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## Teen labor force participation before and after the Great Recession and beyond

Teen labor force participation has been on a long-term downward trend, and the decline is expected to continue to 2024, the latest year for which projections are available. A number of factors are contributing to this trend: an increased emphasis toward school and attending college among teens, reflected in higher enrollment; more summer school attendance; and more strenuous coursework. Parental emphasis on the rewards of education has contributed to the decline in teen labor force participation. Tuition costs have continued to rise dramatically, as has borrowing to pay for college. Taxpayers can qualify for tax credits to help defray tuition costs. Teen earnings are low and pay little toward the costs of college. In a teenager's 24-hour day, except for sleeping, school activities take up the largest amount of time. Teens who do in fact want jobs face competition from older workers, young college graduates, and foreign-born workers. This article examines labor force participation trends for teens ages 16-19, using data from the Current Population Survey. The article also examines labor force projections data from the Employment


Teresa L. Morisi
morisi.teri@bls.gov

Teresa L. Morisi is a Branch Chief in the Office of Occupational Statistics and Employment Projections, U.S. Bureau of Labor Statistics. Projections program the U.S. Bureau of Labor Statistics.

Teen labor force participation has been on a long-term downward trend. Since reaching a peak of 57.9 percent in 1979, the rate fell to 52.0 percent in 2000, just prior to the 2001 recession. The rate then dropped rapidly during and after the 2007-09 recession to reach 34.1 percent in 2011, and since then, it has stayed within a narrow range. The latest projection of labor force participation from the U.S. Bureau of Labor Statistics (BLS) points toward an even lower teen participation rate by 2024.

Current and historical data on labor force participation are available from the BLS Current Population Survey (CPS), which is a monthly survey of about 60,000 households. The Employment Projections program at BLS produces projections of labor force participation and other economic data. BLS releases the projections every 2 years, and they cover 10-year periods; the most recent projections are for the 2014-24 decade. BLS data include the civilian noninstitutional population. The labor force consists of employed people and those people without a job who are actively searching for work and are available for work. The labor force participation rate is the percentage of the population who participates in the labor force.

Why has teen labor force participation declined and remained low? A growing proportion of people ages 16 and 19 years old are in school, and school enrollment has an impact on labor force participation. Other factors besides education affect the participation rate as well. This study will concentrate on labor force participation rates for the 16-to-19 age group, using not seasonally adjusted historical data from BLS, along with projected data. The historical participation rate data are annual averages, except for an analysis of the July rate that is used for evaluating teen labor force participation during the summer.

## Trends in teen labor force participation

Labor force participation for teens trended down from 52.5 percent in 1948 (the start of the data) to 44.5 percent in 1964. The rate moved upward until it reached its high point of 57.9 percent in 1979. Several recessions occurred since 1979, including those of 1981-82, 1990-91, 2001, and the most recent recession, often called the "Great Recession" of 2007-09. ${ }^{1}$ Over the past several decades, the rate exhibited a similar pattern; it fell just before, during, and for a short time after recessions ended, followed by little change during most of the recovery. The overall drop in the rate was especially steep, however, during the two most recent recessions. In 2000, just before the 2001 recession, a little more than one-half of teenagers ( 52.0 percent) were in the labor force. By 2003, the rate had fallen to 44.5 percent. In 2006 (just before the 2007-09 recession), the rate was 43.7 percent. The participation rate declined during that recession and immediately after, falling to 34.1 percent in 2011. It has changed little since 2011. (See figure 1.)

Figure 1. Labor force participation rates for teens ages 16-19, 1948-2015 and projected 2024


Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research. Sources: U.S. Bureau of Labor Statistics, Current Population Survey and Employment Projections Program.

Traditionally, teens held summer jobs even if they did not work during the school year, and labor force participation is higher during the summer than during the school year. Even though some teens still have summer jobs, the proportion of teens who participate in the labor force during the summer has dropped dramatically. The summer break typically includes July. In July 2016, the teen labor force participation rate was 43.2 percent, down almost 30 percentage points from the high point of 71.8 percent in July 1978. (See figure 2.)

