

# A College Degree is No Guarantee

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## Acknowledgements

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# Executive Summary

The Great Recession has been hard on all recent college graduates, but it has been even harder on black recent graduates.

This report reviews evidence on the labor-market experience of black recent college graduates during and after the Great Recession.

Key findings include:

- In 2013 (the most recent full year of data available), 12.4 percent of black college graduates between the ages of 22 and 27 were unemployed. For all college graduates in the same age range, the unemployment rate was 5.6 percent.
- Between 2007 (immediately before the Great Recession) and 2013, the unemployment rate for black recent college graduates nearly tripled (up 7.8 percentage points from 4.6 percent in 2007).
- In 2013, more than half (55.9 percent) of employed black recent college graduates were “underemployed” –defined as working in an occupation that typically does not require a four-year college degree. Even before the Great Recession, almost half of black recent graduates were underemployed (45.0 percent in 2007).
- Black recent college graduates in science, technology, engineering, and mathematics (STEM) majors have fared somewhat better, but still suffer from high unemployment and underemployment rates. For example, for the years 2010 to 2012, among black recent graduates with degrees in engineering, the average unemployment rate was 10 percent and the underemployment rate was 32 percent.

In part, these outcomes reflect the disproportionate negative effect of economic downturns on young workers and, in part, they reflect ongoing racial discrimination in the labor market. A college degree blunts both these effects relative to young black workers without a degree, but college is not a guarantee against either set of forces.

# Introduction

The Great Recession has been hard on recent college graduates,<sup>1</sup> but it has been even harder for black recent college graduates. This report examines the labor-market outcomes of black recent college graduates using the general approach developed by Federal Reserve Bank of New York researchers Jaison Abel, Richard Deitz, and Yaqin Su (2014), who recently studied the outcomes of all recent college graduates.

## Unemployment

As a first cut, we look at unemployment rates for three groups: all workers, college graduates, and young college graduates between the ages of 22 and 27. The data show that college graduates have fared better than workers overall, but recent college graduates, and particularly black recent college graduates, have suffered high unemployment rates since the onset of the Great Recession.

**Figures 1a-c** presents unemployment rates for these groups, by race, from 1979 to 2013. Figure 1a shows that the unemployment rate for black workers is much higher than it is for all workers. Between 2007 and 2011, the gap in unemployment between the two groups nearly doubled, rising from 3.7 to 7.0 percentage points; more recently, the gap has decreased somewhat but is still wider than in 2007. Figure 1b shows that the unemployment rate has also been higher for black college graduates than for all college graduates, with the gap widening since 2007. This racial difference is even more dramatic in figure 1c, which shows unemployment rates for recent college graduates, ages 22-27. Between 2007 and 2013, the unemployment rate for black recent college graduates nearly tripled (up 7.8 percentage points to 12.4 percent), far outstripping the increase for all recent college graduates (up 2.3 percentage points to 5.6 percent).

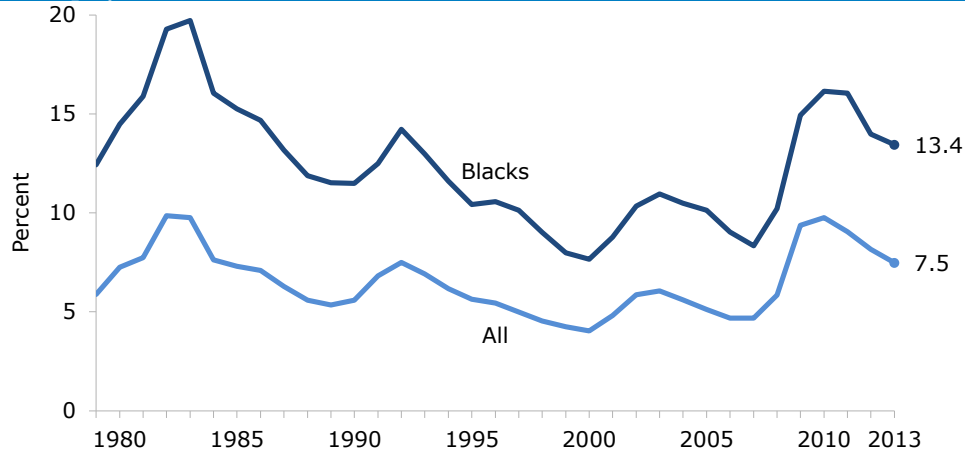
Unemployment rates are generally highest for the youngest workers and then decline with age. **Figures 2a-c** examines unemployment by age for two groups: all workers and black workers. For the 2011-2013 time period, the unemployment rate for black college graduates (using the Outgoing Rotation Group of the Current Population Survey) was higher than for all college graduates at all ages. However, this gap is largest when young college graduates are just entering the labor market, and then closes as workers age (figure 2a). Figure 2b compares the unemployment rate for black college graduates in 2011-2013 to 1998-2000, the period of lowest unemployment for black workers in the last three decades. This figure shows that all young black workers, even those in their 30s, are suffering from higher unemployment now than in the late 1990s.

