The Covid-19 Economic Shutdown and the 2020 Summer Jobs Outlook for American Teens

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Introduction

In recent years, the U.S. labor market has 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 had added nearly 23 million non-farm payroll jobs. The unemployment rate in the first three months of 2020 was only 3.6 percent, which was the lowest unemployment rate observed since December 1969. The average number of job openings during 2019 was 7.20 million.

In January and February 2020, just prior to the Covid-19 lockdown, the job opening level across the U.S. averaged 7.0 million. In the first two months of 2020, the unemployment level across the U.S. averaged just 5.8 million. The number of job openings ready to be filled was higher than the number of unemployed such that at the beginning of 2020 there were 1.2 jobs vacant for every unemployed worker in the nation.

These full employment conditions contributed to an increase in the labor force attachment of teens and adults. The labor force participation rate of prime-age workers (those between the ages of 25 and 54) has increased after reaching a low of 81 percent in 2013. At the beginning 2020, the labor force participation rate of prime-aged persons in the U.S. was 83 percent, participation rates not seen since 2002. The labor force attachment of teens has also increased, rising to 36 percent in the two months of 2020 off its historic low of 34 percent during 2014.

The proportion of teens with a job increased from its recession bottom of 25 percent in 2010 to 32 percent at the beginning of 2020. While an important rebound, the share of teens with a job remained sharply below pre-recession highs before the impact of Covid-19 and is dramatically below those observed at the end of the sustained economic expansion of the 1980s and 1990s. Employers are less likely to hire teens today as the teen share of total employment in the nation declined from 5.3 percent during 2000 to just 3.3 percent at the beginning of 2020.

Despite some improvement in teen employment rates in recent years from a strong labor market, the labor force underutilization rate of teens in summer months as well as throughout the year remains 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 this summer. It begins with an examination of longer-term trends (1999 to 2019) in the overall labor force participation rate and employment rate of teens in the United States. It then shifts focus to summer employment trends and assesses the experiences of different subgroups of teens (gender, race-ethnicity, family income, and metropolitan/non-metropolitan area) in finding summer work. The paper also examines the varying likelihood of teens working during the summer months and their labor force underutilization rates across states. The industry and occupation of employment in the summer months of 2018-2019 is also examined for American teens.

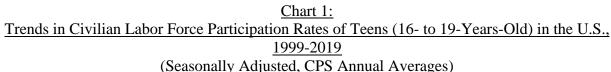
No Improvement in Labor Force Participation Rate among Teens in Recent Years

The teen labor force participation rate has remained at around 50 percent or higher throughout the post-World War II period through the end of the 20th century. Since then, the labor force attachment of all U.S. teens has been declining steadily. Academics, researchers, policy makers, and youth advocates have put forward many different arguments, 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 structural change in the economy, demographic change, displacement of teens in jobs 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 labor markets including food services and some states mandating large gains in minimum wage are also likely to contribute to reduced teen employment rates.

At the peak of the 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 reaching to new historical lows despite the economic recovery. The labor force participation of teens has remained around

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-andafter-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.

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 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 31.7 percent in 2026.²





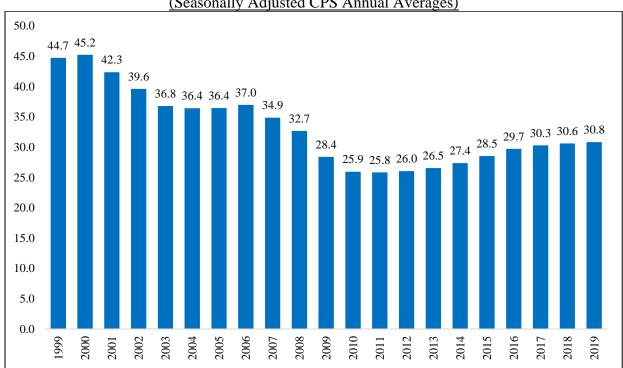
Source: Current Population Surveys (CPS), U.S. Bureau of Labor Statistics, 1999 through 2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Improvement in Teen Employment Rate in Recent Years

The employment rate of teens has been declining sharply since 2000, but the pace of decline was steep during and in the aftermath of the Great Recession of 2007-2009. What caused such sharp decline in teen employment rates? Certainly, a large job deficit was an important

² See: Employment Projections: Civilian Labor Force Participation Rate, by Age, Sex, Race, Ethnicity, 1996, 2006, 2016 and Projected 2026, 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.

source of teen employment losses. At the trough of the recession there were more than 6 officially unemployed workers for every job opening, with millions more able-bodied individuals who had left the job market or were underemployed—especially recent college graduates who were likely to work in traditional teen labor market segments including retail trade and restaurants, preferring mal–employment (or underemployment) to unemployment. 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.



<u>Chart 2:</u> <u>Trends in the Employment Rate of Teens (16- to 19-Years-Old) in the U.S., 1999-2019</u> (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.

³ <u>See</u>: 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.

No 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 2). 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 fall. During the business cycle peak in 2007, the teen employment rate had dropped to 34 percent and then reached 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 2). Despite the labor market recovery since 2011, the employment rate of teens has increased slowly; rising up to 30-31 percent in 2016 and 2019 from lows of 26 percent in 2010 and 2011. The U.S. labor market has added more than 22.5 million jobs since 2010, but these findings indicate that U.S. teens have not seen much improvement in their likelihood of employment. The share of teens with a job in 2016 and 2019 remained well below the share in 2007 (35%) and 2000 (45%).

