

## **FOR-PROFIT HIGHER EDUCATION: AN ASSESSMENT OF COSTS AND BENEFITS**

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*This paper provides a summary and analysis of the economics of the two-year, for-profit higher education sector. I highlight studies that have contributed to our understanding of this sector and assess its social costs and benefits. I generate a rough estimate of the annual per student cost to taxpayers of federal and state grant aid, appropriations, and contracts flowing to these institutions, as well as the cost of defaults on federally-subsidized student loans. I also estimate the out-of-pocket educational expenses and foregone earnings of for-profit students. I find that for-profit, two-year colleges cost taxpayers roughly \$7,600 per year for a full-time equivalent student. Students bear most of the cost of their education, in the form of foregone earnings, tuition, and loan interest amounting to \$51,600 per year. I contrast these costs with similar estimates for public community colleges, including the direct subsidization of the sector by state and local taxpayers. I find that community colleges cost taxpayers more than for-profits — about \$11,400 per year — but students incur costs of only about \$32,200 per year of attendance. Considering both public and private costs, community colleges are thus roughly \$15,600 less expensive. For-profit college attendance would result in net benefits for students if earnings gains exceed 8.5 percent per year of education, while students in community colleges require minimum earnings gains of 5.3 percent per year of education to reap positive net benefits.*

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### **I. INTRODUCTION**

In 2010, a report by the U.S. Government Accountability Office (GAO) set off a heated debate by alleging unscrupulous recruiting practices and fraud in the federal financial aid programs at several large for-profit colleges (GAO, 2010). In response, the Department of Education instituted controversial new rules which specified that for-profit institutions could maintain eligibility for federal student aid programs only

if their students met strict income-to-debt ratios and loan repayment rates (Federal Register, 2011).<sup>1</sup> Although questions of for-profit college cost and quality are central to the debate over the regulations, few empirical estimates of these measures exist.

In this paper, I first provide a summary and analysis of the economics of for-profit higher education, highlighting studies that have contributed to our understanding of the sector. I focus on for-profit institutions that offer two-year and less-than-two-year certificates and degrees, which comprise the vast majority of this sector. These institutions provide education and training to thousands of low- and middle-skilled workers every year and are the primary target of the Department of Education's proposed regulations.

I next assess the social costs and benefits of the two-year, for-profit, higher education sector. I generate a rough estimate of the annual per student cost to taxpayers of federal and state grant aid, appropriations, and contracts flowing to these institutions, as well as the cost of defaults on federally subsidized student loans. I also estimate the out-of-pocket educational expenses and foregone earnings of for-profit students. I find that for-profit two-year colleges cost taxpayers roughly \$7,600 per year for a full-time equivalent student, while students bear most of the cost of their education, in the form of foregone earnings, tuition, and loan interest amounting to \$51,600 per year. I perform sensitivity analyses for variations in the most uncertain parameters. My estimates of the total costs to students and taxpayers of for-profit education range from \$52,000 to \$65,000 per student per year. These figures correspond to total costs for the for-profit sector of \$14 billion to taxpayers and just under \$100 billion for the 1.8 million students enrolled in these institutions each year.

I contrast these costs with similar estimates for public community colleges, including the direct subsidization of this sector by state and local taxpayers. I find that community colleges cost taxpayers more than for-profits — about \$11,400 per year — but that students incur only about \$32,200 in costs per year of attendance. Considering both public and private costs, community colleges are thus roughly \$15,600 less expensive per student per year than for-profit colleges. In aggregate, taxpayers spend \$75 billion supporting the 6.6 million community college students in the United States.

I also calculate the future earnings gains necessary to fully offset the costs to students and taxpayers in each sector. For for-profit students, earnings gains of 8.5 percent or more per year of education would result in positive net benefits — a figure that is somewhat higher than recent studies of the returns to for-profit institutions (Cellini and Chaudhary, 2011; Turner, 2011). In contrast, students in community colleges require a minimum increase in earnings of 5.3 percent per year of schooling to break even. Thus, relative to community colleges, for-profit higher education appears to be less expensive for taxpayers, but much more costly for students and society as a whole.

The paper proceeds as follows. Section II describes the economic research on for-profit colleges, highlighting studies that focus on the supply and demand for for-profit

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<sup>1</sup> Under the new regulations, a program may lose eligibility for federal aid if fewer than 35 percent of former students are repaying their loans, or if recent graduates' debt-to-earnings ratios are 12 percent more of annual earnings or 30 percent or more of discretionary income (Federal Register, 2011).

education, the impacts of financial aid policy, and student outcomes. Section III describes the data and the methodology of my cost-benefit analysis, Section IV discusses the valuation of costs, and Section V describes the benefit calculations. Section VI presents extensions and policy implications, while Section VII concludes.

## II. THE ECONOMICS OF FOR-PROFIT EDUCATION

There is surprising little economic research on for-profit postsecondary education given its prevalence. The primary reason is that few publicly available educational data sets explicitly identify for-profit institutions and students. Nonetheless, new data sources and methods have led to significant strides in our understanding of these institutions in recent years. In this section, I review the economic literature on for-profit postsecondary education, highlighting what we know about these institutions as well as the gaps in the literature. I divide the literature into four broad categories: studies of the supply side of the market, focusing on for-profit institutions; demand-side studies emphasizing student characteristics; research on financial aid policy; and studies of for-profit student outcomes.

### A. The Supply Side: For-Profit Institutions

Research on the institutional behavior of for-profits can be divided into two primary lines of inquiry: the size and growth of the sector, and competition between the public and for-profit sectors.

Remarkably, generating a count of the total number of for-profit institutions in the United States has eluded researchers until recently. The reason is that the U.S. Department of Education only tracks schools that are eligible for federal financial aid programs under Title IV of the Higher Education Act and, as recent research shows, this misses a substantial number of for-profit institutions. Further, assessing the growth of the sector over time — even just the growth in aid-eligible institutions — was nearly impossible until recently because it was not until the late 1990s that the Department of Education made an effort to track down all aid-eligible for-profit institutions (Cellini, 2009). This effort, as well as new data sources on non-aid eligible institutions, is for the first time allowing economists to fully assess the size and growth of the sector.

Cellini and Goldin (2012) provide the first comprehensive assessment of the total number of for-profit institutions in the United States. Using data from the regulatory agencies of five states, we find that institutions that are not federal aid-eligible outnumber aid-eligible institutions. Overall, we estimate that there are 7,550 for-profit institutions in the United States, serving 2.5 million students. Of these, 2,940 institutions and 1.8 million students are Title-IV eligible and reflected in official Department of Education counts.

Deming, Goldin, and Katz (forthcoming) explore the growth of the sector. Focusing on federal aid-eligible institutions in the Department of Education data, they document the tremendous growth of for-profit education over the last decade. Enrollment

in aid-eligible for-profits now accounts for about 11 percent of all enrollment, up from just 4 percent in 2000. This growth is largely driven by chains and on-line institutions. Deming, Goldin, and Katz (forthcoming) report that aid-eligible for-profits currently confer 42 percent of all postsecondary certificates, 18 percent of associate's degrees, and 5 percent of bachelor's degrees.

Several theories regarding the growth of for-profit higher education are explored in a chapter by Breneman, Pusser, and Turner (2006), in an excellent volume on for-profit higher education edited by the same authors. On the supply side, the authors point to several innovations implemented in the for-profit sector that have contributed to lowering the costs of education provision, allowing opportunities for greater profits. Examples include online learning, variable tuition pricing, and the use of non-tenured faculty. These supply-side innovations have allowed for-profit institutions to capitalize on increased demand for education, particularly among older, non-traditional students, as they respond to labor market conditions and the rising returns to education and training over the last few decades.