Figure 2. Labor force participation rates for teens ages 16-19, July 1948-2016


## Education impacts

Educators, parents, policymakers, and other stakeholders are paying more attention to the value of education. Workers with more education tend to have higher pay and lower unemployment. Indeed, data from BLS illustrate this relationship. (See figure 3.) As stakeholders pay more attention to the value of education, teen school enrollment has continued to grow and labor force participation to decline.

Figure 3. Earnings and unemployment rates by educational attainment, 2015


Note: Data are for people ages 25 and over. Earnings are for full-time wage and salary workers. Source: U.S. Bureau of Labor Statistics, Current Population Survey.

## Teen school enrollment

In 2015, about 3 out of 4 teens were enrolled in school. Despite dipping in 2013, this proportion trended up from 58.7 percent in 1985, which is the first year of data. (See figure 4.) These annual averages include all months during the year.

More teens attend school during the summer now than in previous years. The proportion of teenagers enrolled in July 2016 was more than 4 times higher than it was in July 1985-42.1 percent versus 10.4 percent. (See table 1.)

Figure 4. Proportion of teens ages 16-19 enrolled in school, 1985-2015, annual averages


Note: Schools are defined to be public or private institutions that confer academic degrees, including high schools, community or junior colleges, 4-year colleges, universities, and graduate or professional schools of learning. School attendance can be either full time or part time. Shaded areas represent recessions as determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics, Current Population Survey.
According to the Annual Social and Economic Supplement of the CPS, the major reason teens give for not being in the labor force is that they are attending school. The supplement includes a question for those who did not work at all in the previous year: "What was the main reason (you/he/she) did not work in [year]?" In 2014, 92 percent of 16-to-19-year-olds who did not participate in the labor force cited "going to school" as the main reason. In 2004, this percentage was 89 percent. The percentage of teens who did not work at all during the year because they were going to school was 59.5 percent in 2014 versus 46.1 percent 10 years earlier. ${ }^{2}$

Table 1. Proportion of teens ages 16-19 enrolled in school during July 1985-2016

| Year | Percent in July |
| :---: | :---: |
| 1985 | 10.4 |
| 1986 | 11.7 |
| 1987 | 13.3 |
| 1988 | 13.0 |
| 1989 | 14.5 |
| 1990 | 15.7 |
| 1991 | 15.2 |
| 1992 | 13.6 |
| 1993 | 13.9 |
| 1994 | 19.5 |
| 1995 | 21.9 |
| 1996 | 22.0 |
| 1997 | 23.9 |
| 1998 | 24.8 |
| 1999 | 26.8 |
| 2000 | 27.1 |
| 2001 | 31.1 |

[^0]Table 1. Proportion of teens ages 16-19 enrolled in school during July 1985-2016

| Year | Percent in July |
| :---: | :---: |
| 2002 | 33.3 |
| 2003 | 33.2 |
| 2004 | 37.9 |
| 2005 | 36.5 |
| 2006 | 37.6 |
| 2007 | 41.5 |
| 2008 | 41.8 |
| 2009 | 44.7 |
| 2010 | 45.6 |
| 2011 | 46.7 |
| 2012 | 45.7 |
| 2013 | 39.3 |
| 2014 | 40.3 |
| 2015 | 43.1 |
| 2016 | 42.1 |
|  |  |

Source: U.S. Bureau of Labor Statistics, Current Population Survey.

Labor force participation rates are available by enrollment status. The participation for enrolled teens is much lower than for nonenrolled teens. Both rates were at their highest points in 1989. Both rates began to decline sharply before the 2001 recession and continued to descend until 2011; since then, both have stayed within a narrow range. The decline for enrolled teens has been sharper than the decline for teens not in school. About one-quarter of enrolled teens participated in the labor force in 2015, whereas the rate was 42.8 percent in 2000 . The rate for teens who are not enrolled fell from 71.6 percent in 2000 to 58.9 percent in 2015. (See figure 5.)

Figure 5. Labor force participation rates by enrollment status for teens ages 16-19, 1985-2015


Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research. Source: U.S. Bureau of Labor Statistics, Current Population Survey.