Modest Improvement in Teen Employment Rates in Summer Months of Recent Years

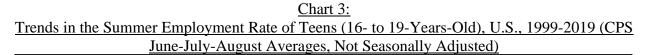
Teens aspire to work more during the summer months to gain both earnings and work experience as they have many more potential weeks and hours to work compared to other months of the year when they are enrolled in high school and college; so teen employment rates are much higher during summer than at other times of the year. As noted in a previous section, summer jobs provide teens with numerous benefits. Summer jobs provide teens with exposure to the world of work and help them develop occupational and soft skills needed at work. 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

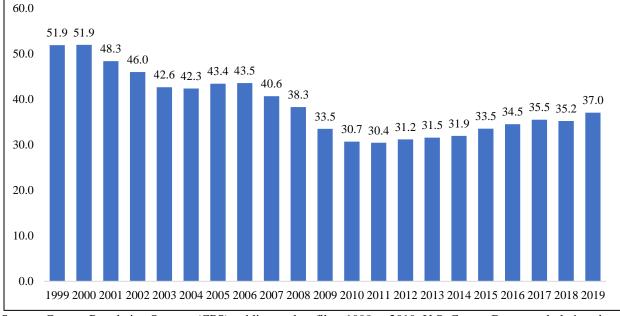
⁴ <u>See</u>: (i). Andrew Sum, Mykhaylo Trubskyy, and Walter McHugh, "The Summer Employment Experiences and the Personal/Social Behaviors of Youth Violence Prevention Employment Program Participants and Those of a Comparison Group", Center for Labor Market Studies, Northeastern University, Prepared for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

⁵ <u>See</u>: 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.

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 over the past few years, the rise in the teen employment rate has not been nearly as strong as 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 (during





Source: Current Population Surveys (CPS) public use data files, 1999 to 2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

summer months and year-round) started 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 at

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 2018 summer employment reports, <u>see</u>: Neeta Fogg, Paul Harrington and Ishwar Khatiwada, "The 2018 Summer Jobs Outlook for Teens in the US," Working paper, Center for Labor Markets and Policy, Drexel University, May 2018; (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", <u>The Boston Globe</u>, 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.

the same time as the national economy recovered from the dot.com recession during the 2003 to 2007 period. Indeed, it seems that teens absorbed a disproportionate share of jobs losses during the dot.com recession but got none of the jobs that were regained during the recovery (Chart 3).

During and in the aftermath of the Great Recession of 2007-2009, the employment prospects of teens further deteriorated, and the teen employment rate reached a historical low. 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 employment rate of teens has risen, but the gains have been very modest. In the summer months of 2019, 37 percent of U.S. teens were able to find some type of paid employment. The employment rate of U.S. teens in 2019 was 7-percentage points above the historically lowest level that it had reached in 2011. The employment-population ratio of teens in summer months of 2019 was 2-percentage points higher than those observed in summer months of 2017 and 2018.

Summer Employment Rates Gains across All Groups of Teens

After hitting a historical low in 2010-2011, the employment rates of teens started to increase slowly as the job gains across the U.S. remained strong and steady. All teens across gender, race-ethnicity, and age groups experienced an increase in their summer employment rates over the 2010-2011 and 2018-2019 period. Table 1 compares teen summer employment rates in 2006-2007, 2010-2011, and 2018-2019. In the summer of 2018-2019, 36.1 percent of U.S. teens were employed. This employment rate was 5.6 percentage points higher than the lowest recorded teen summer employment rate (30.5%) in 2010-2011. The employment rates of 36 percent in 2018-2019 was still about 6-percentage points lower than in 2006-2007, just before the onset of the Great Recession of 2008-2009. The summer employment rate of teens in 2018-2019 was nearly identical for male and female teens (35.7% among males versus 36.5% among females). Among both male and female teens, the summer employment rate over the 2010-2011 and 2018-2019 periods increased by about 5 to 6-percentage points; however, these employment rates in 2018-2019 was still 5-6 percentage points lower than in 2006-2007.

There was substantial variation in the summer employment rate of teens across raceethnicity groups; varying from highs of 35 to 43 percent among teens in the "Other"⁸ race-ethnic group and non-Hispanic White groups to lows of 21 percent and 27 percent among Asian and African-American teens, respectively. Among Hispanic teens, the 2018-2019 summer employment rate was 30 percent. Historically, Asian teens have had the lowest employment rates in summer as well as year-round. Even though employment rates rose modestly for teens in each of the race-ethnic groups over the 2010-2011 and 2018-2019 period, these rates were still lower than in 2006-2007 with the exception of teens in the White, non Hispanic race-ethnic group (Table 1). The recovery in teen employment rates from the Great Recession was especially slow for Black, non Hispanic teens rising by just 2.0 percent compared to much greater increase for Hispanic (+11.3 percent) and White (+9.9 percent) teens in particular.

