schultz family foundation

Mathematica
Progress Together

Youth Unemployment in the Second Year of the COVID-19 Pandemic

Economic recovery and racial and geographic disparities

June 2022

Hande Inanc

Summary: Drawing on a timely and detailed data series, this report describes the trends in youth unemployment rates in 2021, as the COVID-19 pandemic entered its second year. At the national level, 2021 recorded signs of a resilient economic recovery for youth, as the youth unemployment rate steadily declined. However, when looking separately at trends by gender, race, ethnicity, and geographic location, youth unemployment rates fluctuated considerably throughout the year, and the decline in unemployment rates was uneven across groups. Unemployment declined more steadily among White and Hispanic youth, whereas seasonal jumps were more pronounced among Black and Asian youth. State-level data show that youth unemployment rates varied significantly both across states and within each state over the course of the year, which was driven, in part, by the number of new COVID-19 cases per capita at the state level. Overall, youth unemployment declined in all states and metro areas relative to the 2020 rates, but the decline was more pronounced in rural parts of the country.

Suggested citation: Inanc, H. "Youth Unemployment in the Second Year of the COVID-19 Pandemic: Economic recovery and racial and geographic disparities." Cambridge, MA: Mathematica, June 2022.

Acknowledgements: Many people made important contributions to this study. The author thanks Jonah Deutsch for reviewing the report; Serge Lukashanets, Kerry Schellenberger, and Addison Larson for expert programming in generating study findings; Megan Caruso for support throughout the project and finalizing the report; Jennifer Brown for editing assistance; Yvonne Marki and Brigitte Tran for graphic design; and Colleen Fitts and Sharon Clark for producing the report. The author also thanks Schultz Family Foundation, particularly Ellen Gardner and Marie Groark, for their guidance and support throughout the study.

Disclaimer: The analysis reported herein was performed pursuant to a grant from the Schultz Family Foundation. The opinions and conclusions expressed are solely those of the author and do not represent the opinions of the Foundation.

Contents

Figures

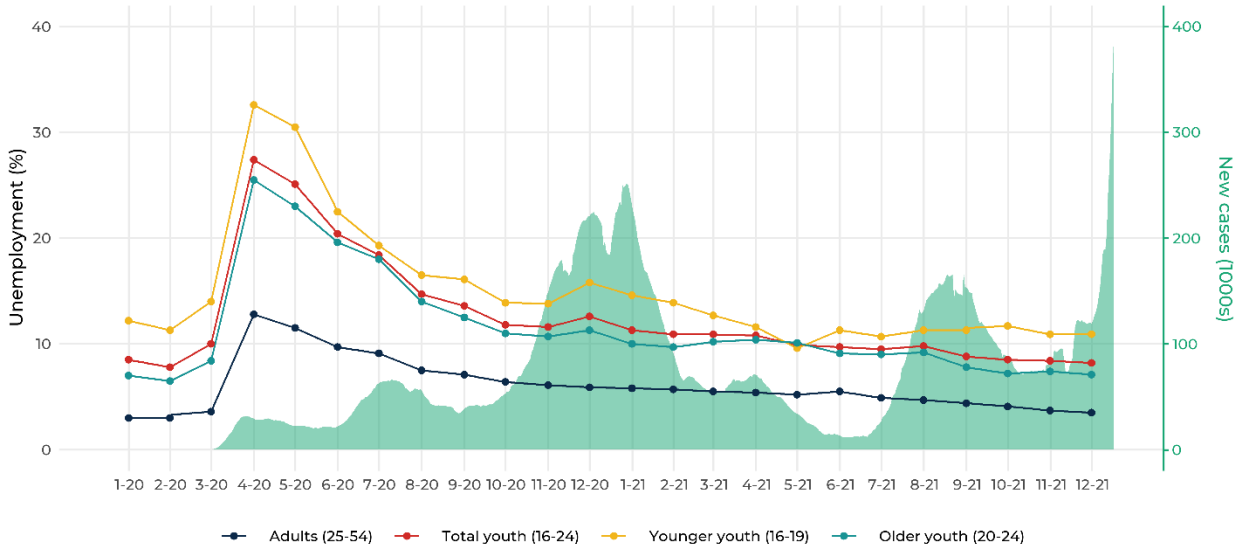
Appendix: Data Tables

Introduction

When the coronavirus disease (COVID-19) pandemic broke out in March 2020, unemployment among youth (defined in this report as those ages 16 to 24) soared. Between the first and second quarters of the year, the number of unemployed youth increased by nearly 3 million—from 1.8 million in quarter 1 to 4.7 million in quarter 2 (Bureau of Labor Statistics [BLS] 2022a). In parts of the country where states introduced stricter COVID containment measures, youth unemployment rates were higher (Inanc 2021). Moreover, these containment measures had a greater influence on unemployment among youth than adults. This unprecedented increase in youth unemployment was due to youth's concentration in retail and hospitality jobs that were affected by mandates to contain the virus, combined with workers' inability to telework in these jobs (Inanc 2021). Among youth, the increase in unemployment was particularly pronounced among female youth and Asian youth—groups that tend to have lower unemployment rates in typical recessions (Albanesi and Kim 2021; Alon et al. 2020a, 2020b; Bennett 2021; Kim et al. 2021).

Despite setbacks in vaccination efforts and emerging new variants, the second year of the pandemic showed strong signs of economic recovery. As businesses reopened and the American Rescue Plan distributed millions of dollars of relief funds, employers added 5.3 million new jobs to the economy (BLS 2022b), workers with low incomes experienced remarkable wage gains (Federal Reserve Bank of Atlanta 2022), and the poverty rate is projected to go below pre-pandemic levels (Macartney et al. 2022). In this economic context, youth unemployment also plummeted. Regardless of the surges in COVID case counts after the delta and omicron variants, in 2021, youth unemployment decreased gradually, from 11.3 percent in January (corresponding to approximately 2.3 million youth) to 8.2 percent in December (corresponding to 1.7 million youth) (Figure 1).

Figure 1. Trends in monthly unemployment rates by age group, from January 2020 to December 2021



Source: Unemployment rates: Mathematica compilation based on the Bureau of Labor Statistics' monthly Labor Force Statistics from the Current Population Survey. Number of new cases: Data on new daily confirmed COVID-19 cases from Ritchie et al. (n.d.).

Note: Estimates for unemployment rates account for seasonal patterns. Number of new COVID-19 cases reflect seven-day averages.

This overall trend, however, masks important differences across groups and geographic areas. Drawing on a timely and geographic- and population-specific data series that Mathematica developed in partnership with the Schultz Family Foundation, this report describes the trends in youth unemployment in 2021, as the COVID-19 pandemic entered its second year. Key findings include the following:

- Overall, 2021 recorded signs of a resilient economic recovery for youth, as the national youth unemployment rate steadily declined from 11.3 percent to 8.2 percent.

- State-level data show that youth unemployment rates varied significantly across states, and within each state, over the course of the year. The variation was driven, in part, by the number of new COVID-19 cases per capita at the state level, which were more strongly associated with youth unemployment rates than with the overall unemployment rate.

- In 2021, youth unemployment rates decreased in every state. In fact, in 14 states, most of them rural, youth unemployment rates dropped below their 2019 levels. However, in other states—Colorado, Hawaii, Maryland, and Massachusetts—youth unemployment in 2021 remained well above the pre-pandemic levels.