Reasons for the dip in teen enrollment in 2013 are not clear. A corresponding increase in labor force participation for this age group did not occur in 2013. Many researchers point toward cyclical trends in school enrollment; that is, people tend to return to school during recessionary periods and to the labor force during recoveries. This factor likely affects young adults more than teenagers, however. Other researchers point toward the high cost of college and concerns about debt. ${ }^{3}$ Indeed, tuition costs and college debt have been rising (see the later section on paying for college). Despite the dip in enrollment in 2013, the proportion enrolled still remains high by historical standards.

## High school coursework

Pressures to increase achievement and to better prepare high school students for college have grown, as shown by changes in coursework. High schoolers are taking tougher and more advanced courses, including those specifically designed for college preparation and credit-Advanced Placement (AP) courses. Dedicating more time to studies may leave less time for participation in the labor force.

The National Commission on Excellence in Education recommended in 1983 that all college-bound students take the following as a minimum during 4 years of high school: 4 years of English; 3 years each of social studies, science, and mathematics; 2 years of a foreign language; and one-half year of computer science. ${ }^{4}$ The National Center for Education Statistics (NCES) has data on combinations of courses taken by high school graduates, including the combination recommended by the Commission, minus computer science. The proportion of high school graduates completing the previous combination of years, at a minimum, was 9.5 percent in 1982. It grew to 61.8 percent of 2009 high school graduates, or more than 6 times higher than the proportion for 1982 high school graduates. (See table 2.)

Table 2. Percentage of public and private high school graduates having completed 4 years of English; 3 years each of social science, mathematics, and science; and 2 years of a foreign language, selected years, 1982-2009

| Year | Percent |
| :---: | :---: |
| 1982 | 9.5 |
| 1987 | 18.1 |
| 1990 | 29.9 |
| 1994 | 39.0 |
| 1998 | 44.2 |
| 2000 | 47.8 |
| 2005 | 54.7 |
| 2009 | 61.8 |

Source: Digest of Education Statistics, table 225.50, "Percentage of public and private high school graduates earning minimum credits in selected combinations of academic courses, by sex and race/ethnicity: selected years, 1982 through 2009," Department of Education, Institute of Education Services, National Center for Education Statistics, 2015.

NCES also has data on selected courses taken by high school graduates by area of study for selected years from 1982 to 2009. As for mathematics, the proportion of graduates who have taken advanced math courses in high school has grown. (See table 3.) Notably, the proportion taking algebra II grew from 39.9 percent in 1982 to 75.5 percent in 2009. The proportion with a semester in analysis/precalculus was just 6.2 percent of graduates in 1982,
and it climbed to a little more than 35 percent of graduates in 2009. Coursework in statistics/probability and calculus also rose over the period.

Table 3. Percentage of public and private high school graduates taking selected mathematics courses in high school, selected years, 1982-2009

| Course | 1982 | 1990 | 1994 | 1998 | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 9}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Geometry (1.0 year) | 47.1 | 64.1 | 70.6 | 75.3 | 78.3 | 83.8 | 88.3 |
| Algebra II (0.5 year) | 39.9 | 48.8 | 61.5 | 61.7 | 67.6 | 70.3 | 75.5 |
| Analysis/precalculus (0.5 year) | 6.2 | 13.4 | 17.4 | 23.2 | 26.6 | 29.4 | 35.3 |
| Statistics/probability (0.5 year) | 1.0 | 1.0 | 2.0 | 3.7 | 5.7 | 7.7 | 10.8 |
| Calculus (1 year) | 5.0 | 6.5 | 9.4 | 11.0 | 11.6 | 13.6 | 15.9 |

Note: For each course category, percentages include only students who earned at least the number of years shown in parentheses.
Source: Digest of Education Statistics, table 225.30, "Percentage of public and private high school graduates taking selected mathematics and science courses in high school, by sex and race/ethnicity: selected years, 1982 through 2009," Department of Education, Institute of Education Services, National Center for Education Statistics, 2015.

