

The 2021 Summer Job Outlook for American Teens

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May 2021



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Labor Markets
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Introduction

Just before the COVID-19 outbreak in the United States, the U.S. economy had exceeded the full employment condition insofar as there were more unfilled jobs than unemployed workers. The national unemployment rate stood at 3.5 percent in January/February of 2020 (just before the pandemic lockdown), which was the lowest since December of 1969. In January 2020, the number of job openings in the nation was 7.2 million while the number of unemployed persons was just 5.8 million. Thus, there were more vacant jobs ready to be filled than unemployed workers willing and able to go to work.

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 March 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, the labor force participation rate of prime-aged persons in the U.S. 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 response in March of 2020, 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 plunged by nearly 21 million in just one month as the lockdown led to widespread business shutdowns. The unemployment rate sky-rocketed to 14.8 percent by 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 lockdown.

Youth employment declined sharply during the COVID-19 pandemic as 16- to 19-year-olds 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. In comparative perspective, the share of teen employment in 2006 was 4.3 percent and 5.3 percent in 2000.

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

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 adult dependency.
- The more time that teens and young adults spend out of school and out of work, the higher the likelihood that they will be jobless, poor, or dependent on government welfare programs when they are 25- to 29-years-old.
- 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 context with other staff and supervisors, meet and deal 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 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.

This paper provides projections of the teen employment rate for summer of 2021. It begins with an examination of longer-term trends (1999 to 2020) in the overall labor force participation rate and employment rate of teens in the United States and highlights rates during

the COVID-19 pandemic for each month of 2020 and 2021 for which labor force data are available from the U.S. Bureau of Labor Statistics. It then shifts focus to longer summer employment rate trend and compare employment rates in summer months of 2019 and 2020 across different subgroups of teens (gender, race-ethnicity, and family income). The paper also examines the teen summer employment rates by states in summer of 2020 and compare rates in 2019. The state teen summer employment rate analysis is then followed by labor force underutilization rates among teens during summer months across the nation. The industry and occupation of employment in summer months of 2020 is also examined for American teens. The last section of the report is devoted to prediction of summer employment rates for 2021.

Declining Trends in Labor Force Participation Rate among Teens Since 2000

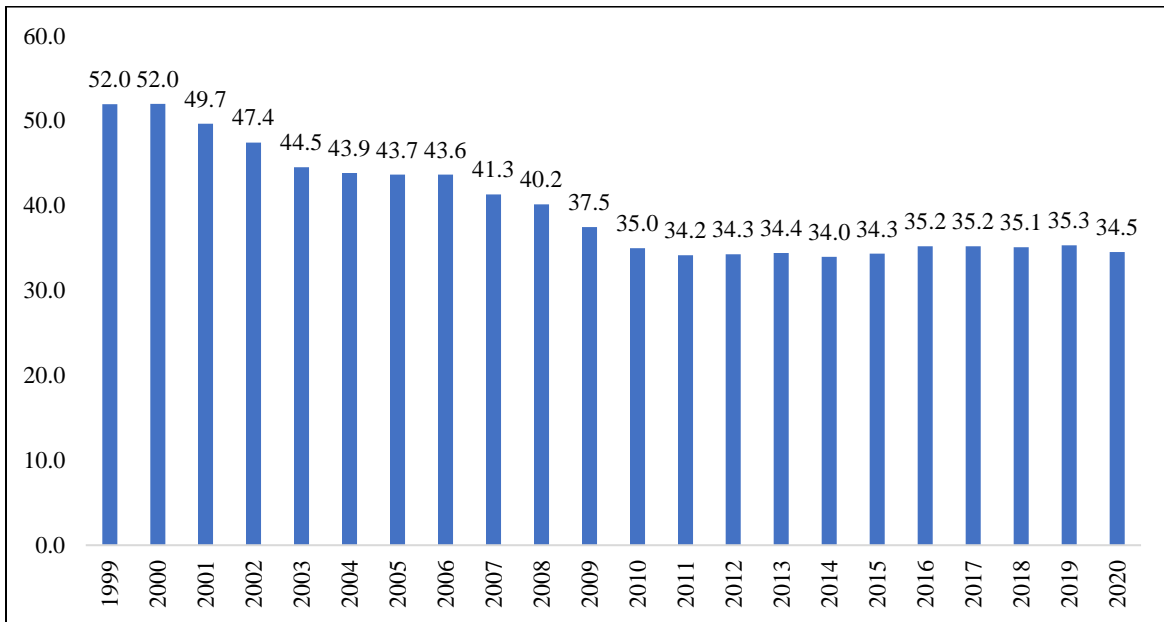
Between the end of World War II and the end of the 20th century half or more of teenagers were active participants in the labor market each month. Since 2000 the labor force attachment of all U.S. teens has been declining steadily where only just over one in three teens are active in the job market, either working or looking for work. 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 the causes (of declining labor market participation of teens) include change in the economy with growth in industries and occupations that don't often hire teens, displacement of teens by older workers and new 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.¹ Improved options for automation in traditional teen jobs including food

¹ 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

services and some states mandating large gains in minimum wage may also contribute to reduced teen employment rates.

