

The 2022 Summer Job Outlook for American Teens

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Introduction

Just before the COVID-19 outbreak, the U.S. economy was operating beyond full employment with labor shortages evident in the sizeable disparity between unfilled jobs and unemployed workers. In January 2020 (just before the pandemic lockdowns), there were 7.2 million job openings in the nation with just 5.8 million unemployed workers, representing 124 job openings for every 100 unemployed workers; there were more vacant jobs ready to be filled than unemployed workers willing to work. The national unemployment rate stood at 3.5 percent in January/February of 2020 which was the lowest since December of 1969.

The U.S. labor market experienced strong and steady growth after initially languishing in a slow growth recovery from the Great Recession of 2007-2009. Between January 2010 and February 2020, the U.S. economy added nearly 23 million non-farm payroll jobs. The labor force participation rate of prime-age workers (those between the ages of 25 and 54) increased between 2015 and 2019 after reaching a low of 80.9 percent in 2014-2015. In the first two months of 2020, before the spread of COVID-19 across the U.S., the labor force participation rate of prime-aged persons had rebounded to 83.0 percent, nearly identical to rates observed more than a decade past (in 2007-2008), just before the Great Recession.

After the outbreak of COVID-19 and the lockdown measures adopted in March of 2020 to mitigate the spread of the virus, the U.S. labor market experienced extraordinary jobs losses, unemployment problems, and a shrinking labor force. By April 2020, non-farm payroll employment in the nation had plunged by nearly 21 million in just one month as the lockdown measure led to widespread business shutdowns. The unemployment rate sky-rocketed to 14.8 percent in April 2020. Workers in direct consumer contact industries and occupations bore the brunt of the job losses. On the other side, a new 'zoom class' of workers composed mainly of those with higher levels of educational attainment, were largely insulated from the worst employment effects of the lockdowns.

Prior to the COVID-19 pandemic, teens also benefited from a strong labor market. During 2010 and 2011 only 26 percent of teens were employed on average, but by 2019 the share of employed teens had increased to 31 percent, a substantial improvement, albeit much lower than the 45 percent observed in 2000. The labor force underutilization rate of teens in summer months (as well throughout the year) has remained a serious problem.

Youth employment declined sharply during the initial phase of COVID-19 pandemic as 16- to 19-year-old teens became an even less important source of workers for firms. The teen share of total employment in April 2020 was just 2.6 percent, down from 3.3 percent in January/February 2020 and much higher shares in earlier years; 4.3 percent in 2006 and 5.3 percent in 2000. The labor market started to improve after April 2020 and teen employment prospect improved significantly as many workers continued to stay away from the labor market resulting in U.S. firms facing acute labor shortage problems.

The teen employment rate in the last quarter of 2020 was about 31 percent, a sharp rise from 20 percent employment rate in April 2020. The employment rate of teens continued to improve throughout 2021. In the fourth quarter of 2021, teen employment rate in the U.S. was 32 percent. The teen employment rate continued to rise as of this writing. In the first quarter of 2022, when the number of job openings sharply exceeded the number of unemployed persons¹, the teen employment rate in the U.S. stood at 32.7 percent.

Why should we care about teen employment? Employing teens is important since:

- Teen employment is highly path dependent - the more teens work today, the more likely they will work tomorrow. This has long-term implications for long-term labor supply, unemployment, and dependency.
- The more time that teens and young adults spend disconnected from school and work, the higher the likelihood that they will be jobless, poor, and dependent when they are older.
- Lower labor force participation of teens reduces their future productivity, resulting in negative impacts on future GDP growth.
- Work experience provides young people with social skills like learning to work in an adult environment with other staff and supervisors, communicate with adult customers, and develop relevant skills to negotiate these relationships at work.
- Compensated work experience where teens earn wages paid by employers in proportion to their contribution to the firm, helps teens accumulate human capital in several ways by exposing them to the world of work where they learn essential job and career skills.

¹ In the first quarter of 2022, the number job openings in the U.S. were 11.392 million and the number of unemployed persons was 6.245 million, i.e., 1.8 vacant jobs for every 1 unemployed person (11.392 million/6.245 million = 1.8).

- Early work experience can help young workers to go beyond entry-level jobs and gain experience in different workplace settings and gain knowledge of specific occupational skills.
- Employment during summer when most teens are not in school keeps them from engaging in risky behaviors, particularly among teens from low-income families and from inner cities.
- Working while in high school substantially raises the expected level of future wealth accumulation of teens compared to those who do not work.

Before getting into the discussion of teen employment, it is important to understand employment trends before and during the pandemic (2019 to 2021) by age group. Employment gains/losses over the 2019 to 2021 period were different for workers by age group. Between 2019 and 2020, the employment-to-population ratio dropped for working-age adults in every age group (Table 1). The drop in the employment-to-population ratio was largest among 20 to 24-year-old youth (-7.5 percentage points) and smallest among 16-to-19-year-olds (-2.4 percentage points) and adults who were 65 years and older (-1.6 percentage points). Workers between the ages of 25 and 64 experienced employment-to-population ratio declines between -3.3 to -5.3 percentage points between 2019 and 2020.

The labor market landscape in 2021 was completely different in comparison to 2020. The labor market improved sharply after April 2020 when the lockdown measures across the U.S. were eased and later in the year when COVID-19 vaccines were first introduced and then became widely available in early 2021. In addition, U.S. firms were facing labor shortage problems throughout 2021. Between 2020 and 2021, the employment-to-population ratio increased for workers in every age group except for those who were 65 years and older. The largest increase in the employment-to-population ratio was among 20 to 24-year-olds (+4.7 percentage points) and 16 to 19-year-olds (+3.5-percentage points). For 25 to 64-year-old workers, the employment-to-population ratio increased in the range of 1.3 to 2.7 percentage points. The employment-to-population ratio was flat among workers 65 and older. Evidence

shows that many in the 55 and older age group retired during the pandemic.² The likelihood of leaving work for this age group rose sharply since the onset of the pandemic.³

Table 1:
Changes in Employment-to-Population Ratio of 16 Years and Old in the U.S. by Age Group, 2019 to 2021 (Annual Averages in Percent)

Age Group	E/P Ratio			Absolute Change		
	2019	2020	2021	2019-2020	2020-2021	2019-2021
16-19	30.8	28.4	32.0	-2.4	+3.5	+1.2
20-24	67.3	59.8	64.5	-7.5	+4.7	-2.8
25-34	79.8	74.5	77.3	-5.3	+2.7	-2.5
35-44	80.9	77.0	78.2	-3.9	+1.3	-2.6
45-54	79.2	75.5	77.3	-3.7	+1.8	-1.9
55-64	63.7	60.3	61.9	-3.3	+1.5	-1.8
65+	19.6	18.0	18.0	-1.6	0.0	-1.6

Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 2019, 2020, and 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Even though the employment-to-population ratio rose between 2020 and 2021 for working-age adults (16+) in every age group, except for 65 and older, the ratios were still lower than in the pre-pandemic year (2019) for all age groups except teens among whom the employment-to-population ratio in 2021 was 1.2 percentage points higher than in 2019 (32% in 2021 vs 30.8% in 2019). Employers hired teens during the labor shortage, particularly in the summer months of 2021, to fill vacant positions.⁴

This paper provides projections of the teen employment rate for the summer of 2022. It begins with an examination of longer-term trends (1999 to 2021) in the overall labor force

² See: Richard Fry, “Amid the Pandemic, a Rising Share of Older U.S. Adults are Now Retired”, Pew Research Center, November 2021, <https://www.pewresearch.org/fact-tank/2021/11/04/amid-the-pandemic-a-rising-share-of-older-u-s-adults-are-now-retired/>

³ See: Laura D. Quinby, Matthew S. Rutledge, and Gal Wettstein, "How was COVID-19 Affected the Labor Force Participation of Older Workers?", Center for Retirement Research, Boston College, October 2021, https://crr.bc.edu/wp-content/uploads/2021/10/wp_2021-13.pdf

⁴ See: (i) Paul Weisman and Joseph Pisani, “As Employers Struggle to Fill Jobs, Teens Come to Rescue”, Associated Press, July 6, 2021, <https://apnews.com/article/nj-state-wire-co-state-wire-health-coronavirus-pandemic-travel-2f02bf564e726f4c4f6916790bda7a2a>; (ii) Amanda Peacher, “Teen Filled the Worker Gap this Summer, but What Happens When Back-to-School Time Arrives?”, MarketWatch, August 19, 2021, <https://www.marketplace.org/2021/08/19/teens-filled-the-worker-gap-this-summer-but-what-happens-when-back-to-school-time-arrives/>

participation rate and employment rate of teens in the U.S. and highlights these rates during the COVID-19 pandemic for each month in 2020 and for January through April of 2022 (months for which labor force data are available from the U.S. Bureau of Labor Statistics). It then shifts focus to the employment rates in the summer months of 2019, 2020, and 2021 across gender, race-ethnicity, and family income subgroups of teens. The paper also examines the teen summer employment rates by states in the summers of 2021 and 2020. The paper then examines labor force underutilization rates among teens during summer months across the nation followed by analysis of the industries and occupations in which teens were employed in the summer months of 2021. The last section of this presents our prediction of summer employment rates for 2022.

