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Unemployment Rates During the COVID-19 Pandemic

Updated April 14, 2021

Congressional Research Service
https://crsreports.congress.gov
R46554

CRS REPORT
Prepared for Members and
Committees of Congress

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SUMMARY

R46554

April 14, 2021

Gene Falk, Coordinator
Specialist in Social Policy

Paul D. Romero
Research Assistant

Jameson A. Carter
Research Assistant

Isaac A. Nicchitta
Research Assistant

Emma C. Nyhof
Research Assistant

Unemployment Rates During the COVID-19 Pandemic

The Coronavirus Disease 2019 (COVID-19) pandemic has had a significant effect on labor market metrics for every state, economic sector, and major demographic group in the United States. This report provides information on unemployment rates, labor force participation rates, and nonfarm payrolls in the United States during the ongoing pandemic. It presents CRS analysis of overall unemployment rate trends during the pandemic. The report first examines these trends nationally, and at the state and industrial levels. Next, it examines how unemployment rates varied across demographic groups. The report then repeats this analysis, where appropriate, for the labor force participation rate, which sheds light on the size of the workforce willing and available for work. The final portion of the report analyzes the impact the pandemic has had on overall employment and by sector.

Among other findings, this report shows the following:

- In April 2020, the unemployment rate reached 14.8%—the highest rate observed since data collection began in 1948. In March 2021, unemployment remained higher (6.0%) than it had been in February 2020 (3.5%).
- The labor force participation rate declined to 60.2% in April 2020—a level not seen since the early 1970s—before partially recovering in March 2021 (61.5%).
- Nonfarm payrolls shed 22.1 million jobs between January 2020 and April 2020, with employment declining to 86% of its pre-recession level. In March 2021, aggregate employment remained 8.1 million jobs below its pre-recession level.
- The COVID-19 pandemic has impacted economic sectors disparately. The leisure and hospitality sector lost the largest number of jobs since January 2020, and persons last employed in this sector have consistently exhibited some of the highest unemployment rates throughout the pandemic. Additionally, the education and services sector and the government sector have exhibited the second and third-largest losses in jobs since January 2020, despite relatively low unemployment rates among persons last employed in these sectors.
- The COVID-19 pandemic has impacted demographic groups disparately. Although all demographic groups were affected, persons identifying as Black or Hispanic and younger workers generally experienced relatively high peaks in unemployment and relatively steep declines in labor force participation over the course of the pandemic. Additionally, persons with lower educational attainment have generally experienced relatively higher unemployment rates and lower labor force participation throughout the pandemic.

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Introduction

The National Bureau of Economic Research declared the start of the current economic downturn in February 2020, marking the end of the longest period of expansion in U.S. history.[1] This expansion followed the Great Recession (December 2007 to June 2009), a downturn widely considered to be the worst since the Great Depression (August 1929 to March 1933).[2] The unemployment rate rose quickly in March 2020, and by April 2020 it had greatly surpassed its previous peaks observed during and just after the Great Recession. This rise in unemployment was caused by an unprecedented loss of 22.1 million jobs between January 2020 and April 2020. Many individuals left the labor force over this period, and by April 2020 the labor force participation rate[3] declined to a level not seen since the early 1970s.

This deterioration in the U.S. labor market corresponded with various advisory or mandated stay-at-home orders implemented in response to the Coronavirus Disease 2019 (COVID-19) pandemic and other pandemic-related factors affecting U.S. demand.[4] States and localities implemented these orders[5] to mitigate the risks of COVID-19 after it was declared a pandemic disease by the World Health Organization on March 11, 2020.[6]

This report discusses the state of the U.S. labor market using data from the Bureau of Labor Statistics (BLS). The three primary sources are the Current Population Survey (CPS), the Local Area Unemployment Statistics (LAUS) program, and the Current Employment Statistics (CES) program. In addition to the usual caveats about estimates (see the "General Data Caveats" section), there were additional data challenges caused by the COVID-19 pandemic (see the "COVID-19 Pandemic-Related Data Issues" section). The pandemic led to lower survey response rates by businesses and households, and BLS detected an error in their categorization procedures that likely underestimated unemployment early in the recession.[7] Labor force participation rates were not affected by this categorization error and met BLS standards of accuracy, despite depressed response rates.[8] Recently, BLS identified an error in the nonfarm enrollment data

[1] The National Bureau of Economic Research; see https://www.nber.org/cycles.html for their historical series of expansions and contractions. For more on their process for determining expansions and contractions, see https://www.nber.org/cycles/recessionsfaq.html#:~:text=What%20is%20an%20expansion%3F,more%20than%20a%20few%20months.&text=Expansion%20is%20the%20normal%20state,economy%3B%20most%20recessions%20are%20brief.

[2] The Great Recession was a particularly long recession, characterized by a steady and large increase in unemployment and unprecedented decreases in labor force participation. The unemployment rates observed during the Great Recession, however, never surpassed those of the early 1980s. For more on labor force metrics during the Great Recession see CRS Report R45330, *Labor Market Patterns Since 2007*, by Sarah A. Donovan and Marc Labonte.

[3] Defined as the percentage of persons in the overall adult population who either have a job or are looking for a job.

[4] See CRS Insight IN11388, *COVID-19: U.S. Economic Effects*, by Rena S. Miller and Marc Labonte.

[5] For a list of state-level stay-at-home orders and estimates of the impact of these orders on risk mitigation, see Amanda Moreland, Christine Herlihy, and Michael A. Tynan et al., *Timing of State and Territorial COVID-19 Stay-at-Home Orders and Changes in Population Movement*, Centers for Disease Control, Morbidity and Mortality Weekly Report Vol. 69 No. 35, Washington, DC, September 4, 2020, pp. 1198-1203, https://www.cdc.gov/mmwr/volumes/69/wr/mm6935a2.htm?s_cid=mm6935a2_w.

[6] World Health Organization, *Coronavirus Disease 2019 (COVID-19)*, Situation Report 51, March 11, 2020, p. 1, https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200311-sitrep-51-covid-19.pdf.

[7] See CRS Insight IN11456, *COVID-19: Measuring Unemployment*, by Lida R. Weinstock.

[8] For BLS impact summaries of COVID-19 on these measures, see https://www.bls.gov/covid19/effects-of-covid-19-pandemic-and-response-on-the-employment-situation-news-release.htm.

processing system wherein some businesses were improperly included in estimates, although the impacts of this error are yet to be evaluated.[9]

This report generally finds the following:

- The unemployment rate peaked[10] in April 2020, at a level not seen since data collection started in 1948, before declining to a level in March 2021 that still remained 2.5 percentage points above the rate observed in February 2020.
- In April 2020, the labor force participation rate declined to levels not seen since the early 1970s.
- Nonfarm payrolls shed 22.1 million jobs between January 2020 and April 2020. In March 2021, aggregate employment remained 8.1 million jobs below its pre-recession level.

U.S. Unemployment Rate: Historical Trends

Prior recessions typically developed with gradually increasing economic distress. The current recession was caused by the COVID-19 pandemic, which was an abrupt and exogenous shock to the economy. The pandemic resulted in rapidly implemented efforts to limit contact among individuals and many shutdown orders. Therefore, the trends in the unemployment rate in the current recession differ from those in prior recessions (see **Figure 1**). Rates observed during prior recessions rose relatively gradually over the course of an economic downturn and then peaked.

The current recession exhibited an unprecedented sharp increase in the unemployment rate (10.3 percentage points) from February to April 2020.[11] Following April, the rate declined rapidly (6.4 percentage points from April 2020 to August 2020) as temporarily furloughed workers returned to work. Despite these rapid declines, the unemployment rate remains at an elevated level (6.0%) compared to February 2020. The share of workers on furlough has declined since peaking in April 2020, while the share of permanently laid off workers has steadily increased.[12] Although economic projections have generally improved since early in the recession, the Congressional Budget Office (CBO) has projected that unemployment rates over 5.0% will persist over the next two years.[13]

[9] For a description of this error, see https://www.bls.gov/ces/notices/2021/ces-sample-rotation-issue-caused-by-pandemic-related-challenges-to-enrollment.htm.

[10] Throughout this report, *peak* refers to the highest level of unemployment between January 2020 and March 2021. It does not account for months outside this range.

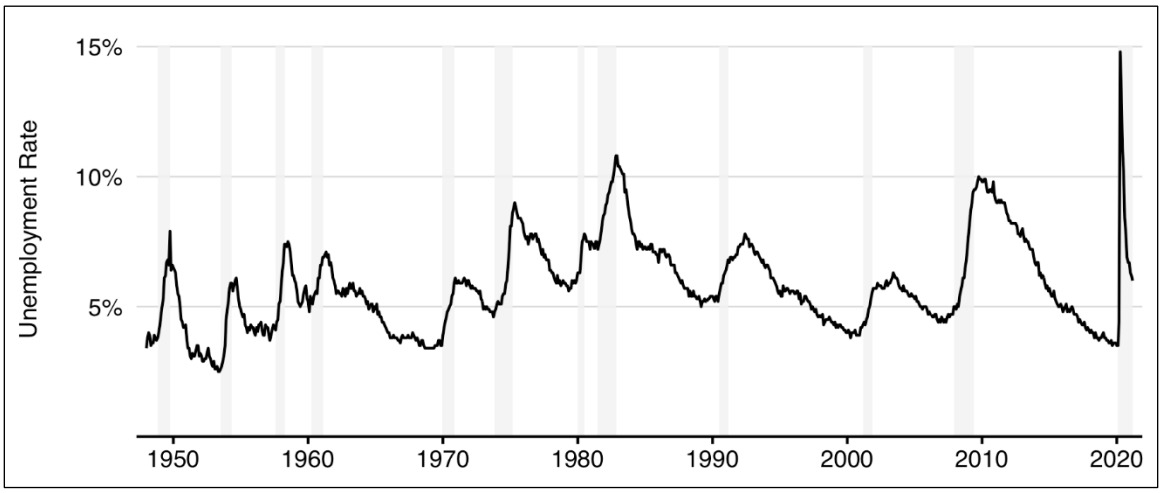
[11] For information on the differences between the congressional response to the current recession compared to the congressional response during the Great Recession in the Unemployment Insurance system, see CRS Report R46472, *Comparing the Congressional Response to the Great Recession and the COVID-19-Related Recession: Unemployment Insurance (UI) Provisions*, by Katelin P. Isaacs and Julie M. Whittaker.

