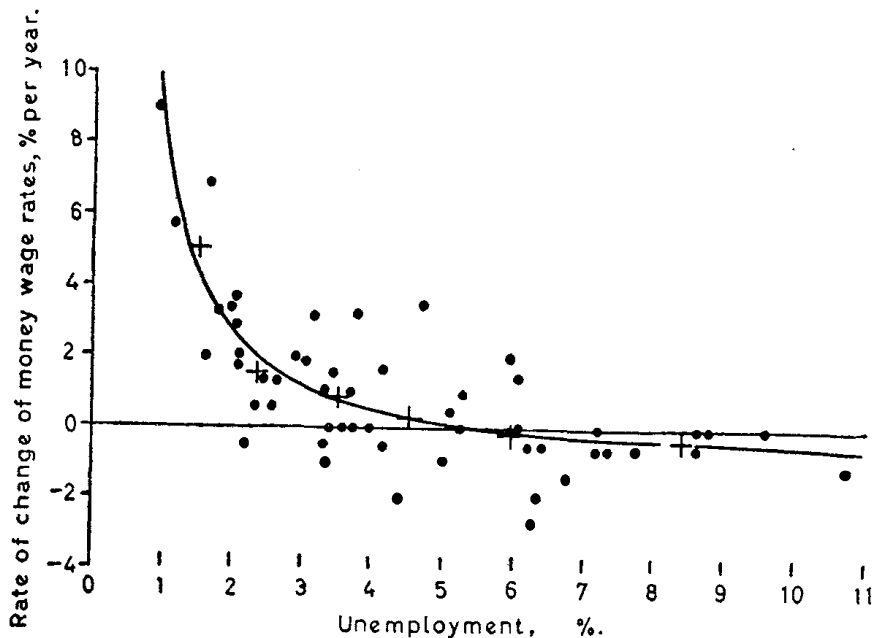
IV. The case of the missing deflation

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.

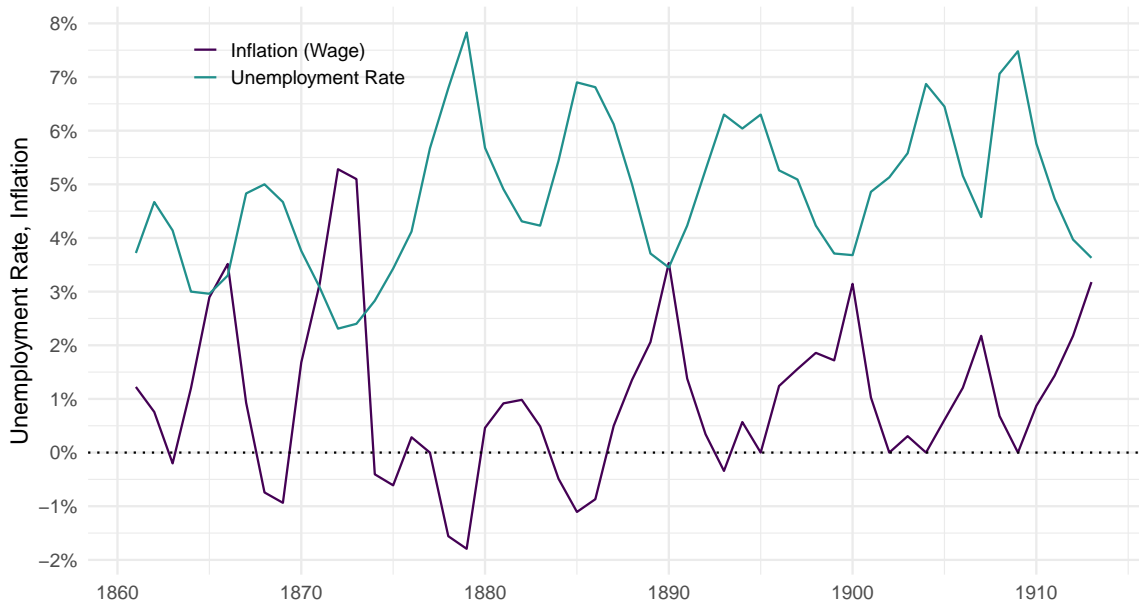
As I said, the experience of stagflation effectively convinced the whole profession of the validity of the natural-rate hypothesis. Almost everyone agreed that there was no long-run inflation–unemployment trade-off. The great saltwater–freshwater divide was, instead, about whether there were usable short-run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

