

Youth and the Labor Force: Background and Trends

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Summary

Congress has indicated a strong interest in ensuring that today's young people (ages 16 to 24) attain the education and employment experience necessary to make the transition to adulthood as skilled workers and taxpayers. This report provides context for Congress on trends in the labor force for youth. It discusses youth labor force data since 1948, with a focus on the period from 2000 to the present.

The labor market experiences of youth ages 16 to 24 have varied based on their age and other factors. Over the post-World War II period, teens ages 16 to 19 generally have had a lower labor force participation rate and employment-population ratio than young adults ages 20 to 24. These two indicators for teens fluctuated from the 1950s through the 1990s, and then began a steady decline before stabilizing in recent years. The labor force participation rate and employment-population ratio for young adults was on an upward trajectory in most years following World War II. This was the result of increases in labor force participation and employment among young women. Both labor force measures declined for young adults in the 2000s. They have ticked back up in recent years, but remain below 2000 levels.

Beginning in the early 2000s, young people ages 16 to 24 began to experience a more pronounced decline in their labor force participation rate and employment, along with a corresponding increase in unemployment. In 2000, they had a participation rate of nearly 66%, an employment-population ratio of about 60%, and an unemployment rate of 9%. These measures eroded even as the economy grew in the mid-2000s, and then declined further immediately following the recession. Although the labor force situation improved for young people in recent years, their labor force participation rate (56%) and employment-population ratio (50%) in 2017 were lower than in 2000, and their rate of unemployment was about the same (9%).

Labor force indicators have trended differently for males and females ages 16 to 24. Beginning in the 1970s, the labor force participation rate and employment-population ratio for females increased as they entered the workforce in greater numbers.

Labor force trends have also been distinct across racial and ethnic groups. Generally, the labor force participation rate and employment-population ratio have been highest for white youth, followed by Hispanic youth. Black and Asian youth have been the least likely to participate in the labor market or to be employed. The 2017 employment-population ratios for youth ages 16 to 24, by race and ethnicity, were as follows: white, 57%; Hispanic, 53%; black, 52%; and Asian, 42%. Black youth have experienced labor force gains in recent years. Education and other factors likely play a role in these labor market outcomes.

Decreases in labor force participation and the employment-population ratios for young people appear to be due to a confluence of demand and supply factors. On the demand side, youth have less education and experience relative to older workers. Youth may also face increased competition for jobs that require less education. On the supply side, a growing number of young people are enrolled in school, particularly post-secondary education, and thus have competing demands on their time. Overall, firms are more likely to hire workers with greater experience and availability.

The changes in the labor market landscape for youth have not been fully explored. Research in this area has hypothesized that reductions in human capital, such as deterioration of skills and foregone work experience, may have lasting impacts on the employability and wages of youth.

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Introduction

This report provides current and historical labor force information about young people ages 16 to 24. In general, youth have a lower rate of labor force participation, and those who are in the labor force are less likely to gain employment than older workers. Both labor supply and demand factors drive this pattern. On the labor supply side, young people are making greater investments in education by enrolling in and completing high school and college in greater numbers. They are less likely to be attached to the labor force due to their limited availability (e.g., only able to work full-time during the summer if they attend school) and their relatively weaker connections to employers. Labor demand also plays a role. Youth are less desirable in some ways than adult workers because they are less experienced; have fewer skills and education; and are potentially short-term hires, which can be costly to employers.

The report focuses on trends from 2000 to 2018. This period has included two recessions (March to November 2001 and December 2007 to June 2009) and a decline in jobs requiring only a high school diploma. Many workers were still struggling to find work in the years immediately following the more recent recession. The recession exacerbated challenges that workers have faced in securing and retaining employment since 2000.¹ Against this backdrop, young people ages 16 to 24 experienced their steepest decreases in labor force participation and employment; however, in recent years employment levels have steadily been recovering.

Some studies have found that early labor market experiences and outcomes have lasting impacts on employability and wages. Given the current and future challenges that young people can experience in the labor market, this report may be of interest to Congress in the contexts of workforce development, education, unemployment insurance, youth policy, or macroeconomic policy; however, the report does not discuss specific programs or policy implications.

The report begins with a brief discussion of current employment and education pathways that young people can pursue. Following this is a description of the labor market data used in the report, which includes the labor force participation rate, employment-population ratio, and unemployment rate.² The report then discusses these data for the post-World War II period, with a focus on trends since 2000, comparing labor force outcomes based on age, sex, and race/ethnicity. The report concludes by exploring the factors that influence the extent to which youth participate in the labor force and their prospects for employment. The last section also discusses the potential short- and long-term effects of young people's labor market experiences. The **Appendix** includes supplemental tables and figures on youth employment trends.

Background

Declines in the shares of young people participating and working in the labor force is probably due, in part, to growing enrollment in high school and postsecondary education,³ which is likely a

¹ Neil Irwin, "Aughts were a Lost Decade for U.S. Economy, Workers," *Washington Post*, January 2, 2010.

² Briefly, the *labor force participation rate* is the percentage of individuals in the population who are employed and who are unemployed. The *employment-population ratio* is the proportion of individuals in the general U.S. population who are employed. The *unemployment rate* is the share of individuals in the labor force who are unemployed. (Note that the denominators for the employment-population ratio and the unemployment rate are different.)

³ T. Alan Lacey, Mitra Toossi, Kevin Dubina, and Andrea Gensler, "Projections Overview and Highlights, 2016–26," U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS), *Monthly Labor Review*, October 2017 (hereinafter, T. Alan Lacey, Mitra Toossi, Kevin Dubina, and Andrea Gensler, "Projections Overview and Highlights, 2016–26."); Maria E. Canon, Marianna Kudlyak, and Yang Liu, "Youth Labor Force Participation Continues to Fall, but It Might

result of a growing need for higher levels of educational attainment to secure employment. The Department of Labor's (DOL's) Bureau of Labor Statistics (BLS), which measures labor market activity, predicts that the fastest growing occupations between 2016 and 2026 will require some postsecondary education.⁴

Education and Employment Pathways for Young People

For the purposes of this report, *youth* refers to young people ages 16 through 24. Individuals as young as 16 are included because BLS counts workers beginning at this age.⁵ Although traditional definitions of youth have considered adolescence to be a period ending at age 18, cultural and economic shifts have protracted the time for youth to transition to adulthood. The current move from adolescence to adulthood has become longer and more complex, and policymakers and others are recognizing that adolescence is no longer a finite period that ends at the age of majority.⁶ Older youth, up to age 24, are included because they are often still in school and/or living with their parents.⁷

Young people ages 16 through 24 may pursue a variety of education and employment pathways. Those of high school age may attend high school and/or work. Youth with a high school diploma can attend a two- or four-year college, enlist in the armed services, or secure part-time or full-time employment. Some youth work and attend school simultaneously, while others alternate between work and school (e.g., summer jobs).⁸ Young people who drop out of high school can do some of these same things, but their opportunities are more limited. They cannot enroll in a four-year college or, in most cases, enlist in the military. They may also face challenges securing employment.⁹

Even young people who are attending high school or an institution of higher education (or those on a break from school) may still want to work, or feel that they have to work, for a variety of reasons—to have spending cash, contribute to their household income, gain work experience, and save for the future, among other possibilities. A nationally representative survey in 2015 found

Be for a Good Reason,” Federal Reserve Bank of St. Louis, *The Regional Economist*, January 2015; (hereinafter, Maria E. Canon, Marianna Kudlyak, and Yang Liu, “Youth Labor Force Participation Continues to Fall, but It Might Be for a Good Reason”); Teresa L. Morisi, “Teen Labor Force Participation Before and After the Great Recession and Beyond,” DOL, BLS, *Monthly Labor Review*, February 2017 (hereinafter, Teresa L. Morisi, “Teen Labor Force Participation Before and After the Great Recession and Beyond.”); Teresa L. Morisi, “The early 2000s: A Period of Declining Summer Teen Employment Rates,” DOL, BLS, *Monthly Labor Review*, May 2010, p. 32 (hereinafter, Teresa L. Morisi, “The early 2000s: A Period of Declining Summer Teen Employment Rates.”)

⁴ DOL, BLS, “Employment Projections 2016-26,” press release, October 24, 2017. See also, Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Recovery: Projections of Jobs and Education Requirements Through 2020*, Georgetown University, Center on Education and the Workforce, June 2013.

⁵ The Fair Labor Standards Act (FLSA) sets 14 as the minimum age for employment and limits the number of hours worked by minors under the age of 16.

⁶ For further information on the transition to adulthood, see CRS Report RL33975, *Vulnerable Youth: Background and Policies*.

⁷ Arguably, the age of youth could be even higher than 24. For example, the Patient Protection and Affordable Care Act (P.L. 111-148) uses age 26. Specifically, the law requires health insurance companies to provide coverage to the children of parents who are enrolled in their health care plans up to their 26th birthday. It also provided a new Medicaid pathway, effective January 2014, for children who age out of foster care up to their 26th birthday.

⁸ See CRS Report R44746, *Background and Federal Efforts on Summer Youth Employment*.