For-profits also appear to respond strongly to the demand for education among the traditional college-age population. In the same volume, Turner (2006) explores the differential growth of for-profits across states, finding a strong correlation between the percentage change in the population ages 18 to 24 and for-profit growth rates. States like California, Colorado, and Arizona witnessed the largest growth in both college-age population and for-profit enrollment between 1995 and 2000. Turner further details the distribution of degrees offered by for-profit institutions by field of study. As expected, public and non-profit institutions offer a much higher percentage of associate's and bachelor's degrees in arts and sciences and liberal/general studies, while for-profit degree programs are concentrated in business, health professions, engineering-related technologies, and computer science. She attributes the for-profit focus in these areas on several factors, such as: skills in these fields are relatively easy to certify (e.g., through exams or job placement), practitioners are capable of teaching the necessary skills, physical plant requirements are minimal, and interdisciplinary training is not necessary for success.

Despite these differences in the proportion of degrees awarded in various fields, Turner (2006), Cellini (2009), and Bailey, Badway, and Gumport (2001) all document substantial overlap between the degrees and certificates offered in the for-profit, public, and not-for-profit sectors, particularly at the two-year college level. In California, for example, my previous work demonstrates that in most fields, including business, construction, health, and technical trades, the number of associate's degree and certificate programs offered in the for-profit sector is roughly equal to the number of programs offered in the public sector in the average county.

The degree of program overlap drives another strand of economic inquiry that focuses on the extent and nature of competition between for-profit colleges and other sectors. Bailey, Badway, and Gumport (2001) argue that although there is overlap between the degrees and certificates offered by public community colleges and for-profits, because of the small number of for-profit schools and students, any competition between the

two sectors is negligible. Their contention is based on the U.S. Department of Education's data in the 1990s, and therefore undercounts the number of institutions and students; nonetheless, the numbers of institutions and students were still likely quite small. Moreover, their in-depth case study of a multiple-branch for-profit school and local community college indicates that community college administrators generally do not view for-profit schools as competitors. The authors conclude that the existence and success of for-profit schools is not likely to exert a significant negative effect on community college enrollment.

In Cellini (2009), I provide the first causal evidence that public and for-profit two-year (and less-than-two-year) colleges do, in fact, compete for students. I use a regression discontinuity design based on close votes on community college bond measures to control for unobservable tastes for education that may bias ordinary least squares (OLS) estimates. My results reveal that when public community colleges receive increased funding and media attention with the passage of a bond measure, students switch from for-profit colleges to community colleges, driving some for-profit colleges out of the market. The magnitude of the effects in each sector are remarkably similar, suggesting strong competition between for-profits and community colleges. The timing of the reaction also suggests that students may not have full information about two-year college options.

## **B. The Demand Side: Student Characteristics**

An understanding of the demand side factors influencing the size and growth of for-profit education requires an understanding of the characteristics of the students attending these institutions and how these students differ from students attending public and non-profit institutions.

Two studies in the 1980s find that private two-year college students are more likely than public community college students to be women, minorities, and come from lower-income and less-educated families (Apling, 1993; Cheng and Levin, 1995). More recent studies suggest that these patterns persist (Bailey, Badway, and Gumpert, 2001; Cellini, 2005; Chung, 2009a; Rosenbaum, Deil-Amen, and Person, 2006). Chung (2009b) uses a multivariate analysis of student-level data from the 1988 National Education Longitudinal Study to study differences in the characteristics of for-profit students and those in other sectors. She finds that for-profit students have less parental involvement in their education, higher levels of high school absenteeism, and are more likely to be young parents than students in other sectors.

Deming, Goldin, and Katz (forthcoming) corroborate the patterns found previously, exploiting new data on first-time college freshmen from the 2004/09 Beginning Postsecondary Students Longitudinal Study. For-profit students in this sample are more likely to be female, black, and Hispanic relative to students in other sectors. Compared with those in community colleges, for-profit students are disproportionately single parents, have much lower family incomes, and they are almost twice as likely to have a general education diploma (GED), rather than a high school diploma.

All of the aforementioned studies rely solely on U.S. Department of Education data on students in institutions that are eligible for federal financial aid programs. Student-level data on ineligible institutions are not available, but studies based on more inclusive data, such as the National Longitudinal Survey of Youth 1997, find similar patterns of female and minority attendance. However, as might be expected, the more inclusive set of institutions reduces disparities in household income between for-profit and community college students (Cellini and Chaudhary, 2011).

### C. The Impact of Policy: Financial Aid

The biggest difference between for-profit and public colleges is undoubtedly their price: required tuition and fees for public community colleges average just \$2,136, while for-profit, two-year colleges charge over \$10,000 more, averaging \$13,725 in 2008–2009 (National Center for Education Statistics (NCES), 2010). Because of their higher tuition, and due to the fact that aid-eligible, for-profit institutions attract (or recruit) a large numbers of students who come from low-income families, for-profit institutions receive a disproportionate share of federal student financial aid under Title IV of the Higher Education Act. In addition, suggestions that the for-profit industry is overly reliant on revenue from aid programs and allegations of fraud and abuse in financial aid have plagued the sector and driven policy in the last few years (GAO, 2010; Federal Register, 2011). In light of these allegations, studies of the impact of financial aid policy on student and institutional behavior are critical in developing sound public policy.

Deming, Goldin, and Katz (forthcoming) point out that for-profits account for 24 percent of Pell grant disbursements and 26 percent of federal student loan disbursements even though they enroll only 12 percent of students. Further, they point out that federal grants and loans received under Title IV of the Higher Education Act account for the vast majority of funding that these colleges receive. In 2008–2009, federal aid program accounted for 74 percent of the revenues of Title IV-eligible, for-profit institutions (Deming, Goldin, and Katz, forthcoming).

In the first quantitative study to address the relationship between financial aid and for-profit enrollment, Turner (2005) shows that Pell Grant recipients are more likely to enroll in for-profit institutions than in public and non-profit institutions in response to cyclical labor market fluctuations. Specifically, she finds that as unemployment rates and public tuition rise, enrollments of Pell Grant recipients in for-profits rise, while enrollments decline with increases in state appropriations.

In Cellini (2010), I assess the impact of the federal Pell Grant program, the GI Bill, and California's Cal Grant program on for-profit college openings and closings. I ask whether the generosity of these programs influence the net number of for-profit colleges in a market. I find that for both Pell and Cal Grants, increases in the per-student maximum award encourage for-profit college entry. The relationship is particularly strong in counties with high adult poverty levels, where more students are eligible for aid. This paper provides the first evidence that federal and state financial aid policies have significant impacts on for-profit college behavior.

In more recent work, Cellini and Goldin (2012) test the “Bennett Hypothesis,” which suggests that the availability of federal financial aid may induce some for-profit institutions to raise tuition above the cost of education. To answer this question, we compare the tuition in programs and institutions that are eligible for federal aid under Title IV against observationally similar programs that are not eligible. We find that aid-eligible institutions charge about 73 percent more than similar ineligible programs, and this effect does not appear to be driven by differences in college quality.

Extending work on the relationship between financial aid and enrollments in for-profits, Darolia (2011) uses a dynamic regression discontinuity design to assess whether institutions that lose federal financial aid eligibility experience lower enrollment and slower enrollment growth than similar institutions that narrowly miss cutoffs for eligibility for Title IV. He finds that enrollment levels and growth rates both decline substantially for schools that lose eligibility, and that these effects are particularly strong among for-profit institutions. Moreover, he finds that the effect is attributable to a decline in the number of new students rather than existing students transferring to other institutions.

#### **D. For-Profit Quality: Student Outcomes**

The issue of the quality of a for-profit education is a central concern for both students and policymakers. If for-profits institutions are providing high quality education to underserved students, then their reliance on federal aid may be warranted and even desirable. Conversely, if these institutions fail to provide benefits to students sufficient to offset their costs, then public support through federal aid programs may be unjustified.

Economic theory suggests that the best measure of education quality is the labor market return, or the growth in earnings, that can be attributed to a student’s education. Over the past half-century, an expansive body of literature has developed to measure the returns to education. Reviews of the literature by Card (1999), Ashenfelter, Harmon, and Oosterbeek (1999), and Kane and Rouse (1995a) report that one additional year of schooling causes earnings gains in the range of 6–9 percent, depending on the method, sample, and time frame of the analysis, while more recent and better identified analyses reveal much higher returns, averaging 10–15 percent per year (Card, 2001; Goldin and Katz, 2008). The vast majority of the research in this area has focused on high school and four-year college returns, with relatively few studies emphasizing differences in various sectors and levels of schooling (Ashenfelter, Harmon, and Oosterbeek, 1999).

