# "The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators?"

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## I. Introduction to the For-Profit Postsecondary School Sector

For-profit schools are a large component of U.S. postsecondary education and they are growing rapidly. The for-profits produced 5 percent of all bachelor's degrees (BA), 18 percent of associate's degrees (AA), 42 percent of certificates, and 10 percent of master's degrees (MA) in 2008-09.[1] The sector accounted for 9 percent of fall enrollments, 12 percent of those enrolled at any point during the year, and 14 percent of full-time equivalent enrollments in all postsecondary schools eligible for federal financial aid.[2]

Enrollment in the for-profit sector tripled in the past decade whereas that for the rest of higher education increased by just 22 percent. In consequence, the fall enrollment fraction accounted for by the for-profits increased from 4.3 percent in 2000 to 10.7 percent in 2009 (Figure 1).[3] Almost 90 percent of the increase occurred because of an expansion of enrollments in for-profit chains and institutions whose students are primarily on-line. More than half of the total increase was due to the explosion of institutions with a major presence in on-line education. The expanding enrollment at the chains, both on-line and in brick-and-mortar institutions, greatly increased for-profit BA degrees and enrollment in for-profit BA-granting institutions, which currently stands at 12 percent of all undergraduate enrollment at four-year institutions (U.S. Department of Education, NCES, Fall 2009, table 1).[4]

The for-profit sector has, seemingly, burst on the scenes in recent years. It is large and growing. It is, as well, big business and its largest providers are major publicly-traded corporations that have generated substantial returns in the past decade (Bennett, Lucchesi, and Vedder 2010). The bulk of revenues of for-profit higher education institutions derive from U.S. government student financial aid (loans and grants). The sector has been, of late, under intense

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[1] Source: U.S. Department of Education (2010) *Digest*, table 195. These figures, and all others presented here, are for Title IV eligible institutions by which is meant eligibility for federal student financial aid (e.g., Pell grants and Stafford loans) under Title IV of the Higher Education Act of 1965. Virtually all degrees are granted by such institutions, but programs that are less than two years in length that grant certificates (also diplomas) are often not given by Title IV eligible institutions. For an analysis of the importance of the non-Title IV group of for-profit schools, see Cellini and Goldin (2011).

[2] U.S. Department of Education, NCES (Fall 2009), table 11, 12-month academic year 2008–09 full-time equivalent (FTE) enrollments, where FTE is based on clock hours (or credit hours) of the program such that 900 clock hours or more (45 credit hours or more) is full-time for quarter calendar systems.

[3] These data, and many others in this article, come from the Integrated Postsecondary Education Data System (IPEDS). See, for example, U.S. Department of Education, NCES (Fall 2009). IPEDS is an annual survey of all postsecondary institutions that participate in the federal student financial aid programs, as per the Higher Education Act of 1965, and contains information on enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices, and student financial aid from about 6,700 institutions. The Appendix provides the details of our processing of the micro IPEDS data, linkage of the IPEDS institution-year data to financial aid to data from the National Student Loan Data System, and construction of an institution-level panel data set for 2000 to 2009.

[4] Enrollment in for-profit BA-granting institutions also includes students who are in AA and certificate programs, among others. In fact, BA degrees at these institutions account for less than a half of all their undergraduate degrees and awards. U.S. Department of Education (2010) *Digest*, table 195.

scrutiny by the U.S. Department of Education and faces further regulatory restrictions for their recruiting practices and large student debt loads that some deem excessive.

In this article, we describe the schools, students, and programs in this sector, its phenomenal growth in the past decade, and its relationship to the federal and state governments. The for-profits seem to have forged a highly successful business model. They appear to be nimble critters that train non-traditional learners for jobs in the fast growing areas, such as health care and information technology. But there is a potential dark side. Default rates on the loans taken out by their students vastly exceed those of other institutions of higher education and audit studies have shown that some for-profits have highly aggressive and even fraudulent recruiting techniques.[5] Are the for-profits "nimble critters" or "agile predators"?

Using the 2004 to 2009 Beginning Postsecondary Students (BPS) longitudinal survey we assess outcomes of a recent cohort of first-time undergraduates who attended for-profits relative to comparable students who attended community colleges or other public or private non-profit institutions. The for-profits, we conclude, succeed in various ways and fall short in others.

Relative to community colleges and other public and private non-profits, for-profits educate a larger fraction of minority, disadvantaged, and non-traditional (e.g., older) students, and they have greater success in many cases at initially retaining students and getting them to complete shorter degree and non-degree programs at the certificate and AA levels.

But the for-profits leave students with far larger student loan debt burdens. For-profit students end up with higher unemployment and "idleness" rates and lower earnings from employment six years after entering programs than do comparable students from other schools. Not surprisingly, for-profit students have trouble paying off their student loans and have far greater default rates. And for-profit students self-report lower satisfaction with their courses of study and are less likely to consider their education and loans worth the price-tag relative to similarly-situated students who went to public and private nonprofit institutions.

