# Trends in the Number, Share, and Characteristics of Disconnected Youth: Implications for Future Policies and Programs 

Final Report

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## Introduction

Youth between the ages of 16 and 24 who are not enrolled in school and not employed are characterized as "disconnected." Despite historically low unemployment rates, there were 4.5 million disconnected youth ages 16-24 in the United States in 2017. This group represents youth who are having difficulty navigating a successful transition to adulthood. The number and share of youth who are disconnected are of concern to policymakers because they are at higher risk of experiencing negative outcomes such as long-term unemployment, lower educational attainment, poverty, poor health, substance abuse, criminal behavior, and incarceration.

There is no single narrative that explains disconnection-youth can become disconnected for many reasons. Some drop out of high school and do not have the skills to qualify for available jobs; others have completed high school but can't afford college and cannot find secure employment that requires only a high school diploma; some are disabled and unable to work; and others are incarcerated. Regardless of the path to disconnection, there are lasting consequences for both disconnected youth and society.

Economic cycles-along with changes in the types of jobs and their minimum education requirementshave affected the number, share, and characteristics of disconnected youth. Changes in family formation and living arrangements have also played a role. The rising cost of higher education may also contribute to disconnection.

Historically, a higher share of disadvantaged minority youth has been disconnected, compared with nonHispanic white youth. With the increasing racial and ethnic diversity of the child and youth population in the United States, this raises concerns about potential future increases in the number of disconnected youth. This report analyzes changes in the number, share, and characteristics of U.S. disconnected youth at the national level from 1970 through 2017, and develops several simulations to assess the potential future numbers of disconnected youth and their racial and ethnic composition.

## Data and Methods

Data for 1970, 1980, 1990, and 2000 were drawn from decennial census long form results. Data for 20082017 were drawn from the American Community Survey (ACS). The geographic coverage for the analysis is the United States (excluding Puerto Rico and other territories). Calculations were performed by PRB staff based on data extracts from IPUMS. ${ }^{1}$ All analysis was conducted on unrounded data. Values in the report were rounded to the nearest integer for readability. Comparability issues are presented in Appendix A and detailed simulation methods are presented in Appendix B.

The universe for this analysis is the population ages 16-29, with a focus on ages 16-24. We provide data for young adults ages 25 to 29, as context. Age ranges are noted in charts and text. The analysis includes those living in group quarters (for example those living in college dormitories, prisons, jails, and mental health facilities). Some studies exclude the group quarters population, but others purposefully include institutionalized and military youth. ${ }^{2}$ To provide the most complete picture of disconnection, we include all youth.

[^0]
## Defining Disconnection

For the purposes of this report a person is identified as disconnected if she or he is not enrolled in school and is not employed. "Not employed" includes both those who are unemployed and actively seeking work, as well as those who are not in the labor force (by choice or by circumstance). Table 1 provides an overview.

Table 1: Definition of Disconnection

|  | In School | Not in School |
| :--- | :---: | :---: |
| Employed | Not Disconnected | Not Disconnected |
| Unemployed | Not Disconnected | Disconnected |
| Not in Labor Force | Not Disconnected | Disconnected |

Definitions of employment and school attendance can be found in Appendix A.
In the report charts and text that refer to the share of youth in a particular subgroup who are disconnected, we use the term "disconnection rate" (for example, the disconnection rate among young women ages $16-24$ was 11 percent in 2017). In charts and text describing the characteristics of the disconnected population, we refer to the percent or share of disconnected youth (for example, about 47 percent of disconnected youth ages 16-24 were female in 2017).

## Trends in the Number and Share of Youth Who Are Disconnected

The number of youth ages 16-24 who were disconnected from both school and employment rose by almost 1 million between 1970 and 1980 but dropped sharply between 1980 and 1990. The number increased again after 1990 and held steady at about 5 million through 2008. Following the Great Recession of 2007-2009, the number of disconnected youth jumped back to 5.8 million in 2010-the same level as in 1970 (see Figure 1). However, by 2017, the number of disconnected youth had dropped below the low of 4.6 million previously experienced in 1990. These overall trends have been influenced by a wide variety of factors, which are described in detail in the "What is Driving These Trends" section of this report.

Figure 1: Number of Disconnected Youth Has Declined Since 1980


[^1] (ACS) extracted from IPUMS.

Due to differences over time in the total number of youth who are ages 16-24, it is important to also examine the share or percent of youth who are disconnected from both school and employment (hereafter referred to as the disconnection rate). In 1970, about one fifth (19 percent) of youth ages 16-24 were disconnected. This share dropped to 13 percent by 2008 but jumped up to 15 percent in 2010 following the Great Recession. By 2017, the disconnection rate among 16- to 24 -year-olds had declined to 11 percent-lower than its prerecession level. However, the rate for all 16- to 24-year-olds masks important differences in disconnection shares between teenagers (ages 16-19) and young adults (ages 20-24).

The disconnection rate has been higher in every decade since 1970 among youth ages 20-24 and 25-29 than among teenagers ages 16-19 (see Figure 2). In fact, the percent of 20-to 24-year-olds who were disconnected was about double the share of teenagers for most of the period between 1970 and 2017. The disconnection rate was lower for all age groups in 1990 than in 1970 but increased among those ages 20 and older between 1990 and 2000. In 2010, the percent disconnected increased sharply among both 20- to 24-year-olds and 25- to 29-year-olds after the Great Recession but dropped below prerecession levels for all age groups by 2017.

