

The Drivers of Inflation Amid a Global Inflation Surge

Bart Hobijn^a

^aFRB of Chicago

May 18th, 2023
Mouradian Foundation
Online Lecture

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

Econ 101 framework to think about surge of inflation

- AD-AS curves
- Impact of combination of demand and supply shocks

Provide reading list

- Some academic papers that I find especially useful
- Some of my own Fed publications and ones that helped shape my interpretation

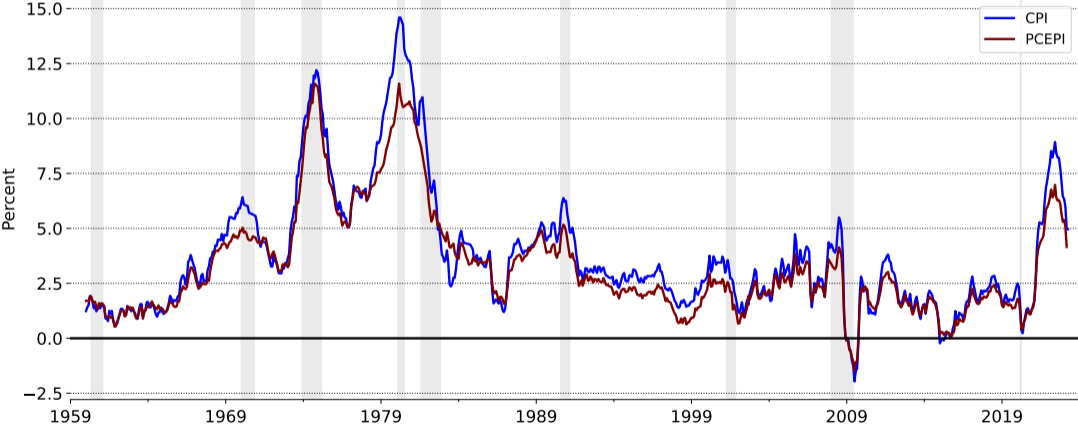
Review some of the main facts

- Focus mainly on U.S. but some cross-country evidence

U.S. Saw A Large Surge in Inflation After The Pandemic

CPI and PCEPI Inflation

Monthly observations; seasonally adjusted; 12-month inflation rates

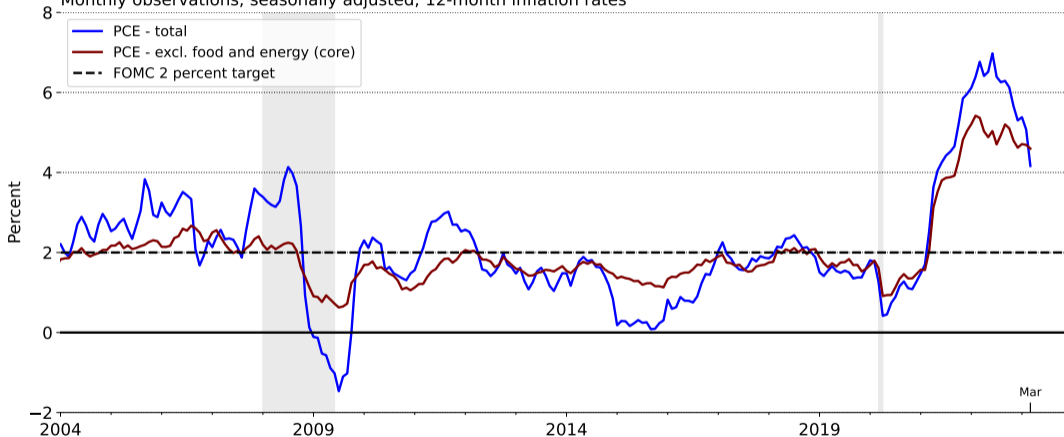


Source: Bureau of Labor Statistics and Bureau of Economic Analysis

Inflation Well Above The Fed's Objective

Headline and Core PCE inflation

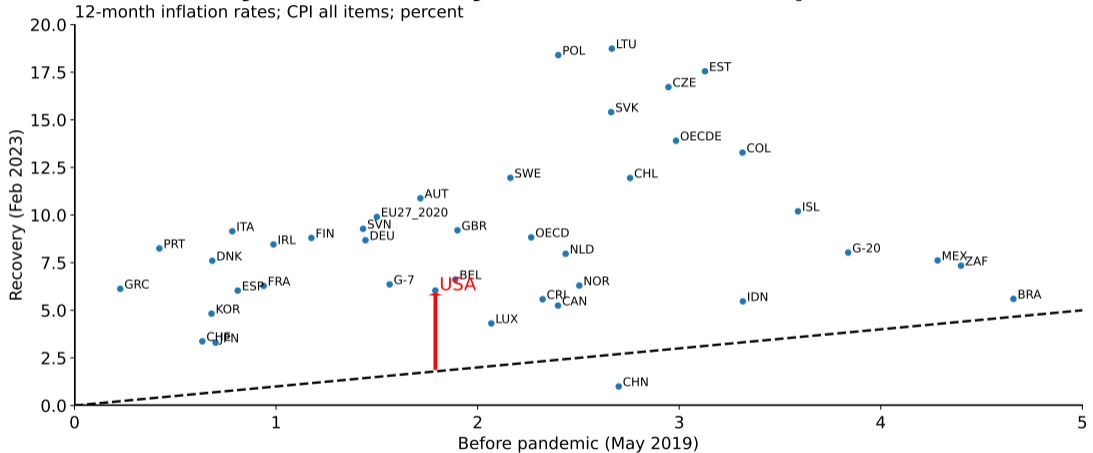
Monthly observations; seasonally adjusted; 12-month inflation rates