⁹ For further discussion, see CRS Report R40535, *Disconnected Youth: A Look at 16 to 24 Year Olds Who Are Not Working or In School*. See also, Gordon L. Berlin, Frank F. Furstenberg, Jr., and Mary C. Waters, “Introducing the Issue,” *Future of Children* Volume on the Transition to Adulthood, vol. 20, no. 1 (Spring 2010), pp. 1-17.

that the majority (61%) of young adults ages 18 to 30 in the labor market are optimistic about future job opportunities. This optimism had increased since the previous survey in 2013 (45%). Further, the 2015 survey found that young adults have a strong preference for steady employment over higher pay, though this has declined somewhat since 2013 (62% in 2015 versus 67% in 2013 for steady employment; and 36% in 2015 versus 30% in 2013 for higher pay).¹⁰

Data on Youth Labor Force Participation and Outcomes

This section describes data on participation in the labor force, including how it applies to youth. The data are reported by BLS based on a household survey conducted by the Census Bureau.¹¹ This survey, known as the Current Population Survey (CPS), collects labor force and other data from a nationally representative sample of 60,000 households on a monthly basis. The survey includes households with civilian non-institutionalized individuals and excludes individuals residing in correctional facilities, residential nursing and mental health facilities, college dorms, military facilities, and other institutions. Employed and unemployed youth (beginning at age 16) and adults (no upper age limit) are counted by BLS as part of the *labor force*.

- The *labor force participation rate* is the percentage of individuals in the population who are employed and who are unemployed (*Labor Force Participation Rate = Employed + Unemployed Individuals/Civilian Population Age 16+*).

BLS considers individuals to be *employed* if they work at all for pay or profit during the week that they are surveyed.¹² This includes all part-time and temporary work, as well as regular full-time, year-round employment. It does not include unpaid internships. Individuals are considered *unemployed* if they are jobless, actively looking for jobs, and available for work. Job search activities include sending out resumes or filling out applications, among certain other activities.

- The *employment-population ratio* is the proportion of individuals in the non-institutionalized U.S. population who are employed (*Employment to Population Ratio = Employed Individuals/Civilian Non-institutionalized Population*).
- The *unemployment rate* is the share of individuals in the labor force who are unemployed (*Unemployment Rate = Unemployed Individuals/Labor Force*).¹³

Labor force participation measures the extent to which individuals are engaged in or actively seeking work, and for this reason has been used as a proxy indicator of interest in working. Generally, increasing labor force participation indicates greater interest in working, while decreasing labor force participation indicates declining or noninterest in working. Changes in labor force participation rates, however, are not perfect indicators of individual or collective preference about work. For example, labor force participation may decline because individuals

¹⁰ Board of Governors of the Federal Reserve System, *Experiences and Perspectives of Young Workers*, December 2016.

¹¹ The terms used in this report are defined by DOL, BLS, in its “Glossary.”

¹² BLS also counts workers who are “unpaid family workers,” which includes any person who worked without pay for 15 hours or more per week in a family-owned enterprise operated by someone in their household. Unpaid family workers comprise a relatively small proportion of total employment.

¹³ The denominators for the employment-population ratio and the unemployment rate are different. When restricted to youth, the denominator for the employment-population ratio is youth in the labor force and the denominator for unemployment is youth in the civilian non-institutionalized population. Youth refers to young people ages 16-24.

become discouraged about job prospects and give up looking for work. Individuals may also decide to pursue education instead of work to improve future job prospects.

The employment-population ratio and the unemployment rate can help to gauge market conditions. When the employment-population ratio rises, it means that a larger percentage of the working-age population is employed.¹⁴ The unemployment rate is also an indicator of whether individuals are able to be employed in the labor force. This rate should be interpreted with caution: changes in the unemployment rate can mask the extent to which individuals want to work. The unemployment rate can fall without a corresponding rise in employment if unemployed workers leave the labor force.

Work Among Youth: Trends Over Time

The figures and tables in this section and the **Appendix** display labor force data over the period following World War II (starting in 1948, when the data first became available) based on age, sex, and race/ethnicity.¹⁵ The figures also plot the 11 periods when the country was in recession.¹⁶

Table A-1, **Table A-2**, **Figure A-1**, and **Figure A-2** in the **Appendix** show broader labor force trend data for teens and young adults, respectively, from 1948 through 2017.

Age

The labor market experiences of youth are different based on their age. **Figure 1** charts the employment-population ratio from 1948 through 2017 for teens (ages 16 to 19), young adults (ages 20 to 24), and “prime-age” individuals (ages 25 to 54). Over that time, teens had the lowest employment-population ratios, followed by young adults. From the 1950s through the 1970s, the prime-age adults’ and young adults’ employment-population ratios moved in the same direction, declining in the 1950s and then increasing in the 1960s and 1970s. The difference in their employment-population ratios began to grow beyond that period, reaching nearly 13 percentage points in 2017.

Figure 1 also illustrates the cyclical nature of the employment-population ratio, particularly for teens. The teen employment-population ratio had a greater decline soon after the start of a recession compared to the ratios for young adults and prime-age adults. Further, the employment-population ratio for young adults generally exhibited a more upward trajectory. This is due, in part, to young adult females entering the labor market in greater numbers starting in the 1960s. The employment-population ratios for both teens and young adults dipped from 2000 to 2010 (capturing the effects of two recessions), but more dramatically for teens (a 33% versus 9% decline). The indicators for both age groups began recovering following the 2007 to 2009 recession, with greater gains in the labor force participation rate and employment-population ratio for teens (see **Table A-1** and **Table A-2** in the **Appendix**). **Figure A-1** and **Figure A-2** show that the labor force participation rate trend lines for teens and young adults were generally parallel,

¹⁴ For further information about the employment-population ratio as a labor market indicator, see CRS Report R44055, *An Overview of the Employment-Population Ratio*.

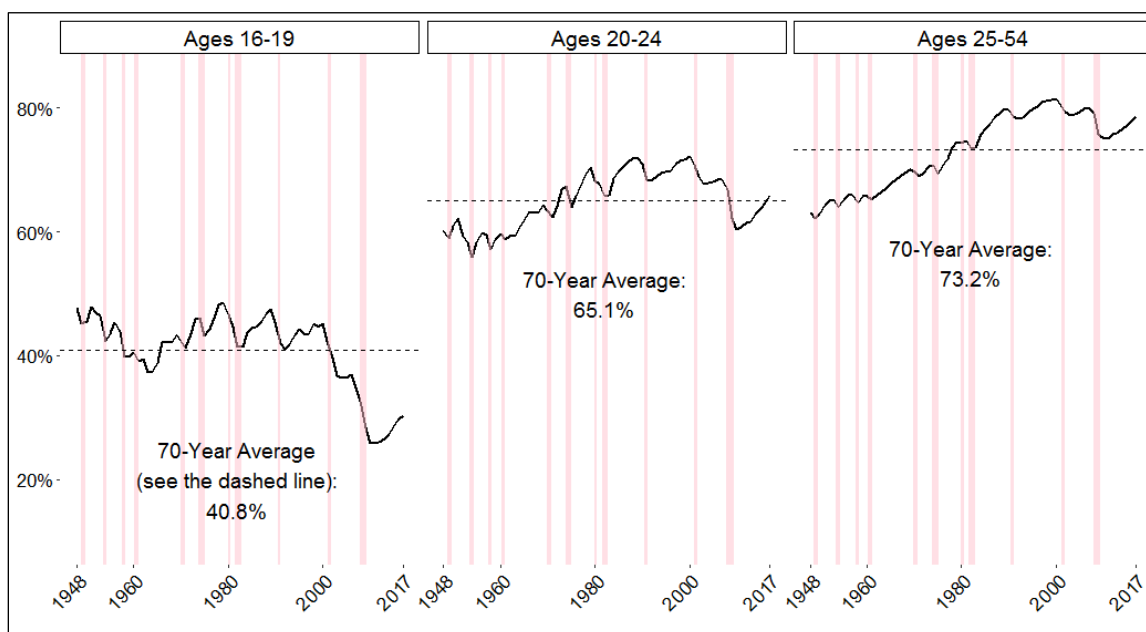
¹⁵ The data are not seasonally adjusted, meaning that they have not been adjusted to account for seasonality in employment and unemployment rates.

¹⁶ These periods are November 1948 (quarter IV) to October 1949 (IV), July 1953 (II) to May 1954 (II), August 1957 (III) to April 1958 (II), April 1960 (II) to February 1961 (I), December 1969 (IV) to November 1970 (IV), November 1973 (IV) to March 1975 (I), January 1980 (I) to July 1980 (III), July 1981 (III) to November 1982 (IV), July 1990 (III) to March 1991 (I), March 2001 (I) to November 2001 (IV), and December 2007 (IV) to June 2009 (II). See National Bureau of Economic Research, *U.S. Business Cycle Expansions and Contractions*.

and were higher than the employment-population ratio trend lines. The trend lines for the unemployment rates for both groups generally mirrored changes in the employment-population ratios.

The post-2000 declines in the employment-population ratios and labor force participation rates, particularly for teens, can likely be viewed as partially a consequence of a positive social trend—the increase in high school and college enrollment.¹⁷ In addition, as discussed later in the report, students are increasingly pursuing unpaid internships to meet high school graduation requirements and improve their prospects for attending college.¹⁸ So although they are gaining experience that will likely benefit them when they work, they are not included in the labor force. Nonetheless, these indicators do not necessarily reflect a tendency toward voluntary withdrawal from the workforce to complete schooling. Some young people may have dropped out of the labor market because of dimmed employment prospects in light of the need for more schooling to obtain a job.

Figure I. Employment-Population Ratios by Select Age Groups, 1948-2017



Source: Congressional Research Service (CRS), based on data from the U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

Notes: Employment-population ratios represent the percentage of the non-institutionalized population who were employed. Shaded areas denote periods of recession.