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1 Pew Research Center (2013); Ruetschlin and Draut (2013); Ayres (2013); and Shierholz, Davis, and Kimball (2014).

**FIGURE 1a**

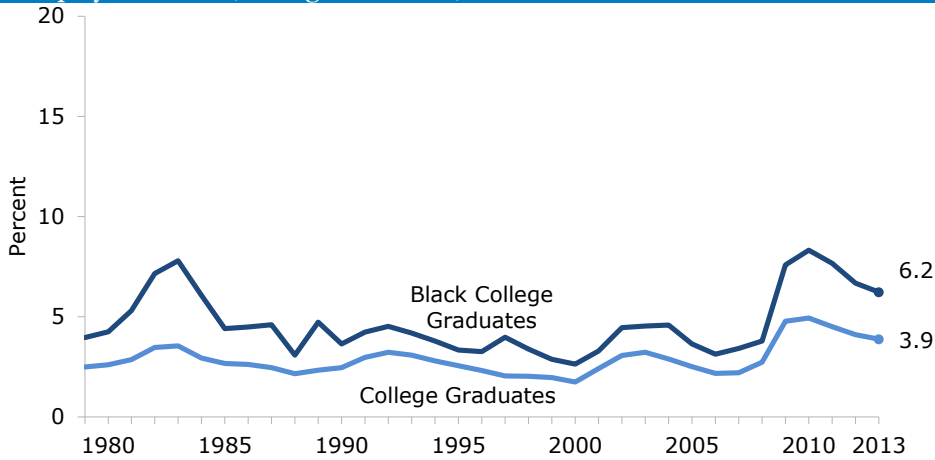
**Unemployment Rates, 1979-2013**



Source: Current Population Survey Outgoing Rotation Group (CPS ORG).

**FIGURE 1b**

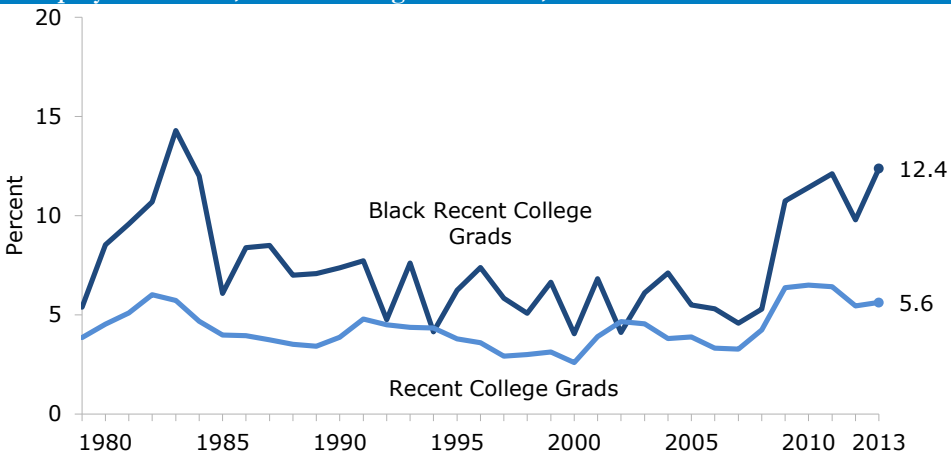
**Unemployment Rates, College Graduates, 1979-2013**



Source: Current Population Survey Outgoing Rotation Group (CPS ORG).

**FIGURE 1c**

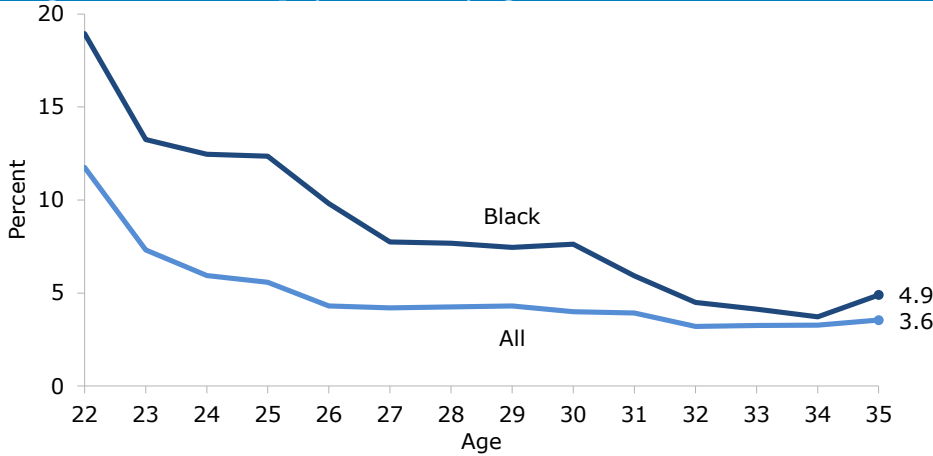
**Unemployment Rates, Recent College Graduates, 1979-2013**



Source: Current Population Survey Outgoing Rotation Group (CPS ORG).