[12] CRS analysis of BLS data, which can be found at https://www.bls.gov/webapps/legacy/cpsatab11.htm. Workers on temporary layoff declined from 18.0 million in April 2020 to 2.0 million in March 2021 as the number of permanent job losers increased from 2.0 million in April 2020 to 3.4 million in March 2021.

[13] See https://www.cbo.gov/about/products/budget-economic-data#4 for CBO's 10-year economic projections of unemployment rates, as of February 2021.

Figure 1. Historical Unemployment Rate

Seasonally adjusted monthly data from January 1948 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Note: Shaded regions indicate recessionary periods as identified by the National Bureau of Economic Research.

The unemployment rate's relatively rapid decline since April 2020 may have been aided by laws passed in response to both the recession and the pandemic. Notably, Congress has passed three rounds of stimulus checks for families,[14] expanded nutrition assistance programs,[15] and enacted increases in refundable tax credits.[16] These provisions increased families' disposable income and may have increased consumer spending, enabling businesses to better endure the recession; a 2020 study from NBER found that higher replacement rates of lost wages led to higher consumer spending.[17] Congress also enacted the Paycheck Protection Program, which provides loans that can be fully forgiven if the majority of funds are used to maintain payrolls.[18]

Additionally, Congress expanded Unemployment Insurance (UI) program benefits and extended length of coverage.[19] This policy could directly increase the unemployment rate because past research has shown UI extensions can increase the duration of unemployment for a relatively

[14] For more information, see CRS Insight IN11605, *COVID-19 and Direct Payments: Comparison of First and Second Round of "Stimulus Checks" to the Third Round in the American Rescue Plan Act of 2021 (ARPA; P.L. 117-2)*, by Margot L. Crandall-Hollick.

[15] For more information, see CRS Report R46681, *USDA Nutrition Assistance Programs: Response to the COVID-19 Pandemic*, by Randy Alison Aussenberg and Kara Clifford Billings.

[16] For more information, see CRS Report R46680, *The American Rescue Plan Act of 2021 (ARPA; P.L. 117-2): Title IX, Subtitle G—Tax Provisions Related to Promoting Economic Security*, by Molly F. Sherlock, Margot L. Crandall-Hollick, and Jane G. Gravelle.

[17] Miguel G. Casado, Britta Glennon, and Julia Lane, et al., *The Effect of Fiscal Stimulus: Evidence from COVID-19*, NBER, Working Paper 27576, Cambridge, MA, August 2020, https://www.nber.org/papers/w27576.

For more on this topic and theories of recessionary policy, also see CRS Report R46460, *Fiscal Policy and Recovery from the COVID-19 Recession*, by Jane G. Gravelle and Donald J. Marples.

[18] For more information, see CRS Report R46397, *SBA Paycheck Protection Program (PPP) Loan Forgiveness: In Brief*, by Robert Jay Dilger and Sean Lowry.

[19] For more information, see CRS Report R46687, *Current Status of Unemployment Insurance (UI) Benefits: Permanent-Law Programs and COVID-19 Pandemic Response*, by Julie M. Whittaker and Katelin P. Isaacs.

small segment of unemployed workers.[20] A recent paper examining data from April to July of 2020 found that while UI benefit increases reduced employment by 0.2% to 0.4%, overall spending by recipients increased by 2.0% to 2.6%.[21] The authors note that while these expansions directly decreased employment among recipients, that increased spending among recipients may have insulated the labor market from further deterioration.

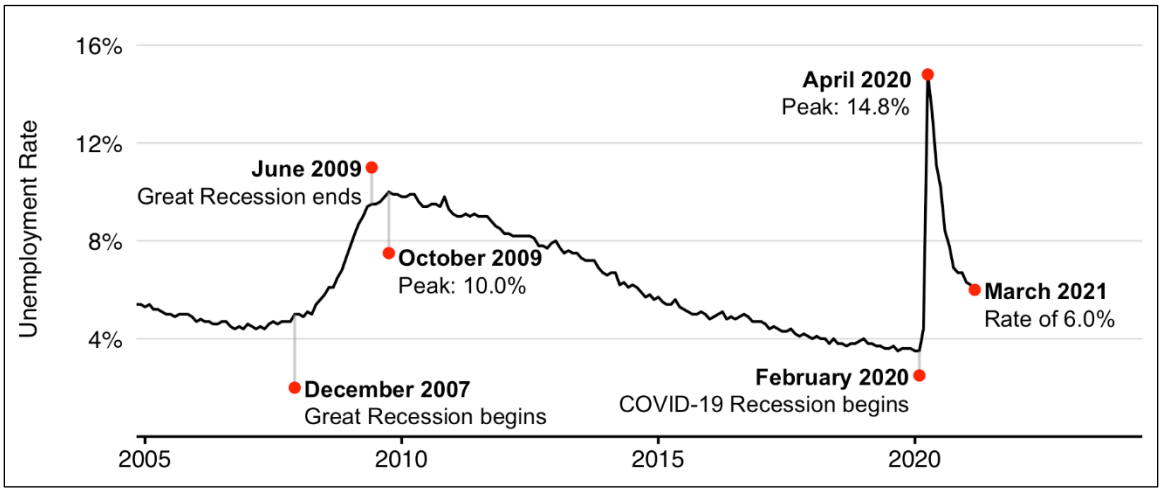
These (and other) policies may have affected unemployment rate trends in several ways; however, the causal impact of policy choices on the unemployment rate is beyond the scope of this report.

Comparing the Great Recession and the COVID-19 Recession

During the Great Recession, the unemployment rate increased from 5.0% in December 2007 (the start of the recession) to 9.5% in June 2009 (the end of the recession) (see **Figure 2**). The unemployment rate peaked at 10.0% in October 2009, four months after the recession officially concluded. In the current recession, the unemployment rate increased from 3.5% in February 2020, to 4.4% in March 2020, and then peaked at a high of 14.8% in April 2020. Since then, the unemployment rate fell to 6.0% in March 2021. The peak represents the quickest month-over-month increase in the unemployment rate and the highest overall unemployment rate since the CPS data started being collected in 1948.[22]

Figure 2. U.S. Unemployment Rate

Seasonally adjusted monthly data from November 2004 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

[20] The study cited here showed that UI extensions during Great Recession increased the unemployment rate of 0.4 percentage points. Henry S. Farber and Robert G. Valletta, *Do Extended Unemployment Benefits Lengthen Unemployment Spells? Evidence from Recent Cycles in the U.S. Labor Market*, NBER, Working Paper 19048, Cambridge, MA, May 2013, https://www.nber.org/papers/w19048.

[21] Peter Ganong et al., *Spending and Job Search Impacts of Expanded Unemployment Benefits: Evidence from Administrative Micro Data*, Becker Friedman Institute, Working Paper No. 2021-19, Chicago, IL, February 2021, https://bfi.uchicago.edu/wp-content/uploads/2021/02/BFI_WP_2021-19.pdf.

[22] There are many differences in labor force statistics observed during the Great Recession, its aftermath, and the COVID-19 recession. For more on this and for information on labor market patterns since 2007, see CRS Report R45330, *Labor Market Patterns Since 2007*, by Sarah A. Donovan and Marc Labonte.

COVID-19 Recession: Unemployment Trends

The COVID-19 pandemic has affected the unemployment rates for every state, economic sector, and major demographic group. In the early stages of the current recession, unemployment rates disproportionately increased among economic sectors delivering in-person services. Some demographic groups are overrepresented in such sectors, contributing to higher unemployment rates for those workers.[23]

Unemployment Rates by State

Figure 3 displays state-level monthly unemployment rates from January 2020 to February 2021 (the data for March and April 2021 have not been released as of the cover date of this report). The figure shows that no state was immune from economic damage early in the pandemic.[24] Since the onset of the current recession, the unemployment rate for every state and the District of Columbia surpassed levels seen during the Great Recession. The variation in economic damage was due to a number of factors, including the proportion of jobs in sectors that provide nonessential services to in-person customers,[25] individual concerns of contracting COVID-19 causing declines in personal consumption,[26] and the implementation of stay-at-home orders and business closure policies.[27]

[23] Guido Matias Cortes and Eliza Forsythe, "The Heterogeneous Labor Market Impacts of the Covid-19 Pandemic," Upjohn Institute, May 2020; and Robert Fairlie, "The Impact of Covid-19 on Small Business Owners: Evidence of Early-Stage Losses from the April 2020 Current Population Survey," NBER Working Paper No. 27309, June 2020.

[24] Felipe Lozano-Rojas et al., "Is the Cure Worse than the Problem Itself? Immediate Labor Market Effects of COVID-19 Case Rates and School Closures in the U.S.," NBER Working Paper No. 27127, May 2020; Eliza Forsythe et al., "Labor Demand in the Time of COVID-19: Evidence from Vacancy Postings and UI Claims," NBER Working Paper No. 27061, April 2020.

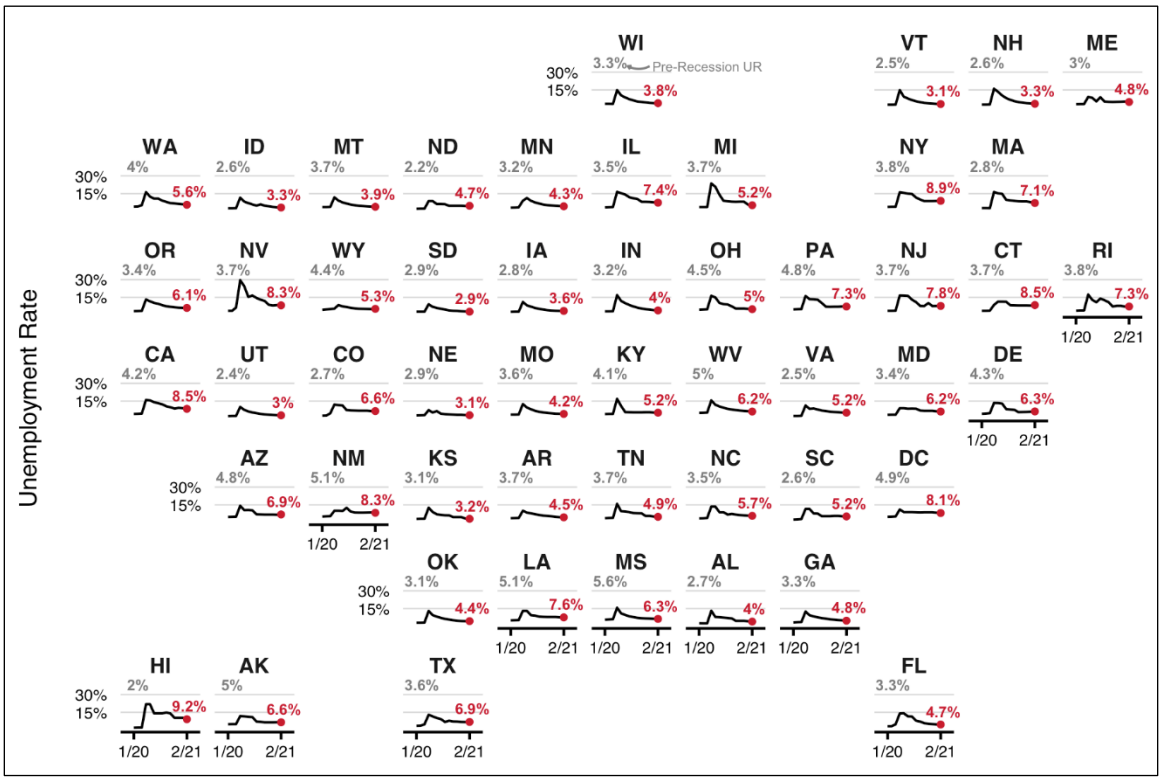
[25] Matthew Dey and Mark Loewenstein, "How many workers are employed in sectors directly affected by COVID-19 shutdowns, where do they work, and how much do they earn?" *Monthly Labor Review*, April 2020.