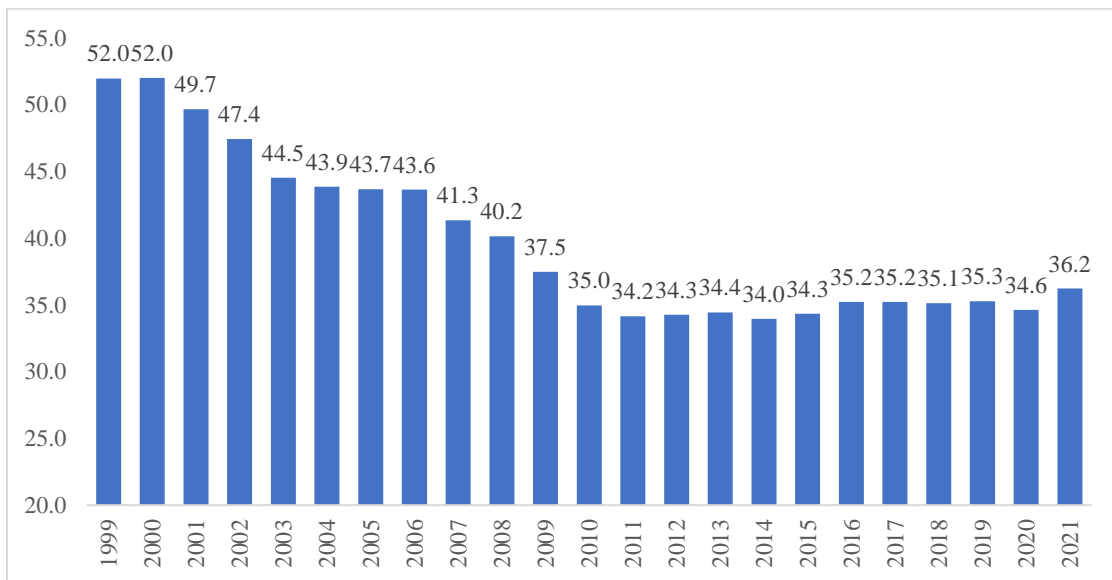
Teen Labor Force Participation Rates, 1999 to 2021

Between the end of World War II and the end of the 20th century, at least half of the nation's teenagers were active participants in the labor market. Since 2000, the teen labor force participation has been declining steadily, reaching 35 percent in 2010 and remaining in the 34-35 percent range over the entire decade with a slight increase to 36.2 percent in 2021. Academics, researchers, policy makers, and youth advocates have put forward many different theories, trying to pinpoint the causes of such a precipitous decline in the labor force participation of U.S. teens. Some of these include changes in the U.S. economy with job growth in industries and occupations that don't often hire teens, displacement of teens by older workers and new adult immigrants with low levels of education, a weak labor market after the economic recession, and a steady rise in school enrollment both year-around and during summer when most teens work.⁵

⁵ See: (i) Daniel Aaronson, Kyung-Hong Park, and Daniel Sullivan, "The Decline in Teen Labor Force Participation", Federal Reserve Bank of Chicago, Economic Perspectives, 2006. First Quarter, pp. 2-18; (ii) "What Is Happening to Youth Employment Rates?" CBO Background Paper, Congressional Budget Office, November 2004. (iii) Christopher L. Smith, "Polarization, Immigration, Education: What's Behind the Dramatic Decline in Youth Employment?" Federal Reserve, October 2011. (iv) Andrew Sum, Paul Harrington, and Ishwar Khatiwada, "The Impact of New Immigrants on Young Native-Born Workers, 2000-2005", Center for Immigration Studies, 2006, www.cis.org/sites/cis.org/files/articles/2006/back806.html. (v) Teresa L. Morisi, "Teen Labor Force Participation Before and After the Great Recession and Beyond", *Monthly Labor Review*, U.S. Bureau of Labor Statistics, February 2017, <https://www.bls.gov/opub/mlr/2017/article/pdf/teen-labor-force-participation-before-and-after-the-great-recession.pdf>, Grace Lorday and David Neumark, People Versus Machines: The Impact of Minimum Wages in Automatable Jobs, National Bureau of Economic Research, NBER paper 23667, January 2018; Jeffrey Clemens, The Minimum Wage and the Great Recession, Evidence from the Current Population Survey, National Bureau of Economic Research, NBER 21830, December 2015.

In 1999-2000, representing the peak of the 1990s labor market boom, more than half of all U.S. teens (52%) participated in the labor force. After a brief technology-led economic recession of 2001, the labor force participation rate of teens started to decline steadily and sharply, falling from 52 percent in 2000 to just 41 percent before the onset of the Great Recession of 2007-2009. During and in the aftermath of the Great Recession of 2007-2009, the labor force participation rate of U.S. teens continued to fall reaching to new historical lows despite the economic recovery. The labor force participation of teens has remained around 34 to 35 percent over the 2011 to 2019 period (Chart 1). It should be noted that workers in each age

Chart 1:
Trends in Civilian Labor Force Participation Rates of Teens (16- to 19-Years-Old) in the U.S., 1999-2021 (Seasonally Adjusted, CPS Annual Averages)



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 1999 through 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

group (16+) experienced a decline in their labor force participation rate during and after the Great Recession of 2007-2009, but the decline was the largest among teens. The U.S. Bureau of Labor Statistics has projected further declines in the teen labor force participation rate down to 28.5 percent in 2029.⁶ In 2020, during the COVID-19 pandemic period, the labor force

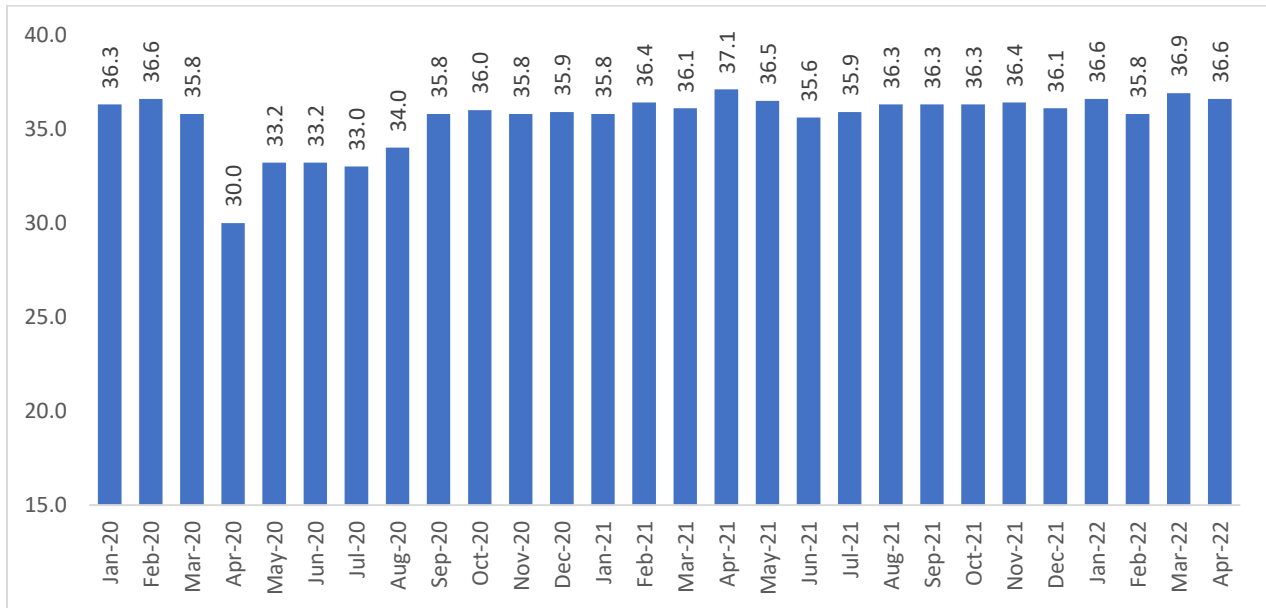
⁶ See: Employment Projections: Civilian Labor Force Participation Rate, by Age, Sex, Race, Ethnicity, 1999, 2009, 2019 and Projected 202, https://www.bls.gov/emp/ep_table_303.htm and for a discussion of an earlier round of teen labor force projection; Mitra Toossi, “Labor force projections to 2024: the labor force is growing, but slowly,” *Monthly Labor Review*, December 2015, <https://www.bls.gov/opub/mlr/2015/article/pdf/labor-force-projections-to-2024.pdf>. A more recent discussion and overview of labor force projections can be found in Kevin S. Dubina, et al,

participation rate of teens declined to 34.5 percent. **By summer of 2021, teen labor force participation rate rose to 36.2, which was the highest since 2008.**

Monthly Teen Labor Force Participation Rates, January 2020 to April 2022

The labor force participation rate of teens during the initial phase of the COVID-19 pandemic dropped sharply but rose after April 2020 and ultimately reached the pre-pandemic level by October 2020 (Chart 2). Before the outbreak of COVID-19, the labor force participation

Chart 2:
Monthly Civilian Labor Force Participation Rates of Teens (16- to 19-Years-Old) in January 2020 to April 2022 (Seasonally Adjusted)



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

rate of teens in January/February 2020 was 36 percent. By April 2020, when the U.S. was in pandemic lockdowns, the teen labor force participation rate declined to 30 percent. When the nation slowly started to open up from the lockdown in May 2020, teen participation did not rebound to its pre-pandemic level and remained in the 33 percent to 34 percent range over the summer months of 2020. In the fall of 2020 through winter of 2021, the teen labor force participation rate rose back to its pre-pandemic levels with a particularly strong increase in April 2021 as job vacancies reached historical highs in the American labor market. Throughout 2021

“Projections Overview and Highlights, 2019-29,” *Monthly Labor Review*, September 2021. <https://www.bls.gov/mlr/2020/article/projections-overview-and-highlights-2019-29.htm>

and the first four months of 2022, the labor force participation rate of teens stayed around 36-37 percent range.