- According to the annual estimates in 50 metro areas in 2021, youth unemployment rates varied from 2.5 percent in Provo, to 14.6 percent in Baltimore. In 19 of these metro areas, which are all large and urban areas, youth unemployment was higher than the national average, whereas it was less than 5 percent in the relatively smaller and more rural metro areas of Burlington (Vermont), Little Rock, Oklahoma City, Ogden, Provo, and Sioux Falls.

- When looking separately at trends by gender and race, youth unemployment rates fluctuated considerably throughout the year. This was not the case when examining demographic trends among older workers ages 25 to 54.

- Among groups of youth, unemployment declined more steadily among White and Hispanic youth, whereas seasonal jumps were more pronounced among Black youth and Asian youth.

- The seasonality of this fluctuation, in part, was associated with the type of jobs youth looked for throughout the year. The share of those reporting that they wanted a part-time job, instead of a full-time one, was remarkably higher among Asian youth in the summer.

- Black youth continued to have the highest unemployment rates in 2021, followed by Hispanic youth. The unemployment rate among Asian youth, however, who had the lowest unemployment levels before the pandemic, remained 3.4 percentage points higher than pre-pandemic levels and 1.2 percentage points higher than the rate for White youth.

The remainder of this report is organized as follows. First, it presents data on trends in youth unemployment at the national level. Then, it turns to differences in youth unemployment across states and in metro areas. The report concludes with a summary of key findings.

Data for tracking youth unemployment during COVID-19

To track youth unemployment during and in the aftermath of the COVID-19 pandemic, Mathematica, with support from the Schultz Family Foundation, has developed a publicly available data series and an accompanying data visualization tool on youth unemployment. Policymakers, foundations, and other key advocacy groups that invest in programs for youth not in education, employment, or training can use these data to further understand the economic challenges young people are facing and target their resources more effectively.

Using microlevel data from the monthly Current Population Survey and compiling monthly statistics from the Bureau of Labor Statistics' Labor Force Surveys, Mathematica provides estimates on youth unemployment at the national level by population groups, at the state level, and in select metro areas. These estimates cover the period beginning in 2010 and are updated monthly.

National-level data: This series includes monthly and annual youth unemployment rates by age group (16–19, 20–24, and 16–24), gender, and race and ethnicity (White, Black or African American, Asian, and Hispanic). The series also provides unemployment rates for adults ages 25 to 54 for comparison.

State-level data: This series covers annual youth unemployment rates at the state level, and three-month average youth unemployment rates in 30 selected states.

Metro-level data: This series covers annual youth unemployment rates in 50 selected metro areas, semiannual youth unemployment rates in 25 selected metro areas, and three-month averages for youth unemployment in 6 selected large metro areas.

Explore interactive dataviz

Download the data tables

Key definitions

Being unemployed: In this report, we use the Bureau of Labor Statistics' (BLS) definition of unemployment, which refers to people who are not working and either looking for work (job seekers) or have been temporarily separated from work (people on layoff). BLS classifies people without a job but available and actively looking for work during the reference week (the week of the 12th every month) as unemployed.

Unemployment rate: We used the standard definition of the unemployment rate, which is the share of unemployed people—as defined above—in the total labor force. The total labor force includes people who are employed and people who are unemployed. People who are not employed but do not meet the criteria for being unemployed as defined above, such as those not seeking work, are considered out of the labor force and therefore do not contribute to the unemployment rate.

Marginally attached workers: BLS defines marginally attached workers as people who are not in the labor force, want and are available for work, and have looked for a job sometime in the prior 12 months; however, they had not searched for work in the prior four weeks.

Discouraged workers: According to the BLS's definition, these are a subgroup of marginally attached workers who are not currently looking for work specifically because they believe no jobs are available for them or there are none for which they would qualify.

Part-time status: BLS defines part-time work as working 1 to 34 hours per week.

Seasonal patterns: Unemployment rates fluctuate significantly over the course of a year due to seasonal events such as holidays and the school calendar. BLS uses a statistical procedure to remove seasonal fluctuations to make it easier to observe cyclical and other economic trends. However, for some data series, BLS only provides estimates that do not account for seasonal patterns, such as data examined separately by age and race. This report relies on estimates that both do and do not account for seasonal patterns, depending on data availability.

Trends in youth unemployment at the national level

National trends in 2021 show that unemployment among prime-age workers—those ages 25 to 54—decreased somewhat gradually across all groups. Among youth ages 16 to 24, however, rates fluctuated throughout the year.

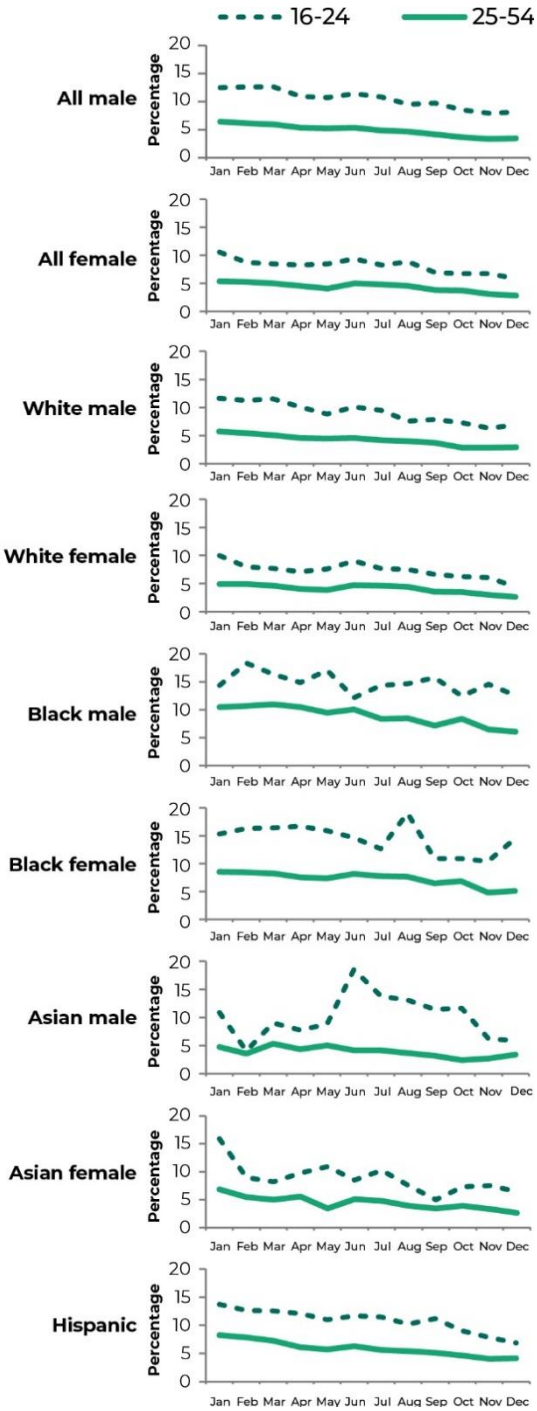
One of the defining features of unemployment among youth is its seasonality, with many youth typically searching for and finding jobs in spring through late summer, and to a lesser degree around the holiday season in late December. In 2021, youth unemployment rates continued to fluctuate considerably (Figure 2).