[26] Austan Goolsbee and Chad Syverson, "Fear, lockdown, and diversion: comparing drivers of pandemic economic decline 2020," NBER Working Paper No. 27432, June 2020.

[27] Sumedha Gupta et al., "Effects of Social Distancing Policy on Labor Market Outcomes," NBER Working Paper No. 2780, May 2020.

Figure 3. Monthly State Unemployment Rate

Non-seasonally adjusted monthly data, January 2020 to February 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: The National Bureau of Economic Research identified February of 2020 as the first month of the current recession. The month-over-month changes are point estimates and have not been tested for significance. The data for March and April 2021 have not been released as of the cover date of this report.

The unemployment rate in most states peaked in April 2020 and has since declined. In February 2021, the states with the highest unemployment rates were Hawaii (9.2%), New York (8.9%), California (8.5%), Connecticut (8.5%), and Nevada and New Mexico (both at 8.3%). The states with the lowest unemployment rates in February 2021 were South Dakota (2.9%), Utah (3.0%), Nebraska (3.1%), Vermont (3.1%), and Kansas (3.2%).

Unemployment Rates by Sector

Figure 4 displays the change in sector unemployment rates from January 2020, before the start of the recession, to March 2021. Sector unemployment rates define the unemployment rate among individuals whose last job was in a particular sector. The figure shows that some sectors were disparately impacted by the recession, although the data are not seasonally adjusted. Without seasonal adjustments, it is difficult to determine the extent to which unemployment trends are related to the recession or to seasonal trends. Readers should interpret trends shown in **Figure 4** with some caution as this report does not test for statistical significance of these differences.

Workers whose last job was in the leisure and hospitality sector experienced a higher peak in unemployment (39.3% in April 2020) than did workers who were previously employed in any other sector; they also had the second highest unemployment rate in March 2021 (13.0%). However, elevated unemployment rates are not constrained to sectors providing in-person

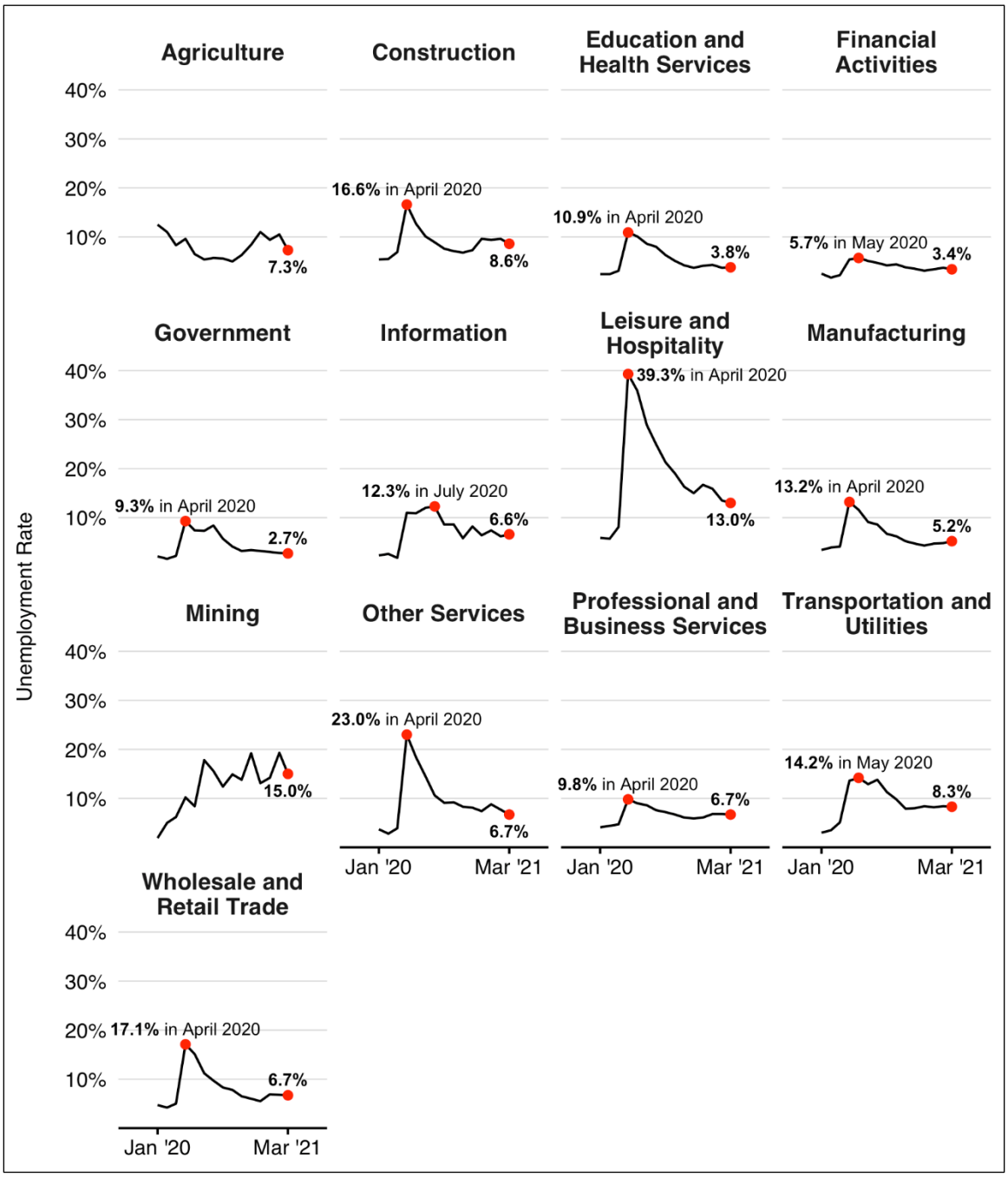
services. Workers whose last job was in the mining or extraction sector have experienced steadily increasing unemployment since the onset of the recession; in March 2021 they exhibited the highest rate (15.0%) among all workers across sectors. The lowest March 2021 rates were among workers whose last job was in the government (2.7%), financial activities (3.4%), or education and health services (3.8%) sectors. These sectors have had unemployment rates below 15% from February 2020 through March 2021.[28] Within sectors, some workers were more likely to lose their jobs than others early in the recession. For example, some studies from early in the pandemic suggest that low-wage workers in the leisure and hospitality sector and other services sectors experienced disproportionately large employment losses.[29]

[28] These data are not seasonally adjusted and do not account for the likely seasonal variation in employment within the education and health services sector.

[29] Alexander Bartik et al., "Measuring the labor market at the onset of the COVID-19 crisis," NBER Working Paper No. 27613, July 2020; and Guido Matias Cortes and Eliza Forsythe, "The Heterogeneous Labor Market Impacts of the Covid-19 Pandemic," Upjohn Institute Working Paper, May 2020.

Figure 4. Unemployment Rates by Sector

Non-seasonally adjusted monthly data, January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: Statistical significance is not calculated for these trends and it is unclear how dependent these trends are on regular seasonal variation. Sectors are defined by the North American Industry Classification System (NAICS) and can be found at https://www.bls.gov/iag/tgs/iag_index_naics.htm. The figure shows unemployment rates for wage and salary workers.

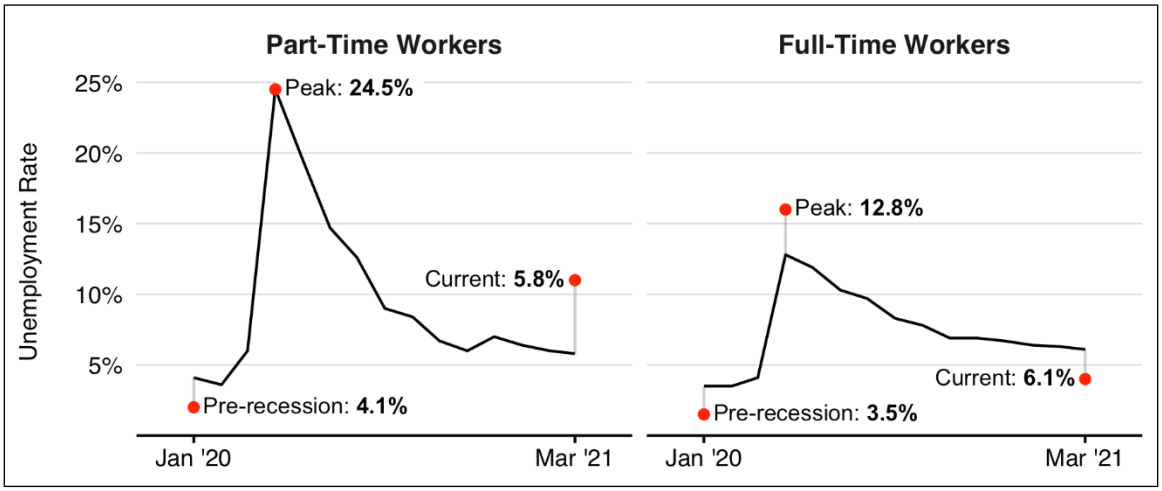
Unemployment Rates for Full- and Part-Time Workers

As shown in **Figure 5**, part-time workers experienced a higher peak unemployment rate (24.5% in April 2020) than full-time workers (12.8% in April 2020). This disparity has closed as the recession has progressed, as the unemployment rate for part-time workers in March 2021 (5.8%) is less than the unemployment rate for full-time workers (6.1%).

