The College Conundrum

Why the Benefits of a College Education May Not Be So Clear, Especially to Men

John Schmitt and Heather Boushey   December 2010
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Introduction and summary

At least since the early 1990s, the share of young people earning a four-year college degree has not increased as quickly as many economists would like. A higher share of young people today have college degrees than at any point in our nation’s history, yet many economists remain concerned that the supply of college graduates is not keeping pace with what they see as an accelerated demand for the skills taught at college. This college gap seems particularly large for young men, who are now substantially less likely than young women to earn a four-year college degree.

Economists measure the accelerated demand for higher skills by looking at the change in wages of workers with different skills. Over the last three decades, the earnings of college graduates increased sharply relative to the earnings of workers with only a high school degree. Among 25- to 34-year-olds, for example, a college graduate earned 25 percent more than a high school graduate at the end of the 1970s, and by the late 2000s, the pay premium for college graduates in the same age range climbed to 60 percent.1

Standard economic theory would predict that such a large increase in relative pay for college-educated workers would lead more and more young people to start and finish college degrees. Yet the share of all 25- to 34-year-olds with a four-year college degree or more changed little in the 1980s, even as the financial return to college increased sharply. (see Figure 1) This flat trajectory for all 25- to 34-year-olds is the result of counteracting trends for women and men. Over the 1980s, the college share increased for women, even as the share of college-educated men reversed course and rose through most of the decade. And in the 2000s, the overall college-attainment rate began to rise as the college share for women accelerated considerably and the share of college-educated men reversed course and rose through most of the decade. And in the 2000s, the overall col-

FIGURE 1
The gender gap in college
Share of 25-to-34 year-olds with a college degree, 1979-2009
Share of all 25-34 year olds
college share continued to grow. Women’s college attainment continued to rise at a steady yet slower pace than the late 1990s, but there was almost no change over the decade in the share of 25- to 34-year-old men with a college degree.

These historical trends present economists with two college conundrums. The first: Why haven’t young people responded to higher returns to college by rushing to attend college? The demand side of the market is sending a clear price signal that there are much higher earnings for college-educated workers to be had upon graduation, but the supply side has responded only haltingly. College completion rates are up, but not very much. The second conundrum: Why have men, who are receiving the same signals as women, lagged particularly far behind?

Almost by definition, increasing college completion involves getting students that in the past would not have attended college or who would have attended, but not completed college, to do so. To understand why college completion has not risen as fast as economic models might predict, we need to focus on the students who might, if conditions were slightly different, attend college. These students are wavering between going to a four-year college, attending community college, or entering the labor force immediately. They are on the fence for a variety of reasons. Maybe they did not have the highest grades in high school. Maybe they have work or family responsibilities. Maybe they feel that they cannot afford college.

Whatever the case, for many of these potential students the most relevant reference point may not be the experience of high fliers or even the average college graduate, as economists looking at the data tend to assume. Financial returns from a college education vary widely across graduates, and the gap between the highest and lowest paid graduates increased somewhat over the last three decades. Students on the fence about college may look more to the experience of recent graduates who are earning less than the average college graduate.

Indeed, we find that for many young people, the economic case for attending college may not be as clear cut as it appears based on the experience of the average graduate. For those college graduates at the middle and top of the postcollege pay scale, college in hindsight looks like a sound investment, but not all graduates do this well. And a small but important share of graduates actually do no better than their counterparts who left school after high school—even before taking the costs of college into account. In 2009, for example, our analysis of the Current Population Survey Outgoing Rotation Group extract finds that among 25 to 34
year old men, one-in-five (19.4 percent) who had a college degree actually earned less than the average male high school graduate, as was also the case for one-in-seven women with a college degree (14.0 percent).

The private decision that the wavering student makes not to attend college may be rational for that individual, but it still may be that we would be better off as a society if students on the fence actually went to college. But to get these students to attend (and complete) college, we have to make that socially sensible decision work for individual students as well. The role for policy is to lower the cost (including the debt burden) and to raise the financial benefits to college for these students who are on the margin between college and work.