Figure 2: Disconnection Rates Vary by Age Group Over Time

| Percent of Youth Disconnected, by Age |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3532 |  |  |  |  |  |
| $\bullet$ |  |  |  |  |  |
| 30 |  |  |  |  |  |
| $25 \stackrel{\circ}{25}$ | 24 |  |  |  |  |
|  | - |  | 21 |  |  |
| 20 | - | 19 | - |  | Ages 25-29 |
|  | 21 | $\bullet$ | $\bullet$ | 18 | $18$ |
|  |  | $\stackrel{-}{17}$ | 19 |  |  |
| 15 | 12 | 17 |  | 17 | $15$ |
| $10 \stackrel{\bullet}{\bullet}$ | $\bullet$ | 10 |  |  |  |
|  |  | - | $\bullet$ |  | $\begin{aligned} & \text { Ages 16-19 } \\ & 7 \end{aligned}$ |
| $5 \longrightarrow$ 边 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |
| 1970 | 1980 | 1990 | 2000 | 2008 |  |

Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Demography of Disconnection

The effects of demographic, social, and economic risk factors on the likelihood of becoming disconnected have changed over time. This section examines disconnection rates for important risk factors including race and ethnicity, educational attainment, gender, marital status, presence of children, poverty status, and disability.

## Race and Ethnicity

In 2000, about one-fourth of Hispanic, non-Hispanic black, and non-Hispanic American Indian and Alaska Native youth were disconnected, compared with only 10 percent of non-Hispanic whites ages 16-24.

Although disconnection rates have declined for all racial and ethnic groups since 2000, persistent disadvantages remain for several minorities relative to their non-Hispanic white and Asian and Native Hawaiian or Other Pacific Islander (Asian/NHOPI) peers. ${ }^{3}$ Roughly one quarter ( 24 percent) of nonHispanic American Indian and Alaska Native youth and 18 percent non-Hispanic black youth were disconnected in 2017, compared with 9 percent of non-Hispanic white youth and 7 percent of nonHispanic Asian/NHOPI youth (see Figure 3).

Figure 3: Disconnection Rates Are Highest Among Non-Hispanic American Indian and Alaska Native, Non-Hispanic Black, and Hispanic Youth


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Educational Attainment

Disconnection rates by educational attainment have remained relatively stable over time, with persistent, wide gaps between those with the highest levels of education and those with the lowest. Young adults (ages 20-24) who have started or completed college have had disconnection rates of 8 percent or lower since 1990, while those with a high school diploma have not had rates below 23 percent, and those with less than a high school education have experienced disconnection rates of 43 percent or higher (see Figure 4, page 7).

In addition to persistently high levels of disconnection, youth with less education experience more distress during recessions. For example, during the Great Recession, disconnection rates increased by 5 percentage points or more among those with a high school education or less, compared with increases of only 1 or 2 percentage points among those who had completed at least some college.

[^2]Figure 4: Disconnection Rates Are Highest Among Those With the Least Education


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Gender

In 1970, 28 percent of women ages 16-24 were neither working nor enrolled in school (compared with just 9 percent of men), a share that fell to 11 percent in 2017 (see Figure 5). The disconnection rate for male youth has shown less change over time. While their rate in 2017 (12 percent) was higher than in 1970 (9 percent), it was similar to the levels in 1980, 1990, and 2000 (which ranged from 11 to 13 percent). However, the disconnection rate for male youth ages 16-24 rose above the rate for female youth in 2009 and has remained equal to or higher than the disconnection rate for females from 2010 through 2017.

Both men and women ages 16-24 saw their disconnection rates rise during the Great Recession, although the increase was larger for young men. By 2014, the rate for young women had dropped to its prerecession (2008) level of 13 percent, but it took until 2016 for the rate for young men to drop back to its prerecession level.

Figure 5: Disconnection Rates Converge for Men and Women Over Time


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Marital Status and Presence of Children

Disconnection rates among those ages 20-24 who had never married remained relatively stable at about 14 to 18 percent across the period from 1970 to 2017. However, the disconnection rate for married youth dropped dramatically-from just under 35 percent in 1970 to 21 percent in 2017. Among youth who were previously married, the disconnection rate declined from 35 percent in 1970 to 26 percent in 2017.

Although nearly half (48 percent) of youth living with own children were disconnected in 1970, this share had dropped to 29 percent in 2017 (see Figure 6). Despite this decline, the disconnection rate in 2017 for youth with at least one own child in the household was nearly three times higher than the rate for those without any children. The disconnection rates and trends for those without children are similar to those for never-married youth, ranging between 10 and 13 percent across the period.