At the peak of the 1990s labor market boom in 1999 and 2000, more than half of all U.S. teens (52%) participated in the labor force in any given month. 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 at the end of the 1990s 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 rates of U.S. teens continued to fall to new historical

Chart 1:
Trends in Civilian Labor Force Participation Rates of Teens (16- to 19-Years-Old) in the U.S., 1999-2020
(Seasonally Adjusted, CPS Annual Averages)



Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 1999 through 2020, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

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 group (16+) experienced a decline in their labor force participation rate during and after the

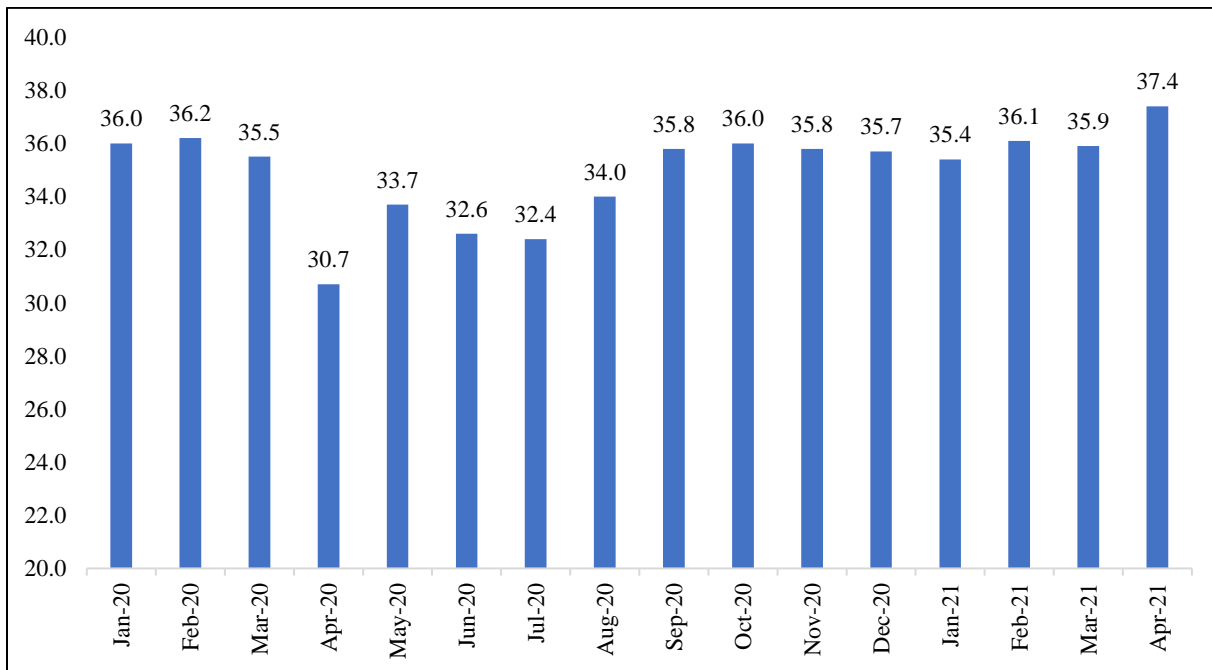
Clemens, The Minimum Wage and the Great Recession, Evidence from the Current Population Survey, National Bureau of Economic Research, NBER 21830, December 2015.

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 2029.² In 2020, during the COVID-19 pandemic period, the labor force participation rate of teens declined to 34.5 percent.

Monthly Labor Force Participation Rates of Teens During the COVID-19 Pandemic

The data provided in Chart 2 examines trends in monthly teen labor force participation rate from January 2020 through April 2021 including all the months in which COVID-19 infections in the U.S. have been at the pandemic level. Before the outbreak of COVID-19, the

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



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

² 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, “Projections Overview and Highlights, 2019-29,” *Monthly Labor Review*, September, 2029. <https://www.bls.gov/mlr/2020/article/projections-overview-and-highlights-2019-29.htm>

labor force participation rate of teens in January/February 2020 was 36 percent. By April 2020, when the U.S. was in lockdown from COVID-19 outbreak, the teen labor force participation rate declined to just under 31 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 32 percent to 34 percent range over the summer. In the fall of 2020 and winter of 2021, teen labor force attachment has risen back to its pre-COVID-19 levels with a particularly strong increase in April 2021 as job vacancies reached historical highs in the American labor market.

Improvement in Teen Employment Rate in Years Before COVID-19

The fraction of teens at work at a point in time (the employment rate or employment to population ratio) 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 officially unemployed workers for every job opening, with millions more able-bodied individuals who had left the job market or 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 foreign-born adults, school enrollment preference associated with increases in the college degree 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 2000.³ 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.