Teen Employment Rates, 1999 to 2021

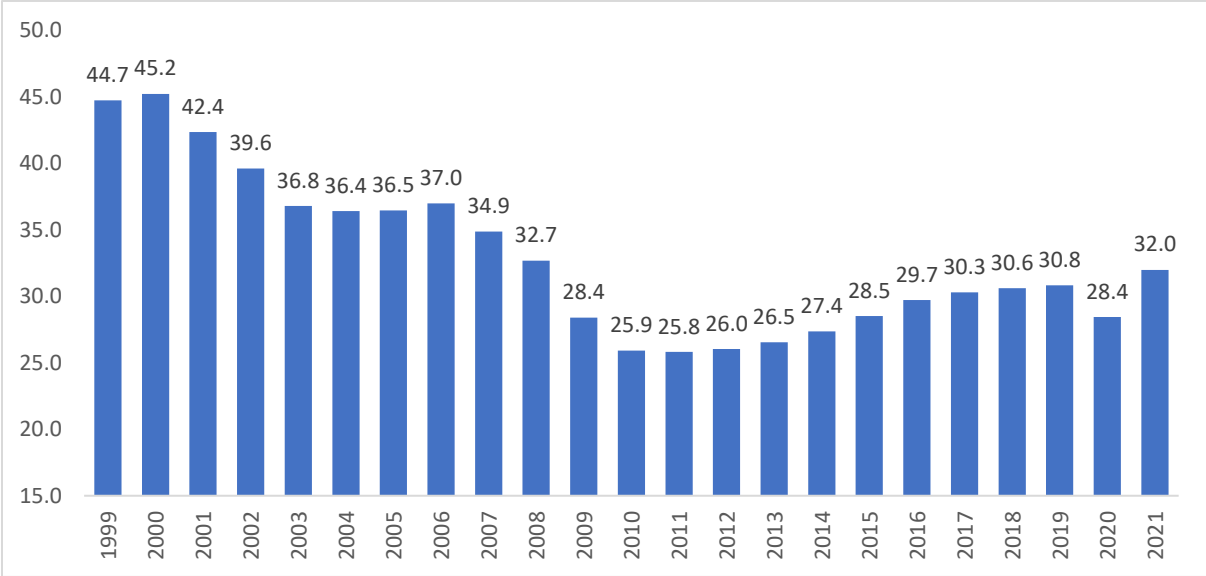
The teen employment rate (the percent of teens who are employed) has been declining sharply since 2000, with the pace of decline particularly steep during and in the aftermath of the Great Recession. What caused such sharp decline in teen employment rates? Certainly, a large job deficit was an important source of teen employment losses. At the trough of the recession, there were more than six unemployed workers for every job opening, with millions more able-bodied individuals who had left the job market or were underemployed (especially ‘mal employed’ recent college graduates who were likely to work in traditional teen labor market segments including retail trade and food services). Employer preference, displacement by older workers and poorly educated foreign-born adults, school enrollment preference associated with increases in the college wage premium, and structural changes in the economy also contributed to declines in teen employment. A convincing body of research also indicates that higher minimum wages are an important factor in explaining changes in the schooling and employment behavior of teens since 2000.⁷ In 2000, teens held 1 out of every 20 jobs in the nation. By 2016-2019, teens held only 1 out of every 30 jobs in the nation.

No other group of U.S. workers has experienced such a sharp decline in their employment rate since 2000. In a given month in 2000, 45 percent of teens were employed (Chart 3). The teen employment rate declined during the 2001 recession and continued its decline during the jobless recovery of 2002-2004. Yet even as labor markets moved towards near full employment conditions, the employment rates of teens continued to slump. During the business cycle peak in 2007, the teen employment rate had dropped to 34 percent followed by historical lows after the massive job losses associated with the Great Recession of 2007-2009. In 2010-2011, only about 25 percent of teens had a job in a given month (Chart 3).

⁷ See: David Neumark and Cortnie Shupe, “Declining Teen Employment: Minimum Wages, Other Explanations, and Implications for Human Capital Investment,” Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2018.

Despite the labor market recovery since 2011, the employment rate of teens has increased slowly, rising up to 30-31 percent level during 2016 through 2019 from lows of 26 percent in 2010 and 2011. The U.S. labor market added more than 22 million jobs between 2010 and 2019, but U.S. teens have not seen much improvement in their likelihood of employment. The teen employment rate during 2016 through 2019 remained its 2007 level (35%) and well below its 2000 level (45%). In 2020, the employment-to-population ratio of teens declined to 28.4 percent, as the state governments, businesses, and consumers adjusted their behaviors in the face of the COVID-19 pandemic. In 2021, the employment-to-population ratio of teens rose to 32 percent. **The 32 percent employment rate among teens in 2021 was highest since 2008.**

Chart 3:
Trends in the Employment Rate of Teens (16- to 19-Years-Old) in the U.S., 1999-2021
(Seasonally Adjusted CPS Annual Averages)



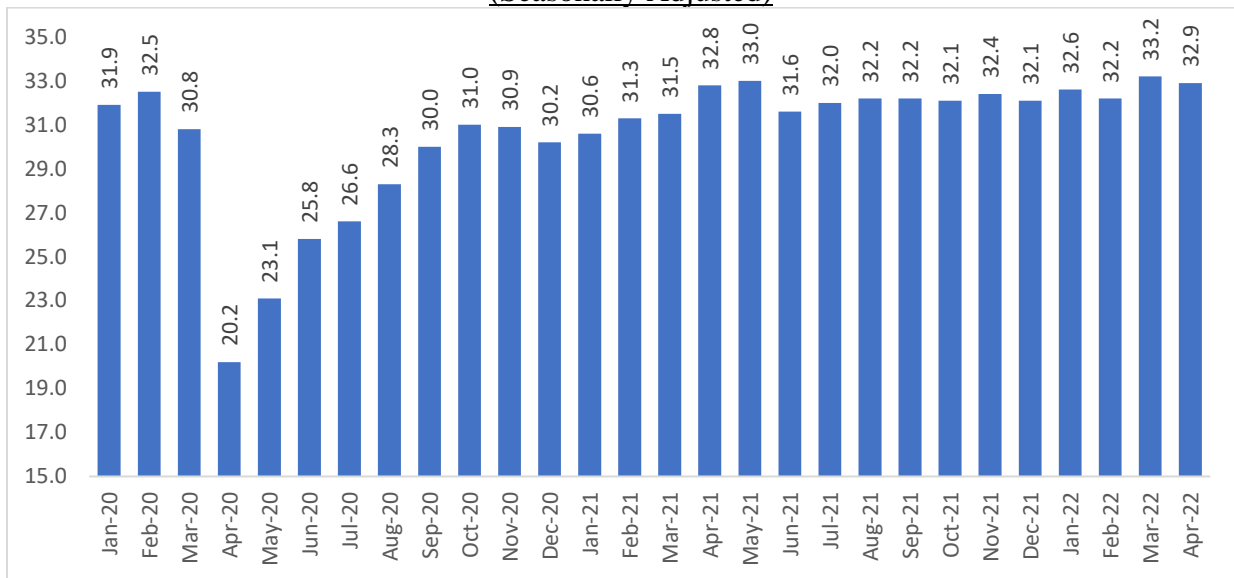
Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 1999 through 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Monthly Teen Employment Rates, January 2020 to April 2022

The 28.4 percent annual average employment rate of teens in 2020 masks extraordinary monthly volatility in the employment situation during the pandemic. To examine monthly trends in teen employment since 2020, we examined monthly (seasonally adjusted) employment-to-population ratio of teens from January 2020 to April 2022. Just before the outbreak of the pandemic in March 2020, the employment rate of teens across the U.S. was 31-32 percent in January/February 2020. As a result of government mandated lockdowns and a change in

consumer behavior in response to the appearance of Covid-19 infections, the teen employment rate declined to just 20 percent in April 2020. From May 2020 when the nation was slowly opening up from the lockdowns, the teen employment rate began to improve, rising from about 23 percent in May 2020 to 30-31 percent during the months of September 2020 to January 2021. By April 2021, the employment rate of teens has risen to 33 percent. Throughout 2021 and the first four months of 2022, teen employment rate has stayed around the 32-33 percent range.

Chart 4
Monthly Employment Rate of Teens (16- to 19-Years-Old) in the U.S. in 2020
(Seasonally Adjusted)



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Teen Summer Employment Rates, 1999 to 2021

Summer provides many more potential weeks and hours of work to teens compared to other months of the year when they are enrolled in school. Therefore, teen employment rates are much higher during the summer months than the rest of the year. Summer jobs provide teens with exposure to the world of work and help them develop work-related skills especially soft skills that are valued across virtually all career fields. Evidence shows that in urban areas, youth who did not work during summer were more likely than their employed peers to commit violent crimes, to be at risk of social isolation, and engage in risky, deviant, delinquent, and violent

behaviors.⁸ Evidence also reveals that summer job programs reduce violent crimes committed by teens.⁹ In addition, summer employment is also found to contribute to better academic outcomes among youth.¹⁰

Longer-term trends show that although the summer employment prospects of U.S. teens have improved modestly in the years just prior to the COVID-19 pandemic in 2020, it has not approached levels attained in the late 1990s when the U.S. labor market was at its peak.¹¹ In the summer months of 1999 and 2000, more than half of the nation's teens were employed. The employment rates of teens (both during summer months and year-round) began to decline at the beginning of the dot.com recession in 2001. By 2006-2007, the summer employment rate of teens had plummeted to between 41 and 43 percent, even as overall employment levels had rebounded during the 2003 to 2007 period. Indeed, it seems that teens absorbed a disproportionately large share of the job loss during the dot.com recession but obtained few of the jobs that were regained during the subsequent recovery (Chart 5).