Figure 6: Disconnection Rates Are Consistently Higher For Youth With Children


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Poverty Status

Although the disconnection rate for youth ages 16-24 living below poverty has declined since 1980, it remained much higher than the disconnection rate among youth at or above the poverty level throughout the period from 1970 to 2017 (see Figure 7, page 9). ${ }^{4}$ In 2017, the disconnection rate was twice as high for youth in poverty ( 20 percent) as for those at or above the poverty line ( 10 percent). Youth who are living in poverty are probably more likely to be disconnected because they lack the financial resources to go to college and because they are more likely to live in communities with limited job opportunities. In addition, being disconnected from employment lowers a person's income, which may lead to living below poverty.

[^3]Figure 7: Disconnection Rate For Youth Below Poverty Twice as High As For Youth Not in Poverty


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Disability

Disability questions-related to six disability types-have been asked in the American Community Survey since 2008. The types of disability include hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty. Respondents who report any one of the six disability types are considered to have a disability.

For nearly a decade, the disconnection rate for youth with a disability has been about three times higher than for those with no disability (see Figure 8). Both groups experienced an increase in disconnection during and immediately after the Great Recession, and both had rates below their 2008 levels by 2017.

Figure 8: Disconnection Rate is Higher for Youth With a Disability


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## What is Driving These Trends?

The overall decline in the share of youth who are disconnected reflects several key underlying social and economic factors, including changes in high school completion and college enrollment, labor force participation, unemployment, and incarceration rates, and changes in family formation patterns and living arrangements.

## High School Completion and College Enrollment

Educational attainment has risen in the U.S. since 1970, and the growing share of youth in school has contributed to a decrease in the disconnection rate over time. The share of youth completing high school has reached an historic high, while the dropout rate is at a record low. In 1970, about 15 percent of the population ages $16-24$ had dropped out of high school. By 2016, that number fell to 6 percent. ${ }^{5}$ The reduction in dropping out of high school is one of the key factors contributing to the decline in disconnection rates among 16-to 19 -year-olds.

In addition, a larger share of youth is going on to 2-year and 4-year colleges today compared with the 1970s. Among youth ages 16-24 who had completed high school earlier in the calendar year, 50 percent of males and 43 percent of females in 1973 were enrolled in college in October, compared with just over 67 percent of males and 72 percent of females in 2016. ${ }^{6}$ The share of high school graduates going on to postsecondary education rose both for 2 -year and 4 -year colleges. Increases were greater for women, overall, than for men (see Figure 9). This gender pattern in education is linked with the family formation, childbearing, and labor force participation trends discussed below.

As with increases in high school completion, rising college enrollment rates are one of the factors that have reduced the overall disconnection rate since the 1970s.

Figure 9: More High School Graduates Are Going on to College, 1973 to 2016


Source: U.S. Department of Education, Digest of Education Statistics

[^4]
## Labor Force Participation Rates

In addition to school enrollment, disconnection rates shift with changes in the labor market. As the share of people in the labor force grows, disconnection rates tend to fall. In 1970, about 58 percent of women ages 20-24 were in the labor force, compared with 73 percent in 2000 and 69 percent by 2017 (see Figure 10). As young adult female labor force participation rates rose over time, their disconnection rates fell. In contrast, the labor force participation rates for males declined, and their disconnection rates rose, surpassing disconnection rates of females beginning in 2009.

The labor force participation rates for teenagers (both male and female) began falling in 2000. This may reflect, in large part, the trends in education discussed above. ${ }^{7}$ There may also be other challenges with employment-high school students and recent high school graduates may have difficulty finding work commensurate with their education and experience. They might be competing with older, more experienced workers for part-time jobs, or they may be encouraged by others to focus on academics rather than work experience. ${ }^{8}$

Figure 10: Changing Labor Force Participation Rates


Source: U.S. Bureau of Labor Statistics.

[^5]
## Unemployment Rates

Economic cycles and trends in unemployment rates have contributed to fluctuations in the number and share of youth who are disconnected. For example, in the years following the Great Recession, unemployment rates for teenagers and young adults reached their highest level in more than four decades (see Figure 11). While unemployment rates also rose for the labor force as a whole, the all-age peak in 2010 was slightly lower than the peak in the early 1980s. As the economy began to recover, the number of disconnected youth also began to decrease.

Figure 11: Unemployment Rate for Teenagers and Young Adults Peaks in 2010
Unemployment Rate, by Age


Source: U.S. Bureau of Labor Statistics.

## Incarceration

Disconnection rates are also affected by (and contribute to) incarceration rates. Those who are incarcerated are, by definition, disconnected, and those who are disconnected are more likely than those working and/or in school to have contact with the justice system. ${ }^{9}$ The overall incarceration rate (all ages) in the U.S. rose nearly five-fold between 1972 and its peak in $2007 .{ }^{10}$

Data on incarceration are reported separately for "juveniles" and for "adults." 11 While historically comparable data are not available for the 1970s and 1980s, the reported rate of juvenile detention in 1975 was approximately 241 juveniles in residential placement per 100,000 juveniles in the population. ${ }^{12}$ Based on current data collection methods, the rate in 1997 was reported to be 356 , and fell to 152 in

[^6]2015. ${ }^{13}$ Over this period (1997 to 2015) the total number of juveniles in residential placement fell from more than 105,000 to just over 48,000 (see Figure 12).

Figure 12: Number of Juveniles in Residential Custody Has Fallen in Recent Years

*Note: The age range of juveniles in residential custody is generally ages 10-17, but in some states juveniles may be as old as age 20.