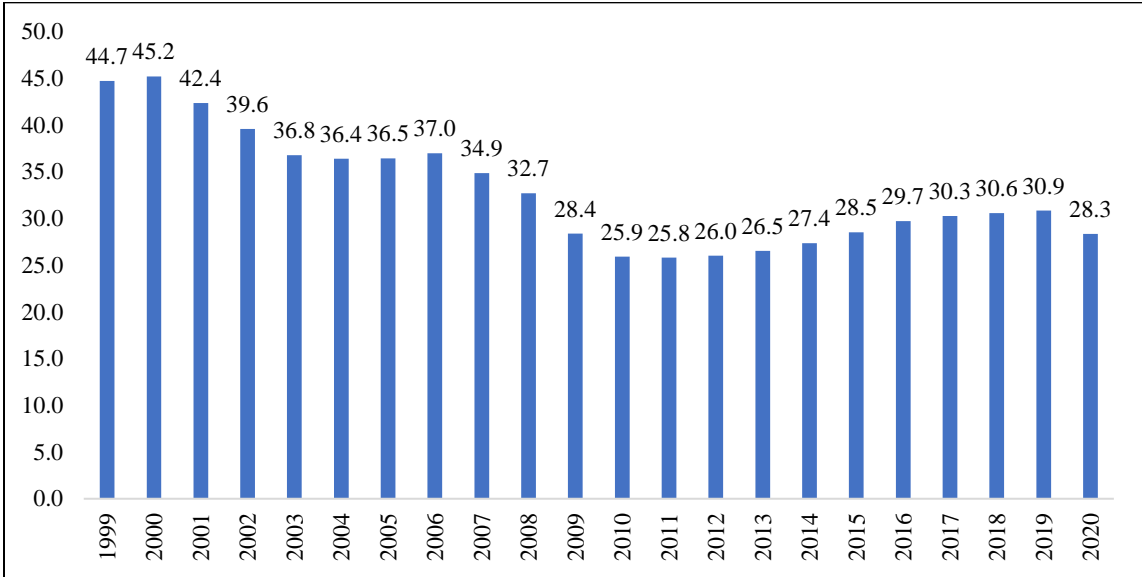
No other group of U.S. workers has experienced such a sharp decline in their employment rate since 2000. In a given month in 2000, 45 percent of teens were employed (Chart 3). The teen employment rate declined during the 2001 recession and continued its decline during the jobless recovery of 2002-2004. Yet even as labor markets moved towards near full employment conditions, the employment rates of teens continued to slump. During the

³ 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.

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).

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 these findings indicate that U.S. teens have not seen much improvement in their likelihood of employment. The teen employment rate during 2016 through 2019 remained well below its 2007 (35%) and 2000 (45%) levels. In 2020, the employment-to-population ratio of teens declined to 28.3 percent, as the state governments, businesses, and consumers adjusted their behaviors in the face of the COVID-19 pandemic.

Chart 3:
Trends in the Employment Rate of Teens (16- to 19-Years-Old) in the U.S., 1999-2019
(Seasonally Adjusted CPS Annual Averages)



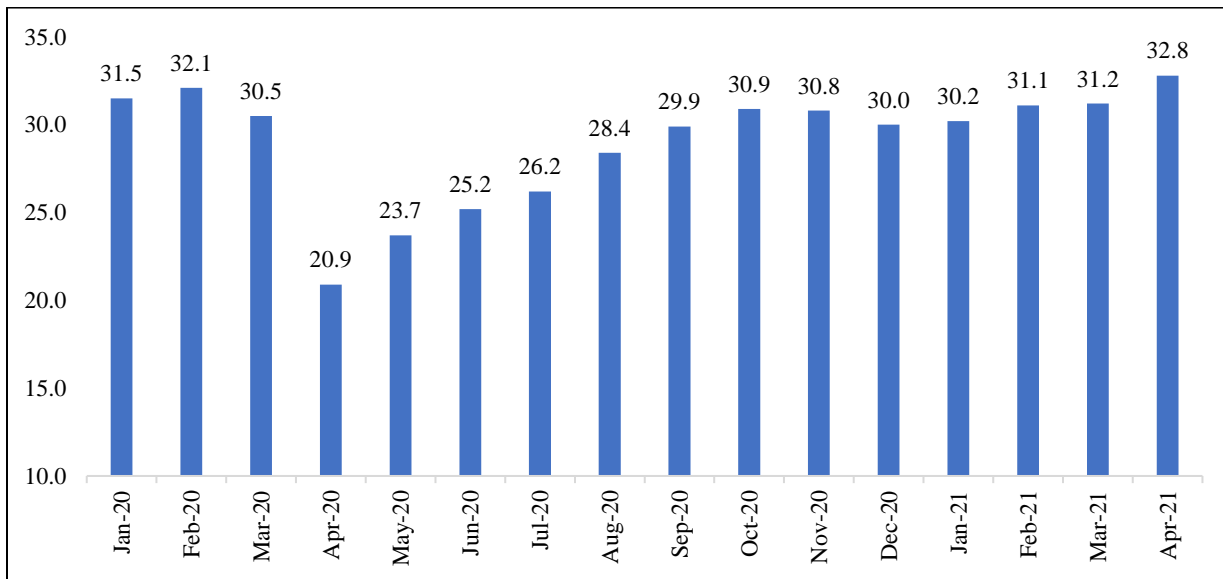
Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 1999 through 2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Monthly Employment Rates of Teens Since 2020