**FIGURE 2a**

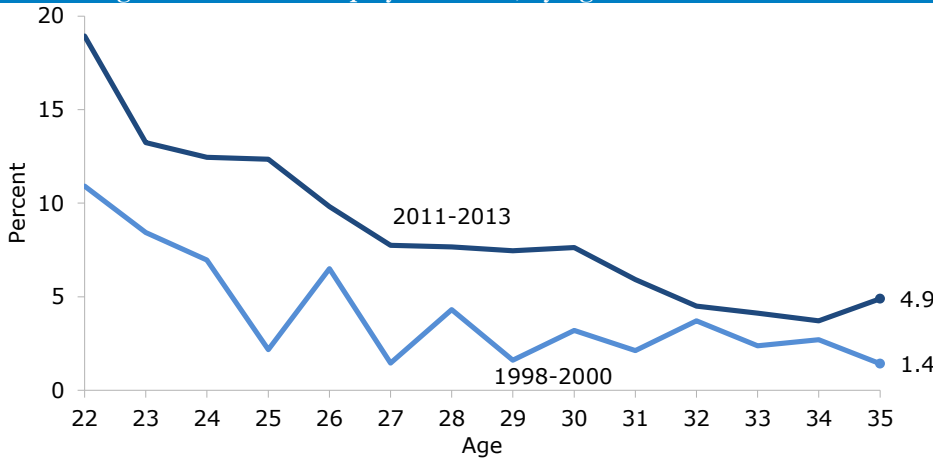
**College Graduates' Unemployment Rate by Age and Race, 2011-2013**



Source: CPS ORG.

**FIGURE 2b**

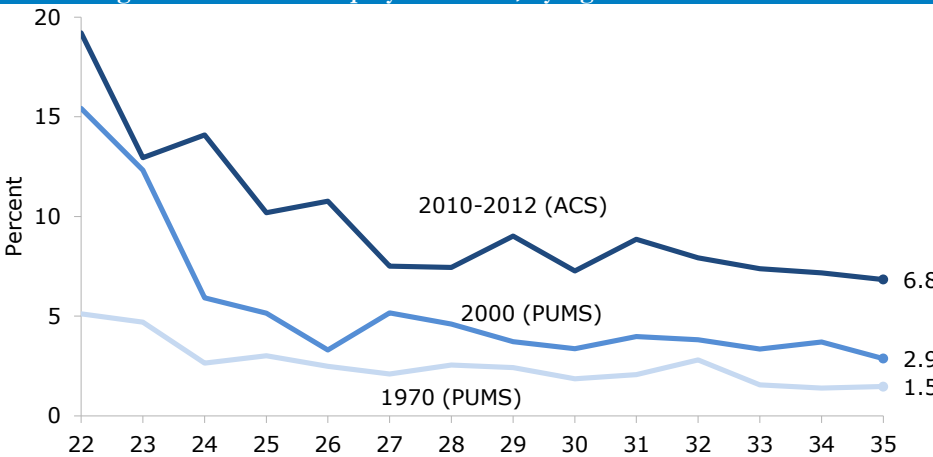
**Black College Graduates' Unemployment Rate, by Age**



Source: CPS ORG.

**FIGURE 2c**

**Black College Graduates' Unemployment Rate, by Age**



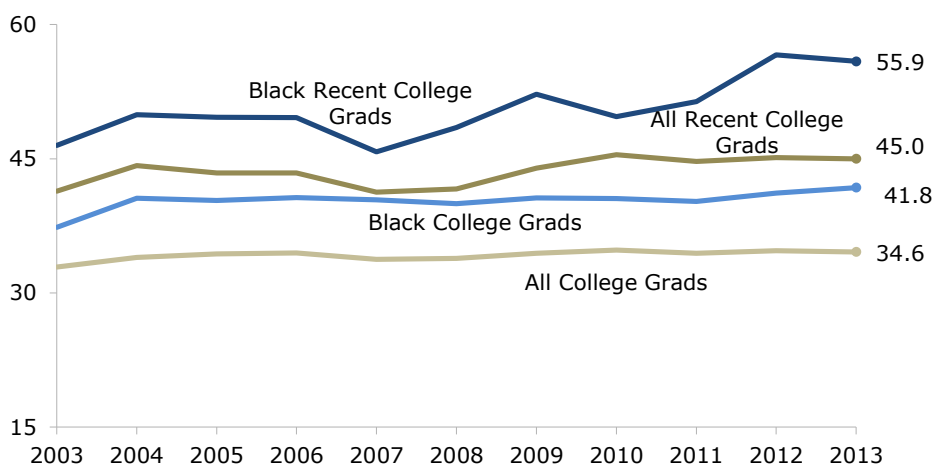
Source: American Community Survey (ACS) and Decennial Census Public Use Microdata Sample (PUMS).

In figure 2c, we analyze unemployment by age for 1970, 2000, and 2010-2012.<sup>2</sup> The relationship between age and the unemployment rate holds during business cycle peaks such as 2000, but the entry into the labor market has been toughest in the most recent time period. For example, the unemployment rate for 22-year-old black college graduates in 1970 was 5.1 percent, compared to 15.4 percent in 2000 and 19.2 percent in 2010-2012. Even 35-year old black college graduates had an unemployment rate in 2010-2012 that was more than four times higher (6.8 percent) than it had been in 1970 (1.5 percent).