Source: Sickmund, M., Sladky, T.J., Kang, W., \& Puzzanchera, C. (2017). "Easy Access to the Census of Juveniles in Residential Placement."

Incarceration among juveniles is only part of the story. While rapidly declining incarceration rates among juveniles is promising, the rates for young adults (ages 18-24) remain stubbornly high. In 2016, there were 653 young adults (ages 20-24) in federal or state prison per 100,000 youth ages 20-24. ${ }^{14}$ This figure likely understates the rate, as it excludes youth in jail (such as those awaiting trial) and those with a sentence of less than one year. In 2010, the most recent year of complete census data available, there were more young adults incarcerated-more than 400,000 in prison or jail-than there were in 1999 (see Figure 13, page 14).

Incarceration affects young men disproportionately, relative to young women (see Figures 12 and 13). There are also dramatic disparities by race and ethnicity. In 2010, rates for non-Hispanic black juveniles were nearly five times higher than rates for non-Hispanic white juveniles, and rates for black young adults are more than seven times higher than for non-Hispanic white young adults. ${ }^{15}$

[^7]Bureau of Justice Statistics. "Imprisonment rate of sentenced state and federal prisoners per 100,000 U.S. residents, by sex, race, Hispanic origin, and age, December 31, 2016." Generated using the Corrections Statistical Analysis Tool https://www.bis.gov/index.cfm?ty=nps

Figure 13: Number of Incarcerated Young Adults Remains High


Source: Child Trends. "Young Adults in Jail or Prison." https://www.childtrends.org/indicators/young-adults-in-jail-orprison

## Family Formation Patterns and Living Arrangements

Since 1970, changes in marriage and childbearing have transformed family structure and living arrangements in the United States. Today's youth postpone marriage and childbearing to much older ages, and a growing share cohabit, sometimes with a series of partners, before marrying. While only 11 percent of marriages among women ages 19-44 were preceded by cohabitation in the late 1960s and early 1970s, this share had risen to nearly 70 percent by the beginning of the 2010s. Delays in marriage and increases in cohabitation have also led to an increase in nonmarital childbearing among young adults. In the 2009-2013 period, 43 percent of all births were nonmarital, compared with only 21 percent in the 1980-1984 period. ${ }^{16}$ These trends have occurred in conjunction with declining disconnection rates, especially among women. The trends have also resulted in marked changes in the marital status, presence of children, and living arrangements of disconnected youth, which are described in the next section of this report.

[^8]
## Changing Profile of Disconnected Youth

Due to changing relationships between some risk factors and the likelihood of becoming disconnected, the demographic, social, and economic profile of disconnected youth in 2017 differs in several important respects from their profile in 1970.

## Race and Ethnicity

Although the racial/ethnic composition of disconnected youth has not changed much since 2000, minority youth are disproportionately represented. In 2017, more than one in four disconnected youth were Hispanic and more than one in five were non-Hispanic black (see Figure 14).

Figure 14: More Than One in Four Disconnected Youth Were Hispanic in 2017


Note: Categories are mutually exclusive. Data shown for racial groups is for the non-Hispanic population.
Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Educational Attainment

Disconnected youth have higher levels of educational attainment today than they did in earlier decades (see Figure 15). Among those ages 20-24 in 2017, more than one in five ( 22 percent) had at least some college education, and less than one-fifth did not complete high school.

Figure 15: Smaller Share of Disconnected Youth Lack High School Diploma, 1990 and 2017


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.
As overall educational attainment has increased since 1990, parental educational attainment for disconnected teens (ages 16-19) still living with parents has also increased (see Figure 16). Of disconnected teens still living with parents in 2017, just over 45 percent were living with parent(s) who had at least some college education, compared with only 33 percent in 1990.

Figure 16: Among Parents of Disconnected Youth, Educational Attainment Has Increased


[^9]
## Gender

In 1970, three-fourths of disconnected youth ages 16-24 were female, but this share dropped to half in 2008. By 2017, more than half of disconnected youth were male ( 53 percent) and only 47 percent were female. Changes in marriage and childbearing patterns have played a key role in this shift in the gender composition of disconnected youth.

## Marital Status, Presence of Children, and Living Arrangements

Changes in family formation processes have dramatically transformed the marital status of disconnected youth since 1970. While only 25 percent of disconnected youth ages 20-24 were never-married in 1970, more than 8 in 10 ( 85 percent) were never-married in 2017 (see Figure 17). Similarly, nearly half (48 percent) of disconnected youth ages 16-24 had a child in their household in 1970, compared with only 16 percent by 2017.

Figure 17: Dramatic Increase in Share of Disconnected Youth Never Married


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.
Delays in marriage and childbearing have also resulted in a much higher share of disconnected youth living with one or more parents. The share of disconnected youth living with at least one parent doubled between 1970 and 2017 (see Figure 18). Part of this increase may be due to the Great Recession-the share of disconnected youth living with parent(s) increased by 14 percentage points between 2000 and 2010. Loss of parental employment and income forced some youth to drop out of college and return home. Many who returned home had difficulty finding jobs during the recession due to high unemployment rates.

