

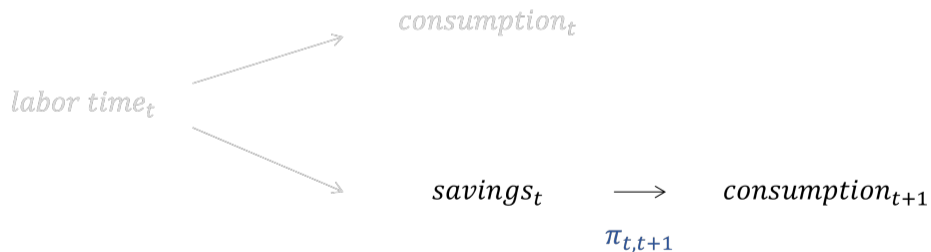
# Who bears the cost of inflation?

**Zach Bethune**  
University of Virginia

April 2022

## What are the channels of inflation?

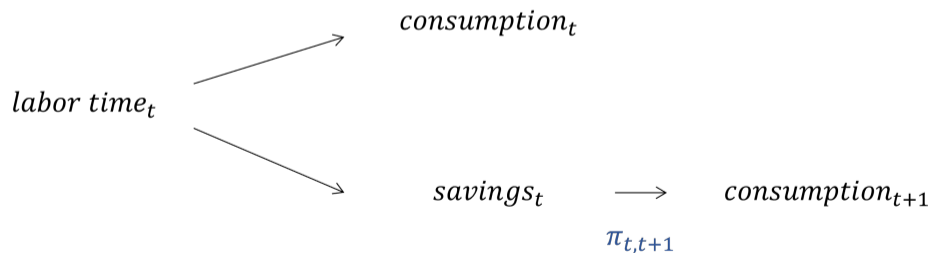
**Conventional view:** inflation reduces purchasing power of a dollar



# What are the channels of inflation?

**Conventional view:** inflation reduces purchasing power of a dollar

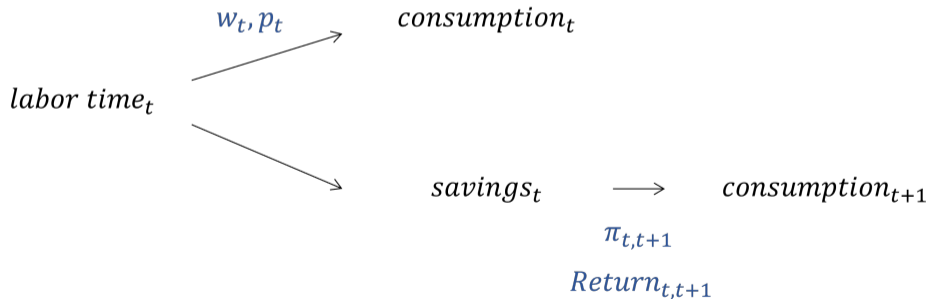
**Many channels of inflation:**



## What are the channels of inflation?

**Conventional view:** inflation reduces purchasing power of a dollar

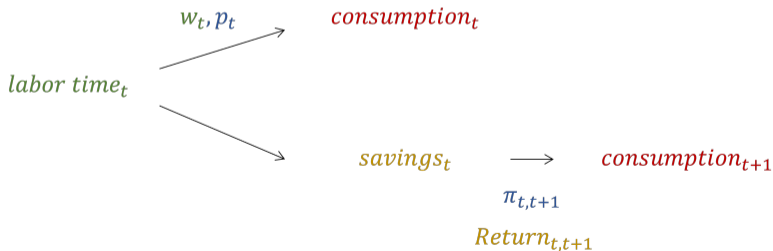
**Many channels of inflation:** real wages, returns on wealth, savings decisions



# Is inflation bad? How bad? Depends on who you ask...

## Households differ along many margins

- ① Work in occupations that differ in earnings process
- ② Consume different baskets of goods/services
- ③ Hold different portfolios of assets and liabilities