ender, Race-Eumicity, and Age, 0.5 ., Selected Tears, 2000-2007, 2010-2011, and 2018-20									
(CPS 2-Year Averages, Not Seasonally Adjusted)									
Group	Employn	nent/Popula	tion Ratio	Absolute Change					
				2010-11 to	2006-07 to				
Group	2006-07	2010-11	2018-19	2018-19	2018-19				
All (16-19)	42.1	30.5	36.1	5.6	-6.0				
Gender	42.1	29.9	35.7	5.8	-6.4				
Male	42.0	31.2	36.5	5.3	-5.5				
Female									
Race-Ethnicity	49.6	37.7	42.8	5.0	-6.9				
White	25.5	17.7	27.5	9.9	2.0				
Black	26.8	19.2	21.3	2.1	-5.5				
Asian	33.1	22.1	30.0	7.9	-3.1				
Hispanic	38.8	24.0	35.3	11.3	-3.5				
Other									
Age									
16	25.6	13.7	19.1	5.4	-6.5				
17	37.7	25.1	30.3	5.1	-7.4				
18	49.0	36.1	43.1	7.0	-5.9				
19	59.5	48.3	54.0	5.7	-5.6				

<u>Table 1:</u> <u>Trends in Summer Employment Rates of 16- to 19-Year-Old Teens by</u> <u>Gender, Race-Ethnicity, and Age, U.S., Selected Years, 2006-2007, 2010-2011, and 2018-2019</u>

Source: Current Population Surveys (CPS) public use data files, 2006-2007, 2010-2011 and 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

⁸ The "Other" race-ethnic group includes American Indian, Alaska Native, Native Hawaiian and other Pacific Islander, those who reported two or more races, and some other races.

Employment rates of teens also rose steadily and strongly with their age. Older teens worked at a much higher rate than their younger peers. In the summer of 2018-2019, the employment rate of teens was only 19 percent among 16-year-olds, rising close to 30 percent among 17–year-olds, to 43 percent among 18-year-olds, and nearly 54 percent among the oldest teens aged 19 years. Teens aged 19 were 2.8 times more likely than their peers aged 16 to work during the summer of 2018-2019. Over the 2010-2011 and 2018-2019 time period, teens in each individual age group experienced between 5.1 and 7.0 percentage points increase in their summer employment rates; however, the employment rates in 2018-2019 were still 6-7 percentage points lower than in 2006-2007 (Table 1).

Employment Rates by Family Income Level

The employment rates among teens also varied by family income levels. 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 in very low-income households (income less than \$20,000 annually) were only about half as likely to work in the summer as their middle-income counterparts who lived in families with incomes between \$75,000 and \$150,000 per year.

The likelihood of a teen working during the summer generally rises with family income until incomes of \$150,000 or more is reached. Teens in higher income families (income \$150,000 or more per year) work at a slightly lower rate than their peers from families with incomes between \$75,000 and \$149,999 per year. In 2018-2019, only 25.6 percent of teens from a low-income family (income under \$20,000) were employed during summer months (Table 2). The teen summer employment rate rose steadily with higher family incomes; increasing from 32 percent among teens in families with incomes between \$20,000 and \$39,999, to about 40 percent among those in families with incomes between \$60,000 and \$74,999, to 41 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 slightly lower, 39.5 percent.

Income Levels, U.S., Selected Years, 2006-2007, 2010-2011 and 2018-2019									
(CPS 2-Year Averages, Not Seasonally Adjusted)									
Group	Employn	nent/Popula	tion Ratio	Absolute	Change				
				2010-11 to	2006-07 to				
Group	2006-07	2010-11	2018-19	2018-19	2018-19				
Under \$20,000	34.9	21.3	25.6	4.2	-9.3				
\$20,000-39,999	37.5	25.2	31.8	6.6	-5.7				
\$40,000-\$59,999	44.6	31.9	34.0	2.1	-10.6				
\$60,000-\$74,999	48.2	33.4	39.6	6.1	-8.6				
\$75,000-\$99,999	51.3	36.8	39.9	3.0	-11.4				
\$100,000-\$149,999	49.8	38.7	41.2	2.5	-8.6				
\$150,000+	46.3	36.1	39.5	3.3	-6.8				

<u>Table 2:</u> <u>Trends in Summer Employment Rates of 16-to 19-Year-Olds by Family</u> <u>Income Levels, U.S., Selected Years, 2006-2007, 2010-2011 and 2018-2019</u>

<u>Source</u>: Current Population Surveys (CPS) public use data files, 2006-2007, 2010-2011 and 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Again, employment rates improved for teens in each family income level over the 2010-2011 and 2018-2019 period in the range of 2-7 percentage points. However, the employment rates in 2018-2019 were 6-11 percentage points lower than in 2006-2007. (Table 2).

Employment Rates of Teens across the States

There were large variations across states in the teen summer employment rate. Table 3 displays a ranking of states by the teen employment rate in the summer of 2018-2019. Teens living in Iowa, New Hampshire, Maine, Wisconsin, Utah, Minnesota, Wyoming, Kansas, South Dakota, and Vermont had the highest employment rate, both year-round and during summer months. These states have also consistently led the nation in teen employment for many years. In the summer months of 2018-2019, teens living in Iowa and New Hampshire had the highest employment rates while teens living in Mississippi and Dist. of Columbia had the lowest employment rates. The top five states with the highest teen employment rate in 2018-2019 were Iowa (59.6%), New Hampshire (58.1%), Maine (57.5%), Wisconsin (57.1%), and Utah (54.1%). Together these states had an average teen summer employment rate of 57 percent. In contrast, the five states with the lowest teen summer employment rates were Louisiana (27.8%), Hawaii (26.5%), California (25.4%), Mississippi (23.6%), and Dist. of Columbia (21.7%). Together, these states had a teen summer employment rate that averaged 25 percent during 2018-2019, half the summer employment rate of the top five states.