In 2021, youth unemployment trended downward for White and Hispanic youth. Among White male youth, despite a slight increase during summer months, unemployment gradually declined from 12.0 to 7.1 percent by the end of the year. Similarly, the unemployment rate among female youth declined by 5.8 percentage points, from 10.4 percent to 4.6 percent (see A.1 in the appendix). Unemployment among Hispanic youth also trended downward and intensified in the last quarter of the year.

However, seasonal jumps were more pronounced among Black youth and Asian youth. The unemployment rate among Black youth remained high with bumps along the way. Comparing the beginning and end of the year, there was little change in unemployment among Black youth: 14.4 to 12.6 percent among male youth and 15.6 to 14.7 for female youth (see Table A.1 in the appendix). Asian male youth experienced a surge in unemployment in summer 2021, similar to the trend in 2020 (see Inanc 2021, p. 7), which then declined to 6.1 percent by the end of the year. Unemployment among Asian female youth declined from a high 16.3 percent to 6.6 percent at the end of the year, with fluctuations throughout the year.

Data show differences by race and ethnicity in terms of the type of work that unemployed youth looked for in 2021. Throughout the year, a majority of unemployed youth who are White, Black, or Hispanic reported they looked for full-time work (Figure 3). The share of those looking for *part-time work* ranged from 16.1 percent in the lowest month to 26.0 percent in the highest month

Figure 2. Unemployment rates in 2021 by age, gender, race, and ethnicity

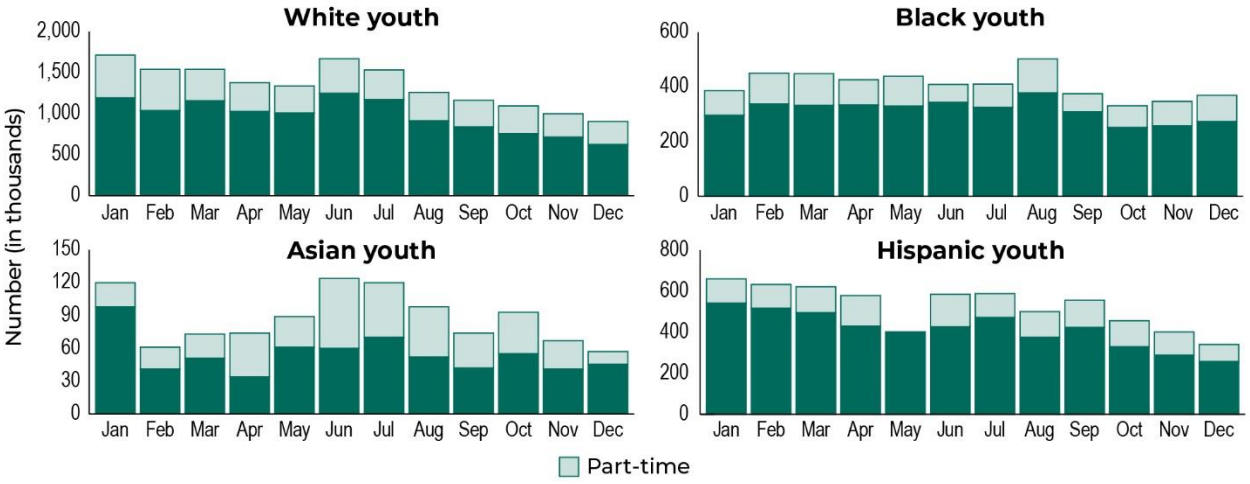


Source: Mathematica compilation based on the Bureau of Labor Statistics' monthly Labor Force Statistics from the Current Population Survey.

Note: Estimates do not account for seasonal patterns. Data by gender are not available for Hispanic youth.

for Black youth, 18.0 percent to 28.2 percent for Hispanic youth, and 23.7 percent to 32.7 percent for White youth (see Table A.2 in the appendix). In contrast, among unemployed Asian youth, there was a large variation—18.3 percent to 54.1 percent—in the share of those looking for part-time work. This was particularly driven by the large increase in the number of part-time job seekers among Asian youth during the summer months. These racial differences, in part, also explain the fluctuations among youth unemployment presented in Figure 2.

Figure 3. Number of youth (in thousands) looking for job in 2021, by job status



Source: Mathematica compilation based on the Bureau of Labor Statistics' monthly Labor Force Statistics from the Current Population Survey.

Note: Estimates do not account for seasonal patterns.

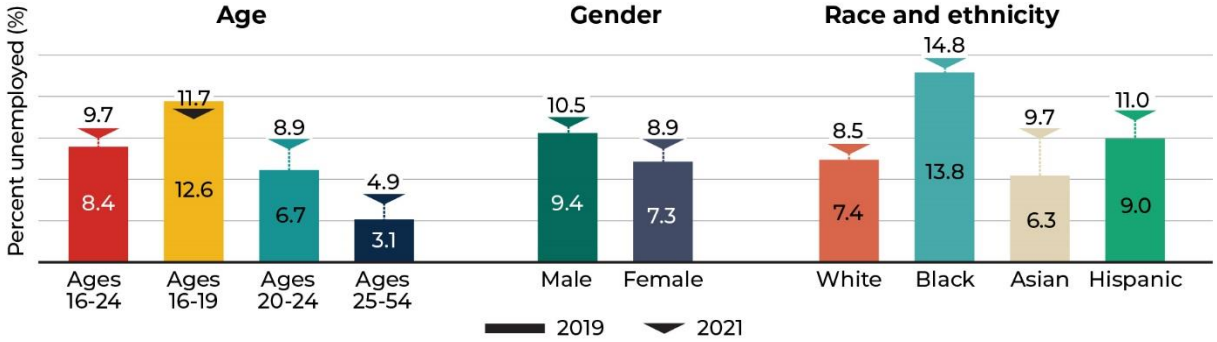
Back to old disparities?

The pandemic economy of 2020 created different disparities in youth's economic opportunities. Traditionally, male youth and Black and Hispanic youth experience higher unemployment rates, particularly during economic downturns. After the outbreak of the COVID-19 pandemic, however, female youth and Asian youth—groups that tend to have lower unemployment rates in typical recessions—experienced disproportionately higher levels of unemployment than other groups (Albanesi and Kim 2021; Alon et al. 2020a, 2020b; Inanc 2020; Kim et al. 2021; Bennett 2021). As a result, in 2020, differences by gender in annual youth unemployment rates disappeared (15.0 percent for male youth and 15.1 percent for female youth). Moreover, unemployment among Asian youth, who normally have the lowest unemployment rates, surpassed that of White youth, reaching similar levels as Hispanic youth (16.5 percent for Asian youth; 16.9 percent for Hispanic youth). These trends contributed to less variation in unemployment across groups of youth in 2020 than in 2019.

In 2021, as the economy continued to recover, unemployment declined for all groups, though more steeply for some groups than others (Figure 4). Overall, annual unemployment rates in 2021 were still higher than in 2019 for all groups except for youth ages 16 to 19. Gender disparities in youth unemployment rates nearly returned to pre-pandemic levels, as unemployment among female youth declined more rapidly than among male youth. Before the pandemic, in 2019, unemployment rate among male youth was 2.1 percentage points higher than it was among female youth, whereas in 2021 the difference was 1.6 percentage points. However, racial and ethnicity disparities in youth unemployment persisted in 2021. Black youth continued to have the highest unemployment rates in 2021, followed by

Hispanic youth. Unemployment among Asian youth declined considerably in 2021, to 9.7 percent; however, this was still 3.4 percentage points higher than pre-pandemic levels and 1.2 percentage points higher than for White youth.

