

The Plummeting Labor Market Fortunes of Teens and Young Adults

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Summary

Employment prospects for teens and young adults in the nation's 100 largest metropolitan areas plummeted between 2000 and 2011. On a number of measures—employment rates, labor force underutilization, unemployment, and year-round joblessness—teens and young adults fared poorly, and sometimes disastrously. While labor market problems affected all young people, some groups had better outcomes than others: Non-Hispanic whites, those from higher income households, those with work experience, and those with higher levels of education were more successful in the labor market. In particular, education and previous work experience were most strongly associated with employment.

Policy and program efforts to reduce youth joblessness and labor force underutilization should focus on the following priorities: incorporating more work-based learning (such as apprenticeships, co-ops, and internships) into education and training; creating tighter linkages between secondary and post-secondary education; ensuring that training meets regional labor market needs; expanding the Earned Income Tax Credit; and facilitating the transition of young people into the labor market through enhanced career counseling, mentoring, occupational and work-readiness skills development, and the creation of short-term subsidized jobs.

Introduction

The first decade of the 21st century, including the Great Recession and its aftermath, was disastrous for many American workers. Anemic economic growth between 2000 and 2010 has led a number of economists and social scientists to refer to the period as the “Lost Decade.”² For the first time following World War II, the U.S. economy did not have more payroll jobs at the end of a decade than at the beginning. Teens aged 16-19 and young adults aged 20-24 have been among the most adversely affected by the constricting labor market.

Finding and keeping a job is a key step in a young person's transition to adulthood and economic self-sufficiency. Employment obviously allows young people to cover expenses for themselves and their families, but it also provides valuable opportunities for teens and young adults to apply academic skills and learn occupation-specific and broader employment skills such as teamwork, time management, and problem-solving. Additionally, it provides work experience and contacts to help in future job searches.

Among teens, employment should be considered complementary to education, since the first priority is to attend school full-time and complete high school. However, evidence suggests that

“These findings point to a clear need to couple labor market demand more tightly with education and training.”

teen employment is associated with improved employment and earnings outcomes later in life, although there is some debate about how much work for high school students is appropriate. After high school, there are a variety of educational pathways on the way to the labor market, which can involve post-secondary education (certificates and two- or four-year degrees), apprenticeships, or other occupational skills training programs. Although attaining a post-secondary credential has become increasingly critical to obtaining good jobs with family-supporting wages and opportunities for advancement, young people can (and do) enter the labor market directly after completing high school. Those who leave high school without a diploma also enter the labor market, but they face fairly bleak employment prospects without future education and training.

Methodology

Given differing expectations and experiences regarding education and employment, this analysis separately examines teens aged 16-19 and young adults aged 20-24, and uses multiple measures of labor force and employment activities among young people in the nation's 100 largest metropolitan areas. The unemployment rate is one of the most commonly used employment-related metrics, but this figure doesn't provide a complete picture on its own, as it is a binary measure that only captures individuals actively looking for work. Accordingly, the study presents additional measures to allow for a more finely-grained analysis.

The measures used in this analysis are derived from three national surveys of the U.S. population:

- ▶ Monthly and annual data from the monthly Current Population Surveys (CPS) from selected years 2000-2011. The CPS is a monthly household survey conducted by the U.S. Census Bureau for the U.S. Bureau of Labor Statistics. It is used to calculate the civilian labor force, the number of employed and unemployed persons, employment/population ratios, unemployment rates, labor force reserve or hidden unemployment, underemployment, and other labor force underutilization measures.
- ▶ The March CPS supplements, 2000-2011. These data are used to calculate the incidence of any paid employment during the prior year and the length of employment in weeks. The survey also provides other economic data on the personal and family backgrounds of respondents, including their family income and poverty status.
- ▶ The American Community Surveys for selected years from 2006-2011. The ACS data are used to provide demographic variables used in the regression analyses to predict the probability of an individual's employment status and to compare and analyze employment/population ratios across metro areas.

Key Terms

Employment rate: The share of individuals in the non-institutionalized population that is employed. A high employment rate shows that people can find jobs. (This is also called the employment to population ratio.)

Unemployment rate: The percentage of individuals in the civilian labor force not working, actively looking for employment, and available for work.

Labor force underutilization: A broader measure than the unemployment rate to show employment problems. It has three components:

- ▶ The officially unemployed: those who don't have a job and are actively looking for one;
- ▶ The hidden unemployed: those who desire employment but are not actively looking;
- ▶ The underemployed: those who are working part-time but desire and are available for full-time work.

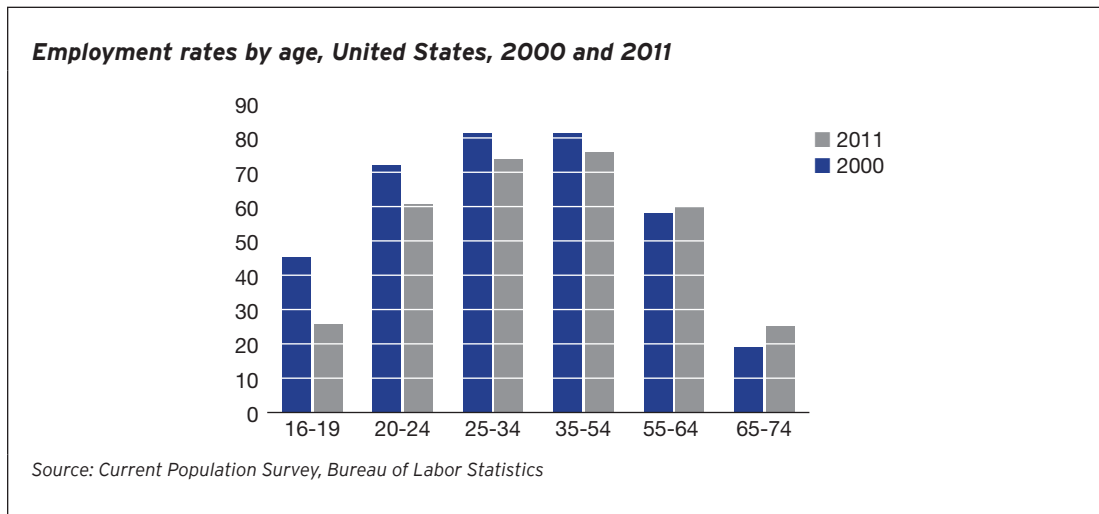
The 100 largest metropolitan areas referred to in this report are based on their population size in 2010-2011. In the report, we aggregate the largest 100 metropolitan areas to produce measures of labor market outcomes for teens and young adults, in both 2000 and 2011. The definitions of metropolitan areas changed during that time period, which caused the boundaries of many of the top 100 metropolitan areas to change by adding or subtracting jurisdictions. Prior to May 2004, the geographies of metro areas were based on Census 1990 metropolitan definitions; after May 2004, metropolitan areas were based on Census 2000 boundaries.

We used the CPS to compare labor market outcomes in 2000 and 2011, and used the CPS' current (post-2004) definition of metropolitan areas for 2011 and the pre-2004 definitions for 2000. To test the effect of these boundary changes on the findings for the largest 100 metropolitan areas combined, we compared employment rates using CPS data for both 2000 and 2011 for several geographies: the entire United States, all metropolitan areas combined, and the 100 largest metropolitan areas combined. Employment rates in all geographies were nearly the same in each time period, leading us to conclude that the boundary changes had no substantive impact on the findings for the combined 100 largest metropolitan areas.

Findings

1. Employment rates showed a 'Great Age Twist' between 2000 and 2011.

Individuals under age 54 were less likely to be working in 2011 than in 2000, with the sharpest declines among teens and young adults, while those 55 and over were more likely to be working in 2011.



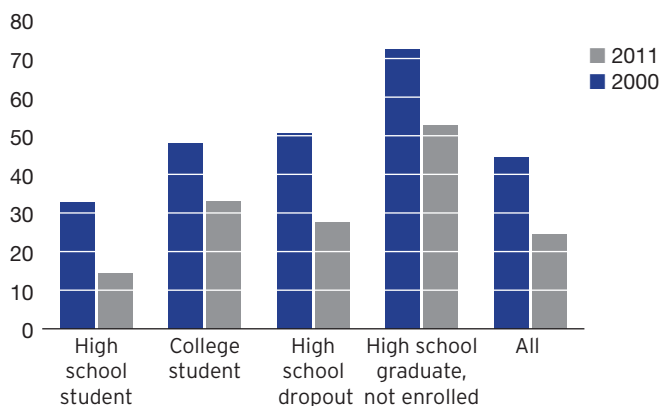
Teens aged 16-19 experienced the most dramatic decline in employment rates, which plummeted from 45 percent in 2000 to 26 percent in 2011—the lowest rate for teens in the post-World War II era. Employment rates also fell sharply among young adults aged 20-24, from 72 percent in 2000 to 61 percent in 2011. Rates declined more modestly among prime-age workers: from 82 to 74 percent among those aged 25-34 and from 81 to 76 percent among those aged 35-54. By contrast, in a historically unprecedented age twist, the employment rates of older workers increased over the 2000-2011 time period. Rates among those aged 55-64 increased from 58 to 60 percent, and increased more substantially among those aged 65-74, from 19 to 25 percent. A variety of factors contributed to older workers' higher employment rates: delayed retirements due to lost savings from the 2008 financial crisis and ensuing recession; greater levels of education and experience compared to younger workers, which made them more competitive job candidates in some cases; and higher average weekly earnings over time that created a higher opportunity cost of dropping out of the labor force.