¹⁷ Maria E. Canon, Marianna Kudlyak, and Yang Liu, “Youth Labor Force Participation Continues to Fall, but It Might Be for a Good Reason”; and Teresa L. Morisi, “Teen Labor Force Participation Before and After the Great Recession and Beyond.” See also, U.S. Department of Education (ED), National Center for Education Statistics, *Projections of Education Statistics to 2024*, Figure 16, “Actual and Projected Numbers for Total Enrollment in All Postsecondary Degree-Granting Institutions, By Age Group, Sex and Attendance Status: Fall 1995 through Fall 2024,” 2016 (hereinafter, ED, NCES, *Projections of Education Statistics to 2024*).

¹⁸ Teresa L. Morisi, “Teen Labor Force Participation Before and After the Great Recession and Beyond”; and Teresa L. Morisi, “The early 2000s: A Period of Declining Summer Teen Employment Rates.”

Sex

Figure 2 plots the employment-population ratios for female and male teens and young adults for 1948 through 2017, revealing different levels and patterns of change. For many years, the employment-population ratios for females were much lower than they were for their male counterparts. The difference in the employment-population ratios for males and females in both age groups began to narrow in the 1990s, but likely for different reasons. For teens, the male employment-population ratios started to drop while the female employment-population ratios began to rise, so that by 1996 the rates were nearly identical. This may be attributable to the changing employment prospects of individuals with lower levels of education, as discussed in a subsequent section. Young males ages 16 through 24 are somewhat less likely to be enrolled in high school or college than their female counterparts,¹⁹ and a smaller share of males ages 25 through 29 have obtained a college degree.²⁰

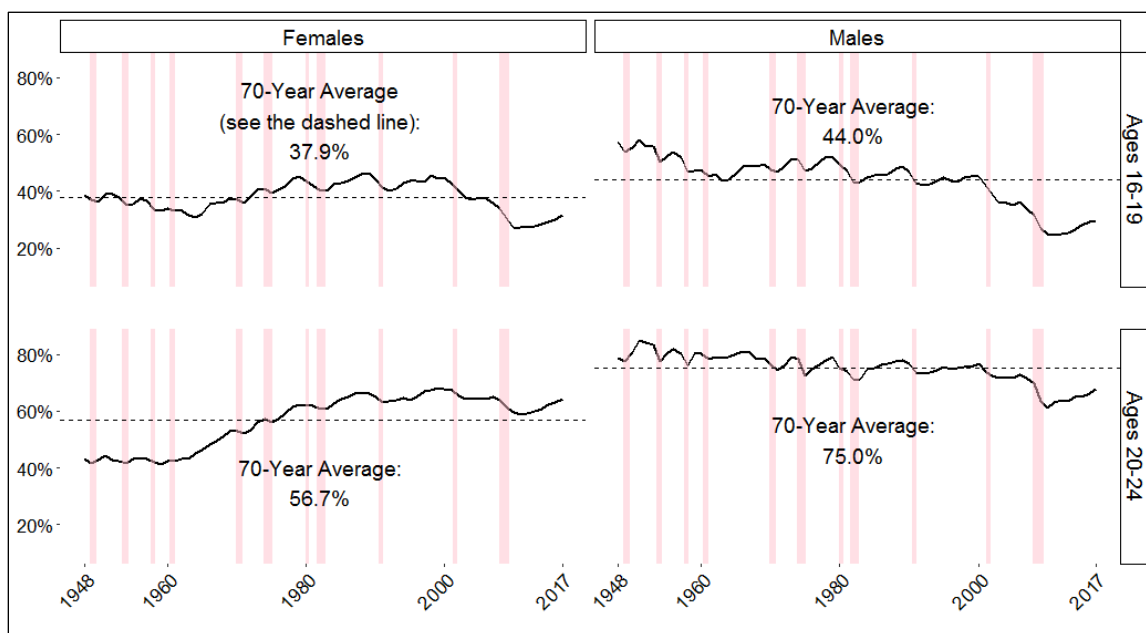
With regard to young adults, females made significant inroads into the labor market. The employment-population ratios for young adult women generally began to trend upward in the 1960s through the 1980s. This corresponds with an upward trend in college completion among women,²¹ which likely influenced the extent to which they pursued and secured employment. In addition, other factors—lower fertility, declines in marriage rates, and increased likelihood of divorce—have played a role in women’s increased participation in the labor force, among other factors that are not easy to quantify (e.g., shifts in expectations about roles based on sex).²² From approximately 2000 onward, the employment-population ratios for females and males became more similar; however, the employment-population ratios for young adult males have been higher in each year.

¹⁹ The statistics are available in the following age categories: 16 and 17, 18 and 19, 20 and 21, and 22 to 24. For each of these categories, females are more likely than males to be enrolled in school, particularly among those ages 18 through 21. ED, NCES, *Digest of Education Statistics: 2016*, Table 103.10, “Percentage of the Population 3 to 34 Years Old Enrolled In School, by Sex, Race/Ethnicity, and Age: Selected years, 1980 through 2015,” July 2016; and Table 303.10, “Total Fall Enrollment in Degree-Granting Institutions, by Attendance Status, Sex of Student, and Control of Institution: Selected Years, 1947 through 2026,” February 2017.

²⁰ U.S. Department of Commerce (DOC), Census Bureau, *Educational Attainment in the United States: 2016*, Table A-2, “Percent of People 25 Years and Over Who Have Completed High School or College, by Race, Hispanic Origin and Sex: Selected Years 1940 to 2016” (hereinafter, DOC, Census Bureau, *Educational Attainment in the United States: 2016*.)

²¹ Ibid.

²² Francine D. Blau, “Women’s Economic Well-Being, 1970-1995: Indicators and Trends,” *Focus*, vol. 20, no. 1 (Winter 1998-1999), pp. 6-8.

Figure 2. Employment-Population Ratios of Young People by Sex, 1948-2017

Source: Congressional Research Service (CRS), based on data from the U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

Notes: Employment-population ratios represent the percentage of the non-institutionalized population who were employed. Shaded areas denote periods of recession.

Race and Hispanic Ethnicity

Figure 3 and **Figure 4** compare the employment-population ratios of teens and young adults by race and Hispanic ethnicity from 1972 to 2017. The Congressional Research Service (CRS) applies Census definitions in this section, which divide race into black, white, or Asian and ethnic origin into Hispanic or non-Hispanic. People of Hispanic origin may be of any race. BLS began recording employment data for black individuals in 1972, for Hispanic individuals in 1994, and for Asian individuals in 2000. Both figures indicate that employment-population ratios were highest over time for white youth, followed by Hispanic youth. Black and Asian youth had similarly low employment-population ratios relative to their white and Hispanic counterparts.

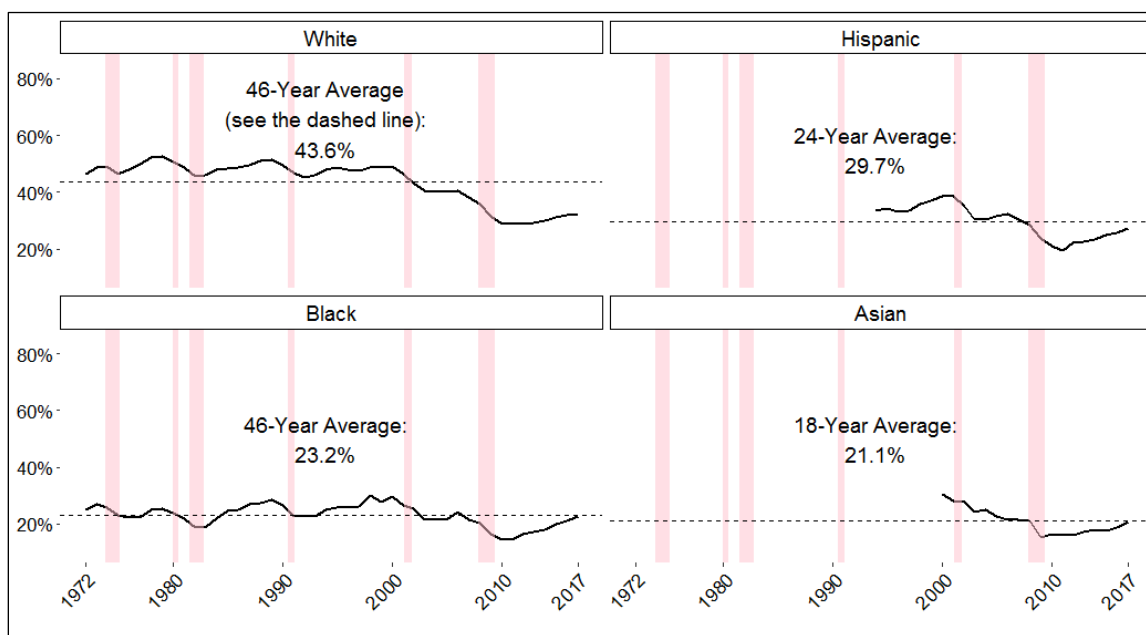
As shown in **Figure 3**, the employment trends for white, black, and Hispanic teens generally reflected the cyclical effects of the economy until the late 1990s. The employment-population ratios for all groups subsequently decreased in most years through 2012 (give or take a year, depending on the racial/ethnic group). The employment gap between white teens and black teens narrowed, from about 20 percentage points in 2000 to 10 percentage points in 2017, due primarily to decreases in the employment-population ratio for white teens.

Figure 4 indicates that employment for white young adults steadily increased, even following most recessions, over the period examined. Hispanic and black young adults made inroads in the labor market since the most recent recession (2007-2009), such that Hispanic youth had similar employment-population ratios to white youth and the employment-population ratio for black young adults reached an all-time high of 61% in 2017 (similar, but still higher, to levels in the late 1990s). The employment-population ratio for Asian young adults has generally been in decline over time, and hovered near 50% during the most recent post-recession period.