In this short overview, we first review some possible answers to these two puzzles and then discuss some implications for policy. At this stage, our explanations are tentative and our policy discussion is intended primarily to help focus attention on addressing the market obstacles to increasing participation in postsecondary education, among American males in particular.
Why the underwhelming response, particularly for men?

Let’s begin by assuming that younger cohorts of both men and women see the market signal that there is a growing demand for college-educated workers. Even if that is true, a variety of factors limit the ability of recent high school graduates to act quickly to respond to the changing nature of labor demand. The most important of these factors is probably the rise in college costs and the composition of financial aid packages.

Further, the sheer nature of the lead time on a college investment means that there will be a lag in the response to the market signal, especially if structural factors—for example, how colleges organize class schedules and financial aid—assume that the typical student enters college at age 18 and attends full time. So let’s first look at these hurdles.

The rising cost of college

One factor that is often overlooked—even by economists who generally obsess over prices—is that at least part of the rising financial returns to college has been offset by substantial increases in the cost of attending college. Between 1980 and 2010 the inflation-adjusted cost of college tuition and fees rose as much or more than the returns to a college education. (see Figure 2) Notably, the cost side of the ledger rose much faster in recent years for students attending public, four-year institutions, which are more likely than private, four-year institutions to attract students wavering about college attendance.

The data in the chart refer to published tuition and fees and don’t include the effects of the increase in financial aid over this period, which shifted away from grants toward student loans. Financial aid applications and packages have also both become increas-
ingly complex, which makes it difficult for students to apply for aid and fully understand how much college will ultimately cost them once they accept aid.\(^5\) Even after financial aid, obtaining a college degree is substantially more expensive now than it was 30 years ago, and young people deciding about college factor both the expected returns and the expected costs into their decision.

**The role of debt**

One way that students and their families cope with the rising cost of college is through borrowing. Among college seniors graduating in the 2007-08 academic year who had taken out student loans, the average cumulative debt was $21,622,\(^6\) more than double the average of $10,251 among those graduating in 1986-1987.\(^7\) While student loans make college possible for many, the increasing need to rely on debt financing for college may also deter some young people from attending college.

Men also seem to be less willing than women to use debt to finance college, which may help to explain why they’ve lagged behind women as debt has become an increasingly important part of paying for college. Among those graduating in 2007-08, for example, 63.2 percent of women took on student debt, compared to 57.4 percent of men. Women who took out student loans were also more likely than men to take on large amounts of debt. While 49.3 percent of women took on more than $19,000 to finance a college degree, only 44.7 percent of men took on that much debt.\(^8\)

Further, students from lower-income families take on as much debt by graduation with a bachelor’s degree as do students from higher-income families.\(^9\) This indicates a commitment among these students to getting a degree, but it also indicates how the combination of rising college costs and the shift in the composition of student aid toward loans rather than grants increases the cost burden for students from lower-income backgrounds.

Parents may also be playing a role here. Those parents who benefited from a college degree or saw others benefit may be more willing to encourage children to take on debt or take on debt themselves to help pay for a child’s college education. But those parents who did not take on large debt (and older generations in general took on smaller debt loads), may be concerned about the value of the investment.
Getting an incomplete

Most young people understand that a college degree will make a big difference for their future. As a result, a majority of recent high school graduates do enroll (eventually, if not immediately) in college. Many of these students, however, leave before they earn their degree. Among students who entered college in 1998, for example, only about one-third (34.5 percent) graduated four years later, just over half (51.5 percent) graduated within five years, and only slightly more (56.4 percent) after six years.

Men are both less likely to enroll in college and less likely to finish if they’ve started. In the same 1998 entry cohort, for example, the six-year graduation rate for men was 53.1 percent, compared to 59.0 percent for women. One of the easiest ways to increase the pool of college graduates would be to ensure that those students who already took all the necessary steps to attend college are able to finish. Progress here depends on understanding why students, particularly men, drop out in such high numbers.