## Underemployment

Abel, Deitz, and Su also analyze the likelihood that recent college graduates work in low-paying jobs that typically don't require a four-year college degree (see also Pew Research Center, 2013 and Shierholz, Davis and Kimball, 2014).<sup>3</sup> **Figure 3** shows the underemployment rate for college graduates from 2003 through 2013 using this definition.<sup>4</sup> For all college graduates, the rate of underemployment was relatively steady at about 33 percent, which means that about one in three college graduates was in a job that did not require a college degree. The underemployment rate also changed little for all black college graduates, but was at a consistently higher rate of about 40 percent.

**FIGURE 3**  
Underemployment Rate for College Graduates

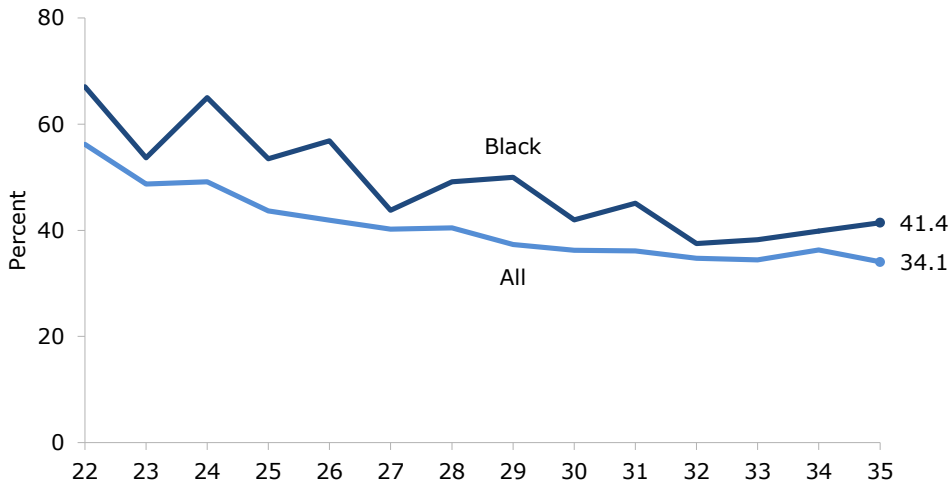


Source: Current Population Survey Outgoing Rotation Group (CPS ORG) and O\*NET.

- 2 Here we switch data sources to a combination of the Decennial Census and the American Community Survey to allow us to look back further using a consistent measure.
- 3 Data on underemployment is based on the Occupational Information Network (O\*NET). Following Abel, Deitz, and Su, we define a given occupation as requiring a college degree if at least half of the O\*NET Education and Training Questionnaire respondents indicated that a bachelor's degree is necessary to perform the job.
- 4 The earliest year in our analysis is 2003 due to occupational coding changes in the Current Population Survey between 2002 and 2003.

The data for recent college graduates, especially black recent college graduates, however, show a different pattern. For all recent college graduates, the rate of underemployment in the last decade averaged about 44 percent. For black recent college graduates the underemployment rate has averaged about 50 percent since 2003. In 2013, more than half (55.9 percent) of employed black recent college graduates were in jobs that did not require a four-year degree. Not only did young black college graduates have the highest underemployment rate of the groups examined here, they also saw the greatest increase in underemployment during the latest economic downturn. Between 2007 and 2013, the underemployment rate for all recent college graduates increased 3.7 percentage points. Since 2007, the underemployment rate for young black college graduates rose 10.1 percentage points, reaching a high of 55.9 percent in 2013.

**FIGURE 4**  
College Graduates' Underemployment Rate, by Age and Race, 2011-2013



Source: Current Population Survey Outgoing Rotation Group (CPS ORG) and O\*NET.

To determine whether high underemployment rates are simply part of the natural transition for recent college graduates entering the labor market, **Figure 4** illustrates underemployment by age. For all college graduates and black college graduates there is a decline in underemployment as labor-market experience increases. Yet, the starting points are very different for the two groups. For black 22-year-olds at the beginning of their transition from college, 67.1 percent were underemployed in 2011-2013, compared to 56.2 percent for all college graduates. Between the ages of 22 and 35, the underemployment rate falls by more than 20 percentage points for both groups. However, at every age, black graduates are more likely to be underemployed than all graduates.