TEENS AGED 16-19

2. Employment rates among teens declined dramatically, from 44 percent in 2000 to 24 percent in 2011, but showed variation by educational attainment and household income.

a. Only about half of high school graduates not enrolled in post-secondary education and less than 30 percent of high school dropouts worked in a given month in 2011.

Employment rates of teens aged 16-19 in the nation's 100 largest metropolitan areas by educational attainment/school enrollment, 2000 and 2011



Source: Current Population Survey, Bureau of Labor Statistics

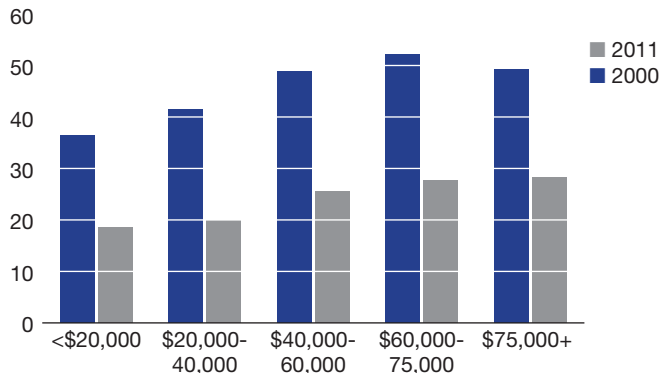
Among all teens, employment rates declined by double digits, from 44 percent in 2000 to 24 percent in 2011. High school graduates not enrolled in post-secondary education had the highest employment rates in both 2000 (72 percent) and 2011 (53 percent), which is not surprising given that they are more likely to need or want to support themselves than high school or college students, and are more attractive job candidates than high school dropouts. However, the fact that only about half of this population—one that presumably needs to support itself through employment—was working in a given month in 2011 raises serious concerns. In fact, the October employment rates of new U.S. high school graduates not enrolling in college in the fall following graduation have reached historical lows in recent years.³ Those who dropped out of high school exhibited very low employment rates: 51 percent in 2000 and 28 percent in 2011.

On its own, having no more than a high school diploma is a major employment and earnings disadvantage; the combination of being a high school dropout or having no more than a high school diploma and being out of work can be crippling, both for current and future economic self-sufficiency.⁴

High school and college students also experienced large drops in employment rates, from 33 to 14 percent and 48 to 33 percent, respectively. While some high school and college students are less likely to need employment to support themselves or their families than their peers not enrolled in school, they may still need income to cover expenses. (And yet, as noted below, low-income high school students fared the worst in obtaining employment.) Additionally, reduced work experience as a high school student, especially for those not enrolling in four-year colleges upon graduation, is often associated with lower employment rates and earnings in later years.⁵

b. Teen employment rates are lower in households with lower incomes.

Employment rates of teens aged 16-19 in the nation's 100 largest metropolitan areas by household income, 2000 and 2011



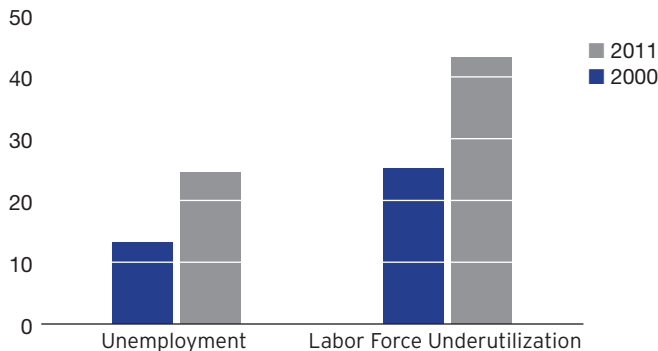
Source: Current Population Survey, Bureau of Labor Statistics

In addition to educational attainment, another sorting factor regarding employment is household income. Teens in households with the lowest incomes had the lowest employment rates. The employment rate for teens in households with income below \$40,000 was less than 20 percent, compared to the 26-28 percent range for teens in higher-income households.

3. 'Labor force underutilization' reveals a bigger problem among teens than reflected in the official unemployment rate, and varies by race/ethnicity and educational attainment.

a. The teen labor force underutilization and unemployment rates both increased from 2000 to 2011, although the underutilization rate remained considerably higher than the unemployment rate.

Unemployment and labor force underutilization rates among teens aged 16-19 in the nation's 100 largest metropolitan areas, 2000 and 2011

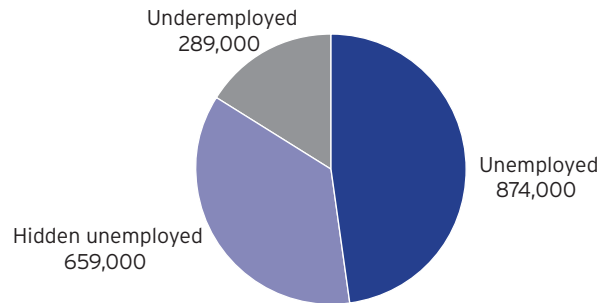


Source: Current Population Survey, Bureau of Labor Statistics

The unemployment rate among all teens in the nation's 100 largest metropolitan areas nearly doubled, from 13 to 25 percent, and the underutilization rate rose from 25 to 43 percent.

b. The underemployed and hidden unemployed made up more than half of the teen underutilized labor force in 2011.

Composition of the underutilized labor force among teens in the nation's 100 largest metropolitan areas, 2011

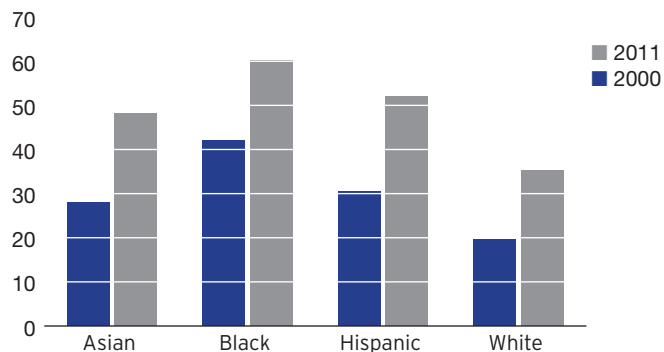


Source: Current Population Survey, Bureau of Labor Statistics

In 2011, the teen underutilized labor force in the nation's top 100 metropolitan areas totaled 1.8 million. The unemployed accounted for almost half of the teen underutilized labor force (48 percent). The hidden unemployed (those who desire employment but are not actively looking) accounted for 36 percent, and the underemployed (those who are working part-time but desire and are available for full-time work) accounted for 16 percent.

c. Labor force underutilization was highest among blacks and lowest among whites in both 2000 and 2011.

Labor force underutilization by teens aged 16-19, largest 100 metropolitan areas, by race/ethnicity, 2000 and 2011

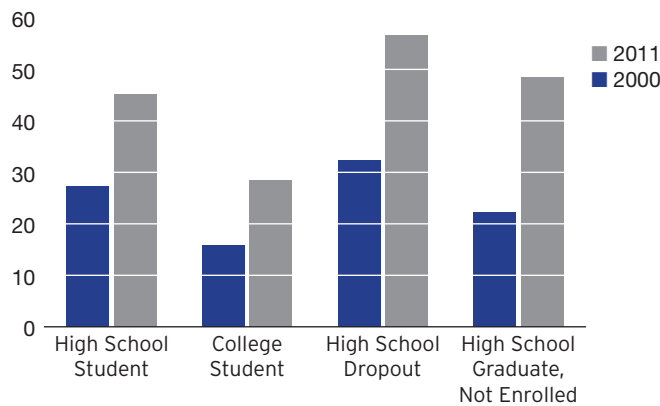


Source: Current Population Survey, Bureau of Labor Statistics

Labor force underutilization increased among all races/ethnicities from 2000 to 2011, but rates in both time periods varied by race. In 2011, blacks had the highest rate of underutilization (60 percent), followed by Hispanics (52 percent), Asians (48 percent), and whites (35 percent).

d. Teen labor force underutilization rates were highest among high school dropouts and lowest among college students in both time periods.

Labor force underutilization by teens aged 16-19, largest 100 metropolitan areas, by educational attainment/school enrollment status, 2000 and 2011



Source: Current Population Survey, Bureau of Labor Statistics

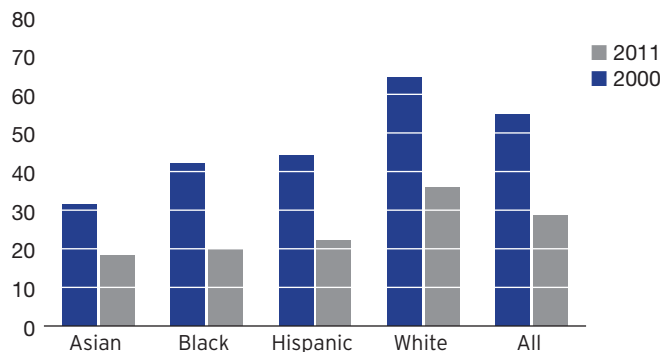
Labor force underutilization increased among all teens regardless of educational attainment or enrollment status, but as with race/ethnicity, rates varied among subgroups in both time periods. In 2011, underutilization was highest among high school dropouts (57 percent), followed by high school graduates not enrolled in post-secondary education (48 percent), high school students (45 percent), and college students (28 percent).