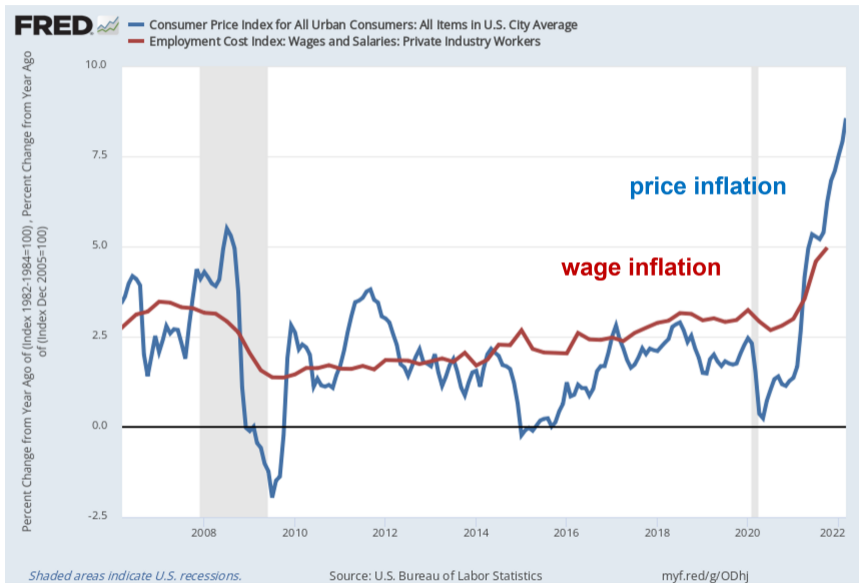
# 1) Real wage channel

Who is exposed to this channel the most?

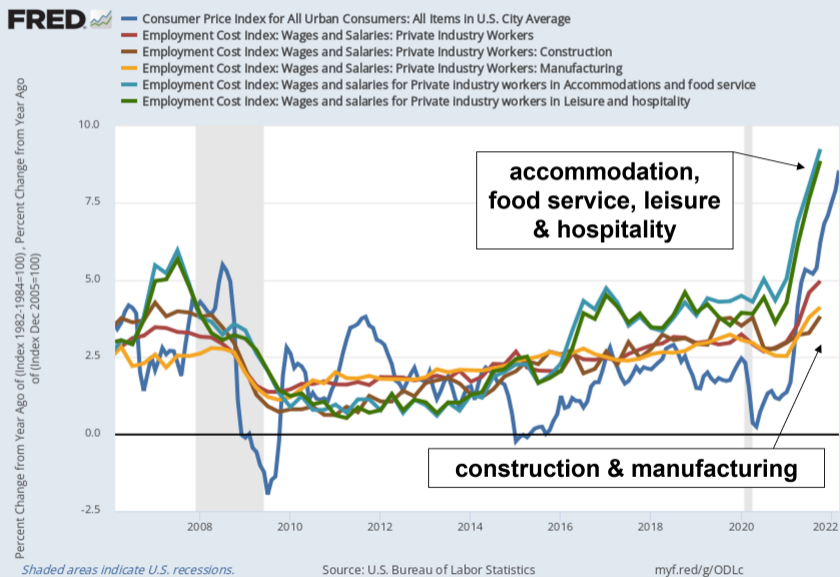
- hand-to-mouth households ( $\sim 11\%$  of households)
- liquidity-constrained households ( $\sim 22\%$  of households)
- high MPCs (consume a lot of out income)