	<u>(CPS 2-Year Av</u>	erages, No	t Seaso	nally Adjusted)	1
		5.0			
	G (E/P		St. (E/P
Rank	State	Ratio	Rank	State	Ratio
1	Iowa	59.6	27	Alaska	39.6
2	New Hampshire	58.1	28	Illinois	39.3
3	Maine	57.5	29	Connecticut	39.2
4	Wisconsin	57.1	30	Oregon	39.1
5	Utah	54.1	31	Tennessee	37.9
6	Minnesota	53.3	32	South Carolina	37.2
7	Wyoming	52.7	33	Arizona	37.0
8	Kansas	51.9	34	Arkansas	36.4
9	South Dakota	51.7		U.S. Average	36.1
10	Vermont	50.3	35	Washington	35.0
11	Nebraska	50.1	36	Virginia	34.8
12	Montana	49.2	37	Alabama	33.7
13	North Dakota	48.6	38	Nevada	32.3
14	Idaho	48.1	39	Florida	31.0
15	Pennsylvania	46.5	40	New York	30.0
16	Missouri	46.5	41	Georgia	29.8
17	Kentucky	45.4	42	West Virginia	29.8
18	Rhode Island	45.0	43	North Carolina	29.8
19	Ohio	43.4	44	Texas	29.6
20	Michigan	43.0	45	New Jersey	28.1
21	Indiana	42.8	46	New Mexico	28.0
22	Oklahoma	41.1	47	Louisiana	27.8
23	Delaware	41.0	48	Hawaii	26.5
24	Maryland	40.1	49	California	25.4
25	Massachusetts	39.9	50	Mississippi	23.6
26	Colorado	39.7	51	Dist. of Columbia	21.7
	1			1	

Table 3:
Ranking of Employment Rates of Teens in Summer Months of 2018-2019 by State
(CPS 2-Year Averages, Not Seasonally Adjusted)

<u>Source</u>: Current Population Surveys (CPS) public use data files, 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Employment Rates Gains Across States

The pace of recovery of teen summer jobs also varied sharply across the 50 states and the District of Columbia A number of states posted strong gains in teen summer employment rates since the employment trough of the recession. In 10 states (Kentucky, New Hampshire, Idaho, Utah, Wisconsin, Arizona, Michigan, South Carolina, Indiana, and Georgia), the teen

Ra	Ranking of States by Absolute Change in Teen Summer Employment Rate over the 2010-2011									
<u>t</u>	to 2018-2019 Period, (CPS 2-Year Averages, Not Seasonally Adjusted Numbers in Percent)									
		2010-	2018-	Absolute			2010-	2018-	Absolute	
Rank	State	2011	2019	Change	Rank	State	2011	2019	Change	
1	Kentucky	27.5	45.4	17.9	27	Illinois	34.3	39.3	5.0	
2	New Hampshire	41.8	58.1	16.3	28	North Carolina	24.8	29.8	4.9	
3	Idaho	32.4	48.1	15.7	29	New York	25.4	30.0	4.7	
4	Utah	39.6	54.1	14.5	30	Kansas	47.7	51.9	4.2	
5	Wisconsin	43.8	57.1	13.3	31	Ohio	39.3	43.4	4.1	
6	Arizona	24.0	37.0	13.0	32	Louisiana	24.0	27.8	3.9	
7	Michigan	31.0	43.0	12.0	33	Montana	45.6	49.2	3.5	
8	South Carolina	25.9	37.2	11.4	34	Missouri	43.1	46.5	3.3	
9	Indiana	31.9	42.8	10.9	35	Wyoming	49.4	52.7	3.3	
10	Georgia	20.2	29.8	9.7	36	Nevada	29.2	32.3	3.0	
11	Tennessee	28.3	37.9	9.6	37	Vermont	47.4	50.3	3.0	
12	Oklahoma	32.0	41.1	9.1	38	Dist. of Col.	19.0	21.7	2.7	
13	Minnesota	44.3	53.3	9.1	39	Texas	27.2	29.6	2.5	
14	Iowa	51.7	59.6	7.9	40	Arkansas	34.7	36.4	1.7	
15	Alabama	26.2	33.7	7.5	41	Massachusetts	39.2	39.9	0.7	
16	Florida	23.6	31.0	7.4	42	Alaska	38.9	39.6	0.7	
17	Delaware	33.7	41.0	7.3	43	Hawaii	26.0	26.5	0.5	
18	Washington	28.3	35.0	6.8	44	New Jersey	28.1	28.1	0.0	
19	Maine	51.3	57.5	6.1	45	Connecticut	39.4	39.2	-0.2	
20	Maryland	34.2	40.1	5.9	46	Nebraska	50.8	50.1	-0.6	
21	Colorado	34.0	39.7	5.7	47	Oregon	40.3	39.1	-1.2	
22	Rhode Island	39.4	45.0	5.6	48	Virginia	36.9	34.8	-2.1	
23	New Mexico	22.5	28.0	5.5	49	Mississippi	27.2	23.6	-3.7	
24	West Virginia	24.5	29.8	5.3	50	South Dakota	57.2	51.7	-5.4	
25	Pennsylvania	41.4	46.5	5.1	51	North Dakota	58.8	48.6	-10.2	
26	California	20.3	25.4	5.0		U.S. Average	30.5	36.1	5.6	