Very few studies have generated credible estimates of the private return to education for for-profit students. Three studies have generated cross-sectional comparisons of average earnings, rather than gains, of for-profit and community college students (Grubb, 1993a;<sup>2</sup> Chung, 2008; Deming, Goldin, and Katz, forthcoming). Chung controls for selection on observable characteristics and Deming, Goldin, and Katz implement propensity score matching, but none can control for unobservable student characteris-

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<sup>2</sup> Note that a related paper (Grubb, 1993b), using the same data and methods to estimate returns to community colleges was found to be severely flawed by Kane and Rouse (1995b).

tics that might bias cross-sectional estimates. Nonetheless, these studies generally find no or few differences in earnings between students in the two sectors. Conditional on employment, Deming, Goldin, and Katz find no earnings difference, but when they include students with zero earnings, for-profit students appear to have 8–9 percent lower earnings than students in other sectors.

In Cellini and Chaudhary (2011), we generate what we believe to be the first causal estimates of the earnings gains to two-year private (mostly for-profit) institutions. We use a student-level fixed effects approach to control for time-invariant unobservable characteristics of students in the 1997 National Longitudinal Survey of Youth. We find no statistically significant difference in the returns to associate's degrees and vocational certificates in private institutions relative to community colleges. Both sectors generate earnings gains of around 8 percent per year for students who complete associate's degrees and do not continue onto four-year colleges.<sup>3</sup> At most, point estimates, though insignificant, suggest that the earnings gains might 1–2 percentage points higher for for-profit students. Among students who attend for-profits but do not complete degrees, we find returns of about 6 percent per year and no significant differences between sectors.

Building on this work, Turner (2011) draws on income tax data to implement a similar student fixed effects approach to assess the differential return to attendance in for-profit and not-for-profit institutions. Turner's data allow him to look at older students and students in both two- and four-year institutions. His preliminary results reveal that earnings gains are about 8 percent lower in for-profits, relative to not-for-profits. He obtains small negative, but imprecise, estimates of the absolute return to a for-profit education.

Labor market returns are undoubtedly the central concern of economists studying the quality of education, but other student outcomes may reveal the mechanisms through which for-profits affect student earnings and shed light on the types of educational services that are of most value in the labor market. Deming, Goldin, and Katz (forthcoming) offer cross-sectional OLS and propensity score estimates of a host of other student outcomes. Conditional on observable characteristics, they find that for-profit students are more likely to default on student loans, are more likely to be unemployed, and are more likely to leave school because of "dissatisfaction." Cellini and Chaudhary (2011) find no discernable differences in the likelihood of being employed or being in full-time employment across sectors. Much more research on student outcomes is needed, particularly on degree completion and transfer rates of for-profit students.

### III. COSTS AND BENEFITS OF A FOR-PROFIT EDUCATION

Despite the renewed research interest in for-profit colleges, few academic studies have attempted to conduct cost-benefit analyses in the sector.<sup>4</sup> Early versions of Cellini and

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<sup>3</sup> If students in community colleges are more likely to transfer to four-year institutions, the returns to public sector education will likely be higher than the returns in the private sector. This possibility is a topic of future research.

<sup>4</sup> There have been a few cost-benefit analyses done by for-profit colleges or consulting firms on their behalf, including de Alva (2010) and Shapiro and Pham (2010).

Chaudhary (2011) and Turner (2011) included rough estimates of the costs and benefits to students and/or taxpayers, but to date, there has been no comprehensive comparison of the costs of the for-profit sector relative to the public sector. In the remaining sections of the paper, I provide such a valuation.

Several caveats are in order. First, I generally draw on the U.S. Department of Education's data on revenues, expenditures, and student aid. Therefore, my cost estimates only include the costs to taxpayers and students of aid-eligible programs in for-profit colleges. Since these institutions receive all federal Title IV funds, which are a large part of the costs of taxpayer costs of for-profits, omitting non-aid eligible institutions will not impact my assessment of federal taxpayer support, but may cause me to understate the burden on state taxpayers if non-Title-IV eligible institutions receive substantial state aid.<sup>5</sup>

Second, given the substantial heterogeneity in for-profit colleges, I focus on comparing the costs of *two-year* for-profits with the costs of public two-year community colleges. I would ideally like to compare the costs of educating a student in an associate's degree program in the two sectors, but the Department of Education data limits my analysis to institutions that offer two-year degrees as their highest degree.<sup>6</sup> As such, many students in these institutions may actually pursue less-than-two-year degrees or certificates. Moreover, a large portion of students in for-profits classified as four-year institutions, which are omitted in my base case analysis, are actually pursuing two-year degrees — but the same is not usually true for not-for-profit and public four-year colleges. As a result, my estimates of tuition and debt may be understated. I consider students in four-year for-profits in an extension below.

Third, I leave out of my analysis any effects accruing to for-profit institutions themselves. A true social cost-benefit analysis should account for all costs and benefits accruing to these institutions (and there are undoubtedly large positive profits for for-profit colleges), but the relevant policy question is whether the benefits to taxpayers and students outweigh the costs to these groups.

Finally, I begin my analysis by evaluating the average costs associated with educating one full-time, full-year student for one year in a two-year, for-profit college, relative to a baseline assumption that the student does not attend any other postsecondary education. I carry out the same calculation — the costs and benefits for a full-time student relative to a baseline of no college — for a community college student for comparison. Of course, many, if not most, students in two-year colleges work while in school and attend only part-time (Scott-Clayton, 2012) and others may be unemployed, causing me to overstate the opportunity cost of attendance. However, as long as both community college and for-profit two-year students are equally likely to attend part-time (Cellini 2009), the differential costs between the sectors should be unaffected. Further, the full-

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<sup>5</sup> In Michigan, for example, state grants can be used to attend non-Title IV eligible institutions (Cellini and Goldin, 2012).

<sup>6</sup> Due to substantial heterogeneity in the costs of various degree programs and majors, I would ideally like to compare the costs and benefits of associate's degree programs in the same field or major (e.g., allied health or computer science), but data on costs by program are not available.

time calculation avoids assumptions (due to a lack of data) about the number of hours worked by students in each sector. Finally, given that I consider two-year programs, all figures should be doubled to assess the costs associated with the completion of an associate's degree.<sup>7</sup>

## IV. VALUING COSTS

### A. Financial Aid

The most controversial aspect of the for-profit sector is undoubtedly its reliance on federal student aid programs. To assess the cost of this support for both for-profit, two-year colleges and their public counterparts, I draw on data provided in NCES (2010), Table 355. I look separately at grant aid and loan aid, as grant aid goes directly to institutions and represents a direct cost to taxpayers, while loans (or more specifically, the interest on those loans) accrue to students, with the exception of defaults. I calculate the value of student loan defaults accruing to taxpayers separately.

A few details of the financial aid calculations merit discussion. Since the NCES figures of average grant and loan amounts are calculated only for aid recipients, I multiply the average awards accruing to each recipient by the percentage of full-time, full-year students receiving each type of aid (federal and non-federal, grants and loans) to arrive at estimated costs per student. I use these "effective" grant and loan amounts for all subsequent calculations (e.g., defaults and interest).

An additional complication is that grant aid is not listed separately for two-year, for-profit institutions, but rather combines two-year institutions with four-year institutions. To better isolate aid amounts for for-profit two-year institutions and in order to be conservative, I average the amount listed for "two-year and above" for-profit institutions with the lower amounts presented for "less-than-two-year" institutions. The idea is that two-year institutions offer associate's degrees as their highest degree, but both private and public two-year colleges also offer less-than-two-year certificate and diploma programs. It is also worth noting that a high percentage of students in four-year institutions actually pursue two-year degrees. To the extent this occurs, my calculations will underestimate the cost to taxpayers of two-year, for-profit colleges. Grant aid is reported separately for two-year public institutions.