Source: Bureau of Economic Analysis

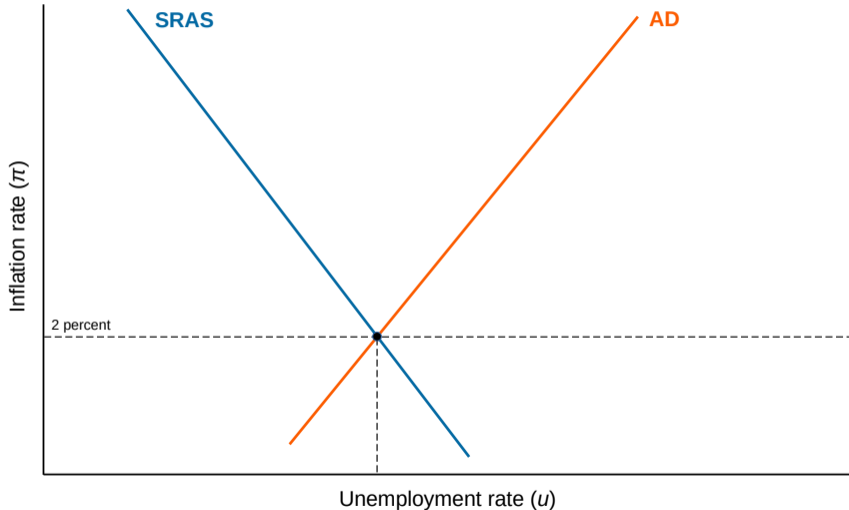
Post-Pandemic Spike in Inflation Widespread

Inflation by OECD country - before and after pandemic

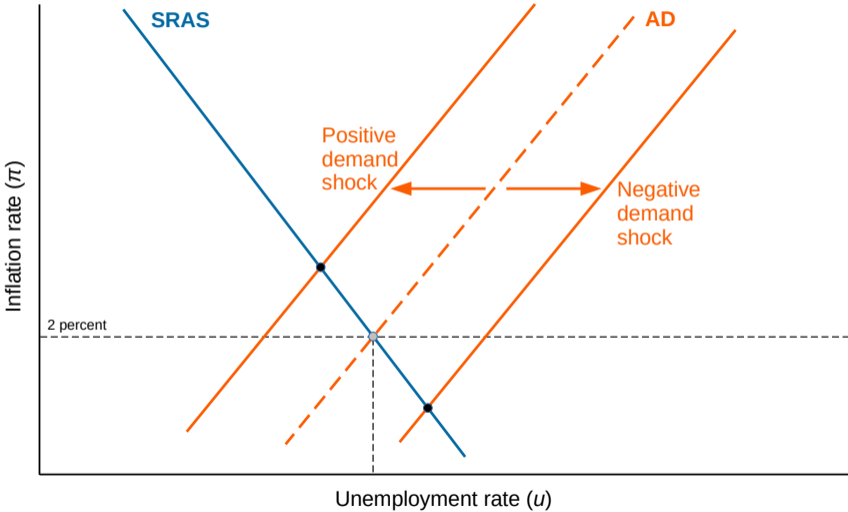


Hobijn *et al.* (2022)

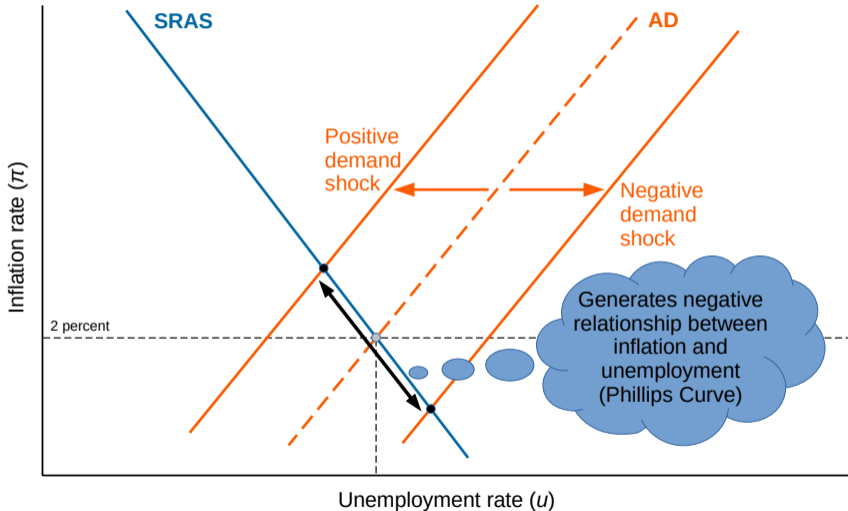
Consider Inflation Surge in Stylized AD-(SR)AS Framework