Figure 18: Marked Increase in Share of Disconnected Youth Living With Parent(s)


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.
Social forces have played a role in shaping the reasons why youth are disconnected. In 1970, the majority ( 50 percent) of disconnected youth ages 20-24 were married women with children (see Figure 19). This suggests that many of the disconnected youth in 1970 were opting out of postsecondary education and the labor force to pursue caregiver roles. While caregiving is an important responsibility, these women may have missed important opportunities to develop the financial independence necessary to withstand marital dissolution or the death of a spouse. By 2017, the gender-and-family pattern had almost completely flipped-never-married men with no own children in the household accounted for the largest share (48 percent) of disconnected youth.

Figure 19: Married Mothers Were Largest Share of Disconnected Youth (Ages 20-24) in 1970, Compared with Unmarried Men in 2017


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Poverty Status and Health

Today's disconnected youth ages 16-24 are more likely to be poor than they were in 1970 ( 34 percent versus 20 percent) (see Figure 20). The poverty rate among disconnected youth reached a peak of nearly 40 percent in 2011 following the Great Recession.

Figure 20: Poverty Rate Has Risen Among Disconnected Youth


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.
In contrast, one of the positive changes in the profile of disconnected youth is the sharp increase in the share who have health insurance coverage associated with the Affordable Care Act (see Figure 21). Access to health care for youth and young adults can help to prevent the development of chronic conditions that could decrease their employment opportunities and earnings in the future.

Figure 21: Insurance Coverage Has Increased Among Disconnected Youth


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

Also related to health, almost three quarters of a million disconnected youth reported having a disability in 2017 (see Figure 22). This represents nearly 17 percent of disconnected youth in 2017, up from 14 percent in 2008. Although having a disability increases the likelihood of being disconnected, the vast majority of disconnected youth are not disabled.

Figure 22: Nearly Three Quarters of a Million Disconnected Youth Have a Disability


Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

## Simulations

According to a 2015 analysis by the Executive Office of the President of the United States, closing opportunity gaps and lowering barriers to achievement would result in economic gains including a larger labor force, increased earnings, and growth in GDP. ${ }^{17}$

To explore the implications of past trends and future policies for the potential number and characteristics of disconnected youth in the future, we developed three simulations. For counts of the population by age and race/ethnicity in the future, we use population projections from the U.S. Census Bureau. ${ }^{18}$ Those projections show the overall youth population (ages 16-24) growing by $5 \%$ between 2016 (the base year for the projections) and 2060. Despite slow overall growth, the racial/ethnic composition of the population is expected to change dramatically. The non-Hispanic Asian/NHOPI population is expected to grow by about 60 percent and the Hispanic population is expected to grow by slightly more than 50 percent over the period. At the same time, the non-Hispanic black youth population is expected to remain nearly constant, and the non-Hispanic white youth population is expected to shrink. As a result, by 2060, nonHispanic blacks and Latinos are projected to comprise 45 percent of the youth population ages 16-24, compared with 8 percent for non-Hispanic Asian/NHOPI, and 38 percent for non-Hispanic whites.

[^10]To these projected populations, we applied disconnection rates by race/ethnicity and age calculated by PRB. We assessed three different scenarios:

- If 2017 disconnection rates by age and race/ethnicity remain constant
- If recession recurs and disconnection rates return to their 2010 peak levels
- If racial/ethnic disparities in disconnection rates were eliminated, and all groups converged to the non-Hispanic white rates (of 2017)

Given the changing racial/ethnic composition of the population, the number of disconnected youth would be expected to rise slightly by 2060 if 2017 rates were to remain constant (see Figure 23). Under this scenario, higher rates in the growing Hispanic youth population are somewhat offset by lower rates in the growing Asian/NHOPI population. A return to Great Recession-era levels of disconnection could increase the number of disconnected youth by 40 percent in 2060, which has important consequences described in the "Policy and Program Implications" section below. Conversely, convergence of all racial/ethnic groups to the rates experienced by non-Hispanic whites in 2017 would result in a modest decline in the number of disconnected youth, even as the total population in this age group increases slightly.

Figure 23: Elimination of Racial/Ethnic Disparities Could Reduce Number of Disconnected Youth
Disconnected Youth Ages 16-24


Source: PRB calculations

## Policy and Program Implications

Regardless of the path to disconnection, there are lasting consequences for both individual youth and society as a whole. Work experience in the teenage years has broad personal benefits. Early jobs provide
teens with valuable skills and experience and allow them to begin building their professional network. ${ }^{19}$ According to a report by Measure of America:

> "Spells of disconnection cast a long shadow into adulthood. The limited education, social exclusion, lack of work experience, and minimal professional networks that are part and parcel of disconnection have long-term consequences that snowball through the years, affecting a range of well-being outcomes, from earnings and self-sufficiency, to physical and mental health, to relationship quality and family formation"20

Youth disconnection also has important social consequences. Having youth who are disconnected from the workforce and from education results in a smaller labor force. These conditions also lead to a greater need for public assistance and heightened risk of poor outcomes for the next generation. ${ }^{21}$ There is evidence that moving disconnected youth into the workforce or school would result in substantial increases in GDP. ${ }^{22}$ With the impending retirement of large numbers of Baby Boomers, the U.S. needs youth with the education, skills, and experience to move into the labor force to replace them. Such a workforce is essential for sustaining U.S. economic growth in the future.