Federal grant aid includes all Title IV grants as well as programs administered through the Department of Defense and Veteran's Affairs (e.g., GI Bill). As shown in the first row of Table 1, under the base case (representing the most plausible values of all parameters), federal grant aid averages \$2,376 per full-time-equivalent student in a two-year, for-profit college. In the first row of Table 2, the same value is calculated for

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<sup>7</sup> Completion rates may be different in the two sectors, and will be reflected to some extent in the loan calculations (e.g., students who do not complete will take out fewer loans and may be more likely to default), but this should not substantially affect estimates of the annual cost of education. On the benefits side, I avoid assumptions about completion by only calculating the minimum returns necessary to offset costs.

**Table 1**  
Annual Per-Student Two-Year For-Profit College Costs  
(Constant 2008 Dollars)

Costs	Base Case	Best	Worst
<b>Federal Taxpayers</b>			
Federal grant aid	2,376	2,150	3,325
Federal loan defaults	1,854	440	2,712
Federal appropriations, grants, and contracts	1,736	1,736	1,736
<i>Total federal taxpayer costs</i>	<i>5,966</i>	<i>4,326</i>	<i>7,773</i>
<b>State and local taxpayers</b>			
Non-federal grant aid (state, private, employer)	627	497	758
Non-federal loan defaults	873	214	1,245
State and local appropriations, grants, and contracts	171	171	171
<i>Total state and local taxpayer costs</i>	<i>1,671</i>	<i>882</i>	<i>2,174</i>
<b>Students</b>			
Foregone earnings	26,550	22,150	30,900
Tuition, fees, edex, <sup>1</sup> room and board (net of grant aid)	21,666	22,022	20,586
Interest on federal loans	2,332	1,985	2,678
Interest on non-federal/private loans	1,022	750	1,383
<i>Total student costs</i>	<i>51,569</i>	<i>46,907</i>	<i>55,547</i>
<b>Total costs (students and taxpayers)</b>	<b>59,206</b>	<b>52,114</b>	<b>65,495</b>
<b>Total taxpayer costs (federal, state, and local)</b>	<b>7,637</b>	<b>5,208</b>	<b>9,948</b>

Source: Author's calculations using data from NCES (2010). See text for detailed explanation of calculations.

<sup>1</sup>Educational expenses ("edex") include books and supplies.

public community colleges. Federal taxpayers pay \$1,272 in grant aid for each student in the public sector. Note that all values are calculated as one-year values, so students attending for two years would cost taxpayers twice this amount.

Federal loans include Stafford, Perkins, and PLUS loans.<sup>8</sup> In the base case, I use a 35 percent default rate for for-profit institutions. This figure reflects the cumulative lifetime default rate over 10 years, as calculated by the U.S. Department of Education, based on the cohort of students entering repayment in 1997. For the public sector, in the base case, I use the analogous 10-year cumulative lifetime default rate of 26 percent.<sup>9</sup>

<sup>8</sup> PLUS loans are parental loans, but I attribute them to students for simplicity.

<sup>9</sup> The Department of Education spreadsheet can be downloaded from FinAid (2011). The 15-year default rate rises to 40 percent for for-profits and 31 percent for community colleges (as reported on finaid.org, but not verified with Department of Education data). Finally, two-year cohort default rates (based on students, rather than loans) reveal rates of 12.5 and 8.4 percent for the for-profit and public two-year colleges, respectively (available from the Department of Education). I use these values in sensitivity analysis.

**Table 2**  
Annual Per-Student Community College Costs  
(Constant 2008 Dollars)

Costs	Base Case
<b>Federal Taxpayers</b>	
Federal grant aid	1,272
Federal loan defaults	240
Federal appropriations, grants, and contracts	2,122
<i>Total federal taxpayer costs</i>	<i>3,634</i>
<b>State Taxpayers</b>	
Non-federal grant aid (state, institutional, private, employer)	776
Non-federal loan defaults	89
Expenditure per full-time equivalent (net of tuition, institutional aid, federal and local appropriations)	4,337
<i>Total state taxpayer costs</i>	<i>5,202</i>
<b>Local Taxpayers</b>	
Local appropriations, grants, and contracts	2,551
<i>Total local taxpayer costs</i>	<i>2,551</i>
<b>Students</b>	
Foregone earnings	26,550
Tuition, fees, edex, <sup>1</sup> room and board (net of grant aid)	5,520
Interest on federal loans	80
Interest on non-federal/private loans	18
<i>Total student costs</i>	<i>32,169</i>
<b>Total costs (students and taxpayers)</b>	<b>43,555</b>
<b>Total taxpayer costs (federal, state, and local taxpayers)</b>	<b>11,387</b>

Source: Author's calculations using data from NCES (2010). See text for detailed explanation of calculations.

<sup>1</sup>Educational expenses ("edex") include books and supplies.

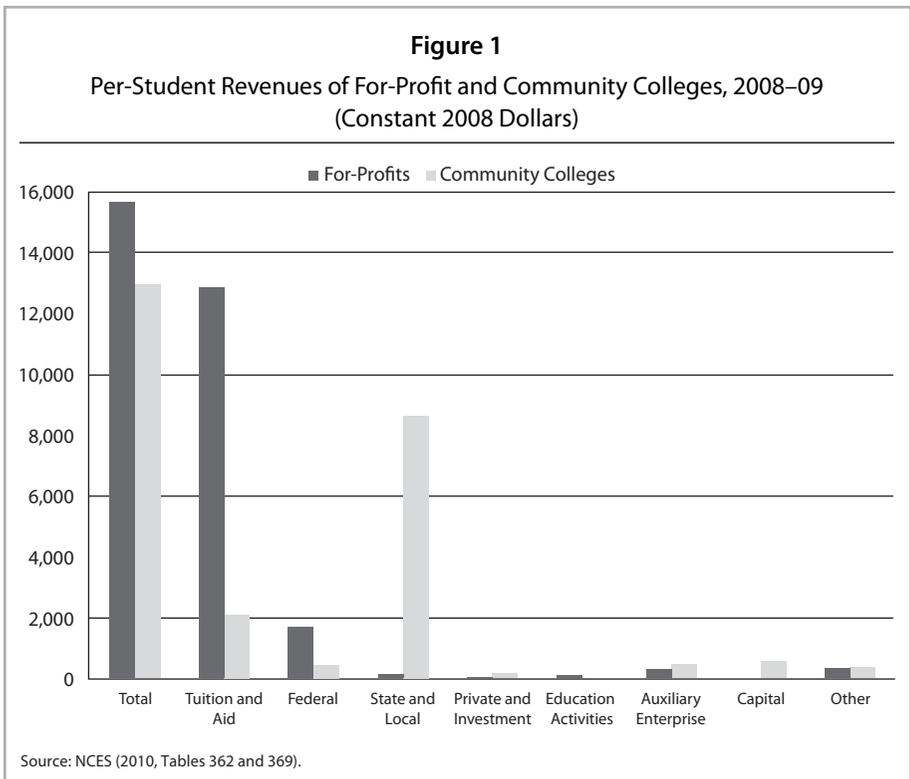
To monetize the impact of defaults, I multiply the average total student loan amount in each sector by the relevant default rate (one might interpret this as each student having a probability of default equal to the average default rate). I then multiply this figure by 0.9, under the assumption that a student defaults on 90 percent of his total loan amount. I vary this assumption in sensitivity analysis.

I am able to separately identify average institutional aid in each sector: \$38 for two-year for-profits and \$1,007 per full-time-equivalent in a community college, based on expenditure data (NCES, 2010, Tables 378 and 373, respectively). For for-profit colleges, I subtract this amount from non-federal grant aid reported by NCES, which includes state, private, employer, and institutional aid, since the goal is to reflect only

taxpayer and student costs in the analysis (i.e., I exclude profits and costs to for-profit institutions). In Table 1, non-federal grant aid therefore includes only state, private, and employer aid. In Table 2, for community colleges, I leave institutional aid in the non-federal grant aid calculation, since it accrues to taxpayers. However, to avoid double counting, I subtract institutional aid from total direct expenditures for community colleges (discussed below). For simplicity, I attribute the full cost of non-federal grant aid to state taxpayers, although some portion undoubtedly is covered by the private sector.