4. The share of teens with any paid employment throughout the year dropped from 55 percent in 2000 to 28 percent in 2011.

Another approach to assessing employment trends is to assess the changing incidence and intensity of employment during a year: the extent to which teens work at any point during the prior year and the number of weeks they were employed. As shown below, employment declines among teens were primarily due to a massive increase in year-round joblessness rather than to a decline in weeks worked. In contrast to the substantial drop in the number with any paid employment, the mean weeks of employment among those teens who did work declined fairly modestly: from 31 weeks in 2000 to 29 weeks in 2011.

a. Work experience varied by race: Although whites had the largest percentage point drop from 2000 to 2011 (29 points), they still had the highest rates in both time periods.

Share of teens aged 16-19 in the nation's 100 largest metropolitan areas with paid employment experience during the year, by race and ethnicity, 2000 and 2011

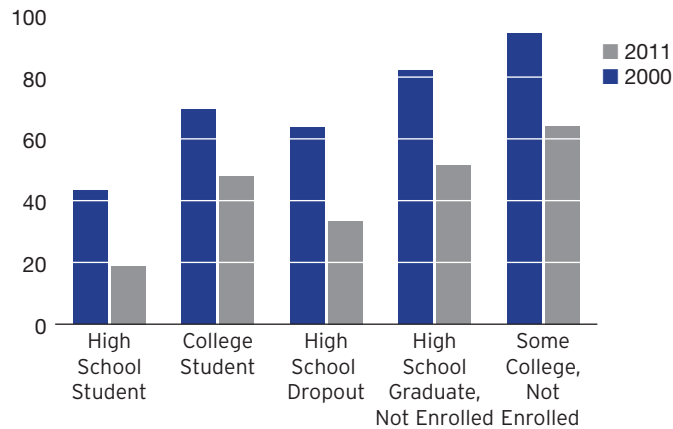


Source: Current Population Survey, Bureau of Labor Statistics

The share of teens with any paid employment in the previous year fell among all races and ethnicities. In 2011, about 20 percent of Asians, blacks, and Hispanics worked at some point during the previous year, compared to 35 percent of whites. In other words, about 80 percent of Asians, blacks, and Hispanics were jobless year-round, as were 65 percent of whites.

b. Teens with higher levels of education had higher rates of paid employment in both time periods.

Share of teens aged 16-19 in the nation's 100 largest metropolitan areas with paid employment experience during the year, by education, 2000 and 2011

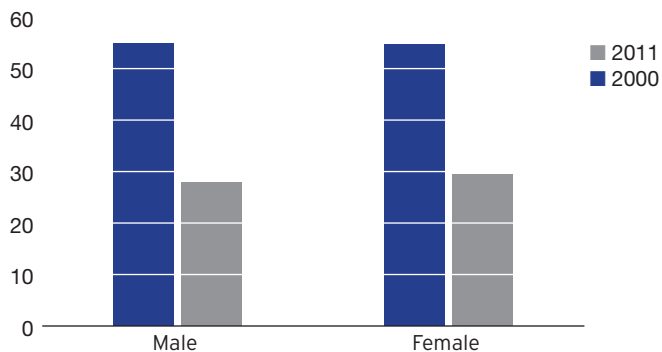


Source: Current Population Survey, Bureau of Labor Statistics

The incidence of paid work experience declined among all teens, regardless of educational attainment or school enrollment status. High school students had the lowest rate, at 19 percent. Among those not enrolled in school, the likelihood of paid employment rose steadily with their level of education: 33 percent among high school dropouts in 2011, compared to 51 percent among high school graduates, and 64 percent among those with at least one year of post-secondary education who are not enrolled in college.

c. Teen employment rates fell dramatically among both genders.

Share of teens aged 16-19 in the nation's 100 largest metropolitan areas with paid employment experience during the year, by gender, 2000 and 2011



Source: Current Population Survey, Bureau of Labor Statistics

Males and females showed similar patterns. In 2000, 55 percent of both genders reported some paid employment in the previous year, a figure that declined to 28 percent in 2011 for males and 30 percent for females.

5. Teens with more work experience in the previous year are much more likely to find employment in the current year.

To supplement the above findings we conducted a multivariate statistical analysis to explore the demographic and socioeconomic factors associated with teen employment. The base group and point of comparison for the first model is a 19-year-old white male who graduated from high school but is not enrolled in college. The base group for the second model is the same individual, but with no paid employment during the previous year. The strongest finding was the positive association between the number of weeks worked in 2010 and the probability of being employed in 2011. Please see Appendix C for more details on the regression analysis.

Estimated marginal effects of education and work experience on the probability of employment of 16- to 19-year-olds in the nation's 100 largest metropolitan areas, March 2011

Variable	Associated Change in the Probability of Employment			
	Model 1		Model 2	
Education				
High school dropout	-1.5%		-0.5%	
High school student	-12.9%	***	-6.2%	**
College student	-1.9%		-4.6%	**
Some college/Assoc. or Bach. degree	17.4%	***	9.4%	*
Work history in the previous year				
Worked 1-13 weeks			32.6%	***
Worked 14-19 weeks			53.6%	***
Worked 20-26 weeks			59.0%	***
Worked 27-39 weeks			59.6%	***
Worked 40+ weeks			86.1%	***

* = significant at .1 level; ** = significant at .05 level; *** = significant at .01 level

The first model found that age, gender, race/ethnicity, education, family income, and local employment rates all have statistically significant effects on the probability of youth employment. Female teens were more likely to be employed than males, and younger teens, especially those aged 16 and 17, were less likely to be employed than 19-year-olds. Blacks, Hispanics, and Asians were less likely to be employed than whites. High school students and those with at least one year of post-secondary experience or a two- or four-year degree were more likely to be employed than high school graduates not enrolled in school. Higher household incomes and higher local teen employment rates were both associated with increased employment.

The second model examined the extent to which previous employment is associated with subsequent employment. Employment intensity, measured as the number of weeks worked in the past year, was associated with significantly higher employment rates. The more weeks worked in the previous year, the greater the probability of employment in the next year: Those who worked between one and thirteen weeks had a 33 percentage point higher chance of employment than those without any work experience; those who worked 20-26 weeks had a 59 percentage point higher chance of employment; and those who worked more than 40 weeks had an 86 percentage point higher chance of employment. The addition of the job intensity variables both improved the predictive power of the model

and reduced the effects of the other variables. With the inclusion of employment history, household income variables and most of the age variables lost their statistical significance. Gender, race, and education remained significantly associated with employment but not as strongly.

This finding is in line with previous studies showing that teen employment is path dependent—that is, that recent employment history is strongly associated with current employment. It also suggests that rising year-round joblessness among teens has played a key role in reducing the employment rates among teens over time.

6. Teen employment rates vary widely among metropolitan areas.

Teen employment rates vary considerably across the nation's 100 largest metropolitan areas, far exceeding the variation for all other age groups by a wide margin. Employment rates ranged from a high of 43 percent in Ogden, Utah to a low of about 17 percent in Los Angeles. Teen employment rates are not always perfect indicators of wider metropolitan economic health. However, on average, economies with higher employment rates and lower unemployment rates tend to create more jobs for teens. Please see Appendix A for a full list of the teen employment rates in the largest 100 metropolitan areas.

Metropolitan areas with the highest and lowest employment rates of teens aged 16-19 among the nation's 100 largest metropolitan areas, 2010-2011

Metropolitan Area	Employment rate
Top 10	
Ogden-Clearfield, UT	43.2
Omaha-Council Bluffs, NE-IA	42.3
Des Moines-West Des Moines, IA	42.2
Salt Lake City, UT	39.9
Wichita, KS	38.3
Harrisburg-Carlisle, PA	38.2
Portland-South Portland-Biddeford, ME	36.7
Minneapolis-St. Paul-Bloomington, MN-WI	36.3
Oklahoma City, OK	35.8
Provo-Orem, UT	35.3
Bottom 10	
Atlanta-Sandy Springs-Marietta, GA	19.8
Miami-Fort Lauderdale-Pompano Beach, FL	19.6
Las Vegas-Paradise, NV	19.5
San Francisco-Oakland-Fremont, CA	19.4
New York-Northern New Jersey-Long Island, NY-NJ-PA	19.3
San Jose-Sunnyvale-Santa Clara, CA	19.2
Fresno, CA	18.3
Riverside-San Bernardino-Ontario, CA	17.7
Modesto, CA	17.4
Los Angeles-Long Beach-Santa Ana, CA	16.9