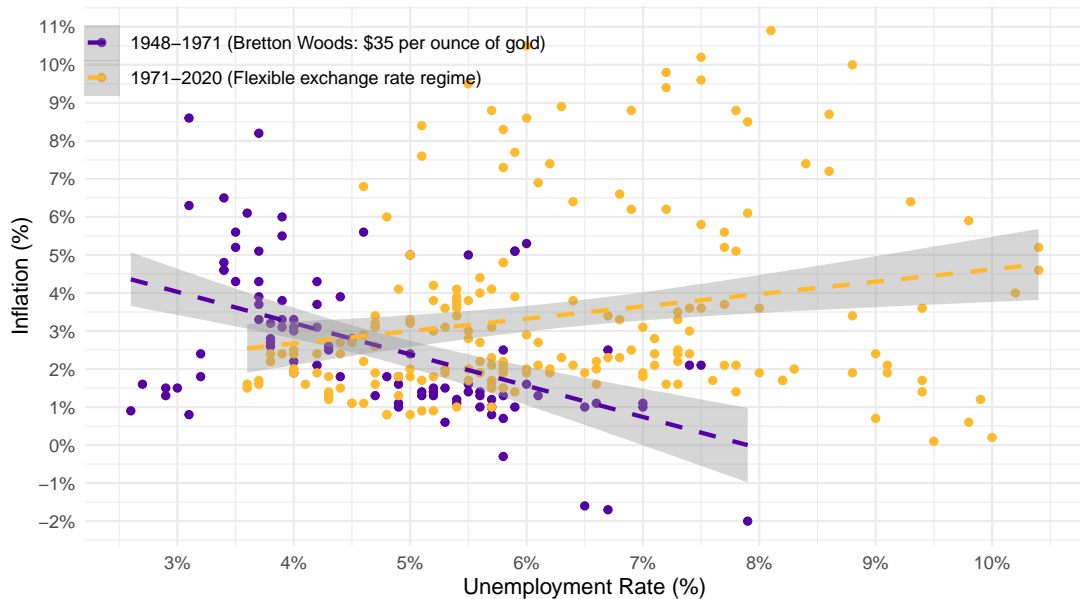
Thesis 1: Phillips Curve Under Fixed Exchange Rates, Not Flexible