There are a few reasons why part-time workers' apparent economic recovery since April may not reflect the realities they face. First, some workers who last worked part-time jobs may have left the labor force, and hence are not counted in the official unemployment statistics used in this report. It is unclear whether that is the case. Additionally, there was a considerable increase in the number of part-time workers who reported that they would have preferred to work full-time but work part-time because their hours were reduced or they could only find part-time jobs.[30] This could be reflected as a reduced unemployment rate among part-time workers. Further, BLS has observed that labor underutilization has remained elevated for workers, including those who have been working part-time for economic reasons.[31]

Figure 5. Monthly Unemployment Rates for Part- and Full-Time Workers

Seasonally adjusted monthly data, January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Note: Both groups experienced their peak unemployment rate in April 2020.

Unemployment Rates by Sex and Age

As seen in **Figure 6**, unemployment rates tended to increase more for younger workers and were higher for women early in the recession. Between February and April 2020, the rate for women ages 16-19 increased by 25.3 percentage points to 36.3%; in contrast, the rates for men of the same age increased by 16.2 percentage points to 28.2%. Since then, the gap between younger

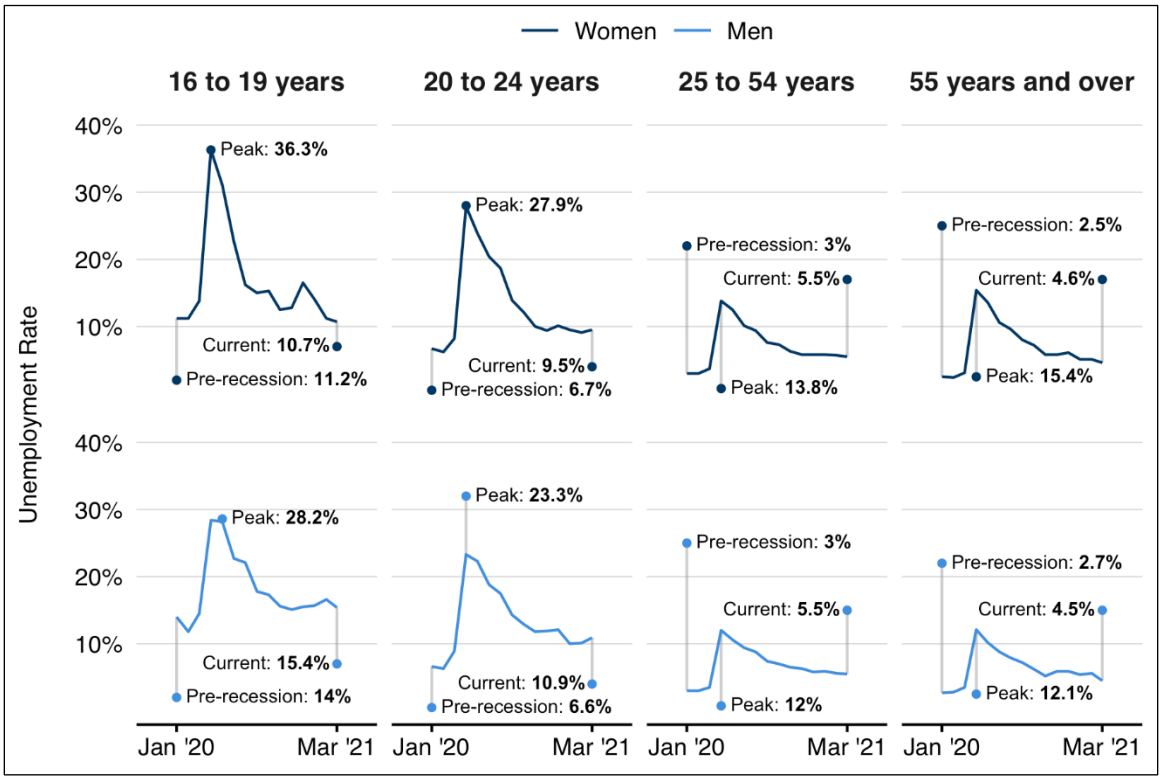
[30] The number of workers working part-time for economic reasons increased from 4.4 million in February 2020 to 5.8 million in March 2021 on a seasonally adjusted basis. See https://www.bls.gov/web/empsit/cpseea07.htm.

[31] See https://www.bls.gov/news.release/empsit.t15.htm for U-6 unemployment rates. U-6 is a measure of the total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percentage of the civilian labor force plus all persons marginally attached to the labor force. For more on this measure, see CRS In Focus IF10443, *Introduction to U.S. Economy: Unemployment*, by Lida R. Weinstock.

men and women has reversed. The unemployment rate for teenaged men (15.4%) was higher than the rate for teenaged women (10.7%) in March 2021. Although unemployment rates for younger workers remain relatively high compared to older workers, the March 2021 rates for men and women across the remaining age groups have declined to similar levels. The rate for men ages 20-24 (10.9%) was slightly higher than the rate for women of the same age (9.5%). The large disparities observed in April 2020 between younger men and women were not observed in older age groups, although women ages 25-54 and 55 and over had rates 1-3 percentage points higher than their male counterparts. This relatively modest gap has since closed; the rate in March 2021 for women ages 25 to 54 (5.5%) was the same as the rate for men (5.5%), and the rate for women ages 55 and over (4.6%) was nearly the same as that of men ages 55 and over (4.5%).

Figure 6. Monthly Unemployment Rates by Sex and Age

Seasonally adjusted monthly data, January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Note: Every group experienced their peak unemployment rate in April 2020, except for 16- to 19-year-old men, who experienced their peak rate in May 2020.

Unemployment Rates by Racial Group and Hispanic Ethnicity

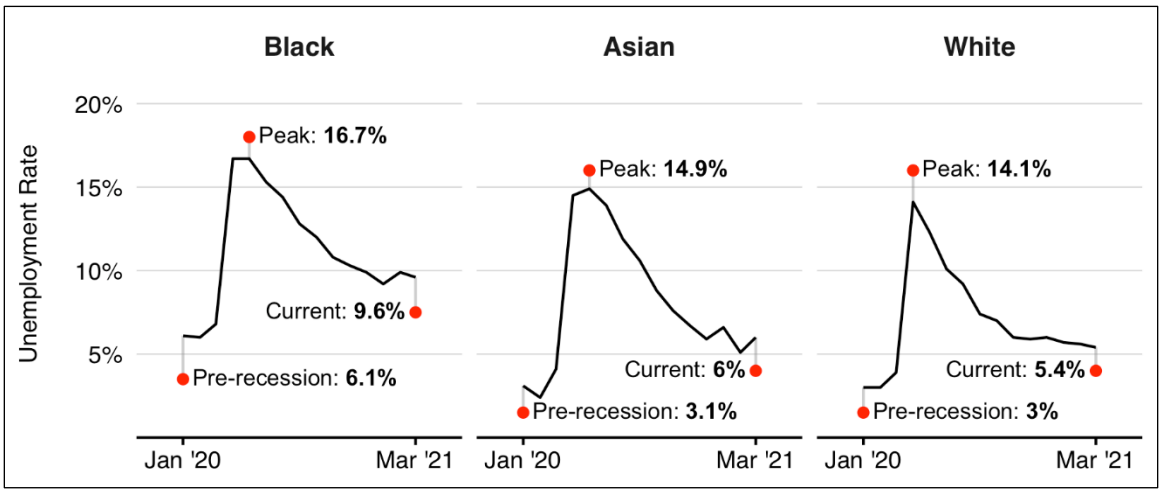
As seen in **Figure 7**, the unemployment rates for Black, Asian, and White[32] workers increased sharply in early 2020. But whereas the unemployment rate for White workers peaked in April 2020, the rate for Black and Asian workers continued to rise through May 2020. The March 2021 rates for Black (9.6%), Asian (6.0%), and White (5.4%) workers were all higher than their

[32] Asian, Black, and White are the three racial categories used in BLS, Table A2: Employment status of the civilian population by race, sex, and age. See https://www.bls.gov/news.release/empsit.t02.htm.

respective rates in January 2020. The rate for Black workers has declined 7.1 percentage points since peaking in May 2020, compared to a decline of 8.9 percentage points for Asian workers and 8.7 percentage points for White workers across the same period.

Figure 7. Unemployment Rates by Racial Group

Seasonally adjusted monthly data, January 2020 to March 2021



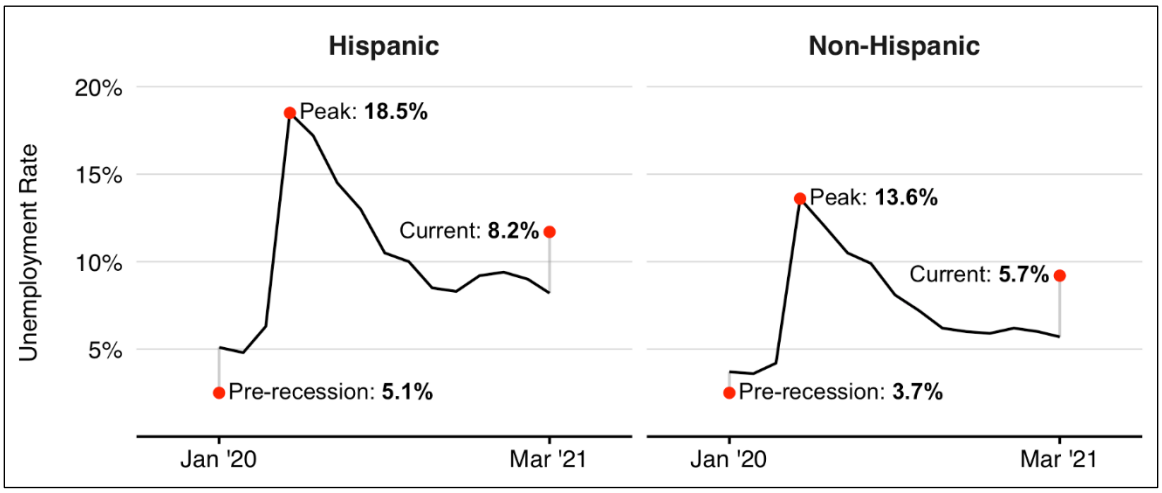
Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: Black and Asian workers experienced their peak unemployment rate in May 2020. White workers peak rate occurred in April 2020.