During the Great Recession of 2007-2009 and the following economic recovery, the summer employment prospects of teens continued to deteriorate, reaching a historical low in 2010-2011. In the summer months of 2010-2011, only 30-31 percent of teens were employed; the lowest teen summer employment rate ever recorded. Since then, the summer employment rate of teens did increase, but the gains remained modest until 2019. In the summer months of 2019, the teen employment rate spiked to 37 percent. The employment rate of U.S. teens in 2019 was 6.6 percentage points above the historically lowest level that it had reached in 2011. The employment rate of teens in the summer months of 2019 was 1.5- to 1.9-percentage points higher

⁸ See: (i) Andrew Sum, Mykhaylo Trubskyy, and Walter McHugh, "The Summer Employment Experiences and the Personal/Social Behaviors of Youth Violence Prevention Employment Program Participants and Those of a Comparison Group", Center for Labor Market Studies, Northeastern University, Prepared for Youth Violence Prevention Funder Learning Collaborative, Boston, July 2013.

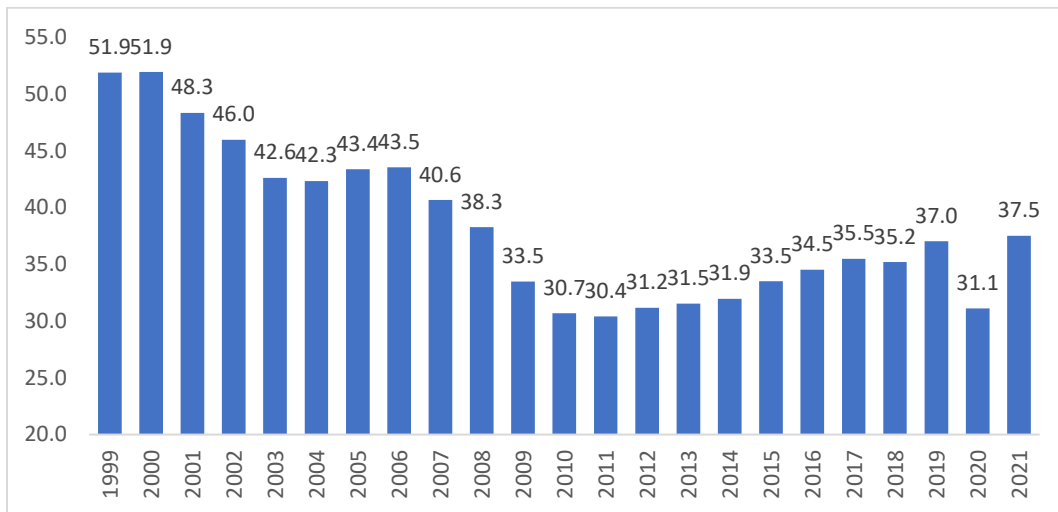
⁹ See: Sara B. Heller, "Summer jobs reduce violence among disadvantaged youth", *Science*, Vol 346, 5 December 2014; Gelber Alexander, Adam Isen, Judd B. Kessler, *The Effects of Youth Employment: Evidence From New York City Summer Youth Employment Program Lotteries*, NBER Working Paper 20810, December 2014.

¹⁰ Jacob Leos-Urbel, "What is a Summer Job Worth? The Causal Impact of Summer Youth Employment on Academic Outcomes: Evidence from a Large-Scale Lottery," *Journal of Policy Analysis and Management*, Volume 33, Issue 4, pages 891-991, Fall 2014.

¹¹ For review of 2019 summer employment reports, see: Neeta Fogg, Paul Harrington and Ishwar Khatiwada, "The 2019 Summer Jobs Outlook for Teens in the US," Working paper, Center for Labor Markets and Policy, Drexel University, April 2019; (ii) Paul Wiseman, "Kids today: They don't work summer jobs the way they used to", Associated Press, June 23, 2017; (ii) Megan Woolhouse, "Affluent Teens Twice as Likely to Find Seasonal Work: Teens Facing a Jobs Gap As Well", *The Boston Globe*, May 28, 2015, pp. C1-C7; (iii) Kaomi Goetz, "Teens Hoping For More Jobs, Higher Wages This Summer," *All Things Considered*, NPR, New York, June 2015.

than those observed in summer months of 2017 and 2018. However, these gains in teen summer employment were short-lived. With the arrival of the pandemic in 2020, the teen employment rate declined sharply in the summer of 2020.

Chart 5:
Trends in the Summer Employment Rate of Teens (16- to 19-Years-Old), U.S., 1999-2021 (CPS June-July-August Averages, Not Seasonally Adjusted)



Source: Current Population Surveys (CPS) public use data files, 1999 to 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

The COVID-19 pandemic altered the labor market landscape for teens during the summer months of 2020 as firms in high consumer contact industries, where most teens worked, saw sharp employment losses from full lockdowns and partial lockdowns with limited capacity in many states. The result was that the teen summer employment rate in 2020 fell to 31.1 percent; near its historic low of 30.4 percent in 2011. However, during the summer of 2021, the teen employment rate rose to 37.5 percent, the highest since 2008. Chronic labor shortage in the U.S. contributed to the increase in teen hiring by employers.¹²

Changes in Teen Summer Employment Rates, 2019-2021

Gender, Race-Ethnicity, and Age

As mentioned above, teen employment rate rebounded sharply in summer months of 2021 as COVID-19 vaccines became more widely available in early 2021 and the business hiring picked up. Firms across the U.S., particularly those involved in direct consumer contact activities

¹² Ibid., 3.

such as leisure and hospitality industries, started to experience an unprecedented labor shortage as workers were hesitant to return to workplace due to fears of COVID-19 infection. Chronic labor shortages across the U.S. may have been caused from (a) workers' hesitancy to return to work from the fear of COVID-19 infection; (b) burnout among workers as well as spending more time to find the right job; (c) higher retirement rate (among 55 and older workers), and (d) immigration policies (44 percent drop in temporary/permanent work visa in 2020 from 2019).¹³ Given this situation, firms may have turned to the teen workforce to fill up the positions, particularly in leisure and hospitality industries.

In summer months of 2022, the teen employment rate rose to 37.5 percent, the highest since 2008. Teens in each gender, race-ethnicity, and age group experienced sharp increase in employment between the summer of 2020 and 2021. Male and female teens experienced increase in their summer employment rates by 6-7 percentage points between 2020 and 2021, with females matching and males exceeding their summer 2019 employment rates. The summer 2021 employment rates of male and female teens were very similar (37-38 percent).

There were substantial increases in summer employment rates of teens in each race-ethnicity group. Between 2020 and 2021, the teen summer employment rate increased by 6 to 8 percentage points among five (out of six) major race-ethnicity groups and 4 percentage points among Hispanic teens. The 2021 summer employment rates among teens varied widely by race-ethnicity, ranging from a low of only 20 percent among Asians to a high of nearly 45 percent among non-Hispanic Whites.

Teen summer employment rates are closely correlated with the age. Older teens are much more likely to work than 16-year-olds. In the summer months of 2021, the employment rate of was only 21 percent among 16-year-olds, rising close to 34 percent among 17-year-olds, to 43 percent among 18-year-olds, and nearly 54 percent among the oldest teens aged 19 years. Teens aged 19 were 2.6 times more likely than those aged 16 to work during the summer of 2021. Between the summer months of 2019 and 2020, reductions in teen employment rates were much greater among older teens. The employment rate decline was only 1.5 percentage among 16-year-olds versus 9 percentage points among 19-year-olds (Table 2). The summer employment

¹³ See: Ian Siegel, "The Labor Shortage Is Creating Unprecedented Hiring Challenges: Who's Coming Out on Top", *Barron's*, December 17, 2021, <https://www.barrons.com/articles/labor-shortage-hiring-businesses-innovation-51639687051>

rate rebounded sharply by age of teens between 2020 and 2021, ranging from an increase of about 3 percentage points among 16-year-olds to about 8 percentage points among 19-year-olds.

Table 2:
Trends in Summer Employment Rates of 16- to 19-Year-Old Teens in 2019, 2020, and 2021 by Gender, Race-Ethnicity, and Age, U.S. (Summer Months Averages, Not Seasonally Adjusted)

Group	E/P Ratio			Absolute Change		
	2019	2020	2021	2019-2020	2020-2021	2019-2021
All	37.0	31.1	37.5	-5.9	6.4	0.5
Gender						
Male	36.8	30.9	37.8	-5.9	6.9	1.0
Female	37.3	31.3	37.3	-6.0	6.0	0.0
Race-Ethnic Group						
White	43.8	37.1	44.8	-6.7	7.7	1.0
Black	28.9	24.1	30.3	-4.8	6.2	1.4
Asian	21.6	13.6	20.4	-8.0	6.8	-1.2
Hispanic	31.0	26.7	30.6	-4.3	3.9	-0.4
Native American	32.1	21.3	26.9	-10.8	5.7	-5.2
All Other Races	36.3	27.2	34.3	-9.1	7.1	-1.9
Age						
16	19.7	18.2	21.0	-1.5	2.8	1.4
17	30.7	26.6	33.9	-4.2	7.3	3.1
18	43.7	36.5	43.2	-7.2	6.7	-0.5
19	55.0	45.9	53.8	-9.1	7.9	-1.3

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, and 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Family Income

Teen employment rates vary considerably by the level of family income. Teens from low-income families are least likely to work while teens in affluent households have a much higher likelihood of working in the summer months. Teens from very low-income families (annual incomes less than \$20,000) were least likely to work during the summer months. During 2020, teens from very low-income families (annual incomes less than \$20,000) were only a little more than half as likely to work in the summer months as their more affluent counterparts who lived in families with annual incomes between \$75,000 and \$150,000.

In the summer months of 2021, the teen employment rate rose steadily with the level of family income, rising from about 29 percent for teens from families with annual

incomes under \$20,000 and between \$20,000 and \$39,999 to a high of 43.6 percent among teens in families with incomes between \$100,000 and \$149,999 per year and 43.2 percent among their counterparts with family incomes of \$150,000 or higher.