Source: American Community Survey, pooled data for 2010-2011

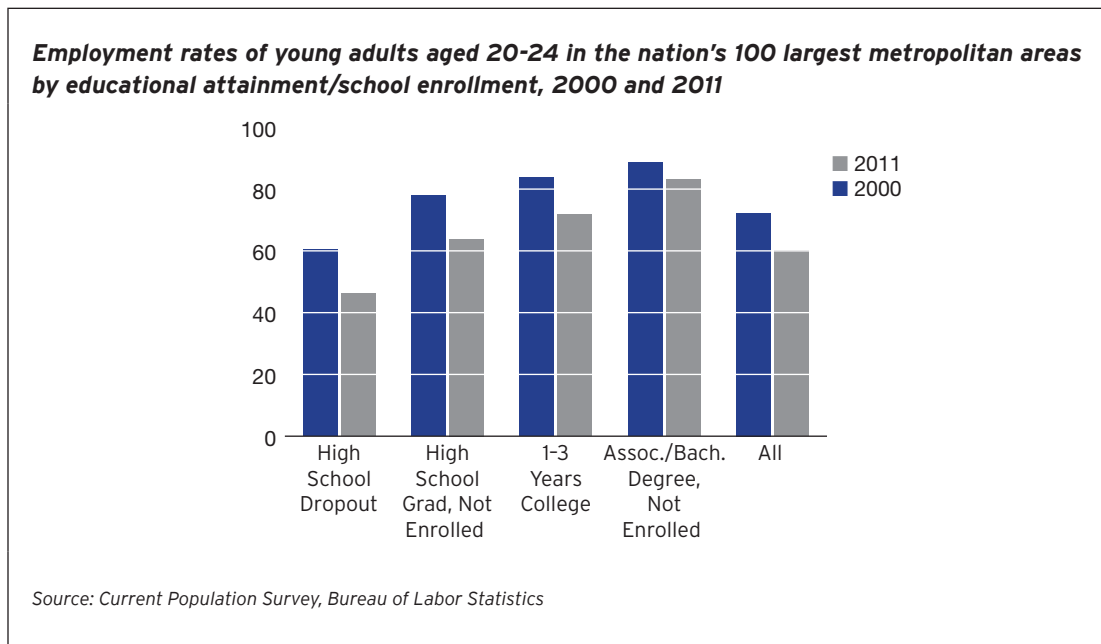
To explore the factors associated with varying teen employment rates among metropolitan areas, we conducted several regression analyses. Please see Appendix D for more information on the regression analysis.

Several variables were negatively associated with teen employment rates in a given metropolitan area. Larger shares of college students, high school dropouts, and teens from low-income families among the teen population were significantly associated with reduced employment rates. High unemployment rates were also significantly associated with lower teen employment rates, as was the presence of immigrants with less than a bachelor's degree. A higher share of teens in the working-age population was associated with higher teen employment rates and, echoing Finding 5, a higher share with work experience in the prior year was also associated with higher teen employment rates.

YOUNG ADULTS AGED 20-24

7. The employment rate among young adults fell from 72 percent in 2000 to 60 percent in 2011.

Those with associate or bachelor's degrees had higher employment rates and a much smaller decline than those with less education.

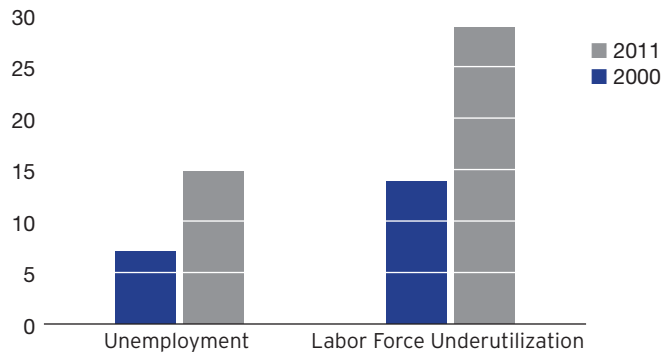


The 12 percentage point decline in employment rates among young adults was second only to teens, a group that experienced a 19 percentage point decline. Employment rates among young adults were highest among those with an associate or bachelor's degree in both time periods: 89 percent in 2000 and 83 percent in 2011. Degree holders experienced a decline of only six percentage points, compared to declines of 12 and 14 percentage points among those with less education. In 2011, the employment rate of degree holders was nearly double the rate of high school dropouts (46 percent).

8. As with teens, labor force underutilization rates are much higher than the official unemployment rate, and vary by race/ethnicity and educational attainment.

a. Both unemployment and underutilization rates among young adults doubled from 2000 to 2011, and underutilization rates were considerably higher in both time periods.

Unemployment and labor force underutilization rates among young adults aged 20-24 in the nation's 100 largest metropolitan areas, 2000 and 2011

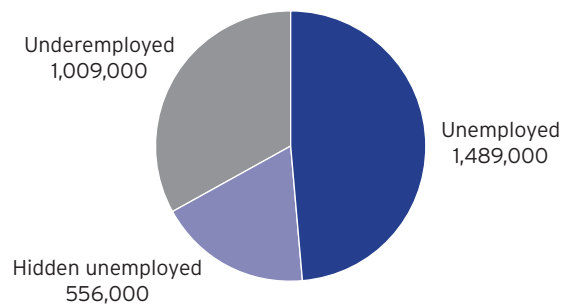


Source: Current Population Survey, Bureau of Labor Statistics

The unemployment rate among all young adults in the nation's 100 largest metropolitan areas rose from seven to 15 percent, while the underutilization rate rose from 14 to 29 percent.

b. The underemployed and hidden unemployed made up more than half of the young adult underutilized labor force in 2011.

Composition of the underutilized labor force among young adults aged 20-24 in the nation's 100 largest metropolitan areas, 2011



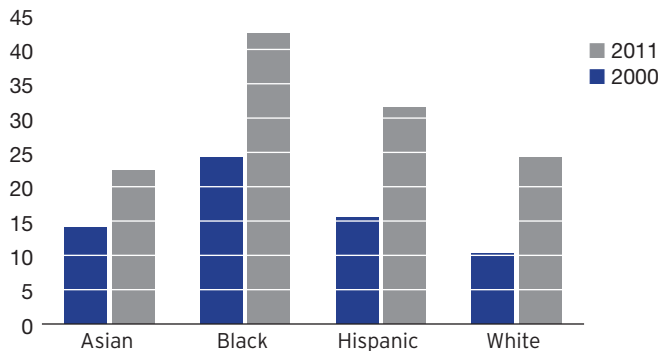
Source: Current Population Survey, Bureau of Labor Statistics

In 2011, the young adult underutilized labor force in the nation's top 100 metropolitan areas totaled 3 million. As with teens, the unemployed accounted for about half of the underutilized labor force (49 percent). The underemployed (those who are involuntarily working part-time) accounted for 33 percent of the underutilized labor force among young adults, and the hidden unemployed (those who desire a job but are not actively looking) accounted for 18 percent.

Underemployment is more common among young adults than among teens (of whom only 16 percent of the underutilized labor force were underemployed, compared to young adults' 33 percent), which likely reflects that most teens are still in high school and want to work part-time, while young adults are more likely to be working part-time because they can't find full-time employment.

c. Labor force underutilization among young adults was highest among blacks in both time periods.

Labor force underutilization of young adults aged 20-24, largest 100 metropolitan areas, by race/ethnicity, 2000 and 2011

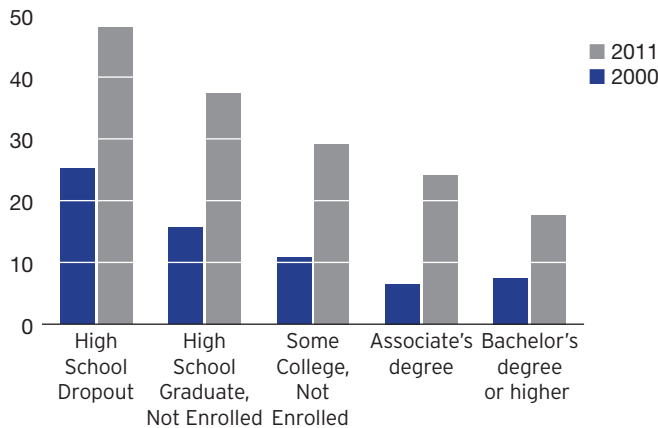


Source: Current Population Survey, Bureau of Labor Statistics

As with teens, labor force underutilization increased among all young people, though with substantial differences by race and ethnicity. In 2011, labor force underutilization was highest among blacks at 42 percent, followed by 32 percent among Hispanics, 24 percent among whites, and 22 percent among Asians.

d. Young adults with a bachelor's degree had the lowest underutilization rate in 2011 and the smallest percentage point increase from 2000.

Labor force underutilization by young adults aged 20-24, largest 100 metropolitan areas, by educational attainment/school enrollment status, 2000 and 2011



Source: Current Population Survey, Bureau of Labor Statistics

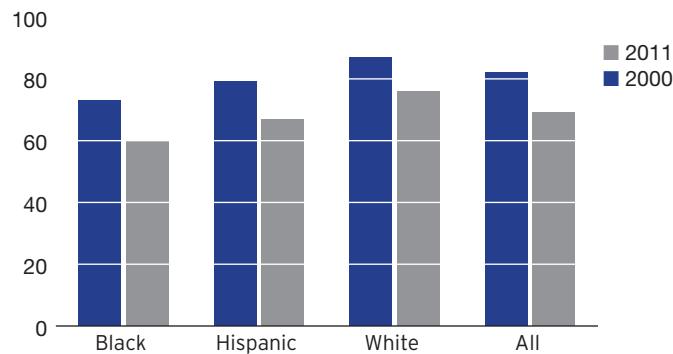
Labor force underutilization increased among all young adults, regardless of educational attainment or enrollment status, but as with race/ethnicity, rates varied among subgroups in both time periods. Young people with higher levels of education had lower rates of labor force underutilization. In 2011, underutilization was highest among high school dropouts (48 percent), followed by high school graduates not enrolled in post-secondary education (37 percent), those who completed at least one year of college but are not enrolled (29 percent), associate degree holders (24 percent), and bachelor's degree holders (18 percent).