The 28.3 percent annual average employment rates of teens in 2020 masks extraordinary monthly volatility in the employment situation during the pandemic. To examine monthly trends in teen employment situation since 2020, we examine monthly seasonally adjusted employment-

to-population ratio of teens from January 2020 to April 2021. Just before the outbreak of the pandemic in March 2020, the employment rates 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 only 21 percent in April 2020. From May 2020 when the nation was slowly winding down from lockdown, the teen employment rate began to improve, rising from about 24 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.

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, 2020, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Modest Improvement in Teen Employment Rates in Summer Months Before the COVID-19

Teens work more during the summer months to gain both earnings and work experience. The 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; so teen employment rates are much higher during the summer than at other times of the year. Summer jobs provide teens with exposure to the world of work and help them develop occupational and especially soft skills that are valued across virtually all career fields. Evidence shows that urban 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.⁴ Evidence also reveals that summer job programs reduce violent crimes committed by African-American teens.⁵ In addition, summer employment is also found to contribute to better academic outcomes.⁶ While working in the summer may have considerable benefits for teens, the share of teens with summer jobs has declined from its historically higher levels.

Although the summer employment prospects of U.S. teens have improved modestly in the years just prior to the COVID-19 pandemic in 2020, the rise in the teen employment rate has not approached levels attained in the late 1990s when the U.S. labor market was at its peak.⁷ In the summer months of 1999-2000, 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 41 to 43 percent even as overall employment levels rebounded during the 2003 to 2007 period. Indeed, it seems that teens absorbed a disproportionately large share of jobs lost during the dot.com recession but obtained few of the jobs that were regained during the subsequent recovery (Chart 5).

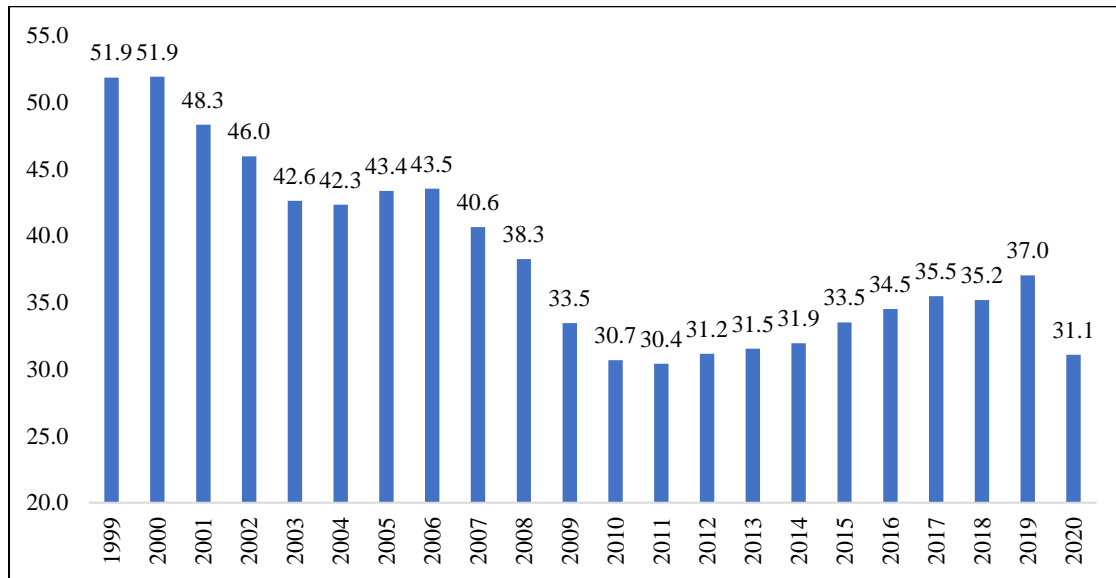
⁴ See: (i). Andrew Sum, Mykhaylo Trubskyy, and Walter McHugh, "The Summer Employment Experiences and the Personal/Social Behaviors of Youth Violence Prevention Employment Program Participants and Those of a Comparison Group", Center for Labor Market Studies, Northeastern University, Prepared for Youth Violence Prevention Funder Learning Collaborative, Boston, July 2013.

