

The 2023 Summer Job Outlook for American Teens

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Introduction

The employment situation for teens in the summer months of 2021 and 2022 was extremely favorable as the U.S. economy faced unprecedented labor shortage. The summer employment rate for the nation's population aged 16 to 19 reached its highest level in fifteen years. Teens (and young adults) not only increased their employment rates, but also were able to secure larger (inflation adjusted) summer weekly earnings increases than both prime age workers (25-54) and older workers (55+). The wage growth among young workers has outpaced inflation growth in the past few years. In the post-pandemic period, employers have relied more intensively on teens to fill vacant positions especially as the labor shortage conditions worsened in 2022.

Over the past three years, the U.S. labor market have experienced a widespread labor shortage. 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 in January/February of 2020 stood at 3.5 percent, 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 modestly 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, the U.S. labor market experienced extraordinary jobs losses, skyrocketing unemployment, and a shrinking labor supply. 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 labor market effects of the lockdowns.

Prior to the COVID-19 pandemic, teens had 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.

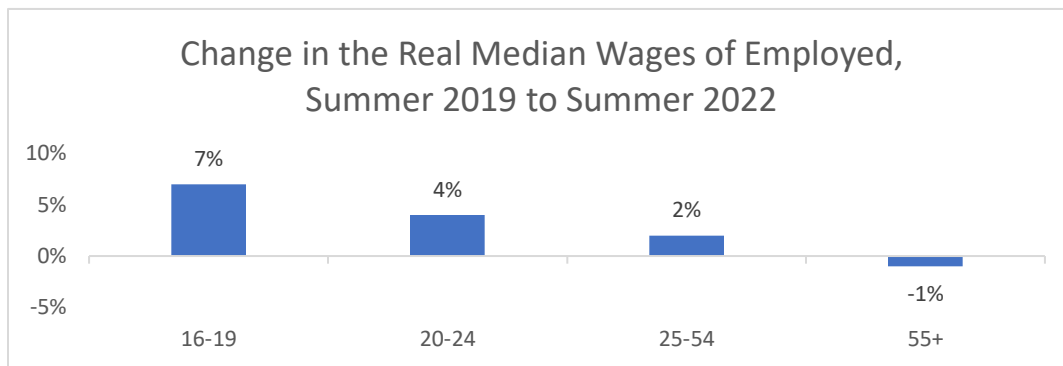
Youth employment declined sharply during the initial phase of the COVID-19 pandemic as 16- to 19-year-old teens became an even less important source of workers for firms as teen intensive retail trade and leisure and hospitality bore the brunt of Covid job losses. The teen share of total employment in 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. As the labor market began a strong bounce back after April 2020 teen employment prospects improved significantly especially as many older workers continued to stay away from employment. As the job market rebounded, firms quickly faced acute and widespread 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, the teen employment rate in the U.S. was 32 percent, rising to 33 percent by the fourth quarter of 2022. The teen employment rate continued to rise as of this writing, even though overall hiring has moderated somewhat in recent months. In March 2023, the job opening level in the U.S. was 9.590 million, much lower than all time high job opening level of 12.027 million in March 2022. Still, in the first quarter of 2023, the number of job openings remained sharply higher than the number of unemployed persons¹ and the teen employment rate in the U.S. stood at 33.4 percent.

¹ In the first quarter of 2023, the number job openings in the U.S. were 10.042 million and the number of unemployed persons was 5.823 million, i.e., 1.7 vacant jobs for every 1 unemployed person (10.042 million/5.823 million = 1.8).

Reflecting the tightening labor market conditions at the entry level of the labor market, teen hourly wages for summer jobs have rising sharply since 2019. Real median weekly pay for teens employed during the summer increased from about \$280 in 2019 to \$300 by the summer of 2022, an increase of 7 percent. The relative increase in inflation adjusted weekly earnings of those 16 to 19 working during the summer months was considerably higher than for young adults (age 20 to 24) who experienced a 4 percent pay hike over the three-year period. During the same period, prime age workers (25 to 54) saw weekly pay rise by just 2 percent and older workers (55 and older) experienced a 1percent decline in real weekly earnings. (Chart 1).

Chart 1:
Percent Change in the Real Median Weekly Earnings of the Employed in the Summer Months of 2019 and 2022



Source: Current Population Surveys (CPS), public use files, U.S. Bureau of Labor Statistics, 2019, 2022, U.S. Census Bureau; tabulations by authors.

Before getting into a discussion of longer-term teen labor force issues it is important to understand employment trends before and during the pandemic (2019 to 2022) by age group, since employment gains/losses over the 2019 to 2022 period varied considerably for workers by age. 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 unprecedented 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 2022 (Annual Averages in Percent)

Age Group	E/P Ratio				Absolute Change			
	2019	2020	2021	2022	2019-2020	2020-2021	2021-2022	2019-2022
16-19	30.8	28.4	32.0	32.8	-2.4	3.5	0.8	1.9
20-24	67.3	59.8	64.5	66.0	-7.5	4.7	1.5	-1.3
25-34	79.8	74.5	77.3	80.0	-5.3	2.7	2.7	0.2
35-44	80.9	77.0	78.2	80.5	-3.9	1.3	2.2	-0.4
45-54	79.2	75.5	77.3	79.1	-3.7	1.8	1.8	-0.1
55-64	63.7	60.3	61.9	63.5	-3.3	1.5	1.6	-0.2
65+	19.6	18.0	18.0	18.6	-1.6	0.0	0.6	-0.9

Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 2019, 2020, 2021, and 2022, U.S. Census Bureau; tabulations by authors.

Between 2021 and 2022, the employment-to-population ratio for working-age adults (16+) continued to increase. Even though the employment-to-population ratio rose between 2020 and 2022 for working-age adults (16+) in every age group, the ratios were still lower or flat in comparison to the pre-pandemic year (2019) for workers in every age group except teens for whom the employment-to-population ratio in 2022 was 1.9 percentage points higher than in 2019

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

(32.8% in 2022 vs 30.8% in 2019). Employers hired teens during the labor shortage, particularly in the summer months of 2021 and 2022, to fill vacant positions.⁴

This paper provides projections of the teen employment rate for the summer of 2023. It begins with an examination of longer-term trends (1999 to 2022) in the overall labor force 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 2023 (months for which labor force data are available from the U.S. Bureau of Labor Statistics). It then shifts focus to the employment rates of teens in the summer months of 2019, 2020, 2021, and 2022 across gender, race-ethnicity, and family income subgroups. The paper also examines the teen summer employment rates by states in the summer months of 2021 and 2022. 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 2022. The last section of this presents our prediction of summer employment rates for 2023.