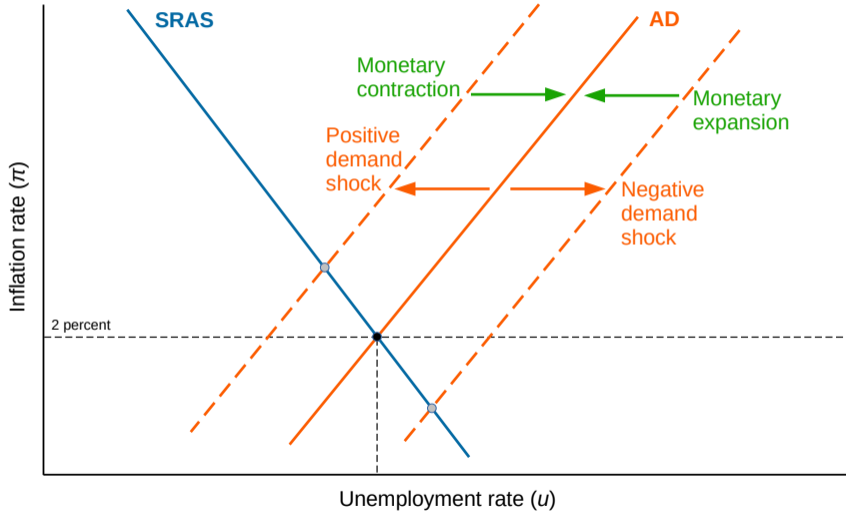
Demand-Driven Fluctuations in Unemployment over Business Cycle



Phillips Curve Driven by Demand Fluctuations

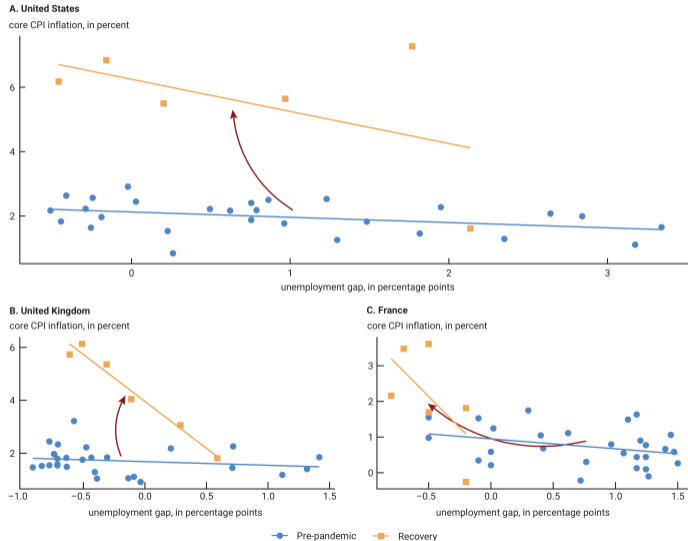


Monetary Policy Stabilizes Demand-Driven Fluctuations



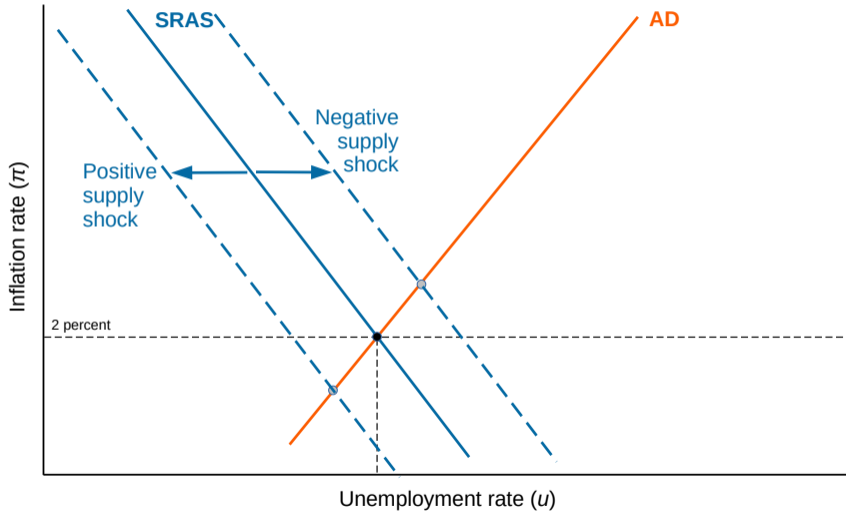
(Edge and Gurkaynak, 2010; McLeay and Tenreyro, 2020)

Seen a Steepening of the Phillips Curve Across Countries



Hobijn *et al.* (2023)

But Supply Shocks also Important...