<u>Table 4:</u>
Ranking of States by Absolute Change in Teen Summer Employment Rate over the 2010-2011

Source: Current Population Surveys (CPS) public use data files, 2010-2011 and 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

summer employment rate increased in the range of 10 to 18 percentage points between 2010-2011 and 2018-2019 (Table 4).

In sharp contrast, seven states actually saw their teen summer employment rates decline even as the nation added more than 22 million new jobs since the end of the recession. Connecticut (-0.2 percentage points), Nebraska (-0.6 percentage points), Oregon (-1.2 percentage points), Virginia (-2.1 percentage points), Oregon (-2.2 percentage points), Mississippi (-3.7 percentage points), South Dakota (-5.4 percentage points), and North Dakota (-10.2 percentage points) all experienced declines in share of teens working during the summer between 2010-11 and 2018-2019 period. The employment rate of teens in North Dakota declined sharply over the 2010-2011 and 2018-2019 period; however, in both time periods, North Dakota had one of the highest teen summer and year-round employment rates among 50 states. In four states (Massachusetts, Alaska, Hawaii, and New Jersey), employment rates for teens over this time period was nearly flat (changing by less than 1 percentage point). In the remaining states, the teen summer employment rate increased by 2 to 10 percentage points between 2010-2011 and 2018-2019 (Table 4).

Table 5 displays ranking of states by teen employment rates growth/decline over the 2006-2007 and 2018-2019 time period. Over this time period, only five states (Kentucky, Alabama, Maine, and Indiana) experienced teen employment rate increase of 2-5 percentage points. In Oklahoma, Georgia, and Oregon, employment rates of teens were flat over this time period. In remaining 44 states and D.C., employment rates in 2018-2019 were 0.2 to 17 percentage points lower than in 2006-2007.

<u>tc</u>	to 2018-2019 Period, (CPS 2-Year Averages, Not Seasonally Adjusted Numbers in Percent)										
		2006-	2018-	Absolute			2006-	2018-	Absolute		
Rank	State	2007	2019	Change	Rank	State	2007	2019	Change		
1	Kentucky	40.1	45.4	5.4	27	Tennessee	44.3	37.9	-6.4		
2	Alabama	28.4	33.7	5.3	28	Nevada	39.2	32.3	-6.9		
3	Maine	55.6	57.5	1.9	29	Montana	56.3	49.2	-7.1		
4	Indiana	41.0	42.8	1.8	30	Dist. of Col.	29.2	21.7	-7.5		
5	Oklahoma	40.3	41.1	0.8	31	Texas	37.9	29.6	-8.3		
6	Georgia	29.6	29.8	0.3	32	California	34.2	25.4	-8.8		
7	Oregon	38.9	39.1	0.2	33	Vermont	59.1	50.3	-8.8		
8	Kansas	52.1	51.9	-0.2	34	Delaware	49.9	41.0	-8.9		
9	South Carolina	37.7	37.2	-0.4	35	Rhode Island	54.0	45.0	-9.1		

Table 5:

Ranking of States by Absolute Change in Teen Summer Employment Rate over the 2006-2007 to 2018-2019 Period. (CPS 2-Vear Averages, Not Seasonally Adjusted Numbers in Percent)

		2006-	2018-	Absolute			2006-	2018-	Absolute
Rank	State	2007	2019	Change	Rank	State	2007	2019	Change
10	Wisconsin	58.1	57.1	-1.0	36	Hawaii	36.0	26.5	-9.5
11	Iowa	60.6	59.6	-1.0	37	Washington	44.6	35.0	-9.5
12	Pennsylvania	47.7	46.5	-1.2	38	Idaho	58.3	48.1	-10.2
13	Michigan	44.6	43.0	-1.6	39	Minnesota	63.8	53.3	-10.5
14	New Hampshire	60.2	58.1	-2.0	40	Colorado	50.2	39.7	-10.5
15	Missouri	48.9	46.5	-2.4	41	Connecticut	49.9	39.2	-10.7
16	Arizona	40.0	37.0	-3.0	42	Virginia	45.6	34.8	-10.8
17	Arkansas	40.2	36.4	-3.8	43	North Carolina	41.1	29.8	-11.3
18	Utah	58.0	54.1	-4.0	44	New Mexico	39.3	28.0	-11.3
19	Illinois	43.4	39.3	-4.2	45	New Jersey	39.8	28.1	-11.7
20	Louisiana	32.6	27.8	-4.8	46	Wyoming	64.7	52.7	-12.0
21	West Virginia	34.8	29.8	-5.0	47	Massachusetts	52.1	39.9	-12.3
22	New York	35.3	30.0	-5.2	48	Nebraska	63.4	50.1	-13.3
23	Maryland	45.6	40.1	-5.5	49	Alaska	54.8	39.6	-15.2
24	Florida	36.8	31.0	-5.7	50	North Dakota	64.8	48.6	-16.2
25	Mississippi	29.6	23.6	-6.1	51	South Dakota	68.8	51.7	-17.0
26	Ohio	49.6	43.4	-6.2		U.S. Average	42.1	36.1	-6.0

Source: Current Population Surveys (CPS) public use data files, 2006-2007 and 2018-2019, 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, in summer as well as year-round. Some argue that more teens are opting for school-related activities than work in summer months.⁹ Indeed, July month school enrollment rate among teens has increased by 18 percentage points since 2000.¹⁰ However, an examination of the desire to work reveals a strong desire to work among teenagers.