Long lead times

One fundamental explanation for the weak market response is that a four-year college degree or an advanced degree involves substantial lead time. The group that was 25 to 34 years old in 1980 (just as the returns on a college degree started to rise) typically finished college between three and 12 years earlier. Moreover, for “lifecycle” reasons (including having children) relatively few people in that 25- to 34-year-old age group were in college nor would they have considered returning to college at that age—even as they observed the rising financial benefits of college. As a result, if we stick with the current model for college education, increasing the supply of college graduates in the U.S. economy is a long, slow process that will primarily involve increasing the college attendance and completion rates of young adults in the 18- to 24-year-old range.

Figure 1 on page 4 does suggest, however, that young people do respond to market signals. From the early 1990s, the share of 25- to 34-year-olds with a college degree began to rise. This is a group that was “college age” in the 1980s when the financial returns on a college education shot up. The challenge, however, is that the supply response has been relatively modest and, for men, all but disappeared in the 2000s. If only the youngest cohorts hear and respond to market signals about the
earnings advantage of a college degree, the overall share of college graduates in the workforce will only increase slowly.

Is the market signal garbled?

Economists have made the case for the need for more college graduates based on the observation that the gap between the earnings of the average college graduate and the average high school graduate has widened considerably over the last three decades. But the experience of the average graduate may not be the relevant reference point for the large pool of high school graduates who have decided not to attend college. And this is precisely the group where we need to increase college attendance if we’re going to increase the overall supply of college graduates.

Figure 3 displays, separately for men and women, one measure of the returns on a college education for 25- to 34-year-old workers. The chart shows the return for the average graduate (the center line in each panel), as well as for a relatively low-paid graduate (the 10th percentile graduate, the bottom line in each panel) and a relatively well-paid graduate (the 90th percentile, the top line in each panel). Each line shows how much more each type of worker earns than the average high school educated worker (male or female, as appropriate).

For both men and women, the average lines behave as economists have known for years. For men, between 1979 and 2009, the difference between what the average college and the average high school educated worker made almost tripled. For women, the average college premium increased more than 70 percent.12

But Figure 3 also lets us look at the experience of graduates whose earnings are above and below the average. The first important feature is that, in any given year, the experience of college graduates varies widely. Well-paid graduates (those in the 90th percentile of the distribution) earn much more than high school graduates and much more than the average college graduate, too.
A second feature of college graduate wage distribution is that it has widened somewhat over the last three decades. Wage inequality increased between college and high school graduates, but it also increased within college graduates. In 1979, a top-earning male college graduate made about 70 percent more than a low-earning graduate. By 2009, the gap was over 90 percent. For women, the same gap within college graduates rose from just over 60 percent in 1979 to almost 90 percent in 2009.

A final feature of the figure, and one that is directly relevant to young people’s decisions about college, is that an important portion of college graduates earn less than the average for high school graduates in the same age range. For both men and women, in every year since 1979, graduates in the 10th percentile of the wage distribution earned less than the average high school graduate. For men, low-earning college graduates consistently lagged farther behind their high school-only counterparts than low-earning women college graduates did.

The increasingly unequal distribution of college-graduate earnings suggests that many high school graduates may not be getting a clear signal that college is right for them. The financial benefits of college have gone up more for graduates at the top than they have at the bottom, while the costs of college have gone up for students across the board. Even after three decades of increasing returns to a four-year college, an important share of college graduates continue to earn less than the average pay for someone with only a high school degree.

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Is employment polarization on the decline?

Young people deciding on college in recent years may also be responding to changes in the labor market in the 2000s—changes that have pushed against the longer-term trends demonstrating the value of a college education. Over the last decade or so, economists documented a substantial “polarization” in employment, with the economy increasingly generating jobs for workers at the high end and the low end of the skills distribution, while “hollowing out” the middle. Typically, this research has focused on changes in employment demand over fairly long time periods. Economists David Autor at the Massachusetts Institute of Technology and Boston University’s David Dorn, for example, demonstrated substantial employment polarization over the period 1980 to 2005.
In more recent work, however, Autor has separately examined employment changes over three different subperiods of the last three decades. What is most striking about this new research is that it appears to show that polarization, particularly the rising employment share for workers at the top of the skills distribution, appears to have abated, and for men may possibly even be on the decline. For the period 1999 to 2007, for example, he finds that the only occupations in the economy where employment shares were on the rise were those in about the bottom fourth of the skills distribution. Occupations in the top three-fourths of the skills distribution—including those at the top of the distribution, which increased sharply in the 1980s and 1990s—either lost employment share or only held their own.