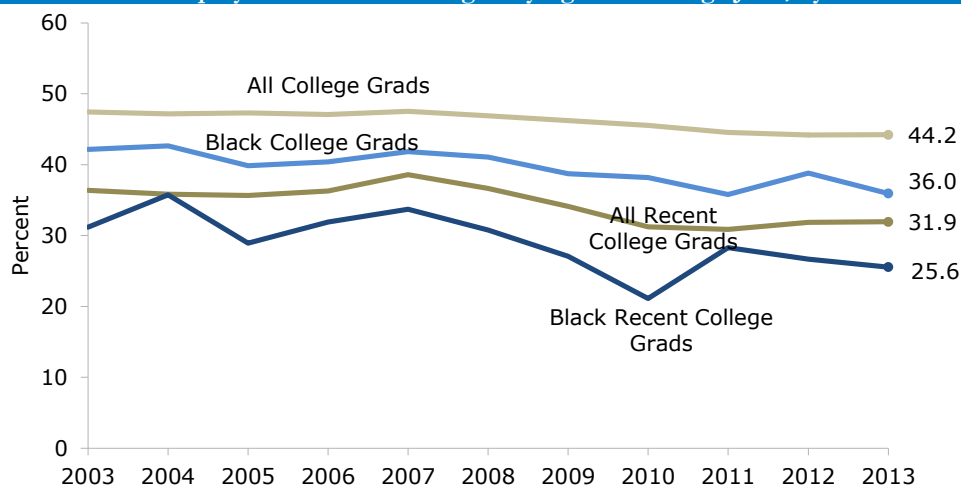


# Job Quality

Some argue that many of the non-college jobs held by young graduates may be good jobs because they pay well even though they don't require a college degree. If the quality of jobs held by the underemployed has indeed improved over time, then the bleak picture painted above might not tell the whole story. To examine the extent to which this may be true, Abel, Deitz, and Su divide “non-college jobs” into two categories: high-wage non-college jobs and low-wage non-college jobs. Graduates in high-paying non-college jobs such as postal workers, air traffic controllers, and dental hygienists, while technically underemployed based on educational requirements, have arguably avoided the worst of the current labor market. At the other end of the spectrum, low-wage non-college jobs, such as fast-food worker, retail salesperson, and childcare worker, are both underemployed and underpaid relative to their counterparts in jobs that typically require a college degree. Following this approach, we define an occupation as high-wage if it has an average salary of at least \$45,000 and low-wage if it has an average salary below \$25,000.

For all four groups in **Figures 5a** and **5b** – all college graduates, black college graduates, all recent college graduates, and black recent college graduates – we see a decline after 2003 in the likelihood that underemployed college graduates were in one of the high-paying non-college occupations (see figure 5a). The fall-off was highest for black college graduates (down 6.2 percentage points) and black recent college graduates (down 8.2 percentage points).

**FIGURE 5a**  
Share of Underemployed Graduates in High Paying Non-College Jobs, by Race



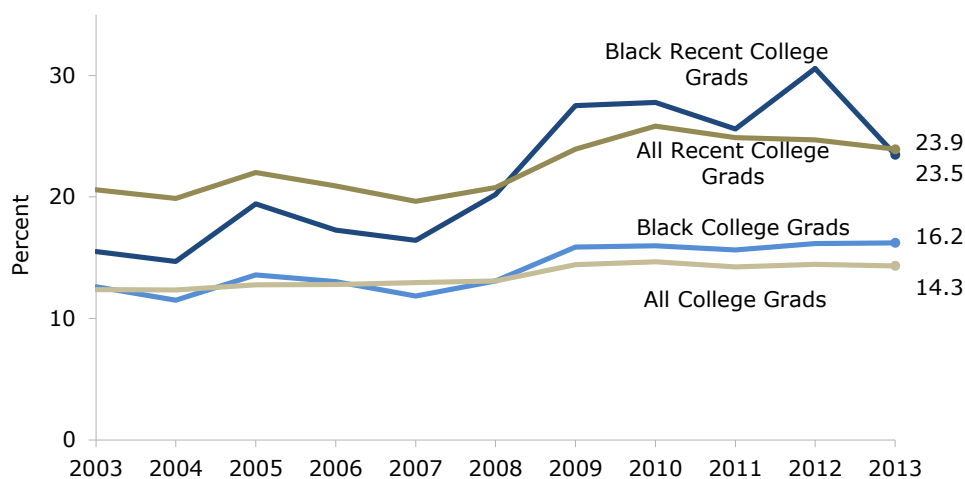
Source: Current Population Survey Outgoing Rotation Group (CPS ORG) and O\*NET.

Figure 5b tells the other side of this story, displaying the share of underemployed college graduates in low-wage non-college occupations. Since 2003, all four groups have seen an increase in the share working in low-wage occupations. Black recent college graduates have seen the largest increase over

the whole period (8.0 percentage points), and since the Great Recession (7.1 percentage points between 2007 and 2013). While some college graduates are finding financial success in the labor market in jobs that don't typically require a college degree, a growing share have had no such luck. Instead, they are working in jobs that don't require a four-year degree and don't pay more than \$25,000; this is especially true for young black graduates.