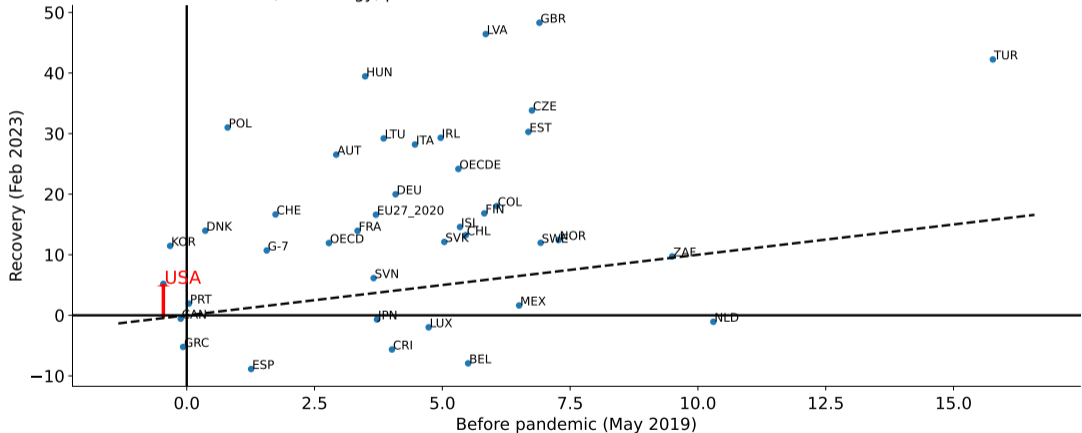


"Supply-Side Origins" of inflation: Hobijn (2020)

Energy Supply Disruptions After Start of War

Energy CPI inflation - before pandemic and now

12-month inflation rates; CPI energy; percent

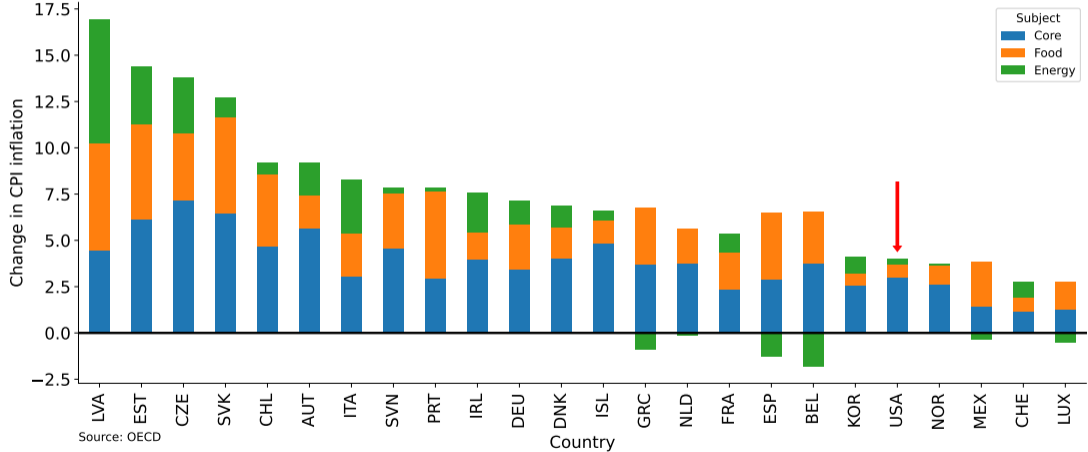


Source: OECD

Food and Energy More Important for Inflation Outside U.S.

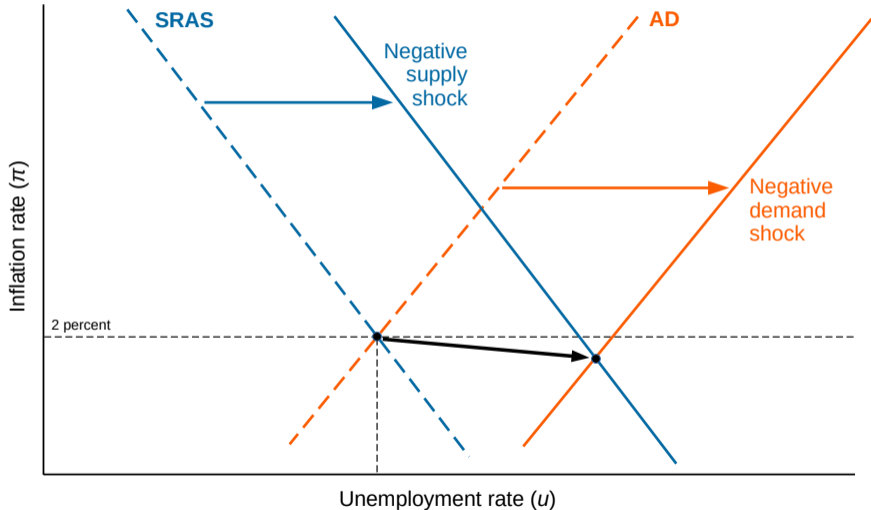
Contributions of non-core, food, and energy to acceleration