Autor’s recent work also shows that, over the longer period between 1979 and 2007, the share of men with a college degree or more who took jobs in low- and medium-skilled occupations increased while their share in high-skilled occupations fell. Flat or even falling employment growth for high-skilled jobs for college graduates over the last decade may be discouraging young people from investing in college. Just as the average returns to a college degree may obscure the experience of graduates at the bottom and the top, comparing the present with 30 years ago may hide factors relevant to the educational decisions that young people are making today.

Ongoing occupational segregation

Despite significant improvements in the 1970s and 1980s, the labor market remains highly segregated along gender lines. Large shares of women, even highly educated women, are concentrated in what are largely “female” occupations, while men are concentrated in largely “male” occupations. Even though occupational segregation tends to reinforce the gender pay gap by channeling women into lower paying occupations than men with similar skills, occupational segregation may also be creating employment problems for college-educated men over the long term.

Some of the high-skilled occupations where employer demand is expected to grow most, for example, in health and education occupations, are still overwhelmingly jobs held by women. The perception that these jobs are “women’s work” may steer men away from these jobs for sociological reasons but also because, all else constant, high concentrations of women workers in an occupation are associated with lower earnings.
In contrast, women may see a rising average return on a college education due to a rising demand in occupations that they traditionally enter. Men, who do not traditionally enter those fields, may not have the same evaluation of their long-term prospects. Combined with Autor’s finding of college-educated men increasingly entering low- and middle-skill occupations, this may mean that young men deciding on college may not be seeing the same price signal that economists see on average.
In general terms, if we want to increase the share of college graduates in the economy, we should pursue strategies that:

- Lower the high school dropout rate, especially for young men, because young people won’t start college if they can’t finish high school
- Encourage more high school graduates to apply to college, especially men
- Lower the “college dropout” rate, once again especially for men

But if only young people go to college, it will still take decades to transform the labor market from top to bottom. This reality suggests that part of the strategy for improving the skills of the labor force must focus on the large share of workers who are already beyond the age where people typically study full time toward a postsecondary degree. A related implication is that there should be a premium placed on developing and extending educational options that lead to nationally recognized skills in less time than the usual four-year college degree.21

An important barrier continues to be the high cost of college. Even though the private returns on a college education increased substantially over the last three decades, so too have the private costs. Financial aid defrays some of those increases, but college remains substantially more expensive for students and their families than was the case 30 years ago. While student loans allow many students to earn a college degree, a continued reliance on debt may limit the ability to expand college attendance much further.

This is especially the case among lower-income families—those who currently have the lowest college attendance and completion rates. They have taken advantage of various student loan programs, but with more limited family resources the same debt burdens weigh heavier on these students than on higher-income families. The strong emphasis on debt financing may also discourage young men, more than young women, from applying for college. The low graduation rates at four-year college are likely related to costs, but there may be more at work. A bet-
ter understanding of why young people, especially young men, start but don’t finish college could be an important way to increase the supply of college graduates.

All of these factors point toward considering policies that lower the upfront cost of college as well as the postcollege debt burden. Expansion of nondebt forms of financial aid are one obvious policy. Another concrete proposal, which has been discussed by both the Labour Party and the Conservative Party in Britain, would be to replace upfront tuition fees with a “graduate tax,” a surcharge on federal income tax that would be paid over a period after graduation based on postgraduation earnings, not on the cost of the program attended.22

Such a system enables students to pay for their education once they’ve finished, which is the case, too, with student loans, but the repayments are scaled to their after-graduation earnings. So those whose private returns on their college degree are higher (say, those in the financial sector) would pay more each year, while those whose private returns are lower (say, someone who teaches kindergarten) would pay less. This idea builds on the loan forgiveness program that we currently have in place for those who work in public service.23

For many young people, the economic case for attending may not be as clear cut as it appears to economists looking at the average experience of graduates over the last three decades. High and rising levels of inequality within college graduates mean that an important share of graduates don’t fair much better than their counterparts who left school after high school (even ignoring the cost of college).