⁵ 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.

⁶ 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.

⁷ 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 5:
Trends in the Summer Employment Rate of Teens (16- to 19-Years-Old), U.S., 1999-2019 (CPS
June-July-August 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.

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 percent of teens were employed; the lowest teen summer employment rate ever recorded. Since then, the summer months 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 7.5 percentage points above the historically lowest level that it had reached in 2011. The employment rate of teens in summer months of 2019 was 2-percentage points higher than those observed in summer months of 2017 and 2018. However, these gains in teen summer employment were short-lived. The pandemic summer of 2020 saw a sharp reversal in the teen employment rate.

The COVID-19 pandemic already altered the labor market landscape for teens during the summer months of 2020 as high consumer contact industries where most teens worked were closed or were partially opened with limited capacity in many states and so resulted in sharply reduced overall employment levels. The result was that the teen summer employment rate fell back to its historic low of 31 percent.

Changes in Summer Employment Rates Between 2019 and 2020 by Teen Characteristics

The teen summer employment losses that occurred between 2019 and 2020 substantially reduced employment rates for both males and females as well as for each race/ethnic group of teens. Findings in Table 1 reveal that both male and female teens saw their summer employment rates fall by 6 percentage points between 2019 and 2020 to just 31 percent in the summer of 2020.

There were substantial losses in the summer employment rates of teens across race-ethnic groups. For each of the five major race-ethnic group of teens, the summer employment rate declined sharply between 2019 and 2020. The employment rate decline ranged from 9.4 percentage points among Hispanic teens to 8 percentage points among Asian teens to 6.7 percentage points among White teens to 4-5 percentage points among African American and teens of “Other” race-ethnic group.

Table 1:
Change in Summer Employment Rates of 16- to 19-Year-Old Teens Between 2019 and 2020 by Gender, Race-Ethnicity, and Age, U.S.
(Summer Months Averages, Not Seasonally Adjusted)

Group	2019	2020	Change
All (16-19)	37.0	31.1	-5.9
Gender			
Male	36.8	30.9	-5.9
Female	37.3	31.3	-6.0
Race-Ethnicity			
White	43.8	37.1	-6.7
Black	28.9	24.1	-4.8
Asian	21.6	13.6	-8.0
Hispanic	35.4	26.0	-9.4
Other	31.0	26.7	-4.3
Age			
16	19.7	18.2	-1.5
17	30.7	26.6	-4.2
18	43.7	36.5	-7.2
19	55.0	45.9	-9.1

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.

Teen summer employment rates are closely correlated with the age of the teen. Older teens are much more likely to work than 16-year-olds. In both summers we observe strong and steady increases in teen employment rates with the age of the teen. In the summer months of 2020, the employment rate of teens was only 18 percent among 16-year-olds, rising close to 27 percent among 17-year-olds, to 36 percent among 18-year-olds, and nearly 46 percent among the oldest teens aged 19 years. Teens aged 19 were 2.5 times more likely than their peers aged 16 to work during the summer of 2020. However, reductions in teen employment rates were much greater among older teens. The employment rate decline was only 1.5 percentage among 16-year-old teens and 9 percentage points among 19 years old teens. (Table 1).

Changes in Teen Summer Employment Rates Between 2019 and 2020 by Family Income Level

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. Teens from very low-income families (income less than \$20,000 annually) were least likely to work during the summer months. During 2020 teens from very low-income family (less than \$20,000 in cash income) were only a bit more than half as likely to work in the summer as their more affluent counterparts who lived in families with incomes between \$75,000 and \$150,000 per year.

In summer months of 2020, only 19.4 percent of teens from a low-income family (income under \$20,000) were employed. (Table 2). The teen summer employment rate rose steadily with higher family incomes; increasing from 23 percent among teens in families with incomes between \$20,000 and \$39,999, to 30 percent among those in families with incomes between \$60,000 and \$74,999, to 37 percent among teens in families with incomes between \$100,000 and \$149,999 per year. The summer employment rate of teens from families with incomes more than \$150,000 was about the same.

Table 2:
Change in Summer Employment Rates of 16-to 19-Year-Olds Between 2019 and 2020 by
Family Income Levels, U.S.,
(Summer Months Averages, Not Seasonally Adjusted)

Group	2019	2020	Change
Under \$20,000	27.5	19.4	-8.2
\$20,000-\$39,999	33.4	23.0	-10.4
\$40,000-\$59,999	33.1	30.4	-2.7
\$60,000-\$74,999	39.3	30.0	-9.4
\$75,000-\$99,999	40.2	33.5	-6.7
\$100,000-\$149,999	43.3	36.7	-6.6
\$150,000+	40.3	36.3	-3.9

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.

Teens in every family income group experienced 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 2).