## II. What is the for-profit postsecondary school sector?

### A. Apollo and the lesser for-profit deities: A diverse sector

At its simplest level the for-profit postsecondary school sector is a group of institutions that give post-high school degrees or credentials and for which some of the legal non-distribution requirements that potentially constrain private non-profit schools do not bind. For-profit institutions can enter the equity market and have few constraints on the amounts they can legally pay their top managers. In practice, only the largest players in this market raise substantial

[5] See U.S. Government Accountability Office (2010).

capital in organized equity markets and tend to pay their top executives mega-salaries that exceed those of presidents at the public and non-profit private universities.[6] Because they often cater to independent students and those from low-income families who finance college through Pell grants and federal student loans, the for-profits have an intricate relationship with the federal and state governments to make sure they maintain eligibility to receive Title IV federal student aid. The for-profits, like public institutions, receive an extremely large fraction of their revenues from government sources.

For-profit sector institutions are a varied group. For-profit schools offer doctorates but also non-degree courses, and their programs run the gamut from healthcare, business, and computers to cosmetology, massage, and dog grooming. The sector contains the largest schools by enrollment in the United States and also some of the smallest. For example, the University of Phoenix Online campus enrolled over 532,000 students and Kaplan University enrolled 96,000 during the 2008-09 academic year. Taken together the largest 15 institutions account for almost 60 percent of for-profit enrollments (Bennett, Lucchesi, and Vedder 2010, table 1). But tabulations from the IPEDS also indicate that the median Title IV eligible for-profit institution had a Fall 2008 enrollment of 172 students as compared with 3,713 for the median community college (two-year public institution), 7,145 for the median four-year public university, and 1,149 for the median four-year private not-for-profit school.

The for-profit sector has become in many people's minds synonymous with the large for-profit chains that have rapidly expanded their presence in the BA and graduate education markets, especially the Apollo Group, which owns the University of Phoenix. But even though the big players in this sector are really large and account the majority of for-profit enrollments, there is another important part of the sector consisting of career colleges that focus on a wide range of shorter (AA and certificate) programs. Completions in the for-profit sector are still dominated by certificate programs and 55 percent of the certificates granted by the for-profits are awarded by the 1,700 or so independent career colleges and institutes.[7] The sector can be likened to the retail clothing industry. Shoppers can go to Macy's, a store with many departments, spend lots of time, and emerge with a complete outfit. Alternatively, they can go to a neighborhood shoe store, spend a short amount of time, and leave with only sandals. Our point

[6] The top CEO pay (salary and other compensation) among the for-profits in 2009 exceeded $20 million and went to Andrew Clark, CEO of Bridgepoint Education, Inc. In second place was Charles Edelstein Co-CEO of the Apollo Group, Inc. who earned more than $11 million. At number 10 is Wallace Boston, Jr. CEO of American Public Education with $961K. But the non-profits and publics are not far behind. In 2006/07, before the stock market decline, the highest paid university president was Gordon Gee at Vanderbilt who earned slightly more than $2 million in total compensation, but number 10 on the list was Jack Varsalona at Wilmington University who earned $974K. Earnings in 2008/09 for presidents at public and non-profit private universities were far lower. The data on for-profit CEO pay is from http://chronicle.com/article/Graphic-CEO-Compensation-at/66017/; that on public and non-profit president's pay is from http://www.businessweek.com/ss/09/02/0216_college_pres/index.htm

[7] Tabulations from the IPEDS indicate that certificates account for 54 percent of the degrees and awards conferred by for-profits in 2008-9

is that the for-profit sector is not just the Apollos, just as retailing is not just Macy's, but the Apollos are big and a substantial fraction of enrollments.

There are several important commonalities across this motley group. One is that the sector offers almost no general education and liberal arts programs, which are the mainstays of the public and non-profit higher education sector. For-profit programs typically are not meant to prepare students to continue to another form of higher education, as is the case with most community colleges. Rather, the for-profits almost always offer training for a vocation or trade. In that sense, they are "career colleges."

Another similarity is that virtually all the for-profits require that admitted students have a high school diploma or a secondary school credential. Their ability to obtain federal (Title IV) financial aid for their students is dependent on their admitting only students who have already completed secondary school. Yet another is that these institutions are almost always non-selective. The leaders of the for-profit sector would commend their open admissions policy as an indication of their commitment to an accessible, non-elite education.

For-profit education can be expected to flourish in vocational programs that lead to certification and early job placement and have clear short-run outcomes that can serve to build institutional reputation in the labor market. But the for-profits are likely to be in a far less advantageous position where external benefits (and subsidies from donors and government) are important and the quality of inputs and outputs are unverifiable.[8] The for-profits also have been successful at designing programs to attract non-traditional students who may not be well served by public institutions (Breneman, Pusser, and Turner 2006).