As the scenarios (above) show, if the status quo persists, the number of disconnected youth will rise as the youth population increases and becomes more racially and ethnically diverse. Conversely, eliminating racial/ethnic disparities in disconnection rates could reduce the number of disconnected youth, and contribute to future economic growth and prosperity.

[^11]
## Appendix A: A Note About Comparability Over Time

Over the time period covered by this report, there were changes in the questions and field operations used to collect the data. One important point is that data from 1970, 1980, 1990, and 2000 are from the long-form of the decennial census, while data from 2008-2017 are from the American Community Survey (ACS). The ACS has a smaller sample size than the decennial census and uses different data collection procedures. Among other differences, the ACS is conducted on an ongoing basis with data collection throughout the year, in contrast to the census which has an April 1 point-in-time count. This temporal difference may affect reported employment and school attendance (e.g. for those surveyed in the months following graduation, or for those employed in seasonal work occupations).

In addition to differences in sample size and field operations, question wording has evolved over time. In writing this report, we attempt to show data only where comparisons over time are reasonable. We truncate historical series where comparisons are not advised. For example, in 2000, the U.S. Census Bureau implemented new wording for racial/ethnic responses that allowed individuals to self-identify as more than one race. The change to multiracial response options led to a break in the historical series that we think precludes comparison with racial/ethnic data prior to that point.

Question wording and structure also changed somewhat for employment and school attendance. Those changes are shown in detail below.

## Employment

Employment status (employed, unemployed, not in labor force) are not questions asked directly by the Census Bureau. Instead, a series of questions are used to construct a measure of respondent's employment status. According to IPUMS, a consortium of experts on historical comparisons in census data, the three categories "are fairly, but not perfectly, comparable across years." ${ }^{23}$ In particular, the U.S. Census Bureau urges caution when comparing data from 2008 with that of prior years. ${ }^{24}$

Table 2: Employment Question Text

| 1970 | Question Text <br> Questions 29 through 41 are for all persons born before 1956 including housewives, <br> students, or disabled persons as well as part-time or full-time workers <br> Did this person work at any time last week? <br> Yes - Fill this circle if this person did full- or part-time work. (Count part-time work <br> such as a Saturday job, delivering papers, or helping without pay in a family business <br> or farm; and active duty in the Armed Forces) <br> No - Fill this circle if this person did not work, or did only own housework, school <br> work, or volunteer work. |
| :--- | :--- |
| Note: In 1970 this question was followed with an hours-worked question that specified "he," <br> and may have resulted in under-reporting of work by women. (If yes, how many hours did he <br> work last week?) |  |

[^12]| 1980 | Did this person work at any time last week? <br> Yes - Fill this circle if this person did full- or part-time work. (Count part-time work <br> such as delivering papers, or helping without pay in a family business or farm. Also <br> count active duty in the Armed Forces.) <br> No - Fill this circle if this person did not work, or did only own housework, school <br> work, or volunteer work. |
| :--- | :--- |
| 1990 | No change from 1980. |

Source: U.S. Census Bureau, History and Questionnaire Archive.

## School Attendance

For all years in this analysis, any schooling leading toward a high school diploma or college degree was considered eligible attendance. Beginning in 1980, other types of schooling counted only if a regular elementary school, high school, or college would have accepted it for credit. Home schooling was explicitly included starting in the 2008 ACS. ${ }^{25}$

In addition to the temporal shift noted above, the reference period for school attendance grew from "any time since February 1" (for April 1 decennial counts), a two-month window, to "any time in the last 3 months" for the ACS.

Table 3: School Question Text

|  | Question Text |
| :--- | :--- |
| 1970 | At any time since February 1, 1970, has this person attended regular school or college at any <br> time? <br> Include only nursery school, kindergarten, and schooling which leads to an elementary <br> school certificate, high school diploma or a college degree. <br> Instructions: Do not count trade or business school, company training, or tutoring unless you <br> think he could get credit for it at a regular school or college. |
| 1980 | Since February 1, 1980, has this person attended regular school or college at any time? <br> Count nursery school, kindergarten, elementary school, and schooling which leads to a high <br> school diploma or college degree. <br> Instructions: Do not count enrollment in a trade or business school, company training, or <br> tutoring unless the course would be accepted for credit at a regular elementary school, high <br> school, or college. A public school is any school or college which is controlled and supported <br> primarily by a local, county, State, or Federal Government. |

[^13]| 1990 | At any time since February 1, 1990, has this person attended regular school or college? <br> Include only nursery school, kindergarten, elementary school, and schooling which leads to a <br> high school diploma or a college degree. <br> Instructions: Do not include enrollment in a trade or business school, company training, or <br> tutoring unless the course would be accepted for credit at a regular elementary school, high <br> school, or college. A public school is any school or college that is controlled and supported <br> primarily by a local, county, State, or Federal Government. Schools are private if supported <br> and controlled primarily by religious organizations or other private groups. |
| :--- | :--- |
| 2000 | At any time since February 1, 2000, has this person attended regular school or college? <br> Include only nursery school or preschool, kindergarten, elementary school, and schooling <br> which leads to a high school diploma or a college degree. <br> Instructions: N/A |
| $2008-$ | At any time IN THE LAST 3 MONTHS, has this person attended school or college? <br> Include only nursery or preschool, kindergarten, elementary school, home school, and <br> schooling which leads to a high school diploma or a college degree. <br> Instructions: A public school is any school or college that is controlled and supported <br> primarily by a local, county, state, or federal government. Schools are private if supported <br> and controlled primarily by religious organizations or other private groups. Home school <br> applies to parental guided education outside of a public or private school for grades 1-12. |