Figure 4. Annual youth unemployment rates by groups of youth, 2021 versus 2019



Source: Mathematica compilation based on the Bureau of Labor Statistics' monthly Labor Force Statistics from the Current Population Survey.

Note: Estimates do not account for seasonal patterns.

Youth involuntarily out of labor force

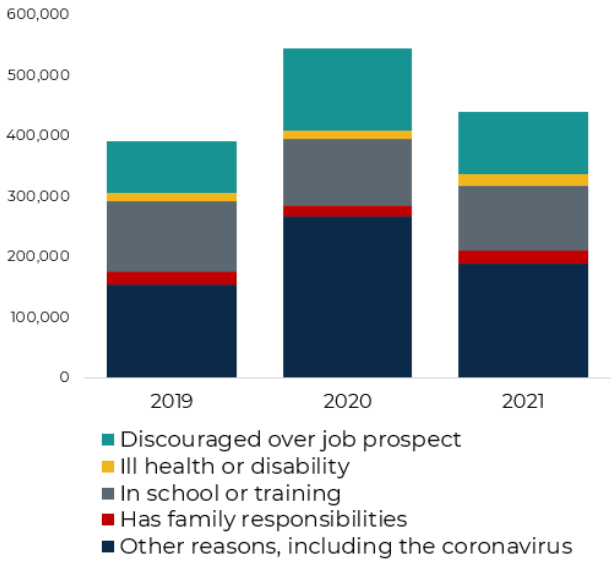
Unemployed youth include those who actively look for work in a given reference week. To fully capture the impact of the COVID-19 pandemic on youth's participation in the labor force and the extent to which the economy is recovering from its impact, it is important to consider youth who were **out of the labor force**.

In addition to the skyrocketing unemployment rate, another important characteristic of youth's labor force status in 2020 was the increase in the number of youth involuntarily out of the labor force. Specifically, the number of youth who reported that they want to work but did not search for a job increased by 400,000 from 2019 to 2020 (Inanc 2021). In 2021, the number of youth involuntarily out of the labor force decreased by a quarter of a million to 1.65 million but was still higher than pre-pandemic levels (BLS 2022c).

An important group within those involuntarily out of the labor force are the **marginally attached** workers—those who want work but are discouraged over their job prospects or did not look for work for other reasons, including the pandemic. In 2020, the number of youth marginally attached to the labor force increased from 392,000 to 454,000 but in 2021 decreased somewhat to 440,000.

The change in the size of this group is primarily driven by the jump in 2020 in the number of those who were discouraged over their job prospects (which increased by almost 60 percent) and those who wanted work but did not look for a job for other reasons, including the pandemic (by more than 70 percent) (BLS 2022c; Inanc 2021).

Number of youth (ages 16-24) marginally attached to the labor force



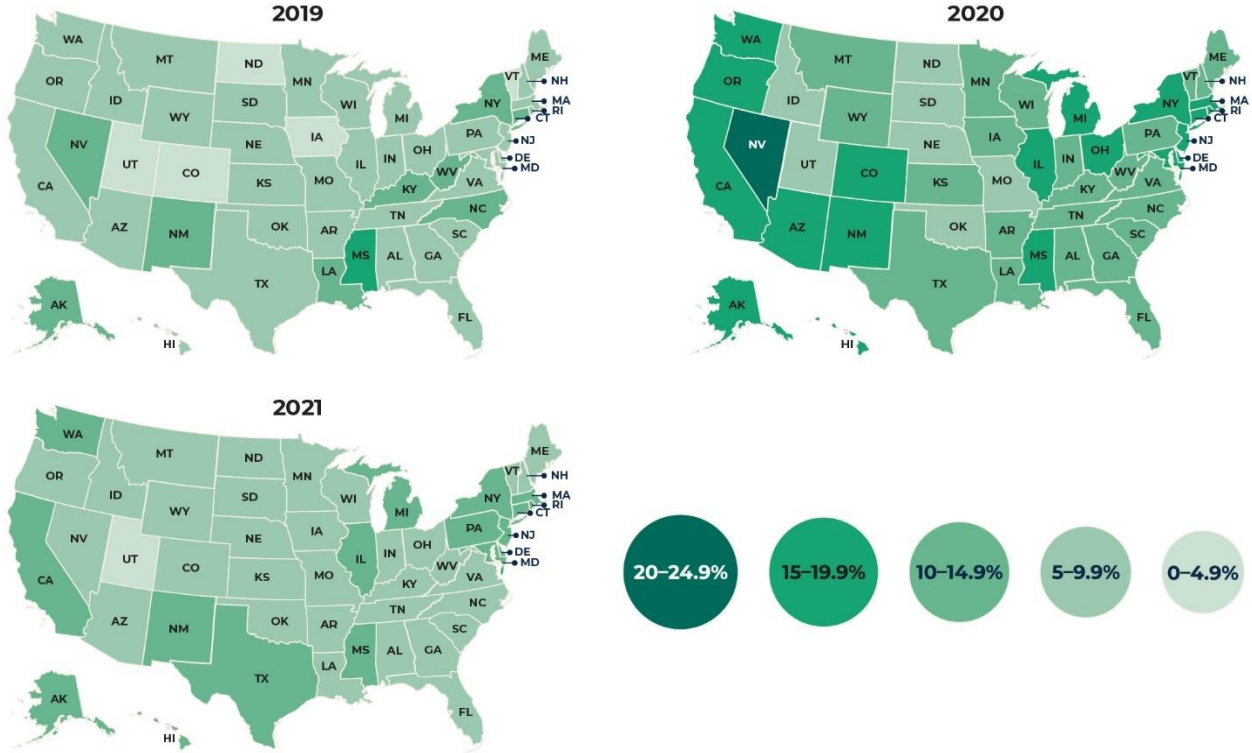
Youth unemployment at the state level

Overall, in 2021, the highest youth unemployment rates were reported in California, Connecticut, Maryland, Mississippi, New York, and Washington, all with youth unemployment rates above 12 percent. Rates in Kentucky, Louisiana, Nevada, Pennsylvania, and Wyoming were close to the national average, ranging from 9.5 to 9.9 percent. North Dakota, Oklahoma, South Dakota, and Utah had the lowest levels of youth unemployment, with less than 6 percent in each.

Compared to the first year of the pandemic, youth unemployment rates decreased in every state in 2021, as indicated with lighter green shades in Figure 5. The most significant drops in youth unemployment were recorded in Nevada (by 12.5 percentage points to 9.9 percent), Ohio (by 8.7 percentage points to 8.4 percent), Rhode Island (by 7.8 percentage points to 10.2 percent), and Illinois (by 7.7 percentage points to 11.8 percent).