People of any race can identify as being either Hispanic or non-Hispanic in the CPS. As seen in **Figure 8**, Hispanic workers, like Black and Asian workers, continue to experience elevated unemployment rates. In March 2021, non-seasonally adjusted unemployment rates experienced by Hispanic (8.2%) and non-Hispanic (5.7%) workers were higher than those experienced prior to the recession. While unemployment remains elevated compared to January 2020, these rates are much lower than the peak exhibited in April 2020. The unemployment rate for Hispanic workers rapidly increased by 13.7 percentage points to 18.5% from February to April 2020. For non-Hispanic workers the unemployment rate increased by 10 points to 13.6%.

Figure 8. Monthly Unemployment Rates by Hispanic Origin

Non-seasonally adjusted monthly data, January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

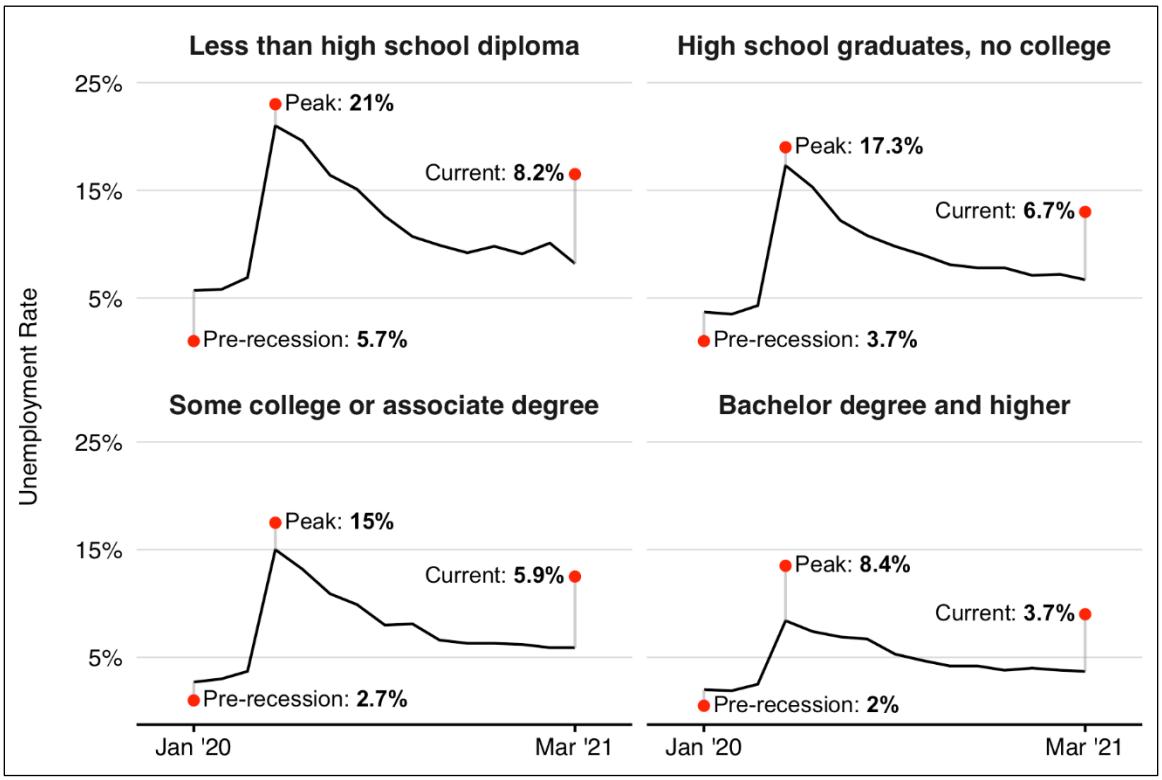
Note: Statistical significance is not calculated for these trends, and it is unclear how dependent these trends are on regular seasonal variation.

Unemployment Rates by Education

In general, workers with lower levels of educational attainment have higher rates of unemployment. This pattern has been amplified during the current recession, as seen in **Figure 9**. The unemployment rate for workers with less than a high school diploma peaked in April 2020 (21.0%), which was higher than the peak for those at all other education levels. The March 2021 rate for workers with less than a high school diploma (8.2%) was also higher than the rate for all other education levels. Workers with a Bachelor's degree or higher, the highest educational level classified here, had the lowest peak unemployment rate (8.4% in April 2020) and the lowest March 2021 rate (3.7%) among all education levels.

Figure 9. Monthly Unemployment Rates by Education

Seasonally adjusted data, January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Note: All groups experienced their peak unemployment rate in April 2020.

U.S. Labor Force Participation Rate: Historical Trends

While the unemployment rate measures the prevalence of unemployment in the labor force, it does not consider the state of the labor force itself. When persons stop looking for work, they exit the labor force, decreasing the number of persons who are either working or actively looking for work. Such persons are not counted in the unemployment rate, by definition, but are an important group to examine when evaluating unemployment. CRS therefore uses the labor force participation rate to further contextualize unemployment rates observed during the COVID-19 pandemic. The labor force participation rate measures the percentage of noninstitutionalized people ages 16 and older who are either looking for work, or working.[33]

Over much of the past two decades, the labor force participation rate has generally declined. Following several years of modest growth through the early and mid-90s, labor force participation rates started to plateau, hit a historical peak in April 2000 (67.3%), and then declined. Labor force participation declined further following the Great Recession, before

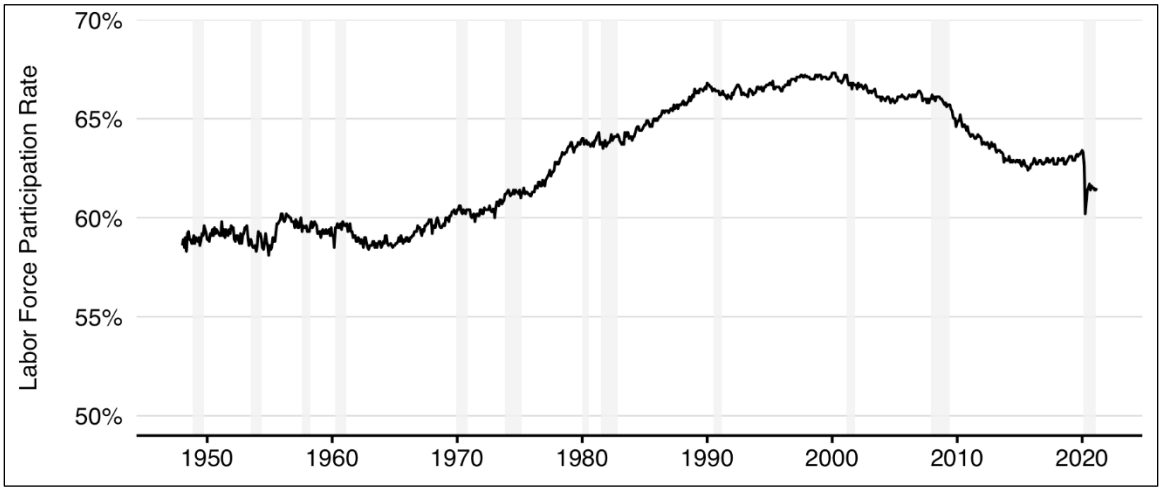
[33] For definitions of the labor force, labor force participation rate, unemployment rate, and other relevant terms, see https://www.bls.gov/cps/definitions.htm#lfpr.

stabilizing and steadily increasing starting in October 2015. This decline can be attributed to several factors, although one prominent reason is the ongoing retirement of the baby boomer generation.[34] Despite the increase exhibited following the Great Recession, the labor force participation rate in January 2020 (63.4%) prior to both the COVID-19 pandemic and economic recession remained below its historical peak.

Between February 2020 and April 2020, the labor force participation rate exhibited an unprecedented decline of 3.1 percentage points as 8.3 million people left the labor force. The participation rate partially recovered between May 2020 and August of 2020 before stagnating. It remains below the pre-recession rate (63.4%) in March 2021 (61.5%).

Figure 10. Historical Labor Force Participation Rate

Seasonally adjusted monthly data for January 1948 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Note: Shaded regions indicate recessionary periods as identified by the National Bureau of Economic Research.

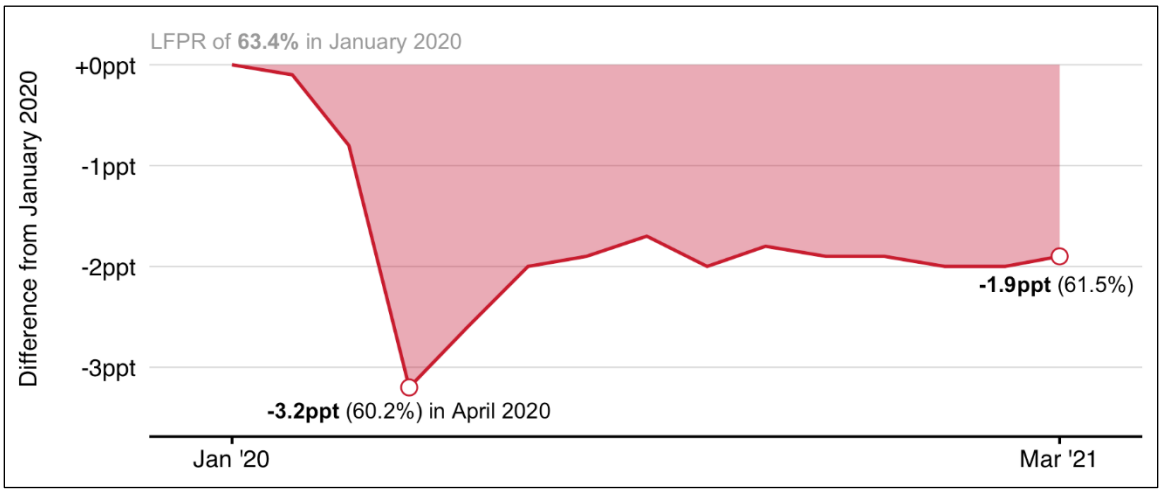
COVID-19 Recession: Trends in Labor Force Participation

The COVID-19 pandemic affected the labor force participation rates in every major demographic group. The analysis in this section compares the pre-recession (January 2020) labor force participation rate to the current labor force participation rate, calculating the difference between the two for each month between January 2020 and March 2021. **Figure 11** shows the sharp decline in the labor force participation rate for individuals ages 16 years and older between February 2020 and April 2020. During this period, 8.3 million individuals left the labor force. The overall rate recovered between May 2020 and August 2020 before stagnating. The labor force participation rate in March 2021 remains 1.9 percentage points below its pre-recession level.

