**April 2023
(Released May 2023)**

EQUITABLE GROWTH INDICATORS

Raji Chakrabarti, Dan Garcia, and Maxim Pinkovsky

Summary

- **INFLATION**

  Low-income households currently face markedly higher inflation than middle- and high-income households-experiencing 0.37 and 0.41 percentage point higher inflation than the middle- and high-income households, respectively.

- **EARNINGS**

  Real earnings of Black and Hispanic workers experienced a decline in 2023 while those of Asian and white workers increased.

- **EMPLOYMENT**

  The unemployment rate gap for Hispanic workers rose sharply since January 2023. In contrast, the unemployment rate gap for Black workers declined during this period. This pattern is largely owing to a relative increase in labor force participation among Hispanic women.

- **CONSUMER SPENDING**

  The decline in real spending between February and March was the sharpest for those age 25 to 34, before it bottomed out in April 2023. Real spending of this group declined by around 10 percentage points in each of the retail, gas, and restaurant categories in this period.
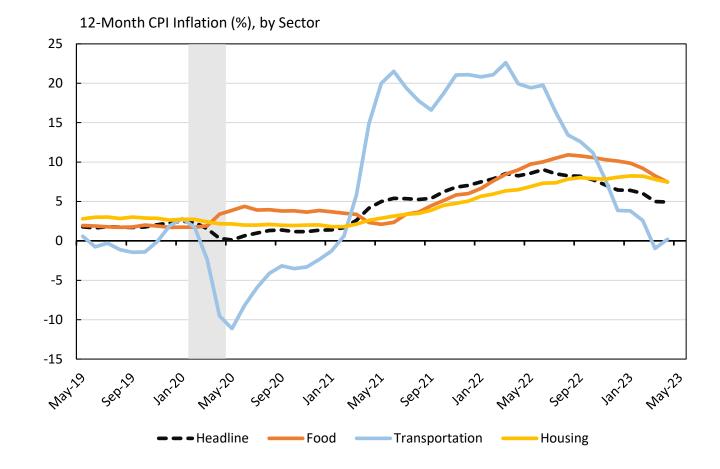
INFLATION

Takeaways | Inflation

- Gaps in demographic inflation rates increased significantly in 2021 and early 2022, a development that was largely attributable to heterogeneity in transportation spending.

- Middle-income households, the young, people without a college degree, residents of the South and Midwest, rural households, and Black and Hispanic households faced higher inflation than the overall average in 2021. Many of these gaps have now reversed.

- Currently, urban, college-educated, low-income households, and residents of the South face higher inflation than average.

- Low-income households currently face markedly higher inflation than middle- and high-income households-experiencing 0.37 and 0.41 percentage point higher inflation than the middle- and high-income households, respectively.
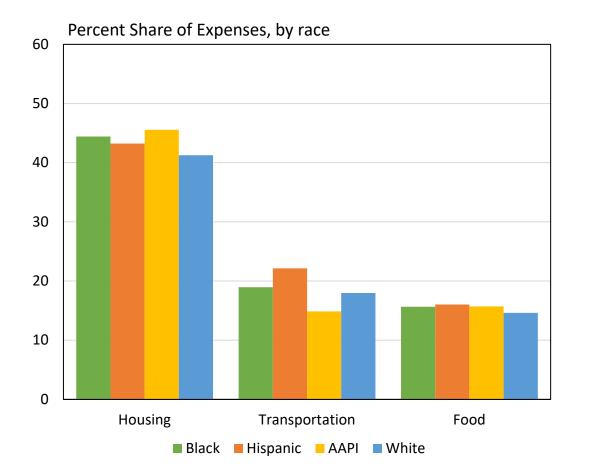
Data & Methods

- Data on inflation by demographic groups are not produced by the Bureau of Labor Statistics.

- To calculate demographic inflation, we exploit the fact that the Consumer Expenditure Survey (CEX) can be used to compute spending shares of various consumption categories (for example, cereal, rent, and used cars) by demographic group (for example, Black, Hispanic, some college, and aged 45-54).

- To compute the contribution of a consumption category in a particular city to demographic inflation for a specific group, we take that group's spending share on that category in that city (from the CEX) in the previous year and multiply it by the twelve-month inflation for that consumption category in that city (from the Consumer Price Index).

- We then add up all the contributions to get an inflation index for the demographic group.

- Our method is similar to the previous literature, for example, Hobijn and Lagakos (2005), McGranahan and Paulson (2006), and Jaravel (2019). We are the first to exploit price variation across cities whereas the above-mentioned studies assume people in different demographic groups and cities face the same prices.
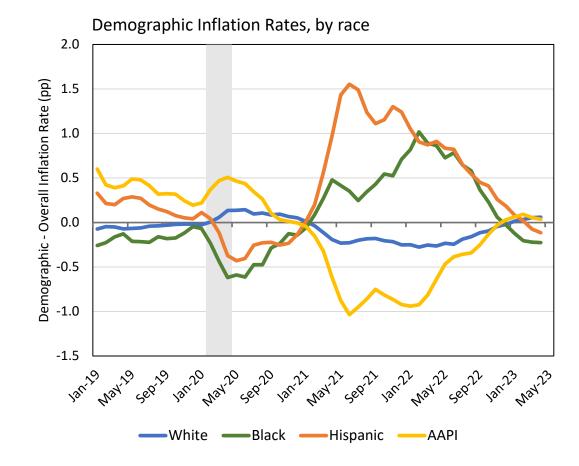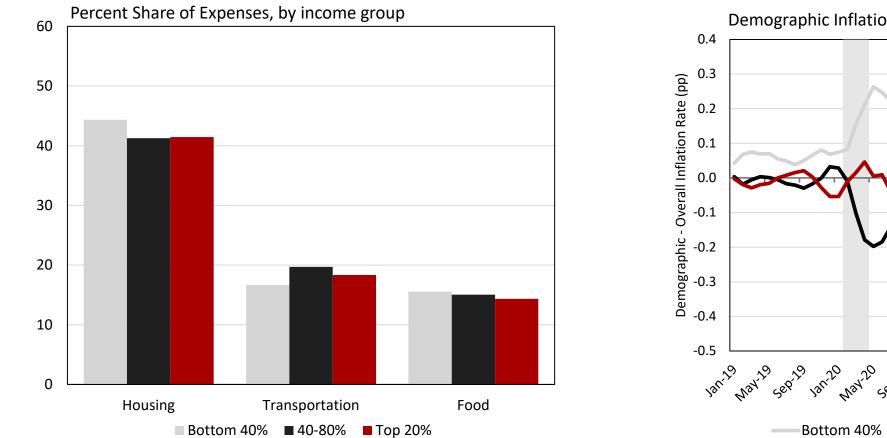
Inflation by Category

12-Month CPI Inflation (%), by Sector

Legend: - - - Headline | —— Food | —— Transportation | —— Housing

Demographic Inflation by Race/Ethnicity

Percent Share of Expenses, by race

Demographic Inflation Rates, by race

Sources: BLS Consumer Expenditure Survey Microdata; BLS Consumer Price Indexes.

Note: Shaded region indicates the COVID-19 recession.

Demographic Inflation by Income

Percent Share of Expenses, by income group

Legend: Bottom 40%, 40-80%, Top 20%

Demographic Inflation Rates, by income group

Legend: Bottom 40%, 40% - 80%, Top 20%

Sources: BLS Consumer Expenditure Survey Microdata; BLS Consumer Price Indexes.
Note: Shaded region indicates the COVID-19 recession.

Demographic Inflation by Education

Percent Share of Expenses, by education

Demographic Inflation Rates, by education

Sources: BLS Consumer Expenditure Survey Microdata; BLS Consumer Price Indexes.
Note: Shaded region indicates the COVID-19 recession.

Demographic Inflation by Age

Percent Share of Expenses, by age
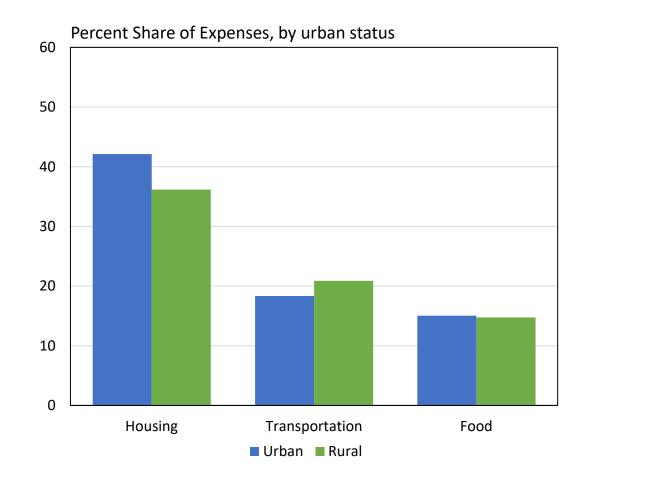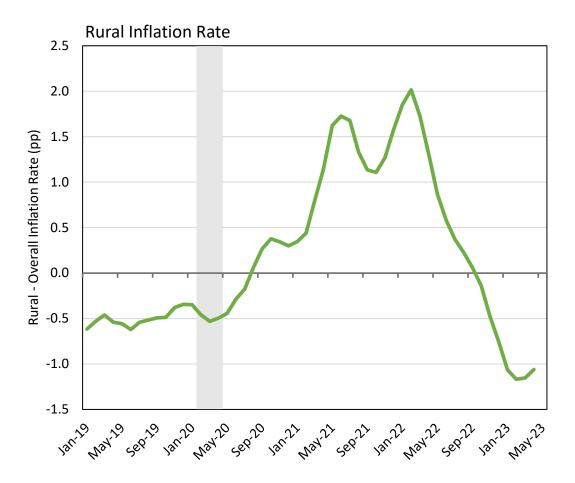
Legend: ■ < 25 ■ 25-54 ■ > 54

Demographic Inflation Rates, by age

Legend: — < 25 — 25 - 54 — > 54

Sources: BLS Consumer Expenditure Survey Microdata; BLS Consumer Price Indexes.
Note: Shaded region indicates the COVID-19 recession.

Demographic Inflation by U.S. Region

Percent Share of Expenses, by region

Legend: ■ Northeast ■ Midwest ■ South ■ West

Headline Inflation Rates, by region

Legend: — Northeast — Midwest — South — West

Sources: BLS Consumer Expenditure Survey Microdata; BLS Consumer Price Indexes.
Note: Shaded region indicates the COVID-19 recession.

Demographic Inflation by Urban Status

Percent Share of Expenses, by urban status

Rural Inflation Rate

Sources: BLS Consumer Expenditure Survey Microdata; BLS Consumer Price Indexes.
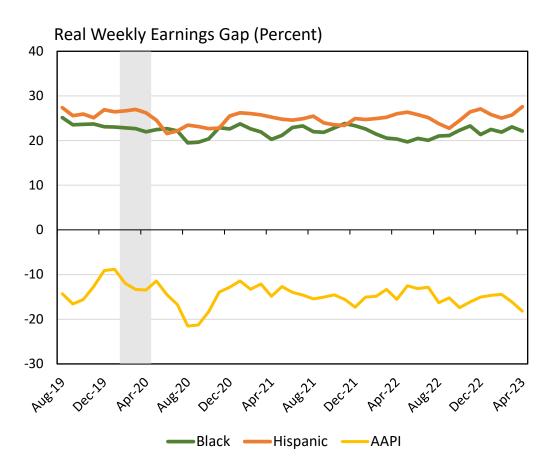Note: Shaded region indicates the COVID-19 recession.

EARNINGS

Takeaways | Earnings

- Real earnings peaked during the pandemic recession and have fallen since.

- Earnings disparities (both nominal and real) are largest across education categories, with smaller but still substantial gaps across racial and ethnic categories, gender, age and geography.

- Real earnings of Black and Hispanic workers experienced a decline in 2023 while those of Asian and white workers increased.

- The gender earnings gap declined perceptibly immediately following the pandemic recession and remained stable between August 2020 and February 2023, narrowing further in the last two months.

- Veteran-nonveteran earnings gaps are now smaller than those during the pre-pandemic period.

- The college premium declined by nearly 6 percentage points between 2019 and the start of 2023 but has gained back 7 percentage points since the beginning of the year.
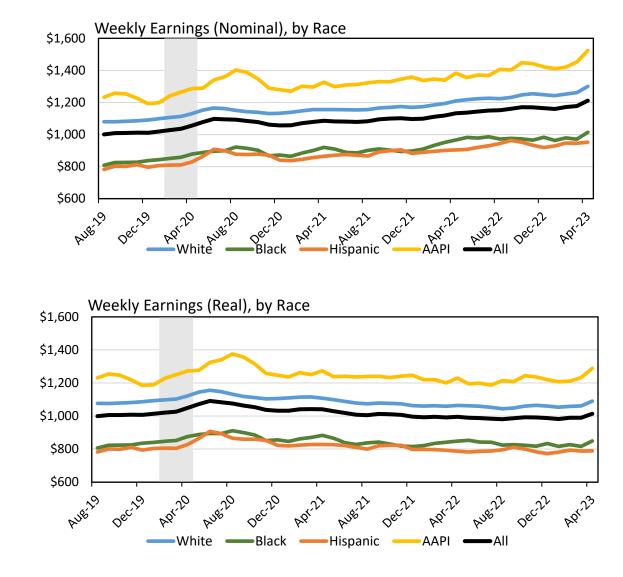
Data & Methods

- We compute real earnings by deflating nominal earnings for each demographic using our estimates of demographic-specific inflation.

- Comparable nonveterans are male high school graduates reweighted by age, race and birthplace to match veterans.

- Gaps are defined as the percentage difference in earnings between a majority group and a minority group in the labor market.

- The gender gap is defined as the percentage difference between male and female earnings.

- The racial gaps are defined as the percentage differences between earnings of white non-Hispanic workers and earnings of workers of the race or ethnicity in question.