[^14]
## Appendix B: Methodology for Simulations

For counts of the population by age and race/ethnicity in the future, we used population projections from the U.S. Census Bureau, vintage 2017 (middle series). ${ }^{26}$ From those data, we aggregated the population by age group (ages 16-19 and 20-24) and racial/ethnic group. Racial/ethnic categories included the following mutually-exclusive groups:

- Non-Hispanic White
- Non-Hispanic Black
- Non-Hispanic American Indian and Alaska Native
- Non-Hispanic Asian \& Native Hawaiian and Other Pacific Islander
- Non-Hispanic Two or More Races
- Hispanic

To these projected populations, we applied disconnection rates by race/ethnicity and age calculated by PRB. ${ }^{27}$ We assessed three different scenarios:

- If 2017 disconnection rates by age and race/ethnicity remain constant through 2060
- If recession recurs and disconnection rates return to their 2010 peak levels by 2030, and remain constant from 2031 through 2060
- If racial/ethnic disparities in disconnection rates were eliminated, and all groups converged by 2030 to the non-Hispanic white rates of 2017 and remain constant from 2031 through 2060.

The Constant Rates scenario applies the 2017 disconnection rates by age group and by race/ethnicity to projected population counts by age and race/ethnicity for each year from 2017 through 2060. The Recession scenario assumes that all racial/ethnic groups return, by 2030, to the disconnection rates they experienced in 2010, and those rates are constant from 2031 through 2060. The Convergence scenario assumes that all racial/ethnic groups converge to the 2017 disconnection rates of non-Hispanic whites by 2030, and those rates remain constant from 2031 through 2060.

[^15]
[^0]:    ${ }^{1}$ Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas, and Matthew Sobek. IPUMS USA: Version 8.0 [dataset]. Minneapolis, MN: IPUMS, 2018. https://doi.org/10.18128/D010.V8.0.
    ${ }^{2}$ For an example report in which institutionalized populations are excluded from analysis, see Adrienne L. Fernandes-Alcantara. Congressional Research Service. "Disconnected Youth: A Look at 16 to 24 Year Olds Who Are Not Working or In School." October 2015. Accessed https://fas.org/sgp/crs/misc/R40535.pdf May 29, 2018.
    For an example report in which institutionalized populations are included among the disconnected, see Annie E. Casey Foundation. 2012. "Youth and Work: Restoring Teen and Young Adult Connections to Opportunity." Accessed http://www.aecf.org/m/resourcedoc/AECF-YouthAndWork-2012-Full.pdf May 29, 2018.

[^1]:    Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and American Community Survey

[^2]:    ${ }^{3}$ Throughout this report, the non-Hispanic Asian and Native Hawaiian and Other Pacific Islander population will be referred to as Asian/NHOPI.

[^3]:    ${ }^{4}$ The federal poverty threshold was $\$ 24,858$ for a family of two adults and two children in 2017.

[^4]:    ${ }^{5}$ The dropout rate refers to the "status dropout rate," or percentage of 16 - to 24 -year-olds who are not enrolled in school and have not earned a high school credential (either a diploma or an equivalency credential such as a GED certificate).
    National Center for Education Statistics. "Digest of Education Statistics: 2017." Accessed https://nces.ed.gov/programs/digest/d17/tables/dt17 219.70.asp?current=yes December 18, 2018.
    ${ }^{6}$ National Center for Education Statistics. "Digest of Education Statistics: 2017." Accessed https://nces.ed.gov/programs/digest/d17/tables/dt17 302.10.asp?current=yes December 18, 2018.

[^5]:    7 Derek Thompson. The Atlantic. June 2017. "Teenagers Have Stopped Getting Summer Jobs—Why?" Accessed https://www.theatlantic.com/business/archive/2017/06/disappearance-of-the-summer-iob/529824/ June 19, 2018.
    ${ }^{8}$ Teresa L. Morisi. U.S. Bureau of Labor Statistics. 2017 "Teen labor force participation before and after the Great Recession and beyond." Accessed https://www.bls.gov/opub/mlr/2017/article/teen-labor-force-participation-before-and-after-the-great-recession.htm June 19, 2018.