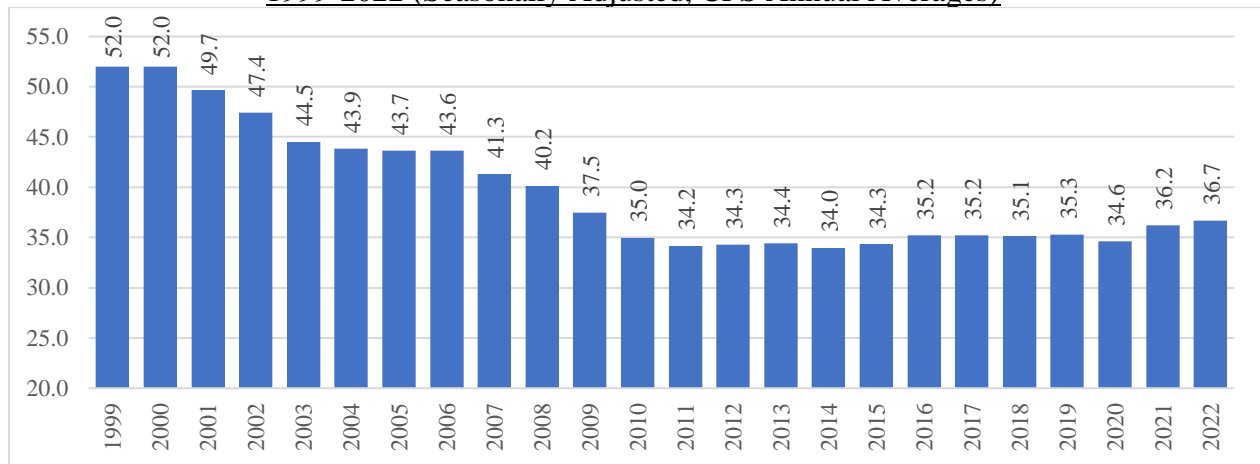
Teen Labor Force Participation Rates, 1999 to 2022

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

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/>

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 In 1999-2000, the peak of the 1990s labor market boom, more than half of all U.S. teens (52%) participated 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 reached to new historical lows (34-35 percent) despite the economic recovery. The labor force participation of teens remained around 34 to 35 percent over the entire 2011 to

Chart 2:
Trends in Civilian Labor Force Participation Rates of Teens (16- to 19-Years-Old) in the U.S., 1999-2022 (Seasonally Adjusted, CPS Annual Averages)



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 1999 through 2022, U.S. Census Bureau; tabulations by authors.

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.

2019 period (Chart 2).

It should be noted that workers in each age group of working-age adults (16+) experienced 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 29.7 percent in 2031.⁶ In 2020, during the COVID-19 pandemic period, the labor force participation rate of teens declined to 34.5 percent. **By summer of 2022, teen labor force participation rate rose to 36.7, which was the highest since 2009.**

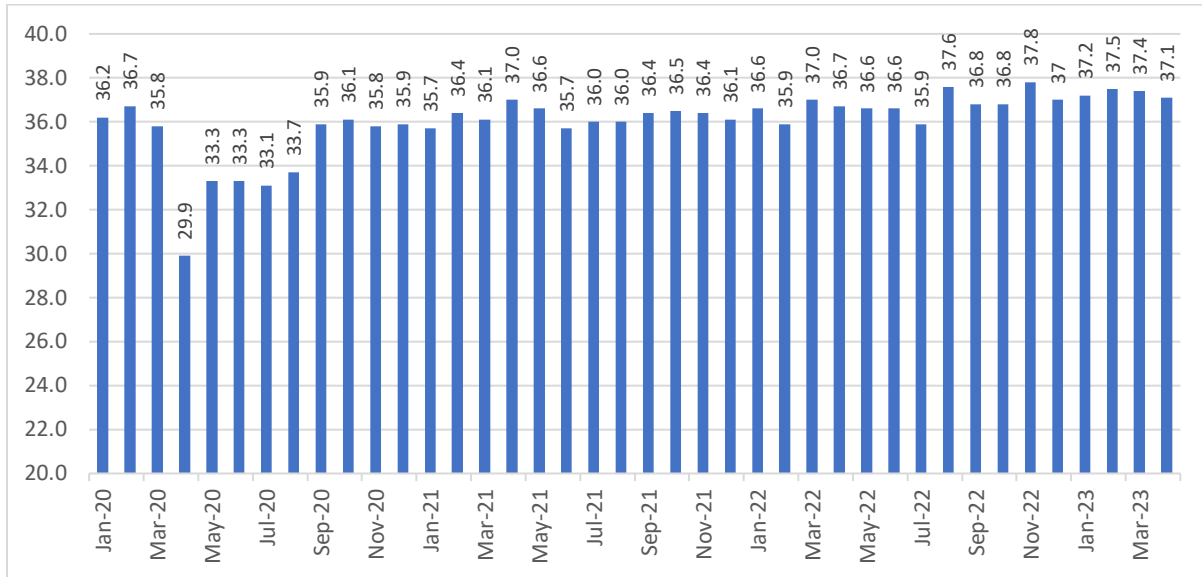
Monthly Teen Labor Force Participation Rates, January 2020 to April 2023

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 3). Before the outbreak of COVID-19, the labor force participation rate of teens in January/February 2020 was 36.5 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 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 and 2022, the labor force participation rate of teens stayed around 36-37 percent range. In the first four months of 2023, the labor force participation rate of teens has remained slightly above the 37 percent range.

Chart 3:

Monthly Civilian Labor Force Participation Rates of Teens (16- to 19-Years-Old) in January 2020 to April 2023 (Seasonally Adjusted)

⁶ See: Employment Projections: Civilian Labor Force Participation Rate, by Age, Sex, Race, Ethnicity, 2001, 2011, 2021, and projected 2031, <https://www.bls.gov/emp/tables.htm>. 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>. For a more recent discussion and overview of labor force projections, see: Nicholas DeZarn, Stanislava Ilic-Godfrey, and Emily Krutsch, "Occupational projections overview, 2021–31," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, April 2023, <https://doi.org/10.21916/mlr.2023.6>



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, U.S. Census Bureau; tabulations by authors.