**B. Direct Public Expenditures**

Student aid is not the only mechanism through which taxpayers support for-profit education. Data on for-profit revenues reflect sizeable federal, state, and local appropriations, grants, and contracts (NCES, 2010, Table 369). As shown in Figure 1, outside of federal aid (which is captured in the “tuition” category in the figure), for-profit two-year colleges report receiving a sizeable \$1,736 per student from federal sources — more than three times federal support of community colleges. Support for for-profits through state and local appropriations, grants, and contracts amounts to another \$171 per student (NCES 2010, Table 369). It is clear that these federal funds do not include student aid programs, but I can find no other details on the programs and sources of this funding.

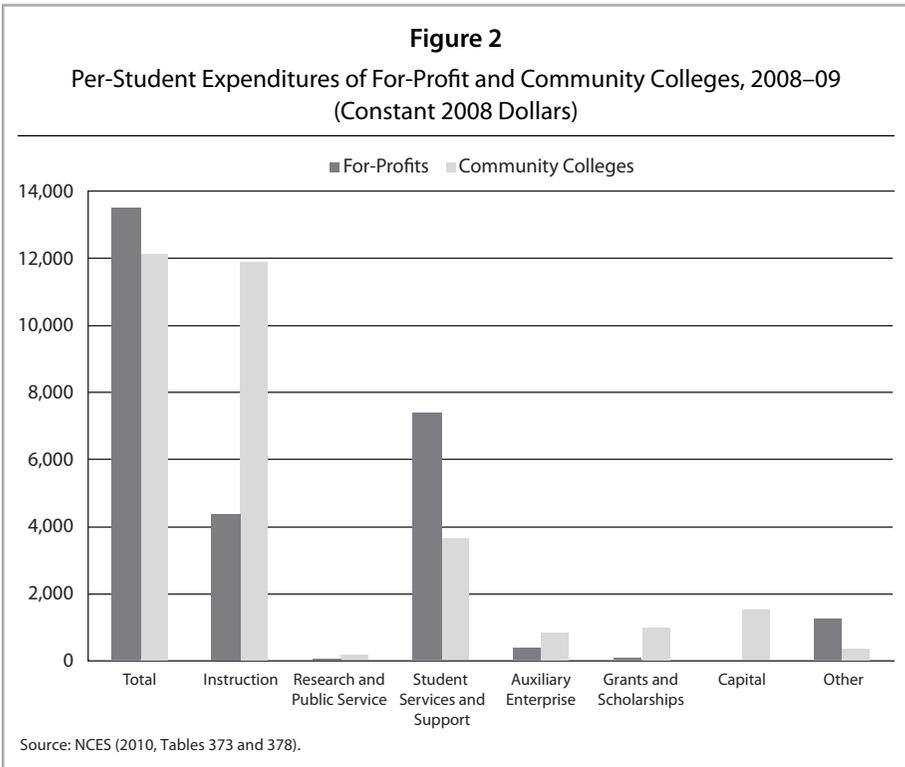


This figure may include funding secured through federal job training programs under the Workforce Investment Act and others.

To assess the degree to which the federal government, states, and local areas support public community colleges, I report grants and appropriations from each level, as revealed in NCES (2010, Table 362) and displayed in Table 1. I assume that local revenues include annualized per-student funding from voter-approved infrastructure bonds and other local sources.

Revenues, however, may not fully reflect the costs to taxpayers of providing public education. I therefore include as a cost to state taxpayers the balance of expenditures per full-time-equivalent student (net of the federal and local revenue sources, counted above, as well as tuition and institutional aid). For community colleges, this balance amounts to \$4,337 and includes instructional expenses (including salaries and wages), research, public service, academic support, student services, institutional support, operation and maintenance of plant, capital depreciation, auxiliary enterprises, and other items.

Figure 2 displays expenditures for both the for-profit and public sector. Community colleges spend much more on instruction than for-profit institutions (\$12,000 vs. \$4,000). For-profits spend more on student services, academic, and institutional support (\$7,000 vs. \$4,000). Notably, for community colleges, total revenues and expenditures differ



only by about \$840. Among for-profit colleges, the difference is larger, suggesting a profit of about \$2,187 per student.<sup>10</sup>

Finally, one cost that I do not value for either sector is the cost of capital. For for-profit colleges, one would want to account for rental costs, assuming that the institution is a traditional “brick-and-mortar” institution, rather than an online entity.<sup>11</sup> For community colleges (which also offer a mix of brick-and-mortar and online delivery), the relevant capital cost is the opportunity cost of public land. One plausible approach to valuing the opportunity cost of public land is to use private sector rental rates, as these represent their best foregone alternative use (Boardman et al., 2011). For this reason, at least for brick-and-mortar classroom space, per-student capital costs may be comparable in the two sectors. Non-instructional facilities, such as gyms, pools, etc., may push the cost of capital higher for public institutions. However, operation and maintenance of these facilities is already included in my calculations of expenditures above.

### C. Student Costs

The largest cost to students is undoubtedly the earnings they forego while in school. I assume, for simplicity, that the students enrolling in the private and public two-year colleges are demographically similar. To the extent that for-profit students are more likely to be women and minorities, my calculations may overstate foregone earnings of students in the for-profit sector. I address this in the sensitivity analysis below.

To calculate foregone earnings of full-time students in either sector, assuming they would have worked full-time if not attending,<sup>12</sup> I average two sets of earnings from the Bureau of Labor Statistics. I use the median weekly earnings of individuals age 16–24 (\$443 per week) averaged with the median earnings of individuals age 25 and over who have a only high school diploma (\$618), since a high proportion of students in both sectors are non-traditional age.

Other costs to students include tuition, fees, educational expenses, and room and board. I draw on NCES (2010, Table 345) to obtain these costs for two-year for-profits (\$24,669) and two-year public institutions (\$7,567) for students attending in-state institutions in 2008–2009. To avoid double counting, in Table 1 I report tuition, fees, educational expenses, and room and board net of effective grant aid, which is already attributed as a cost to federal taxpayers and state taxpayers.

Finally, since students largely rely on loans to pay for tuition and educational expenses, I include the interest paid on the average effective student loan amount (calculated as noted above by multiplying the average loan amounts by the percentage of students

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<sup>10</sup> Note that I do not include for-profit profits as a benefit in my analysis, as the goal is to focus on taxpayer and student costs and benefits.

<sup>11</sup> Institutions that exist solely online would have virtually no capital costs.

<sup>12</sup> As noted above, I focus on calculating opportunity costs of full-time full-year attendance for simplicity, although I acknowledge that many students work while in school and attend part-time and others may be unemployed. My estimate will overstate the cost of foregone earnings for these students.

taking out those loans) as an additional cost to students.<sup>13</sup> For federal loans, I base my interest calculations on a 6.8 percent interest rate, the rate applied to both subsidized and unsubsidized federal direct Stafford loans in 2007–2008.<sup>14</sup> I assume a 1 percent origination fee and repayment over 10 years. I use the student loan calculator available at [www.Finaid.org](http://www.Finaid.org) to calculate the interest owed based on these parameters.<sup>15</sup> For non-federal loans, I apply a conservative 10 percent interest rate, based on the average of a typical range of 6.75 to 12.75 percent for private student loans (FinAid, 2011). Based on these calculations, for-profit, two-year colleges cost students \$3,354 in interest each year, compared to \$98 for public sector students.

#### D. Base Case Cost Analysis

As reported in Table 1, in the base case, for-profit institutions cost society about \$59,200 per full-time equivalent student. Most of this burden falls on students, who incur \$51,600 in costs, or 87 percent of the total. Foregone earnings are, of course, the largest cost of attendance for students, but tuition, fees, educational expenses, room and board, and the interest on loans used to pay these expenses, amount to about \$26,600 (or 52 percent of the total cost) for students in for-profit institutions.