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 2018-2019, 912,000 teens were 'officially' unemployed, another 387,000

⁹ 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

¹⁰ 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.

wanted to work full-time, but were working part-time because they could not find full-time work, and another 831,000 teens wanted to work, but had quit looking for a job (Table 6). The combined pool of the three groups of underutilized teens was nearly 2.13 million. This means that 27 percent of the adjusted teen labor force was underutilized during the summer months of 2018-2019. This underutilization rate is higher than the rate of underutilization among any other group of workers. These findings clearly show 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.

<u>Table 6:</u> <u>Trends in Labor Market Problems of 16- to 19-Year-Olds in Summer Months of 2006-2007,</u> <u>2010-2011, and 2018-2019</u>

(er 5 2- rear Averages, rist beasonary Aufusted Humbers in 1,0005)						
				Abse	olute Change	
				2010-11 to	2006-07 to	
Labor Force Status	2006-07	2010-11	2018-19	2018-19	2018-19	
Labor Force	8,481	6,940	6,948	8	-1,533	
Employed	7,087	5,138	6,036	898	-1,051	
Unemployed	1,394	1,802	912	-891	-483	
Working PT for ECN Reasons	488	671	387	-284	-101	
Labor Force Reserve	919	1,095	831	-263	-87	
Labor Force Underutilized Pool	2,801	3,567	2,129	-1,438	-671	
Not In Labor Force	8,364	9,880	9,771	-109	1,407	
Total Teen Population (16-19)	16,845	16,821	16,719	-102	-127	
Labor Force Underutilization						
Rate (In %)	30	44	27	-17	-2	

	(CPS 2-Year Avera	ges, Not Season	ally Adjuste	ed Numbers in 1,000	ls)
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<u>Source</u>: Current Population Surveys (CPS) public use data files, 2006/2007, 2010/2011 and 2018/2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University. <u>Note</u>:* 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).

With the overall improvement in national labor market conditions, the unemployment, hidden unemployment, and underemployment problems of teens has declined sharply from the high reached in 2010-11. Over the summer months of 2010-11 and 2018-2019, the number of unemployed teens declined by 891,000 or 49 percent, the number of underemployed teens declined by 284,000 or 42 percent, and the number of teens experiencing hidden unemployment fell 263,000 or 24 percent (Table 6). The underutilized pool of teens dropped by nearly 40 percent over this time period. The underutilization rate of teens during summer months has

declined from 44 percent in 2010-11 to 27 percent in 2018-2019. Despite this decline, the teen labor force underutilization problem remains stubbornly high even in the recent labor market boom. The labor force underutilization rate of teens in 2018-2019 was about 3 percentage points lower than in 2006-2007 (Table 6).

The teen labor force underutilization rate varied widely across states. In the summer months of 2018-2019, the labor force underutilization rate of teens varied from lows of 13 to 16 percent in South Dakota, North Dakota, Iowa, and Minnesota to highs of 35 to 43 percent in New Mexico, Washington, North Carolina, Arizona, and Mississippi. (Table 7).

	<u>(CPS 2- Fear Ave</u>	rages, Not Seasona	any Adju	usted Numbers in Per	rcent)
		Labor Force			Labor Force
		Underutilization			Underutilization
Rank	State	Rate	Rank	State	Rate
1	South Dakota	13.4	27	Colorado	24.5
2	North Dakota	14.0	28	Montana	25.8
3	Iowa	14.4	29	Connecticut	26.2
4	Minnesota	16.3		U.S. Average	27.4
5	Kansas	17.8	30	Massachusetts	27.7
6	Wisconsin	18.0	31	Virginia	27.8
7	Delaware	18.4	32	Texas	28.5
8	Nebraska	18.5	33	New York	29.2
9	New Hampshire	18.6	34	West Virginia	29.9
10	Vermont	19.2	35	Florida	29.9
11	Utah	19.4	36	Ohio	30.7
12	Oklahoma	19.6	37	Georgia	30.8
13	Missouri	20.4	38	New Jersey	30.9
14	Kentucky	20.8	39	Hawaii	32.1
15	Arkansas	21.1	40	Alaska	32.4
16	Alabama	21.4	41	Maryland	32.7
17	Idaho	21.7	42	Louisiana	32.9
18	Michigan	21.9	43	Oregon	33.0
19	Tennessee	22.4	44	California	34.1
20	Rhode Island	22.9	45	Nevada	34.1
21	Wyoming	22.9	46	Dist of Columbia	34.5
22	Pennsylvania	23.0	47	New Mexico	35.3
23	Maine	23.2	48	Washington	35.5
24	South Carolina	23.6	49	North Carolina	37.4