Teen Employment Rates, 1999 to 2022

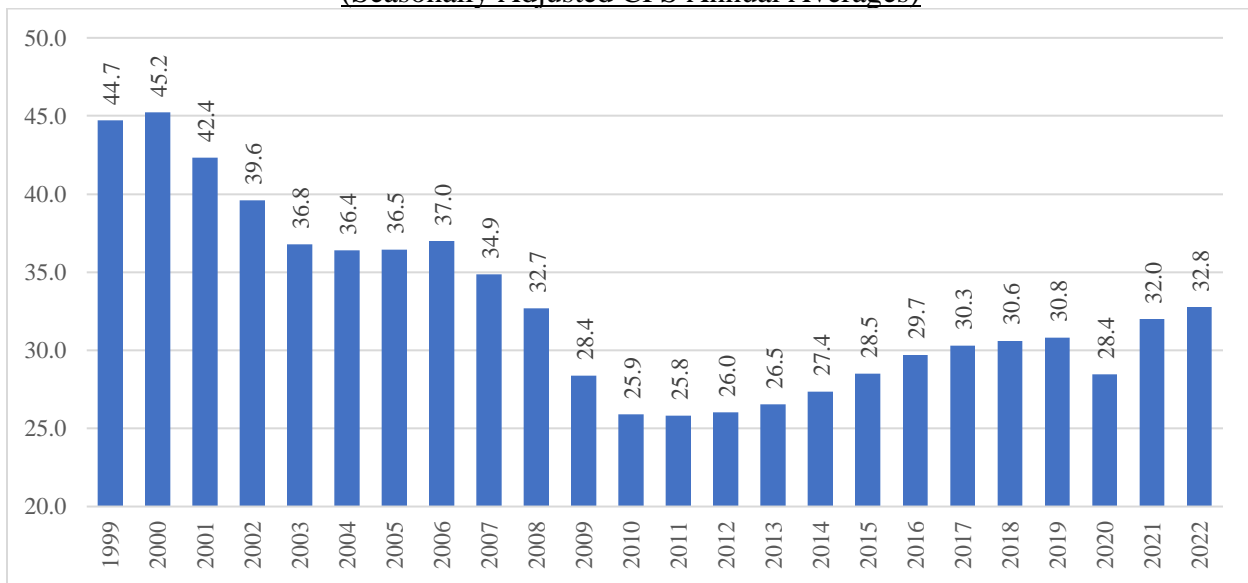
The teen employment rate (the percent of teens who are employed) has been declining sharply since 2000, with the pace of decline particularly steep during and in the aftermath of the Great Recession. What caused such sharp decline in teen employment rates? Certainly, a large job deficit was an important 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. (See Chart A-3 in the Appendix).

No other group of U.S. workers has experienced such a sharp decline in their employment rate since 2000. In a given month during 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 4).

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

Chart 4:
Trends in the Employment Rate of Teens (16- to 19-Years-Old) in the U.S., 1999-2022
(Seasonally Adjusted CPS Annual Averages)



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 1999 through 2022, U.S. Census Bureau; tabulations by authors.

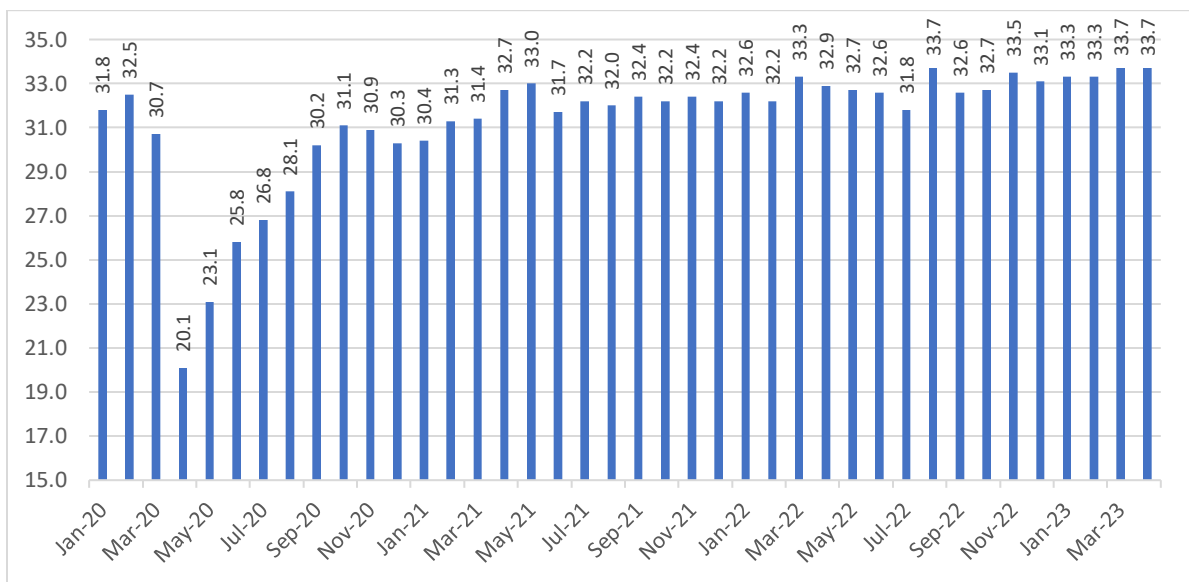
⁷ See: David Neumark and Cortnie Shupe, “Declining Teen Employment: Minimum Wages, Other Explanations, and Implications for Human Capital Investment,” Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2018.

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, teens employment-to-population ration reached to 32 percent and continued to rise in 2022, reaching 32.8 percent. **The 32.8 percent employment rate among teens in 2022 was highest since 2008.**

Monthly Teen Employment Rates, January 2020 to April 2023

The 28.5 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-

Chart 5:
Monthly Trends in Employment to Population Ratio of Teens 16 to 19 in the U.S. in January 2020 to April 2023 (Seasonally Adjusted)



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, U.S. Census Bureau; tabulations by authors.

population ratio of teens from January 2020 to April 2023 (Chart 5). 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/May/June of 2022, the teen employment rate reached nearly 33 percent. From June to December of 2021, the teen employment rate remained in 32 percent range. Throughout 2022, the teen employment remained in 33 percent range. In the first four months of 2023, the teen employment rate has stayed around the 33.3-33.7 percent range.

Teen Summer Employment Rates, 1999 to 2022

Summer months provide 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 In addition to reducing involvement in criminal justice system, Summer Employment Youth Programs (SAEPS) have found to provide employment and earnings boost to youth who otherwise had difficulty finding employment.

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.

Summer employment also found to have positive effects on socio-emotional skills, academic and career aspirations, and work habits associated with job readiness.¹¹

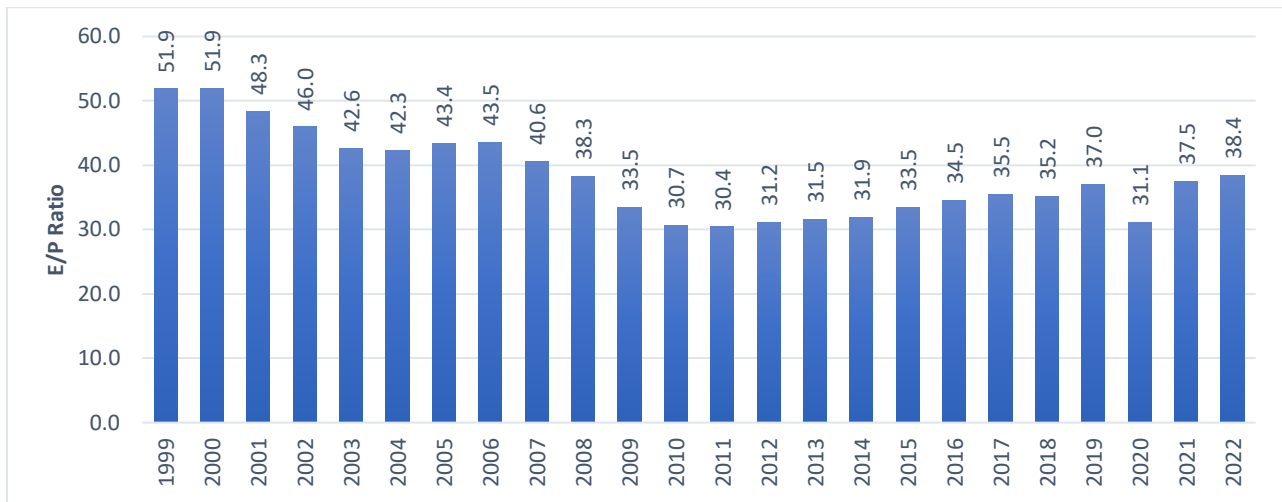
Longer-term trends show that the summer employment prospects of U.S. teens have improved modestly in the years just prior to the COVID-19 pandemic in 2020 and continuously improved during 2021 and 2022 during the unprecedented labor shortage faced by the U.S. economy; however, the summer employment rates of teens has not approached levels attained in the late 1990s when the U.S. labor market was at its peak.¹² 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 6).