Table 3:
Trends in Summer Employment Rates of 16-to 19-Year-Olds Between 2019 to 2021 by Family Income Levels, U.S. (Summer Months Averages, Not Seasonally Adjusted)

Family Income Level	E-P Ratio			Absolute Change		
	2019	2020	2021	2019-2020	2020-2021	2019-2021
Under \$20,000	27.5	19.4	28.6	-8.2	9.3	1.1
\$20,000-\$39,999	33.4	23.0	28.5	-10.4	5.5	-5.0
\$40,000-\$59,999	33.1	30.4	38.0	-2.7	7.6	4.9
\$60,000-\$74,999	39.3	30.0	36.1	-9.4	6.2	-3.2
\$75,000-\$99,999	40.2	33.5	40.5	-6.7	7.0	0.4
\$100,000-\$149,99	43.3	36.7	43.6	-6.6	7.0	0.3
\$150,000+	40.3	36.3	43.2	-3.9	6.8	2.9

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, and 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Teens in every family income group experienced a decline in summer employment rates between 2019 and 2020. The size of the decline ranges from 10 percentage points among teens in \$20,000-\$39,999 family income category to about 3 percentage points among teens in \$40,000-\$59,999 family income category (Table 3).

The summer of 2021 saw a reversal in teen employment rates that rose sharply for teens in each of the seven family income groups from their lows in 2020. The largest increase in summer employment rate between 2020 and 2021 was observed for teens in the lowest family income level (under \$20,000). Teens in this family group experienced summer employment rate increase of 9.3 percentage points between 2020 and 2021. Teens in the remaining six family income groups saw increases of 5.5 and 7.6 percentage points in their summer employment rates between 2020 and 2021.

Teen Summer Employment Rates Across States in 2021

Teen summer employment rates were characterized by high degree of variations across the states. Table 4 displays a ranking of states by the teen employment rate in the

summer of 2021. Teens living in New Hampshire, Maine, Wisconsin, South Dakota, North Dakota, Nebraska, Minnesota, Montana, Wyoming, and Pennsylvania had the highest employment rate in summer months of 2021. Many of these states have also consistently led the nation in teen employment for many years.

The top five states with the highest teen employment rate in 2021 were New Hampshire (61.1%), Maine (59.91%), Wisconsin (59.8%), South Dakota (56.0%), and North Dakota (54.8%). Together these states had an average teen summer employment rate of 58 percent. In contrast, the five states with the lowest teen summer employment rates were Hawaii (29.7%), New York (28.6%), California (27.5%), District of Columbia (27.3%), and New Jersey (26.2%). Together, these states had a teen summer employment rate that averaged about 27.9 percent in 2021, less than half the summer employment rate of teens in the top five states.

Table 4:
Ranking of Employment Rates of Teens in Summer Months of 2021 by State
(Summer Month Averages, Not Seasonally Adjusted)

Rank	State	E/P Ratio	Rank	State	E/P Ratio
1	New Hampshire	61.1	27	Missouri	41.9
2	Maine	59.9	28	Iowa	41.8
3	Wisconsin	59.8	29	Indiana	40.7
4	South Dakota	56.0	30	Illinois	40.0
5	North Dakota	54.8	31	North Carolina	38.7
6	Nebraska	54.6	32	Arizona	38.7
7	Minnesota	53.4	33	Washington	38.5
8	Montana	52.4	34	Michigan	38.5
9	Wyoming	52.0		U.S. Average	37.5
10	Pennsylvania	51.2	35	Kentucky	36.6
11	Kansas	51.1	36	Nevada	34.7
12	Idaho	51.1	37	Arkansas	34.6
13	Delaware	49.5	38	New Mexico	34.5
14	Utah	49.4	39	Connecticut	33.3
15	Maryland	49.3	40	Mississippi	32.7
16	Colorado	48.7	41	Georgia	32.3
17	Rhode Island	47.4	42	Alabama	31.3
18	Vermont	47.3	43	Louisiana	30.8
19	Virginia	45.9	44	Texas	30.7
20	Tennessee	44.8	45	Florida	30.3

Rank	State	E/P Ratio	Rank	State	E/P Ratio
21	Massachusetts	44.5	46	Oregon	30.1
22	South Carolina	43.8	47	Hawaii	29.7
23	Ohio	43.6	48	New York	28.6
24	West Virginia	43.5	49	California	27.5
25	Oklahoma	43.1	50	Dist. of Columbia	27.3
26	Alaska	42.2	51	New Jersey	26.2

Source: Current Population Surveys (CPS) public use data files, 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Teen Summer Employment Gain Across States Between 2020 and 2021

Between 2020 and 2021, forty-six states experienced gains in teen employment rates. (Table 5). Teens in five states (New Jersey, Oregon, Iowa, Missouri, and Alabama) experienced a decline in the teen summer employment rate between 2020 and 2021. The summer employment rate of teens in Alabama was 9.5 percentage points lower in 2021 than in 2020. It should be noted that Alabama teens experienced gains in summer employment between 2019 and 2020. In the remaining four states (that had lower summer teen employment rate in 2021 than in 2020), the size of the employment rate decline was in the 1.6 to 4.8 percentage points range. Among the 46 states with gains in teen summer employment rates between 2020 and 2021, Rhode Island, West Virginia, Delaware, Maryland, and South Carolina recorded the largest gains, in the range of 15-22 percentage points. Teens in Ohio, Idaho, Kansas, Georgia, and Connecticut experienced summer employment rate gains ranging from 0.2 to 2.7 percentage points between 2020 and 2021.

Table 5:
Ranking of States by Absolute Change in Teen Summer Employment Rate over the 2020 and 2021, (Summer Months Averages, Not Seasonally Adjusted Numbers in Percent)

Rank	State	2020	2021	Absolute Change	Rank	State	2020	2021	Absolute Change
1	Rhode Island	25.7	47.4	21.8	27	Massachusetts	36.5	44.5	8.0
2	West Virginia	25.2	43.5	18.3	28	Alaska	34.9	42.2	7.2
3	Delaware	32.2	49.5	17.3	29	Arizona	31.9	38.7	6.8
4	Maryland	33.9	49.3	15.3	30	California	21.0	27.5	6.5
5	South Carolina	28.7	43.8	15.0	31	Mississippi	26.7	32.7	6.0
6	New Hampshire	47.9	61.1	13.2	32	Louisiana	24.9	30.8	5.9
7	Oklahoma	30.4	43.1	12.7	33	Montana	46.8	52.4	5.6
8	Wisconsin	47.5	59.8	12.2	34	Arkansas	30.4	34.6	4.2

Rank	State	2020	2021	Absolute Change	Rank	State	2020	2021	Absolute Change
9	Pennsylvania	39.1	51.2	12.1	35	Nebraska	50.4	54.6	4.1
10	Maine	47.9	59.9	11.9	36	Nevada	30.7	34.7	4.0
11	Dist. of Columbia	16.0	27.3	11.3	37	Indiana	36.9	40.7	3.8
12	New Mexico	23.5	34.5	11.0	38	Vermont	43.5	47.3	3.8
13	Tennessee	34.1	44.8	10.7	39	Texas	27.2	30.7	3.5
14	Wyoming	41.2	52.0	10.7	40	Minnesota	50.1	53.4	3.3
15	Virginia	35.4	45.9	10.5	41	Utah	46.4	49.4	3.0
16	North Carolina	28.3	38.7	10.5	42	Ohio	40.9	43.6	2.7
17	Florida	19.9	30.3	10.4	43	Idaho	48.9	51.1	2.2
18	Illinois	30.2	40.0	9.7	44	Kansas	48.9	51.1	2.2
19	Colorado	39.1	48.7	9.6	45	Georgia	31.7	32.3	0.7
20	Kentucky	26.9	36.6	9.6	46	Connecticut	33.1	33.3	0.2
21	Washington	28.9	38.5	9.6	47	New Jersey	27.8	26.2	-1.6
22	North Dakota	45.5	54.8	9.2	48	Oregon	33.9	30.1	-3.7
23	Hawaii	20.7	29.7	9.0	49	Iowa	46.0	41.8	-4.1
24	South Dakota	47.2	56.0	8.8	50	Missouri	46.8	41.9	-4.8
25	Michigan	30.1	38.5	8.3	51	Alabama	40.8	31.3	-9.5
26	New York	20.6	28.6	8.0		U.S. Average	31.1	37.5	6.4

Source: Current Population Surveys (CPS) public use data files, 2020 and 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

The teen summer jobs losses between 2019 and 2020 that were primarily associated with the COVID-19 pandemic varied quite sharply across states. Indeed, a small number of states experienced no decline in the teen employment rate between the summers of 2019 and 2020 (Table 5). In four states (Mississippi, Nebraska, Nevada, and North Carolina), the teen summer employment rate between 2019 and 2020 was flat. In contrast, five states (Kansas, New Jersey, Virginia, Georgia, and Alabama) experienced summer teen employment rate gains of 2-5 percentage points. However, the teen summer employment rate declined in most states between 2019 and 2020. The size of the decline was quite large in several states. Sixteen states experienced double-digit declines. Among states with the largest declines were Rhode Island (-20.1 percentage points), Kentucky (-19.5 percentage points), Michigan (-15.8 percentage points), Maine (-14.3 percentage points), and New Hampshire (-13.8 percentage points). Appendix Table A-1 displays teen summer employment rates for each state in 2019 and 2020.

Do Teens Want to Work in Summer?