- The college premium is defined as the percentage difference between earnings of college graduates and earnings of workers who did not graduate from college.
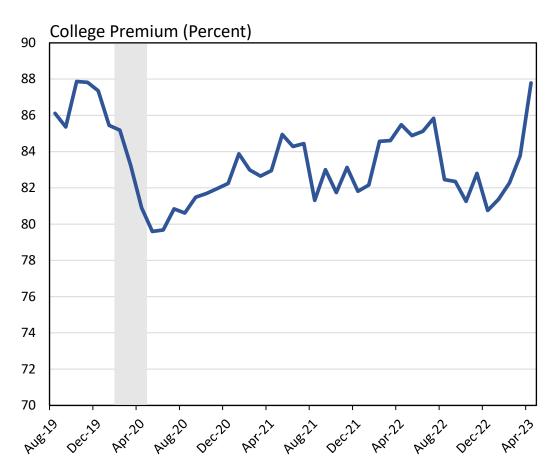
Real/Nominal Earnings by Race/Ethnicity

Real Weekly Earnings Gap (Percent)

Weekly Earnings (Nominal), by Race
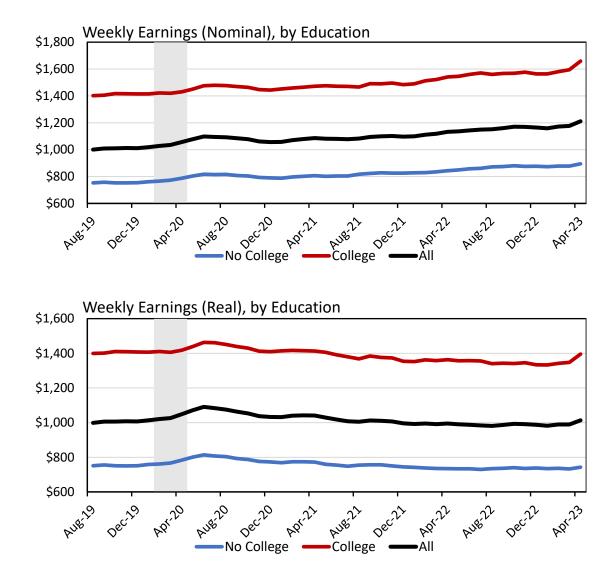

Weekly Earnings (Real), by Race

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3MMA.
Notes: Real earnings uses corresponding demographic prices, indexed to June 2019. Shaded region indicates the COVID-19 recession. The race gap is defined here as the percent less in real earnings that the average black/Hispanic/AAPI American earns on average compared to white Americans. For instance, a gap of 20% implies that the average black/Hispanic/AAPI American earns 80% of the average white American.
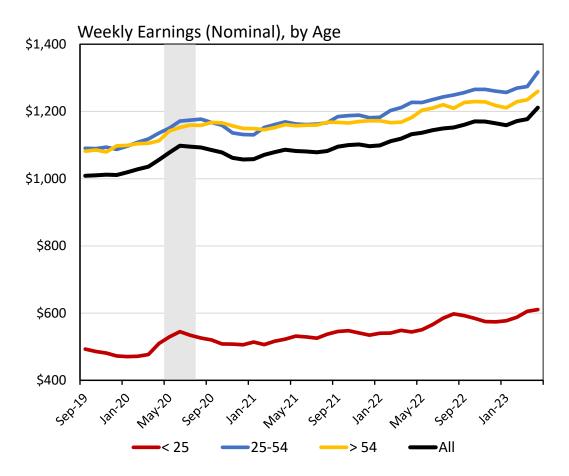
Real/Nominal Earnings by Education

College Premium (Percent)

Weekly Earnings (Nominal), by Education

— No College — College — All

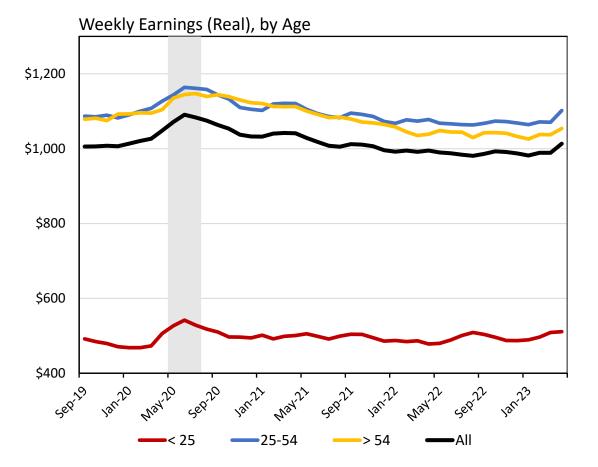## Weekly Earnings (Real), by Education

— No College — College — All

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3MMA.
Notes: Real earnings uses corresponding demographic prices, indexed to June 2019. Shaded region indicates the COVID-19 recession. College premium is defined here as the percent more that college graduates earn (weekly) on average compared to. For instance, a gap of 80% implies that the average graduate earns 80% more than the average non-graduate. non-graduates.
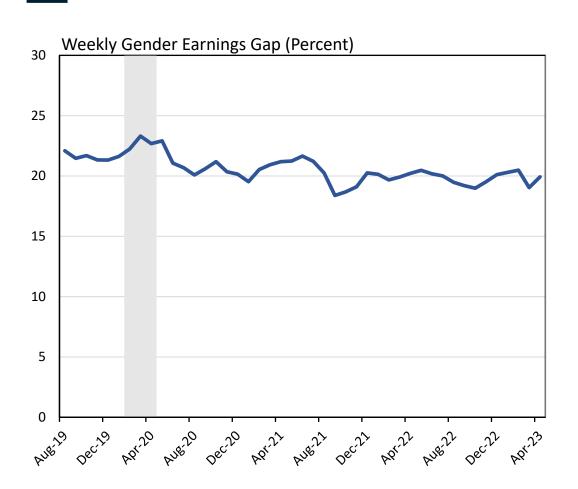
Real/Nominal Earnings by Age

Weekly Earnings (Nominal), by Age

Weekly Earnings (Real), by Age
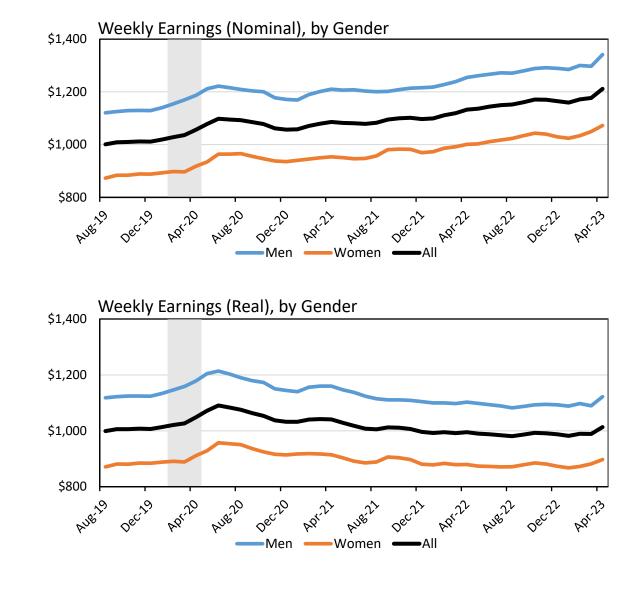
Legend: < 25   25-54   > 54   All

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.
Notes: Real earnings uses corresponding demographic prices, indexed to June 2019. Shaded region indicates the COVID-19 recession.
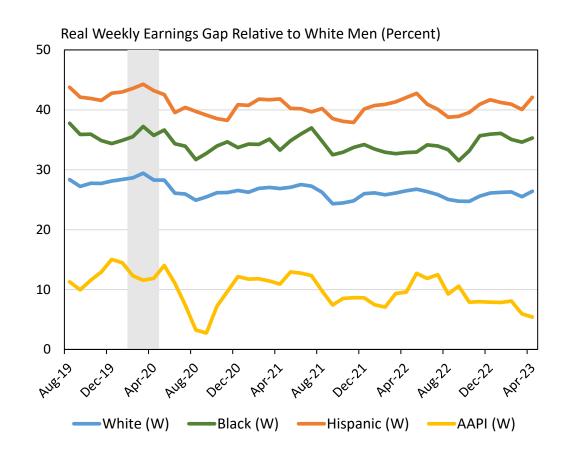
Real/Nominal Earnings by Gender

Weekly Gender Earnings Gap (Percent)

Weekly Earnings (Nominal), by Gender
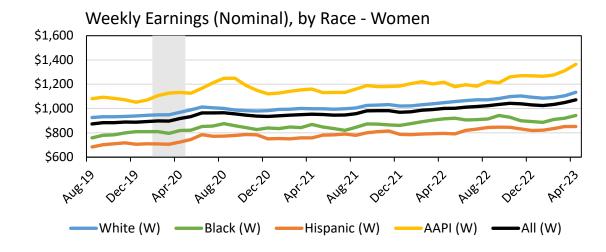

Weekly Earnings (Real), by Gender

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.
Notes: Real earnings uses corresponding demographic prices, indexed to June 2019. Shaded region indicates the COVID-19 recession. The gender gap is defined here as the percent less that women earn on average compared to men. For instance, a gap of 20% implies that the average woman earns 80% of the average man.
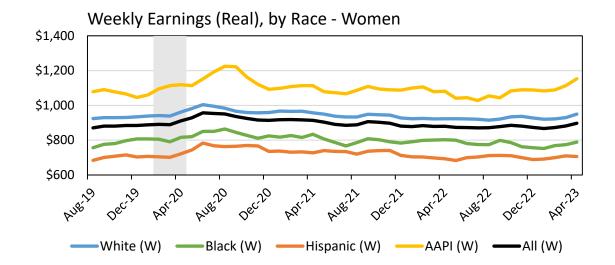
Real/Nominal Earnings by Race x Gender (Women)

Real Weekly Earnings Gap Relative to White Men (Percent)

Legend: White (W), Black (W), Hispanic (W), AAPI (W)

Weekly Earnings (Nominal), by Race - Women

Legend: White (W), Black (W), Hispanic (W), AAPI (W), All (W)

Weekly Earnings (Real), by Race - Women

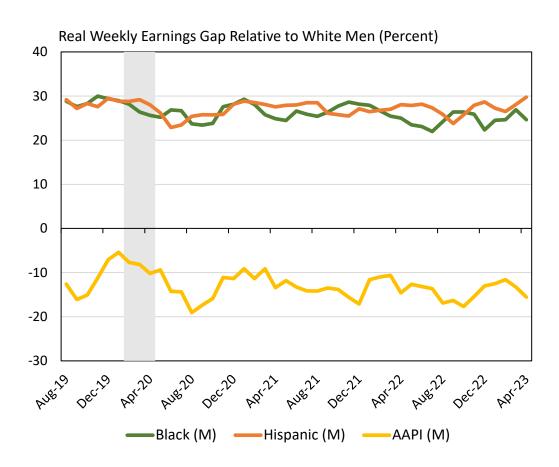Legend: White (W), Black (W), Hispanic (W), AAPI (W), All (W)

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.
Notes: Real earnings uses corresponding demographic prices, indexed to June 2019. Shaded region indicates the COVID-19 recession. The earnings gap is defined here as the percent less that a woman of each racial/ethnic group earns on average compared to white men. For instance, a gap of 40% implies that the average Black/Hispanic/AAPI/white woman earns 60% of the average white man.
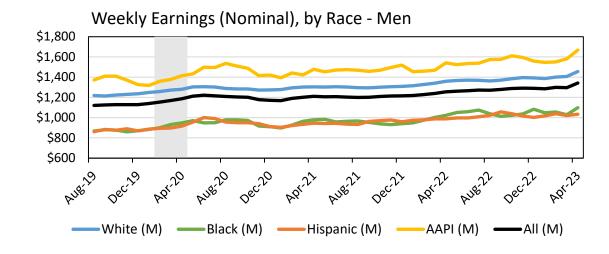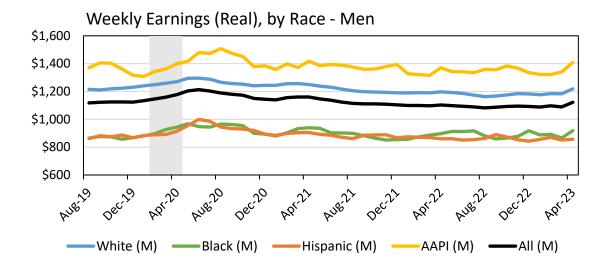
Real/Nominal Earnings by Race x Gender (Men)

Real Weekly Earnings Gap Relative to White Men (Percent)

— Black (M)　— Hispanic (M)　— AAPI (M)

Weekly Earnings (Nominal), by Race - Men

— White (M)　— Black (M)　— Hispanic (M)　— AAPI (M)　— All (M)

Weekly Earnings (Real), by Race - Men

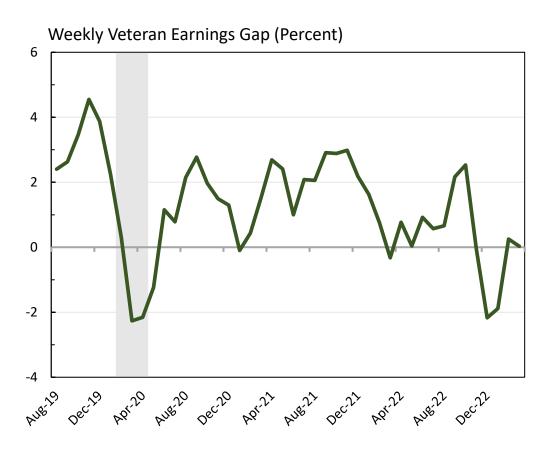— White (M)　— Black (M)　— Hispanic (M)　— AAPI (M)　— All (M)

Sources: US Census Bureau/BLS - Current Population Survey Microdata, authors' calculations, 3MMA.
Notes: Real earnings uses corresponding demographic prices, indexed to June 2019. Shaded region indicates the COVID-19 recession. The earnings gap is defined here as the percent less that a man of each racial/ethnic group earns on average compared to white men. For instance, a gap of 20% implies that the average Black/Hispanic/AAPI man earns 80% of the average white man.
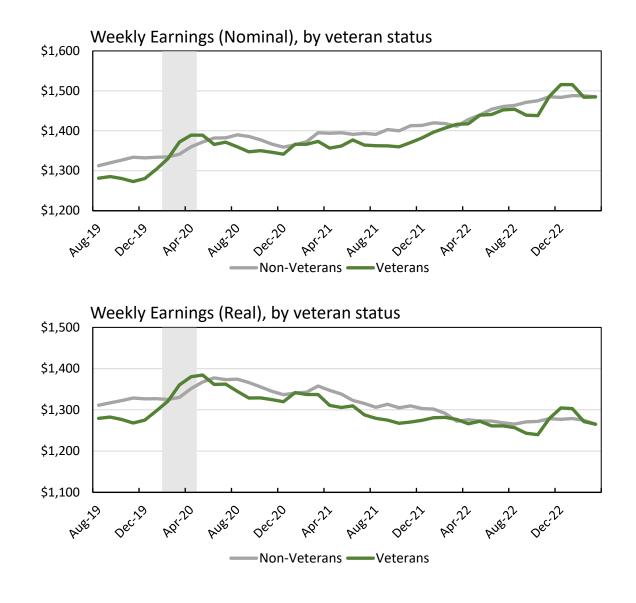
Real/Nominal Earnings by Veteran Status*

Weekly Veteran Earnings Gap (Percent)

Weekly Earnings (Nominal), by veteran status

Non-Veterans — Veterans

Weekly Earnings (Real), by veteran status

Non-Veterans — Veterans

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.
Notes: Real earnings uses corresponding demographic prices, indexed to June 2019.
*The non-veteran sample is propensity reweighted towards non-veterans with similar demographic characteristics. Shaded region indicates the COVID-19 recession. The veteran gap is defined here as the percent less that veterans earn on average compared to non-veterans. For instance, a gap of 20% implies that the average veteran earns 80% of the average non-veteran.
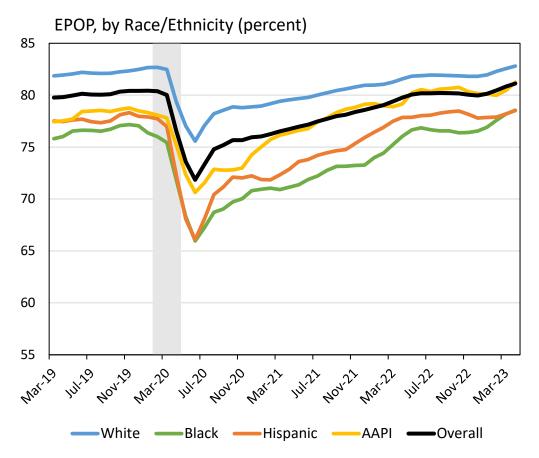
EMPLOYMENT

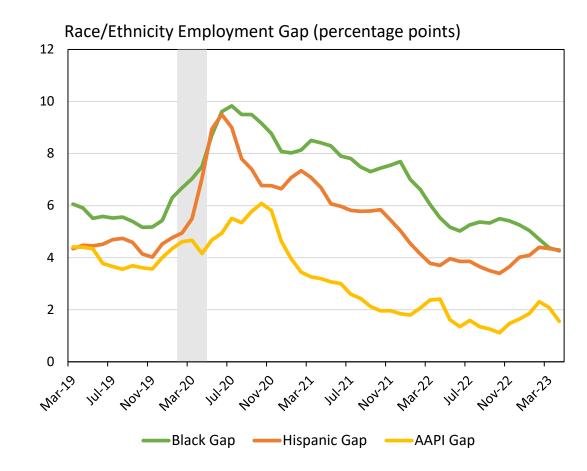Employment-Population Ratio

Takeaways | EPOP

- Employment as a ratio to population (EPOP) for people aged 25 to 54 declined precipitously during the pandemic recession and rebounded quickly thereafter, returning to pre-pandemic levels in early 2022.