Wage inflation differs across industries and occupations

# Average real earnings have fallen

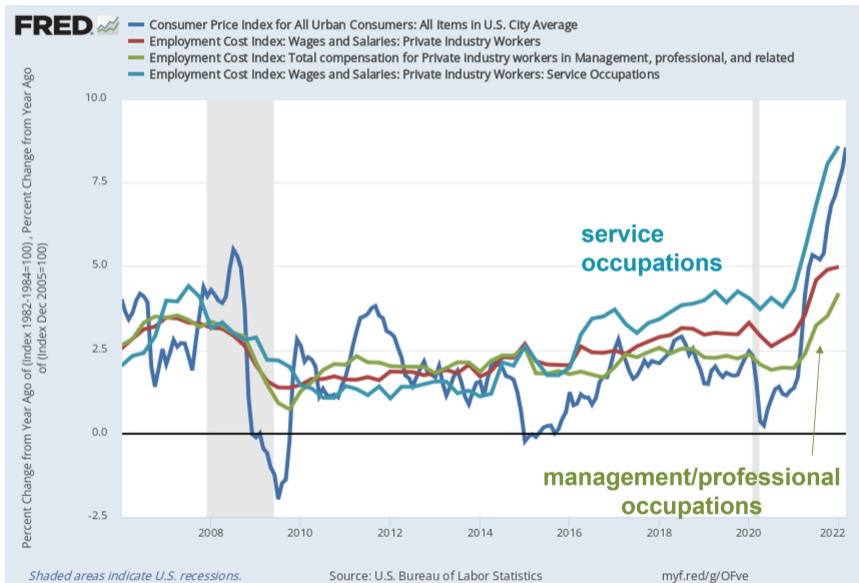


# Both positive and negative real earnings changes



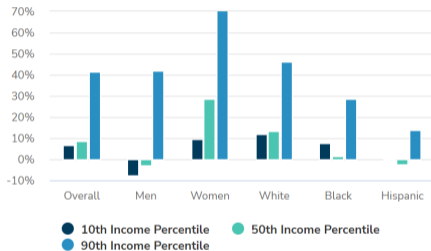


# Real wage gains concentrated in service industries/occupations



# Important to remember low income and minority workers had slower real wage gains before Covid

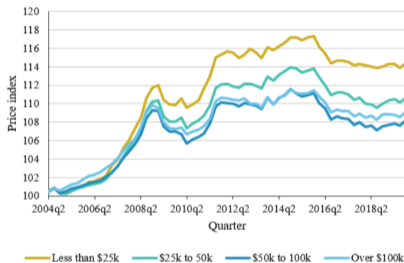
## Real Wage Gains in the U.S. (1979 - 2019)



While overall wage gains have exceeded inflation over the past 40 years, the gains have been much smaller for low and middle income people. Some subgroups of Americans (notably many men and Hispanics) have gone backward.

Source: Current Population Survey via Congressional Research Service

## Figure 1: Consumer goods price index by household income group, 2004–2019



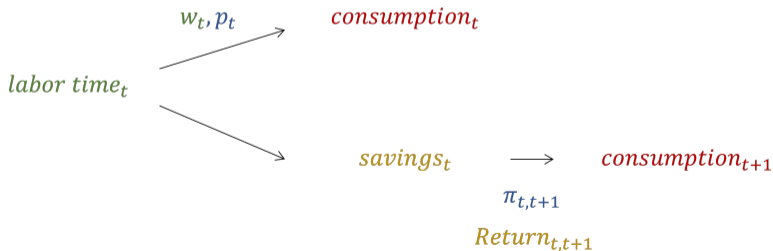
Data is reported quarterly from second quarter of 2004 (2004q2) through fourth quarter of 2019 (2019q4). The income bins roughly correspond to quartiles of the household income distribution.

Source: (right) Argente and Lee (2022)

# Is inflation bad? How bad? Depends on who you ask...

## Households differ along many margins

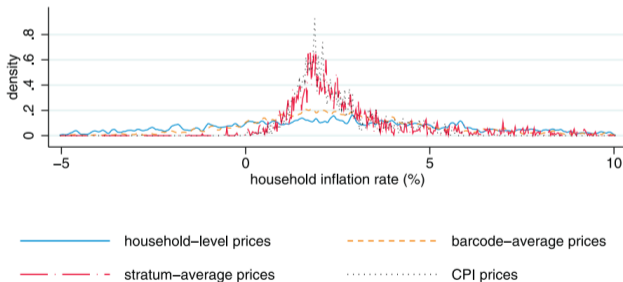
- ① Work in occupations that differ in earnings process
- ② Consume different baskets of goods/services
- ③ Hold different portfolios of assets and liabilities