[34] See Michael Dotsey, Shigeru Fujita, and Leena Rudanko, *Where is Everybody? The Shrinking Labor Force Participation Rate*, Federal Reserve Bank of Philadelphia, Economic Insights Vol 2. Issue 4, Philadelphia, PA, 2017, pp. 17-24, https://www.philadelphiafed.org/-/media/frbp/assets/economy/articles/economic-insights/2017/q4/eiq417.pdf.

Figure 11. Labor Force Participation Rate During COVID-19 Pandemic

Seasonally adjusted monthly data from January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

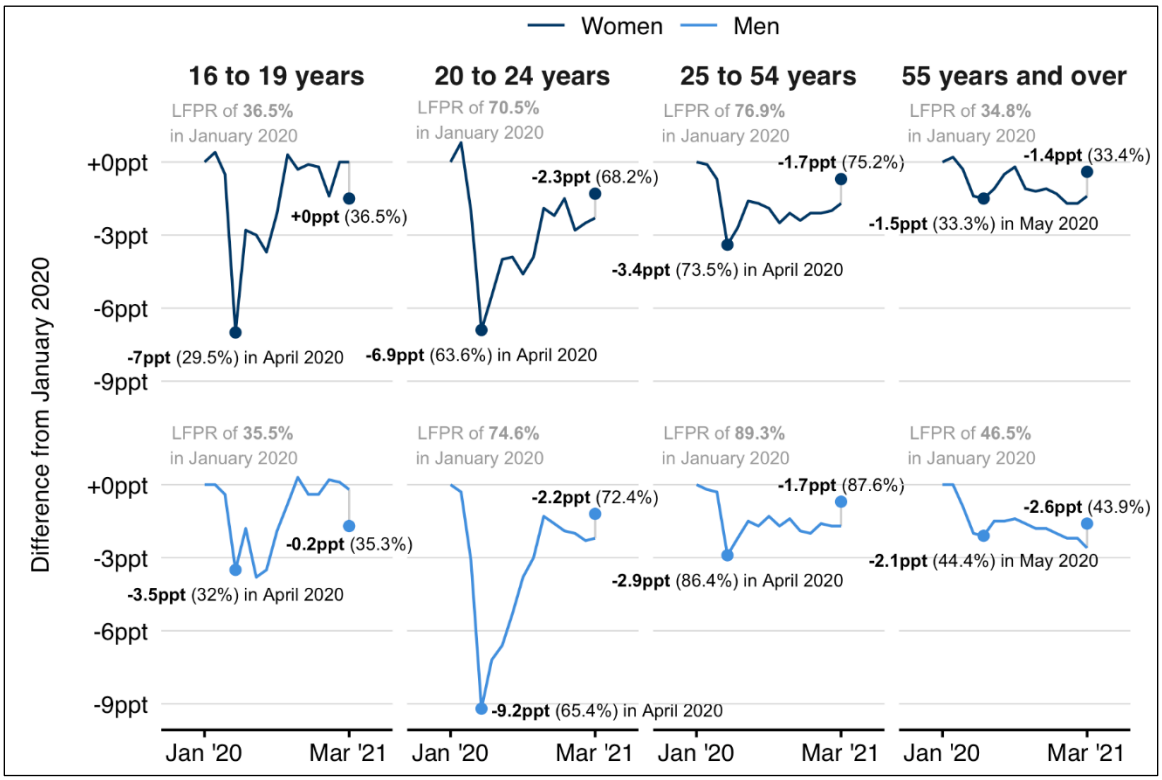
Notes: LFPR = Labor Force Participation Rate; ppt = percentage points. Changes in LFPR since January 2020 have not been tested for statistical significance.

Labor Force Participation Rate by Age and Sex

Figure 12 displays the change in the labor force participation rate since January 2020 by age and sex. Between January 2020 and April 2020, every group experienced a decline in their labor force participation rate. Women aged 16 to 19 (-7.0 percentage points) and men aged 20 to 24 (-9.2 percentage points) experienced the largest declines in labor force participation between January 2020 and April 2020. Men and women in the 25-54 and 55-and-older age groups experienced smaller declines in labor force participation but have seen their recovery stagnate. All groups except for men aged 16 to 19 remained below their January 2020 participation rates in March 2021.

Figure 12. Labor Force Participation Rate by Age and Sex

Seasonally adjusted monthly data for January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

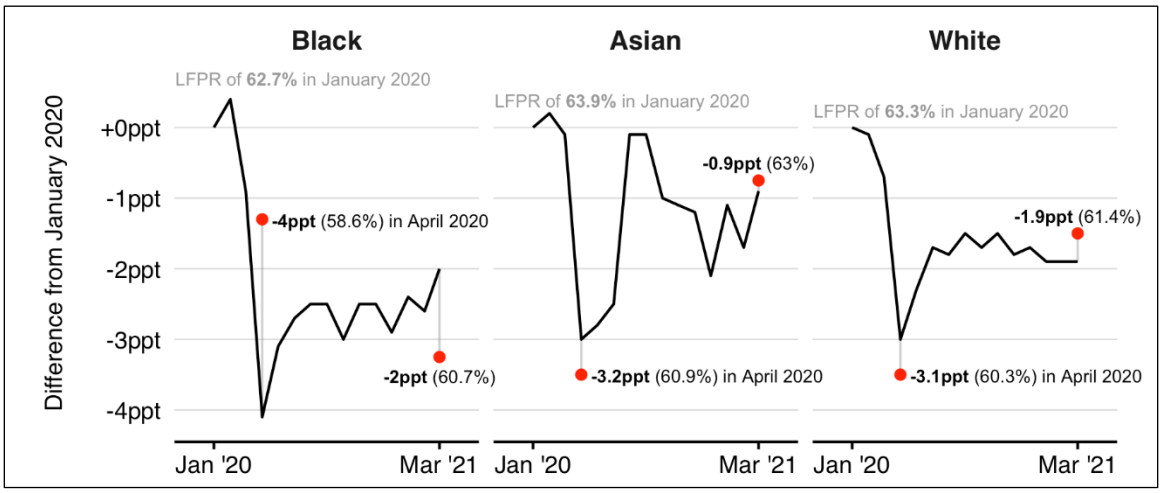
Notes: LFPR = Labor Force Participation Rate; ppt = percentage points. Changes in LFPR since January 2020 have not been tested for statistical significance.

Labor Force Participation Rate by Race and Ethnicity

Figure 13 displays the change in the labor force participation rate for the Black, Asian, and White racial groups since January 2020. Between January 2020 and April 2020, each group experienced a sharp decline in their labor force participation rate. In March 2021, the participation rate for each group remained below its January 2020 value. In particular, participation rates for Black individuals (-2 percentage points) and White individuals (-1.9 percentage points) remained well below their January 2020 values in March 2021.

Figure 13. Labor Force Participation Rate by Race

Seasonally adjusted monthly data from January 2020 to March 2021



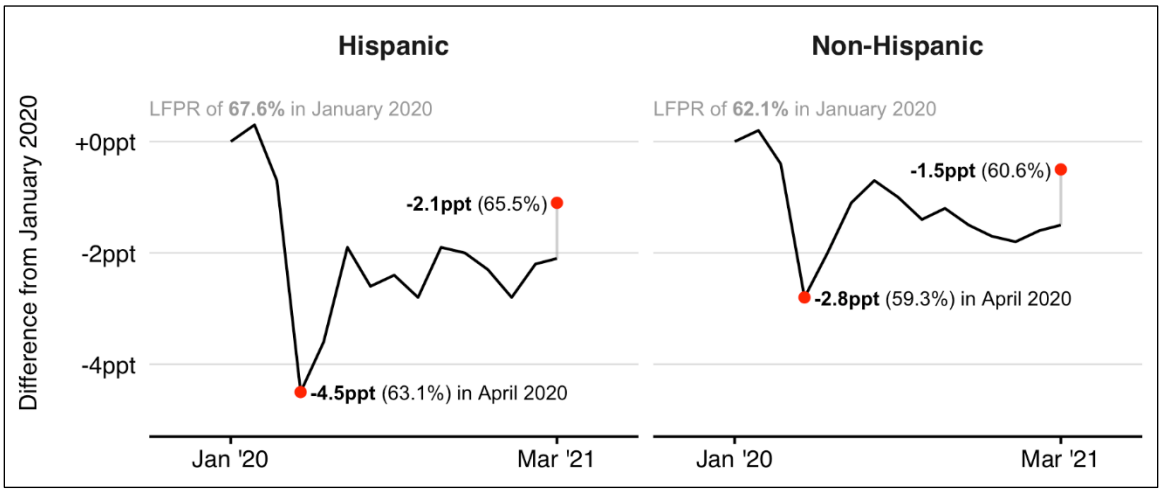
Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: LFPR = Labor Force Participation Rate; ppt = percentage points. Changes in LFPR since January 2020 have not been tested for statistical significance.

Individuals of any race can identify as Hispanic or non-Hispanic. The data on labor force participation rate for these two ethnic groups are not seasonally adjusted. Therefore, this report is constrained to a comparison across values for January 2020 and the most recent month for which the data are available. This comparison shows that Hispanic individuals had higher participation rates in both January 2020 and March 2021 than non-Hispanic individuals, but the decline in labor force participation over this period was greater for Hispanic persons. The labor force participation rate for Non-Hispanic individuals in March 2021 was 1.5 percentage points below its value for January 2020. For Hispanic individuals, the participation rate in March 2021 was 2.1 percentage points below its January 2020 value.