The declining trend in teen employment in the summer as well as year-round has raised questions about the employment desire of teens. Some argue that more teens are opting for school-related activities than work in the summer months.¹⁴ Indeed, the school enrollment rate among teens in the month of July has increased by 18 percentage points since 2000.¹⁵ Nonetheless, our analysis of CPS data reveals a strong desire for work among teenagers.¹⁶

The labor market problems of American teens in the summer months of 2021 were sharply lower than in summer months of 2020. The numbers of teens in the labor force increased, their employment level increased, and their unemployment and underemployment problems declined between 2020 and 2021 (Table 6). It should be noted that the labor market problems among teens (in summer and year-round) such as unemployment, hidden unemployment, and underemployment are higher than those observed for any other age group (see Appendix Chart A-1). In the summer months of 2021, 810,000 million teens were ‘officially’ unemployed, another 313,000 wanted to work full-time, but held part-time positions because they could not find full-time work, and an additional 764,000 teens wanted to work but had stopped their job search (Table 6). The latter group is frequently called the labor force reserve. The combined pool of the three groups of underutilized teens was nearly 1.887 million. This means that 24 percent of the adjusted teen labor force (labor force + labor force reserve) was underutilized during the summer months of 2021, sharply lower than in summer months of 2020 (37.1 percent). As noted above, the rate of labor force underutilization is typically higher among teens than workers in other age groups. These findings suggest that, despite some claims to the contrary, a large number of teens do have a strong desire to work in the summer months but are unsuccessful in either finding sufficient hours of work or finding any work at all.

¹⁴ See: (i) Jeff Clabaugh, Why Teens Don’t Want Summer Jobs? *Washington Business Journal*, April 21, 2015; (ii) Catey Hill, American Teens Don’t Want to Work, *MarketWatch*, August 4, 2014.

<https://www.marketwatch.com/story/american-teens-dont-want-to-work-2014-05-01>

¹⁵ Our analysis of CPS public use files for 1999-2000 and 2018-2019 show that July month school enrollment rate among U.S. teens increased from 26.9 percent in 1999-2000 to 45.6 percent in 2018-2019.

¹⁶ Paul Harrington and Ishwar Khatiwada, “US Teens Want to Work,” *Communities & Banking*, Vol. 27, no. 2, Spring 2016, Federal Reserve Bank of Boston, <https://www.bostonfed.org/commdev/c&b/2016/spring/US-Teens-Want-to-Work.pdf>.

Table 6:
Trends in Labor Market Problems of 16- to 19-Year-Olds in Summer Months of 2019, 2020, and
2021 (CPS Summer Months Averages, Not Seasonally Adjusted Numbers in 1,000s)

Labor Force Status	2019	2020	2021	Absolute Change, 2019-2020	Absolute Change, 2020-2021
Labor Force	7,122	6,390	6,983	-732	593
Employed	6,179	5,147	6,173	-1,032	1,026
Unemployed	943	1,243	810	300	-433
Working PT for ECN Reasons	397	520	313	123	-207
LF Reserve	787	964	764	177	-200
NILF	9,563	10,162	9,459	600	-703
Underutilized Pool	2,128	2,727	1,887	599	-840
Adj. Labor Force	7,909	7,354	7,747	-556	393
Total (16-19)	16,685	16,552	16,442	-132	-110
LF Underutilization Rate	26.9	37.1	24.4	10.2	-12.7

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, and 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

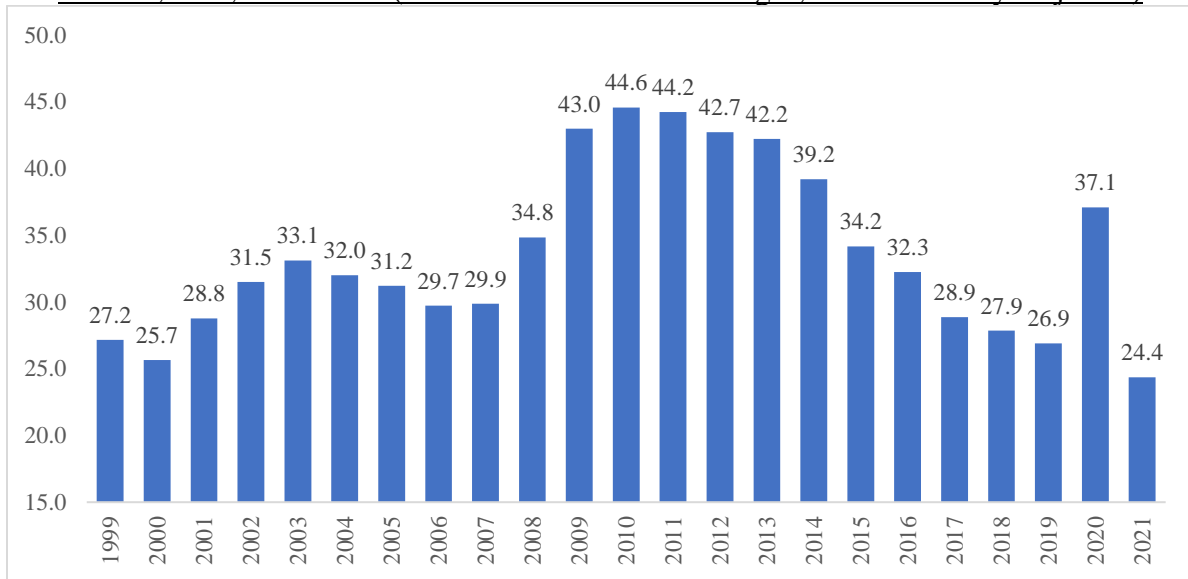
Note:* Underutilization rate is derived by dividing underutilized pool (unemployed, underemployed, and hidden employed (labor force reserve)) by adjusted labor force (labor force + labor force reserve).

Longer-term trends reveal that teen labor force underutilization rates during the summer months of 1999 and 2000 were between 26 and 27 percent (Chart 6). During and after the brief economic recession of 2001, the underutilization rate of teens rose to 33 percent in the summer months of 2003, and again declined to 30 percent in summer months of 2007 before the onset of the Great Recession of 2007-2009. After the Great Recession and during jobless recovery, the teen labor force underutilization rate in summer months of 2010 and 2011 reached as high as 45 percent. With the overall improvement in national labor market conditions, the unemployment, hidden unemployment, and under-employment problems of teens gradually declined to just under 27 percent in the summer months of 2019 (Chart 6).

During the COVID-19 pandemic period, the teen labor force underutilization rate rose sharply to 37.1 percent in the summer of 2020, representing an increase of 10 percentage points compared to the summer of 2019. It is important to note that like their adult counterparts, the number of teens who were not active in the labor market rose sharply as the pandemic lockdowns were implemented. As the labor market condition improved by the end of 2020, the labor market outcomes of teens also improved. In the summer months of 2021, the teen underutilization rate

dropped to 24.4 percent, representing a decline of nearly 12.7-percentage points from the high of 37 percent in the summer months of 2020 (Table 6 and Chart 6).

Chart 6:
Trends in Labor Force Underutilization Rate of Teens (16- to 19-Years-Old) During Summer Months, U.S., 1999-2021 (CPS Summer Month Averages, Not Seasonally Adjusted)



Source: Current Population Surveys (CPS) public use data files, 1999 to 2020, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Industry and Occupation of Teens in the Summer of 2021

Teen summer employment is largely concentrated in few key industries and occupations. Tables 7, 8, 9, and 10 provide insights into the industries and occupations in which teens worked in the summer months of 2019, 2020, and 2021. Out of the total of 6.173 million teens employed during the summer months of 2021, about 44 percent were working in leisure and hospitality firms (including food services), 22.5 percent worked in retail trade businesses, and about 9 percent worked in educational services, healthcare and social assistance industries (including day care facilities). These three major industries employed three-quarters (75%) of all teens that worked in the summer of 2021 (Table 7).

Nationally, between 2011 and 2019, total payroll employment in leisure and hospitality, and education and health industries grew robustly rising 24 percent and 19

percent, respectively. Growth in overall retail trade employment was much slower rising by just 6 percent over the period.¹⁷

Table 7:
Percent Distributions of Employed Teens in Summer Months of 2019, 2020, and 2021 by
Major Industry (Numbers in Percent)

Major Industry	2019	2020	2021
Agriculture, forestry, fishing, and hunting	2.2	2.2	1.4
Construction	4.3	4.9	3.9
Manufacturing	4.5	2.8	4.0
Wholesale trade	0.6	1.0	0.8
Retail trade	19.2	23.4	22.5
Transportation, warehousing, and utilities	2.0	2.7	3.6
Information	1.4	0.6	0.8
Finance, insurance, and real estate	1.4	1.5	1.3
Professional, scientific, management, administrative and waste management services	5.3	5.6	5.0
Educational services, healthcare, and social assistance	10.6	8.8	8.9
Arts, entertainment, recreation, accommodations, and food services	41.7	41.3	43.7
Other services	5.3	4.3	3.5
Public administration	1.4	0.9	0.6
Total Employed (In 1,000s)	6,179	5,147	6,173

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, and 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

The pandemic lockdowns resulted in very sharp job losses in the nation’s leisure and hospitality industries where about 42 percent of teens worked in the prior summer (2019). Summer employment in firms like eating and drinking establishments, sports, entertainment, and recreational facilities, museums, and similar kinds of business that make up the leisure and hospitality sector fell by nearly one-quarter as a result of the lockdowns (Table 8). Job losses in retail trade (-5 percent) were more modest (although quite large by historical standards) as employment shifted from face-to-face to on-line and delivery retail firms. Summer employment in education and health services including social services such as daycare activities also experienced losses of about 5 percent (Table 8).

¹⁷ Employment in the retail trade industry increased from 14.675 million in 2011 to 15.616 million in 2019. In the education and health industry, employment increased from 20.322 million in 2011 to 24.162 million in 2019. Similarly, employment in the leisure and hospitality industry increased from 13.352 million in 2011 to 16.589 million in 2019.