## 2) Consumption Channel

Households face different inflation rates because

- consumption baskets differ across households (income, wealth, race, etc.)
- inflation differs across baskets of goods/services
- prices paid differ across households for same good



Source: Kaplan and Schulhofer-Wohl (2017)

# Difference in household consumption baskets by income

Table 5: Distribution of total CPI market basket expenditures, snapshot of 2015-2016<sup>20</sup>

Item Category	All urban households (U)	62 years or older (E)	Lowest income quartile	Highest income quartile
Food, total	14.6%	12.4%	15.6%	14.2%
Food at home	7.7%	7.1%	9.5%	6.7%
Food away from home	5.9%	4.5%	5.4%	6.3%
Alcoholic beverages	1.0%	0.8%	0.7%	1.2%
Housing, total	41.0%	45.8%	45.2%	39.5%
Shelter	30.5%	34.4%	34.6%	28.8%
Rent	7.5%	4.7%	15.6%	3.4%
Owner's equivalent rent	23.0%	29.7%	19.1%	25.5%
Household utilities	4.7%	5.0%	5.9%	3.8%
House furnishings and other household services	4.5%	4.8%	3.7%	5.1%
Lodging away from home	1.0%	1.0%	0.6%	1.4%
Recreation	5.9%	5.7%	4.6%	6.7%
Education and communication, total	7.1%	4.4%	6.8%	8.0%
Education	3.0%	0.8%	2.7%	4.4%
Communication	4.1%	3.7%	4.1%	3.6%
Apparel	3.2%	2.1%	2.9%	3.5%
Medical care	8.5%	12.0%	8.2%	7.9%
Health insurance	1.0%	1.2%	0.8%	1.1%
Professional services	3.3%	4.6%	3.0%	3.2%
Transportation, total	16.6%	14.7%	13.0%	17.2%
Motor Fuel	3.7%	2.9%	3.4%	3.3%
Vehicles and vehicle maintenance	9.0%	8.0%	6.0%	9.7%
Motor vehicle insurance	2.1%	2.1%	2.4%	1.9%
Public transportation	1.3%	1.2%	0.9%	1.7%
Other goods and services	3.2%	3.0%	3.6%	3.0%

Source: CE integrated data with CPI division adjustments based on CE data from 2015 – 2016.

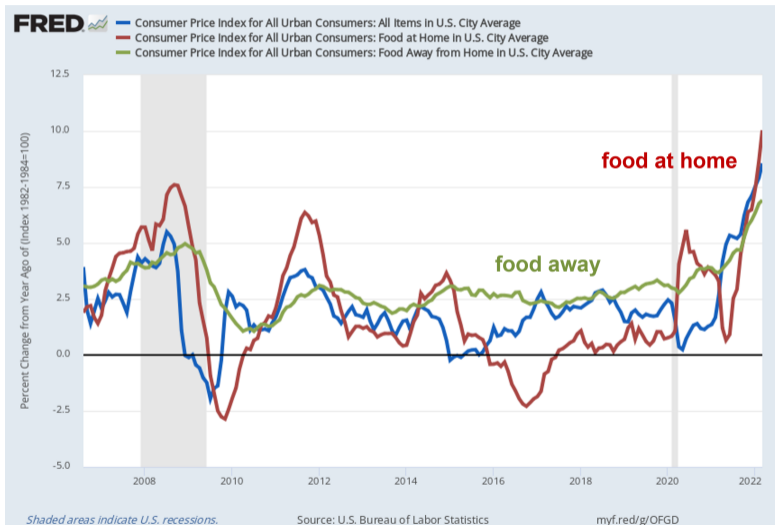
Low income spend more on:

- Food at home
- Rent

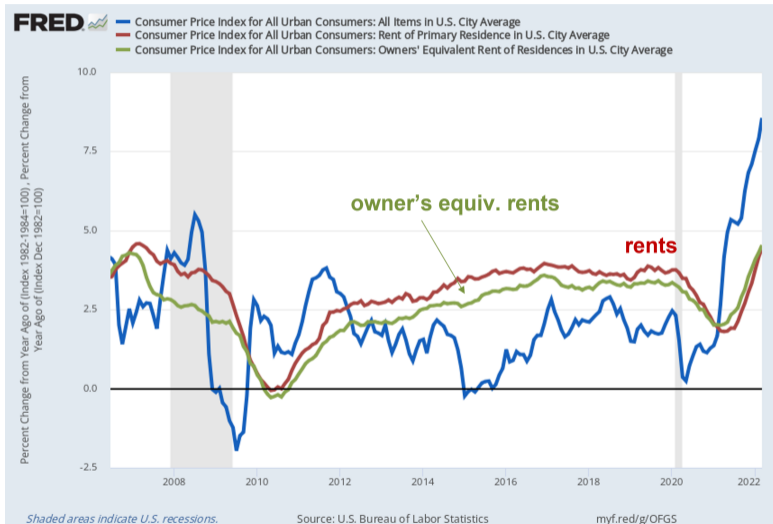
High income spend more on:

- Food away from home
- Owner's equivalent rent
- Transportation
  - vehicles and maintenance

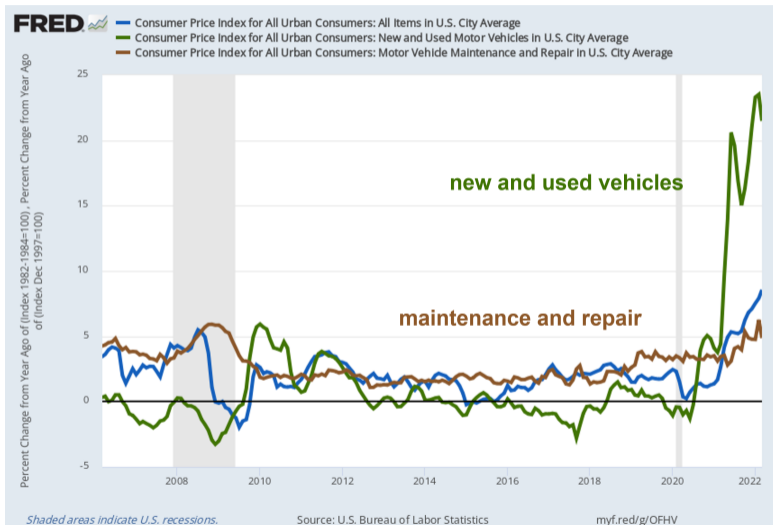
# Higher relative price to eat at home



# No significant difference in cost of housing



# High transportation prices, especially for new and used vehicles

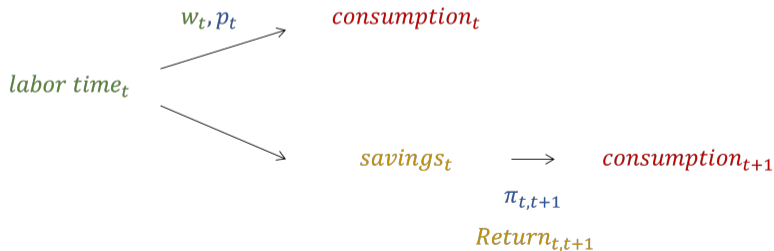




# Is inflation bad? How bad? Depends on who you ask...

## Households differ along many margins

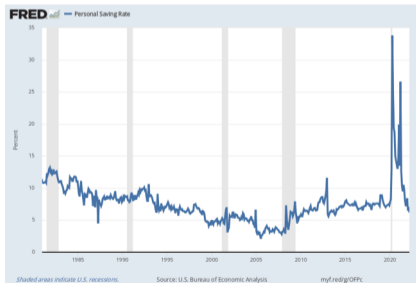
- ① Work in occupations that differ in earnings process
- ② Consume different baskets of goods/services
- ③ Hold different portfolios of assets and liabilities