- EPOP decreased more than the U.S. average for Black people, Hispanics, women, the young, people in rural areas, and people without a college education during the pandemic.

- EPOP for Black people, Hispanics and Asians have been rising steadily post-pandemic, but have been roughly stable across age, education, and gender.

- The Black EPOP has equaled the Hispanic EPOP since February 2023, despite being perceptibly below the Hispanic EPOP before. Women's EPOP grew faster than that for men since January 2023.

- Black men and Hispanic and Asian women have EPOP ratios considerably below the national averages for their genders, a pattern driven almost entirely by their labor force participation.

- Veterans have systematically lower EPOP than comparable* nonveterans, mainly because they have lower labor force participation.

Comparable nonveterans are male high school graduates reweighted by age, race and birthplace to match veterans.
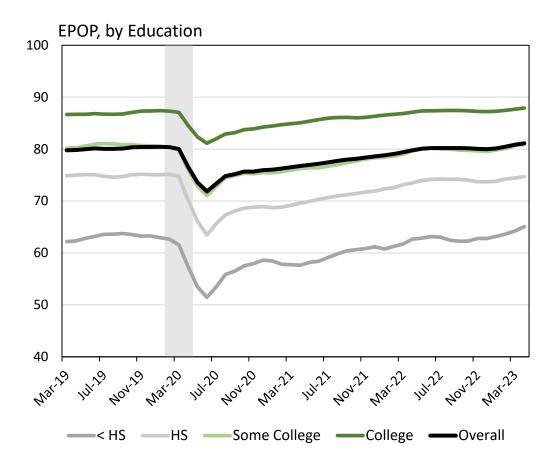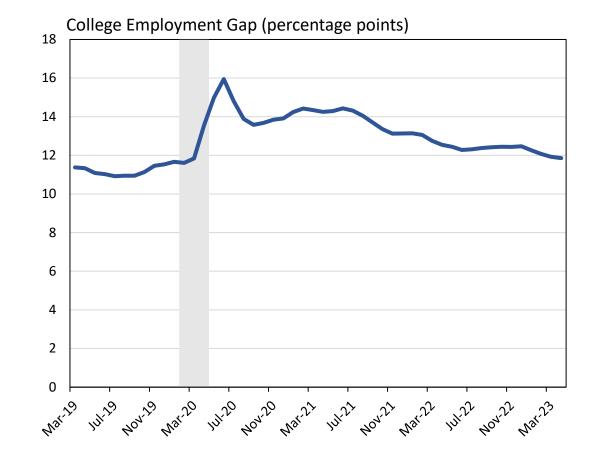
EPOP by Race/Ethnicity

EPOP, by Race/Ethnicity (percent)

Race/Ethnicity Employment Gap (percentage points)

White ——— Black ——— Hispanic ——— AAPI ——— Overall

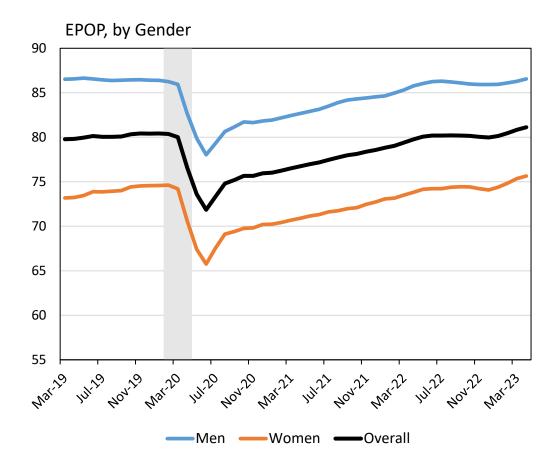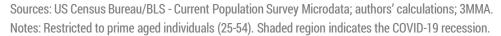Black Gap ——— Hispanic Gap ——— AAPI Gap

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

EPOP by Education

EPOP, by Education

Legend: < HS | HS | Some College | College | Overall

College Employment Gap (percentage points)

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.

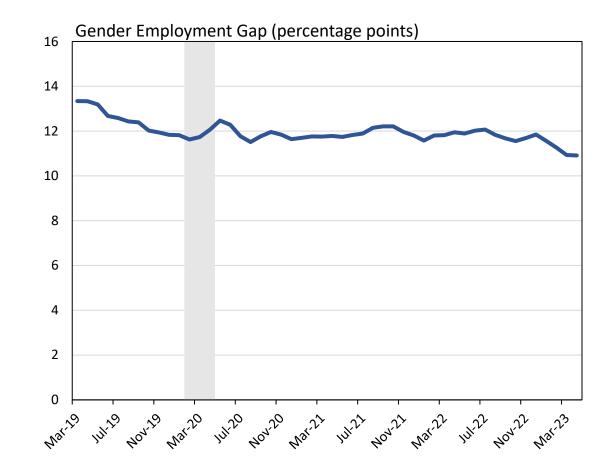Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

EPOP by Gender

EPOP, by Gender

— Men — Women — Overall

Gender Employment Gap (percentage points)

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.
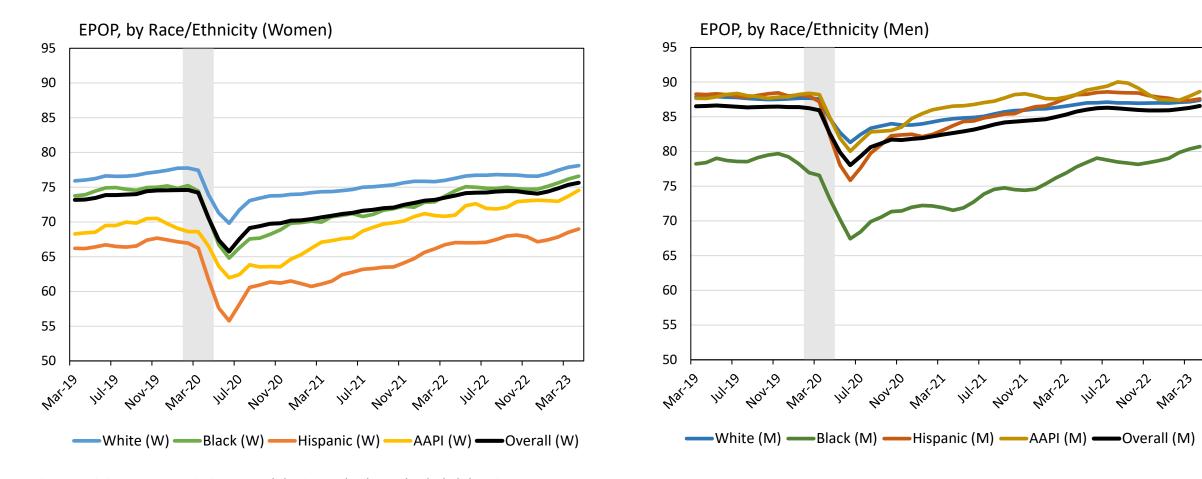
EPOP by Race x Gender

EPOP, by Race/Ethnicity (Women)
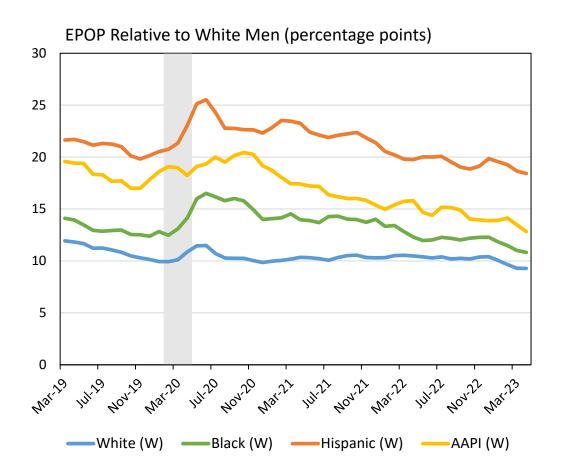
EPOP, by Race/Ethnicity (Men)

White (W) — Black (W) — Hispanic (W) — AAPI (W) — Overall (W)

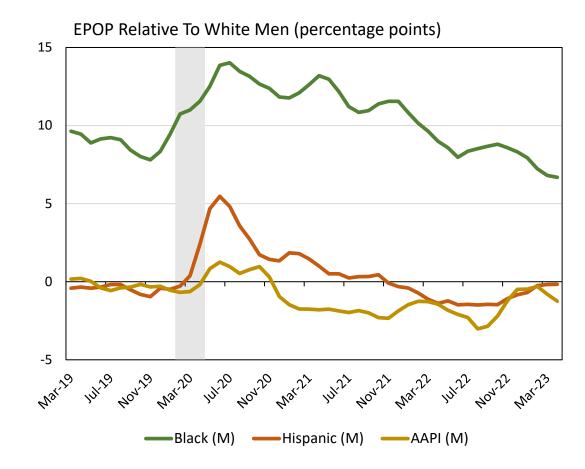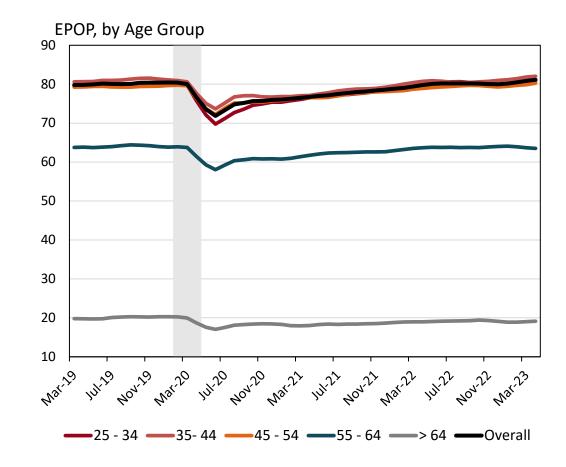White (M) — Black (M) — Hispanic (M) — AAPI (M) — Overall (M)

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

EPOP Gaps by Race x Gender

EPOP Relative to White Men (percentage points)

Legend: White (W), Black (W), Hispanic (W), AAPI (W)

EPOP Relative To White Men (percentage points)

Legend: Black (M), Hispanic (M), AAPI (M)

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.

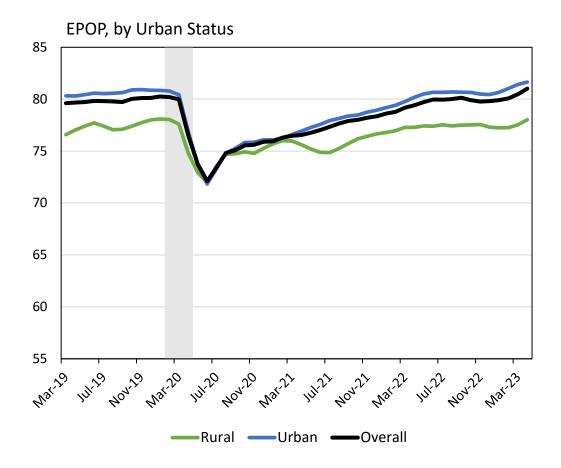Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

EPOP by Age

EPOP, by Age Group
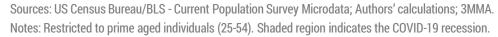
Legend: 25 - 34 | 35- 44 | 45 - 54 | 55 - 64 | > 64 | Overall

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.

Notes: Overall line uses prime age (25-54) sample. Shaded region indicates the COVID-19 recession.
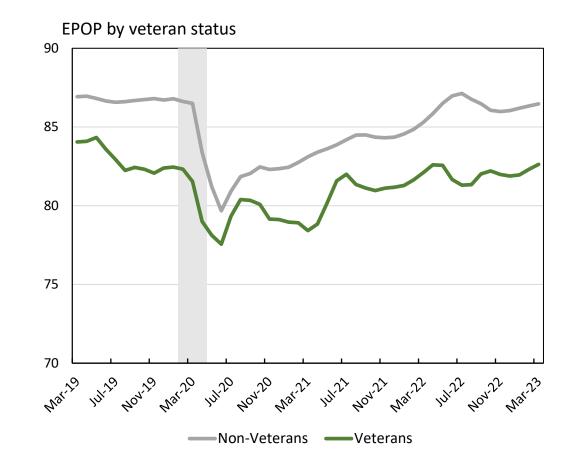
EPOP by Urban Status

EPOP, by Urban Status

Rural Employment Gap (percentage points)

Rural — Urban — Overall

Sources: US Census Bureau/BLS - Current Population Survey Microdata; Authors' calculations; 3MMA.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

EPOP by Veteran Status

EPOP by veteran status

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3MMA.

Notes: Restricted to men, 25-55, with at least a high school diploma. Shaded region indicates the COVID-19 recession.
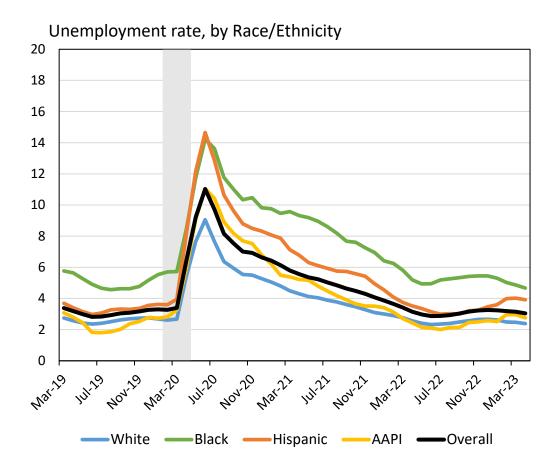
EMPLOYMENT

Unemployment Rate

Takeaways | Unemployment Rate

- We define unemployment rate as the fraction of unemployed in the labor force. The overall unemployment rate peaked at more than 11 percent during the pandemic but has since declined to pre-pandemic levels.

- Unemployment rate gaps increased during the pandemic but are now close to pre-pandemic levels.

- The unemployment rate gap for Hispanic workers rose sharply since January 2023 owing mostly to the increase in the gap for Hispanic women workers. In contrast, the unemployment rate gap for Black workers declined during this period owing to a decline in the gap for Black women.

- Unemployment rate gaps are highest for the young, followed by Black workers, and by people without a college degree.

- Veterans and comparable* nonveterans have had essentially the same unemployment rate since the pandemic.