In 2021, youth unemployment rates in Florida, Indiana, Maine, Missouri, Nevada, New Hampshire, and Utah returned to nearly pre-pandemic levels of 2019. Moreover, in Alabama, Alaska, Arizona, Kansas, Kentucky, Louisiana, Mississippi, Nebraska, North Carolina, Oklahoma, Oregon, South Dakota, West Virginia, and Wisconsin, most of them rural states, annual youth unemployment rates in 2021 declined below their 2019 levels. However, in other states, youth unemployment rates in 2021 remained well above pre-pandemic levels. For example, the 2021 youth unemployment rate in Massachusetts was 5.8 percentage points higher than it was in 2019. The 2021 rate was 5.1 percentage points higher in Maryland, 4.7 percentage points higher in Colorado, and 4.2 percentage points higher in Hawaii compared to 2019 rates in those states.

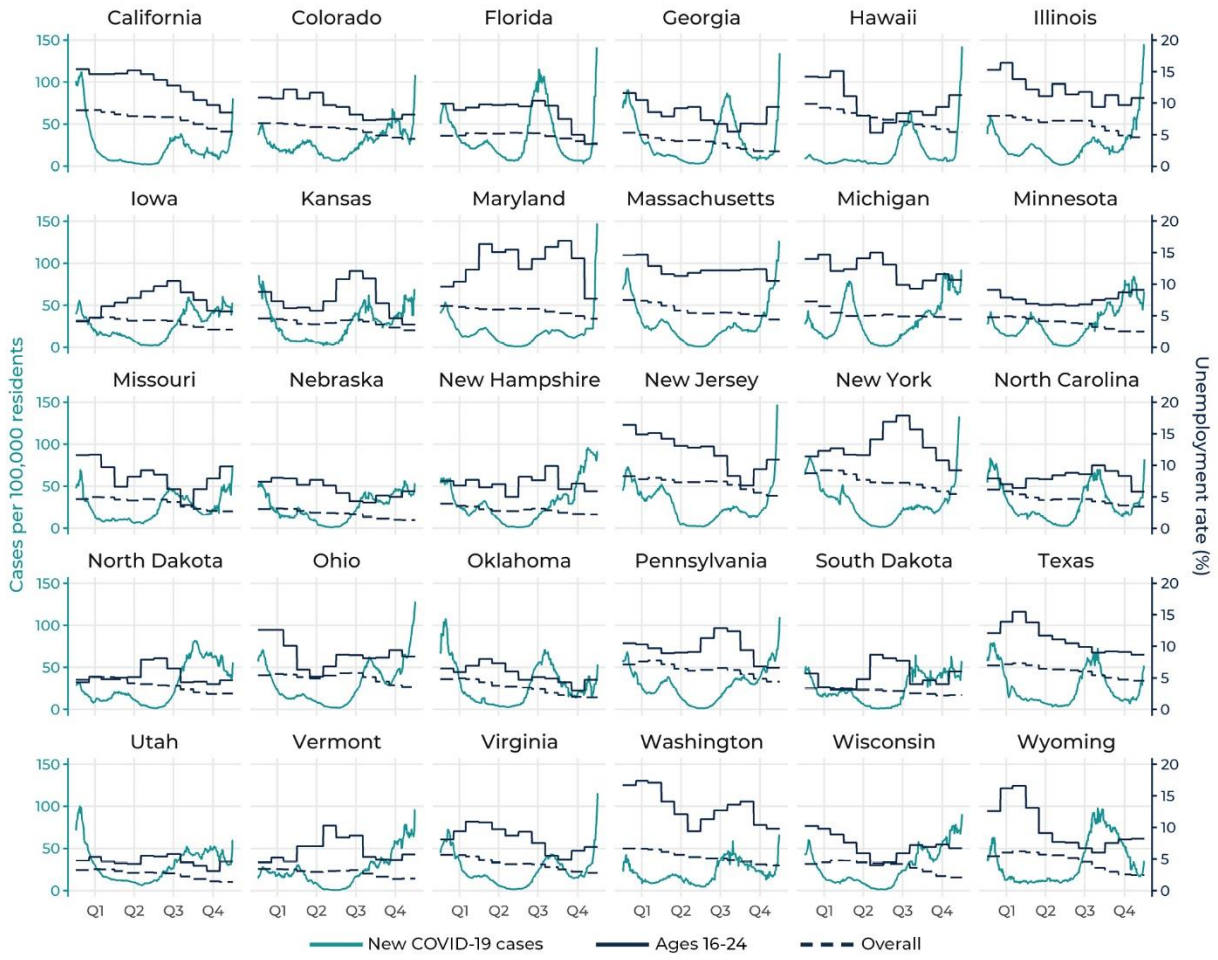
Figure 5. State-level youth unemployment rates from 2019 to 2021



Source: Mathematica estimations using the monthly Current Population Survey, based on the Bureau of Labor Statistics' definition of *unemployed* and *civil labor force*.

Even though youth unemployment at the national level gradually declined throughout 2021, trends in youth unemployment varied significantly across states. In fact, only a handful of states such as California, Florida, and Massachusetts had a downward trend somewhat similar to the nationwide pattern (Figure 6). The youth unemployment rate (solid navy blue line) fluctuated throughout the year in most states. For example, youth unemployment peaked in the second half of the year in Kansas, New York, and Pennsylvania, whereas it trended like a U-shape pattern in Hawaii, New Jersey, Washington, and Wisconsin. General unemployment rates across all ages, however, trended downward in a majority of states (dashed navy blue lines), similar to the national trend (see A.3 in the appendix for exact percentages).

Figure 6. Number of new COVID-19 cases and unemployment rate across select states, 2021



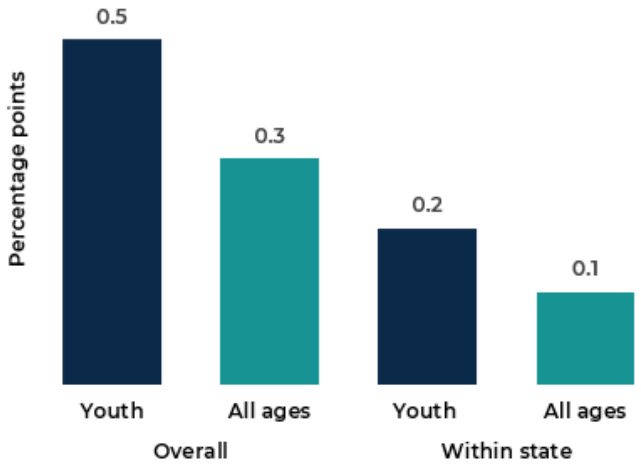
Sources: Cases per 100,000 residents: Data from *The New York Times* (2021), based on reports from state and local health agencies. Unemployment rates: Mathematica estimates based on the monthly Current Population Survey and using the Bureau of Labor Statistics' definition of *unemployed* and *civil labor force*.

Note: Teal lines represent the daily COVID-19 cases per 100,000 residents in each state. Dashed navy blue lines represent the three-month rolling average of the unemployment rate for youth ages 16 to 24, and solid navy blue lines represent the three-month rolling averages of the unemployment rate in the overall population. Estimates for monthly unemployment rates do not account for seasonal patterns.

As Figure 6 depicts, daily COVID-19 cases (teal lines) increased and decreased at different times and at different levels across states. For example, the number of new cases (per 100,000 residents) peaked in late summer in Florida, Georgia, and Hawaii and then skyrocketed again in December with the highly contagious omicron variant. In other states, for example Maryland, Massachusetts, New Jersey, and New York, daily case numbers declined rapidly with the beginning of the year and remained relatively low until the daily cases spiked at the end of 2021.