[^6]:    ${ }^{9}$ Clive R. Belfield, Henry M. Levin, and Rachel Rosen. 2012. "The Economic Value of Opportunity Youth." Accessed https://eric.ed.gov/?id=ED528650 May 29, 2018.
    ${ }^{10}$ National Research Council (NRC), "Rising Incarceration Rates," in The Growth of Incarceration in the United States: Exploring Causes and Consequences, ed. Jeremy Travis, Bruce Western, and Steve Redburn (Washington, DC: The National Academies Press, 2014). Accessed https://www.nap.edu/read/18613/chapter/4 June 19, 2018.
    ${ }^{11}$ The upper age limit for "juvenile" varies by state, but generally is ages 10-17, with a maximum age of 20 .
    12 U.S. Department of Justice. "Children in Custody, 1975-85: Census of Public and Private Juvenile Detention, Correctional, and Shelter Facilities, 1975,1977,1979,1983, and 1985." Accessed https://www.ncjrs.gov/pdffiles1/bjs/114065.pdf June 19, 2018.

[^7]:    ${ }^{13}$ Kids Count Data Center. "Youth residing in juvenile detention, correctional and/or residential facilities." Accessed https://datacenter.kidscount.org/data/tables/42-youth-residing-in-juvenile-detention-and-correctionalfacilities\#detailed/1/any/false/573,36,867,133,18,17,14,12,10,8/any/319,17599 June 19, 2018.
    ${ }^{14}$ Bureau of Justice Statistics. "Imprisonment rate of sentenced state and federal prisoners per 100,000 U.S. residents, by sex, race, Hispanic origin, and age, December 31, 2016." Generated using the Corrections Statistical Analysis Tool https://www.bjs.gov/index.cfm?ty=nps
    ${ }^{15}$ Annie E. Casey Foundation. 2013. "Reducing Youth Incarceration in the United States." Accessed http://www.aecf.org/m/resourcedoc/AECF-DataSnapshotYouthIncarceration-2013.pdf\#page=2 January 9, 2019.

[^8]:    ${ }^{16}$ For a detailed overview of changes in family formation patterns since the 1970s, see Alicia G. VanOrman and Paola Scommegna, "Understanding the Dynamics of Family Change in the United States," Population Bulletin 71, no. 1 (2016). This report can be accessed online at: https://www.prb.org/wp-content/uploads/2016/08/prb-population-bulletin-71.1-complex-families-2016.pdf.

[^9]:    Source: Analysis by PRB of data from U.S. Census Bureau Decennial Census and ACS extracted from IPUMS.

[^10]:    ${ }^{17}$ Executive Office of the President of the United States. "Economic Costs of Youth Disadvantage and High-Return Opportunities for Chang." July 2015. Accessed
    https://obamawhitehouse.archives.gov/sites/default/files/docs/mbk report final update1.pdf May 29, 2018.
    ${ }^{18}$ U.S. Census Bureau. Projections for the United States: 2017 to 2060. Projected Population by Single Year of Age, Sex, Race, and Hispanic Origin for the United States: 2016 to 2060. Accessed https://www.census.gov/data/datasets/2017/demo/popproj/2017-popproj.html December 17, 2018.

[^11]:    ${ }^{19}$ Paul Harrington and Ishwar Khatiwada. Federal Reserve Bank of Boston. March 2016. "U.S. Teens Want to Work." Accessed https://www.bostonfed.org/publications/communities-and-banking/2016/spring/us-teens-want-to-work.aspx May 29, 2018.
    ${ }^{20}$ Sarah Burd-Sharps, Kristen Lewis. Measure of America. "More Than a Million Reasons for Hope: Youth Disconnection in America Today." March 2017. Accessed http://www.measureofamerica.org/youth-disconnection2018/ May 29, 2018.
    ${ }^{21}$ Sarah Burd-Sharps, Kristen Lewis. Measure of America. "More Than a Million Reasons for Hope: Youth Disconnection in America Today." March 2017. Accessed http://www.measureofamerica.org/youth-disconnection2018/ May 29, 2018.
    ${ }^{22}$ Executive Office of the President of the United States. "Economic Costs of Youth Disadvantage and High-Return Opportunities for Change." July 2015. Accessed
    https://obamawhitehouse.archives.gov/sites/default/files/docs/mbk report final update1.pdf May 29, 2018.

[^12]:    ${ }^{23}$ Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Integrated Public Use Microdata Series: Version 7.0 [dataset]. Minneapolis: University of Minnesota, 2017. https://doi.org/10.18128/D010.V7.0.
    ${ }^{24}$ U.S. Census Bureau, "Changes to the American Community Survey between 2007 and 2008 and the Effect on the Estimates of Employment and Unemployment", accessed https://www.census.gov/hhes/www/laborfor/researchnote092209.html May 23, 2018.

[^13]:    ${ }^{25}$ Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Integrated Public Use Microdata Series: Version 7.0 [dataset]. Minneapolis: University of Minnesota, 2017.
    https://doi.org/10.18128/D010.V7.0.

[^14]:    Source: U.S. Census Bureau, History and Questionnaire Archive.

[^15]:    ${ }^{26}$ U.S. Census Bureau. Projections for the United States: 2017 to 2060. Projected Population by Single Year of Age, Sex, Race, and Hispanic Origin for the United States: 2016 to 2060. Accessed https://www.census.gov/data/datasets/2017/demo/popproj/2017-popproj.html December 17, 2018.
    ${ }^{27}$ PRB did not vary rates by marital status, presence of children, poverty, or disability status because those characteristics are not available in the Census Bureau population projection data. PRB also did not apply rates by gender because the gender composition of the population in the projections is relatively constant over the projection period.