9. The share of young adults with any paid employment in a given year dropped from 82 percent in 2000 to 69 percent in 2011.

As among teens, the share of young adults reporting any paid employment in the prior year dropped dramatically between 2000 and 2011, from 82 to 69 percent. However, the drop in mean weeks worked among those who did have jobs was much more modest—from 43 weeks in 2000 to 41 weeks in 2011. Findings 9 and 10 suggest that, as with teens, increases in year-round joblessness are driving the decline in employment rates.

a. Whites had the smallest declines and highest rates of previous-year employment in both 2000 and 2011.

Share of young adults aged 20-24 in the nation's 100 largest metropolitan areas with paid employment experience during the year, by race and ethnicity, 2000 and 2011

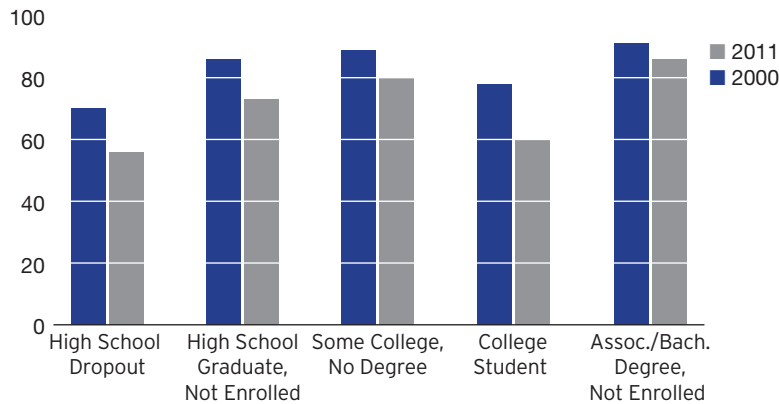


Source: Current Population Survey, Bureau of Labor Statistics

The share of young adults with any paid employment in the previous year fell among all races and ethnicities, but rates varied by group. In 2011, whites had the highest rates (76 percent), followed by Hispanics (67 percent), and blacks (60 percent). In other words, 40 percent of black young adults experienced year-round joblessness, as did 33 percent of Hispanics and 24 percent of whites.

b. Young adults with associate or bachelor's degrees had the highest rates in both years and a much smaller decline than those with less education.

Share of young adults aged 20-24 in the nation's 100 largest metropolitan areas with paid employment experience during the year, by educational status, 2000 and 2011

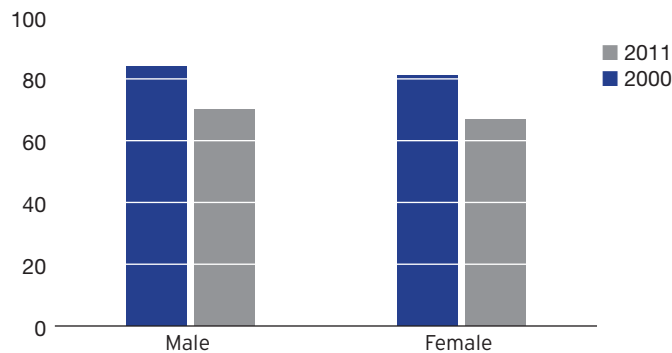


Source: Current Population Survey, Bureau of Labor Statistics

Young people with higher levels of education were more likely to have worked during the previous year. In 2011, 86 percent of those with associate or bachelor's degree worked the previous year, compared to 80 percent of those with at least one year of college, 73 percent of high school graduates not enrolled in college, 60 percent of college students, and 56 percent of those without high school diplomas. In other words, only 14 percent of two- or four-year degree holders experienced year-round joblessness, compared to 44 percent of high school dropouts.

c. Both young men and women experienced a steep drop in paid employment between 2000 and 2011.

Share of young adults aged 20-24 in the nation's 100 largest metropolitan areas with paid employment experience during the year, by gender, 2000 and 2011



Source: Current Population Survey, Bureau of Labor Statistics

Young men were slightly more likely to have worked in the previous year than young women in both 2000 and 2011. In 2011, 70 percent of young men reported some paid employment in the previous year, compared to 67 percent of women.

10. Young adults with work experience in the previous year and higher levels of education are much more likely find employment.

Similar to our earlier assessment of teen employment, we conducted a multivariate statistical analysis to explore the demographic and socioeconomic factors associated with employment among young adults. Separate analyses were run for men and women: The base group and point of comparison for the first model is a single 20- or 21-year-old white male or female high school graduate without children and who is not enrolled in college. The base group for the second model is the same individual, but with no paid employment during the previous year. The strongest findings relate to education and previous employment, with very positive associations between the probability of employment and post-secondary education (specifically, a bachelor’s degree) and having worked in the previous year. The combination of education and employment history accounts for most of the variability in the likelihood of a young person’s employment. Please see Appendix E for more details on the regression analysis.

Estimated marginal effects of education and work experience on the probability of employment of 20-24 year olds in the nation’s 100 largest metropolitan areas, March 2011

Variable	Associated Change in the Probability of Employment							
	Male				Female			
	Model 1		Model 2		Model 1		Model 2	
Education								
High school dropout	-13.3%	***	-9.7%	***	-23.3%	***	-16.7%	***
College student	-18.4%	***	-8.1%	***	-12.4%	***	-7.9%	***
Some college	9.6%	***	7.1%	**	9.2%	***	0.4%	
Associate’s degree	36.5%	***	14.9%		13.7%	**	2.9%	
Bachelor’s degree	25.1%	***	34.4%	***	26.3%	***	31.1%	***
Work history in the previous year								
Worked 1-13 weeks			31.8%	***			30.3%	***
Worked 14-19 weeks			50.3%	***			46.9%	***
Worked 20-26 weeks			65.4%	***			53.5%	***
Worked 27-39 weeks			68.9%	***			68.7%	***
Worked 40+ weeks			102.7%	***			104.9%	***
* = significant at .1 level; ** = significant at .05 level; *** = significant at .01 level								

The first model found that age, race/ethnicity, marital status, and education are significantly associated with employment for both males and females. Being older was associated with increased employment chances for both genders. Race/ethnicity had both positive and negative associations: Being black was associated with reduced employment among men, but not women; being Asian was associated with reduced employment among both men and women; and being Hispanic was associated with increased employment among men but not women. Marital status was positively associated with employment for men and negatively associated for women. Having dropped out of high school and being a college student were both negatively associated with employment for both genders. Having completed at least one year of post-secondary education or holding an associate or bachelor’s degree was strongly associated with employment.

As with teens, the second model examined the extent to which previous employment is associated with current employment. And as with teens, the number of weeks worked in the previous year was

strongly associated with higher employment rates and reduced the effect of many of the other demographic characteristics. Among both men and women, the probability of employment increased with the number of weeks the person worked in the previous year. Men and women who worked one to 13 weeks in the previous year had about a 30 percentage point higher chance of employment than those without any work experience, and those who worked more than 40 weeks had a nearly 100 percent chance of current employment. With the inclusion of a person's employment history in the prior year, the effects of most educational variables were reduced in significance and/or magnitude, with the exception of bachelor's degree attainment, which retained its strong statistical significance and was associated with an increased likelihood of finding employment. Educational attainment also had a strong indirect effect on current employment via its influence on weeks worked in the prior year.

11. Young adult employment rates vary widely among metropolitan areas, although not as much as teen employment rates.

In 2010-2011, employment rates among young adults in the nation's 100 largest metropolitan areas varied from a high of 76 percent in Omaha to a low of 53 percent in McAllen, Texas. Employment rates for young adults tend to track a region's economic performance as measured by median income. In general, metro areas with higher employment rates among young adults are higher-income places. Larger shares of young adults in these areas have earned bachelor's degrees, which is associated with better employment outcomes and metropolitan economic health. Nine of the 10 metropolitan areas with the lowest young adult employment rates rank in the bottom half of the 100 largest metro areas on median household income, and six of the 10 rank in the bottom quarter.⁷ Please see Appendix B for a full list of the employment rates of young adults in the largest 100 metropolitan areas.

Metropolitan areas with the highest and lowest employment rates of young adults aged 20-24 among the nation's 100 largest metropolitan areas, 2010-2011

Metropolitan Area	Employment rate
Top 10	
Omaha-Council Bluffs, NE-IA	75.8
Madison, WI	75.0
Salt Lake City, UT	74.6
Des Moines-West Des Moines, IA	74.5
Portland-South Portland-Biddeford, ME	73.7
Honolulu, HI	73.5
Grand Rapids-Wyoming, MI	73.1
Ogden-Clearfield, UT	72.3
Wichita, KS	71.3
Provo-Orem, UT	71.1
Bottom 10	
Syracuse, NY	56.7
Tucson, AZ	55.8
Augusta-Richmond County, GA-SC	55.6
Springfield, MA	55.6
Fresno, CA	55.5
Bakersfield, CA	55.3
New York-Northern New Jersey-Long Island, NY-NJ-PA	54.5
Greenville-Mauldin-Easley, SC	54.2
Stockton, CA	54.0
McAllen-Edinburg-Mission, TX	52.9

To explore the factors associated with varying employment rates among young adults in different metropolitan areas, we conducted several regression analyses. Please see Appendix F for more information on the analyses.