Although myriad factors affect local labor market conditions and labor force participation, our analysis suggests that the average new COVID-19 cases at the state level had stronger associations with youth unemployment rates than with the overall unemployment rate. Specifically, comparing across states and months throughout 2021, for every 10,000 of new COVID-19 cases from the previous week, the youth unemployment rate increased by 0.5 percentage point (Figure 7). Looking at variation within states over time, for every 10,000-unit increase in a state's daily cases, the youth unemployment rate increased by 0.2 percentage point. In comparison, across states, the general unemployment rate (across all ages) increased by 0.3 percentage point for every 10,000 additional COVID-19 cases and within states increased by 0.1 percentage point. In absolute terms, the differences in the strength of the association between youth and the overall population indicate that surges in new cases inflated the unemployment rate among youth more profoundly than among the overall population.

Figure 7. Increase in unemployment rate for each 10,000-unit increase in daily COVID-19 cases during 2021



Source: Author's calculations using data from Mathematica estimates based on the monthly Current Population Survey that uses the Bureau of Labor Statistics' definition of *unemployed* and *civil labor force*, and data from *The New York Times* (2021), based on reports from state and local health agencies.

Note: The Current Population Survey uses a reference week—the specific week of the month that includes the 12th—to determine the employment status of survey respondents. The analysis presented here is based on average daily COVID-19 cases one week before the reference period in each month. For each three-month observation period for unemployment rate, the analysis uses the average of daily COVID-19 cases one week before the reference week.

Estimating youth unemployment at the local level

Because our estimates are based on the monthly Current Population Survey, the geographic areas for which we can produce reliable estimates depend on the number of youth in an area and the number of months in the observation period. For shorter periods, such as quarters, we have estimates for fewer geographic areas, but the estimates are more frequent. For yearly estimates, we can cover more areas, but data are only updated once a year.

Because of these trade-offs, our three-month estimates are available for 30 states and 6 metro areas, our semiannual estimates are available for 25 metro areas, and our annual estimates are available for metro areas and all states.

Youth unemployment at the metro level

Similar to the state-level statistics, youth unemployment rates in metro areas were overall lower in 2021 than they were in 2020, but the trends varied. Estimates on semiannual rates across 25 metro areas with available data show that youth unemployment increased sharply in the first half of 2020 and gradually declined close to 2019 levels by the second half of 2021 (Figure 8). The largest decreases in youth unemployment rates were in Las Vegas (by 19.9 percentage points to 11.2 percent), Denver (by 13.7 percentage points to 9.3 percent), and Detroit (by 12.6 percentage points to 11.8 percent). Other metro areas where youth unemployment rates recovered by more than 10 percentage points, with respect to the peak of the pandemic, were San Francisco, Chicago, Los Angeles, Miami, Phoenix, and Providence. In a few metro areas, namely Miami, Providence, and Urban Honolulu, the highest level of youth unemployment was recorded not in the first half of 2020, but in the second half. Similarly, Houston experienced its highest youth unemployment rates in the first half of 2021. These trends highlight the divergence in the timeline of the pandemic, which in turn have affected the sectors in which youth are predominantly employed.

Figure 8. Semiannual unemployment rates in 25 select metro areas, 2019 to 2021

Source: Mathematica estimations using the monthly Current Population Survey, based on the Bureau of Labor Statistics' definition of *unemployed* and *civil labor force*.

Note: Monthly estimates do not account for seasonal patterns. Metro areas are defined as Metropolitan Statistical Areas (MSAs). For brevity, the figure displays the name of the major city in each metro area. For example, Dallas refers to the Dallas–Fort Worth–Arlington, Texas MSA.

Figure 9. Annual youth unemployment rates by gender in select metro areas, 2021

According to the annual estimates in 50 metro areas in 2021, overall, youth unemployment rates ranged from 2.5 percent in Provo to 14.6 percent in Baltimore, with Urban Honolulu, situating at the national level at 9.7 percent (Figure 9). In 19 of these metro areas, which are all large and urban areas, youth unemployment was higher than the national average. Conversely, youth unemployment was less than 5 percent in the relatively smaller and more rural metro areas of Burlington (Vermont), Little Rock, Oklahoma City, Ogden, Provo, and Sioux Falls.

Compared to 2020 figures (see Inanc 2021), youth unemployment in 2021 was lower in all but one metro area—Boise City, where it increased by 1.4 percentage point to 7.0 percent. In Birmingham, Kansas City, and Memphis, youth unemployment in 2021 was only slightly lower than it was in 2020, by less than 0.5 percentage point. Metro areas where the youth unemployment rate declined by more than 10 percentage points were Cincinnati, Las Vegas, Miami, and St. Louis.

Due to the stronger impact of the COVID-19 pandemic on sectors in which women are predominantly employed, in 2020, unemployment rates for male and female youth were nearly equal (15.0 and 15.1 percent, respectively). In 2021, the gender disparity returned to the pre-pandemic pattern: at the national level, male youth unemployment was 1.6 percentage points higher than female youth unemployment. A similar pattern developed in most metro areas where data are available by gender. Among the 39 metro areas for which this information is available, 26 had higher unemployment rates among male youth than female youth.

Source: Mathematica estimations using the monthly Current Population Survey, based on the Bureau of Labor Statistics' definition of *unemployed* and *civil labor force*.

Note: Metro areas are defined as Metropolitan Statistical Areas (MSAs). For brevity, the table displays the name of the major city in each metro area. For example, Dallas refers to the Dallas–Fort Worth–Arlington, Texas MSA.

In fact, the gender difference was larger than 5 percentage points in Providence, San Diego, and Washington, DC. On the contrary, unemployment among female youth was at least 2 percentage points higher than it was among male youth in Charlotte, Miami, Nashville, Orlando, Philadelphia, Pennsylvania, and Sioux Falls.

Conclusion

This report presented detailed and timely data on youth unemployment during 2021, the second year of the COVID-19 pandemic. Despite setbacks in vaccination efforts and emerging new variants, the second year of the pandemic showed strong signs of economic recovery. This translated into youth labor market activity as the unemployment rate declined steadily throughout the year—from 11.3 percent in January to 8.2 percent in December at the national level. However, when looking separately at trends by gender, race, ethnicity, and geographic location, youth unemployment rates fluctuated considerably throughout the year, and the decline in unemployment rates was uneven across groups. This was not the case when examining demographic trends among older workers ages 25 to 54.

Throughout the year, unemployment rates declined somewhat steadily among White and Hispanic youth. However, recovery in employment opportunities among Black and Asian youth were bumpy. Overall, in 2021, unemployment rates were highest for Black youth, followed by Hispanic youth, consistent with pre-pandemic trends. Unemployment among Asian youth, who had the lowest unemployment rates before the pandemic, remained 3.4 percentage points higher than pre-pandemic levels and 1.2 percentage points higher than the rate for White youth.

Local-level data show that youth unemployment rates varied significantly across states and metro areas, and within each state and metro area over the course of the year. The variation was, in part, driven by the local COVID-19 surges taking place at different times. In fact, our analysis showed that the average new COVID-19 cases at the state level were more strongly associated with youth unemployment rates than with rates for the overall population.