<u>Table 7:</u> <u>Labor Force Underutilization Rates of Teens during the Summer of 2018-2019 by State</u> (CPS 2-Year Averages Not Seasonally Adjusted Numbers in Percent)

25	Illinois	24.1	50	Arizona	38.5
26	Indiana	24.2	51	Mississippi	42.7

<u>Source</u>: Current Population Surveys (CPS) public use data files, 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Industry and Occupation of Teens during the Summer of 2018-2019

Tables 8 and 9 provide some insight into the industries and occupations where teens work in the summer. The employment of teens was concentrated in only few key industries during the summer months. Of the total 6.036 million teens employed during

(Numbers of Employed in 1,000s)					
(Itumbers of Employed in 1,000s	Numbers of	Percentage			
Industry	Employed	Distribution			
Agriculture, forestry, fishing and hunting, and mining	140	2.3			
Construction	252	4.2			
Manufacturing	279	4.6			
Wholesale trade	37	0.6			
Retail trade	1,192	19.7			
Transportation, warehousing, and utilities	117	1.9			
Information	77	1.3			
Finance and insurance, and real estate and leasing	88	1.5			
Professional, scientific, management, administrative and					
waste management services	312	5.2			
Educational services, healthcare and social assistance	596	9.9			
Arts, entertainment, recreation, accommodations and food					
services	2,555	42.3			
Other services	309	5.1			
Public administration	82	1.4			
Total	6,036	100.0			

<u>Table 8:</u> <u>Distributions of Employed Teens in Summer Months of 2018-2019 by Major Industry</u> (Numbers of Employed in 1 000s)

<u>Source</u>: Current Population Surveys (CPS) public use data files, 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

the summer months of 2018-2019, forty-two percent were working in arts, entertainment, recreation, accommodations and food service industries, about 20 percent worked in retail trade industries, and another 10 percent worked in educational services, healthcare and social assistance industries. These three major industries employed nearly three-quarters (72%) of all employed teens during the summer of 2018-2019 (Table 8).

Nationally, between 2011 and 2017, total payroll employment in leisure and hospitality, retail trade, and education and health industries increased by 20 percent, 8 percent, and 14 percent, respectively.¹¹

Since a large majority of teens are entering the world of work for the first time, they lack sufficient education/human capital, experience, and job skills. Consequently, teens are more likely to be employed in entry-level occupations that do not require a lot of education/human capital, experience, and job skills. During the summer of 2018-2019, slightly more than 62 percent of all employed teens worked in service and low-level sales positions.¹² The second largest share of employed teens worked in office and administrative support occupations (10.7%) followed by production, transportation, and material moving occupations (10.5%) (Table 9). These three major occupations accounted for 84 percent of all employed teens across the U.S. in the summer months of 2018-2019.

I II	The Distribution of Employed Teens during the Summer of 2018-2019 by Major					
	Occupations (Numbers of Employed Teens in 1,000s)					
		Numbers				
		Employed	Percentage			
	Occupation	(1000's)	Distribution			
	Professional, technical, managerial, high level sales	481	8.0			
	Healthcare practitioner & technical	49	0.8			
	Office & administrative support	649	10.7			
	Service & low-level sales	3,759	62.3			
	High skill blue collar	350	5.8			
	Production, transportation & material moving	636	10.5			
	Farming, fishing, and forestry	112	1.9			

6.036

100.0

<u>Table 9:</u> <u>The Distribution of Employed Teens during the Summer of 2018-2019 by Major</u> Occupations (Numbers of Employed Teens in 1 000s)

<u>Source</u>: Current Population Surveys (CPS) public use data files, 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

Total

¹¹ Employment in the retail trade industry increased from 14.686 million in 2011 to 15.639 million in 2019. In the education and health industry, employment increased from 20.341 million in 2011 to 24.175 million in 2019. Similarly, employment in the leisure and hospitality industry increased from 13.371 million in 2011 to 16.581 million in 2019.

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 2018-2019, one in three were working in the following five occupations: cashiers, waiter/waitresses, retail salespersons, cooks, and food preparation workers. Table 10 displays the top 20 occupations of jobs held by teens during the summer of 2018-2019. All of these occupations are low level service occupations. Sixty-six percent of teen employment in the summer of 2018-2019 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.

During the Summer Months of 2018-2019, U.S.	N. 1 0	
	Numbers of	_
Occupation	Employed	Percent
4720 Cashiers	802,067	13.3
4110 Waiters and waitresses	416,084	6.9
4760 Retail salespersons	284,460	4.7
4020 Cooks	238,472	4.0
4030 Food preparation workers	230,013	3.8
5240 Customer service representatives	212,627	3.5
9620 Laborers and freight, stock, and material movers, hand	191,134	3.2
3955 Lifeguards and other recreational, and all other protective service workers	180,889	3.0
4150 Hosts and hostesses, restaurant, lounge, and coffee shop	156,008	2.6
4600 Childcare workers	153,677	2.5
5620 Stock clerks and order fillers	148,632	2.5
4250 Grounds maintenance workers	143,093	2.4
4060 Counter attendants, cafeteria, food concession, and coffee shop	135,379	2.2
4220 Janitors and building cleaners	113,131	1.9
6260 Construction laborers	107,897	1.8
6050 Miscellaneous agricultural workers	104,195	1.7
4130 Dining room and cafeteria attendants and bartender helpers	103,338	1.7
4050 Combined food preparation and serving workers, including fast food	91,993	1.5
4620 Recreation and fitness workers	82,555	1.4
4430 Miscellaneous entertainment attendants and related workers	77,096	1.3
Total of Above Occupation	3,972,742	65.8
Total Teens Employed in All Occupation	6,036,317	100.0

<u>Table 10:</u> <u>Top 20 Occupations Employing Largest Number of Teens</u> During the Summer Months of 2018-2019, U.S.