**FIGURE 5b**

**Share of Underemployed Graduates in Low-wage Non-College Jobs, by Race**

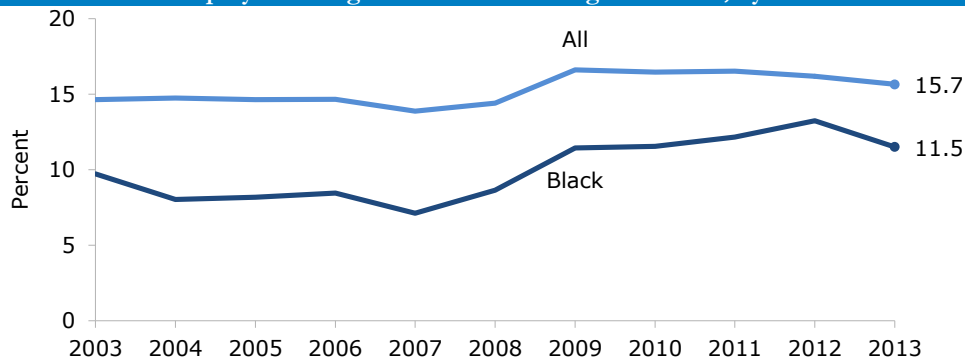


Source: Current Population Survey Outgoing Rotation Group (CPS ORG) and O\*NET.

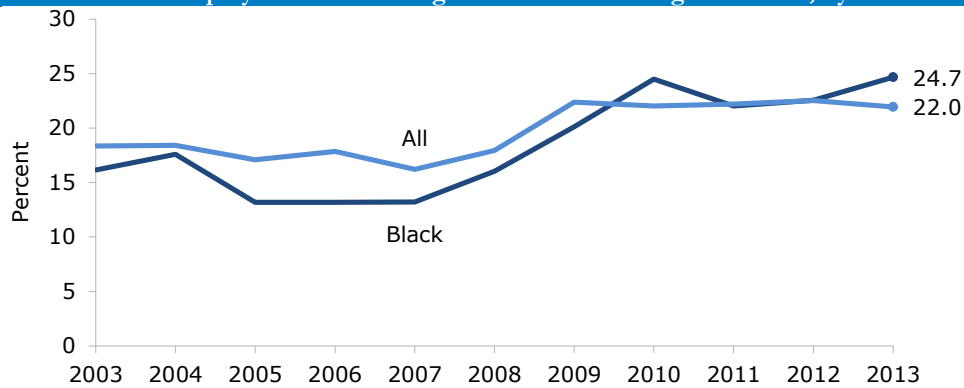
Another possible indicator of poor job quality is the rate at which the underemployed are working part-time (where part-time is defined as usually working fewer than 35 hours per week). **Figure 6a** shows that over the last decade underemployed black college graduates are *less likely* to work part-time than all college graduates. Since the Great Recession, the rate of underemployment for black college graduates working part-time increased 4.4 percentage points, from 7.1 percent in 2007 to 11.5 percent in 2013. **Figure 6b** shows that between 2003 and 2013, the increase of black recent college graduates working part type in these non-college jobs (11.5 percent) is more drastic than the increase for all recent graduates (5.7 percent).

**FIGURE 6a**

**Share of Underemployed College Graduates Working Part-Time, by Race**



Source: Current Population Survey Outgoing Rotation Group (CPS ORG) and O\*NET.

**FIGURE 6b****Share of Underemployed Recent College Graduates Working Part-Time, by Race**

Source: Current Population Survey Outgoing Rotation Group (CPS ORG) and O\*NET.

## Labor Market Outcomes by Major

The data thus far have shown that all recent college graduates, especially blacks, are having a difficult time in the labor market. Now, we look at the degree to which college major has an impact on these outcomes. In recent years, research has focused significant attention on the benefits of STEM (science, technology, engineering, and mathematics) majors<sup>5</sup> and the perceived advantages that they confer in the labor market. Following the methodology of Abel, Deitz, and Su, we examine the labor-market outcomes of recent graduates in thirteen undergraduate major categories: engineering, education, health, math and computers, architecture and construction, sciences, social sciences, business, liberal arts, communications, technologies, agriculture and natural resources, and leisure and hospitality.<sup>6</sup>

**Figures 7a** shows three possible labor-market outcomes for recent college graduates: unemployed, employed in a job that does not typically require a four-year degree, or employed in a job that does typically require a four-year degree.<sup>7</sup> Looking first at unemployment, for black recent graduates, the majors with the lowest unemployment rates are technologies (7 percent), leisure and hospitality (8 percent), and social sciences (8 percent). In contrast, architecture and construction has the highest unemployment rate, by far, at 27 percent, followed by communications and agriculture and natural resources, both 12 percent. Since the Great Recession, the construction industry has been particularly hard hit and, according to these data, has still has not recovered.