Taxpayers fund the remaining \$7,600 in costs, of which 78 percent — or \$6,000 — comes from federal sources. Federal student aid programs and loan defaults account for about \$4,200 per student (70 percent of the federal funding). Federal appropriations and grants to institutions account for another \$1,700.

Comparing for-profit costs to public sector costs in Table 2, I find that a community college education costs society roughly \$43,600 per full-time equivalent student, or about \$15,600 less than a for-profit education. Costs to students amount to \$32,200, almost \$20,000 less than for their for-profit counterparts. Net tuition, educational expenses, and interest are only about \$5,600, or 17 percent, of the student's cost, as the bulk of the cost to students is foregone earnings.

Taxpayers pay about \$11,400 for a full-time equivalent student in a community college, about \$3,800 more per student than for a for-profit education. Of this total, state and local taxpayers fund the majority of community college expenditures, covering 69 percent of the total or \$7,700 per student. Still, federal taxpayers pay about \$3,600 for a community college student, 42 percent of which comes through federal student aid.

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<sup>13</sup> It is also worth noting that, among those who do not default, the loan interest constitutes a transfer between students and taxpayers. I currently include it as a cost to students to measure the full cost of attendance accruing to students.

<sup>14</sup> Interest rates on subsidized Stafford loans were lowered between 2008–2009 and 2011–2012, but they were increased back to 6.8 percent in 2012–2013. Interest rates on unsubsidized loans remained at 6.8 percent throughout this period. Interest rates on PLUS loans are higher, around 8.5 percent. Depending on the mix of federal loans, interest rates could be slightly higher or lower, but overall, 6.8 percent appears to be reasonable average (FinAid, 2011).

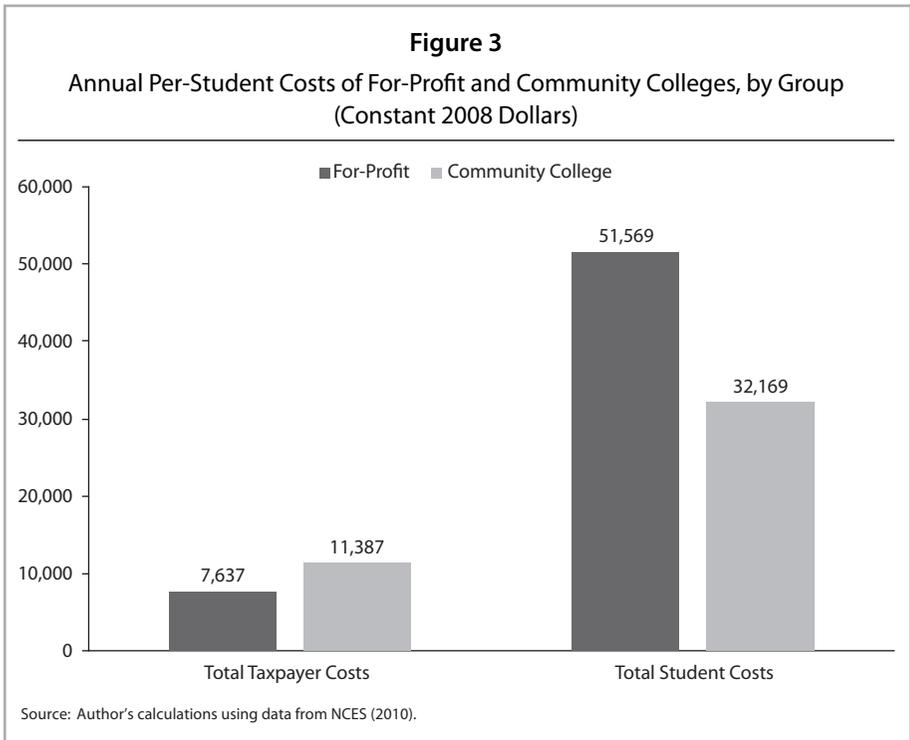
<sup>15</sup> The calculator also asks for a minimum monthly payment (I use the default of \$50), the degree program (associate's), and the number of years in college (2). With these parameters, the calculator assumes 120 monthly payments of \$68.63 (FinAid, 2011).

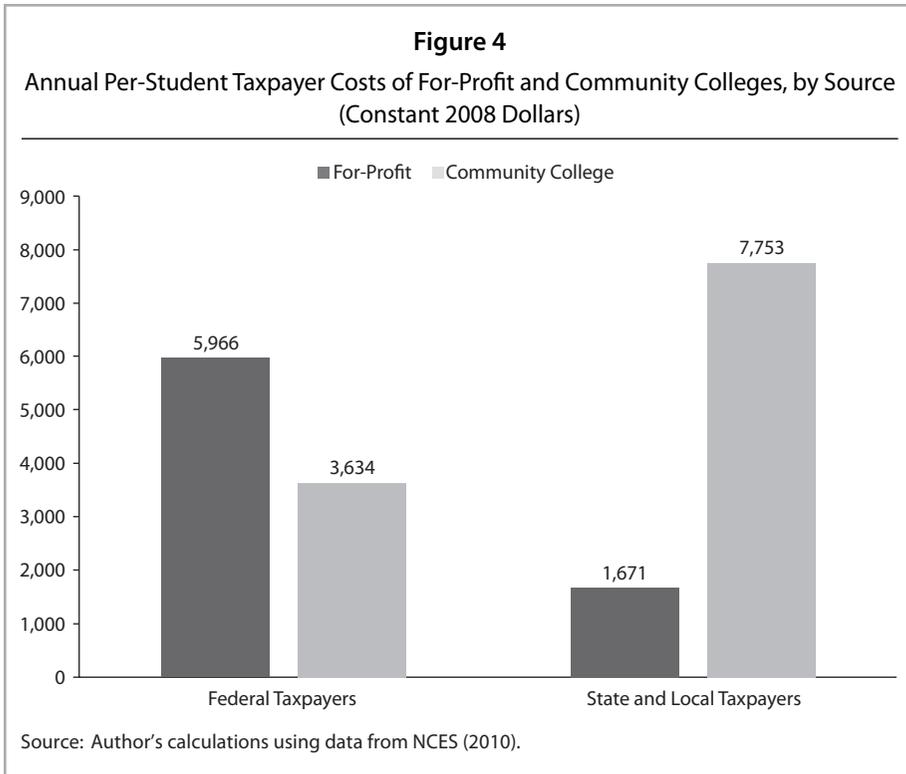
Figure 3 reveals the difference in the total costs to taxpayer and student costs in the two sectors graphically. Figure 4 reveals differences by source of funding. Federal support for for-profits is much higher than for public sector institutions, but state and local funding for community colleges outstrips for-profit support. Figures 5A and 5B break federal funding down into its components in the two sectors. Despite the policy focus on loan defaults in the private sector, these comprise only 31 percent of the federal spending on for-profits. In the public sector, defaults account for just seven percent of federal spending. Grant aid accounts for 40 percent of the cost to federal taxpayers, and appropriations, grants, and contracts account for the remaining 29 percent of federal support in the for-profit sector.

**E. Sensitivity Analysis**

To test the sensitivity of my assumptions, I re-calculate for-profit costs under both a best- and worst-case scenario. I report these estimates in columns (2) and (3) of Table 1.