Change in contribution to 12-month inflation rates between 2019/5 and 2023/2; percentage point;



Source: OECD

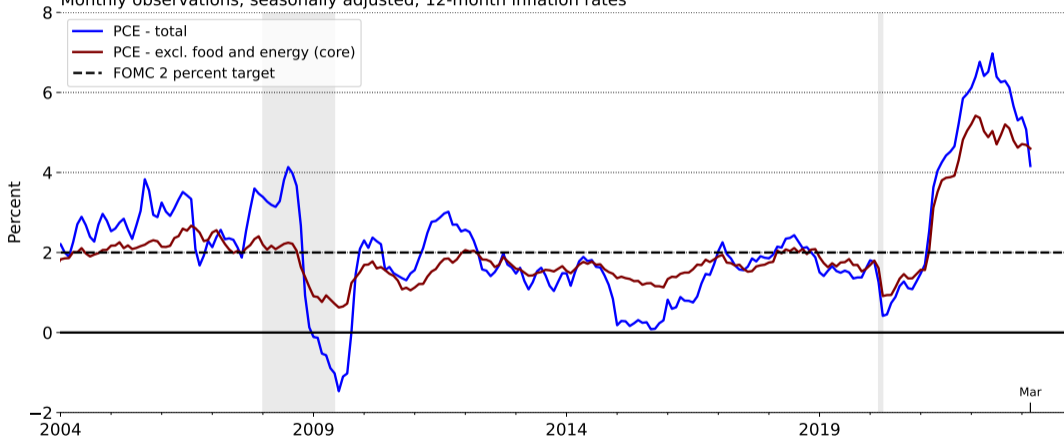
Large Joint Negative Supply and Demand Shocks During Pandemic