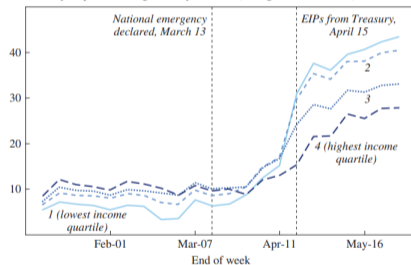
### 3) Wealth channel

Transforming wealth into consumption

Unprecedented increase in savings rate, for all income levels



Year-over-year percent change in daily balances (averaged over the week)



Source: JPMorgan Chase Institute.

Note: This figure plots both average dollar balances and year-over-year percentage change in checking account balances by income quartile. Balance increases are larger in dollar terms for high-income households (who have higher prepandemic balances), and in percent terms for low-income households (who have lower prepandemic balances).

# Households hold different portfolios of assets and debt

Unexpected inflation redistributes wealth from nominal lenders to borrowers

- borrowers tend to be young, middle-class households with fixed-rate mortgages
- lenders tend to be older, wealthy households

Expected and unexpected inflation is a tax on liquid wealth

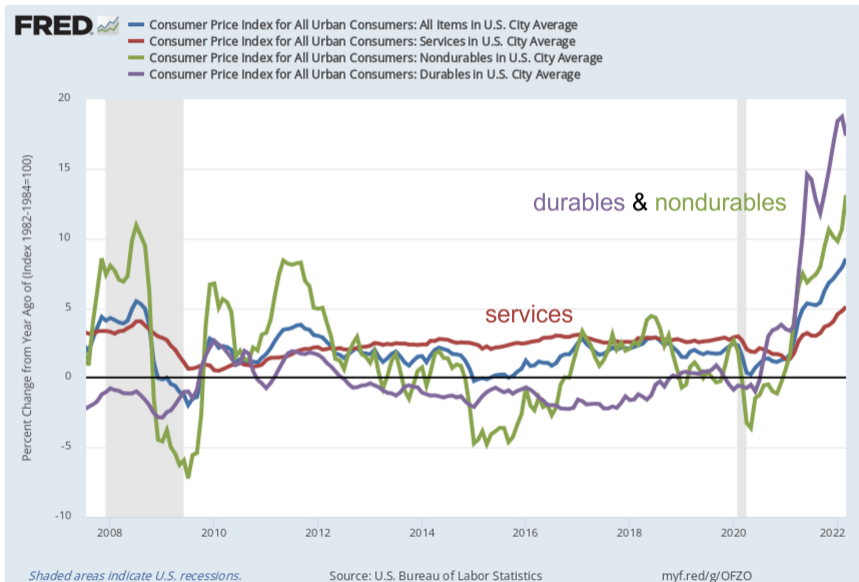
- Low wealth and income hold almost exclusively zero-nominal return wealth
- Middle/high wealth and income hold predominately housing and financial wealth

## What is generating inflation matters also

- Fiscal/monetary expansion was not lump-sum
- Monetary stimulus also has redistributive effects
  - transmission also depends on distribution of wealth/income
  - stabilization depends on redistribution, and vice versa
- Contractionary policy must balance redistributive effects of
  - lower inflation
  - higher nominal (real?) interest rates
  - higher taxes?