During the Great Recession of 2007-2009 and the following economic recovery, the summer employment prospects of teens continued to deteriorate, reaching historical lows 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 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.

¹¹ See: Yiping Li and Kalila Jackson-Spieker, "The Promises of Summer Employment Programs: Lessons from Randomized Evaluations", Abdul Latif Jameel Poverty Action Lab (J-PAL North America, MIT), https://www.povertyactionlab.org/sites/default/files/publication/SYEP_Evidence_Review-9.22.22.pdf

¹² 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.

Chart 6:
Trends in the Summer Employment Rate of Teens (16- to 19-Years-Old), U.S., 1999-2022 (CPS
June-July-August Averages, Not Seasonally Adjusted)



Source: Current Population Surveys (CPS) public use data files, 1999 to 2022, U.S. Census Bureau; tabulations by authors.

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, experienced 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.¹³ Teens summer employment rate further rose to 38.4 percent in 2022, the highest since 2007.

Changes in Teen Summer Employment Rates, 2019-2022

Gender, Race-Ethnicity, and Age

As mentioned above, teen employment rate rebounded sharply in summer months of 2021 from 2020 as COVID-19 vaccines became more widely available in early 2021 and the business hiring picked up. This trend continued in 2022. Firms across the U.S., particularly those involved in direct consumer contact activities such as leisure and hospitality industries, started to experience an unprecedented labor shortage as workers were hesitant to return to workplace due

¹³ Ibid., 3.

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).¹⁴ 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, teen employment rate rose to 38.4 percent, the highest since 2007. After dropping extraordinarily in 2020 during the initial phase of pandemic, teens employment rate rose sharply in summer of 2021. Teens in each gender, race-ethnicity, and age group experienced sharp increase in employment rates 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. The summer employment rates of teens in 2022 continued to rise. Between 2021 and 2022, the summer employment rate of teens rose by about a percentage point. During this period, male teens experienced higher increase in summer employment rates than their female peers (1.2 percentage points versus 0.6 percentage point). The summer 2022 employment rates of male and female teens were very similar (38-39 percent) and were higher than in 2019.

The 2022 summer employment rates among teens varied widely by race-ethnicity, ranging from a low of only 24 percent among Asians to a high of nearly 45 percent among non-Hispanic Whites. There were substantial increases in summer employment rates of teens in each race-ethnicity group since 2020. 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 summer employment rate continued to rise in 2022 for teens in every race-ethnic group, with the exception of African-Americans, which was flat between 2021 and 2022. The employment rates of teens in the summer months of 2022 in each of the major race-ethnic group, except Hispanics, was higher than in 2019.

¹⁴ 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>

Table 2:
Trends in Summer Employment Rates of 16- to 19-Year-Old Teens in 2019, 2020, 2021, and 2022 by Gender, Race-Ethnicity, and Age, U.S. (Summer Months Averages, Not Seasonally Adjusted)

xx Group	E/P Ratio				Absolute Change			
	2019	2020	2021	2022	2019-2020	2020-2021	2021-2022	2019-2022
All	37.0	31.1	37.5	38.4	-5.9	6.4	0.9	+1.4
Gender								
Male	36.8	30.9	37.8	38.9	-5.9	6.9	1.2	+2.1
Female	37.3	31.3	37.3	37.9	-6.0	6.0	0.6	+0.6
Race-Ethnic Group								
White	43.8	37.1	44.8	45.2	-6.7	7.7	0.4	+1.4
Black	28.9	24.1	30.3	30.1	-4.8	6.2	-0.2	+1.2
Asian	21.6	13.6	20.4	23.6	-8.0	6.8	3.2	+2.1
Hispanic	31.0	26.7	30.6	31.0	-4.3	3.9	0.3	0.0
American Indian	32.1	21.3	26.9	36.8	-10.8	5.7	9.9	+4.7
All Other Races	36.3	27.2	34.3	46.3	-9.1	7.1	11.9	+10.0
Age								
16	19.7	18.2	21.0	24.3	-1.5	2.8	3.3	+4.7
17	30.7	26.6	33.9	33.2	-4.2	7.3	-0.7	+2.5
18	43.7	36.5	43.2	44.7	-7.2	6.7	1.6	+1.0
19	55.0	45.9	53.8	54.1	-9.1	7.9	0.3	-0.9

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, 2021, and 2022, U.S. Census Bureau; tabulations by authors.

Teen summer employment rates are closely correlated with age. Older teens are much more likely to work than 16-year-olds. In the summer months of 2022, the employment rate of 16-year-olds was only 24 percent, rising close to 33 percent for 17-year-olds, to 45 percent among 18-year-olds, and nearly 54 percent for the oldest teens aged 19 years. Teens aged 19 were 2.2 times more likely than those aged 16 to work during the summer of 2022. Between the summer months of 2019 and 2020, decline in teen employment rates were much greater among older teens. The employment rate decline was only 1.5 percentage points among 16-year-olds versus 9 percentage points among 19-year-olds (Table 2). The summer employment 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. In the summer months of 2022, the teen employment rate increase from 2019 was highest among 16

years old (4.7 percentage points), followed by an increase of 2.5-percentage points among 17 years old, and 1 percentage point among 18 years old. However, the summer employment rate of 19 years old in 2022 was nearly a percentage point lower than in 2019. (Table 2).

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 2022, 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 2022, the teen employment rate rose steadily with the level of family income, rising from about 26 percent for teens from families with annual incomes under \$20,000 and to a high of 44 percent among teens in families with annual incomes between \$100,000 and \$149,999 and 46 percent among their counterparts with family annual incomes of \$150,000 or higher.

Teens in every family income group experienced substantial decline in summer employment rates between 2019 and 2020. The size of the employment rate decline ranged 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).