Comparable nonveterans are male high school graduates reweighted by age, race and birthplace to match veterans.
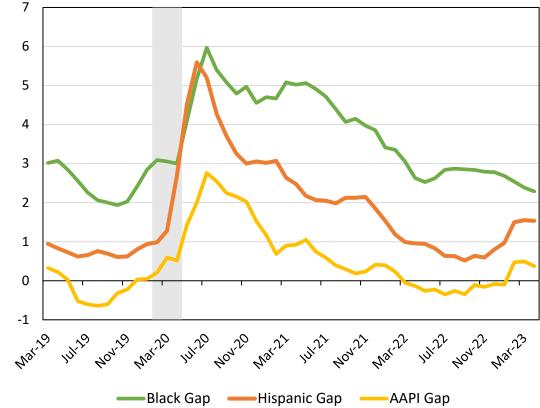
Unemployment Rate by Race/Ethnicity

Unemployment rate, by Race/Ethnicity

Race/Ethnicity Unemployment Gap (percentage points)

White — Black — Hispanic — AAPI — Overall
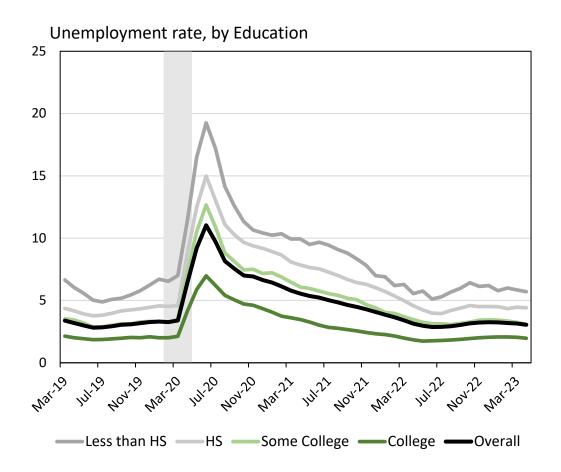
Black Gap — Hispanic Gap — AAPI Gap
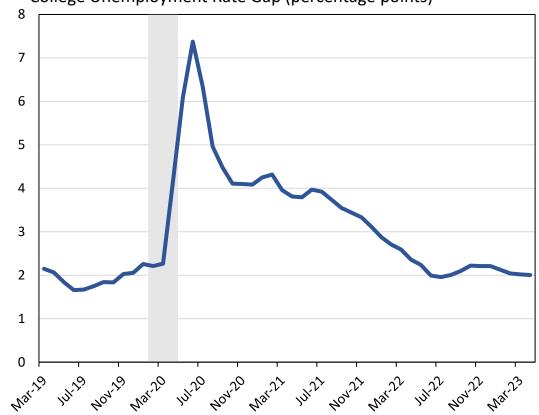
Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-month moving averages.
Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Unemployment Rate by Education

Unemployment rate, by Education

Less than HS — HS — Some College — College — Overall

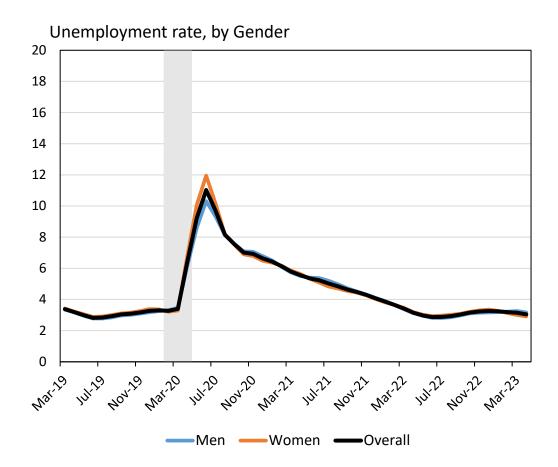College Unemployment Rate Gap (percentage points)

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-month moving averages.
Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Unemployment Rate by Gender

Unemployment rate, by Gender

Gender Unemployment Gap (percentage points)

Men Women Overall

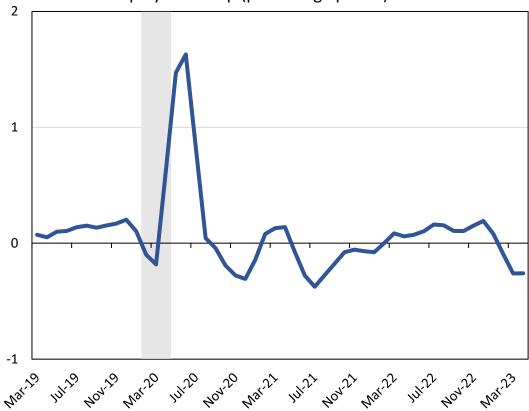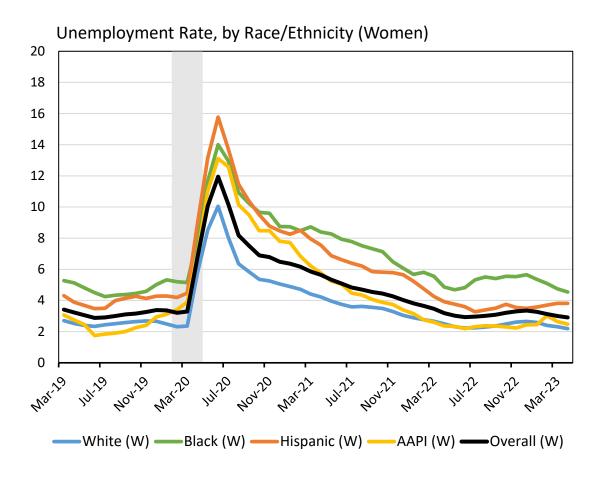Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-month moving averages.
Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Unemployment Rate by Race x Gender

Unemployment Rate, by Race/Ethnicity (Women)

Legend: White (W), Black (W), Hispanic (W), AAPI (W), Overall (W)

Unemployment Rate, by Race/Ethnicity (Men)
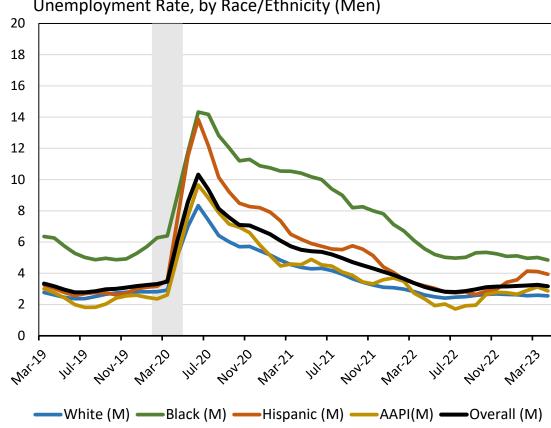
Legend: White (M), Black (M), Hispanic (M), AAPI(M), Overall (M)

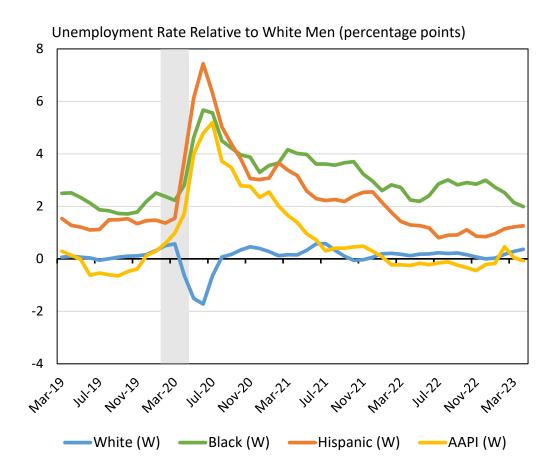Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-month moving averages.
Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Unemployment Rate Gaps by Race x Gender

Unemployment Rate Relative to White Men (percentage points)

Unemployment Rate Relative to White Men (percentage points)

— White (W) — Black (W) — Hispanic (W) — AAPI (W)

— Black (M) — Hispanic (M) — AAPI(M)

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-month moving averages.
Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.
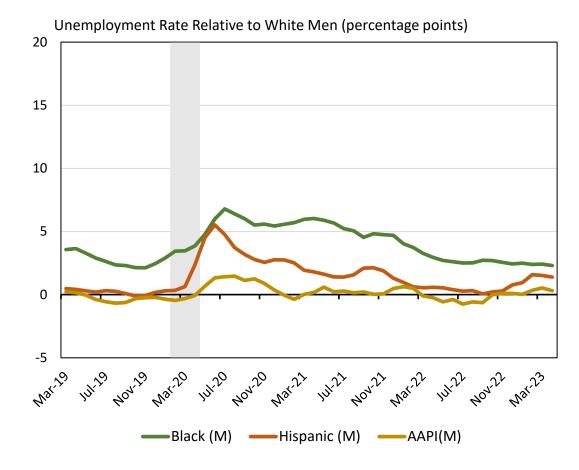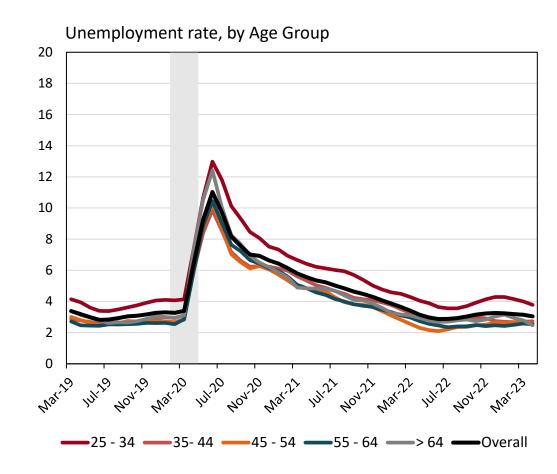
Unemployment Rate by Age

Unemployment rate, by Age Group

Legend: 25 - 34, 35 - 44, 45 - 54, 55 - 64, > 64, Overall

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata, authors' calculations, 3-month moving averages.
Notes: Overall line uses prime age (25-54) sample. Shaded region indicates the COVID-19 recession.

Unemployment Rate by Urban Status

Unemployment rate, by Urban Status

Urban Unemployment Gap (percentage points)

Rural ― Urban ― Overall

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-monh moving averages.
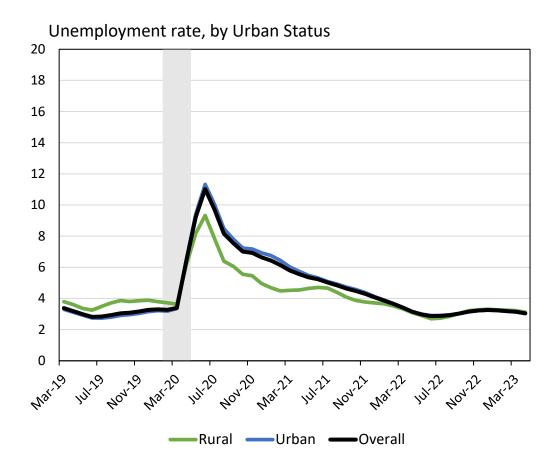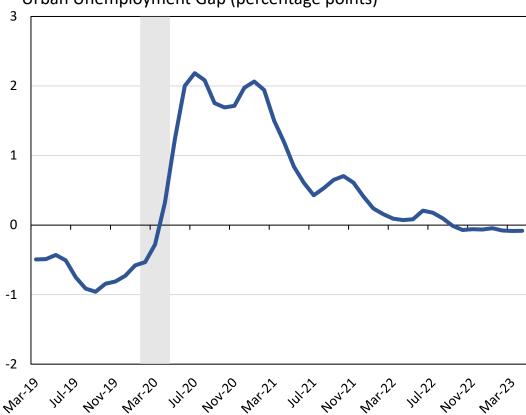Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Unemployment Rate by Veteran Status

Unemployment rate by veteran status

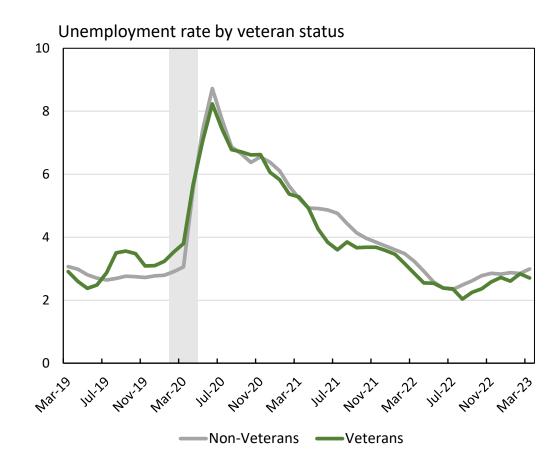Non-Veterans Veterans

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-month moving averages.
Notes: Restricted to men, 25-55, with at least a high school diploma. Shaded region indicates the COVID-19 recession.
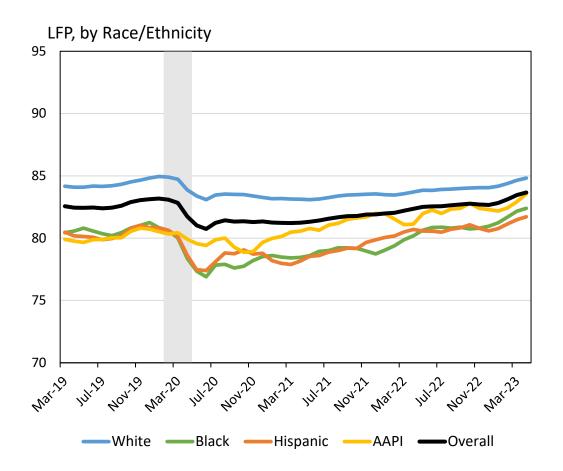
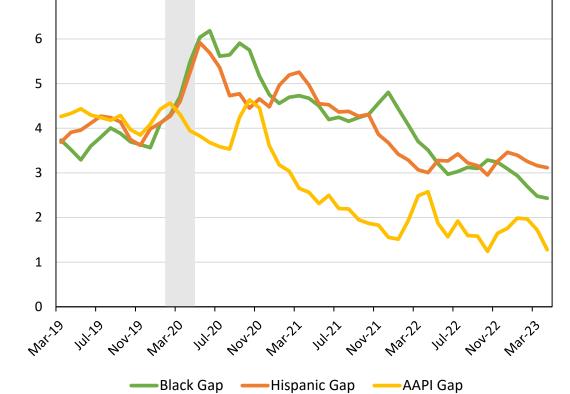# EMPLOYMENT

Labor Force Participation

Takeaways | Labor Force Participation

- Labor force participation rates (LFP) declined during the pandemic and are currently about half a percentage point above pre-pandemic levels.

- Black, Hispanic, and Asian workers have LFPs below the U.S. average. Asians' LFP was close to the LFP of Black workers and Hispanics in 2019, but it has risen to nearly the national average LFP.

- The LFP gender gap is large and the female LFP is almost 13 percentage points lower than the male LFP. The LFP gaps by age and education are larger.

- Veterans have lower LFP than comparable* nonveterans, and the gap has grown since 2019.

*Comparable nonveterans are male high school graduates reweighted by age, race and birthplace to match veterans.
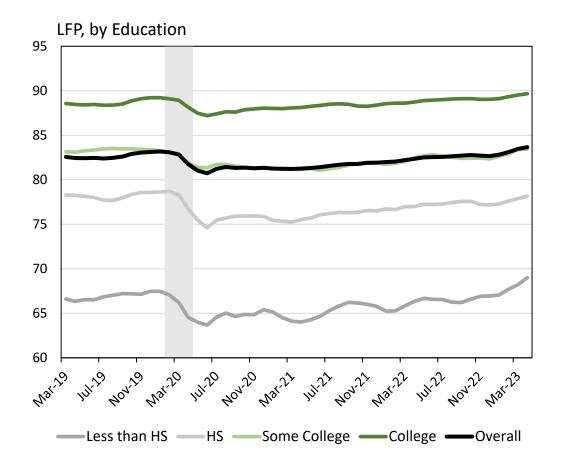
Labor Force Participation by Race/Ethnicity

LFP, by Race/Ethnicity

Race/Ethnicity LFP Gap (percentage points)

Legend: White, Black, Hispanic, AAPI, Overall

Legend: Black Gap, Hispanic Gap, AAPI Gap

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3 month moving averages.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Labor Force Participation by Education

LFP, by Education
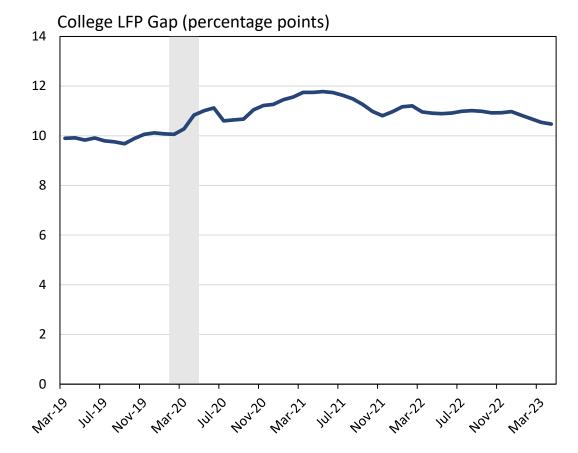
— Less than HS — HS — Some College — College — Overall

College LFP Gap (percentage points)

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3-month moving averages.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Labor Force Participation by Gender

LFP, by Gender

Gender LFP Gap (percentage points)

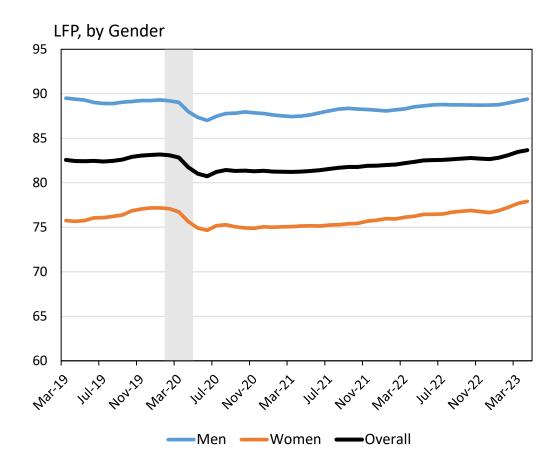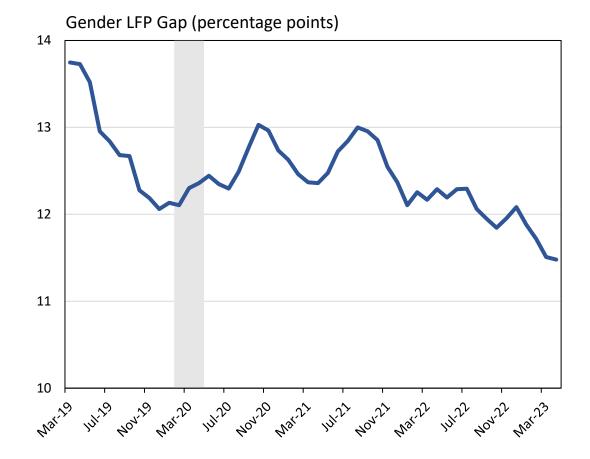Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3-month moving averages.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Labor Force Participation by Race x Gender

LFP, by Race/Ethnicity (Women)

LFP, by Race/Ethnicity (Men)

White (W) — Black (W) — Hispanic (W) — AAPI (W) — Overall (W)

White (M) — Black (M) — Hispanic (M) — AAPI (M) — Overall (M)

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3-month moving averages.