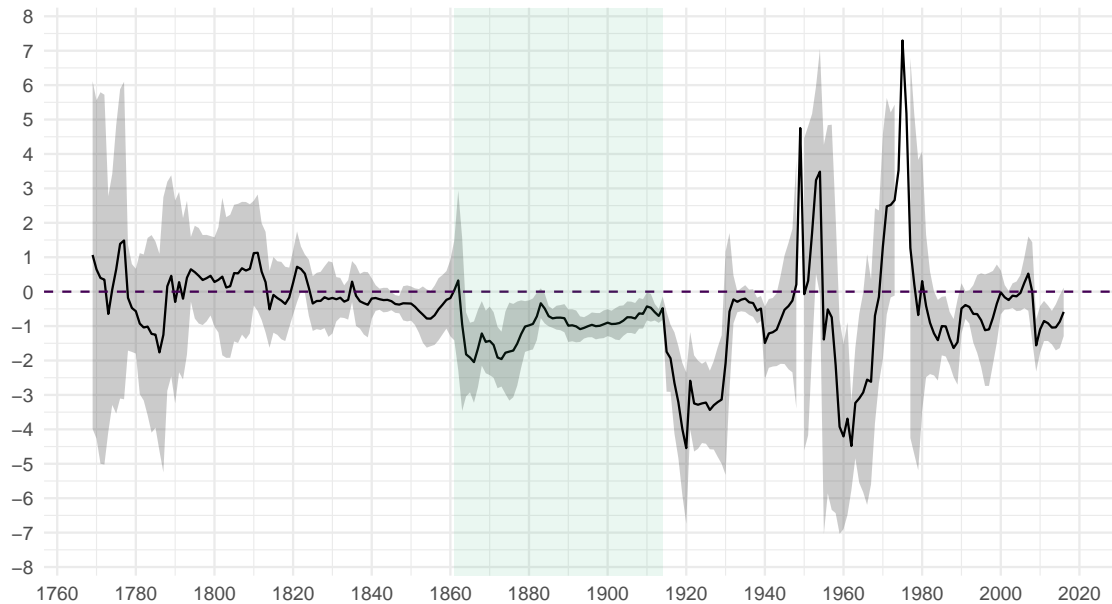
CPhillips Correlation



Example of a Phillips Curve

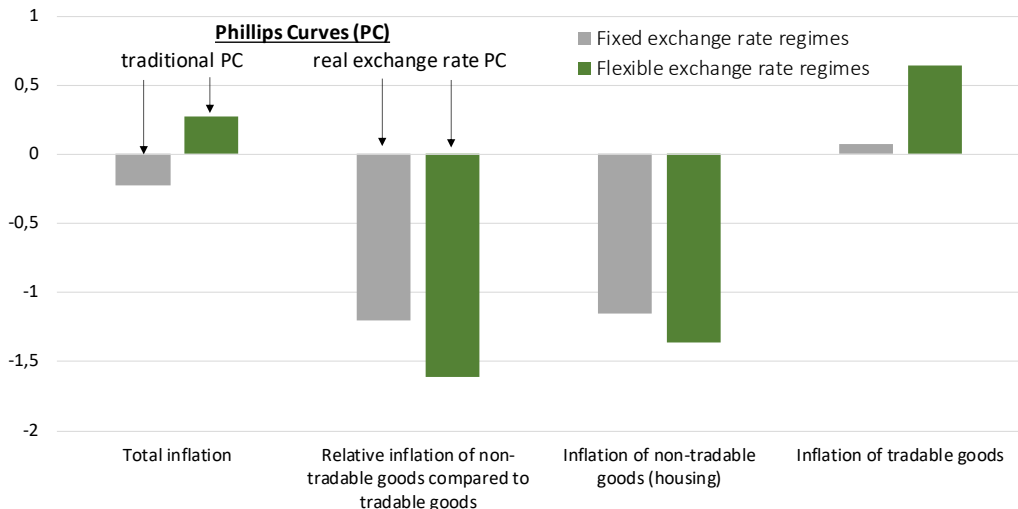


Phillips Correlation

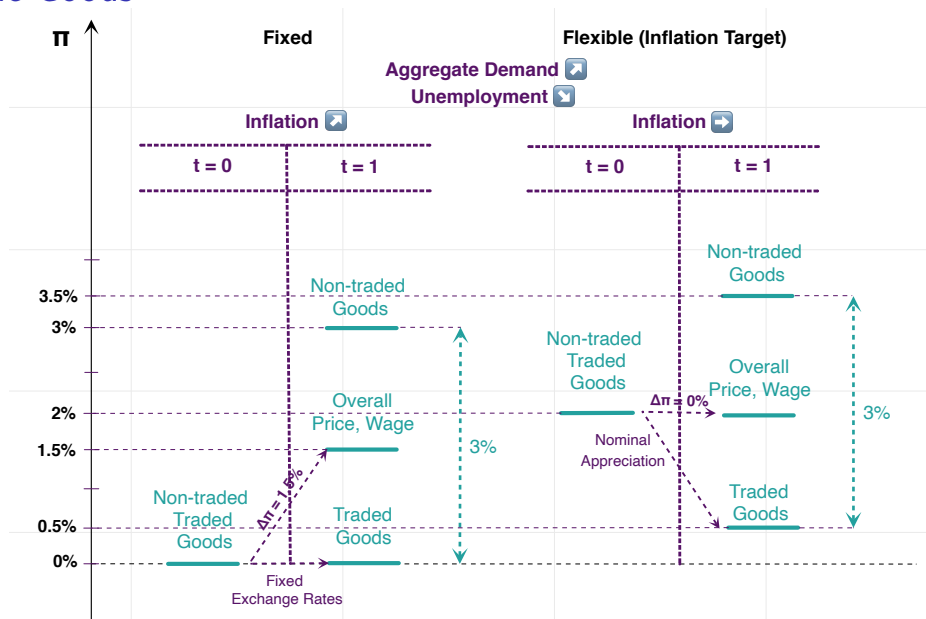


Thesis 2: Decomposition Between Non-Tradable Goods (Housing) and Tradable Goods

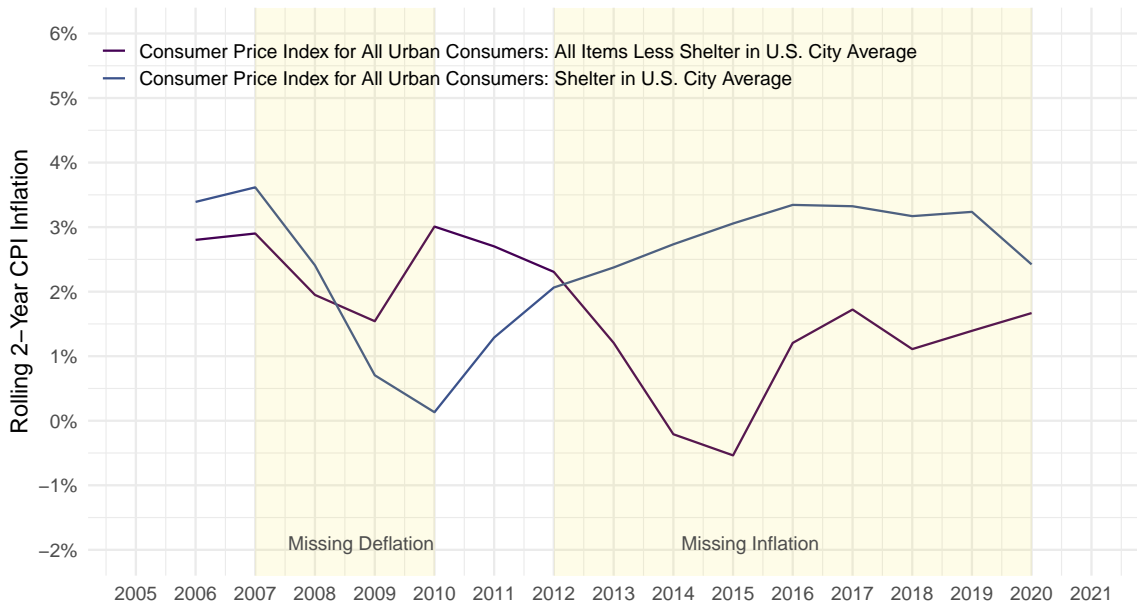
Estimated coefficient on the unemployment rate in regressions of total inflation, relative inflation (real exchange rate changes), non-tradable inflation (housing), and tradable inflation, under fixed and flexible exchange rate regimes



Thesis 2: Decomposition Between Non-Tradable Goods (Housing) and Tradable Goods










Example of This Price Index Decomposition



The Dichotomy Holds More Generally




- Consistent** with Phillips = **FIXED**
- In **contradiction** with Phillips = **FLOATING**

Overheating: low unemployment, high inflation




-  1960-69: Vietnam War, Kennedy
-  1990-95: post pegging to \$ boom
-  2000-07: post €-entry boom
-  2000-07: post €-entry boom
-  2000-07: post €-entry boom
-  2005-07: post €-entry boom
-  2005-08: real estate & banking boom

High
Inflation

Stagflation = high unemployment, high inflation

-  1971-79: end of Bretton Woods
-  2001-08: not pegging to \$ anymore
-  2008-10: post-currency crisis







Missing deflation : high unemployment, inflation

-  1933-37: \$ devaluation in 33
-  1990-93: bubble burst
-  2007-09: financial crisis
-  2007-09: financial crisis
-  2011-13: European austerity, debt crisis


Low
Unemploy.

High
Unemploy.

Missing inflation: low unemployment, low inflation










-  1986-90: real estate bubble, after Plaza
-  1997-01: Internet bubble, irrational exuberance
-  1997-02
-  2000-05
-  2010-19: commodities boom
-  2017-20: Trump stimulus