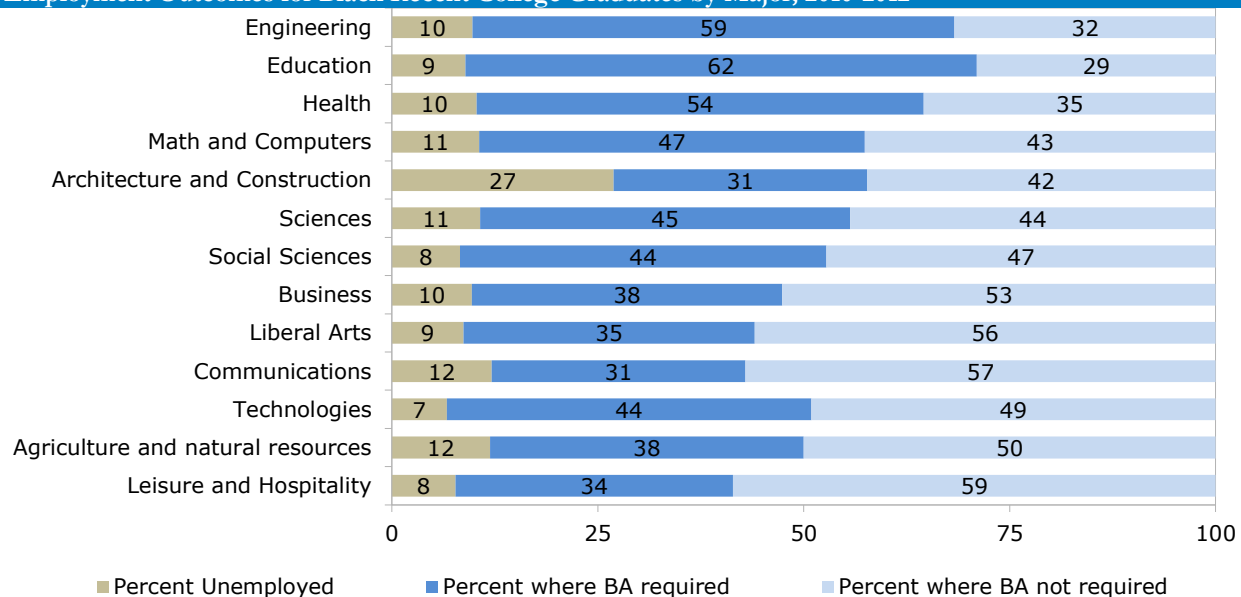
5 See, for example, Xu (2013), Melguizo and Wolniak (2012), and Roksa (2010).

6 Data on majors for college graduates is from the American Community Survey.

7 Following Abel, Deiltz and Su, we limit our analysis to the employed and unemployed and exclude those not in the labor force.

**FIGURE 7a**

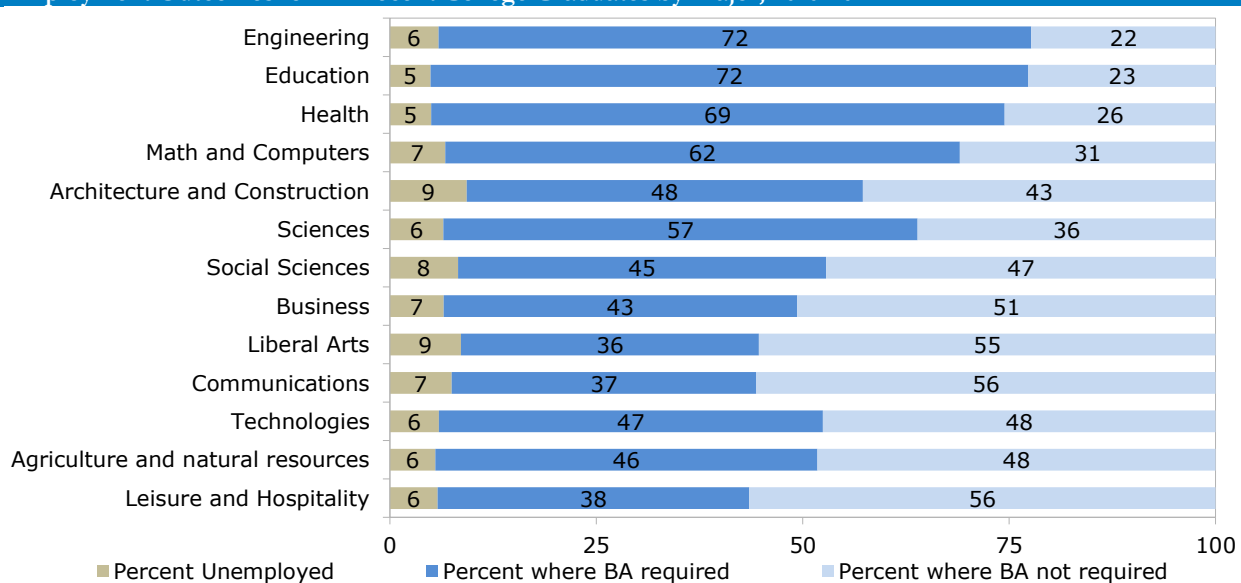
**Employment Outcomes for Black Recent College Graduates by Major, 2010-2012**



Source: American Community Survey (ACS) and O\*NET.

**FIGURE 7b**

**Employment Outcomes for All Recent College Graduates by Major, 2010-2012**



Source: American Community Survey (ACS) and O\*NET.