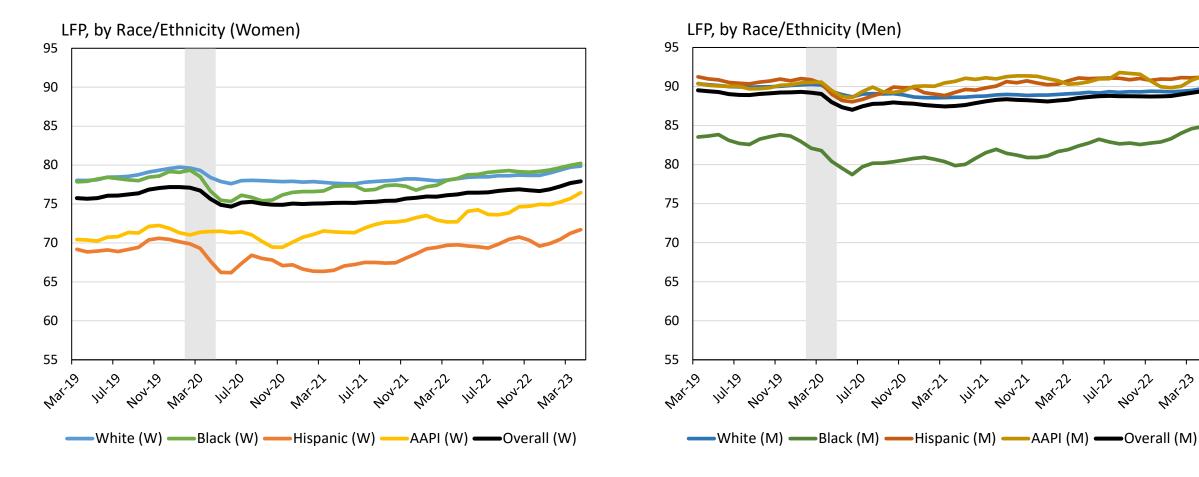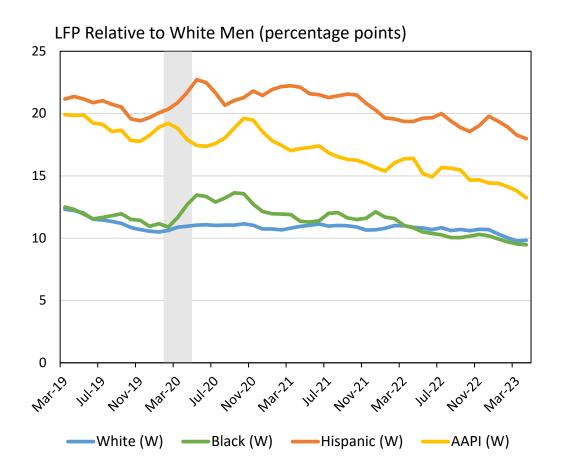Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Labor Force Participation Gaps by Race x Gender

LFP Relative to White Men (percentage points)

White (W) Black (W) Hispanic (W) AAPI (W)

LFP Relative to White Men (percentage points)

Black (M) Hispanic (M) AAPI (M)

Sources: US Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3-month moving averages.

Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.
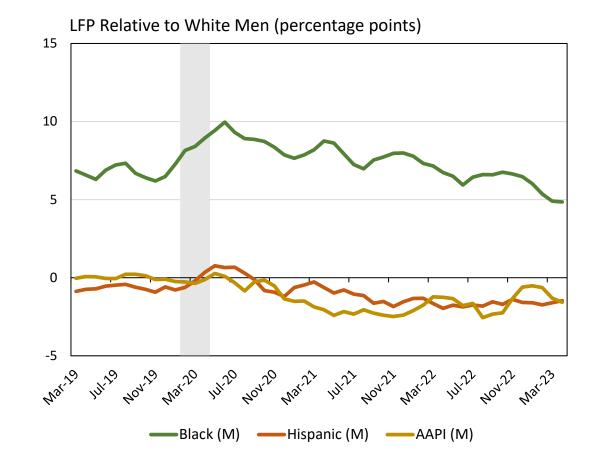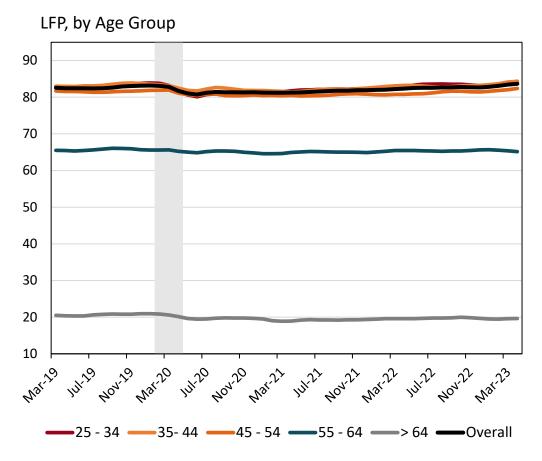
Labor Force Participation by Age

LFP, by Age Group

25 - 34   35- 44   45 - 54   55 - 64   > 64   Overall

Sources: US Census Bureau/BLS - Current Population Survey Microdata, authors' calculations, 3-month moving averages.

Notes: Overall line restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.

Labor Force Participation by Urban Status

LFP, by Urban Status

Rural LFP Gap (percentage points)

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations, 3-month moving averages.

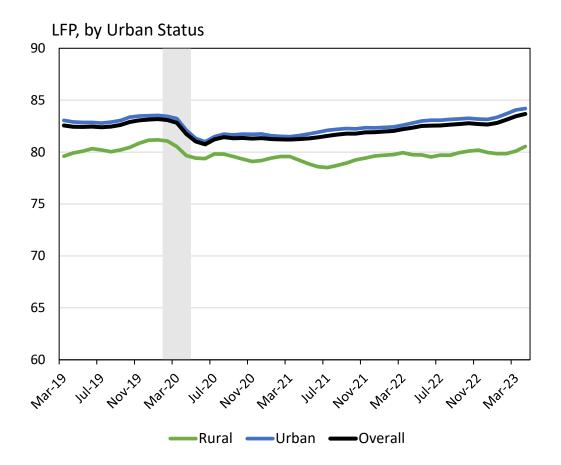Notes: Restricted to prime aged individuals (25-54). Shaded region indicates the COVID-19 recession.
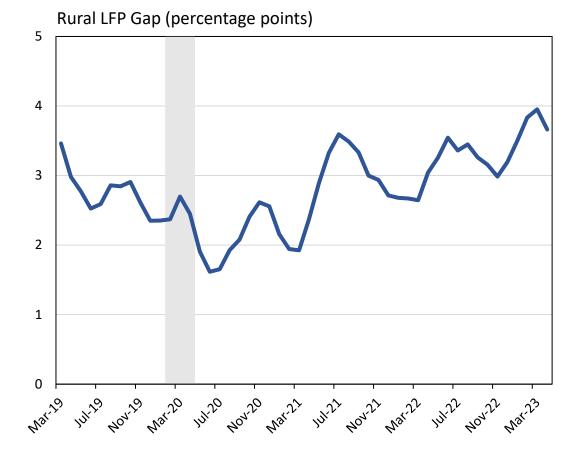
Labor Force Participation by Veteran Status

LFP by veteran status

Non-Veterans   Veterans

Sources: U.S. Census Bureau/BLS - Current Population Survey Microdata; authors' calculations; 3-month moving averages.

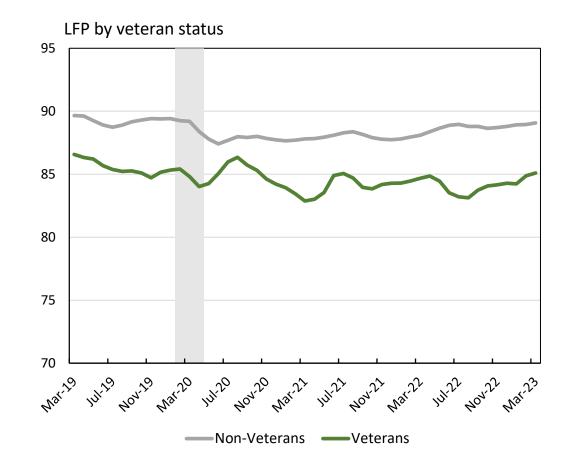Notes: Restricted to men, 25-55, with at least a high school diploma. Shaded region indicates the COVID-19 recession
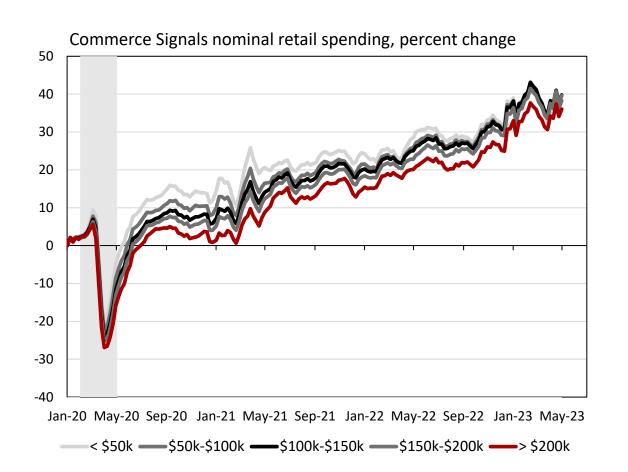
CONSUMER SPENDING

Takeaways | Consumer Spending

- The lower income, the less educated, and the young experienced a significantly faster recovery in spending since the pandemic. There are some signs, however, that the spending recovery among the young and less educated is weakening.

- Consumer spending recovery gaps are largest for age and smallest for income, with education gaps in the middle.

- Recovery gaps are slightly smaller for gas spending than for retail and restaurant spending but follow a similar pattern.

- The plunge in consumption among the young bottomed out in April 2023, with real consumption declining by nearly 10 percentage points in all three consumption categories.
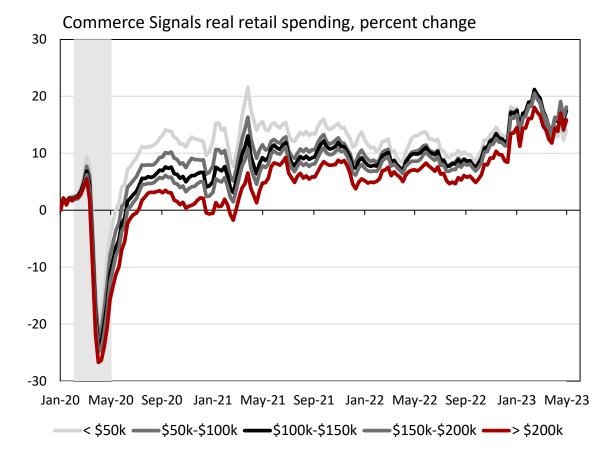
Data & Methods

- We leverage a permissioned panel of around 40 million U.S. households' debit and credit card spending from Commerce Signals, a TransUnion company.

- Commerce Signals data correlate well with U.S. Census Bureau data in measuring aggregate trends in retail, restaurants, and gas station spending, but is released at high frequency (weekly).

- Data are seasonally adjusted by first considering a week in the year and dividing over the 52-week moving average centered at that week. The mean of these ratios across years is used as that week's denominator for seasonal adjustment.

- Real consumer spending trends use the demographic inflation price indexes from the Inflation section when possible. For county demographic spending (besides urban vs. rural), regional price indexes are used.

Retail Spending by Income

Commerce Signals nominal retail spending, percent change

< $50k — $50k-$100k — $100k-$150k — $150k-$200k — > $200k

Commerce Signals real retail spending, percent change

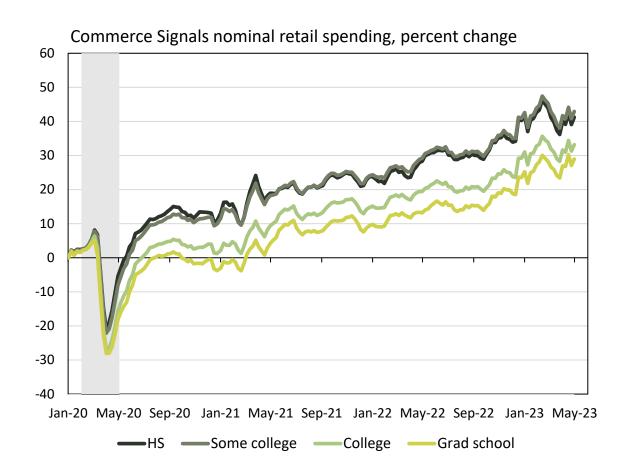< $50k — $50k-$100k — $100k-$150k — $150k-$200k — > $200k

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.

Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Retail Spending by Education

Commerce Signals nominal retail spending, percent change

Commerce Signals real retail spending, percent change

HS — Some college — College — Grad school

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
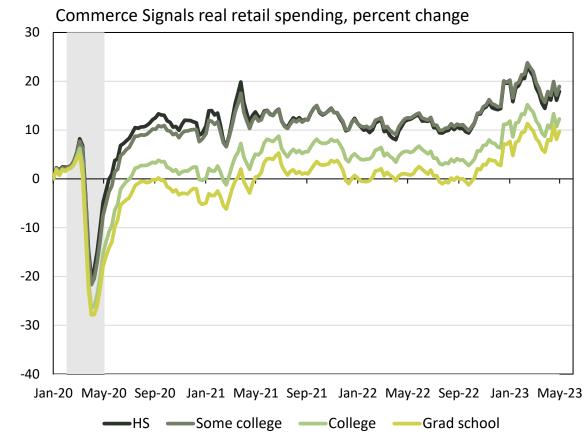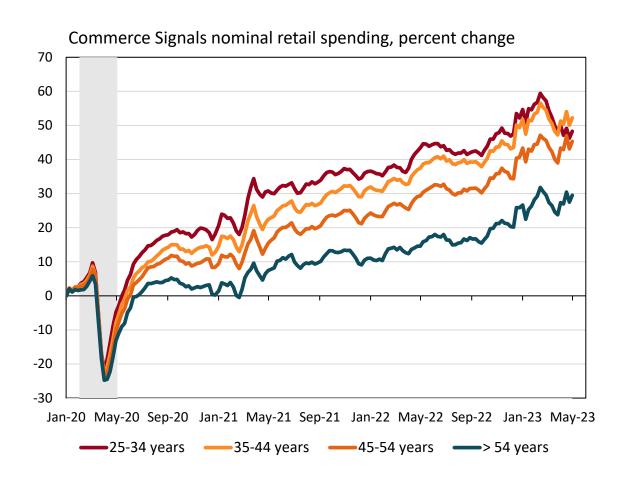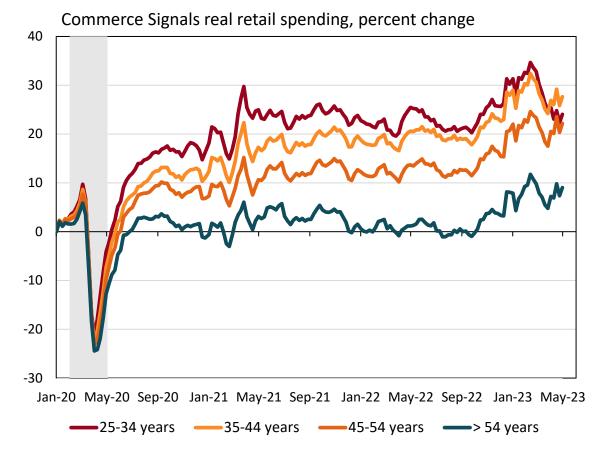
Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Retail Spending by Age

Commerce Signals nominal retail spending, percent change

— 25-34 years — 35-44 years — 45-54 years — > 54 years

Commerce Signals real retail spending, percent change

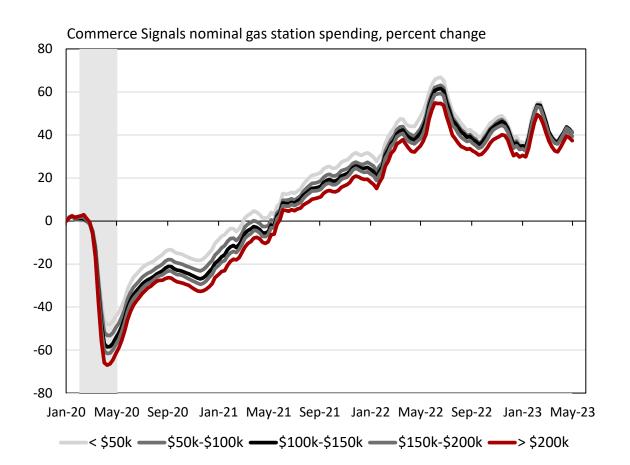— 25-34 years — 35-44 years — 45-54 years — > 54 years

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
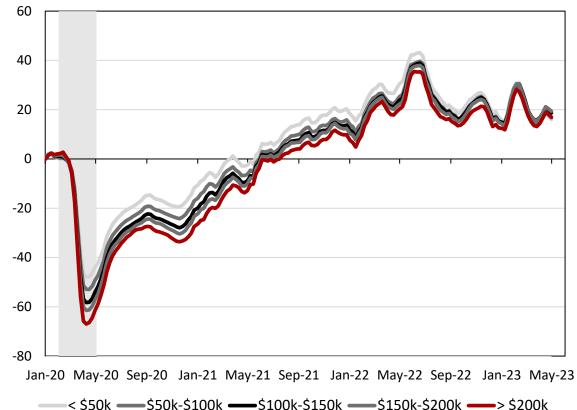
Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Gas Station Spending by Income

Commerce Signals nominal gas station spending, percent change

Legend: < $50k — $50k-$100k — $100k-$150k — $150k-$200k — > $200k

Commerce Signals real gas station spending, percent change

Legend: < $50k — $50k-$100k — $100k-$150k — $150k-$200k — > $200k
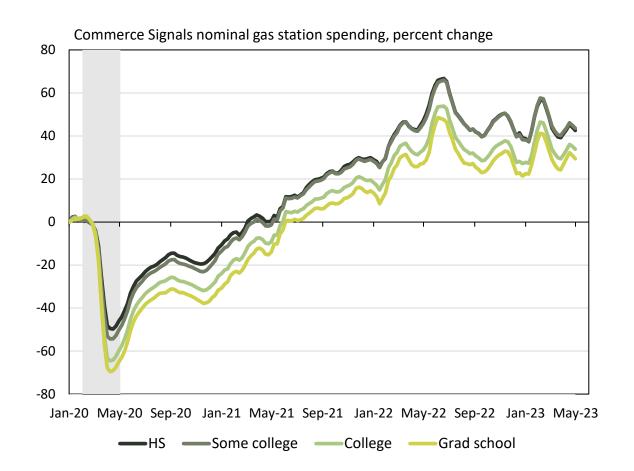
Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
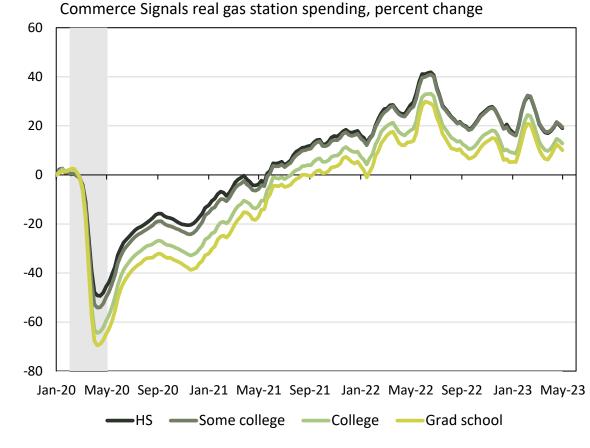
Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Gas Station Spending by Education

Commerce Signals nominal gas station spending, percent change

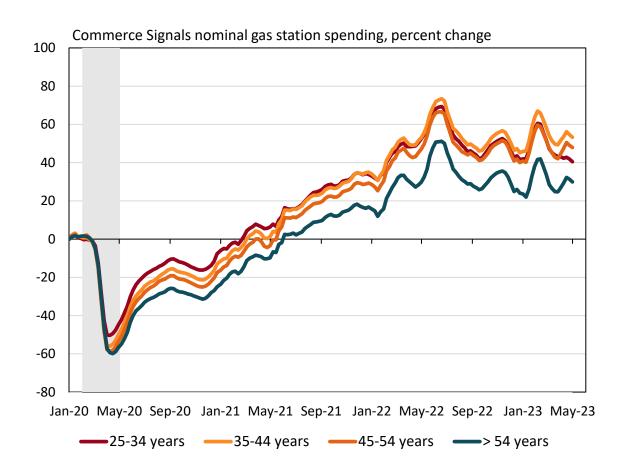Commerce Signals real gas station spending, percent change

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
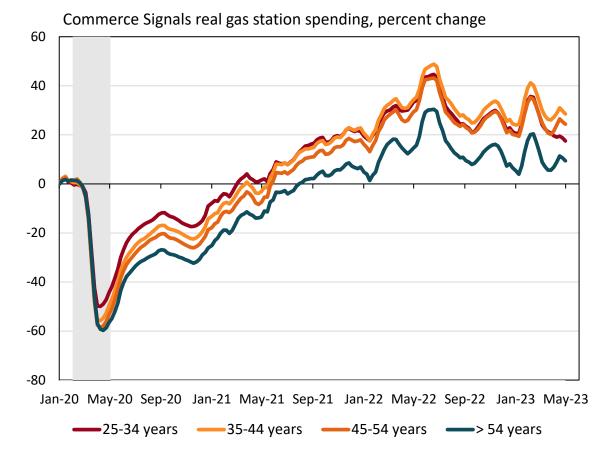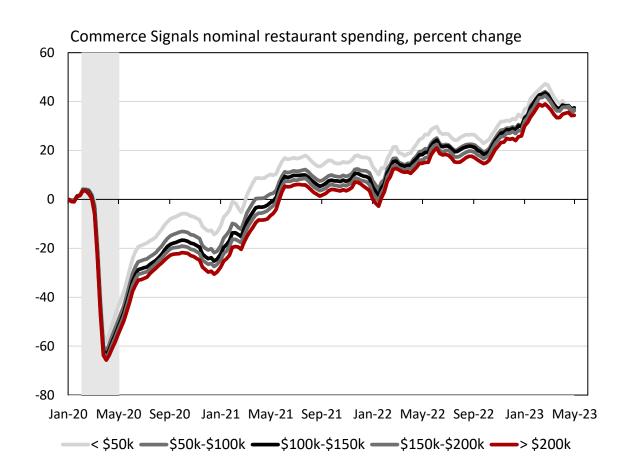
Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Gas Station Spending by Age

Commerce Signals nominal gas station spending, percent change

Commerce Signals real gas station spending, percent change

Legend: 25-34 years, 35-44 years, 45-54 years, > 54 years

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
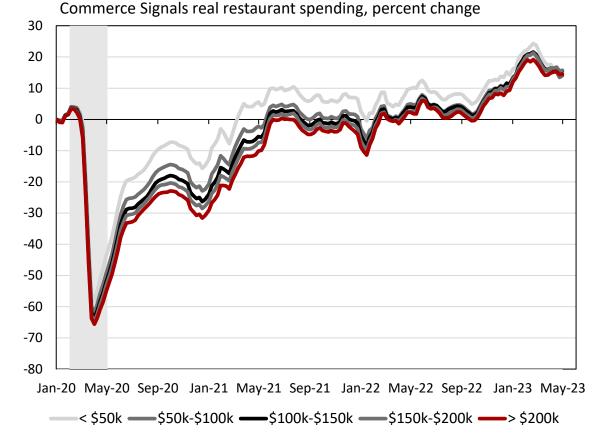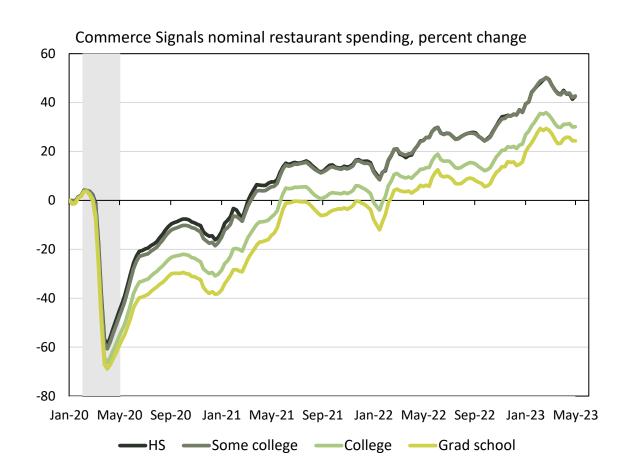
Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Restaurant Spending by Income

Commerce Signals nominal restaurant spending, percent change

Legend: < $50k | $50k-$100k | $100k-$150k | $150k-$200k | > $200k

Commerce Signals real restaurant spending, percent change

Legend: < $50k | $50k-$100k | $100k-$150k | $150k-$200k | > $200k

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
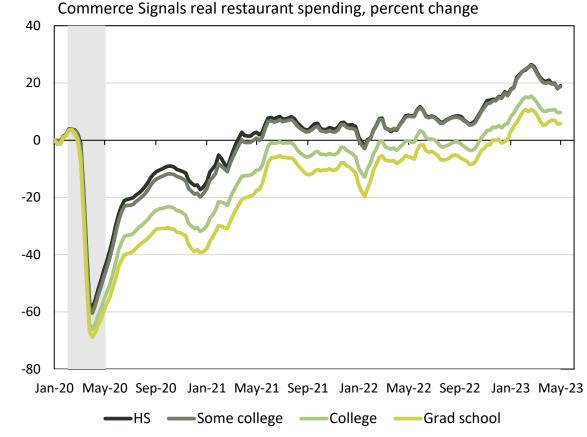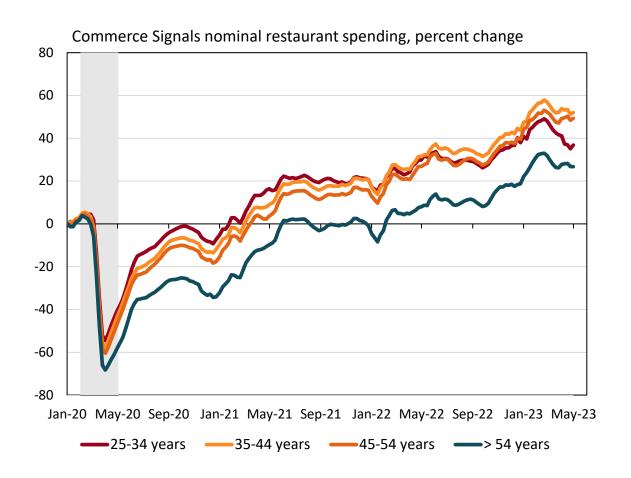
Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Restaurant Spending by Education

Commerce Signals nominal restaurant spending, percent change

Commerce Signals real restaurant spending, percent change

Legend: HS — Some college — College — Grad school

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
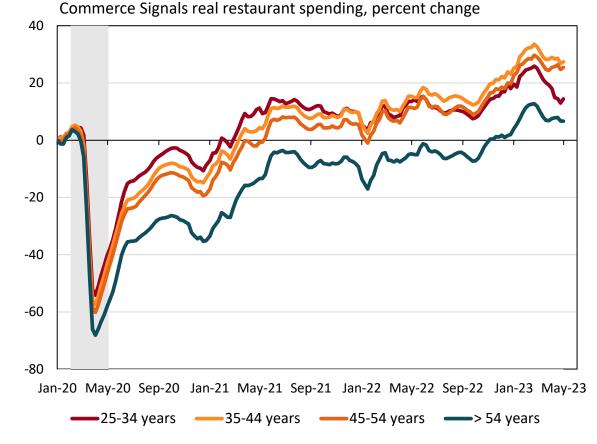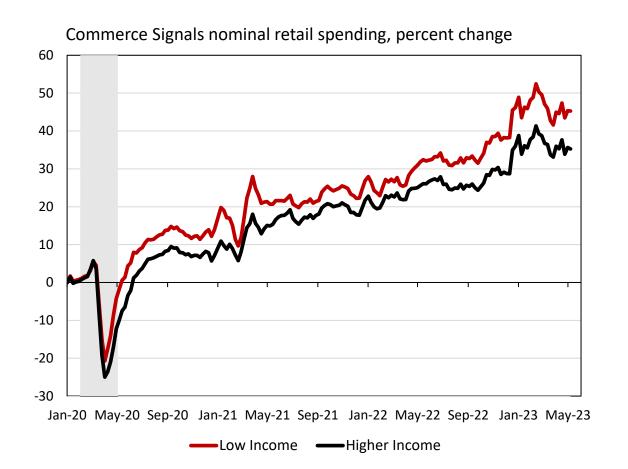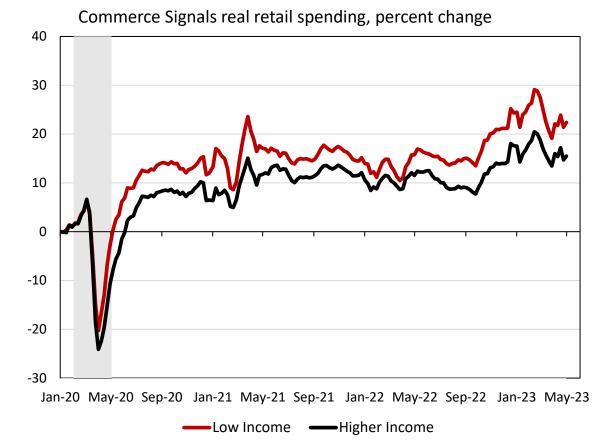
Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Restaurant Spending by Age

Commerce Signals nominal restaurant spending, percent change

Commerce Signals real restaurant spending, percent change

Legend: 25-34 years, 35-44 years, 45-54 years, > 54 years

Source: Commerce Signals – 3-week moving averages.
Notes: Real spending uses corresponding demographic prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.