Despite recent improvements in employment among minority youth, they have had lower employment-population ratios relative to white youth. These lower rates may be due, in part, to the reduced employment prospects of individuals with less education and other factors that are more difficult to measure, such as poverty and neighborhood characteristics (see discussion at the end of the report).

Black and Hispanic youth ages 16 to 24 are less likely to have completed high school and college (see **Table A-3**).²³ Schooling may also explain the relatively low employment-population ratios for Asian youth, but for a different reason. Asian youth are delaying entry into the labor market and may be foregoing work for school while in the labor force. Asian youth have had the highest rates of college completion among any racial or ethnic group (and rates of high school completion that are comparable to that of white youth).²⁴ The role of education for Hispanic youth is less clear. While their employment-population ratio has been closer to that of white youth in recent years, Hispanic youth had relatively lower rates of high school completion and slightly higher rates of college completion than white youth.

Figure 3. Employment-Population Ratio of Teens Ages 16-19 by Race and Ethnicity, 1972-2017



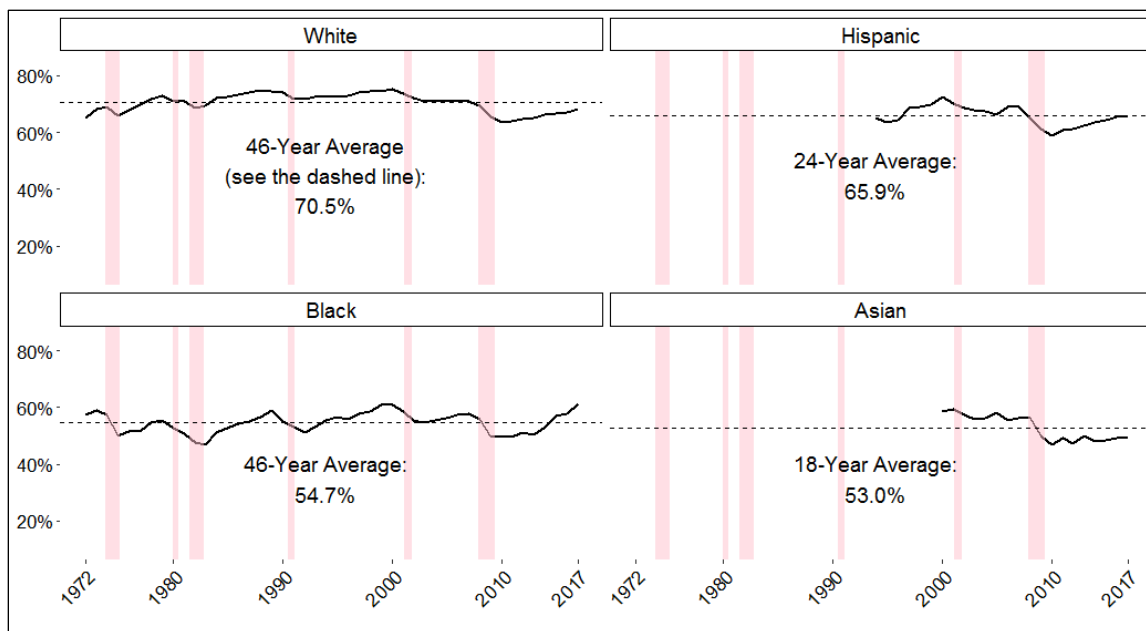
Source: Congressional Research Service (CRS), based on data from U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

Notes: Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The Bureau of Labor Statistics began recording employment data for black individuals in 1972, for Hispanic individuals in 1994, and for Asian individuals in 2000. Persons of Hispanic origin can be of any race. Shaded areas denote periods of recession.

²³ DOC, Census Bureau, *Educational Attainment in the United States: 2016*. See also, Howard N. Fullerton, Jr., “Labor Force Participation: 75 Years of Change, 1950-98 and 1998-2025,” DOL, BLS, *Monthly Labor Review*, December 1999, p. 6. In this analysis, which predated collection of data on Asian individuals via the CPS, labor force data for Asian youth were combined with individuals who were not identified as white or black. These data were derived by subtracting “black” from the “black and other” group.

²⁴ Ibid.

Figure 4. Employment-Population Ratio of Young Adults Ages 20-24 by Race and Ethnicity, 1972-2017



Source: Congressional Research Service (CRS), based on data from the U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

Notes: Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The Bureau of Labor Statistics began recording employment data for black individuals in 1972, for Hispanic individuals in 1994, and for Asian individuals in 2000. Persons of Hispanic origin can be of any race. Shaded areas denote periods of recession.

Trends Since 2000

Snapshot of Trends in 2017

Table 1 provides labor force data for individuals ages 16 and older by age groups—16 to 19 (teens), 20 to 24 (young adults), and older working-age groups—in 2017. The table shows that for these workers generally, the labor force participation rate was 62.9% and the unemployment rate was 4.4%. In addition, 60.1% of individuals in the working population overall were employed. Though not shown in the table, these figures represent improvements from 2014, which were included in the last update to this report.²⁵

Except for the oldest workers, teens are less likely than other age groups to participate in the labor force. Teens that do participate are less likely than other groups to find work (i.e., they have higher unemployment). In 2017, teens had the second lowest rate of labor force participation, after the oldest workers (ages 65 to 69); the lowest employment-population ratio; and the highest rate of unemployment. While young adults participated at a high rate in the labor force and about two out of three were working, they also had a higher rate of unemployment relative to the overall unemployment rate. As discussed in a subsequent section, these trends are consistent with factors that influence labor force outcomes. In general, firms are more likely to hire workers with more

²⁵ In 2014, the overall unemployment rate was 6.2%, the employment-population ratio was 59%, and the labor force participation rate was 62.9%. The drop in the unemployment rate appears to be due to increased employment that has outpaced growth in the labor force.

experience and availability. Young people tend to have less experience and also may be less likely to be in the labor force because of their participation in school.

Table 1. Labor Force Participation by Selected Age Groups, 2017

Age Group	Civilian Non-institutionalized Population (in thousands)	Labor Force Participation Rate	Employment-Population Ratio	Unemployment Rate
16-24	38,150	55.5%	50.3%	9.2%
16-19	16,754	35.2%	30.3%	14.0%
20-24	21,396	71.3%	66.0%	7.4%
25-54	125,697	81.7%	78.6%	3.7%
55-64	41,691	64.5%	62.5%	3.1%
65+	49,542	19.3%	18.6%	3.6%
All (16+)	255,079 ^a	62.9%	60.1%	4.4%

Source: Congressional Research Service (CRS), based on published data from the U.S. Department of Labor, Bureau of Labor Statistics (BLS), Current Population Survey (CPS).

Note: The labor force participation rate is the percentage of individuals in the population who were employed and unemployed (those who are not employed and not looking for work are out of the labor force). Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The unemployment rate is the percentage of individuals in the labor force who were jobless, looking for jobs, and available for work.

a. The total does not add to 255,080 due to rounding.

Changes from 2000 through 2017

Table 2 displays youth labor force data for young people ages 16 to 24 by sex, race, and Hispanic ethnicity in four years: 2000, 2007, 2014, and 2017. These four years are notable because they include the start of a period with long-term changes in labor market outcomes for youth (2000), a period just before the start of the December 2007 to June 2009 recession (2007), and two recent full years after the recession ended (2014 and 2017). Labor force trends for these youth were on a downward trajectory before the onset of the recession.²⁶ The table shows that youth labor force participation rates and the youth employment-population ratio in 2017 were generally lower than in 2000 and 2007; however, the youth unemployment rate was about the same, at 9%, in both 2000 and 2017, suggesting that young people gained some footing in the labor market following the recession.

The table also shows the following trends:

- Both females and males ages 16 to 24 experienced sharp decreases in their labor force participation rate and employment-population ratios from 2000 to 2017. A slightly greater share of males had withdrawn from the labor market over the period, such that labor force participation rates were somewhat comparable for both females (54.3%) and males (56.6%) by 2017. Employment-population ratios were about the same in 2017 for males and females (50%), but males experienced

²⁶ From 2000 to 2007, labor force participation among youth decreased from 66% to 59%, their employment-population ratio fell from 60% to 53%, and their unemployment rate increased from 9% to 11%.

- a greater decline since 2000. The unemployment rate ticked up from 2000 to 2017 for male youth, and declined slightly for female youth.
- Labor force participation and employment-population ratios for all racial and Hispanic ethnic groups decreased from 2000 to 2017. Black and Asian youth were less likely than white and Hispanic youth to be employed, but their relatively low employment rates had different drivers. Black youth were more likely to participate in the labor force but were less successful at finding jobs, as shown in their higher rates of unemployment. Asian youth were somewhat less likely to participate but had greater success in finding employment, as shown in their lower rates of unemployment (which were comparable to white youth).
 - The changes in youth labor force participation rates and labor force outcomes from 2014 to 2017 reflected overall improvements in the economy. There was a slight increase in labor force participation for all subgroups except white and Hispanic youth, whose participation rates remained constant. The employment-population ratio increased for all subgroups, and jumped by nearly 16% for black youth. Unemployment rates declined for all subgroups. Black youth unemployment dropped most significantly, but was still higher than other groups at 14.6%.

The first two tables in the **Appendix** display this same labor force data for youth, as breakouts for teens ages 16 to 19 (**Table A-1**) and young adults ages 20 to 24 (**Table A-2**). From 2000 to 2017, teens saw striking declines in their labor force participation (-17%) and employment-population ratios (-15%) compared to young adults (-7% and -6%, respectively). However, the unemployment rates for teens were similar in 2000 (13.1%) and 2017 (14%), and about the same for young adults (around 7%) in these two years. Still, the unemployment rates for both groups declined by about 30% since 2014.