More high school graduates have been taking science, including multiple science courses. Nearly all 2009 graduates earned at least 1 year in biology ( 95.6 percent), 70.4 percent earned 1 year in chemistry, and 36.1 percent earned at least 1 year in physics. The proportion of graduates earning multiple years in the sciences has grown. In 2009, 68.3 percent of graduates earned years in both biology and chemistry, and 30.1 percent earned years in biology, chemistry, and physics. By comparison, 29.3 percent of 1989 graduates earned years in biology and chemistry and 11.2 percent in biology, chemistry, and physics. (See table 4.)

Table 4. Percentage of public and private high school graduates taking selected science courses in high school, selected years, 1982-2009

| Course | 1982 | 1990 | 1994 | 1998 | 2000 | 2005 | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Biology (1 year) | 77.4 | 91.3 | 93.7 | 92.9 | 91.1 | 92.5 | 95.6 |
| Chemistry (1 year) | 32.1 | 49.2 | 56.1 | 60.5 | 61.8 | 66.4 | 70.4 |
| Physics (1 year) | 15.0 | 21.3 | 24.8 | 28.8 | 31.3 | 32.9 | 36.1 |
| Biology and chemistry (2 years) | 29.3 | 47.8 | 53.8 | 59.1 | 59.2 | 64.3 | 68.3 |
| Biology, chemistry, and physics (3 years) | 11.2 | 18.7 | 21.4 | 25.6 | 25.0 | 27.4 | 30.1 |

Note: For each course category, percentages include only students who earned at least the number of years shown in parentheses.
Source: Digest of Education Statistics, table 225.30, "Percentage of public and private high school graduates taking selected mathematics and science courses in high school, by sex and race/ethnicity: selected years, 1982 through 2009," Department of Education, Institute of Education Services, National Center for Education Statistics, 2015.

As for foreign languages, 86.4 percent of 2009 graduates had taken a foreign language, compared with 54.4 percent in 1982. The proportion of graduates taking 1 year or less of a foreign language declined since 1982. Those having taken a minimum of 2 years in foreign languages was 19.5 percent in 1982 and 35.3 percent in 2009, having dipped from 2005. The proportion earning 3 or more years has more than doubled since 1982. In 2009, nearly 40 percent of graduates had 3 or more years of a foreign language. (See table 5.)

Table 5. Percentage distribution of high school graduates by the highest level of foreign language courses taken, selected years, 1982-2009

| Foreign language level | 1982 | 1987 | 1990 | 1994 | 1998 | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 9}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Any foreign language | 54.4 | 66.7 | 73.1 | 77.7 | 80.6 | 82.6 | 83.6 | 86.4 |
| Year 1 or less | 20.4 | 22.6 | 21.2 | 19.8 | 19.2 | 18.0 | 13.0 | 11.2 |
| Year 2 | 19.5 | 24.9 | 30.2 | 32.1 | 31.5 | 34.9 | 37.1 | 35.3 |
| Year 3 or higher | 14.6 | 19.2 | 21.7 | 25.9 | 30.0 | 29.8 | 33.5 | 39.9 |

Note: The Federal Interagency Forum on Child and Family Statistics (Forum) uses data from a number of federal sources, including the National Center for Education Statistics.

Source: Forum, America's children: key national indicators of well-being, 2015, table ED3.C, "High school academic coursetaking: percentage distribution of high school graduates by the highest level of foreign language courses taken, selected years, 1982-2009" (Washington, DC: U.S. Government Printing Office, July 2015).

The proportion of graduates with credits in AP courses has increased as well. AP courses allow students to take college-level courses in high school, and they can earn college credit for the courses if they achieve a minimum score on an AP examination. In 2009, 36.3 percent of public high school graduates had taken an AP course, compared with 26.9 percent in $2000 .{ }^{5}$

## College after high school

Figure 6. College enrollment rates for recent high school graduates, October


Note: Data beginning in 2006 are not strictly comparable to earlier years because of a change in supplement weights.
Source: U.S. Bureau of Labor Statistics, Current Population Survey, October Supplement.
BLS data show that the proportion of high school graduates who go to college immediately following graduation has trended up, despite dipping slightly in recent years. In October 2015, the proportion of 2015 high school graduates enrolled in college was 69.2 percent, close to the high point of 70.1 percent in October 2009. Although this proportion dipped from 2009 through 2013 (from 70.1 percent to 65.9 percent), it has trended up since. By
comparison, less than half of recent high school graduates were enrolled in college in October 1959. (See figure 6.) As noted earlier, students are less likely to participate in the labor force.