Nominal spending ranges from January 1, 2020, to May 6, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Retail Spending by County Household Income

Commerce Signals nominal retail spending, percent change

Commerce Signals real retail spending, percent change
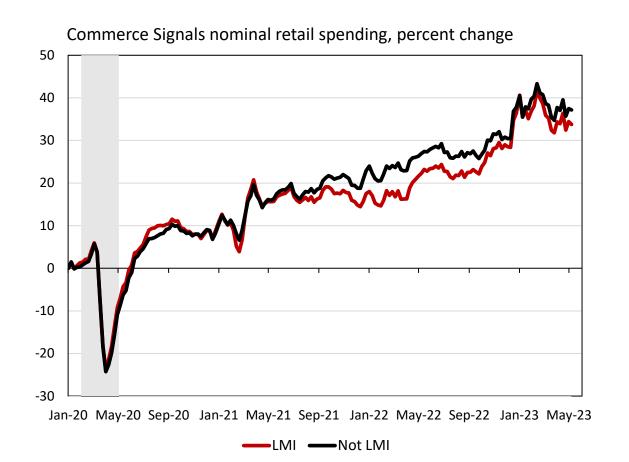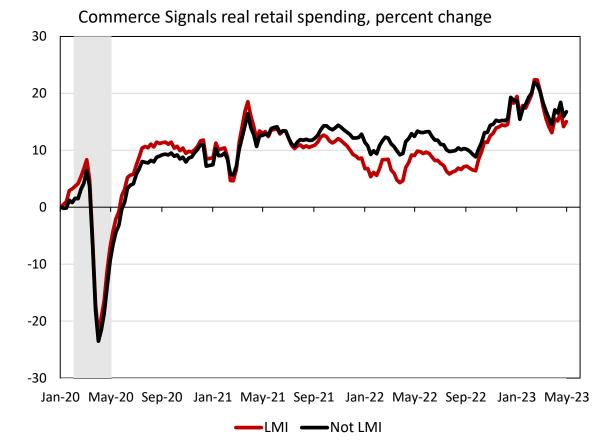
Low Income — Higher Income

Source: Commerce Signals – 3-week moving averages.
Notes: Low-income counties are defined as those with household incomes below the 25th percentile of national household income. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.

Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Retail Spending by Low to Moderate Income (LMI) Status

Commerce Signals nominal retail spending, percent change

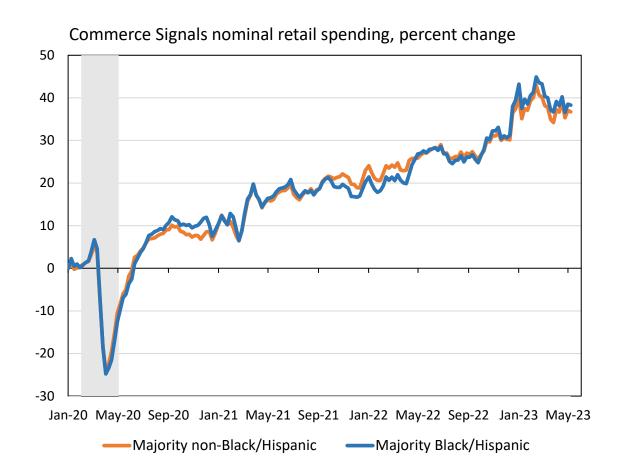Commerce Signals real retail spending, percent change

Source: Commerce Signals – 3-week moving averages.
Notes: Low-to-moderate income (LMI) counties are defined as those where the majority of households earn below 80% of the metro area median. Real spending uses corresponding urban/rural prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
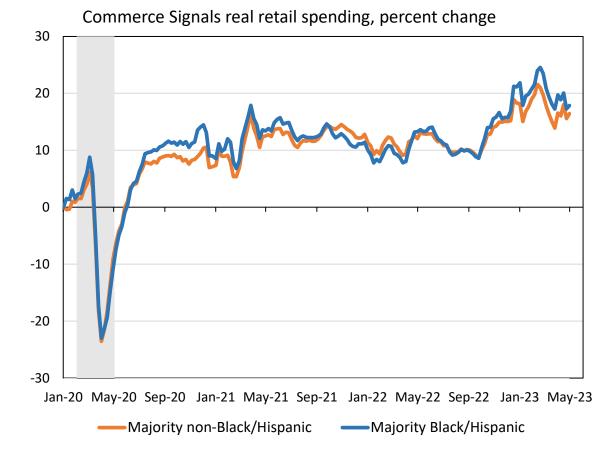
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Retail Spending by County Demographics

Commerce Signals nominal retail spending, percent change

Commerce Signals real retail spending, percent change

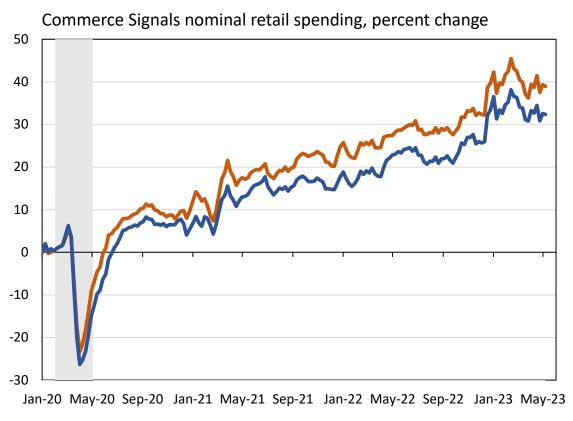— Majority non-Black/Hispanic   — Majority Black/Hispanic

Source: Commerce Signals – 3-week moving averages.
Notes: Majority Black/Hispanic counties are defined as those where greater than 50% of the county's population is Black or Hispanic. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
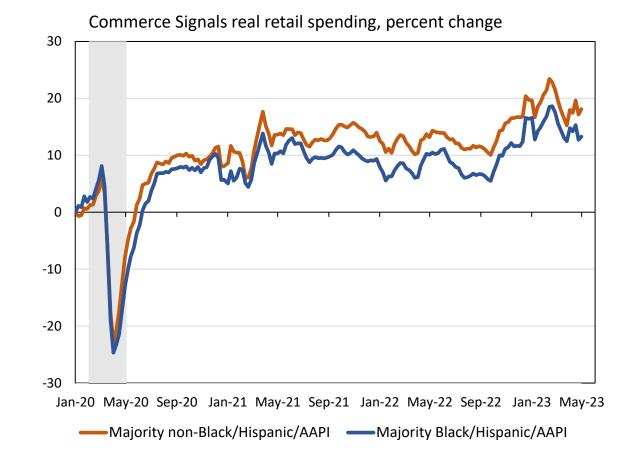
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Retail Spending by County Demographics

Commerce Signals nominal retail spending, percent change

Commerce Signals real retail spending, percent change

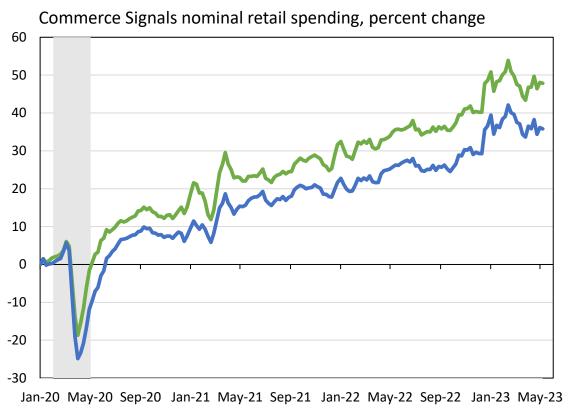— Majority non-Black/Hispanic/AAPI — Majority Black/Hispanic/AAPI

— Majority non-Black/Hispanic/AAPI — Majority Black/Hispanic/AAPI

Source: Commerce Signals – 3-week moving averages.
Notes: Majority Black/Hispanic/AAPI counties are defined as those where greater than 50% of the county's population is Black, Hispanic, or AAPI. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.

Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.
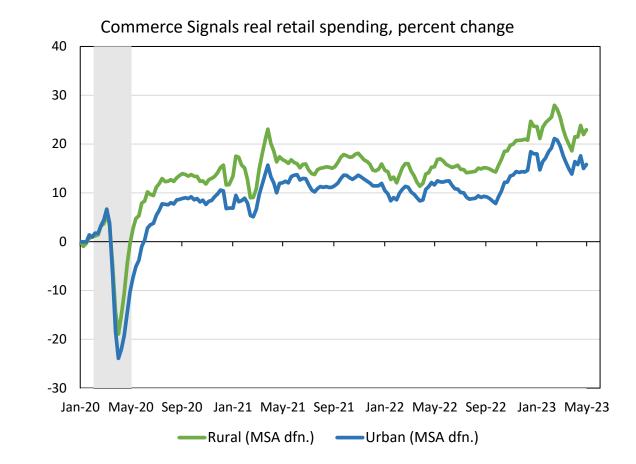
Retail Spending by County Urban/Rural Status

Commerce Signals nominal retail spending, percent change

Commerce Signals real retail spending, percent change
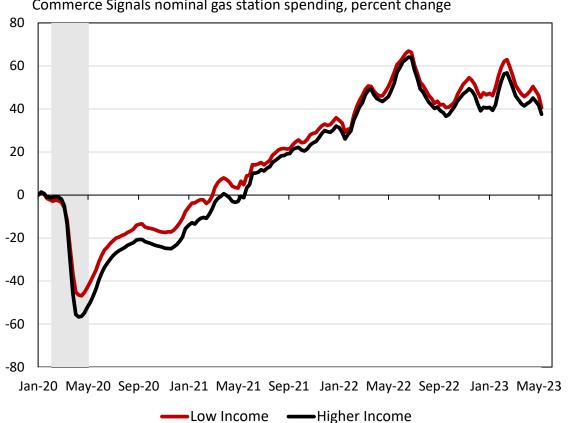

Rural (MSA dfn.)   Urban (MSA dfn.)

Source: Commerce Signals – 3-week moving averages.
Notes: Urban counties are defined as those located in a Metropolitan Statistical Area (MSA). Real spending uses corresponding urban prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
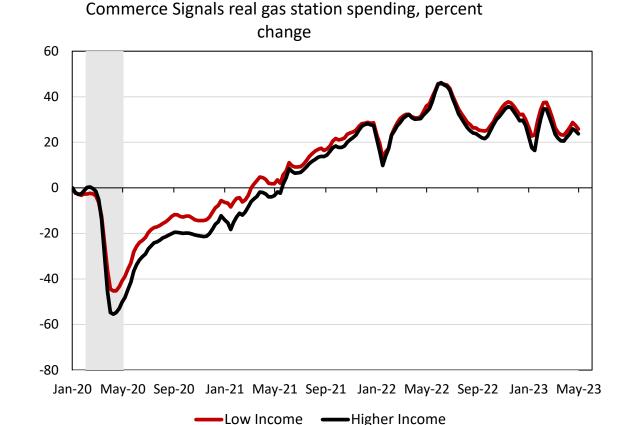
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

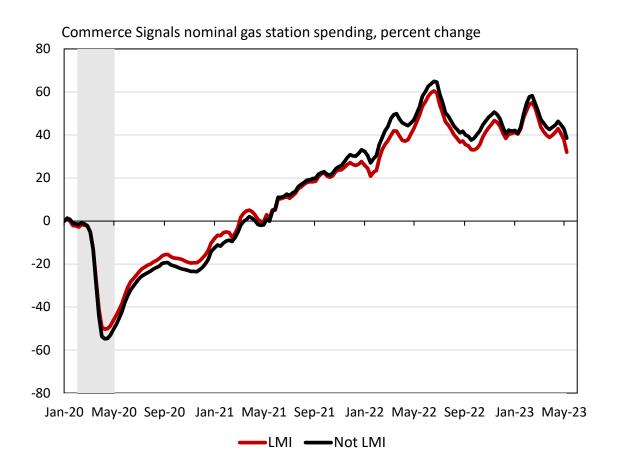## Gas Station Spending by County Household Income

Commerce Signals nominal gas station spending, percent change

Commerce Signals real gas station spending, percent change

— Low Income — Higher Income

Source: Commerce Signals – 3-week moving averages.
Notes: Low-income counties are defined as those with household incomes below the 25th percentile of national household income. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
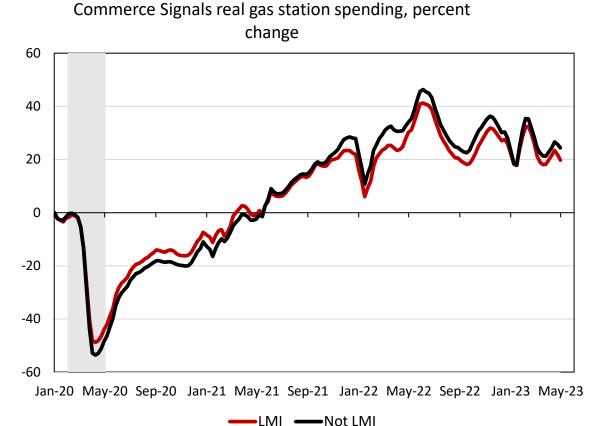
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Gas Station Spending by Low to Moderate Income (LMI) Status

Commerce Signals nominal gas station spending, percent change

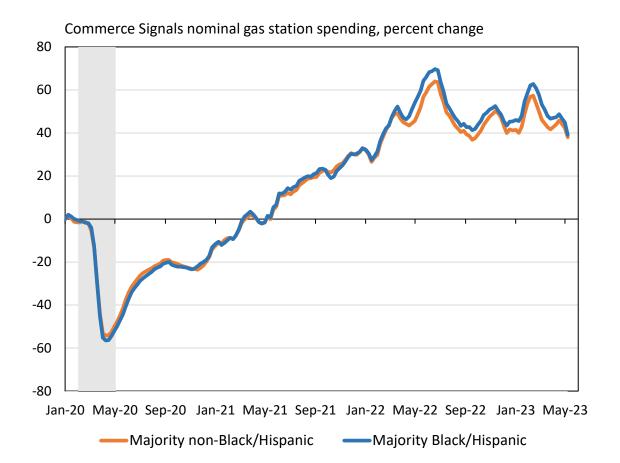Commerce Signals real gas station spending, percent change

Source: Commerce Signals – 3-week moving averages.
Notes: Low-to-moderate income (LMI) counties are defined as those where the majority of households earn below 80% of the metro area median. Real spending uses corresponding urban/rural prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
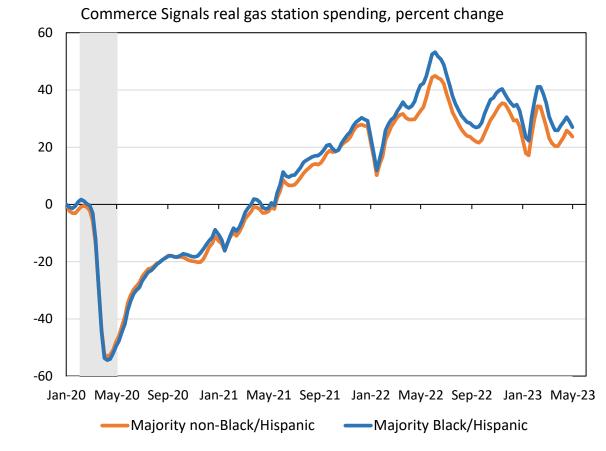
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Gas Station Spending by County Demographics