<u>Source</u>: Current Population Surveys (CPS) public use data files, 2018-2019, U.S. Census Bureau; tabulations by Center for Labor Markets and Policy, Drexel University.

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

From January 2010 to February 2020, the U.S. have created more than 22.6 million nonfarm payroll jobs; however, job gains for teens have failed to keep pace with the overall rate of new job creation. How well are the nation's teens likely to fare in the job market in the summer months of 2020? To answer this question, we have relied upon a regression model of teen employment rates that was 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 11).

The predicted summer employment rate (seasonally adjusted) for a given year is estimated as follows:¹⁴

Predicted Summer E-P Ratio, EMP i, t = 43.0 +.97*(EMPj, t-43.2)

Where: EMP i, t = Predicted seasonally adjusted summer teen employment rate in year t.

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.

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).

EMP j, t = Estimated teen employment rate in the first four months of year t

Table 11:

Findings of the Regression Model Estimates of the Summer Teen Employment Rate in the U.S.					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	
	Model Summary					
	R-Squared	0.87				
	DF; N	1;24				
	F-Stat	160.8				
	Sig. of F	0.001				

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.

Most of this report with the exception of the projection section was completed before the onset of COVID-19. The COVID-19 pandemic and lockdown completely altered the U.S. labor market landscape with the extraordinary job loss and an unemployment rate not seen after the Great Depression of the 1930s. Teen's seasonally adjusted employment-to-population ratio in the month of January and February 2020 (before COVID-19) was 32.1 percent. In April and May 2020, employment-to-population ratio of teens declined extraordinarily to 22.4 percent, a decline to a new historical low.

We have examined the summer job outlook for teens by making two different projections of the summer employment rate of teens. First, we examine the counterfactual condition by projecting the 2020 summer teen employment-population ratio assuming no COVID-19 pandemic and the accompanying economic shutdown. This meant estimating the expected 2020 teen summer employment rate assuming that the strong economy with a very low unemployment rate and a labor shortage condition that existed before the shutdowns would continue through the spring of this year. Second, we created another 2020 teen summer jobs outlook projection that accounted for the massive collapse in economic activity from the COVID-19 shutdowns and the associated extraordinary declines in teen employment rates this spring.

Our counterfactual of 'no COVID-19 shutdown' regression model yields an expected <u>32.8</u> percent teen employment rate in the summer months of 2020. This means that, if there was no COVID-19 economic shutdown, the seasonally adjusted 2020 summer teen employment rate would be about 32.8 percent.

Our second regression model accounts for the COVID-19 shutdowns that resulted in unprecedented and massive employment declines across the nation. Importantly, these job losses were very heavily concentrated in accommodation, food services, amusements, and retail trade industries that historically employ large shares of teens. More than 60 percent of all employment in these industries (accommodation, food services, amusements, and retail trade together) consists of 16- to 19-year-olds. These industries on which teens rely for work lost nearly 10 million jobs between February and April this year, accounting for 44 percent of total decline in wage and salary employment in the nation. The result was a 35 percent decline in the number of employed teens between February and April. In April and May of 2020, the seasonally adjusted teen employment rate in the U.S. was only 22.4 percent compared to 32 percent just prior to the COVID-19 shutdown in January and February.

Using these actual results in our COVID-19 shutdown regression model predicts a 23.1 percent teen employment rate in the U.S. during the summer months of 2020. Had the COVID-19 pandemic and the subsequent shutdowns not occurred we expect that the seasonally adjusted teen employment rate would have increased to about 31 percent, a level not reached since before the Great Recession. The COVID-19 pandemic and resulting shutdowns across the nation have radically changed our outlook for summer jobs. We expect that the teen summer employment rate to be about 23 percent; a historic low. The COVID-19 shutdowns reduced the projected summer teen employment rate by 9.4 percentage points. This implies that one-third fewer teens will work this summer because of the COVID-19 shutdowns.

(June-August Averages, in Percent, Seasonally Adjusted)				
	Actual	Predicted	Gap (Actual-	
Summer of Year:	Rate	Rate	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				
Shutdown)	?	32.8		
2020				
(With COVID-19				
Shutdown)	?	22.8		

<u>Table 12:</u> <u>Comparisons of Predicted and Actual Teen Summer Employment Rates from</u> <u>2005 to 2019 and the Predicted Teen Summer Employment Rate for 2020</u> (June August August Secondly, Adjusted)

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

¹⁵ For detail, <u>see</u>: U.S. Census Bureau. <u>Current Population Survey: Interviews Reference Manual</u>, April 2015, retrieved, http://www2.census.gov/programs-surveys/cps/methodology/intman/CPS_Manual_April2015.pdf

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- to19-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.