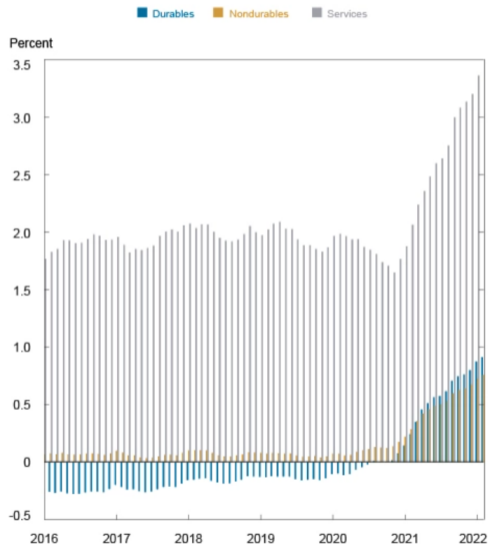


# Price inflation across sectors



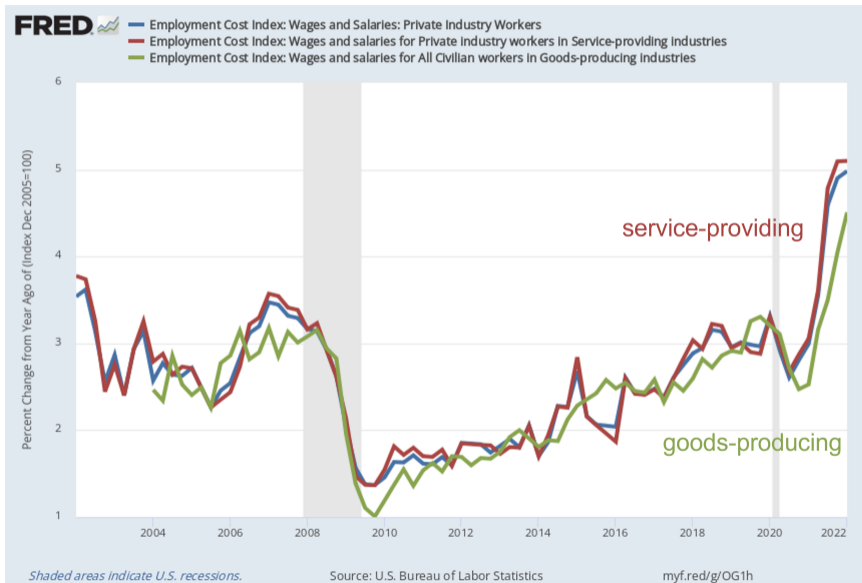
# Services large contributor to current inflation

Inflation Trend Decomposition by Sector



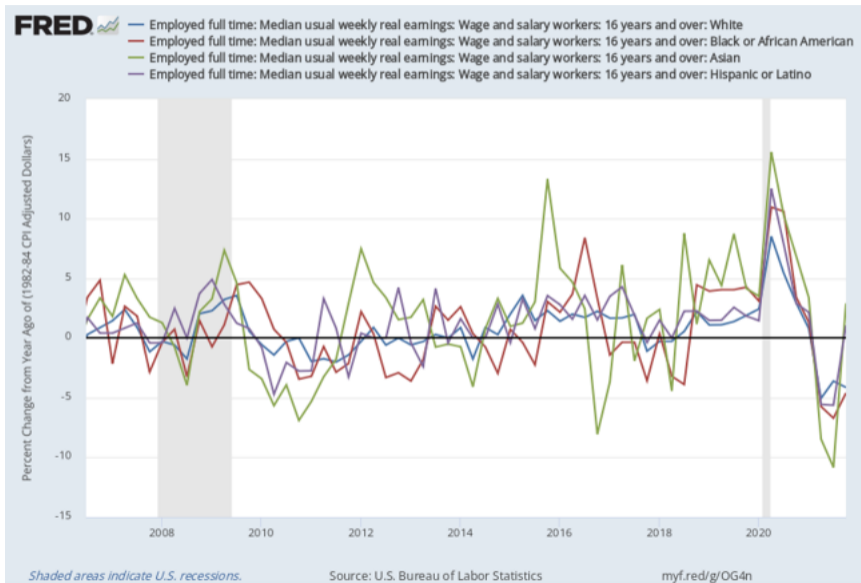
Sources: Bureau of Economic Analysis; authors' calculations.

# Wage inflation across sectors





# Wage inflation across race/ethnicity



# Real earnings growth by earnings quartile