Commerce Signals nominal gas station spending, percent change

— Majority non-Black/Hispanic   — Majority Black/Hispanic

Commerce Signals real gas station spending, percent change

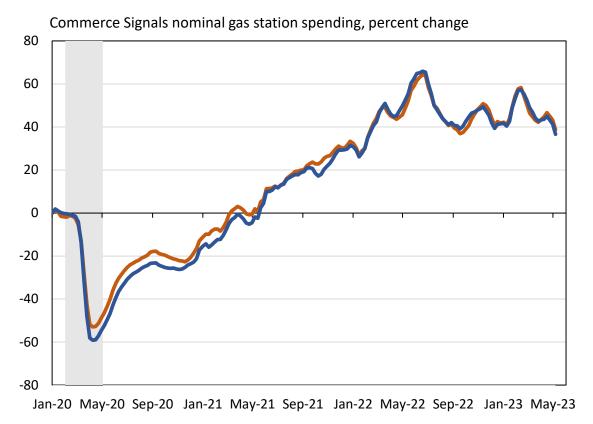— Majority non-Black/Hispanic   — Majority Black/Hispanic

Source: Commerce Signals – 3-week moving averages,
Notes: Majority Black/Hispanic counties are defined as those where greater than 50% of the county's population is Black or Hispanic. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
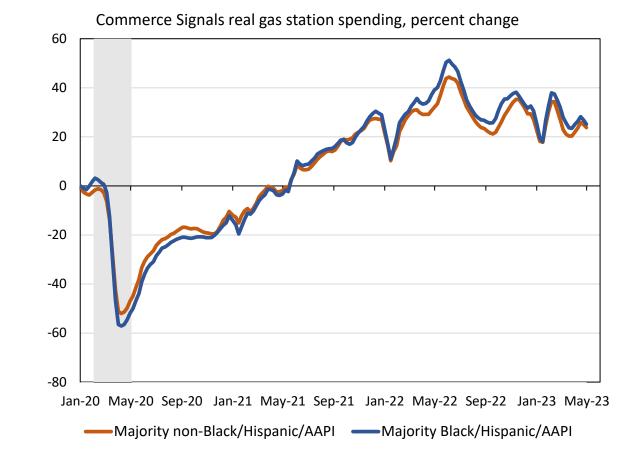
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Gas Station Spending by County Demographics

Commerce Signals nominal gas station spending, percent change

Commerce Signals real gas station spending, percent change

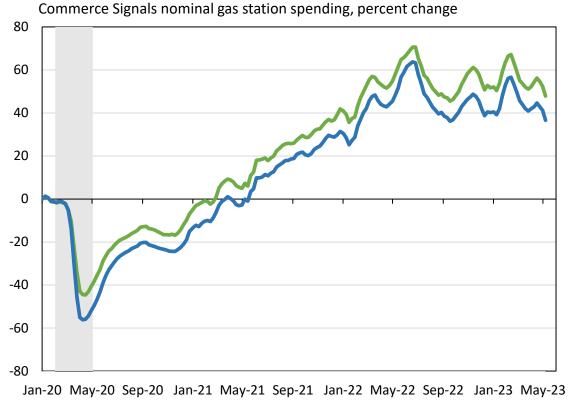— Majority non-Black/Hispanic/AAPI   — Majority Black/Hispanic/AAPI

— Majority non-Black/Hispanic/AAPI   — Majority Black/Hispanic/AAPI

Source: Commerce Signals – 3-week moving averages.
Notes: Majority Black/Hispanic/AAPI counties are defined as those where greater than 50% of the county's population is Black, Hispanic, or AAPI. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
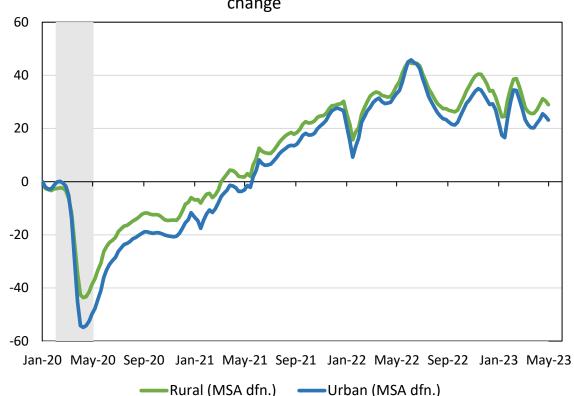
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Gas Station Spending by County Urban/Rural Status

Commerce Signals nominal gas station spending, percent change

Commerce Signals real gas station spending, percent change

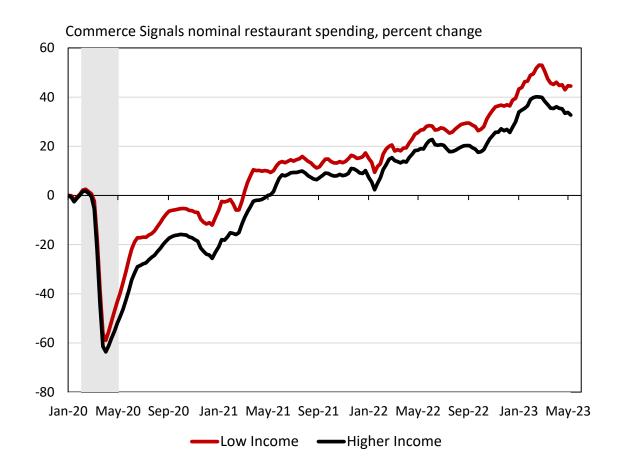Source: Commerce Signals – 3-week moving averages.
Notes: Urban counties are defined as those located in a Metropolitan Statistical Area (MSA). Real spending uses corresponding urban prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
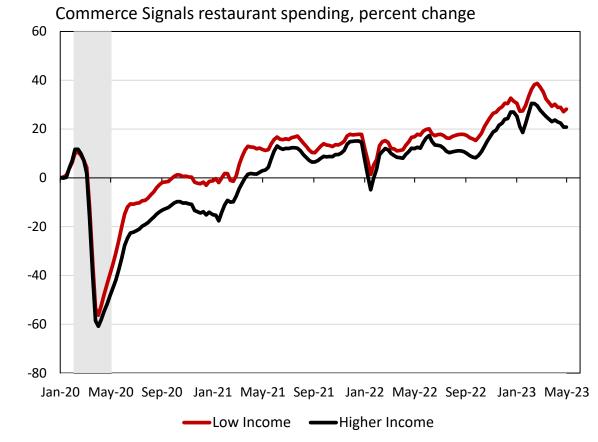
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Restaurant Spending by County Household Income

Commerce Signals nominal restaurant spending, percent change

Commerce Signals restaurant spending, percent change
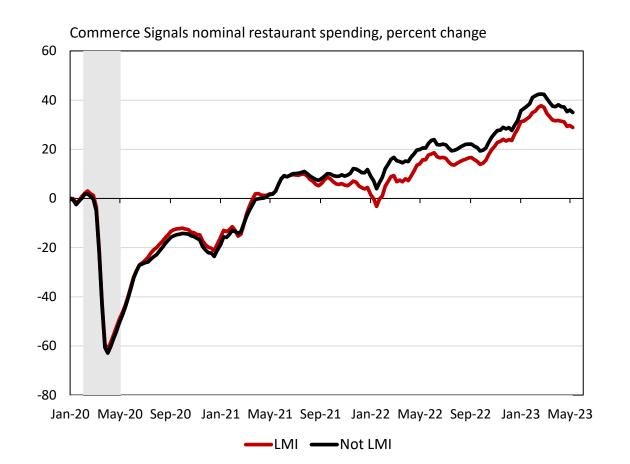
Low Income   Higher Income

Source: Commerce Signals – 3 Week Moving Averages.
Notes: Low-income counties are defined as those with household incomes below the 25th percentile of national household income. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
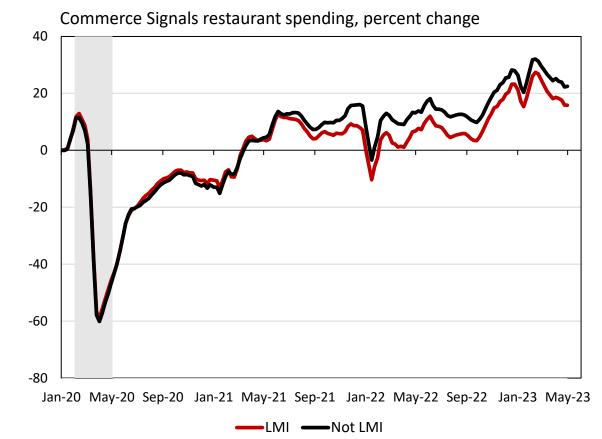
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Restaurant Spending by Low to Moderate Income (LMI) Status

Commerce Signals nominal restaurant spending, percent change

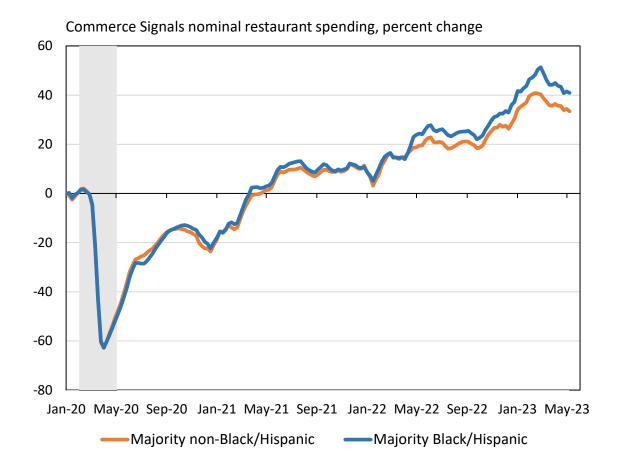Commerce Signals restaurant spending, percent change

Source: Commerce Signals – 3-week moving averages.
Notes: Low-to-moderate income (LMI) counties are defined as those where the majority of households earn below 80% of the metro area median. Real spending uses corresponding urban/rural prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.
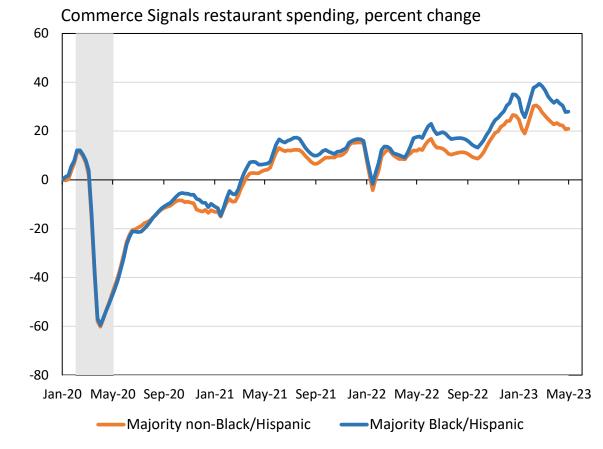
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Restaurant Spending by County Demographics

Commerce Signals nominal restaurant spending, percent change

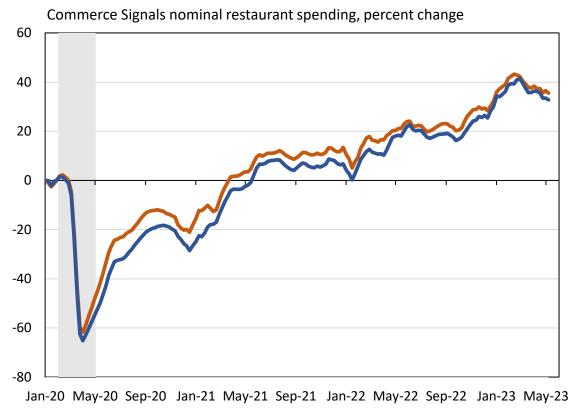Commerce Signals restaurant spending, percent change

Source: Commerce Signals – 3-week moving averages.
Notes: Majority Black/Hispanic counties are defined as those where greater than 50% of the county's population is Black or Hispanic. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession
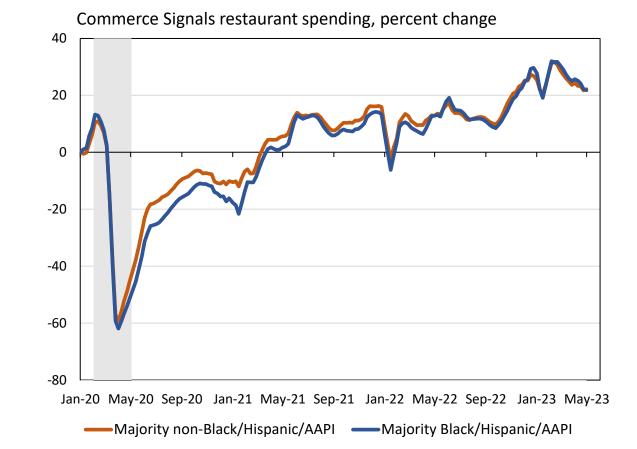
Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.

Restaurant Spending by County Demographics

Commerce Signals nominal restaurant spending, percent change

Commerce Signals restaurant spending, percent change

— Majority non-Black/Hispanic/AAPI   — Majority Black/Hispanic/AAPI
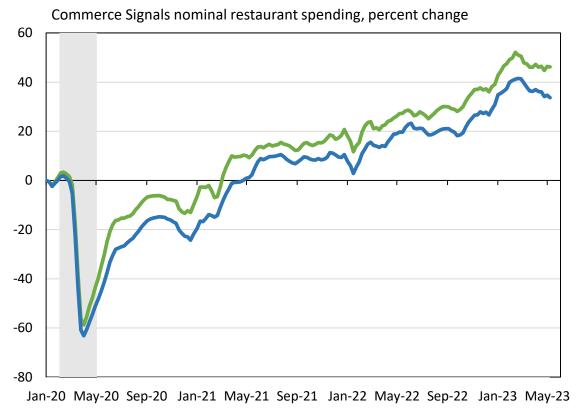
— Majority non-Black/Hispanic/AAPI   — Majority Black/Hispanic/AAPI

Source: Commerce Signals – 3-week moving averages.
Notes: Majority Black/Hispanic/AAPI counties are defined as those where greater than 50% of the county's population is Black, Hispanic, or AAPI. Real spending uses corresponding regional prices, indexed to January 2020. Shaded region indicates the COVID-19 recession

Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.
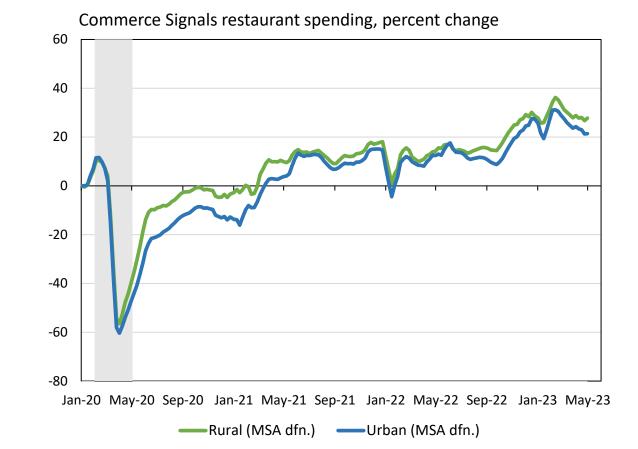
Restaurant Spending by County Urban/Rural Status

Commerce Signals nominal restaurant spending, percent change

Commerce Signals restaurant spending, percent change

Rural (MSA dfn.) — Urban (MSA dfn.)

Source: Commerce Signals – 3-week moving averages.
Notes: Urban counties are defined as those located in a Metropolitan Statistical Area (MSA). Real spending uses corresponding urban prices, indexed to January 2020. Shaded region indicates the COVID-19 recession.

Nominal spending ranges from January 1, 2020, to May 13, 2023. Real spending ranges from January 1, 2020, to May 6, 2023.