Table 3:
Trends in Summer Employment Rates of 16- to 19-Year-Olds Between 2019 to 2022 by Family Income Levels, U.S. (Summer Months Averages, Not Seasonally Adjusted)

Family Income Group	E-P Ratio				Absolute Change			
	2019	2020	2021	2022	2019-2020	2020-2021	2021-2022	2019-2022
Under \$20,000	27.5	19.4	28.6	26.3	-8.2	9.3	-2.3	-1.2
\$20,000-\$39,999	33.4	23.0	28.5	29.1	-10.4	5.5	0.7	-4.3
\$40,000-\$59,999	33.1	30.4	38.0	35.3	-2.7	7.6	-2.7	+2.2
\$60,000-\$74,999	39.3	30.0	36.1	36.5	-9.4	6.2	0.3	-2.9
\$75,000-\$99,999	40.2	33.5	40.5	40.1	-6.7	7.0	-0.4	0.0
\$100,000-\$149,99	43.3	36.7	43.6	44.4	-6.6	7.0	0.8	+1.1
\$150,000+	40.3	36.3	43.2	45.7	-3.9	6.8	2.5	+5.4

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, 2021, and 2022, U.S. Census Bureau; tabulations by authors.

The summer of 2021 saw a reversal in teen employment rates. The employment rate 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 experienced increases of 5.5 and 7.6 percentage points in their summer employment rates between 2020 and 2021. Between 2021 and 2022, the summer employment rate rose substantially only for teens in affluent families (+2.5 percentage points). For teens in all other family income categories, the summer employment rate between 2021 and 2022 was either flat or declined slightly. Overall, teens who experienced increase in summer employment rates between 2019 and 2022 were from family with income between \$40,000-\$59,999 (+2.2. percentage points) and between \$100,000-\$149,99 (1.1 percentage point). For those with income under \$20,000, between \$60,000-\$74,999, and between \$20,000-\$39,999, the summer employment rate in 2022 were still 1-4 percentage points lower than in 2019. (Table 3).

Teen Summer Employment Rates Across States in 2022

There was high degree of variations in teen summer employment rates across the U.S. states. Table 4 displays ranking of states by the teen employment rate in the summer months of 2022. Teens living in Nebraska, New Hampshire, Maine, Minnesota, Iowa, Rhode Island, South Dakota, Wisconsin, North Dakota, Nebraska, and Utah had the highest employment rate in summer months of 2022. Many of these states have also consistently led the nation in teen employment for many years.

Table 4:
Ranking of Employment Rates of Teens in Summer Months of 2022 by State
(Summer Month Averages, Not Seasonally Adjusted)

Rank	State	E/P Ratio	Rank	State	E/P Ratio
1	Nebraska	65.9	27	New Jersey	40.5
2	New Hampshire	64.9	28	Pennsylvania	40.2
3	Maine	61.7	29	Connecticut	40.0
4	Minnesota	60.5	30	West Virginia	39.3
5	Iowa	60.2	31	Virginia	39.2
6	Rhode Island	58.7	32	Maryland	39.2
7	South Dakota	58.6		U.S. Average	38.4
8	Wisconsin	58.4	33	North Carolina	38.3
9	North Dakota	58.3	34	South Carolina	38.2
10	Utah	56.2	35	Louisiana	37.6
11	Kansas	55.4	36	Oregon	36.5
12	Idaho	55.4	37	Tennessee	36.4
13	Vermont	53.3	38	Georgia	35.8
14	Indiana	49.4	39	Washington	35.7
15	Alaska	49.2	40	Nevada	35.0
16	Montana	47.4	41	Oklahoma	34.3
17	Kentucky	46.7	42	Mississippi	34.3
18	Ohio	46.3	43	Alabama	33.6
19	Massachusetts	45.4	44	Texas	32.0
20	Missouri	44.0	45	New York	30.9
21	Arkansas	43.7	46	California	29.4
22	Michigan	43.0	47	Arizona	29.0
23	Wyoming	42.6	48	New Mexico	27.8
24	Colorado	41.4	49	Dist. of Columbia	27.2
25	Delaware	41.4	50	Florida	26.3
26	Illinois	40.6	51	Hawaii	23.7

Source: Current Population Surveys (CPS) public use data files, 2022, U.S. Census Bureau; tabulations by authors.

The top five states with the highest teen employment rate in 2022 were Nebraska (65.9%), New Hampshire (64.9%), Maine (61.7%), Minnesota (60.5%), and Iowa (60.2%). Together these states had an average teen summer employment rate of just under 63 percent. In contrast, the five states with the lowest teen summer employment rates were Arizona (29.0%), New Mexico (27.8%), District of Columbia (27.2%), Florida (26.3%), and Hawaii (23.7%). Together, these states had a teen summer employment rate that averaged about 26.8 percent in 2022, less than half the summer employment rate of teens in the top five states.

Teen Summer Employment Gain/Loss Across States Between 2021 and 2022

Between 2021 and 2022, twenty-five states (49%) experienced gains in teen employment rates of at least 2 percentage points. (Table 5). Teens in 17 states experienced a decline in summer employment rate between 2021 and 2022. The decline in summer employment rate of teens in these states ranged from lows of 1-3 percentage points in Wisconsin and Washington to highs of 10-11 percentage points in Maryland and Pennsylvania. In the remaining seven states, the summer employment rates of teens increased by less than 2-percentage points or remained flat between 2021 and 2022. Among the 25 states with gains in teen summer employment rates of at least 2 percentage points between 2021 and 2022, Iowa, New Jersey, Nebraska, Rhode Island, and Kentucky recorded the largest gains in the range of 10-18 percentage points. 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 (Appendix Table 1). 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.

Table 5:
Ranking of States by Absolute Change in Teen Summer Employment Rate over the 2021 and 2022, (Summer Months Averages, Not Seasonally Adjusted Numbers in Percent)

Rank	State	2021	2022	Absolute Change	Rank	State	2021	2022	Absolute Change
1	Iowa	41.8	60.2	18.4	27	Maine	59.9	61.7	1.8
2	New Jersey	26.2	40.5	14.3	28	Mississippi	32.7	34.3	1.6
3	Nebraska	54.6	65.9	11.3	29	Texas	30.7	32.0	1.3
4	Rhode Island	47.4	58.7	11.3	30	Massachusetts	44.5	45.4	1.0
5	Kentucky	36.6	46.7	10.2		U.S. Total	37.5	38.4	0.9
6	Arkansas	34.6	43.7	9.1	31	Illinois	40.0	40.6	0.7
7	Indiana	40.7	49.4	8.7	32	Nevada	34.7	35.0	0.3
8	Minnesota	53.4	60.5	7.2	33	Dist. of Co.	27.3	27.2	-0.1
9	Alaska	42.2	49.2	7.0	34	North Carolina	38.7	38.3	-0.4
10	Utah	49.4	56.2	6.9	35	Wisconsin	59.8	58.4	-1.4
11	Louisiana	30.8	37.6	6.8	36	Washington	38.5	35.7	-2.8
12	Connecticut	33.3	40.0	6.7	37	Florida	30.3	26.3	-4.0
13	Oregon	30.1	36.5	6.4	38	West Virginia	43.5	39.3	-4.2
14	Vermont	47.3	53.3	6.1	39	Montana	52.4	47.4	-5.0
15	Michigan	38.5	43.0	4.5	40	South Carolina	43.8	38.2	-5.6
16	Kansas	51.1	55.4	4.3	41	Hawaii	29.7	23.7	-6.0
17	Idaho	51.1	55.4	4.3	42	New Mexico	34.5	27.8	-6.7
18	New Hampshire	61.1	64.9	3.8	43	Virginia	45.9	39.2	-6.7
19	North Dakota	54.8	58.3	3.6	44	Colorado	48.7	41.4	-7.3
20	Georgia	32.3	35.8	3.5	45	Delaware	49.5	41.4	-8.1
21	Ohio	43.6	46.3	2.7	46	Tennessee	44.8	36.4	-8.4
22	South Dakota	56.0	58.6	2.6	47	Oklahoma	43.1	34.3	-8.8
23	New York	28.6	30.9	2.3	48	Wyoming	52.0	42.6	-9.3
24	Alabama	31.3	33.6	2.3	49	Arizona	38.7	29.0	-9.7
25	Missouri	41.9	44.0	2.1	50	Maryland	49.3	39.2	-10.1
26	California	27.5	29.4	1.9	51	Pennsylvania	51.2	40.2	-11.0