Higher education levels and stronger employment histories were positively associated with employment rates among 20-24 year olds. A larger share of bachelor's degree holders among the young adult population was associated with higher employment rates. The findings based on employment histories underline the path dependency argument: Metropolitan areas with higher employment rates among 16-19 year-olds in 2006-2007 had higher employment rates among 20- to 24-year olds in 2010-2011. More work experience in the teen years is associated with higher employment rates of young adults four to five years later. Additionally, metropolitan areas with higher shares of young adults who reported some paid employment in the prior year had higher employment rates the following year. The greater the number of weeks worked in the previous year, the greater the impact on employment rates the following year.

Several factors were negatively associated with employment rates. Metropolitan areas with higher unemployment rates had lower employment rates among young adults, as did areas with higher shares of young adults with less than a high school diploma.

Conclusion and Recommendations

A host of measures—employment rates, unemployment rates, labor force underutilization rates, and year-round joblessness—confirm that teens aged 16-19 and young adults aged 20-24 experienced plummeting labor market outcomes over the first decade of the 21st century. Problems finding work have been widespread, affecting all young people. However, some groups fared better than others: Non-Hispanic whites, those from higher income households, those with work experience, and those with higher levels of education were more successful in the labor market.

Education and work experience were critical factors associated with better employment outcomes. Teens and young adults with work experience in the previous year were more likely to be employed, lending support to the idea that employment is path-dependent among young people, with recent employment history acting as a strong predictor of current employment. Among young adults, post-secondary education was also strongly associated with employment. The strongest effects were connected to degree attainment (associate or bachelor's), although some college experience was also associated with employment. Similarly, young adults without a high school diploma were less likely to be employed than those who completed high school.

To be sure, interpreting employment statistics for young people also requires considering school enrollment. Declining employment rates could be seen as less troubling if accompanied by increased enrollment rates. Indeed, school enrollment among young people rose modestly from 2000 to 2011.⁸ Thus, a portion of the employment decline during this period could be interpreted as voluntary withdrawal from the labor market in favor of school, as well as a reaction to decreasing demand for labor in general, which tends to disproportionately impact young and inexperienced workers. Whether, or to what extent, the loss of employment experience is offset by the increase in schooling is subject to debate. However, the magnitude of the disruption to young people's employment trajectories shown in this analysis is such that additional schooling is likely not an adequate counterbalance or explanation. High youth unemployment and underutilization rates signal interest in working, and the findings on path dependency suggest that reduced employment as a young person can set that person on a trajectory of reduced employment prospects and earnings in the long term, especially when accompanied by low levels of education.

Labor market outcomes are concerning for both youth enrolled in school and those who are not, but to different degrees and for slightly different reasons. High school and college students may benefit from the money, and some young people find employment to be a financial necessity to help support their families. However, education is designed to be a young person's primary activity until high school graduation, with employment a complementary activity. There has been some debate on whether employment interferes with academic achievement for high school students, although there appears

to be consensus that working 15-20 hours per week is not likely to hurt academic performance, and some research asserts that employment experience during teenage and young adult years is positively associated with later earnings and employment.⁹ Furthermore, while post-secondary education is increasingly necessary to obtain a good job, many college students also work, and can benefit from that experience in later years.

In addition to financial benefits, employment can provide young people the chance to acquire specific occupational skills and broader employment skills such as communication, teamwork, and problem-solving. It can also provide work experience and professional contacts for references and job leads that can assist in future job searches. Youth employment or related experiences such as internships, co-ops, and apprenticeships can ease the transition to full-time work as an adult and meet the developmental needs of young people by providing responsibilities and challenges in a structured and supportive environment.¹⁰ Thus, reduced work experience among high school and college students is worrisome not because it automatically indicates current economic hardship, but because it suggests a long-term negative effect on employment and earnings.

However, teens and young adults not enrolled in school who are also not working (especially those with no more than a high school education) are likely to face more severe consequences. So-called “disconnected youth” or “opportunity youth” are missing key education and employment experiences and are at increased risk for a host of negative outcomes: long spells of unemployment, poverty, criminal behavior, substance abuse, and incarceration.¹¹

Clearly, the sharply constricted labor market prospects faced by teens and young adults inflicts economic hardship and threatens the American ideal of upward economic and social mobility, given that these problems are concentrated among less-educated and low-income individuals. Reduced employment among young people is a daunting and serious problem, but it can be addressed.

Since young people are not a monolithic population, policy and program responses should be differentiated based on age, academic preparation, and life circumstances. In general, successful programs link secondary and post-secondary education and integrate education, training, work-readiness, and youth development principles in order to equip young people with the academic, occupational, and personal skills they need to succeed. The blend of these elements and settings should vary based on the age, academic, and developmental levels of the youth in question: more school-based and educationally focused programs for younger youth, and more career-focused programs for older youth with strong ties to education. While it is often “second chance” programs or those designed for non-college bound high school students that explicitly focus on career preparation or occupational skills training, some high school initiatives blur the lines between “academic” programs and “career and technical education” by connecting rigorous academics with technical skills and real-world experience in a variety of careers.¹²

Initiatives in multiple settings across the country—led by community colleges, high schools, workforce investment boards, employers, unions, nonprofits, and others—have created stronger on-ramps into the labor market for young people. The particulars can vary a great deal, but a number of common themes emerge that provide clear outlines for action. The following recommendations are accompanied by concrete examples of the recommendation in action.

A few caveats are in order about these examples: They are illustrative (not the results of a comprehensive inventory of programs), and some strong programs have been no doubt unintentionally omitted. Additionally, there is no large, unambiguous research base on the specifics of “what works” in education and employment initiatives for youth. The complexity of the forces affecting youth outcomes (including individual, family, school, neighborhood, and economic factors) and the difficulty in identifying appropriate data sources available over time make it challenging for programs to meet the gold standard of rigorous research: the randomized control trial with experimental and control groups.¹³ Nonetheless, an established body of knowledge based on research, theory, and practice can guide interventions to improve employment outcomes for young people.¹⁴

Investments in developing and expanding services should be coupled with investments in performance assessment and management so that organizations can track progress toward their target outcomes and make mid-course corrections as appropriate. More mature and stable programs should be targeted for more formal evaluations to understand their effectiveness and impacts.

1. Integrate work-based learning opportunities into high school and college education, and expand apprenticeships. Work-based learning—in which students learn technical, academic, and employability skills by working in a real work environment—is valuable on a number of fronts.¹⁵ Internships, co-ops, and apprenticeships provide a chance to learn employability skills such as problem-solving, communication, and teamwork in a way that is not typically possible in the classroom. These opportunities can highlight the relevance of education (which can be especially salient to young people who struggle in traditional academic courses) and can enrich the experience of high-achieving students. Schools that provide links to employers can function as key brokers, especially for low-income and minority youth who otherwise might not have networks to connect them to jobs during school or after graduation. Work-based learning can also provide the opportunity for students to improve their basic literacy and numeracy skills, particularly for those who learn better in a practical, applied setting.¹⁶

Examples:

- ▶ Educational models used in high schools across the country, such as [Career Academies](#) and [Linked Learning](#), incorporate internships into their approach. The [Christo Rey Network](#) of high schools places its students in “work-study” positions throughout the academic year. Hundreds (if not thousands) of other high schools also offer internships and co-ops as standard parts of their curriculum. These programs typically emphasize readiness for both college and career, and can be found in a variety of settings, including charter schools, traditional public schools, and regional career and technical centers serving multiple high schools.¹⁷
- ▶ Perhaps the prototypical example of work-based learning is the **apprenticeship**, in which individuals learn through supervised, work-based learning and related academic instruction. While apprentices are typically in their mid- to late-20s, apprenticeship programs are open to younger individuals.¹⁹ [Wisconsin](#) and [Georgia](#) have developed youth apprenticeship programs for high school students, in partnerships with high schools, businesses, and community colleges. South Carolina’s [Apprenticeship Carolina](#) initiative, while not only targeting youth, has dramatically increased the number of apprentices and participating businesses since its launch in 2007.²⁰
- ▶ Nonprofit organizations such as [Urban Alliance](#) in Washington, D.C., Baltimore, and Chicago and [Afterschool Matters](#) in Chicago organize structured internships and apprenticeships that provide youth with exposure to professional workplaces and working adults, mentoring, and job readiness skills development.