Summer Employment Rates of Teens Across the States in 2020

Large variations exist in the teen summer employment rate across states in the nation. Table 3 displays a ranking of states by the teen employment rate in the summer of 2020. Teens living in Nebraska, Minnesota, Kansas, Idaho, New Hampshire, Maine, Wisconsin, South Dakota, Montana, and Missouri had the highest employment rate in summer months of 2020. 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 2020 were Nebraska (47.9%), Minnesota (50.1%), Kansas and Idaho (tied at 48.9%), New Hampshire and Maine (tied at 47.9%). Together these states had an average teen summer employment rate of 49 percent. In contrast, the five states with the lowest teen summer employment rates were California (21.0%), Hawaii (20.7%), New York (20.6%), Florida (19.9%), and Dist. of Columbia (16.0%). Together, these states had a teen summer employment rate that averaged about 20 percent in 2020, less than half the summer employment rate of the top five states.

Table 3:
Ranking of Employment Rates of Teens in Summer Months of 2020 by State
(Summer Month Averages, Not Seasonally Adjusted)

Rank	State	E/P Ratio	Rank	State	E/P Ratio
1	Nebraska	50.4	27	Connecticut	33.1
2	Minnesota	50.1	28	Delaware	32.2
3	Kansas	48.9	29	Arizona	31.9
4	Idaho	48.9	30	Georgia	31.7
5	New Hampshire	47.9		U.S. Average	31.1
6	Maine	47.9	31	Nevada	30.7
7	Wisconsin	47.5	32	Arkansas	30.4
8	South Dakota	47.2	33	Oklahoma	30.4
9	Montana	46.8	34	Illinois	30.2
10	Missouri	46.8	35	Michigan	30.1
11	Utah	46.4	36	Washington	28.9
12	Iowa	46.0	37	South Carolina	28.7
13	North Dakota	45.5	38	North Carolina	28.3
14	Vermont	43.5	39	New Jersey	27.8
15	Wyoming	41.2	40	Texas	27.2
16	Ohio	40.9	41	Kentucky	26.9
17	Alabama	40.8	42	Mississippi	26.7
18	Colorado	39.1	43	Rhode Island	25.7
19	Pennsylvania	39.1	44	West Virginia	25.2
20	Indiana	36.9	45	Louisiana	24.9
21	Massachusetts	36.5	46	New Mexico	23.5
22	Virginia	35.4	47	California	21.0
23	Alaska	34.9	48	Hawaii	20.7
24	Tennessee	34.1	49	New York	20.6
25	Maryland	33.9	50	Florida	19.9
26	Oregon	33.9	51	Dist. of Col.	16.0

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

Teen Summer Employment Loss Across States Between 2019 and 2020

The teen summer jobs losses 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 4). In four states (Mississippi, Nebraska, Nevada, and North Carolina), 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 in most states between the summer of 2019 and 2020 declined. The size of the decline was quite large in several instances. Sixteen states experienced double digit declines in teen summer employment rates between 2019 and 2020. Among states with the largest decline in teen summer employment rates between 2019 and 2020 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).

Table 4:
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.

Do Teens Want to Work in Summer?

The decline trend in teen employment in the summer as well as year-round has raised questions about the employment desire of teens, both in summer as well as year-round. Some argue that more teens are opting for school-related activities than work in summer months.⁸ Indeed, the July school enrollment rate among teens has increased by 18 percentage points since 2000.⁹ Nonetheless, our analysis of CPS data reveals a still strong desire to work among teenagers.¹⁰

The labor market problems such as unemployment, hidden unemployment, and underemployment among teens are higher than those observed for any other age group. In the summer months of 2020, 1.243 million teens were ‘officially’ unemployed, another 520,000 wanted to work full-time, but held part-time positions because they could not find full-time work, an additional 964,000 teens wanted to work but had stopped their job search (Table 6). The combined pool of the three groups of underutilized teens was nearly 2.727 million. This means that 37 percent of the adjusted teen labor force was underutilized during the summer months of 2020. This underutilization rate is higher than the rate of underutilization among any other group of workers. 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.

In a historical perspective, the labor force underutilization rate of teens during summer months of 1999/2000 was 26-27% (Chart 6). The labor force underutilization rate increased during and after the brief economic recession of 2001, 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 44-45 percent. With the overall improvement in national labor market conditions, the unemployment, hidden

⁸ 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>

⁹ 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.