Source: Current Population Surveys (CPS) public use data files, 2021 and 2022, U.S. Census Bureau; tabulations by authors.

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.¹⁵ Indeed, the school enrollment rate among teens in the month of July has increased by 18 percentage points since 2000.¹⁶ Nonetheless, our analysis of CPS data reveals a strong desire for work among teenagers.¹⁷

The labor market problems of American teens in the summer months of 2022 were sharply lower than in the 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 2022. (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 2022, 839,500 teens were ‘officially’ unemployed, another 324,000 wanted to work full-time, but held part-time positions because they could not find full-time work, and an additional 839,100 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 2.002 million. This means that 24.3 percent of the adjusted teen labor force (labor force + labor force reserve) was underutilized during the summer months of 2022, sharply lower than in summer months of 2020 (37.1 percent) and identical with 2021 labor force underutilization rate. 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.

¹⁵ 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>

¹⁶ 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.

¹⁷ 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>.

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 7). 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 7).

Table 6:
Trends in Labor Market Problems of 16- to 19-Year-Olds in Summer Months of 2019, 2020, 2021, and 2022 (CPS Summer Months Averages, Not Seasonally Adjusted Numbers in 1,000s)

Labor Force Status	2019	2020	2021	2022	Absolute Change, 2019-2020	Absolute Change, 2020-2021	2021-2022	2019-2022
Labor Force	7,122	6,390	6,983	7,404	-732	593	421	282
Employed	6,179	5,147	6,173	6,564	-1,032	1,026	391	385
Unemployed	943	1,243	810	839	300	-433	29	-104
Working PT for ECN Reasons	397	520	313	324	123	-207	11	-73
LF Reserve	787	964	764	839	177	-200	75	52
NILF	9,563	10,162	9,459	9,676	600	-703	217	113
Underutilized Pool	2,128	2,727	1,887	2,002	599	-840	115	-126
Adj. Labor Force	7,909	7,354	7,747	8,243	-556	393	496	334
Total (16-19)	16,685	16,552	16,442	17,080	-132	-110	638	395
LF Underutilization Rate	26.9	37.1	24.4	24.3	10.2	-12.7	-0.1	-2.6

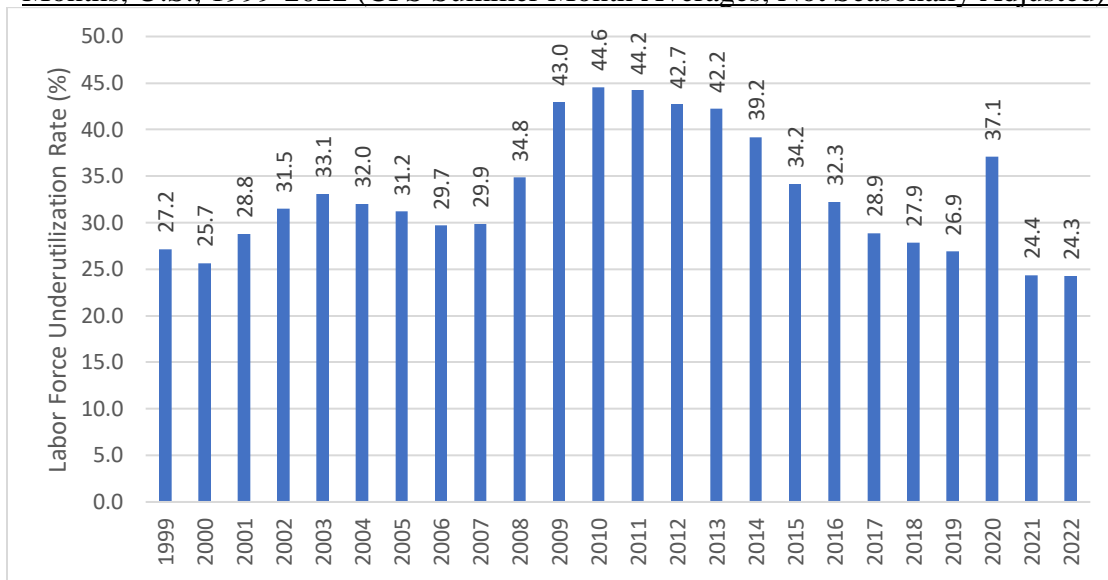
Source: Current Population Surveys (CPS) public use data files, 2019, 2020, 2021, and 2022, U.S. Census Bureau; tabulations by authors.

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).

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 from summer months 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 U.S. labor market condition improved by the end of 2020, the labor market outcomes of teens also improved. In the summer months of 2021, teen labor force

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 7). In the summer months of 2022, the labor force underutilization rate of teens remained almost identical to that of 2021 (24.3 percent).

Chart 7:
Trends in Labor Force Underutilization Rate of Teens (16- to 19-Years-Old) During Summer Months, U.S., 1999-2022 (CPS Summer Month Averages, Not Seasonally Adjusted)



Source: Current Population Surveys (CPS) public use data files, 1999 to 2022, U.S. Census Bureau; tabulations by authors.

Industry and Occupation of Teens in the Summer Months of 2022

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, 2021, and 2022. Out of the total of 6.564 million teens employed during the summer months of 2022, about 44 percent were working in leisure and hospitality firms (including food services), 21.4 percent worked in retail trade businesses, and 8.5 percent worked in educational services, healthcare and social assistance industries (including day care facilities). These three major industries employed nearly three-quarters (73.5%) 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.¹⁸

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	2022
Agriculture, forestry, fishing, and hunting	2.2	2.2	1.4	2.5
Construction	4.3	4.9	3.9	4.5
Manufacturing	4.5	2.8	4	4.4
Wholesale trade	0.6	1	0.8	0.6
Retail trade	19.2	23.4	22.5	21.4
Transportation, warehousing, and utilities	2	2.7	3.6	3.2
Information	1.4	0.6	0.8	0.8
Finance, insurance, and real estate	1.4	1.5	1.3	1.2
Professional, scientific, management, administrative and waste management services	5.3	5.6	5	3.7
Educational services, healthcare, and social assistance	10.6	8.8	8.9	8.5
Arts, entertainment, recreation, accommodations, and food services	41.7	41.3	43.7	43.6
Other services	5.3	4.3	3.5	5.0
Public administration	1.4	0.9	0.6	0.6
Total Employed (In 1,000s)	6,179	5,147	6,173	6,564

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, 2021, and 2022, U.S. Census Bureau; tabulations by authors.