Inflation Declined In Depth of Pandemic

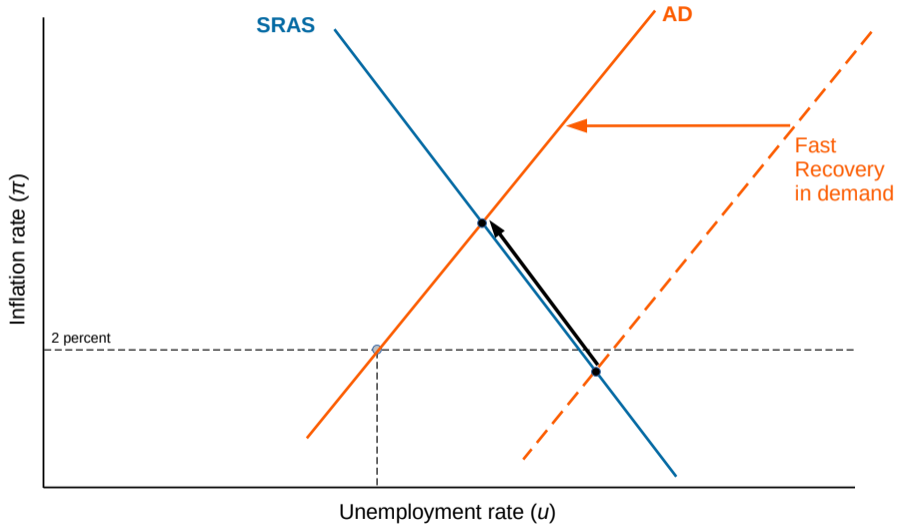
Headline and Core PCE inflation

Monthly observations; seasonally adjusted; 12-month inflation rates



Source: Bureau of Economic Analysis

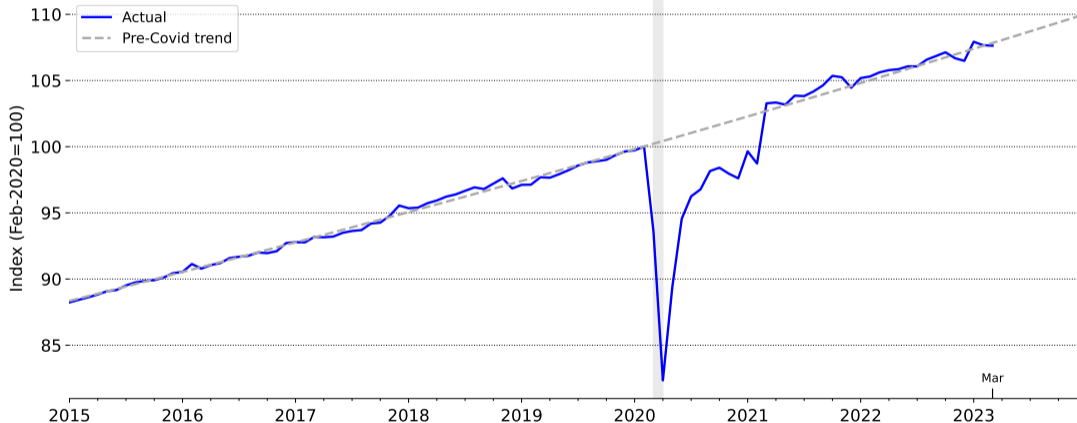
Fast Recovery in Demand



Consumption Bounced Back to Trend in Spring 2021

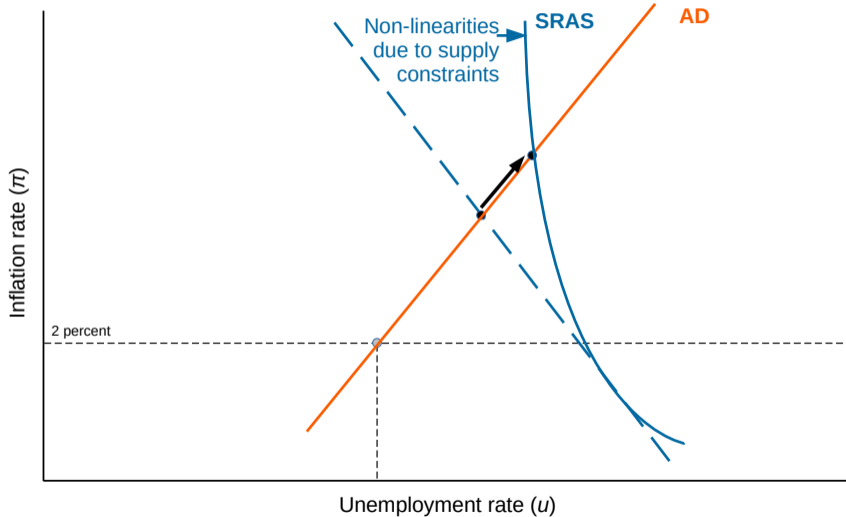
Real Personal Consumption Expenditures

Monthly observations; seasonally adjusted; percent of Feb-2020 level; Feb-2015 - Feb-2020 trend



Source: Bureau of Economic Analysis and author's calculations

Non-Linearities in Supply Curve Due to Disruptions

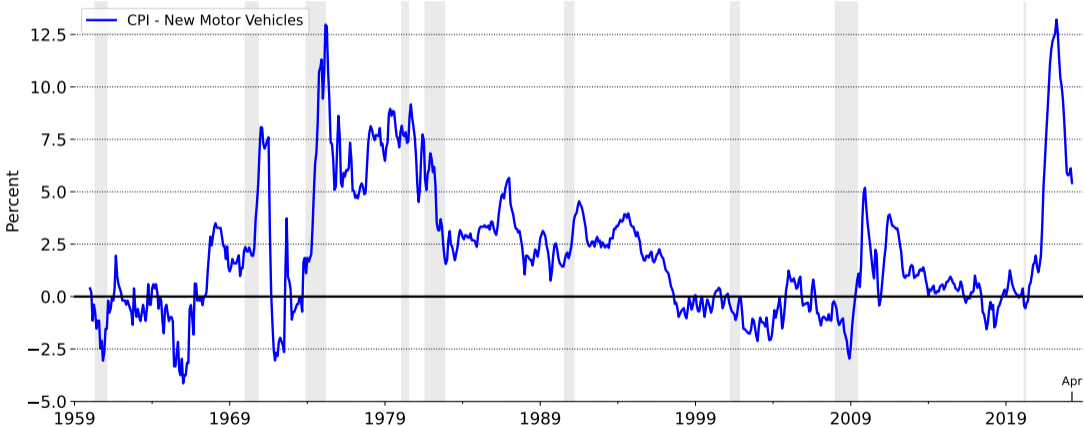


Boehm and Pandalai-Nayar (2022)

Motor Vehicle Price Increased Due to Chips Shortage

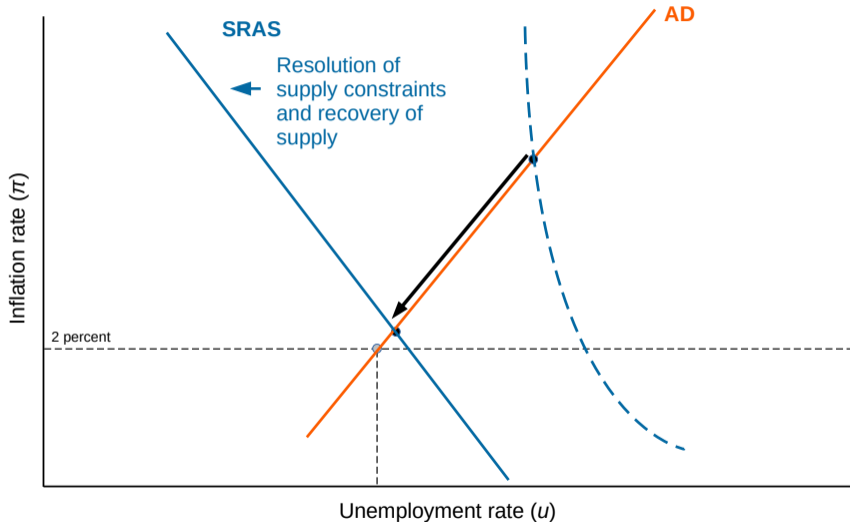
New Motor Vehicle Inflation

Monthly observations; seasonally adjusted; 12-month inflation rates, Consumer Price Index