2. Link high school to post-secondary educational credentials. High school is becoming the new middle school—an important educational milestone, but lacking intrinsic value except to prepare youth for post-secondary education.²¹ While estimates vary, large shares of high school students do not earn a college credential and fall off the education pipeline at various points: They either do not complete high school, do not enroll in post-secondary education, or drop out of college.²² Among 24- to 29-year-olds, 8 percent have an associate degree and 30 percent have a bachelor’s degree, meaning that almost two-thirds do not have a two- or four-year college credential.²³ Programs like dual enrollment and early college allow students to take college classes in high school and can increase the likelihood that low-income youth, first-generation college-goers, and other groups under-represented in higher education will enroll and succeed in post-secondary education.²⁴

Examples:

- ▶ The [Early College High School Initiative](#), launched in 2002, has created or redesigned over 240 high schools across the country to blend high school and college in a rigorous and supportive program. The [Pathways to Prosperity Network](#) is building career and educational pathways spanning grades 9-14 in nine states. Other examples (among many) include the [Alamo Academies](#) in San Antonio, Texas and [P-TECH](#) (Pathways in Technology Early College High School) in New York City, both of which were developed with close collaboration among high schools, post-secondary institutions, and industry. The P-TECH model is expanding to the rest of New York state and the city of Chicago.

- ▶ States can also develop policies to support early college and dual enrollment. [North Carolina's Career and College Promise](#) initiative offers high school students various paths to earning college credit while in high school, with one focused on transfer to a four-year degree program and another focused on technical certificates, diplomas, and degrees. The [Kansas Governor's CTE Initiative](#) allows high school students to take free career and technical education courses at community and technical colleges, and offers high schools a \$1,000 bonus for each student who graduates with an industry-recognized credential in a high-demand occupation.

3. Smooth young people's transition into employment, especially high school graduates who do not immediately enroll in college or an apprenticeship, through increased emphases on career and technical education, career counseling, and job development/placement. While post-secondary credentials are clearly associated with better employment outcomes, some jobs and even career pathways are accessible to high school graduates. With appropriate preparation and support, high school graduates can master the skill requirements necessary for entry-level employment in the 21st century and navigate the school-to-work transition.²⁵ They can then continue their learning in the workplace, in formal post-secondary institutions, or in other settings as appropriate to their career pathway. In addition to work-based learning as noted above, other activities could help young people find entry-level jobs, ideally with advancement opportunities. The presence of closely involved adult instructors, mentors, or advisors is critical.

Examples:

- ▶ For high school students:
 - High-quality [career and technical education programs](#), especially those that allow students to take a critical mass of related courses, are associated with improved employment and earnings after graduation. Such programs marry rigorous academics with technical and employability skills in the context of a career pathway.
 - For those at risk of dropping out: [Jobs for America's Graduates \(JAG\)](#) focuses on helping young people graduate from high school and either finding a job or enrolling in post-secondary education. It provides mentoring, employability skills development, and career and academic counseling, including one-on-one assistance with finding and keeping a job after graduation. [Massachusetts' Connecting Activities](#), operated by public schools in cooperation with regional workforce investment boards, offers career counseling and brokers internships and other work-based learning experiences while supporting students in earning their high school diploma.
- ▶ For high school graduates or GED holders, a highly structured program of technical skills development, coupled with strong employment connections, is typically most appropriate:
 - [Year Up](#), located in 12 cities across the country, provides information technology skills training, college credits, and corporate internships for young people aged 18-24 with high school diplomas or GEDs.
 - Institutions such as the 27 public [Tennessee Colleges of Applied Technology](#) and programs like the [CNC Bootcamp](#), offered by Wisconsin's Gateway Technical College in partnership with the local workforce development system, provide occupational skills training in settings that mimic the work world. While not exclusively designed for youth under the age of 24, these schools and programs do successfully serve young people.
- ▶ For everyone:
 - High-quality **career counseling and advising** should be available via high schools, community-based organizations, community colleges, four-year colleges, and public workforce centers. Students and job seekers should receive career and educational advice based on a solid understanding of regional labor market dynamics and the types of occupations and career paths available to individuals with different levels of education, including high school diplomas, certificates, industry-recognized certifications, two-year degrees, and four-year degrees. The [Boston Private Industry Council](#) places career specialists in public high schools and helps arrange job shadowing, mock interviews, summer jobs, and school-year internships.

South Carolina's [Personal Pathways to Success](#) program, created by the Economic Development Act of 2005, offers enhanced school counseling and career guidance in middle and high schools. [Counseling to Careers](#), developed by Jobs for the Future, offers curricula and support for career counselors in a variety of settings to help students understand their "best bets" for careers and educational options.

- 4. Provide opportunities for young people to earn a high school diploma or GED after dropping out, coupled with access to post-secondary credentials/occupational skills training and a focus on work readiness.** Such programs are located in multiple settings, including traditional public schools, community colleges, specially focused recovery high schools, and nonprofits. They may incorporate community service, occupational and academic skill-building, stipends, and mentoring or teaching by caring, responsible adults.

Examples:

- ▶ Both [YouthBuild](#) and the [Youth Service and Conservation Corps \(Youth Corps\)](#) are intended to positively impact the lives of participants and their surrounding communities and combine mentoring, education, work-readiness and occupational skills training, and community development. In YouthBuild, young people aged 16-24 work toward their high school diploma or GED while learning job skills by building affordable housing. They also receive counseling, support services, assistance with job placement, and follow-up services. In the Youth Corps, young people aged 16-25 work on local projects related to infrastructure, conservation, and human services.
- ▶ [Gateway to College](#) programs at community colleges around the country serve young people aged 16-21 who dropped out of high school or are not on track to graduate. They allow students to earn a high school diploma while earning credits toward a college degree or certificate, in an environment characterized by high support and high expectations.

- 5. Orient career-focused education and training to the regional labor market.** Whether operated out of a high school, community college, nonprofit, union, public workforce entity, or other organization, career-focused education must be based on quantitative labor market data that outlines major industries and in-demand occupations in a given region. This quantitative data should be coupled with qualitative intelligence from regional employers about their workforce and skill needs. Programs should develop in-depth knowledge on a specific industry or industries and tailor curricula and programs accordingly.

Most of the examples listed above incorporate this principle, but other notable examples include:

- ▶ The Southern Regional Education Board's [Advanced Career](#) initiative developed academically rigorous high school career and technical education curricula in high-demand, high-skill, high-wage career areas targeted to specific state and regional economies. Curricula focus on aerospace engineering, advanced manufacturing, and clean energy technology, among other topics. [Austin Polytechnical Academy](#), a public high school in Chicago, offers a STEM-intensive education with an advanced manufacturing focus and strong connections to local manufacturing firms through field trips, job shadowing, mentoring, internships and more.
- ▶ Washington state's [Centers of Excellence](#) focus on targeted industries such as manufacturing, allied health, and information technology. Housed at community colleges and guided by industry representatives, their goal is provide fast, flexible, and responsive education and training programs.

- 6. To address weak demand for labor, create transitional subsidized jobs programs for young people to help them support themselves, develop work experience, and gain a foothold in the labor market.** While the ratio of unemployed workers to job openings has fallen since the height of the recession, there are still too many workers chasing too few jobs, especially in occupations that are available to younger people with less education and experience.²⁷ Moreover, the labor market is projected to remain slack over the next few years.²⁸ As part of the American Recovery

and Reinvestment Act, 39 states and the District of Columbia implemented short-term subsidized employment programs, creating more than 260,000 subsidized jobs designed to reduce employers' costs and risks associated with hiring during a weak economy. An evaluation found that participants had improved employment and earnings in unsubsidized employment following the program.²⁹

Examples:

- ▶ While transitional jobs can be implemented in a number of ways, the models (and perhaps the existing infrastructure) provided by AmeriCorps, Youth Corps, and YouthBuild may be most appropriate for efforts focused on young people. These models and organizations have extensive experience engaging young people in intensive, time-limited community service projects while providing mentoring, stipends, and skills training.

7. Increase financial incentives for employment through an expanded EITC, specifically targeting younger workers without children. The federal Earned Income Tax Credit (EITC) is a refundable tax for working people who earn low wages and is the country's largest and most successful anti-poverty effort. While the federal EITC can supplement family earnings by as much as \$6,000 per year, the credit for single tax-filers without dependents is much smaller (capped at \$487), reducing its effectiveness as a pro-employment policy tool.³⁰ Additionally, the minimum age requirement—currently 25 years for a single adult without qualifying children—should be lowered to age 19 or 21 to reach more young workers.³¹

Example:

- ▶ New York City's recently launched [Paycheck Plus](#) program will test the effects of an expanded credit for low-income single workers without children, who will be eligible for up to \$2,000.³²