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).

¹⁸ 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. The payroll employment growth continued throughout the 2022. Among these three sectors, the largest job gains between summer of 2020 and 2022 took place in the leisure and hospitality sector (+29.0 percent) followed by retail trade sector (+7.1 percent), and education and health services sector (+6.9 percent). However, employment levels in leisure and hospitality sector during the summer months of 2022 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, 2021, and 2022 in Selected Sectors (Seasonally Adjusted Numbers in 1,000s)

Year	Total non-farm	Education & health services	Leisure & hospitality	Retail trade
2019	150,948	24,180	16,535	15,588
2020	139,140	22,892	12,179	14,762
2021	146,330	23,689	14,253	15,405
2022	152,358	24,467	15,706	15,805
Absolute Change				
2019-2020	-11,808	-1,288	-4,357	-826
2020-2021	7,189	797	2,074	643
2021-2022	6,029	778	1,453	400
2020-2022	13,218	1,575	3,527	1,043
2019-2022	1,410	287	-830	217
% Change				
2019-2020	-7.8	-5.3	-26.3	-5.3
2020-2021	5.2	3.5	17.0	4.4
2021-2022	4.1	3.3	10.2	2.6
2020-2022	9.5	6.9	29.0	7.1
2019-2022	0.9	1.2	-5.0	1.4

Source: Current Employment Statistics (CES), U.S. Bureau of Labor Statistics, tabulations by authors.

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 2022, about 60 percent of all employed teens worked in service and low-level sales positions.¹⁹ The second largest share of employed teens worked in production, transportation, and material moving occupations, including route and delivery workers (15.1%), followed by office and administrative support occupations including cashier (8.1%) (Table 9). The share of teens who worked in production, transportation, and material moving occupations has increased sharply in the summers of 2020 and 2022 compared to the summer of 2019. These three major occupations accounted for about 83 percent of all employed teens across the U.S. in the summer months of 2022. The share of teens working in office and administrative occupations declined has been declining since 2020 compared to 2019 as cashier employment declined from state lockdowns that sharply reduced employment in this key retail trade occupation. In summer months of 2022, eleven 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, 2021, and 2022 by Major Occupations (Numbers in Percent)

Major Occupation	2019	2020	2021	2022
Professional, technical, managerial, high-level sales	7.4	6.4	7.1	8.5
Healthcare practitioner & technical	1	1.2	0.9	0.8
Office & administrative support	11.1	9.4	9.1	8.1
Service & low-level sales	62.4	60	61.4	59.8
High skill blue collar	9.3	9.5	8.9	5.8
Production, transportation & material moving	7.1	11.6	11.5	15.1
Farming, fishing, and forestry	1.8	1.9	1	1.9
Total Employed (In 1,000s)	6,179	5,147	6,173	6,564

Source: Current Population Surveys (CPS) public use data files, 2019, 2020, 2021, and 2022, U.S. Census Bureau; tabulations by authors.

Analysis of more detailed occupations of all employed teens during the summer months of 2022 found that one in three of all employed teens were working in the following five occupations: cashiers (11.5 percent), waiter/waitresses (6.8 percent), fast food and counter workers (5.3 percent), cooks (5.0 percent), and retail salespersons (4.4 percent). Table 10 displays the top 20 occupations of jobs held by teens during the

¹⁹ 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.

summer of 2021. All of these occupations are low level service occupations. Sixty-eight percent of teen employment in the summer of 2022 was concentrated in these 20 occupations; considerably higher than the 15 percent share in these occupations of workers aged 20 or older. In the 1990s, teens used to work in more diverse sets of

Table 10:
Top 20 Occupations Employing Largest Number of Teens During the
Summer Months of 2022, U.S.

Top 20 Occupation	Number of Employed Teens	% Dist. of Employed Teens	% Dist. of Employed 20 Years and Older
41-2010 Cashiers	753,400	11.5	1.3
35-3031 Waiters and waitresses	443,114	6.8	1.0
35-3023 Fast food and counter workers	350,358	5.3	0.3
35-2010 Cooks	329,313	5.0	1.1
41-2031 Retail salespersons	287,758	4.4	1.5
53-7065 Stockers and order fillers	267,064	4.1	1.0
43-4051 Customer service representatives	247,382	3.8	1.6
53-7062 Laborers and freight, stock, and material movers, hand	237,067	3.6	1.4
35-2021 Food preparation workers	225,707	3.4	0.4
35-9031 Hosts and hostesses, restaurant, lounge, and coffee shop	198,999	3.0	0.1
33-909X Other protective service workers	189,747	2.9	0.1
37-3011 Landscaping and groundskeeping workers	156,297	2.4	0.8
45-20XX Other agricultural workers	116,747	1.8	0.5
35-9011 Dining room and cafeteria attendants and bartender helpers	106,366	1.6	0.1
39-9011 Childcare workers	102,535	1.6	0.6
47-2061 Construction laborers	102,098	1.6	1.4
39-9032 Recreation workers	95,577	1.5	0.1
37-201X Janitors and building cleaners	90,274	1.4	1.4
39-30XX Other entertainment attendants and related workers	85,647	1.3	0.1
43-4171 Receptionists and information clerks	74,558	1.1	0.7
Total of above occupation	4,460,009	67.9	15.5
Total Employed	6,564,045	100.0	100.0

Source: Current Population Surveys (CPS) public use data files, 2022, U.S. Census Bureau; tabulations by authors.

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

The Projected Summer 2023 Job Outlook for U.S. Teens

The U.S. economy experienced a sharp rise in employment in 2021 as it was recovering from steep job losses during the pandemic lockdowns, adding on average 606,000 payroll jobs per month in 2021. The job creation pace slowed in 2022 compared to 2021. In 2022, a total of 4.792 million jobs were created, an average of 399,000 jobs per month. Despite stellar job creation in 2021, there were 1.629 million or 1.7% fewer jobs in December 2021 than in February 2020. In 2022, the U.S. economy added more than 4.5 million jobs (375,000 per month on average). The payroll employment level in April 2023 was 3.302 million or 2.2% higher than in February 2020. Of the four sectors that typically employ teens during summer, three sectors (retail trade, education, and health services) have recovered and added jobs lost during the COVID-19 lockdowns in 2020 and thereafter. The education sector and healthcare/social assistance sectors gained 127,000 and 436,000 more jobs, respectively, between February 2020 and April 2023. The payroll employment level in retail sector was 16,000 higher in April 2023 than in February 2020. However, payroll employment in the leisure and hospitality sector in April 2023 was 402,000 lower than in February 2020.