Deflation & growth: low unemployment, deflation

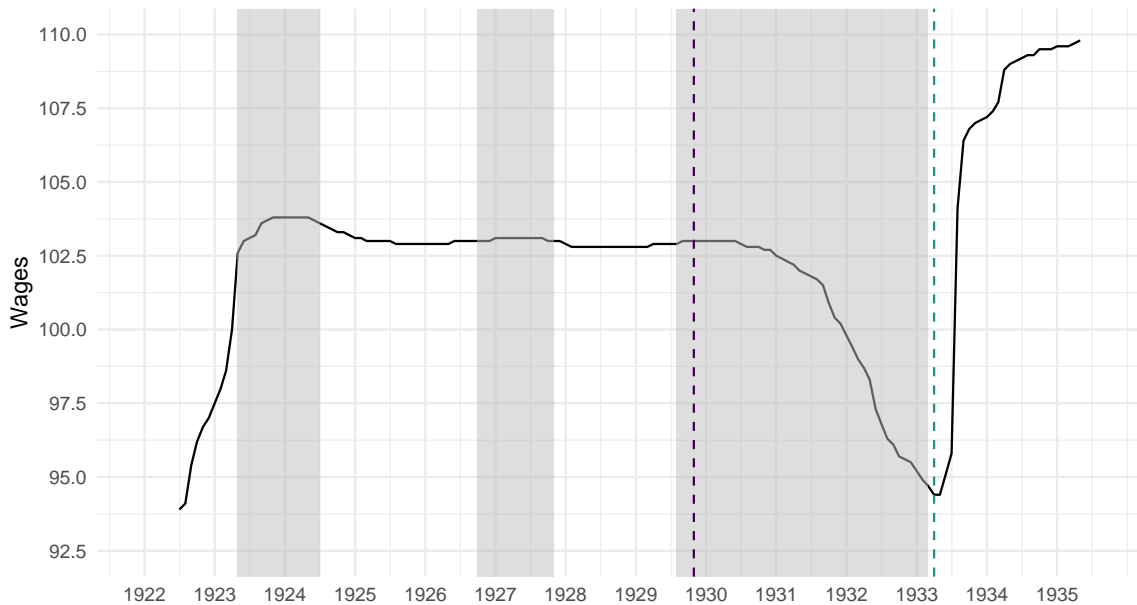
-  2011-16: post Swiss Franc appreciation

Low
Inflation

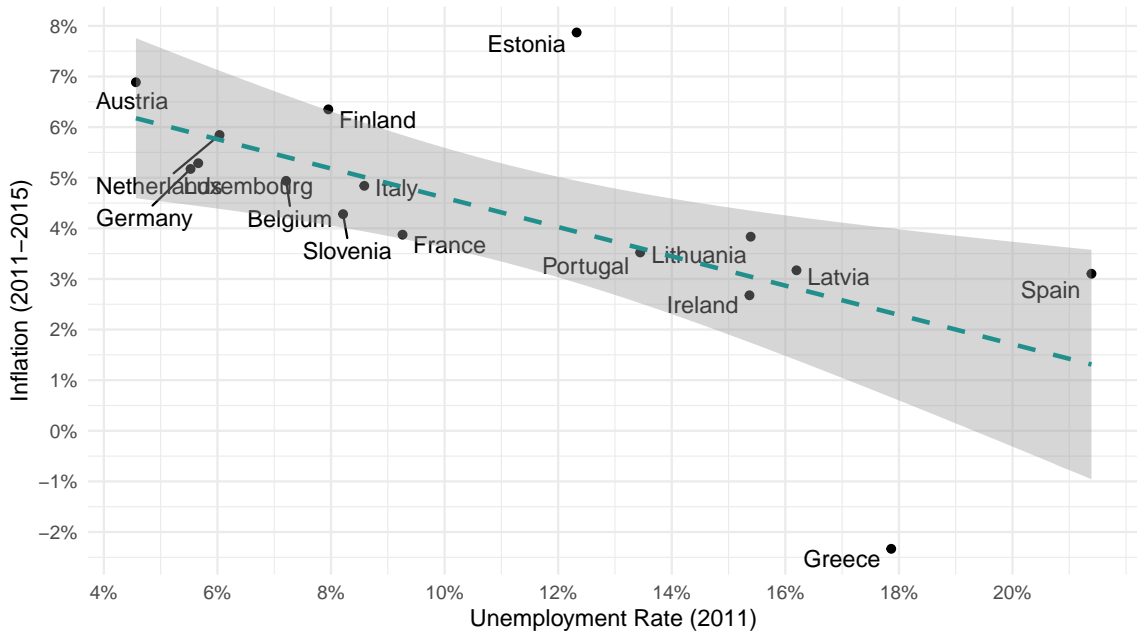
Deflationary Environment: high unemploy. & deflation

-  1929-33: Hoover deflation
-  1930-33: Brüning deflation
-  1931-33: Laval deflation
-  1997-02: after the 1997 Asian financial crisis
-  1997-00: Crisis, pegged to \$
-  2010-15: austerity (debt crisis)
-  2014-16: European austerity
-  2014-16: European austerity
-  2014-16: European austerity

Roosevelt, 1933



Europe, 2010-15



Conclusion

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