A comparison of employment in these three sectors (where a majority of teens work) between the summer months of 2020 and 2021 shows sharp increases. Among these three sectors, the largest job gains between summer of 2020 and 2021 took place in the leisure and hospitality sector (+19.4 percent) followed by retail trade sector (+4.2 percent), and education and health services sector (+3.2 percent). However, employment levels in these three sectors during the summer months of 2021 were still below their levels before the pandemic in summer months of 2019.

Table 8:
Trends in Payroll Employment Level During Summer Months of 2019, 2020, and 2021 in Selected Sectors (Seasonally Adjusted Numbers in 1,000s)

Sector	2019	2020	2021	Absolute Change			% Change		
				2019-2020	2020-2021	2019-2021	2019-2020	2020-2021	2019-2021
Total non-farm	150,914	139,518	146,790	-11,395	7,272	-4,123	-7.6	+5.2	-2.8
Retail trade	15,590	14,747	15,365	-843	618	-225	-5.4	+4.2	-1.5
Education & health services	24,183	22,880	23,617	-1,303	737	-566	-5.4	+3.2	-2.4
Leisure & hospitality	16,546	12,648	15,097	-3,898	2,448	-1,450	-23.6	+19.4	-9.6

Source: Current Employment Statistics (CES), U.S. Bureau of Labor Statistics, tabulations by Center for Labor Markets and Policy, Drexel University.

Teen summer employment is heavily concentrated in entry-level occupations that do not require a lot of education/human capital, work experience, or on-the-job skills development. Summer employment is characterized by its short duration and high turnover rate. Employers seek teens with strong character and behavioral traits, with other human capital traits playing a much-reduced role.

During the summer of 2021, sixty-one percent of all employed teens worked in service and low-level sales positions.¹⁸ The second largest share of employed teens worked in production, transportation, and material moving occupations, including route and delivery workers (11.5%), followed by office and administrative support occupations including cashier (9.1%) (Table 9). The share of teens who worked in production,

¹⁸ Service and low-level sales occupations include healthcare support, food preparation and support, buildings and ground cleaning, personal care and service, and low-level sales.

transportation, and material moving occupations has increased sharply in the summers of 2020 and 2021 compared to the summer of 2019. These three major occupations accounted for about 82 percent of all employed teens across the U.S. in the summer months of 2021. The share of teens working in office and administrative occupations declined in both 2020 and 2021 compared to 2019 as cashier employment declined from state lockdowns that sharply reduced employment in this key retail trade occupation. In summer months of 2021, twelve percent of all employed teens were working in cashier occupation (Table 10).

Table 9:
Percent Distribution of Employed Teens during the Summer of 2019, 2020, and 2021 by Major Occupations (Numbers in Percent)

Major Occupation	2019	2020	2021
Professional, technical, managerial, high-level sales	7.4	6.4	7.1
Healthcare practitioner & technical	1.0	1.2	0.9
Office & administrative support	11.1	9.4	9.1
Service & low-level sales	62.4	60.0	61.4
High skill blue collar	9.3	9.5	8.9
Production, transportation & material moving	7.1	11.6	11.5
Farming, fishing, and forestry	1.8	1.9	1.0
Total Employed (In 1,000s)	6,179	5,147	6,173

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, and 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Analysis of more detailed occupations of all employed teens during the summer months of 2021 found that 35 percent of all employed teens were working in the following five occupations: cashiers (12.4 percent), waiter/waitresses (7.4 percent), cooks (5.5 percent), fast food and counter workers (5.4 percent), and retail salespersons (4.8 percent). Table 10 displays the top 20 occupations of jobs held by teens during the summer of 2021. All of these occupations are low level service occupations. Sixty-nine percent of teen employment in the summer of 2021 was concentrated in these 20 occupations; considerably higher than the 18 percent share in these occupations of workers aged 20 or older. In the 1990s, teens used to work in more diverse sets of occupations, including financial institutions and public service occupations. In recent decades, however, a large majority of teens are confined to employment in a handful of low-level service occupations.

Table 10:
Top 20 Occupations Employing Largest Number of Teens During the
Summer Months of 2021, U.S.

Top 20 Occupation	Number of Employed Teens	% Dist. of Employed Teens	% Dist. of Employed 20 Years and Older
41-2010 Cashiers	766,333	12.4	1.4
35-3031 Waiters and waitresses	454,405	7.4	0.9
35-2010 Cooks	336,494	5.5	1.0
35-3023 Fast food and counter workers	335,279	5.4	0.3
41-2031 Retail salespersons	293,584	4.8	1.7
43-4051 Customer service representatives	250,895	4.1	1.5
35-2021 Food preparation workers	197,702	3.2	0.5
53-7065 Stockers and order fillers	195,440	3.2	1.0
53-7062 Laborers and freight, stock, and material movers, handlers	195,171	3.2	1.3
35-9031 Hosts and hostesses, restaurant, lounge, and coffee shop	168,736	2.7	0.1
33-909X Other protective service workers	154,063	2.5	0.0
37-3011 Landscaping and groundskeeping workers	144,289	2.3	0.8
47-2061 Construction laborers	121,782	2.0	1.5
35-9011 Dining room and cafeteria attendants and bartender helpers	104,344	1.7	0.1
37-201X Janitors and building cleaners	102,288	1.7	1.4
39-9011 Childcare workers	101,859	1.7	0.6
53-3030 Driver/sales workers and truck drivers	94,547	1.5	2.4
53-7064 Packers and packagers, hand	86,293	1.4	0.4
31-1131 Nursing assistants	74,644	1.2	0.8
39-9032 Recreation workers	71,271	1.2	0.1
Total of above occupation	4,249,419	68.8	17.9
Total Employed	6,172,777	100.0	100.0

Source: Current Population Surveys (CPS) public use data files, 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

The Projected Summer 2022 Job Outlook for U.S. Teens

The U.S. economy saw a sharp rise in employment in 2021 as it was recovering from the sharp job losses during the pandemic lockdowns, adding 562,000 payroll jobs per month in 2021. Despite this rapid pace of job creation, there were 1.19 million fewer payroll jobs in April 2022 than in February of 2020, a month before the outbreak of COVID-19. Of the three sectors that typically employ teens during summer, two sectors have not recovered the jobs lost during the

COVID-19 lockdowns in 2020 and thereafter. The retail trade sector has gained jobs between February 2020 and April 2022 (+288,000); however, payroll jobs in the educational/health and leisure and hospitality sectors in April 2022 were still below their levels in February 2020 (-409,000 and -1.438 million, respectively).

However, given the unprecedented labor shortage experienced across the U.S., particularly in industries where teens typically work, teens have a higher probability of being hired by employers. Given this situation, how well are the nation's teens likely to fare in the job market in the summer months of 2022? To answer this question, we rely on a regression model of teen employment rates that we developed in 2006 and has proven to be a reliable predictor of the summer employment prospects of teens across the nation.¹⁹ The model is designed to predict the average summer employment rate of teens based on their employment in January through April of each year. The regression model used seasonally adjusted monthly teen employment data from 1980 through 2002. The teen labor force increases sharply in the summer months as students are out of school temporarily during the summer vacation or have exited school permanently. The teen employment rate is highly path dependent, that is, the likelihood of working in the future is dependent on employment in the past. Teens who worked in the previous year or during the winter and spring before the summer are much more likely to work in the summer months than those who did not work.

In recent years, we revised our previous regression model to predict the summer employment rate with data from 1980 through 2005. We included seasonally adjusted average teen employment rates for three months (January, February, and March) to predict the (seasonally adjusted) summer employment rate, based on the hypothesis that a higher employment rate over the January to March period is expected to yield a higher summer employment rate for teens. Our revised model also achieved a good fit. The R-squared for the model was .87, which was highly significant at .001 level (Table 11).

¹⁹ The projection is based on a method developed by Andrew Sum and Ishwar Khatiwada et al. at the Northeastern University's Center for Labor Market Studies.

Table 11:
Findings of the Regression Model Estimates of the Summer Teen Employment Rate in the U.S.
Based on Observations from 1980 to 2005 (Seasonally Adjusted Average E/P Rates, Jan-March)

Regression Variable	Coefficient	Standard Error	t-Statistics	Sig. of t
Constant	43.0	0.231	186.0	0.001
Jan-March E-P	.97	0.077	12.7	0.001
<u>Model Summary</u>				
R-Squared	0.87			
DF; N	1;24			
F-Stat	160.8			
Sig. of F	0.001			

The predicted summer employment rate (seasonally adjusted) for a given year is estimated as follows:²⁰

$$\text{Predicted Summer E-P Ratio, EMP } i,t = 43.0 + .97*(\text{EMP } j,t-43.2)$$

Where: EMP i,t = Predicted seasonally adjusted summer teen employment rate in year t .
 EMP j,t = Estimated teen employment rate in the first four months of year t .

Table 12 presents actual and predicted summer teen employment rates based on the above model. The model under-predicted the teen summer employment rate in 2012 through 2014 by 0.3 to 0.6 percentage points. In 2015 and 2016, the model over-predicted the teen summer employment rate by 0.2 to 0.6 percentage points. In 2017, the predicted teen summer employment rate was identical to the actual rate of 30.5 percent. In 2018, the predicted teen summer employment rate was only 0.3 higher than the actual employment rate. In 2019, the actual and predicted seasonally adjusted summer employment rates of teens were nearly identical. Due to the outbreak of COVID-19 and its unprecedented impact on the U.S. economy, the prediction of summer jobs for teen was less reliable. Our projection suggested that the teen employment rate would decline substantially more than it actually did. The teen summer employment rate in 2020 averaged 26.3 percent compared to our forecast that it would fall to 23.1 percent. We suspect that a number of lockdown-related policies actually contributed to the better-than-expected teen job market during the pandemic summer of 2020. As lockdowns came off, job vacancies rose sharply, but generous federal unemployment benefits slowed the re-entry of those who had lost their jobs during the lockdown. Teens for the most

²⁰ The predictor variable referred to as employment rate (employment to population ratio) is the value of average employment rate of January to March, seasonally adjusted, less 43.2 (average January-March employment to population ratio from 1980 to 2005).

part did not have sufficient work experience to be eligible for unemployment insurance benefits, so teens became a more important source of hiring for re-opening employers. Similarly, visa programs that bring in foreign college students and other temporary summer workers from overseas were suspended, again making the local teen population a more attractive source of labor supply. The projected summer employment for 2021 was nearly identical with the actual teen summer employment rate (31.5 percent predicted versus 31.9 actual).