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 2023? 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.²⁰ 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

²⁰ The projection is based on a method developed by Andrew Sum and Ishwar Khatiwada.

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).

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:²¹

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

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.

²¹ 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).

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 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). The 2022 teen summer employment rate projection was almost identical.

In January-April 2023, the seasonally adjusted employment rate of teens in the U.S. was 33.5 percent. Plugging this employment rate in the regression equation above yields **33.6 percent teen employment rate in the summer months of 2023**. This forecast suggests a strong summer job market for teens.

Table 12:
Comparisons of Predicted and Actual Teen Summer Employment Rates from
2005 to 2022 and the Predicted Teen Summer Employment Rate for 2023
(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	32.7	32.8	+0.1
2023	---	33.6	---

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.
- 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.

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.²² 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

²² 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

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.

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.

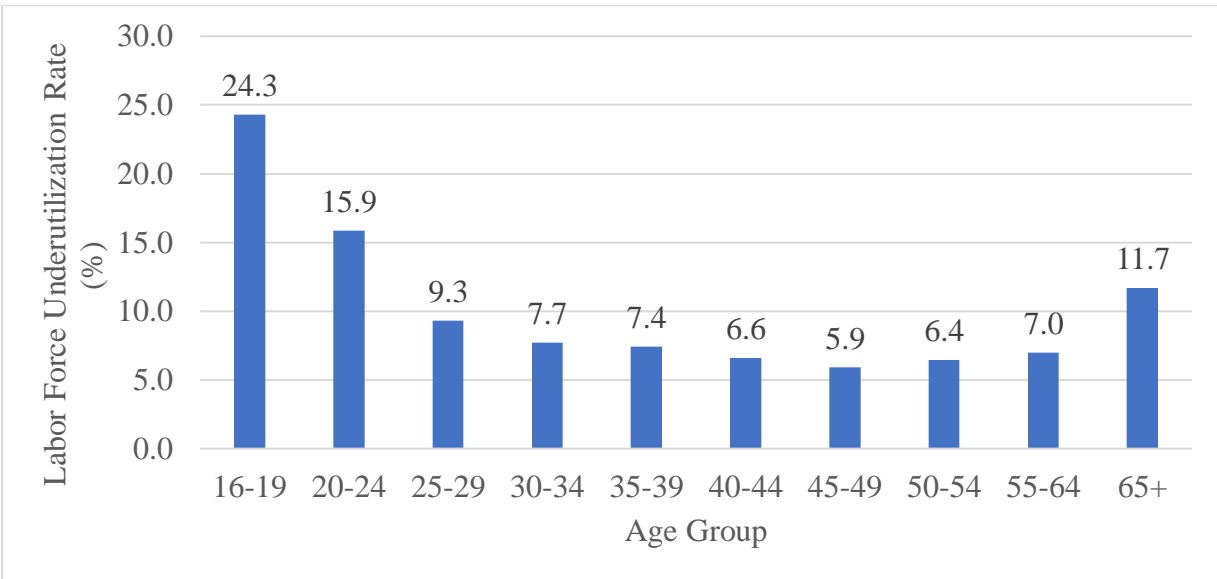
Appendix

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 authors.

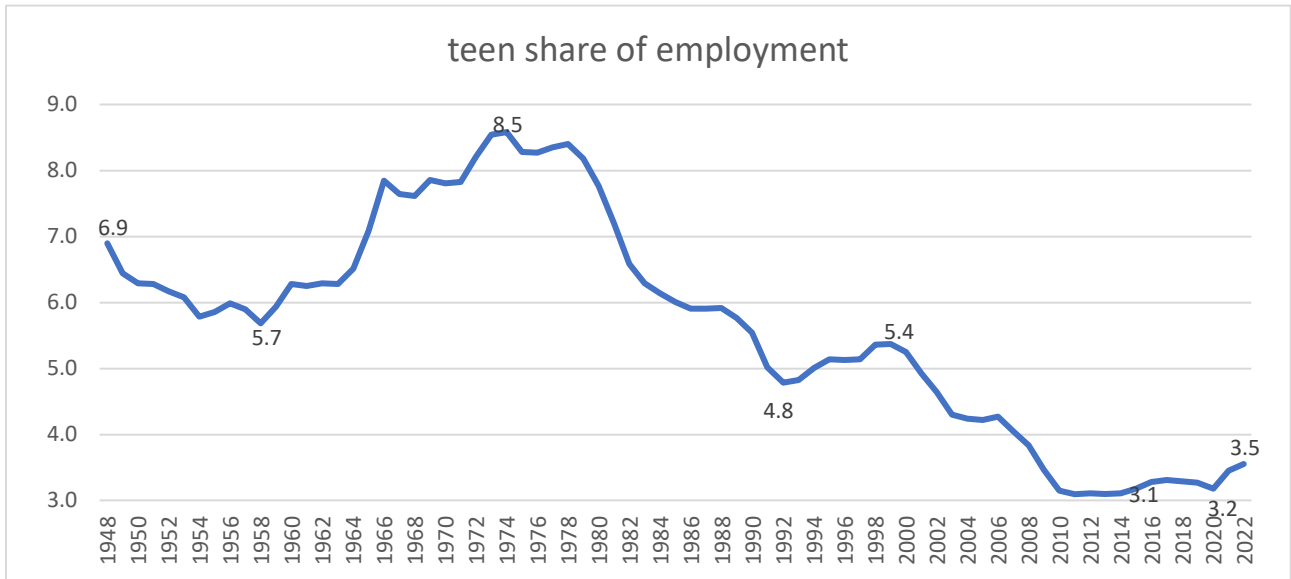
Appendix Chart A-1:
Labor Force Underutilization Rates of 16 and Older Residents in the U.S. by Age Group,
Summer Months of 2022 (June-July-August Averages, Not Seasonally Adjusted Rates in %)



Source: Current Population Surveys (CPS) public use data files, 2022, U.S. Census Bureau; tabulations by authors.

In historical perspective, teens employment share in total employment has been declining steadily since the mid-1970s. In 1948, teens employment accounted for about 7 percent of total household employment. The share of teen employment declined thereafter, reaching a low of 5.7 percent in 1958. Teens increased their share in the 1960s and the first three years of 1970, reaching as high as 8.5 percent in 1973. Again, the teen employment share began downward slide and reached 4.8 percent in 1992. Teen employment share in total employment further declined in 1990s and 2000s and by 2013, teens employment share in total household employment was only 1.3 percent. During the pandemic in 2020, the teen employment share stood at 3.2 percent. In 2021 and 2022, teens were able to increase their share reaching 3.5 percent in 2022.

Chart A-2:
Trends in Teen Employment Share in Total Household Employment, 1948 to 2022



Source: U.S. Bureau of Labor Statistics, U.S. Census Bureau; tabulations by authors.