Under the best case scenario, I assume that for-profit students have a lower opportunity cost of attendance than community college students. This may be the case, if, for example, for-profit students are disproportionately minority, female, or young. I therefore use the lower of my two earnings estimates, the median for young people age 16–24 (\$443). This is conservative estimate, considering that the median earnings for



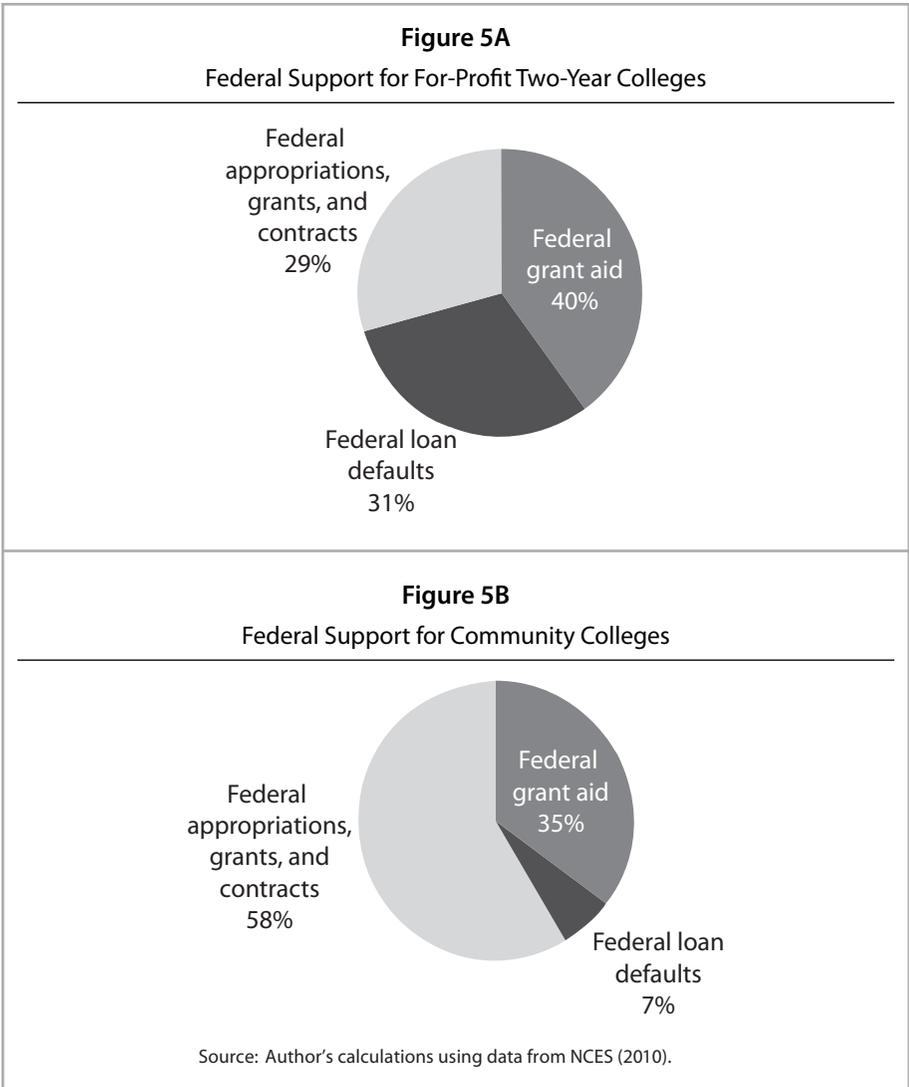


black women age 25 and over in 2008 was \$480 per week. In the worst case scenario, I use the highest of my estimates, \$618 per week.

One of the most uncertain parameters, and one that has a significant impact on the analysis, is the percentage of students receiving loans and grants, which is used to calculate effective per-student aid costs. In the base case, I used the average proportion listed for “two-year or more” institutions and “less-than-two-year.” In my best case scenario, I rely on the lowest proportion listed for either of these two levels of education, in order to lower the burden on taxpayers to the lowest possible levels. In the worst case scenario, I use the highest proportion. Notably, a higher proportion of less-than-two-year students receive federal grants, presumably due to the inclusion of veteran’s benefits (72 percent vs. 60 percent). But a much higher proportion of two-year-or-more students take out federal loans (93 percent vs. 69 percent). This proportion impacts all of the aid variables in the analysis.

I use two-year cohort default rates (12.5 percent) in the best-case scenario and 15-year cumulative lifetime default rates in the worst case scenario (40 percent). Finally, I vary the proportion of the student loan that is not paid back under default. In the best case, I assume 70 percent of the total amount, and I use 100 percent in the worst case.

As shown in Table 2, the results of analysis yield a best-case cost to society of \$52,100 and a worst-case cost of \$65,500. Even under the best case scenario, the costs remain well above the base case community college costs of \$43,600. Under the best case scenario, taxpayers pay only \$5,200 per full-time equivalent students, compared to



about \$9,900 under the worst case — still about \$1,500 less than the taxpayer burden of community colleges.

**V. VALUING BENEFITS**

**A. Private Returns to Education**

The costs of both sectors, of course, need to be evaluated relative to their benefits. The most obvious benefit for students and society generally is the gain in earnings that students experience as a result of their education. As noted above, very few studies have

generated credible estimates of this private return to education for for-profit students. At best, the research suggests the returns to for-profits are about 6 percent per year for students who attend with or without completion, which is similar to community college returns (Cellini and Chaudhary, 2011). At worst, for-profits may result in zero gains or even losses (Turner, 2011).

Rather than relying on either of these estimates, in Table 3, I instead calculate the magnitude of returns needed to offset student and taxpayer investments in for-profit education under the base case costs described above. Assuming annual earnings of \$30,900 (the average earnings of adults over age 25 with no college),<sup>16</sup> a 30-year career, and a discount rate of 3 percent, I calculate the present value of lifetime earnings of an individual with no college to be \$664,000. Comparing this to the \$51,600 of student costs, a return of 8.5 percent return per year of education would be needed to fully offset the cost of one year of education incurred by the student. Including taxpayers in the calculation would require a 9.8 percent return. These figures are substantially higher than returns to for-profits estimated in Cellini and Chaudhary (2011), but they remain barely within the 95 percent confidence interval.

The comparable figures for community college returns are considerably lower. Under the same set of assumptions, students in community colleges require a return of 5.3 percent to offset their costs, while society requires a 7.2 percent return. These estimates are well below the returns to community colleges estimated in Cellini and Chaudhary (2011) and other well-identified studies of public sector returns (Jepsen, Troske, and Coomes, 2010; Jacobson, Lalonde, and Sullivan, 2005).

**Table 3**  
Breakeven Return to Education for For-Profit and Community Colleges  
(Constant 2008 Dollars)

	For-Profit	Community College
<i>Social Costs</i>	59,206	43,555
Minimum return necessary to offset (%)	9.8	7.2
<i>Student Costs</i>	51,569	32,169
Minimum private return necessary to offset (%)	8.5	5.3
<i>Assumptions</i>		
High school only earnings (no college)	30,900	
Years of work	30	
Discount rate	0.03	
Lifetime earnings of high school only	605,654	

Source: Author's calculations using data from NCES (2010). See text for detailed explanation of calculations.

<sup>16</sup> If for-profit students typically make less than the average due to demographics, a higher return would be needed to offset costs.

## B. Social Returns to Education

Although earnings gains, or private returns, are typically the largest benefits of college education, they are by no means the only benefits. The social returns to education reflect externalities to human capital accumulation that benefit other members of society in a number of ways.<sup>17</sup> First, more educated workers may increase the productivity of those around them if, for example, less-educated individuals learn by interacting informally with better-educated colleagues. Second, more educated individuals may be less likely to engage in criminal behavior, saving substantial costs to society. Third, better educated individuals may be more engaged in civic life, leading to more informed voting behavior and better public policy.

The literature on social returns to education is much smaller than the literature on private returns. As is the case in studies of private returns, research on social returns must overcome a number of empirical challenges to generate plausibly causal estimates. A few notable papers have addressed these challenges. To assess the magnitude of productivity spillovers, Moretti (2004) compares similar industrial plants in cities with different proportions of college-educated workers. He finds that a 1 percentage-point increase in the share of workers with a college education results in a 0.5–0.7 percent increase in productivity, holding all else equal. Lochner and Moretti (2004) find evidence that education reduces crime. They estimate the magnitude of the social savings from reduced crime to be 14–26 percent of the private return to education. Evidence on civic participation also reveals a strong link. Dee (2004) uses an individual's proximity to two-year colleges (private and public) as an instrument for college attendance to assess the causal impacts of education on civic participation. He finds that college attendance increases voter participation by 17–22 percentage points.