In eight of the thirteen major categories, black recent college graduates that did find a job were more likely to end up in a job that did not require a four-year degree than in one that did. The major with the highest share of graduates in occupations that required a college degree was education, (62 percent for black graduates), but even in this field, more than one-third of black graduates were either unemployed or in jobs that didn't require a degree. Engineering majors, a core STEM major, were the next best group, but again, more than four-in-ten engineering graduates were either unemployed or in jobs that did not require a college degree (let alone an engineering degree). Only

three major categories (engineering, education, and health) had more than one-half of black recent graduates in jobs that required an undergraduate degree. Communications and architecture along with construction had the lowest share of black recent graduates in jobs that required a four-year degree, both at 31 percent. Another way of looking at the data is to say that, in 2013, for black recent college graduates majoring in nine of the 12 broad categories, there was less than a 50 percent chance they would be in a job that required their degree. (See **Figure 7b** for a comparison with all recent college graduates.)

## Explaining Poor Employment Outcomes

Recent college graduates, especially black recent college graduates, have fared poorly in the recovery from the Great Recession. But, even before the economic downturn, black recent college graduates were more likely than other recent graduates to be unemployed or to be in low-paying jobs that did not require a college degree. These poor outcomes hold even for black graduates with degrees in STEM majors.

Part of the problems that black recent graduates face reflects the weak nature of the current recovery, which has hit young workers especially hard, including college graduates.<sup>8</sup> But, black workers, even those with college degrees, face additional challenges in the labor market, including racial discrimination. A large and growing body of recent research documents extensive, ongoing discrimination in the labor market. In a careful 2003 “audit study,” Devah Pager sent teams of trained male respondents, one black, one white, with identical fictitious resumes to apply for jobs in Milwaukee. She found that the black applicants were less than half as likely as the white applicants to receive a call back from employers. Moreover, the white applicants with a (fictitious) criminal record were more likely to receive a call back than the matched black applicants without a criminal record.

In a follow up report with Bart Bonikowski and Bruce Western, Pager (2009) looked at entry-level jobs in New York City, and found the same result. Black men were less likely to receive a call back than equally qualified white men, and black men with no criminal record fared worse than recently incarcerated white men. Blacks also placed last in the racial hierarchy, with employers favoring white men, and then Latino men, and only then black men.

Marianne Bertrand and Sendhil Mullainathan (2003) conducted an “audit study” in which they responded to want ads for sales, administrative support, clerical and customer services jobs in

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8 Wilson (2014) notes another reason black unemployment rates are higher than white unemployment rates is that black workers show more “resilience” than other workers and are less likely to abandon their job search when unemployed.

Boston and Chicago using fictitious resumes that differed only in that half had black and half had white “sounding” names (determined by an analysis of Census records). Resumes with white sounding names received 50 percent more call backs from potential employers than the resumes with black sounding names. White respondents with “high quality” resumes received 27 percent more call backs than white respondents with “low quality” resumes, but black respondents with high quality resumes received only eight percent more call backs than black respondents with low quality resumes.

More recently, Nextions (2014), a Chicago-based consulting firm, found that 60 partners at law firms rated the same legal brief consistently lower when told the author was black (3.2 out of 5), compared to when they were told the author was white (4.1 out of 5). In addition, the reviewers were more likely to point out spelling, grammar, and technical errors when under the impression the author was black.

Researchers have also found evidence of significant racial discrimination in the high-paying, closely watched industry of professional sports. A study of Major League Baseball<sup>9</sup> demonstrated that when the umpire and pitcher did not match racially, umpires were less likely to call strikes. This particular form of discrimination affected the types of pitches thrown and had a negative effect on the performance of minority pitchers.

Looking at the National Basketball Association, Justin Wolfers and Joseph Price (2007) found white referees were more likely to call personal fouls on black players than on white players. The bias was so large that it even had an impact on the probability of a majority black team winning a game officiated by majority white referees. A recent update to the original report<sup>10</sup> found that awareness of the original findings of discrimination was enough to eliminate this particular form of bias in this particular context.

Hamilton, Austin, and Darity (2011) conducted an analysis more directly related to the situation facing black recent college graduates. They found that more than half of management, professional, and related occupations – those where many college graduates ultimately work – have an underrepresentation of black men. Meanwhile, in typically low-wage service occupations, black men were over-represented. The authors estimate that a \$10,000 increase in the average annual wage of an occupation was associated with a seven percentage-point decrease in the proportion of black men in that same occupation.

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9 Parsons, Sulaeman, Yates, and Hamermesh (2011).

10 Pope, Price, and Wolfers (2013).

## Conclusion

Young workers have borne the brunt of the labor-market downturn that started in 2008. As Abel, Deitz, and Su have demonstrated, recent college graduates were no exception. Among recent college graduates, blacks were particularly hard hit by the Great Recession and its aftermath. Young black workers with college degrees suffered less than their less-educated counterparts, but their poor outcomes, even as the economy has picked up, raise serious questions about economic solutions premised solely on improving the skills and education of the workforce. That black college graduates of all ages consistently have higher unemployment rates, higher underemployment rates, and lower wages than their white counterparts, even when black students complete STEM majors, reinforces concerns that racial discrimination remains an important factor in contemporary labor markets.

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