## Time spent on school activities

The time that teens spend on school-related activities can take away from any hours left in the day for a job. According to the BLS American Time Use Survey (ATUS), participation in educational activities consumes a large amount of time in a young person's day. Educational activities in ATUS include attending class, doing homework and research, and other activities, including related travel. Estimates are available for youth who are ages 15 to 19 years old and enrolled in high school. According to ATUS, enrolled youth who participated in educational activities spent 7.72 hours a day on the activities for the combined years 2010-14. This measure is up slightly from 200307 , when it was 7.59 hours. Only sleeping, at 8.63 hours in 2003-07 and 8.68 hours in 2010-14, accounted for more time in a 24 -hour period than educational activities. ${ }^{6}$

Some high schools require prospective graduates to spend time volunteering to graduate. The CPS has a supplementary survey on volunteering. The data show that the proportion of the 16-to-19-year-old population who volunteer has been a little more than one-quarter of the teenage population. This proportion has moved little since the CPS supplement started in 2002. Teenagers do volunteer at higher rates than several other age groups, including 20-to-24-year-olds. ${ }^{7}$ Data from ATUS on time use also indicate that among teens who volunteer, the time spent on volunteering has not risen. According to ATUS, 15-to-19-year-old volunteers enrolled in high school spent 1.65 hours volunteering during school weekdays in 2010-14 versus 2.1 hours in 2003-07. ${ }^{8}$ Still, hours spent during the day on volunteering take time from other activities, including working.

## Earlier school start dates

School terms have become less likely to start after Labor Day. The school starting dates for many school districts have moved earlier into the summer, oftentimes to extend the school year so that students have more time to prepare for standardized tests. For example, schools in Cleveland, Ohio, have moved their starting dates up about 1 week for the past two summers and moved up another week in 2016 to a start date of August 8, 2016. ${ }^{9}$ In Texas, many school districts want to change the state law on when school starts (which is currently late August) to allow more time for test preparation and to better balance school days with school breaks. ${ }^{10}$ Last school year, just three states (Virginia, Minnesota, and Michigan) had state laws that prohibited schools from starting before Labor Day unless they received a waiver; some school systems, such as those in Hawaii, started at the end of July. ${ }^{11}$ With a shorter summer off from school, students may be less inclined to get a summer job, and employers may be less inclined to hire them.

## Paying for college

The price of college tuition has continued to rise. The average cost for undergraduate tuition, fees, room, and board for school year 2014-15 (in constant 2014-15 dollars) was nearly $\$ 22,000$, more than double the amount experienced 30 years earlier. Tuition for both public and private colleges has risen. The average public school tuition was about $\$ 16,000$ in 2014-15, compared with about $\$ 7,600$ for the 1984-85 school year. The increase in private (both for-profit and nonprofit) tuition was even greater, from approximately $\$ 18,000$ to about $\$ 37,000$ over the same period. ${ }^{12}$

As tuition costs have risen, so has the proportion of students receiving financial aid. During the 2011-12 school year, 84.4 percent of full-time, full-year undergraduates received financial aid (grants, loans, and workstudy), up from 58.2 percent in 1992-93. The proportion receiving grants grew from nearly one-half to close to three-fourths, and the share with loans from about 3 in 10 to almost 6 in $10 .{ }^{13}$ In addition, parents are borrowing more, through Parent Plus loans. The average per borrower of a Parent Plus loan for an undergraduate was $\$ 11,999$ for the 2015-16 school year, up from $\$ 3,231$ (in constant 2015 dollars) for the 1995-96 school year. ${ }^{14}$

Taxpayers also can take advantage of tax credits or deductions to assist with tuition costs. As of tax year 2009, the American Opportunity Credit replaced the former Hope Scholarship Credit. The American Opportunity Credit is for students in their first 4 years of school who are attending school at least half time. It allows taxpayers to qualify for a credit for education expenses when they file their taxes, up to $\$ 2,500$ (depending on income). The amount of education tax credits was $\$ 17.8$ billion in 2014 , up from 4.3 billion in 1998 (in 2014 dollars). ${ }^{15}$


197919811983198519871989199119931995199719992001200320052007200920112013
Note: The Consumer Price Index research series is used to convert current dollars into constant 2014 dollars. Source: U.S. Bureau of Labor Statistics, BLS Reports, report 1058, "Highlights of women's earnings in 2014," table 20: "Inflation-adjusted median hourly earnings, by age, for wage and salary workers paid hourly rates, 1979-2014 annual averages," November 2015.