In January-April 2022, the seasonally adjusted employment rate of teens in the U.S. was 32.7 percent. Plugging this employment rate in the regression equation above yields **32.8 percent teen employment rate in the summer months of 2022**. This forecast suggests a strong summer job market for teens.

Table 12:
Comparisons of Predicted and Actual Teen Summer Employment Rates from 2005 to 2021 and the Predicted Teen Summer Employment Rate for 2022
(June-August Averages, in Percent, Seasonally Adjusted)

Summer of Year:	Actual Rate	Predicted Rate	Gap (Actual-Predicted)
2005	36.7	36.2	+0.5
2006	36.9	37.2	-0.2
2007	34.3	36.0	-1.7
2008	32.4	33.7	-1.3
2009	28.5	30.3	-1.9
2010	25.6	26.6	-1.0
2011	25.6	26.1	-0.5
2012	26.4	26.0	+0.4
2013	26.7	26.4	+0.3
2014	27.2	26.6	+0.6
2015	28.1	28.8	-0.6
2016	29.7	29.9	-0.2
2017	30.5	30.5	0.0
2018	30.6	30.9	-0.3
2019	30.8	30.7	+0.1
2020 (No COVID-19)	?	32.8	--
2020 (With COVID-19)	26.3	23.1	-3.2
2021	31.9	31.5	+0.4
2022	--	32.8	--

Data Sources and Methodology

Estimates of labor force statistics appearing in this report are based on the monthly Current Population Survey, a national household survey, conducted by the U.S. Census Bureau for the U.S. Department of Labor's Bureau of Labor Statistics. Every month, the CPS survey is conducted from the 19th to the 25th of the month with a nationally representative sample of approximately 60,000 households.²¹ The survey asks household members about their labor force status in the "reference week", the week prior to the day of interviews (12th to 19th of the month). The CPS collects data on the current labor force activities of all household members aged 16 years and older, including their employment, unemployment status, hours worked, industry and occupation of employment, etcetera. The CPS survey is the official source of data on the labor force, income, and poverty in the United States. The monthly CPS also adds supplemental questions to household members in a particular month to get detailed information on various important topics such as the annual social and economic characteristics, education and school enrollment, food security, fertility and marriage, tobacco use, computer and internet use, voting and registration, volunteering, veterans, etcetera. These CPS supplemental topics are known as CPS supplement surveys.

To assess the labor market well-being of teen aged (16- to 19-years-old) population in the U.S., we have relied primarily on the employment rate (employment to population ratio or E/P ratio) measure in this paper. The employment rate is the percent of a population group (in this instance 16- to 19-year-olds) in the civilian, non-institutional population that were employed in an average month during the year. The denominator excludes persons serving in the nation's armed forces and inmates of institutions, such as juvenile homes, jails, and prisons. Employment rate is the best available indicator to gauge labor market success of teens.

Key Definitions

Labor force participation rate: the share of civilian persons in a given group who are either working or actively looking for work. The labor force is the sum of employed and unemployed persons, i.e., labor force = employed + unemployed.

²¹ For detail, see: U.S. Census Bureau. Current Population Survey: Interviews Reference Manual, April 2015, retrieved, http://www2.census.gov/programs-surveys/cps/methodology/intman/CPS_Manual_April2015.pdf

Employment rate: also referred to as the employment to population ratio. It is the numbers of civilian persons employed in a given group as a percentage of non-institutionalized population in that group.

Unemployment rate: the percentage of persons in the civilian labor force who are not working but are actively looking for employment and are available for work.

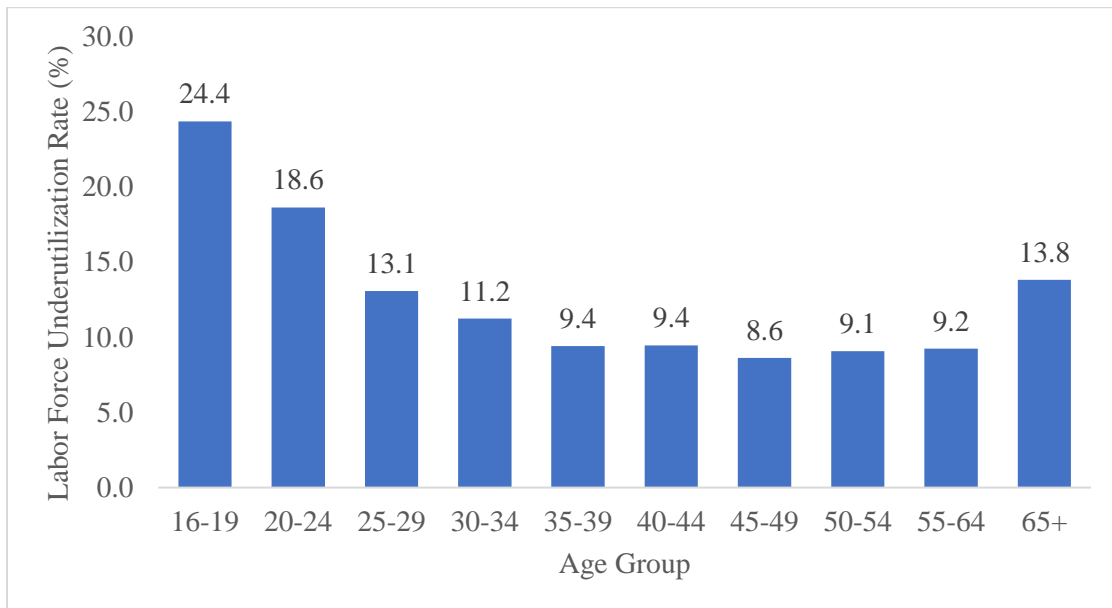
Appendix

Appendix Table A-1:
Ranking of States by Absolute Change in Teen Summer Employment Rate over the 2019 and 2020, (Summer Months Averages, Not Seasonally Adjusted Numbers in Percent)

Rank	State	2019	2020	Absolute Change	Rank	State	2019	2020	Absolute Change
1	Rhode Island	45.8	25.7	-20.1	27	Delaware	38.1	32.2	-5.8
2	Kentucky	46.4	26.9	-19.5	28	Pennsylvania	44.8	39.1	-5.7
3	Michigan	45.9	30.1	-15.8	29	New Mexico	28.8	23.5	-5.3
4	Maine	62.3	47.9	-14.3	30	Hawaii	25.9	20.7	-5.2
5	New Hampshire	61.7	47.9	-13.8	31	Minnesota	55.2	50.1	-5.1
6	Utah	58.3	46.4	-12.0	32	Texas	32.3	27.2	-5.1
7	Arizona	43.7	31.9	-11.8	33	Tennessee	38.9	34.1	-4.8
8	Florida	31.6	19.9	-11.7	34	Massachusetts	41.0	36.5	-4.6
9	Iowa	57.6	46.0	-11.7	35	Ohio	45.4	40.9	-4.5
10	Oklahoma	41.6	30.4	-11.2	36	West Virginia	29.6	25.2	-4.4
11	Illinois	41.3	30.2	-11.0	37	Missouri	50.2	46.8	-3.5
12	Wyoming	52.1	41.2	-10.8	38	California	24.3	21.0	-3.2
13	Alaska	45.8	34.9	-10.8	39	Louisiana	27.1	24.9	-2.2
14	Vermont	53.9	43.5	-10.4	40	North Dakota	47.5	45.5	-2.0
15	Maryland	44.2	33.9	-10.2	41	Montana	48.4	46.8	-1.6
16	New York	30.8	20.6	-10.2	42	Idaho	50.4	48.9	-1.6
17	Dist of Col.	25.0	16.0	-9.0	43	Mississippi	26.9	26.7	-0.3
18	Indiana	45.8	36.9	-8.9	44	Nebraska	50.7	50.4	-0.3
19	Wisconsin	56.2	47.5	-8.7	45	Nevada	30.7	30.7	0.0
20	Washington	37.3	28.9	-8.4	46	North Carolina	27.9	28.3	0.3
21	South Dakota	55.3	47.2	-8.1	47	Kansas	47.1	48.9	1.8
22	South Carolina	36.1	28.7	-7.4	48	New Jersey	25.8	27.8	2.0
23	Arkansas	37.7	30.4	-7.3	49	Virginia	33.1	35.4	2.4
24	Oregon	40.8	33.9	-6.9	50	Georgia	29.2	31.7	2.4
25	Connecticut	39.6	33.1	-6.5	51	Alabama	35.4	40.8	5.5
26	Colorado	45.3	39.1	-6.2		U.S. Average	37.0	31.1	-5.9

Source: Current Population Surveys (CPS) public use data files, 2019 and 2020, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Appendix Chart A-1:
Labor Force Underutilization Rates of 16 and Older Residents in the U.S. by Age Group, Summer Months of 2021 (June-July-August Averages, Not Seasonally Adjusted Rates in %)



Source: Current Population Surveys (CPS) public use data files, 2021, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.