¹⁰ 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>.

unemployment, and under-employment problems of teens has declined sharply from the high levels reached in 2010-11. Between 2012 and 2019, the teen labor force underutilization rate

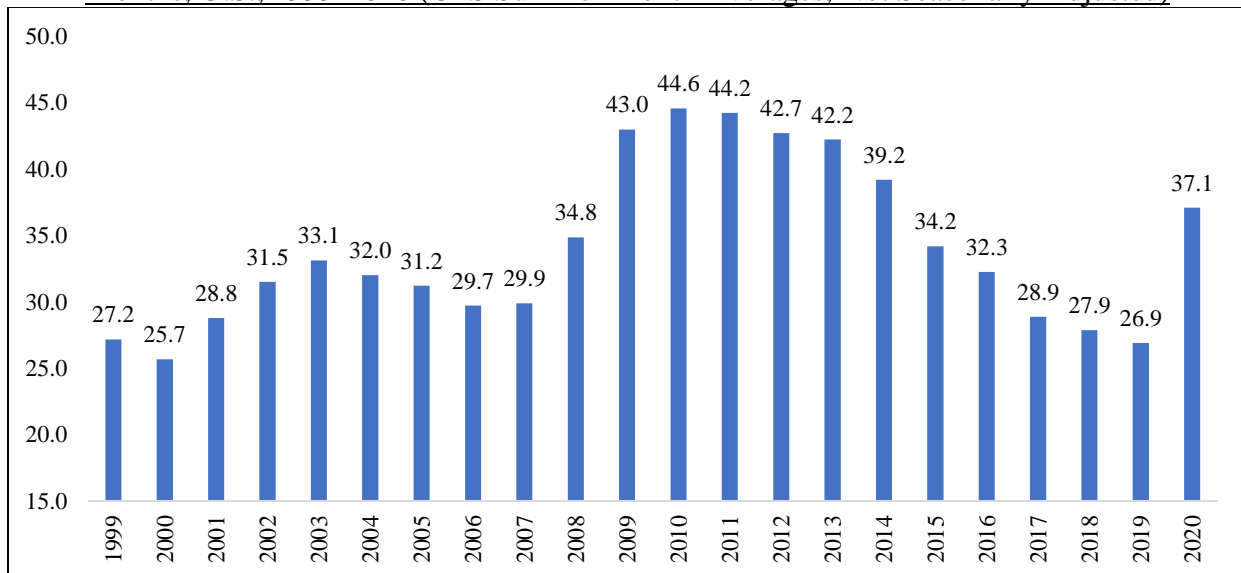
Table 6:
Change in Labor Market Problems of 16- to 19-Year-Olds in Summer Months of 2019 and 2020
(CPS Summer Months Averages, Not Seasonally Adjusted Numbers in 1,000s)

Labor Force Status	2019	2020	Absolute Change
Labor Force	7,122	6,390	-732
Employed	6,179	5,147	-1,032
Unemployed	943	1,243	+300
Working PT for ECN Reasons	397	520	+123
Labor Force Reserve	787	964	+177
Labor Force Underutilized Pool	2,128	2,727	+599
Not In Labor Force	9,563	10,162	600
Total Teen Population (16-19)	16,685	16,552	-132
Labor Force Underutilization Rate (In %)	26.9%	37.1%	+10.2%

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.

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).

Chart 6:
Trends in Labor Force Underutilization Rate of Teens (16- to 19-Years-Old) During Summer Months, U.S., 1999-2020 (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.

declined from nearly 43% in 2012 to just under 27% in 2019. (Chart 6). During the COVID-19 pandemic period, the 2020 summer months teen labor force underutilization rate rose sharply to 37.1 percent, 10 percentage points increase compared to underutilization problems observed during the summer months of 2019. It is important to note that like their adult counterparts, the number of teens who were not active at all in the labor market rose sharply as the pandemic lockdown was put in place.

Industry and Occupation of Teens during the Summer of 2020

Tables 8 and 10 provide some insight into the industries and occupations where teens work in the summer. The employment of teens is concentrated in only few key industries during the summer months. Of the total 5.147 million teens employed during the summer months of 2020, forty-one percent were working in leisure and hospitality firms including food services, 23 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 nearly three-quarters (73%) of all teens that worked last summer (Table 8).

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.¹¹

Table 8:
Distributions of Employed Teens in Summer Months of 2020 by Major Industry
(Numbers of Employed in 1,000s)

Industry	Numbers of Employed	Percentage Distribution
Agriculture, forestry, fishing and hunting, and mining	115	2.2
Construction	254	4.9
Manufacturing	142	2.8
Wholesale trade	50	1.0
Retail trade	1,202	23.4

¹¹ 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.

Industry	Numbers of Employed	Percentage Distribution
Transportation, warehousing, and utilities	141	2.7
Information	31	0.6
Finance and insurance, and real estate and leasing	79	1.5
Professional, scientific, management, administrative and waste management services	287	5.6
Educational services, healthcare and social assistance	453	8.8
Leisure and Hospitality including food services	2,125	41.3
Other services	221	4.3
Public administration	46	0.9
Total	5,147	100.0

Source: Current Population Surveys (CPS) public use data files, 2020, 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 more than 40 percent of teens work in the summer. 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 lockdown. Losses in retail trade 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 summer employment losses of about 5 percent (Table 9).