Since college is so costly, teen earnings may not make much of a dent in the tuition bill. Moreover, with available financial aid and tax credits, teens still in school may not have to work as much to pay for college. In fact, teens' buying power has declined in recent years. In 2014, median hourly earnings for teens paid hourly rates was $\$ 8.43$ (in constant 2014 dollars), down from $\$ 9.09$ in 2002. (See figure 7.)

## Parental emphasis on school-related activities

Anecdotal evidence points toward parents preferring that their children do not work and that they instead use their time for school-related activities. ${ }^{16}$ This preference is more apparent among highly educated families and those with the highest incomes according to analyses using CPS and ATUS data. Shirley L. Porterfield and Anne E. Winkler analyzed teen employment rates using CPS data and found that declines in employment from 1995-96 to 2003-04 were greatest for teens in the most educated families. The same study analyzed ATUS data, and results
showed that teens in families with the highest incomes spent more time on the "traditional activities" of extracurricular pursuits, plus hobbies, reading, and writing. ${ }^{17}$

Another study of time use data found a large increase in time that parents with college education spend in "childcare," meaning time spent with children. Garey Ramey and Valerie A. Ramey studied time use data from 1965 to 2007 and found that the increase in time spent with children was twice as great for college-educated parents, and the increase was mainly time spent on activities of older children. The authors state, ". . . the increase in time spent in childcare, particularly among the college educated, may be a response to an increase in the perceived return to attending a good college, coupled with an increase in competition in college admissions." ${ }^{18}$

## Competition for jobs

Are teens competing with other workers for jobs? Older workers looking for jobs, perhaps after retiring from their careers; young, underemployed college graduates; and immigrants are among those who may compete with teens for low-wage jobs. Competition with other workers could affect the labor force participation of all teens, whether enrolled or not.

## Older workers and young college graduates

While teens have seen reductions in their labor force participation rates, participation among the 55 -and-over age group has been growing. The labor force participation rate for people ages 55 and over surpassed the rate for teens in 2009. By 2015, the participation rate for the older age group was 39.9 percent versus 34.3 percent for teenagers. In 2015, the number of employed people ages 55 and over was about 7 times greater than the number of employed 16-to-19-year-olds. Older people are staying in the labor force longer than ever before. In addition, even though older workers may officially "retire" from their career jobs, many do not officially exit the labor force; instead, they increasingly take on "bridge" jobs, usually part-time or part-year and lower wage jobs. ${ }^{19}$

Data from the CPS show that fewer teens are employed in the occupational groups in which they are concentrated and that greater shares of older workers are employed in these groups, particularly workers ages 55 and over. The three occupational groups that employ the most teenagers are food preparation and serving, sales and related occupations, and office and administrative occupations. Employment share by age group for these occupational groups for 2005 and 2015 is shown in table 6. Although the share of food preparation employment held by teenagers fell between 2005 and 2015, it grew among those ages 20-24, 25-34, and ages 55 and over. As for sales and related occupations, older people increased their share to more than 1 in 5 workers in 2015, while the share of sales jobs held by teens dropped to 7 percent. In office and administrative support occupations, the only age group to increase in share was the 55-and-older set. In 2015, nearly one-quarter of workers in office and administrative support were ages 55 and up.

Table 6. Percentage share of employment in selected occupational groups, by age group, 2005 and 2015

| Age | Food preparation and serving |  | Sales and related |  | Office and administrative support |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000 | 2015 | 2000 | 2015 | 2000 | 2015 |
| 16-19 | 20 | 16 | 9 | 7 | 4 | 3 |

See footnotes at end of table.