Despite some credible evidence of social returns to college education generally, there are no studies that differentiate between the social returns to various types of colleges. It might be expected that education in the public sector generates greater civic participation as students become more invested in the fate of their college. For example, in California, voters routinely vote on bond measures to support infrastructure improvements in their local community colleges. Differences in productivity spillovers and reductions in crime between sectors are less obvious. Because of the lack of evidence, any valuation of differential social returns between for-profit and public two-year colleges would be little more than speculation, so I omit it from my calculations.

## C. Other Benefits

Beyond private and social returns to education, colleges may generate additional benefits to society outside of their educational services. Community colleges may have recreational or other facilities that are open to the public. For example, public colleges often offer low-cost or free access to gyms, athletic fields, pools, or libraries that may generate substantial value to the community. For-profit colleges are less likely to offer

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<sup>17</sup> See Moretti (2004) for an excellent review of this literature.

reduced-cost services to the broader community, and may not even have recreational facilities or libraries. Additional societal value may be generated from faculty or student research, although this is not a traditional function of either private or public two-year colleges, and thus is likely to be small in both cases.

Expenditures on research and public service in the two sectors may provide an indication of the relative importance each sector places on these activities, but these values do not, of course, reflect the willingness-to-pay for these services in the broader community. As shown in Figure 2, for-profit, two-year colleges spend just \$8 per student on research and public service combined, compared to \$196 per student spent by community colleges.<sup>18</sup> Community colleges spend an additional \$1,500 per student on capital (depreciation and operations and maintenance). Comparable values are not calculated by NCES for for-profits, but are included along with other expenses in a category called “other” that averages \$1,200 per student. Again, these values do not reflect the value to society of these facilities to the community, which may be a particularly important consideration for community colleges.

Another benefit to society not previously discussed is the corporate tax revenue collected from for-profit colleges. Corporate tax receipts offset some portion of the cost to taxpayers of a for-profit education. Accurate estimates of the per-student tax liability of for-profit institutions are difficult to obtain, but cost estimates presented by the University of Phoenix suggest a corporate tax liability of about \$625 per student (de Alva, 2010). Projections of the tax liabilities of two-year colleges derived by consultants for Kaplan, Inc. suggest corporate tax revenues of \$485 per student (Shapiro and Pham, 2010). Including these (potentially overstated) estimates in the analysis would not result in a substantial change in my estimate of the taxpayer burden associated with for-profits and would do little to close the gap in the total societal costs between the private and public sectors.

Finally, to the extent that college attendance results in increased earnings, students in both sectors would also pay more in personal income taxes and be less reliant on public assistance. Apart from any distortionary effects, these taxes and subsidies represent a benefit to society, but a cost to students: I therefore consider them a pure transfer in this analysis. Moreover, without more accurate estimates of earnings gains, it is unclear how taxes and public assistance would differ across sectors.

## VI. EXTENSIONS AND POLICY IMPLICATIONS

### A. Aggregate Estimates

The analysis thus far has focused on per-student costs and benefits, but an understanding of the aggregate costs to taxpayers and students of the for-profit sector merits discussion. Title IV eligible two-year and less-than-two-year for-profit institutions

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<sup>18</sup> Note that for community colleges this amount is disaggregated: \$190 per student is spent on public service and just \$6 is spent on research. For-profit college expenditures are not disaggregated.

enroll roughly 624,000 students, based on fall enrollment counts. Using the figures calculated in the base case, this implies aggregate costs to society of \$37 billion per year. As noted above, most of this cost accrues to students as foregone earnings, but taxpayers contribute \$4.8 billion to two-year, for-profits annually.

If we assume that four-year college students accrue roughly the same costs as two-year students, then we can extrapolate costs to the 1.2 million students in four-year for-profits. As noted above, since the four-year designation applies to the highest degree offered by an institution, many students listed as enrolled in four-year institutions are actually enrolled in associate's degree or non-degree programs within those institutions. These students may face similar opportunity costs, and possibly similar tuition and debt levels relative to students in two-year institutions. To the extent that four-year students (including those in bachelor's programs) pay higher tuition and assume additional debt, my estimates based on two-year college costs will underestimate the costs to taxpayers and students of these students.

Taking all 1.8 million students enrolled in federal aid-eligible, for-profit institutions into account, I estimate total social costs at \$106 billion, with \$14 billion accruing to taxpayers and \$92 billion to students. In contrast, the 6.6 million students enrolled in community colleges, together incur \$214 billion in costs with taxpayers paying \$75 billion.

To assess the plausibility of the for-profit figures, it is useful to compare the taxpayer burden to spending on federal student aid programs. Official reports of federal expenditures on Pell Grants reveal that \$4.3 billion was spent on students in for-profit institutions in 2008–2009 (U.S. Department of Education, 2011). In addition, GI Bill funds accruing to for-profits account for another \$1.6 billion (U.S. Senate HELP Committee, 2011). The remaining \$8 billion difference is attributable to student loan defaults, a myriad of other grant aid programs, and the somewhat vague albeit large category of “federal appropriations, grants, and contracts” described above.

## **B. Policy Implications**

In light of the vast amount of money spent by students and taxpayers on for-profit colleges and the limited evidence of their effectiveness, it seems appropriate to consider whether further regulation of the for-profit industry can be justified. The U.S. Department of Education's new gainful employment regulation will undoubtedly cause some for-profit institutions to close, but the magnitude of this effect is unclear. The Department of Education suggests that about 3 percent of aid-eligible for-profit programs would lose eligibility (Federal Register, 2011), while opponents of the regulation suggest that 7 percent (or more) would lose eligibility (Guryan and Thompson, 2010). It is not clear whether the analogous proportion of institutions would close, or whether some might continue to operate without Title IV eligibility (see for example, Cellini and Goldin, 2012), making these impacts even more uncertain.

Further complicating analyses of this policy is the uncertainty regarding the extent to which community colleges could and would absorb students from the for-profit sec-

tor. If community colleges have the capacity to add students from the for-profit sector, the gainful employment regulations may save students substantial costs, but require increased investment from taxpayers. On the other hand, some taxpayer savings would also result from the reduction in grant aid and loan defaults in the newly-ineligible programs. Still, it is not clear whether students in ineligible schools will be absorbed by community colleges or whether they will forego their education altogether.

## VII. CONCLUSION

Research on the economics of for-profit education is still in its infancy but, like for-profit colleges themselves, the field is rapidly growing. Over the last few years, we have learned much about the responses of for-profit institutions to financial aid and competition with the public sector, and have finally generated an accurate estimate of the number of for-profit institutions in the country. We are beginning to learn about student outcomes, and have the first few estimates of labor market returns.

Still, there are few data sources on for-profits, so estimation of the costs of a for-profit education remains a challenge, and definitively assessing its benefits is even more difficult. My estimates of the social costs of education in the for-profit sector suggest that the costs to taxpayers of educating a student in a for-profit institution are roughly \$7,600 per year per student. Students incur annual costs in excess of \$50,000 in foregone earnings, tuition, and loan interest in two-year for-profit institutions. Although taxpayer costs are almost \$4,000 higher in the public sector, the combined costs for students and taxpayers suggest that community colleges are roughly \$16,000 per student per year lower than their for-profit counterparts. To cover their personal costs, for-profit students need to generate earnings gains of at least 8.5 percent per year of education. By comparison, community college students require earnings gains of only 5.3 percent to obtain net benefits from their education.

These findings suggest that unless the private and social returns to for-profit education can be shown to be substantially higher than the returns to a community college education — which the current literature does not support — then many students would be better off in lower-cost community colleges. Given the large tuition differences between the two sectors, the student savings that could be realized by a switch to the public sector appears to outweigh the greater taxpayer burden of public education.

This analysis, however, omits several important costs and benefits of for-profit institutions, not least of which are their profits earned by for-profit institutions. I also omit the social benefits of education and the externalities associated with research, public service, and the use of college facilities by the broader community. Further, state budget cuts may render community college expansion politically infeasible for the foreseeable future and changes to tuition and financial aid programs will alter the estimates presented above. As the research on for-profit education develops, more detailed assessments of the costs and benefits of a for-profit education can and should be undertaken.

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