Table 2. Labor Force Trends of Youth Ages 16-24 by Sex and Race/Ethnicity: 2000, 2007, 2014, and 2017

	2000	2007	2014	2017	Relative Change from 2000 to 2017	Relative Change from 2014 to 2017
Labor Force Participation Rate						
All	65.8%	59.4%	55.0%	55.5%	-15.7%	0.9%
Male	68.6	61.5	56.4	56.6	-17.5	0.4
Female	63.0	57.2	53.6	54.3	-13.8	1.3
White	69.7	62.0	57.1	57.1	-18.1	0.0
Black	56.1	50.2	50	52.1	-7.1	4.2
Hispanic	64.3	57.9	53.3	53.3	-17.1	0.0
Asian	50.5	45.1	40.9	41.7	-17.4	2.0
Employment-Population Ratio						
All	59.7	53.1	47.6	50.3	-15.7	5.7
Male	61.9	54.4	48.2	50.8	-17.9	5.4
Female	57.4	51.8	47.1	49.9	-13.1	5.9
White	64.5	56.3	50.7	52.5	-18.6	3.6
Black	45.7	40.5	38.5	44.5	-2.6	15.6
Hispanic	57.6	51.7	45.8	48.2	-16.3	5.2
Asian	45.9	41.9	36.0	38.3	-16.6	6.4
Unemployment Rate						
All	9.3	10.5	13.4	9.2	-1.1	-31.3
Male	9.7	11.6	14.5	10.3	6.2	-29.0
Female	8.9	9.4	12.2	8.1	-9.0	-33.6
White	7.4	9.2	11.3	8.1	9.5	-28.3
Black	18.5	19.3	23.1	14.6	-21.1	-36.8
Hispanic	10.4	10.7	14.0	9.6	-7.7	-31.4
Asian	9.1	7.2	12.0	8.2	-9.9	-31.7

Source: Congressional Research Service (CRS), based on data from U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

Notes: The labor force participation rate is the percentage of individuals in the population who were employed and unemployed (those who are not employed and not looking for work are out of the labor force). Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The unemployment rate is the percentage of individuals in the labor force who were jobless, looking for jobs, and available for work. Persons of Hispanic origin can be of any race. Relative change refers to the percentage change over the period referenced and is derived by subtracting 2017 data from 2000 or 2014 data and then dividing that number by the 2000 or 2014 data.

Factors Influencing Youth Employment

The labor force situation has generally been improving for youth since the last recession ended in June 2009. Nonetheless, their employment-population ratios have only recently recovered to pre-recession levels. Multiple variables likely affect labor market outcomes for youth. This section provides a brief summary of some of these factors. One major factor is that youth have less education and experience relative to older workers. In general, firms are more likely to hire workers with greater experience. Youth may also face increased competition for jobs that require less education. Further, a growing number of young people are enrolled in school, particularly post-secondary education, and therefore may be out of the labor force. Teens are especially likely to report that they are not in the labor force because they are attending school. As with experience, firms are more likely to hire workers with greater availability.

Labor Market Strength

Labor is a “derived demand,” meaning firms hire and retain workers to produce goods and deliver services sought by consumers. The overall health of the economy is a predictor of whether individuals seeking jobs or who have jobs, including youth, are able to secure and maintain employment. In other words, when demand is greater for goods and services, employers generally have a greater demand for workers. In the latest recession, the decline in economic activity (as measured by gross domestic product, or GDP) bottomed out in the second half of 2009. Since this time, the labor market has been recovering, albeit at a relatively slow pace.²⁷ The Congressional Budget Office (CBO) projected that increases in GDP from 2017 through 2027 are expected to remain modest, primarily because of a slow increase in the size of the labor force.²⁸

As noted, firms are generally more likely to hire workers with greater experience and availability, which puts young workers at a disadvantage. Young workers may especially face challenges in landing a job during difficult economic times. Some analyses have found that the rising premium on education could be linked to a decrease in demand for some adult workers with less education. In turn, this decrease can lead to greater competition between adults and young people looking for work.²⁹ In addition, adult immigrants with lower levels of education may contribute to this

²⁷ Congressional Budget Office, *The Slow Recovery of the Labor Market*, pp. 1-3, February 2014.

²⁸ Congressional Budget Office, *The Budget and Economic Outlook: 2017 to 2027*, June 2017.

²⁹ Teresa L. Morisi, “The early 2000s: A Period of Declining Summer Teen Employment Rates.” The research literature is somewhat mixed about the extent to which older workers displace younger workers. Some research shows that older workers are not exiting the labor force but have instead increased their participation, which may make it more difficult for workers with less experience to compete. See, for example, Neeta P. Fogg and Paul E. Harrington, “Rising Demand for Older Workers Despite the Economic Recession: Accommodation and Universal Design for the New American Workforce,” *Public Policy & Aging Report*, vol. 21, no. 2 (Winter 2011), pp. 11-13. This analysis concluded that employers substituted older workers for younger workers during the recent recession. It shows that from December 2007 to December 2010, the rise in unemployment among workers 55 and older was countered by their increased entry into the labor market. Further, younger workers ages 16 through 24 had a decline in labor force participation and experienced a greater decrease in their employment-population ratio than did older workers.

Other analyses show that the employment of older workers does not reduce employment opportunities for younger workers. This research asserts that the “lump of labor” theory—that there is a fixed amount of labor—is false, and that the labor market is flexible and can adapt to changes in economic conditions. One study shows that higher employment-population ratios among older persons “leads to better outcomes for the young in the form of reduced unemployment, increased employment, and a higher wage.” Alicia H. Munnell and April Yanyuan Wu, *Will Delayed Retirement By the Baby Boomers Lead to Higher Unemployment Among Younger Workers*, Boston College, Center for Retirement Research, October 2012. See also, *The Economist*, “Keep on Trucking: Why the old should not make way for the young,” February 11, 2012.

increased competition.³⁰ How immigration affects labor markets is a large and complex area of economic research, and economic theory produces a range of possible outcomes that depend on multiple factors.³¹

Education

Education likely also plays a role in whether youth seek and are able to find work. Youth may decide not to pursue employment and to attend school instead; or they may want to do both, but may not have as many job options without adequate levels of education.

A growing share of young people is attending school. A Federal Reserve Bank analysis shows that school attendance for 16-to-24 year olds *without a high school diploma* increased from 38% in 1998 to 60% in 2014, and that this upward trend has been driven by youth ages 16 to 19.³² **Figure 5** shows the rates of enrollment in higher education among youth ages 18 to 19 and 20 to 24. The figure indicates that these rates steadily increased over time, reaching an all-time high in 2010 (51%) for teens and in 2012 (40%) for young adults. From 1970 to 2015, the rate of teen attendance in higher education increased by about 30%. The slight decline in attendance in higher education for teens, from the 2010 peak to about 50% in 2015, may be due to improved prospects in the labor market and other factors, such as the rising cost of public higher education.³³ About 40% of young adults were enrolled in higher education in 2015, compared to about 20% in 1970.³⁴

School attendance and the intensity of educational activities likely plays a role in the downward trend in the labor market participation rate for teens and young adults.³⁵ A BLS analysis indicates that 9 out of 10 teens ages 16 to 19 cited school attendance as the main reason for not being in the workforce in 2014.³⁶ Teens attending school were also much less likely to work than in previous years. The BLS study further indicated that teens appear to face greater academic demands and pressure, which may influence their education and labor force choices. The study noted that participation in educational activities takes up a larger amount of time in a young person's day than ever before. Further, more high school students are satisfying the requirements needed for attending a four-year college, and a growing share of students are taking coursework to prepare

³⁰ Christopher L. Smith, "Polarization, Immigration, Education: What's Behind the Dramatic Decline in Youth Employment?" Federal Reserve Board, Divisions of Research and Statistics, and Monetary Affairs, October 2011; and Stephanie Aaronson et al., "Labor Force Participation: Recent Development and Future Prospects," *Brookings Papers on Economic Activity*, Fall 2014.

³¹ Such factors include the characteristics of incoming immigrant workers and how they compare to workers in a country's existing labor pool, the degree to which new immigrants and existing workers compete for jobs in the same labor markets, how employers respond to the new labor supply, macroeconomic considerations, and other factors. See National Academies of Sciences, *Engineering, and Medicine, The Economic and Fiscal Consequences of Immigration*, ed. Francine D. Blau and Christopher Mackie (Washington, DC: The National Academies Press, 2016).

³² Maria E. Canon, Marianna Kudlyak, and Yang Liu, "Youth Labor Force Participation Continues to Fall, but It Might Be for a Good Reason."

³³ Steven W. Hemelt and Dave E. Marcotte, "The Changing Landscape of Tuition and Enrollment in American Public Higher Education," *The Russell Sage Foundation Journal of the Social Sciences*, vol. 2, no. 1, pp. 42-68.

³⁴ ED, NCES, *Digest of Education Statistics: 2016*, Table 103.10, "Percentage of the Population 3 to 34 Years Old Enrolled In School, by Age Group: Selected years, 1940 through 2015," July 2016.