Table 6. Percentage share of employment in selected occupational groups, by age group, 2005 and 2015

| Age | Food preparation and serving |  | Sales and related |  | Office and administrative support |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000 | 2015 | 2000 | 2015 | 2000 | 2015 |
| 20-24 | 22 | 24 | 13 | 14 | 12 | 12 |
| 25-34 | 20 | 23 | 19 | 20 | 21 | 21 |
| 35-44 | 16 | 15 | 22 | 17 | 23 | 19 |
| 45-54 | 13 | 13 | 20 | 19 | 23 | 22 |
| 55 and over | 8 | 11 | 18 | 22 | 17 | 24 |

Source: U.S. Bureau of Labor Statistics, unpublished tabulations from the Current Population Survey.

Other researchers noted that college graduates may be working in jobs that do not require a college degree, particularly after the most recent recession. Neeta P. Fogg and Paul E. Harrington at the Center for Labor Markets and Policy, Drexel University, noted, "That is, young college graduates increasingly will choose to work in occupations that do not use much of the knowledge, skills, and abilities usually developed by earning a college degree rather than accept the alternative of joblessness." ${ }^{20}$ In a study from the Federal Reserve Bank of New York, Jaison R. Abel, Richard Deitz, and Yaqin Su estimated that about 20 percent of young, recent college graduates were employed in low-wage jobs in 2009, such as cashiers or food servers, compared with 15 percent in 1990. ${ }^{21}$

## Foreign-born workers

Overall, the percentage of the total labor force held by the foreign born was 16.7 percent in 2015 , whereas it was 14.8 percent in 2005 (the first year of CPS published foreign-born data). These foreign-born workers may compete directly with teens for the types of jobs teens would typically hold, which would be those with low educational requirements. The educational attainment of foreign-born workers is lower than that of native-born workers. According to the CPS, about one-quarter of the foreign-born labor force ages 25 and over had less than a high school diploma as their highest level of educational attainment in 2015, while that proportion was about 5 percent for the native-born labor force ages 25 and over. An analysis by Christopher L. Smith of the Federal Reserve Board found that immigrant employment has a greater effect on employment of native-born 16-to-17-year-olds than it does on native-adult employment. According to Smith, ". . . a 10-percent increase in the number of immigrants with a high school degree or less is estimated to reduce the average total number of hours worked in a year by 3 to $31 / 2$ percent for native teens and by less than 1 percent for less educated adults." ${ }^{22}$

## Fewer teens not in the labor force actually "want a job"



Do those teens who are not in the labor force want to be working? According to the CPS, in 2015, just 8.8 percent of 16-to-19-year-olds not in the labor force wanted a job. In 1994, this proportion was 20.0 percent. It declined to 9.8 percent in 2007 and has ranged from about 9 to 10 percent since then. (See figure 8.)

## What about 2024?

BLS projects declining teen labor force participation in the next decade-the rate is projected to drop from 34.0 percent in 2014 to 26.4 percent in 2024. BLS links the projected decline to increased school enrollment. ${ }^{23}$ Overall labor force participation (for all ages) is projected to fall. This projection for the overall rate is partly due to declines among youth, but mainly, it is due to the baby-boom generation moving into the older age groups who have lower labor force participation rates. At the same time, the participation rates for cohorts ages 55 and over are projected to increase over the projection period. In fact, the projected participation rate for the ages 65-to-74 cohort, at 29.9 percent in 2024, is greater than the rate projected for teenagers.

## Conclusion

Overall, labor force participation of teens has been declining since 1979, and their low rates of labor force participation continued into the recovery period following the latest recession. In particular, teen participation during the summer has dropped dramatically. School enrollment has increased, especially during the summer months, and enrollment affects the participation of teenagers in the labor force. Along with the increased emphasis toward college, coursework has also become more strenuous in high school. In addition, teens spend much of their time on school activities-only sleeping accounts for more time in a teenager's day. Teens who do want jobs may face competition from others for the types of jobs they typically hold. As for the future, the labor force participation rate for teens is projected to decline further in 2024, according to the latest BLS projections.

## SUGGESTED CITATION

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## NOTES

${ }_{-}^{1}$ The National Bureau of Economic Research is the official arbiter of dating recessions.
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