Overall, in 2021, youth unemployment rates decreased in every state. In fact, in 14 states, most of them rural, youth unemployment rates dropped below their 2019 levels. However, in other states, youth unemployment rates in 2021 remained well above pre-pandemic levels. According to the annual estimates in 50 metro areas in 2021, youth unemployment rates ranged from 2.5 percent in Provo to 14.6 percent in Baltimore. In 19 of these metro areas, which are all large and urban areas, youth unemployment was higher than the national average, whereas it was less than 5 percent in relatively smaller and more rural metro areas.

As 2021 came to end, the signs of economic recovery were strong for youth. However, data indicated that the gains in employment did not lessen the racial and ethnic disparities in the labor market. In fact, as reflected in the unemployment rate among Asian youth that was higher than pre-pandemic levels, racial inequalities in employment became more pronounced. Because employment provides important opportunities for youth to learn job skills, assess what type of jobs they like, and connect with employers, experiencing unemployment can both be stressful and have long-term adverse economic effects. Research shows that youth with prolonged unemployment spells have lower earnings and increased risk of unemployment later in life (Glatt and Wunnava 2018). Moreover, the economic prospects of youth entering the labor market during a recession might be permanently limited (Kahn 2010). Monitoring youth unemployment closely and in detail is particularly important for creating equitable employment.

Related links:

Access the data presented in this report by downloading our data tables on youth unemployment rates: https://www.mathematica.org/-/media/internet/files/additional-documents/tracking-youth-unemployment-during-covid-19-data-tables.xlsx?la=en

Explore youth unemployment rates through our interactive data visualization tool: https://mathematica.org/dataviz/youth-unemployment-tracker

Learn more about this project and access publications and monthly infographics on youth unemployment: https://www.mathematica.org/our-publications-and-findings/projects/tracking-youth-unemployment-during-the-covid-19-pandemic

References

Albanesi, S., and J. Kim. "The Gendered Impact of the Covid-19 Recession on the U.S. Labor Market." Working Paper 28505. Cambridge, MA: National Bureau of Economic Research, February 2021.

Alon, T., M. Doepke, J. Olmstead-Rumsey, and M. Tertilt. "The Impact of COVID-19 on Gender Equality." Working Paper 26947. Cambridge, MA; National Bureau of Economic Research, April 2020a.

Alon, T., A., M. Doepke, J. Olmstead-Rumsey, and M. Tertilt. "This Time It's Different: The Role of Women's Employment in a Pandemic Recession." Working Paper 27660. Cambridge, MA: National Bureau of Economic Research, August 2020b.

Bennett, J. "Long-Term Unemployment Has Risen Sharply in U.S. Amid the Pandemic, Especially Among Asian Americans." Pew Research Center blog, March 11, 2021. Available at https://pewrsr.ch/3tbhrzK. Accessed March 9, 2021.

Bureau of Labor Statistics. "Labor Force Statistics from the Current Population Survey" 2022a. Available at https://www.bls.gov/cps/data.htm. Accessed January 20, 2022.

Bureau of Labor Statistics. "The Employment Situation News Release." March, 4, 2022b. Available at https://www.bls.gov/bls/news-release/empsit.htm. Accessed March 7, 2022.

Bureau of Labor Statistics. "Household Data Annual Averages. 35. Persons Not in the Labor Force by Desire and Availability for Work, Age, and Sex." Database. 2022c. Available at https://www.bls.gov/cps/cpsaat35.htm. Accessed February 24, 2022.

Federal Reserve Bank of Atlanta. "Wage Growth Tracker."2022. Available at https://www.atlantafed.org/chcs/wage-growth-tracker. Accessed February 10, 2022.

Glatt, J., and P. Wunnava. "Help Not Wanted: The Dismal Science of Youth Unemployment's Scarring Effect." *iBusiness,* vol. 10, 2018, pp. 51–84. https://doi.org/10.4236/ib.2018.102004.

Inanc, H. "Youth Unemployment in the First Year of the COVID-19 Pandemic: From the Breakout to the Vaccine Rollout." Cambridge, MA: Mathematica, April 2021.

Kahn, Lisa. "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy." *Labour Economics,* vol. 17, no. 2, 2010, pp. 303–316. https://doi.org/10.1016/j.labeco.2009.09.002.

Kim, A. T., C. H. Kim, S. E. Tuttle, and Y. Zhang. "COVID-19 and the Decline in Asian American Employment." *Research in Social Stratification and Mobility,* vol. 71, 2021. https://doi.org/10.1016/j.rssm.2020.100563.

Macartney, S., R. Ghertner, L. Wheaton, and L. Giannarelli. "Federal Economic Stimulus Projected to Cut Poverty in 2021, Though Poverty May Rise as Benefits Expire." Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, February 10, 2022. Available at https://aspe.hhs.gov/reports/federal-economic-stimulus-projected-cut-poverty-2021. Accessed March 22, 2022.

The New York Times. "Coronavirus (Covid-19) Data in the United States." 2021. Available at https://github.com/nytimes/covid-19-data. Accessed January 20, 2022.

Ritchie, Hannah, Edouard Mathieu, Lucas Rodés-Guirao, Cameron Appel, Charlie Giattino, Esteban Ortiz-Ospina, Joe Hasell, Bobbie Macdonald, Diana Beltekian, and Max Roser. "Coronavirus Pandemic (COVID-19)." n.d. Available at https://ourworldindata.org/coronavirus. Accessed January 27, 2022.

Appendix: Data Tables

Table A.1. Unemployment rates in 2021 by age, gender, race, and ethnicity (percentages)

	All male	All female	White male	White female	Black male	Black female	Asian male	Asian female	Hispanic
Ages 16–24									
January	12.6	11.6	12.0	10.4	14.4	15.6	11.2	16.3	14.0
February	12.7	9.6	11.6	8.3	18.4	16.6	4.2	9.2	12.9
March	12.7	9.3	11.9	8.0	16.4	16.7	9.3	8.4	12.8
April	11.0	9.1	10.4	7.4	14.9	17.0	8.0	10.0	12.3
May	10.8	9.3	9.1	7.9	17.1	16.2	9.1	11.2	11.2
June	11.5	10.3	10.4	9.4	12.2	14.9	19.1	8.7	11.9
July	10.9	9.1	9.8	8.0	14.4	12.9	14.2	10.5	11.7
August	9.6	9.7	7.8	7.8	14.7	19.4	13.5	7.7	10.4
September	9.8	7.6	8.1	6.9	15.8	11.1	11.8	5.1	11.4
October	8.6	7.4	7.5	6.5	12.5	11.1	12.0	7.5	9.2
November	8.0	7.4	6.5	6.3	14.6	10.6	6.4	7.7	8.0
December	8.2	6.4	7.1	4.6	12.6	14.7	6.1	6.6	7.0
Ages 25–54									
January	6.5	5.9	5.9	5.1	10.5	8.7	4.9	7.0	8.4
February	6.2	5.8	5.6	5.1	10.7	8.6	3.7	5.6	8.0
March	6.0	5.5	5.2	4.8	11.0	8.4	5.5	5.1	7.4
April	5.4	5.0	4.7	4.2	10.5	7.7	4.5	5.7	6.2
May	5.3	4.5	4.6	4.0	9.5	7.5	5.2	3.5	5.8
June	5.4	5.5	4.7	4.9	10.1	8.3	4.3	5.2	6.4
July	4.9	5.3	4.3	4.8	8.4	7.9	4.3	4.9	5.7
August	4.7	5.0	4.1	4.6	8.5	7.8	3.8	4.0	5.5
September	4.2	4.2	3.8	3.7	7.2	6.6	3.3	3.5	5.2
October	3.7	4.1	2.9	3.6	8.4	7.0	2.5	4.0	4.7
November	3.4	3.4	2.9	3.1	6.5	4.9	2.8	3.4	4.1
December	3.5	3.1	3.0	2.7	6.1	5.2	3.5	2.7	4.2

Source: Mathematica compilation based on the Bureau of Labor Statistics' monthly Labor Force Statistics from the Current Population Survey.