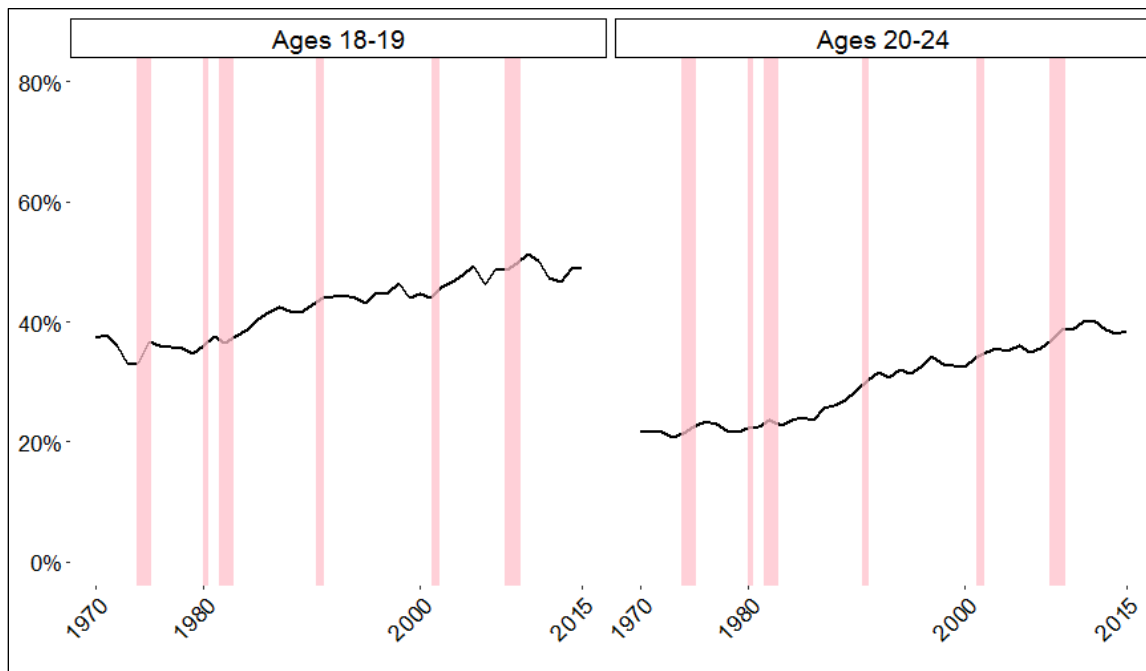
³⁵ T. Alan Lacey, Mitra Toossi, Kevin S. Dubina, and Andrea B. Gensler, "Projections Overview and Highlights, 2016–26; Maria E. Canon, Marianna Kudlyak, and Yang Liu, "Youth Labor Force Participation Continues to Fall, but It Might Be for a Good Reason."

³⁶ Teresa L. Morisi, "Teen Labor Force Participation Before and After the Great Recession and Beyond." CRS similarly found that 92% of youth ages 16 to 19 cited school as the main reason they were out of the labor force in 2016. Approximately 66% of young adults ages 20 to 24 cited the same.

them for college: about 10% of students took such coursework in 1982, compared to nearly 50% in 2000 and almost 62% in 2009.

Figure 5. Percentage of Youth Ages 18-24 Enrolled in Higher Education, 1970-2015

Shaded areas denote recessions



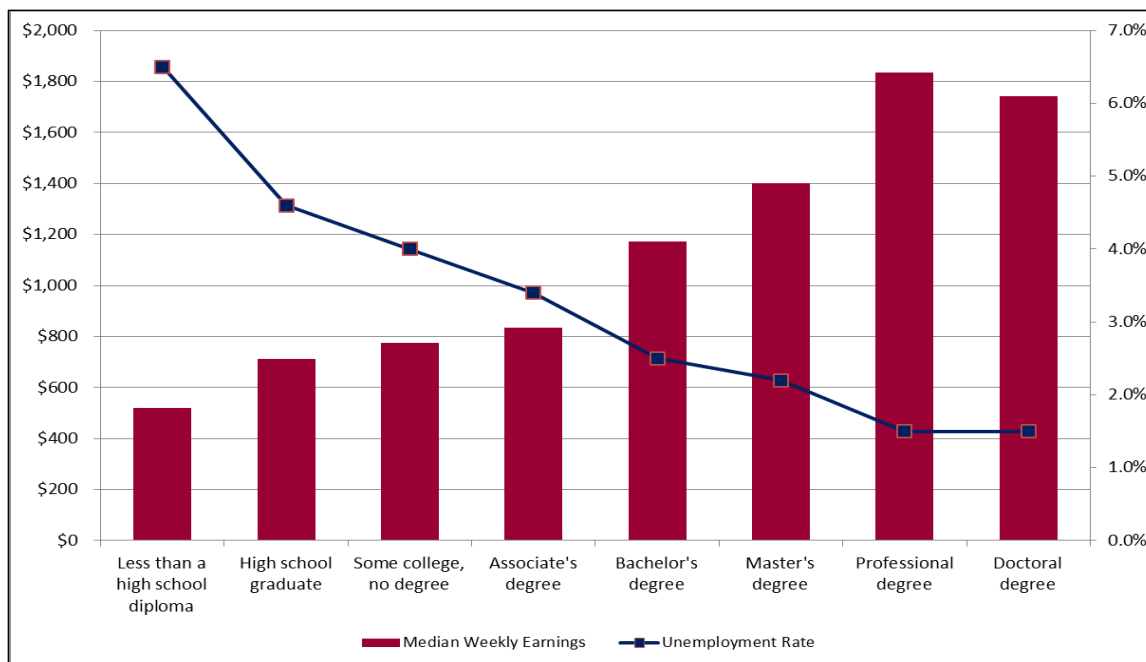
Source: U.S. Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics: 2015*, Table 103.20, "Percentage of the Population 3 to 34 Years Old Enrolled in School, By Age Group: Selected Years, 1940 through 2015," July 2016.

Notes: Higher education refers to public and private colleges, universities, and professional schools.

Increases in school attendance and related school activities suggest that young people are foregoing work to instead pursue education because of the gains they can make in the labor market at a later time—although the extent to which this occurs is uncertain because of data and survey limitations. However, a large body of research documents favorable labor force outcomes for individuals with a bachelor's degree or higher, which likely accounts for such decisionmaking.³⁷ Success in the workforce is related to education, with the payoff being lower unemployment and higher wages as educational attainment increases. **Figure 6** shows the unemployment rates and median weekly earnings for full-time workers ages 25 and older in 2017. Generally, as the level of education rises, the unemployment rate decreases and median weekly earnings increase. Among adults with a high school degree, for example, 4.6% were unemployed and earnings were \$712 per week. This is compared to an unemployment rate of 2.5% and nearly \$1,200 in weekly earnings for college graduates.

³⁷ DOL, BLS, *More Education: Lower Unemployment, Higher Earnings*, March 2018.

Figure 6. Median Weekly Earnings and Unemployment Rates by Education Level for Adults Ages 25 and Over, 2017



Source: Congressional Research Service (CRS), based on data from U.S. Department of Labor, Bureau of Labor Statistics, *More Education: Lower Unemployment, Higher Earnings*, March 2018.

Workers with higher levels of education are more likely to weather hard economic times. According to a 2010 analysis, in the past two recessions “the typical job loser was a high school-educated male in a blue collar job, such as manufacturing or construction, working in the middle of the country. In the past two recoveries, the typical job gainer was a female with a postsecondary education who lived on either coast and worked in a service occupation—particularly healthcare, education, or business services.”³⁸

A growing number of young people have obtained a college degree, which is likely attributable to the widely held belief that higher education leads to favorable returns in employment. **Table A-3** in the **Appendix** shows the share of young people ages 25 to 29 who have completed high school or college in three selected years: 2000, when the economy was expanding but youth employment was beginning a long-term decline; 2007, immediately before the start of the December 2007 to June 2009 recession; and 2016, the most recent full year after the recession for which data are available. Data are also shown for racial and ethnic groups, except Asian youth in 2000.³⁹

From 2000 to 2016, females and males made the same gains in high school completion but females were much more likely to have attained a college degree. In 2016, males and females were likely to complete high school at almost the same rate (93% for females and 91% for males); however, about 40% of females had completed at least a bachelor’s degree before age 30, compared to about 33% of males. In almost every racial and ethnic category, females were more likely than males to graduate from high school and college in both 2000 and 2016 (about the

³⁸ Anthony P. Carnevali, Nicole Smith, and Jeff Strohl, *Jobs Wanted: Projections of Jobs and Education Requirements Through 2018*, Georgetown University, Center on Education and the Workforce, June 2010.

³⁹ The absolute and relative changes for Asian youth are based on 2007 and 2016 data because 2000 data are not available.

same share of black males and black females completed high school). College completion rates generally rose over time across racial and ethnic groups, especially for Hispanic male and female young adults. Their rates of college completion nearly tripled from 2000 to 2016. Black female young adults also saw a sizable increase of nearly 50% over the period.

In short, females and some minority youth, notably Hispanic youth and black female youth, have made educational gains since 2000. This may be one reason that labor market outcomes of females have been relatively better than those of their male counterparts. Over the 2000 to 2017 period (see **Table 2**), the employment-population ratio for females declined by nearly 8% compared to 11% for males. Additionally, the unemployment rate for females decreased while the unemployment rate for males increased. Minority youth also had smaller losses in labor force participation over this same period relative to white youth.

Other Factors

The factors discussed thus far affect the labor market experiences of both youth and adults, although the effects tend to be more significant for youth. There are additional factors that may particularly influence youth outcomes in the labor market.⁴⁰

Seasonality of Work

Youth tend to have frequent movements in and out of the labor force. The educational calendar exacerbates the probability of unemployment for young labor force (re)entrants. They typically come into the labor market in May and June either searching for summer jobs after the school year has ended or seeking initial jobs upon graduating (or dropping out).⁴¹ While the regularly occurring swell in the labor supply of youth coincides with increased demand for workers in some seasonal industries, this is not the case for most firms in the economy.