Figure 14. Labor Force Participation Rate by Hispanic Origin

Non-seasonally adjusted monthly data, January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

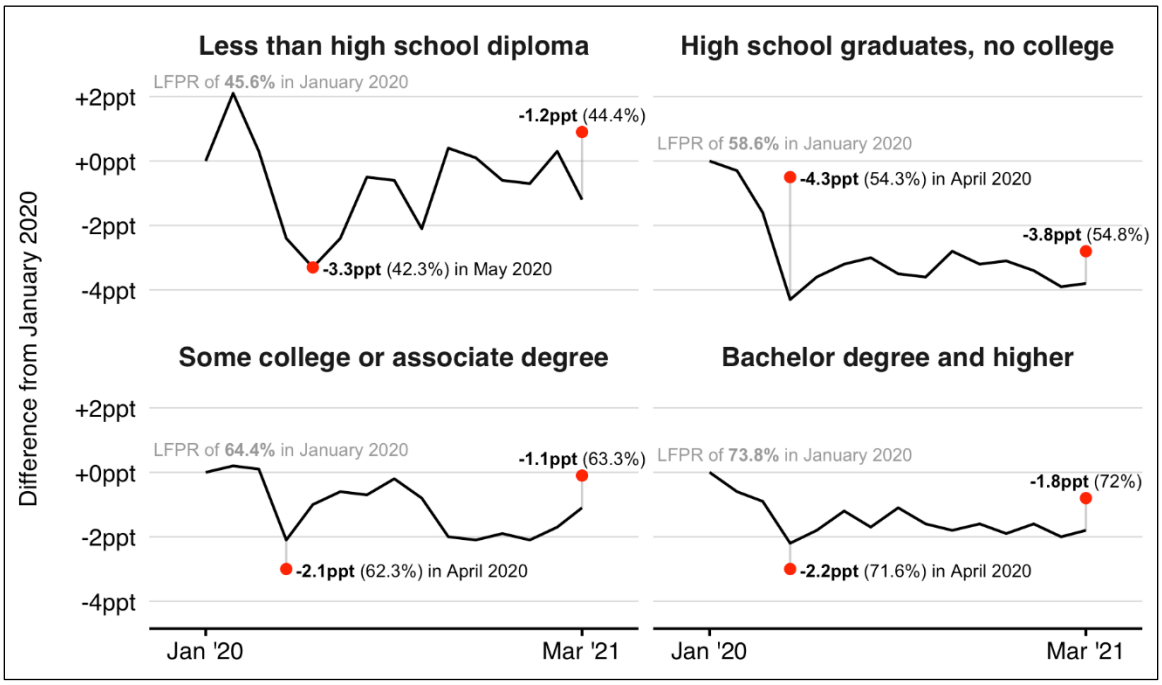
Notes: LFPR = Labor Force Participation Rate; ppt = percentage points. Statistical significance is not calculated for these trends and it is unclear how dependent these trends are on regular seasonal variation. Changes in LFPR since January 2020 have not been tested for statistical significance.

Labor Force Participation Rate by Educational Attainment

Figure 15 displays the difference in the labor force participation rate from its January 2020 level for groups with different levels of educational attainment. Labor force participation fell for all groups between January 2020 and April 2020. The largest decline was experienced by those with a high school diploma (-4.3 percentage points). In March 2021, every group remained below their labor force participation rate in January 2020. Specifically, those with a high school diploma (-3.8 percentage points) and a bachelor's degree or higher (-1.8 percentage points) had participation rates that remained close to those in April 2020.

Figure 15. Labor Force Participation Rate by Educational Attainment

Seasonally adjusted monthly data for January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: LFPR = Labor Force Participation Rate; ppt = percentage points. These data reflect the civilian population that is 25 years and older. Changes in LFPR since January 2020 have not been tested for statistical significance.

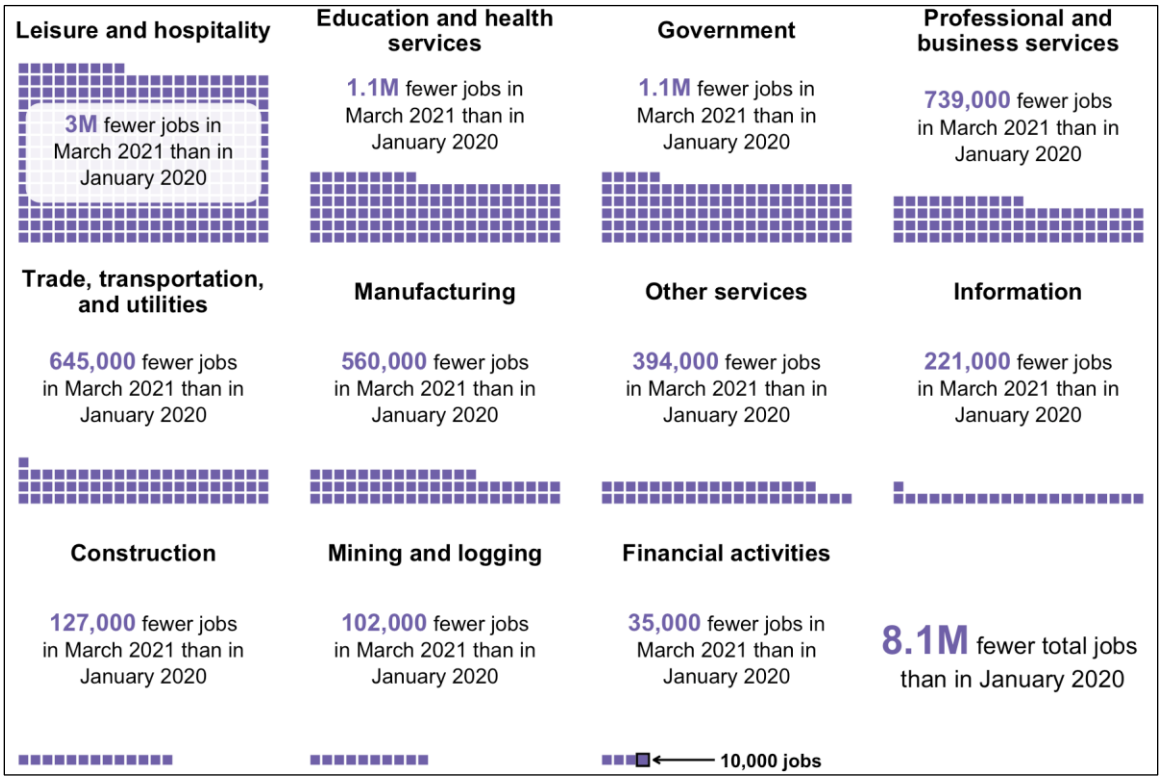
COVID-19 Recession: Nonfarm Payrolls

The number of nonfarm workers on payroll further contextualizes the relatively high unemployment rates observed during the COVID-19 pandemic. Unemployment rates and labor force participation rates do not measure the extent of job disruption occurring during the pandemic. By comparing the number of jobs before the recession to recent data, CRS can evaluate the extent of job loss and put unemployment rates into a broader economic context.

Figure 16 displays the gap between the January 2020 and March 2021 employment levels for all supersector industries in the North American Industry Classification System (NAICS).[35] In March 2021, there were 8.1 million fewer jobs than there were in January 2020. The largest portions of this gap were made up by the leisure and hospitality (3.0 million), education and health services (1.1 million), and government (1.1 million) sectors. While losses were concentrated in a handful of major sectors, employment gaps existed for all sectors in March 2021.

Figure 16. Change in Employment by Sector

Seasonally adjusted data for March 2021; relative to January 2020



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: A single purple box reflects 10,000 jobs. Data for March 2021 are preliminary. "Other services" is a BLS aggregation of three subsectors: repair and maintenance, personal and laundry services, and membership associations and organizations.

Trends in Employment in the Private Sector

Figure 17 displays the monthly change in seasonally adjusted nonfarm jobs from January 2020 to March 2021 for six major sectors of the private sector.[36] Job loss peaked in April 2020 for all sectors presented in the figure. The leisure and hospitality sector experienced a higher peak in job losses (-8.3 million) than any other sector. Additionally, the leisure and hospitality sector had the largest employment gap in March 2021 (-3.0 million) than any other sector in that month. The

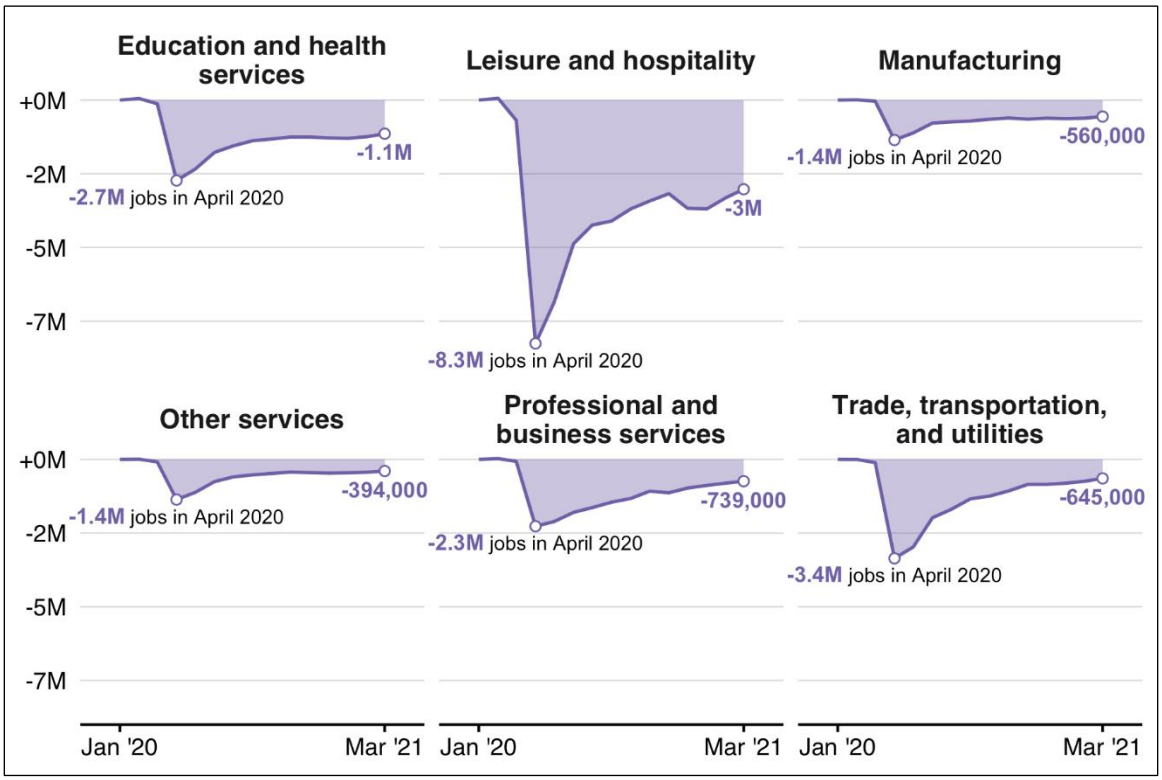
[35] Sectors are defined by the NAICS and can be found at https://www.bls.gov/iag/tgs/iag_index_naics.htm.