Note: Estimates do not account for seasonal patterns.

Table A.2. Number (in thousands) and percentage of youth looking for job in 2021, by job status

			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
White	Number	Full-time	1,191	1,036	1,156	1,025	1,009	1,246	1,170	911	837	758	713	622
		Part-time	522	504	384	353	327	423	363	348	326	337	286	288
	%	Full-time	69.5	67.3	75.1	74.4	75.5	74.7	76.3	72.4	72.0	69.2	71.4	68.4
		Part-time	30.5	32.7	24.9	25.6	24.5	25.3	23.7	27.6	28.0	30.8	28.6	31.6
Black	Number	Full-time	296	337	332	334	329	343	325	378	309	251	257	273
		Part-time	90	113	116	92	110	66	85	124	66	80	90	96
	%	Full-time	76.7	74.9	74.1	78.4	74.9	83.9	79.3	75.3	82.4	75.8	74.1	74.0
		Part-time	23.3	25.1	25.9	21.6	25.1	16.1	20.7	24.7	17.6	24.2	25.9	26.0
Asian	Number	Full-time	98	41	51	34	61	60	70	52	42	55	41	46
		Part-time	22	20	22	40	28	64	50	46	32	38	26	12
	%	Full-time	81.7	67.2	69.9	45.9	68.5	48.4	58.3	53.1	56.8	59.1	61.2	79.3
		Part-time	18.3	32.8	30.1	54.1	31.5	51.6	41.7	46.9	43.2	40.9	38.8	20.7
Hispanic	Number	Full-time	541	516	495	430	402	427	472	375	423	329	288	257
		Part-time	119	117	127	149	118	158	116	126	133	127	113	83
	%	Full-time	82.0	81.5	79.6	74.3	77.3	73.0	80.3	74.9	76.1	72.1	71.8	75.6
		Part-time	18.0	18.5	20.4	25.7	22.7	27.0	19.7	25.1	23.9	27.9	28.2	24.4

Source: Mathematica compilation based on the Bureau of Labor Statistics' monthly Labor Force Statistics from the Current Population Survey.

Note: Estimates do not account for seasonal patterns.

Table A.3. Three-month rolling averages for youth unemployment rates in select states, 2021 (percentages)

	Jan – Mar	Feb – Apr	Mar – May	Apr – Jun	May – Jul	Jun – Aug	Jul – Sep	Aug – Oct	Sep – Nov	Oct – Dec
United States	11.4	10.8	10.4	10.4	10.3	10.2	9.4	8.8	8.1	7.7
California	14.6	14.7	15.2	14.6	13.7	12.8	11.8	10.5	9.7	8.5
Colorado	12.2	10.7	11.7 [a]	9.7	9.4	8.2	7.3	7.4	7.5	8.2
Florida	9.3	9.8	9.7	9.8	9.5	10.4	9.6	7.5	5.0	3.5
Georgia	8.6	7.9	9.2	9.4	7.3	6.7	5.5	6.8	6.7	9.4
Hawaii	15.1 [a]	11.1 [a]	8.0 [a]	5.3	6.9 [a]	8.4 [a]	8.7 [a]	8.1	9.4 [a]	11.3 [a]
Illinois	13.8	12.2	11.1	13.0	11.4	11.8	9.4	11.3	9.7	10.8
Iowa	6.5	7.1	7.8	8.9	9.7	10.5 [a]	8.7	7.5	5.8	5.7
Kansas	6.2	6.3	5.8	7.3	10.8	12.1 [a]	10.9	7.0	4.6	3.6
Maryland	12.3 [a]	16.4 [a]	15.1	15.5 [a]	12.4 [a]	14.0 [a]	15.9	16.9 [a]	14.1 [a]	7.7 [a]
Massachusetts	12.9	11.6	11.3	11.8	12.2	12.2	12.2	12.3	12.4	10.5
Michigan	12.1	12.4	14.1	15.0	13.1	9.9	9.3	10.6	11.6	10.7
Minnesota	7.6	6.9	6.7	6.8	6.6	6.8	7.5 [a]	7.7	8.7 [a]	9.1
Missouri	9.7	6.6	8.2	9.2	8.5	6.2	3.7	6.2	7.9	9.8
Nebraska	7.9	6.9	7.7	6.8	5.6	4.3	4.1	5.2	5.0	5.9
New Hampshire	7.7 [a]	6.5 [a]	7.0 [a]	5.0	8.2	7.6	9.9	6.2	7.1 [a]	5.9
New Jersey	15.1 [a]	14.2 [a]	13.1 [a]	12.8 [a]	13.0 [a]	11.5 [a]	8.3	6.8	9.4	10.9 [a]
New York	12.7	11.7	11.6	14.1	16.9	17.9	15.7	12.8	10.8	9.2
North Carolina	6.4	7.9	7.8	8.4	8.8	8.6	10	9.1	8.3	5.8
North Dakota	4.8	5.0	5.1	7.9	8.1	6.5	4.3	4.4	4.0	4.6
Ohio	10.1	6.3	5.2	6.8	8.7	8.6	8.1	8.2	9.4	8.4
Oklahoma	6.9	8.0	7.3	6.0	4.7	5.1	4.9	4.3	3.0	4.7
Pennsylvania	9.7	8.9	9	9.1	11.3	12.9	12.4	9.4	6.8	6.6
South Dakota	3.1	3.1	4.8	8.7	8.1	7.7	4.0	4.6	4.0	6.0
Texas	15.5	13.8	11.7	11.1	10.5	9.9	9.0	9.2	9.1	8.7
Utah	4.6	4.3	4.2	5.5	5.4	5.8	4.4	3.9	3.1	4.6
Vermont	4.6	7.0 [a]	7.0	10.3 [a]	8.4 [a]	8.7 [a]	5.3	4.9	4.8	5.7 [a]
Virginia	10.9	10.8	9.7	8.7	9.3	7.5	5.5	4.9	6.3	6.9
Washington	17.1 [a]	14.1 [a]	12.1	9.4	11.3	12.7	13.6	14.1	10.4	9.8
Wisconsin	8.9	7.6	5.9	4.0	4.4	5.9	7.2	6.9	7.3	6.7
Wyoming	16.6 [a]	13.1 [a]	9.1	7.7	7.6	6.7	6.0	7.5	8.1	8.2

Source: Mathematica estimates based on the monthly Current Population Survey and using the Bureau of Labor Statistics' definition of *unemployed* and *civil labor force*.

Note: Monthly estimates do not account for seasonal patterns, but data points reflect three-month rolling averages.

[a] Estimate has low statistical reliability.