Neighborhood Characteristics

Characteristics of the neighborhoods in which youth live, such as area employment and poverty rates, and proximity of those neighborhoods to jobs, can also affect their labor status. Findings in this research area have been somewhat mixed. For example, an analysis found that certain neighborhood characteristics (higher rates of property crime, child abuse, and older housing stock) in one major metropolitan area were associated with higher rates of employment and more hours worked for low-income teens who lived in public housing; however, this association varied by sex, race, and ethnicity.⁴² Other research has found an association between better communities (e.g., less concentrated poverty, less income inequality, better schools) and better outcomes for children from poor families, including higher earnings as young adults. Further, the study found that the income gap between white and black young adults can be explained in some part by the differences in where they grow up.⁴³

⁴⁰ Though not discussed here, youth may withdraw from the labor force or decline to participate altogether because of a disability; however, this has not been fully explored in the research literature.

⁴¹ See CRS Report R44746, *Background and Federal Efforts on Summer Youth Employment*.

⁴² George Galster, Anna Santiago, and Jessica Lucero, "Employment of Low-Income African American and Latino Teens: Does Neighborhood Social Mix Matter," *Housing Studies*, vol. 30, no. 2 (2015), pp. 192-227.

⁴³ Raj Chetty and Nathaniel Hendren, *The Impacts of Neighborhoods on Intergenerational Mobility II: County Level Estimates*, National Bureau of Economic Research, Working Paper 23002, December 2016, revised May 2017.

In addition, geographic isolation from fast-growing, job-rich areas (i.e., spatial mismatch) has been shown to affect youth employment outcomes. Some analyses estimated that limited proximity of jobs has a more adverse impact than access to transportation, and the proximity of jobs was found to affect the labor market involvement of youth independent of other factors.⁴⁴ Geographic proximity to schools appears to influence decisions to attend college, and therefore may also lead to disparities in later job opportunities. Studies have shown a relationship between proximity to college and college attendance even when controlling for the characteristics of individuals and families who live near colleges versus those who live farther away.⁴⁵

Effects of Youth Labor Force Trends

The effects of decreasing labor force participation and employment among youth have not been fully explored in the research literature. Some studies addressing these trends have focused on the individual outcomes for youth and not, for example, on societal or economic outcomes such as reduced GDP.⁴⁶ The studies found that on average, early youth unemployment has serious negative effects on income but not as strong of effects on future unemployment. Other studies show that youth entering the labor force during a downturn in the economy have poorer labor market outcomes in the long run. These studies are discussed briefly below.

Using data from the National Longitudinal Survey of Youth (NLSY), researchers estimated the long-term effects of youth unemployment on labor market outcomes.⁴⁷ They examined the employment status of young men in the sample when they were in their 20s and nearly 10 years later. The study found that their average level of education and training increased over time, but also that early unemployment affected both wages and future unemployment. It projected that a six-month spell of unemployment at age 22 would result in a 2% to 3% lower wage rate in their early 30s.

Other research has examined how young workers fare when entering the labor market during a weak economy. One study pooled data from the NLSY and other sources to estimate short- and medium-term effects of graduating from college during a recession at some point between 1974 and 2011. The study found that graduating during a recession reduced earnings, on average, by 10%. The loss of earnings persisted, with average earnings loss of 1.8% per year over the first 10 years. This decrease is driven in part by an inability to obtain hours of work and a loss in earning power.⁴⁸

⁴⁴ See, for example, Katherine M. O'Regan and John M. Quigley, "Where Youth Live: Economic Effects of Urban Space on Employment Prospects," *Urban Studies*, vol. 35, no. 7 (1998); and Steven Raphael, "Inter- and Intra-Ethnic Comparisons of the Central City-Suburban Youth Employment Differential," *Industrial & Labor Relationship Review*, vol. 51, no. 3 (April 1998).

⁴⁵ Abigail Wozniak, "Coming and Going: Encouraging Geographic Mobility at College Entry and Exit to Life Wages," in *Revitalizing Wage Growth*, ed. Jay Shambaugh and Ryan Nunn (Washington, DC: The Hamilton Project, 2018), pp. 77-92.

⁴⁶ At least one study, from the United Kingdom, has found evidence that spells of unemployment affect wages as well as non-labor market outcomes many years later. These other outcomes include happiness, job satisfaction, and health. The study also found that youth unemployment involved significant social and economic costs. See David N.F. Bell and David G. Blanchflower, *What Should Be Done about Rising Unemployment in the U.K?*, Institute for the Study of Labor, Discussion Paper No. 4040, February 2009.

⁴⁷ Thomas A. Mroz and Timothy H. Savage, "The Long-Term Effects of Youth Unemployment," *Journal of Human Resources*, vol. 41, no. 2 (Spring 2006), pp. 259-293.

⁴⁸ Lisa B. Kahn, "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy," *Labour Economics*, vol. 17, no. 2 (201), pp. 303-316. See also Joseph G. Altonji, Lisa B. Kahn, and Jamin D. Speer,

Other research has found that young people's experiences in the job market since 2000 have been less favorable than in prior years. An analysis by the Federal Reserve examined unemployment from 1990 through early 2013 for 22 to 27 year olds with at least a bachelor's degree. Its analysis found that securing employment tended to be more difficult for those just out of college at any point over this period. The study also found that unlike their earlier counterparts, a greater share of young people graduating from college since the early 2000s were working in low-wage jobs (e.g., bartender, food server) as opposed to other non-college jobs with higher wages (e.g., electrician, hygienist).⁴⁹

Conclusion

This report provides an overview of the youth labor force situation. It shows that teens and young adults were withdrawing from the labor force over the time periods discussed, and those in the labor force were less likely to be employed than older workers. Several factors influence these trends. For example, school enrollment means less supply of young workers. The characteristics of young workers—their relative lack of work experience, lower levels of education, and frequent movement in and out of the labor force—also play a role. Perhaps most striking is that the employment-population ratio for youth, especially for teens, has eroded over the past decade—even in years when the economy was growing. The teen employment-population ratio has been below 40% in each year since 2002. This illustrates a decline in long-term employment ratios that began in the early 2000s, likely due, in part, to youth withdrawing from the labor force to pursue educational opportunities. While the employment-population ratio trend line for 20 to 24 year olds has been higher and more stable, the employment gains for this population have dipped since the early 2000s. Nonetheless, the employment-population ratio for young adults was higher in 2017 (about 66%) than it was in 1948 (about 60%). Additional research is needed on the effects of recent long-term youth unemployment. Such research could focus on how the current generation of young workers compares in terms of employment and wages to past generations of young workers who entered the labor force during downturns in the economy.

"Cashier or Consultant? Entry Labor Market Conditions, Field of Study, and Career Success," *Journal of Labor Economics*, vol. 34, no. S1 (January 2016).

⁴⁹ Jaison R. Abel, Richard Deitz, and Yaqin Su, "Are Recent College Graduates Finding Good Jobs?," Federal Reserve Bank of New York, *Current Issues in Economics and Finance*, vol. 20, no. 1, 2014.

Appendix. Supplemental Tables and Figures

Table A-1. Labor Force Participation of Youth Ages 16-19 by Sex and Race/Ethnicity: 2000, 2007, 2014, and 2017

	2000	2007	2014	2017	Relative Change from 2000 to 2017	Relative Change from 2014 to 2017
Labor Force Participation Rate						
All	52.0%	41.3%	34.0%	35.2%	-32.3%	3.5%
Male	52.8	41.1	33.5	34.6	-34.5	3.3
Female	51.2	41.5	34.5	35.9	-29.9	4.1
White	55.5	44.4	36.2	36.8	-33.7	1.7
Black	39.4	30.3	27.2	30.0	-23.9	10.3
Hispanic	46.3	37.1	30.3	31.9	-31.1	5.3
Asian	35.8	24.5	21.0	23.5	-34.4	11.9
Employment-Population Ratio						
All	45.2	34.8	27.3	30.3	-33.0	11.0
Male	45.4	33.9	26.3	29.2	-35.7	11.0
Female	45.0	35.8	28.4	31.4	-30.2	10.6
White	49.1	38.3	29.9	32.3	-34.2	8.0
Black	29.8	21.4	18.2	22.8	-23.5	25.3
Hispanic	38.6	30.4	23.5	27.1	-29.8	15.3
Asian	30.7	21.4	18.1	20.8	-32.2	14.9
Unemployment Rate						
All	13.1	15.7	19.6	14.0	6.9	-28.6
Male	14.0	17.6	21.4	15.5	10.7	-27.6
Female	12.1	13.8	17.7	12.5	3.3	-29.4
White	11.4	13.9	17.3	12.2	7.0	-29.5
Black	24.5	29.4	33.0	24.0	-2.0	-27.3
Hispanic	16.6	18.1	22.5	15.0	-9.6	-33.3
Asian	14.2	12.7	14.0	11.5	-19.0	-17.9

Source: Congressional Research Service (CRS), based on data from U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

Notes: The labor force participation rate is the percentage of individuals in the population who were employed and unemployed (those who are not employed and not looking for work are out of the labor force). Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The unemployment rate is the percentage of individuals in the labor force who were jobless, looking for jobs, and available for work. Persons of Hispanic origin can be of any race. Relative change refers to the percentage change over the period referenced and is derived by subtracting 2017 data from 2000 or 2014 data and then dividing that number by the 2000 or 2014 data.