Policies that bolster earnings among those college graduates who don’t make as much money after graduation as their higher earning peers might encourage more high school graduates to enter college and finish up. In addition, policies that work to eliminate gender segregation or that boost the pay of traditionally female-dominated occupations might be particularly helpful since many of the lowest paying jobs for college graduates, men or women, are in those occupations that are dominated by women.

One final policy consideration concerns the possibility that the demand structure in the economy may be changing again. Evidence suggests that in recent years employment growth is concentrated most in the bottom fourth or so of the occupational skill distribution, in jobs such as food service, personal care, and protective service occupations. In contrast, demand at the top of the earnings curve, for jobs such as managers, professionals, and technicians, is
flat or possibly even falling. If so, recent high school graduates might interpret this development as evidence against investing heavily in a college education, in which case policies to promote greater college attainment might be fighting against and not with the market stream.

Once we dig into the data, the college conundrum begins to evaporate. Young people are not finishing college in the numbers that economists think they should because the rising financial returns on a college degree only capture part of the decision facing young people. On average, the pay-off to college is much higher today, but so is the cost, both the upfront cost and the debt-burden carried by recent graduates. And for many of the recent high school graduates who are waver- ing about attending college, the average return may not be the most relevant benchmark. Despite high and rising financial returns on a college degree, an important share of college graduates still make less than the average high school graduate in the same age range, even without factoring in the direct costs of college. Several of these factors appear to weigh more heavily on men than they do on women, which may help to explain why young men have lagged behind young women. Men appear to be less willing to assume high levels of debt for college, which may in part reflect their increasingly mixed financial experience after college.
Endnotes

1 We focus here on 25- to 34-year-olds because they are old enough to have completed a four-year college degree following the standard educational trajectory and still young enough to tell us about relatively recent decisions about attending and completing college.

2 This is the opening piece of project that will delve deeper into the issues introduced in this policy brief.

3 The average cost of college tuition and fees in 2010 is about 2.9 times higher for a private college and about 3.6 times higher for a public college than it was in 1980; even a public two-year college is about 2.6 times more expensive now than in 1980. For 25- to 34-year-olds, the returns to college (relative to high school) are about 2.4 times higher now than in 1980.


5 For more on this issue within the context of community colleges, see: Molly F. McIntosh and Cecilia Elena Rouse, The Other College: Retention and Completion Rates Among Two-Year College Students (Washington: Center for American Progress, 2009).


7 Heather Boushey, “Student Debt: Bigger and Bigger” (Washington: Center for Economic and Policy Research, 2005), updated to 2008 dollars using the CPI-RS.


12 These results are based on raw data, not regression controls, so differ quantitatively, though not qualitatively, from more formal regression-controlled analysis.


16 In the economics discussion, the term polarization it is used specifically to refer to growth at the top and the bottom of the distribution, alongside a (relative) decline in the middle.

17 See David Autor, “The Polarization of Job Opportunities in the U.S. Labor Market,” Figure 1.

18 See Autor, “The Polarization of Job Opportunities in the U.S. Labor Market,” Figure 4. Separately, the college-high school wage premium also appears to have flattened in the 2000s.

19 For an excellent survey of occupational segregation by gender from the early 1970s through the present, see Ariane Hegewisch, Hannah Liepmann, Jeffrey Hayes, and Heidi Hartmann, “Separate and Not Equal? Gender Segregation in the Labor Market and the Gender Wage Gap” (Washington, Institute for Women’s Policy Research, 2010).


21 For ideas on how to do this, see Louis Soares, “Working Learners” (Washington: Center for American Progress, 2009).


23 The College Cost Reduction and Access Act of 2007 established a new public service loan forgiveness program. For graduates who are employed full-time in public service, if they make their loan payments for 10 years, at the end of that period, their remaining federal student loans are discharged. There are also loan forgiveness programs for other specific occupations and income levels.
About the authors

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