Endnotes

1. Andrew Sum, Ishwar Khatiwada, Mykhaylo Trubskyy, Walter McHugh, and Sheila Palma are all with the Center for Labor Market Studies at Northeastern University. Sum is Director, Khatiwada is Associate Director, Trubskyy is Research Associate, McHugh is Research Assistant, and Sheila Palma is Senior Administrator. Martha Ross is a Fellow at the Brookings Metropolitan Policy Program.
2. Menzie Chinn and Jeffrey Frieden, *Lost Decade: The Making of America's Debt Crisis and the Long Recovery* (New York: W.W. Norton and Company, 2011); Carl Van Horn, *Working Scared Or Not At All: The Lost Decade, Great Recession, and Restoring the Shattered American Dream* (New York: Rowman and Littlefield Publishers, 2012).
3. Only 46 of every 100 such high school graduates in 2011 and 2012 had a job the following October. U.S. Bureau of Labor Statistics, "Labor force status of 2012 high school graduates and 2011-12 high school dropouts 16 to 24 years old by school enrollment, educational attainment, sex, race, and Hispanic or Latino ethnicity, October 2012," <http://www.bls.gov/news.release/hsgec.t01.htm>, accessed December 6, 2013; "College enrollment and work activity of 2011 high school graduates," www.bls.gov/news.release/archives/hsgec_04192012.pdf, accessed December 6, 2013.
4. Sheldon Danziger and David Ratner, "Labor Market Outcomes and the Transition to Adulthood." In *The Future of Children: Transition to Adulthood 20* (1) (2010: 133-151); Dan Bloom, "Programs and Policies to Assist High School Dropouts in the Transition to Adulthood." In *The Future of Children: Transition to Adulthood 20* (1) (2010: 89-108); Douglas A. Besharov, ed., *America's Disconnected Youth: Toward a Preventive Strategy* (Washington: Child Welfare League of America and American Enterprise Institute, 1999).
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6. Andrew Sum and Walter McHugh, "Modeling the Influence of Recent Work Experience on the Employment of Teens in March 2011" (Boston: Center for Labor Market Studies, Northeastern University, 2012); Andrew Sum, Ishwar Khatiwada, Robert Taggart with Joseph McLaughlin and Sheila Palma, "The Path Dependency of Teen Employment: The Impacts of Previous Year Work Experience on the Current Employment Status of the Nation's Teenagers (16-19) in 2006," Paper Prepared for the U.S. Conference of Mayors, October 2007.
7. Data on median income are from the interactive website developed by the Brookings Metropolitan Policy Program, "State of Metropolitan America Indicator Map" available at http://www.brookings.edu/research/interactives/state-of-metropolitan-america-indicator-map#/?subject=8&ind=75&dist=0_0&data=Number&year=2010&geo=metro&zoom=0&x=0&y=0, accessed January 14, 2014. Data are from 2010.
8. Among 18- to 24-year-olds, enrollment in two- and four-year degree-granting institutions increased from 36 percent in 2000 to 42 percent in 2011; and among 16- to 24-year-olds, the share of high school dropouts decreased from 11 percent in 2000 to 7 percent in 2011. National Center for Education Statistics, "Enrollment rates of 18- to 24-year-olds in degree-granting institutions, by level of institution and sex and race/ethnicity of student: 1967 through 2012," *Digest of Education Statistics 2013*, http://nces.ed.gov/programs/digest/d13/tables/dt13_302.60.asp, accessed November 14, 2013; National Center for Education Statistics, "Percentage of high school dropouts among persons 16 through 24 years old (status dropout rate), by income level, and percentage distribution of status dropouts, by labor force status and years of school completed: 1970 through 2012," *Digest of Education Statistics 2013*, http://nces.ed.gov/programs/digest/d13/tables/dt13_219.75.asp, accessed November 14, 2013.
9. National Research Council, *Protecting Youth at Work: Health, Safety, and Development of Working Children and Adolescents in the United States*. (Washington, DC: The National Academies Press, 1998); Bureau of Labor Statistics, *Report on the Youth Labor Force*, U.S. Department of Labor, 2000; Kusum Singh, Mido Chang, and Sandra Dika, "Effects of Part-Time Work on School Achievement During High School," *Journal of Educational Research* 101 (1) (2007): 12-23; Stephen F. Hamilton and Rachel Sumner, "Are School-Related Jobs Better?" (Atlanta: Southern Regional Education Board, 2012); Christopher J. Ruhm, "Is High School Employment

Consumption or Investment?" *Journal of Labor Economics* 15 (4) (1997): 735-775.

10. Harvard Graduate School of Education, "Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century," 2011; Nancy Hoffman, *Schooling in the Workplace: How Six of the World's Best Vocational Education Systems Prepare Young People for Jobs and Life* (Cambridge: Harvard, 2011); Corrine Alfeld and others, "Work-Based Learning Opportunities for High School Students" (Kentucky: National Research Center for Career and Technical Education, 2013).
11. Clive R. Belfield, Henry M. Levin, and Rachel Rosen, "The Economic Value of Opportunity Youth" (Washington: Civic Enterprises, 2012); Michael Wald and Tia Martinez, "Connected by 25: Improving the Life Chances of the Country's Most Vulnerable 14-24 Year Olds" Working Paper (William and Flora Hewlett Foundation, 2003); Adrienne L. Fernandes and Thomas Gabe, "Disconnected Youth: A Look at 16- to 24-Year Olds Who are Not Working or in School" (Washington: Congressional Research Service, 2009); Douglas A. Besharov, ed., *America's Disconnected Youth: Toward a Preventive Strategy* (Washington: Child Welfare League of America and American Enterprise Institute, 1999).
12. For example, see the Southern Regional Education Board's Advanced Career initiative, ConnectEd's Linked Learning, the National Academy Foundation's Career Academies, P-TECH in New York City, and other high schools and programs, too numerous to mention, that build relationships with employers such that students can engage in authentic projects while interacting with working adults.
13. Rigorous research (with control and experimental groups) on the effectiveness of youth education and career-focused programs remain the exception rather than the rule. Many research studies have methodological shortcomings in research design due to the difficulties in identifying data sets that allow tracking over time in multiple locations in order to make generalizations about program effectiveness. For a discussion on the need for caution in interpreting available research see: Dan Bloom, "Programs and Policies to Assist High School Dropouts in the Transition to Adulthood;" and Alfred and others, "Work-Based Learning for High School Students."
14. For examples of notable programs based on research, theories and experience, if not meeting the gold standard of "evidence-based," see the following, among others: Nancy Martin and Samuel Halperin, "Whatever it Takes: How Twelve Communities are Reconnecting Out-of-School Youth" (Washington: American Youth Policy Forum, 2006); Lisbeth B. Shorr and Vicky Marchand, "Pathways to Successful Young Adulthood," (New York: Center for the Study of Social Policy, 2007); and the Community Collaboratives Toolbox developed by the White House Council for Community Solutions to improve outcomes for young people not in school and not employed, available at <http://www.serve.gov/?q=site-page/council-resources>, accessed February 19, 2014. For an argument in favor of developing a broader definition of "evidence-based" for programs seeking improve outcomes for children, youth and families, please see Lisbeth B. Schorr and Frank Farrow, "Expanding the Evidence Universe: Doing Better by Knowing More," (New York: Center for the Study of Social Policy, 2011).
15. The definition of work-based learning is from Alfred and others, "Work-Based Learning for High School Students."
16. James R. Stone and Morgan Lewis, *College and Career Ready in the 21st Century: Making High School Matter* (New York: Teachers College Press, 2012).
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18. Robert I. Lerman, "Training Tomorrow's Workforce: Community College and Apprenticeship as Collaborative Routes to Rewarding Careers" (Washington: Center for American Progress, 2009).
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21. Credit to Stone and Lewis, (2012) for the formulation of high school as the new middle school. Stone and Lewis argue that the "college for all" movement has unintentionally caused serious harm to the large share of high school students who never earn a traditional college credential. They assert that some career pathways

are or could be accessible to graduates of robust and re-imagined high school career and technical education programs leading to an industry-recognized credential to signal that the graduate is prepared to be employed and continue learning beyond high school.

22. Peter T. Ewell, Dennis P. Jones, and Patrick Kelly, "Conceptualizing and Researching the Educational Pipeline" (Boulder, CO: National Center for Higher Education Management Systems, 2003); Stone and Lewis (2012); Erich Lauff and Steven J. Ingels, *Education Longitudinal Study of 2002* (ELS:2002): A First Look at 2002 High School Sophomores 10 Years Later (National Center for Education Statistics, U.S. Department of Education, 2014).
23. 2009-2011 American Community Survey
24. Ben Struhl and Joel Vargas, "Taking College Courses in High School: A Strategy for College Readiness" (Boston: Jobs for the Future, 2012); Jobs for the Future, "Early College Designs," early.colleges.org, accessed January 24, 2013.
25. While there is not a uniform definition of entry-level work-readiness skills, there are several delineations, which have large areas of overlap. Murnane and Levy define the "new basic skills" as including the following: ninth grade or higher mathematics and reading abilities, ability to use a computer to perform simple tasks, communicate effectively both orally and in written form, reliability, a positive attitude, and willingness to work hard. See Richard Murnane and Frank Levy, *Teaching the New Basic Skills: Principles for Educating Children to Thrive in a Changing Economy* (New York: The Free Press, 1996). The National Career Readiness Certificate developed by ACT measures foundational skills portable across occupations, such as reading for information, applied mathematics, problem solving, critical thinking, and communication. See ACT, "Work Readiness Standards and Benchmarks: The Key to Differentiating America's Workforce and Regaining Global Competitiveness" (2013). The National Academies Foundation developed a College and Career Readiness certification system that assesses five major domains: core academics, career knowledge, foundational skills (communication, critical thinking, problem solving, etc.), interpersonal skills, and self-management. See "The NAF Student Certification Assessment System (SCAS): Benefits for Students and Teachers and NAF Support," Presented at NAF's 2013 Annual Conference, NAFNEXT: Exponential Impact!, available at <http://naf.org/presentation-file/2013/2013-naf-next/naf-student-certification-assessment-system-benefits-students-a>, accessed February 19, 2014.
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