Table A-2. Labor Force Participation of Youth Ages 20-24 by Sex and Race/Ethnicity: 2000, 2007, 2014, and 2017

	2000	2007	2014	2017	Relative Change from 2000 to 2017	Relative Change from 2014 to 2017
Labor Force Participation Rate						
All	77.8%	74.4%	70.8%	71.3%	-8.4%	0.7%
Male	82.6	78.7	73.9	74.1	-10.3	0.3
Female	73.1	70.0	67.7	68.5	-6.3	1.2
White	79.9	76.4	73.0	73.1	-8.5	0.1
Black	71.8	68.3	66.6	69.2	-3.6	3.9
Hispanic	78.2	74.8	71.4	71.0	-9.2	-0.6
Asian	63.0	59.7	54.3	53.5	-15.1	-1.5
Employment-Population Ratio						
All	72.2	68.4	62.9	66.0	-8.6	4.9
Male	76.6	71.7	64.9	67.9	-11.4	4.6
Female	67.9	65.0	60.9	64.2	-5.4	5.4
White	75.2	71.0	66.4	68.4	-9.0	3.0
Black	61.0	57.9	53.2	61.3	0.5	15.2
Hispanic	72.4	69.0	63.5	65.6	-9.4	3.3
Asian	58.6	56.4	48.0	49.6	-15.4	3.3
Unemployment Rate						
All	7.2	8.2	11.2	7.4	2.8	-33.9
Male	7.3	8.9	12.2	8.4	15.1	-31.1
Female	7.1	7.3	10.1	6.3	-11.3	-37.6
White	5.9	7.0	9.1	6.5	10.2	-28.6
Black	15	15.2	20.2	11.5	-23.3	-43.1
Hispanic	7.5	7.8	11.1	7.6	1.3	-31.5
Asian	6.9	5.6	11.5	7.2	4.3	-37.4

Source: Congressional Research Service (CRS), based on data from U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

Notes: The labor force participation rate is the percentage of individuals in the population who were employed and unemployed (those who are not employed and not looking for work are out of the labor force). Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The unemployment rate is the percentage of individuals in the labor force who were jobless, looking for jobs, and available for work. Relative change refers to the percentage change over the period referenced and is derived by subtracting 2017 data from 2000 or 2014 data and then dividing that number by the 2000 or 2014 data.

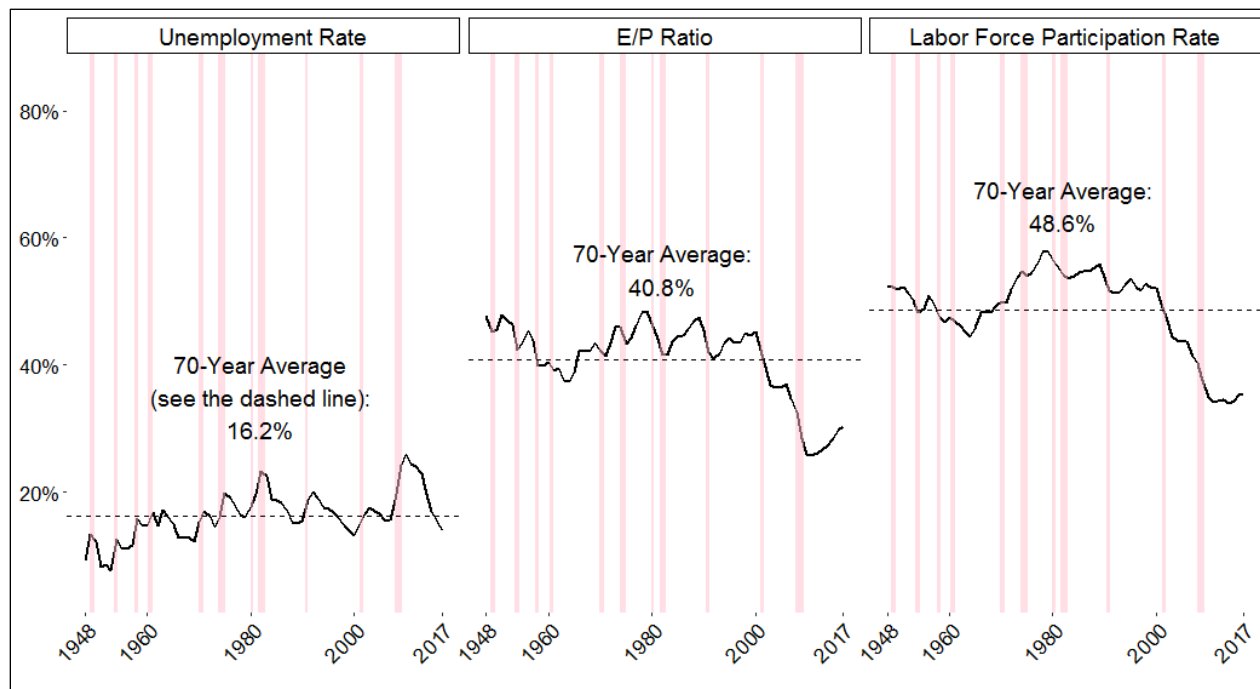
Table A-3. Percentage of Young Adults Ages 25-29 Who Completed High School or College, by Sex and Race/Ethnicity: 2000, 2007, and 2016

Educational Attainment by Year	Total		Non-Hispanic White		Black		Hispanic		Asian	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
<i>High School</i>										
2000	86.7%	89.4%	92.9%	95.2%	86.6%	85.3%	59.2%	66.4%	N/A	N/A
2007	84.9	89.1	92.7	94.2	87.0	87.8	60.5	70.7	95.8%	98.5%
2016	90.9	92.5	94.8	95.7	90.8	90.4	85.8	88.4	95.9	97.1
Relative Change from 2000 to 2016	4.8	3.5	2.1	0.5	4.9	6.0	44.9	33.1	N/A	N/A
<i>College</i>										
2000	27.9	30.1	32.3	35.8	18.1	17.0	8.3	11.0	N/A	N/A
2007	26.3	33.0	31.9	39.2	17.9	19.9	8.6	15.4	59.8	62.0
2016	32.7	39.5	39.5	46.3	20.2	25.0	24.0	30.8	60.3	68.8
Relative Change from 2000 to 2016	17.2	31.2	22.3	29.3	11.6	47.1	189.2	180.0	N/A	N/A

Source: Congressional Research Service (CRS), based on U.S. Department of Commerce, Census Bureau, *Educational Attainment in the United States: 2016*, Table A-2, "Percent of People 25 Years and Over Who Have Completed High School or College, by Race, Hispanic Origin and Sex: Selected Years: 1940 to 2016."

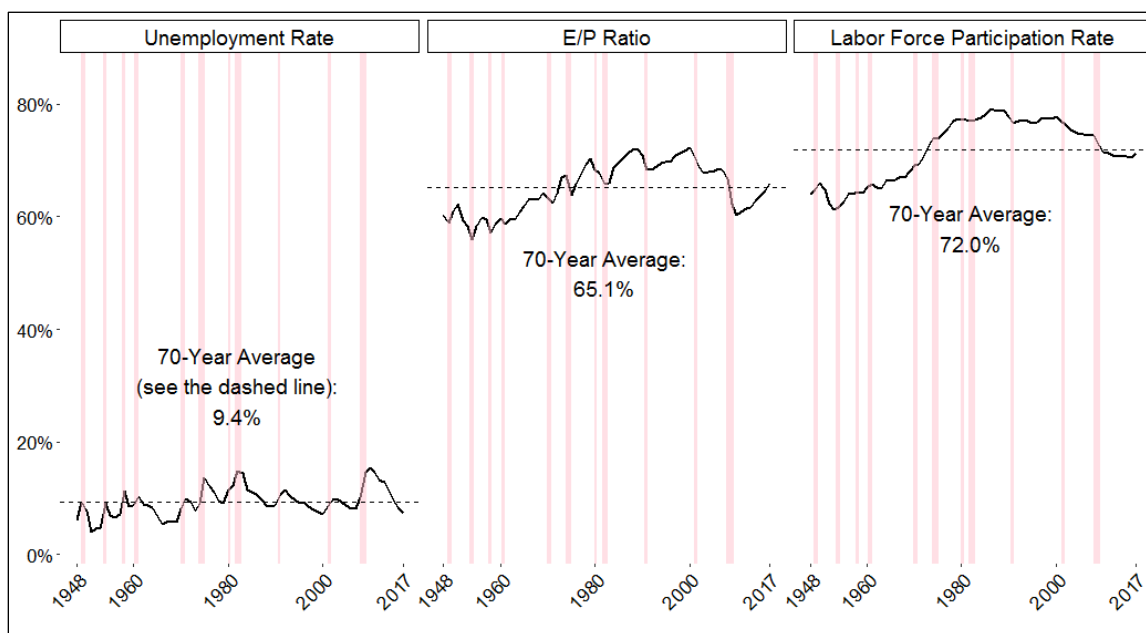
Note: N/A means not available. College attainment refers to a bachelor's degree or higher. Relative change refers to the percentage change over the period referenced and is derived by subtracting 2016 data from 2000 data and then dividing that number by the 2000 data.

Figure A-1. Labor Force Trends for Youth Ages 16-19, 1948-2017



Source: Congressional Research Service (CRS), based on data from U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey. Shaded areas denote periods of recession.

Notes: The labor force participation rate is the percentage of individuals in the population who were employed and unemployed (those who are not employed and not looking for work are out of the labor force). Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The unemployment rate is the percentage of individuals in the labor force who were jobless, looking for jobs, and available for work.

Figure A-2. Labor Force Trends for Youth Ages 20-24, 1948-2017

Source: Congressional Research Service (CRS), based on data from U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey. Shaded areas denote periods of recession.

Notes: The labor force participation rate is the percentage of individuals in the population who were employed and unemployed (those who are not employed and not looking for work are out of the labor force). Employment-population ratios represent the percentage of the non-institutionalized population who were employed. The unemployment rate is the percentage of individuals in the labor force who were jobless, looking for jobs, and available for work.

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