Source: Bureau of Labor Statistics

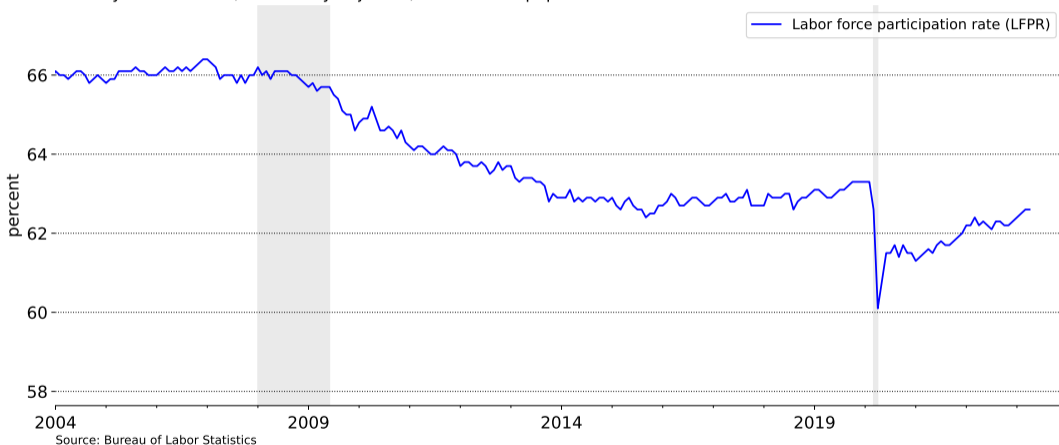
Alleviation of Supply Constraints Has Reduced Inflation



Recovery of Labor Supply Alleviated Labor Shortages

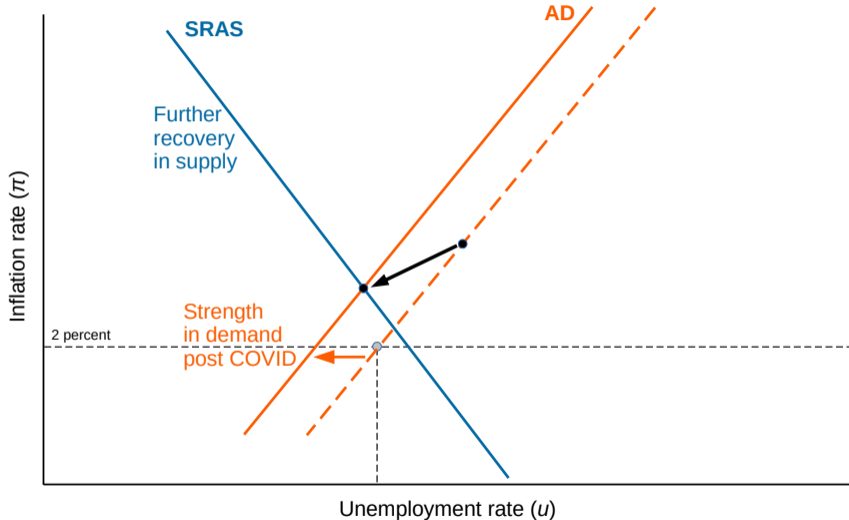
Labor Force Participation Rate

Monthly observations; seasonally adjusted; share of the population



(Hobijn and Şahin, 2021; Abraham and Rendell, 2023; Hobijn and Şahin, 2022)

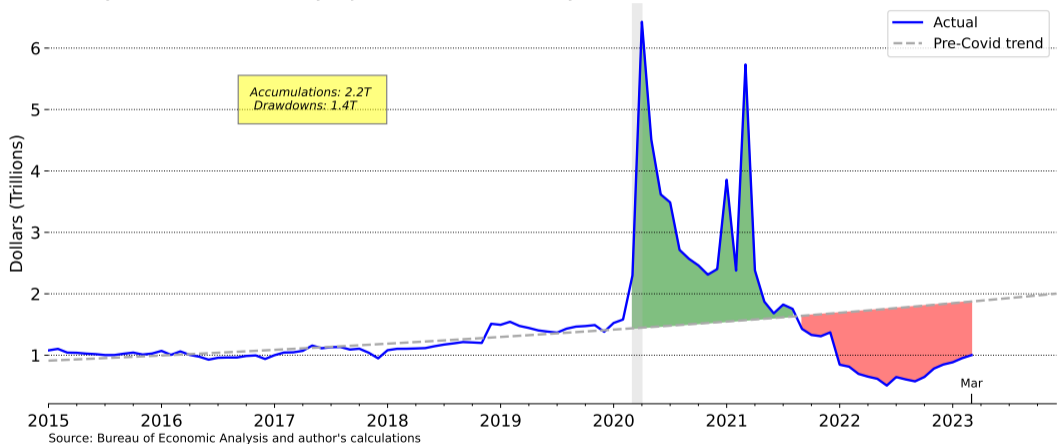
But Strength in Demand Puts Upward Pressure on Inflation