Table 9:
Comparisons of Payroll Employment Level During Summer Months of 2019 and 2020 in Selected Sectors
(Seasonally Adjusted Numbers in 1,000s)

Sector	2019	2020	Absolute Change	% Change
Total nonfarm	150,914	139,518	-11,395	-7.6
Retail trade	15,590	14,747	-843	-5.4
Education and health services	24,183	22,880	-1,303	-5.4
Leisure and hospitality	16,546	12,648	-3,898	-23.6

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 compared to most of the U.S. economy.

During the summer of 2020, sixty percent of all employed teens worked in service and low-level sales positions.¹² The second largest share of employed teens worked in production, transportation, and material moving occupations, including route and delivery workers (14.6%), followed by office and administrative support occupations including cashier (9.4%) (Table 10). These three major occupations accounted for 84 percent of all employed teens across the U.S. in the summer months of 2020. The share of teens working in office and administrative occupations declined in 2020 compared to earlier years as cashier employment declined sharply as state lockdowns sharply reduced employment in this key retail trade occupation. About one in seven teens working in the summer are employed in the cashier occupation.

Table 10:
The Distribution of Employed Teens during the Summer of 2020 by Major Occupations
(Numbers of Employed Teens in 1,000s)

Occupation	Numbers Employed (1000's)	Percentage Distribution
Professional, technical, managerial, high level sales	329	6.4
Healthcare practitioner & technical	64	1.2
Office & administrative support	486	9.4
Service & low-level sales	3,086	60.0
High skill blue collar	332	6.4
Production, transportation & material moving	753	14.6
Farming, fishing, and forestry	97	1.9
Total	5,147	100.0

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

¹² 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.

At the individual occupation level, of all employed teens during the summer months of 2020, thirty-five percent of all employed teens were working in the following five occupations: cashiers, fast food and counter workers, cooks, waiter/waitresses, and retail salespersons.

Table 11 displays the top 20 occupations of jobs held by teens during the summer of 2020. All of these occupations are low level service occupations. Seventy-one percent of teen employment in the summer of 2020 was concentrated in these 20 occupations. 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 11:
Top 20 Occupations Employing Largest Number of Teens
During the Summer Months of 2020, U.S.

Occupation	Numbers of Employed	Percent
41-2010 Cashiers	686,225	13.3
35-3023 Fast food and counter workers	313,462	6.1
35-2010 Cooks	290,569	5.6
35-3031 Waiters and waitresses	280,412	5.4
41-2031 Retail salespersons	267,160	5.2
43-4051 Customer service representatives	220,430	4.3
35-2021 Food preparation workers	199,675	3.9
53-7065 Stockers and order fillers	194,929	3.8
53-7062 Laborers and freight, stock, and material movers, handlers	178,834	3.5
33-909X Other protective service workers	137,105	2.7
37-3011 Landscaping and groundskeeping workers	130,969	2.5
35-9031 Hosts and hostesses, restaurant, lounge, and coffee shop	117,785	2.3
47-2061 Construction laborers	107,707	2.1
39-9011 Childcare workers	95,883	1.9
45-20XX Other agricultural workers	94,032	1.8
37-201X Janitors and building cleaners	91,159	1.8
53-3030 Driver/sales workers and truck drivers	62,420	1.2
53-7064 Packers and packagers, hand	62,188	1.2
39-30XX Other entertainment attendants and related workers	58,886	1.1
39-2021 Animal caretakers	56,792	1.1
Total of Above Occupation	3,646,621	70.9
All, Employed	5,146,705	100.0

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

The Projected Summer 2020 Job Outlook for U.S. Teens

In April of 2021, there were 8.215 million or 5.4 percent fewer payroll jobs than in February of 2020, a month before the outbreak of COVID-19. Sectors that typically employ teens during summer months have not come close to recovering the jobs lost during the lockdown period last spring, and while initially robust, the pace of new job growth in the nation has slowed with an acceleration in the rate of consumer price increases. Given this situation, how well are the nation's teens likely to fare in the job market in the summer months of 2021? 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.¹³ 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 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 the amount of past work experience. 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 1980 through 2005 data. We included seasonally-adjusted average teen employment rates during 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 12).

¹³ 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 12:
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, January through 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:¹⁴

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

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 13 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 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 2020 pandemic summer.

¹⁴ 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).

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.

In January-April 2021, the seasonally adjusted employment rate of teens in the U.S. was 31.3 percent. Plugging this employment rate in the regression equation above yields **31.5 percent teen employment rate in the summer months of 2021**. This forecast suggests a strong rebound in the summer jobs situation for teens as the worst labor market effects of the pandemic lockdown are behind us.

Table 13:
Comparisons of Predicted and Actual Teen Summer Employment Rates from
2005 to 2020 and the Predicted Teen Summer Employment Rate for 2021
(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	?	31.5	--

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.¹⁵ 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.

¹⁵ 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.