[36] For the purpose of this visualization, CRS selected the six private sectors with the largest (i.e., most negative) average losses in seasonally adjusted nonfarm jobs from January 2020 to March 2021.

trade, transportation, and utilities sector had the second largest peak in job losses (-3.4 million), followed by education and health services (-2.7 million), professional and business services (-2.3 million), other services[37] (-1.4 million), and manufacturing (-1.4 million). In March 2021, all six of these sectors had fewer jobs compared to their respective employment levels in January 2020.

Figure 17. Job Loss During the COVID-19 Recession in the Private Sector

Seasonally adjusted monthly data for January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: M = million. Data for February and March 2021 are preliminary. Changes in employment since January 2020 have not been tested for statistical significance.

Trends in Employment by Government Sector

Figure 18 displays the monthly change in seasonally adjusted nonfarm jobs from January 2020 to March 2021 for three levels of government employment: federal, state, and local. While the number of federal government jobs increased during 2020 (peaking at +309,000 jobs in August),[38] state and local governments both experienced significant job losses. Local governments experienced the largest job losses of any government level, peaking at 1.2 million jobs lost in May. There were 949,000 fewer local government jobs in March 2021 than in January 2020. State government jobs fell throughout 2020 and peaked in October (-340,000 jobs). In

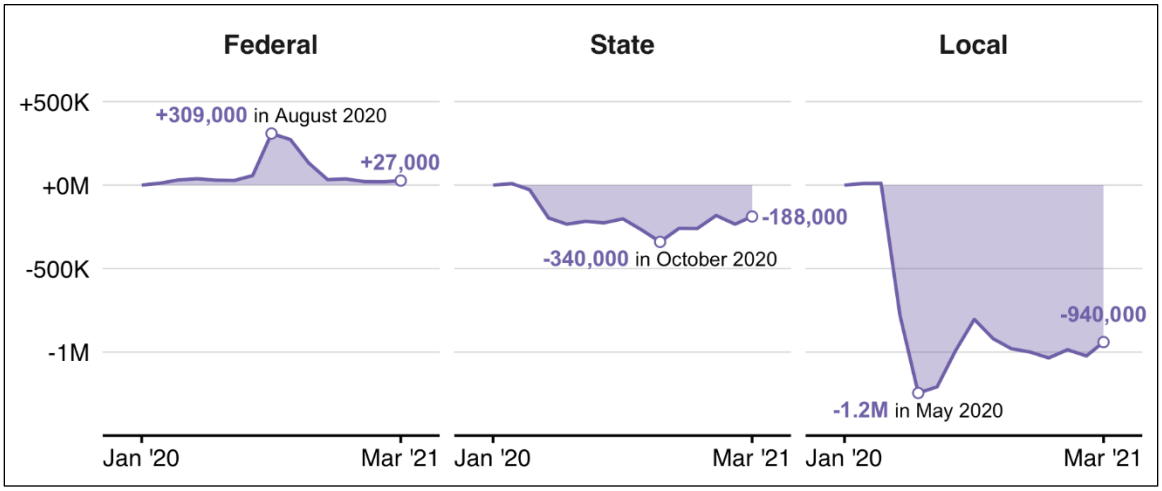
[37] "Other services" is a BLS aggregation of three subsectors: repair and maintenance, personal and laundry services, and membership associations and organizations. Sectors are defined by the North American Industry Classification System (NAICS) and can be found at https://www.bls.gov/iag/tgs/iag_index_naics.htm.

[38] This peak could be due to temporary employment for those conducting activities related to the 2020 Decennial Census.

March 2021, state government employment was 188,000 jobs below its January 2020 employment level.

Figure 18. Job Loss During the COVID-19 Recession in the Public Sector

Seasonally adjusted monthly data for January 2020 to March 2021



Source: Created by CRS using data from the Bureau of Labor Statistics (BLS). Extracted using the Labor Force Statistics data series on https://www.bls.gov/data/.

Notes: M = million. Data for February and March 2021 are preliminary. Changes in employment since January 2020 have not been tested for statistical significance.

Data Limitations and Caveats

National level data presented in this report are from the Current Population Survey (CPS) or Current Employment Statistics (CES) survey and state level data are from the Local Area Unemployment Statistics (LAUS) program. The CPS is a sample survey of about 60,000 households conducted by the Census Bureau for BLS. The CES is a sample survey of about 144,000 business and government agencies conducted by BLS. LAUS is a BLS program that calculates state-level unemployment rates using multiple data sources, including the CPS and CES.[39]

Estimates from all three sources are subject to sampling and nonsampling error.[40] Sampling error occurs when the survey sample is not representative of the underlying population, while nonsampling error describes errors often associated with data collection.[41] Sampling error is a result of statistical theory that underlies any estimate generated through surveys. While the CPS and CES samples are selected to be representative of the nation, the possibility remains that it does not accurately estimate certain nationwide statistics.[42] Nonsampling error refers to all

[39] In addition to the CPS, LAUS uses the Current Employment Statistics survey, state Unemployment Insurance claims counts, the Quarterly Census of Employment and Wages program, and data from the Census Bureau's American Community Survey and Population Estimates Program; https://www.bls.gov/lau/laumthd.htm.

[40] For further discussion of error, see the "Reliability of the Estimates" section of the Employment Situation report's Technical Note at https://www.bls.gov/news.release/empsit.tn.htm. For a description of LAUS estimation procedures, see https://www.bls.gov/lau/laumthd.htm.

[41] For more information, see https://www.bls.gov/opub/hom/topic/error-measurements.htm.

[42] For more information, see https://www.bls.gov/opub/hom/topic/sampling.htm.

sources of error that are not due to sampling. They can result from incorrect or biased collection and processing of the data. For example, nonsampling error can occur if a surveyor incorrectly records responses or a respondent incorrectly responds to a question.

COVID 19 Pandemic-Related Data Issues

The COVID-19 pandemic increased nonsampling error in the CPS and CES due to a number of factors. For example, BLS reported that both surveys experienced lower response rates.[43] BLS additionally noted that business closures initially interfered with the ability for businesses to respond to CES inquiries. (The bureau has since made statements affirming the robustness of its CPS and CES estimates despite these lower response rates.[44]) Furthermore, BLS detected an error in its CPS categorization procedures that likely underestimated unemployment early in the recession.[45] Specifically, large numbers of workers were classified as *employed but not at work* when they should have been recorded as *unemployed on temporary layoff*.

Per agency policy, BLS did not adjust CPS records, but it did provide adjusted estimates of the unemployment rate. This report does not use these adjusted estimates as they are not official BLS estimates. BLS estimated that its categorization error underestimated seasonally adjusted unemployment by roughly 0.9 percentage points in March 2020, 4.8 points in April, 3.1 in May, 1.2 in June, 0.9 in July, 0.7 in August, 0.4 in September, 0.3 in October, 0.4 in November, 0.6 in December, and 0.6 in January 2021. In February 2021, the error underestimated seasonally adjusted unemployment by an estimated 0.5 percentage points. These estimates evaluate what the impact would be in the worst-case scenario, as the true impact is uncertain. BLS released a statement regarding the underestimate, noting that, "these assumptions probably overstate the size of the misclassification error."[46] In later months, BLS made efforts to correct this classification error during data collection and processing.[47]

Additionally, BLS recently identified a data processing error in the CES, which began in July 2020 but remained undetected. The error unintentionally caused some businesses to be inappropriately included in the sample and used for estimates. BLS is resolving the issue and has not yet released guidance on the impact of the issue on employment estimates.[48]

LAUS was impacted by both the low response rate and the categorization error due to its connection with the CPS and CES. Considering that LAUS is dependent on a number of other data sources that were impacted by COVID-19 in their own right, the net effect of the pandemic on LAUS estimates is unknown.[49]

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[43] See the FAQ BLS produced on this topic for more on the impact of COVID-19 on data collection by month at https://www.bls.gov/covid19/home.htm.

[44] See https://www.bls.gov/covid19/employment-situation-covid19-faq-april-2020.htm.

[45] See CRS Insight IN11456, *COVID-19: Measuring Unemployment*, by Lida R. Weinstock.

[46] See https://www.bls.gov/covid19/employment-situation-covid19-faq-january-2021.htm#ques3.

[47] Among other protocols, the Census Bureau monitored survey responses in August and marked those they felt could be misclassified. These responses were then re-evaluated. For more on BLS and Census efforts to reduce the misclassification, see https://www.bls.gov/covid19/employment-situation-covid19-faq-august-2020.htm#ques9.

[48] For the BLS notice on this error, see https://www.bls.gov/ces/notices/2021/ces-sample-rotation-issue-caused-by-pandemic-related-challenges-to-enrollment.htm.

[49] For more on the impacts of COVID-19 on LAUS and its inputs, see https://www.bls.gov/covid19/effects-of-covid-19-pandemic-on-employment-and-unemployment-statistics.htm.

General Data Caveats

Other data considerations include the following:

- *Lack of seasonally adjusted data*: Seasonally adjusted data are published by BLS for selected labor force indicators to better account for seasonality in the trends.[50] Without seasonal adjustments, it is difficult to distinguish between trends related to the recession and seasonal trends. Where adjusted data are not available, this report presents unadjusted data that do not account for underlying seasonal variation.
- *Reference week:* In general, CPS data are collected for the calendar week containing the 12th of the month. CES data are collected for the pay period including the 12th of the month. This could lead to incongruity between actual labor force conditions over the course of a month and the conditions observed, as well as inconsistencies between CES-reported data and CPS-reported data.
- *CPS and LAUS unemployment rate comparability*: While the LAUS program uses the same unemployment concepts as the CPS and uses the CPS as an input, LAUS estimates are based on multiple sources (including administrative data). Consequently, CPS and LAUS estimates are not directly comparable.

Author Information

Gene Falk, Coordinator
Specialist in Social Policy

Paul D. Romero
Research Assistant

Jameson A. Carter
Research Assistant

Isaac A. Nicchitta
Research Assistant

Emma C. Nyhof
Research Assistant

Acknowledgments

The four Research Assistants in CRS's Domestic Social Policy Division were responsible for the analysis and writing of this report, under the guidance of Gene Falk, Specialist in Social Policy. Questions from congressional staff should be directed to Mr. Falk.

[50] See CPS and LAUS documentation for more on seasonal adjustment at https://www.bls.gov/cps/seasonal-adjustment-methodology.htm and https://www.bls.gov/lau/lauseas.htm.

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