Excess Savings Support Discretionary Spending

Personal Savings and Pre-Covid Trend

Monthly observations; seasonally adjusted; annualized monthly rate

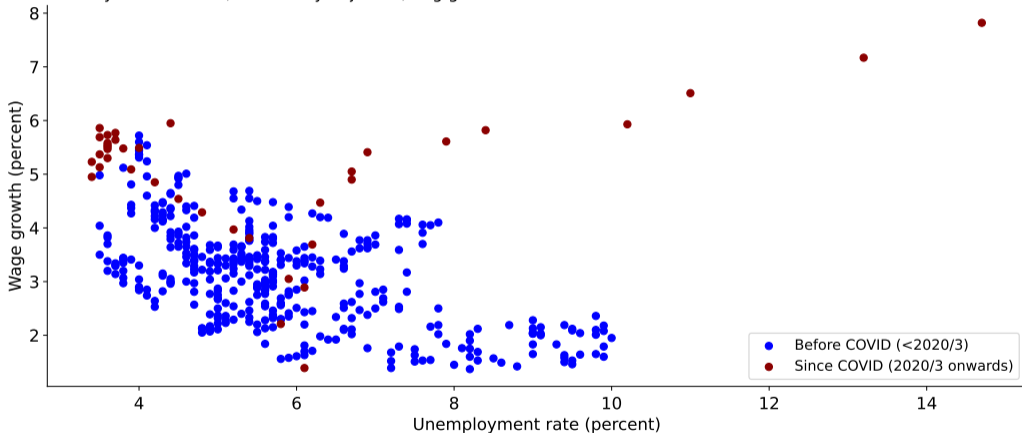


Calculation similar to Abdelrahman and Oliveira (2023)

Result is Low Unemployment and Elevated Wage Growth

U.S. Wage Phillips Curve: 1986-Now

Monthly observations; seasonally adjusted; Avg growth across measures



Source: Bureau of Labor Statistics

We have returned to the Wage Phillips curve! Galí (2011)

References

- ABDELRAHMAN, HAMZA, AND OLIVEIRA, LUIZ E. 2023. The Rise and Fall of Pandemic Excess Savings. *Frbf economic letter*, **2023**(11), 1–6.
- ABRAHAM, KATHARINE, AND RENDELL, LEA. 2023. Where are the missing workers? *Brookings papers on economic activity*, **Spring 2023**.
- BOEHM, CHRISTOPH E., AND PANDALAI-NAYAR, NITYA. 2022. Convex Supply Curves. *American economic review*, **112**(12), 3941–3969.
- EDGE, ROCHELLE M., AND GURKAYNAK, REFET S. 2010. How Useful Are Estimated DSGE Model Forecasts for Central Bankers? *Brookings papers on economic activity*, **41**(2 (Fall)), 209–259.
- GALÍ, JORDI. 2011. The return of the wage phillips curve. *Journal of the european economic association*, **9**(3), 436–461.
- HOBIIJN, BART. 2020. The Supply-Side Origins of U.S. Inflation. *Chap. 7, pages 227–268 of: CASTEX, GONZALO, GALÍ, JORDI, AND SARAVIA, DIEGO (eds), Changing Inflation Dynamics, Evolving Monetary Policy*. Central Banking, Analysis, and Economic Policies Book Series, vol. 27. Central Bank of Chile.
- HOBIIJN, BART., AND ŞAHIN, AYŞEGÜL. 2021. Maximum employment and the participation cycle. *Jackson hole economic policy symposium proceedings*.
- HOBIIJN, BART, MILES, RUSSELL, ROYAL, JAMES, AND ZHANG, JING. 2022. What Is Driving U.S. Inflation amid a Global Inflation Surge? *Chicago fed letter*, August.
- HOBIIJN, BART, MILES, RUSSELL, ROYAL, JAMES, AND ZHANG, JING. 2023. The Recent Steepening of Phillips Curves. *Chicago fed letter*, **0**(January).
- HOBIIJN, BART, AND ŞAHIN, AYŞEGÜL. 2022 (December). *Missing workers and missing jobs since the pandemic*. Working Paper 30717. National Bureau of Economic Research.
- MCLEAY, MICHAEL, AND TENREYRO, SILVANA. 2020. Optimal Inflation and the Identification of the Phillips Curve. *Nber macroeconomics annual*, **34**(1), 199–255.