B. Brief history of for-profit institutions

Even though for-profit postsecondary schools have greatly increased in size of late, they were preceded, a century ago, by another group of institutions that were also responding to an explosion in demand for various vocational subjects. Some of today's for profits originated in these older institutions. Business, managerial, and secretarial skills were in great demand in the late nineteenth and early twentieth centuries and a multitude of proprietary institutions emerged that taught accounting, management, real estate, stenography and typing. Their numbers and enrollments were greatly reduced when public high schools expanded and increased their offerings in the business and vocational areas. But many survived and morphed into some of the current for-profits, such as Blair College (established 1897; now part of Everest College), Bryant and Stratton College (1854), Gibbs College (1911), Globe University (1885), Rasmussen College (1900), and Strayer University (1892).

Distance learning, known today as on-line education, has an interesting past in "correspondence courses," which were offered by many universities beginning in the late

[8] See Winston (1999) for a further discussion of where for-profits are most likely to thrive.

nineteenth century including some of the most prestigious, such as the University of Chicago and the University of Wisconsin (Watkins 1991). In the 1960s the "university without walls" was a popular television show in Britain (and elsewhere) that offered college credit. On-line university education was pioneered by Walden University, which was founded in 1970 to allow professionals to work and earn further degrees. Walden is now one of the largest for-profit on-line institutions and is part of the international corporation Lureate Education Inc.

C. What is Title IV eligibility?

The for-profit sector that we analyze here includes almost exclusively those that are termed Title IV eligible. These institutions can usually have their students apply for federal student loans and for Pell grants. Title IV eligibility is granted by the U.S. Department of Education and requires that the institution be accredited by at least one of their approved accrediting agencies, be registered by one of the states, and meet other standards on a continued basis. Some of these standards concern the length of programs and some concern students and their loan payment activity.

Title IV eligible schools must have at least one full-time program (at least 900 clock hours and 45 credit hours), although students in shorter programs given by a Title IV school may be eligible for some type of funding. The main point is that we are excluding non-Title IV for-profit schools, about which little has been known because the U.S. Department of Education does not track them (see Cellini and Goldin 2011 for a corrective using state registration data). Because virtually all degree granting institutions are Title IV eligible, the undercount impacts only the non-degree (typically certificate) programs in institutions without any degree program.

D. For-profit programs

The for-profits loom large in the production of degrees and certificates in certain programs. For-profits produce 18 percent of all associate's degrees, for example. But they produce 33 percent of the AAs granted in business, management and marketing, 51 percent in computer and information sciences, 23 percent in the health professions and 34 percent in security and protective services.[9] In the public and non-profit private sectors an AA degree is often the gateway to a four-year college and, in consequence, 38 percent of these AA programs are in general studies and liberal arts programs. A mere 2.4 percent are in the for-profits.

Although 5 percent of all BAs are granted by for-profit institutions, 12 percent of all BAs in business, management, and marketing are. Other large for-profit BA programs are in communications (52 percent of all BAs in communications are granted by for-profits), computer and information sciences (27 percent), and personal and culinary services (42 percent).

[9] We employ the two-digit Classification of Instructional Programs (CIP) code categories here.

Programs are highly concentrated in the for-profit degree categories. Among AA degrees just two program groups, business, management and marketing and health professions, account for 52 percent of all degrees. In the BA group, the business program produces almost 50 percent of the total. Among certificates granted in the Title IV for-profit sector, health professions and personal and culinary services account for 78 percent of certificate completers.[10]

E. Who are the students?

The for-profit sector disproportionately serves certain segments of the U.S. population: older students, women, African-Americans, Hispanics, and those with low incomes, as can be seen in Table 1. Although African Americans account for 13 percent of all students in higher education, they are 22 percent of those in the for-profit sector. Hispanics are 15 percent of those in the for-profit sector yet 11.5 percent of all students. Women are 65 percent of those in the for-profit sector.[11] For profit students are older, about 65 percent are 25 years and older, whereas just 31 percent of those at four-year public colleges are and 40 percent of those at two-year colleges are.

Using the BPS data for students entering postsecondary school during the 2003-04 academic year, we can get a more detailed picture of for-profit students relative to those at other colleges. Because the BPS surveys only first-time undergraduates, the results are somewhat different from the IPEDS, but the story is still the same. Compared with those in community colleges (almost entirely two-year public schools), for-profit students are disproportionately single parents, have much lower family incomes, and they are almost twice as likely to have a GED. Among for-profit students in the BPS data 55 percent are in certificate programs and just 11 percent are enrolled in a BA program.

Similarly, among all for-profit students in the IPEDS, certificates are 54 percent of all completions or degrees conferred and associates are 22.5 percent.[12] The BA group is just 13 percent but is the fastest growing degree group among the for-profits. Post-graduate programs, primarily master's degrees, account for the remaining 10.5 percent.

## III. Enrollment, completions, and growth

For-profit enrollments have grown considerably during the past several decades particularly in degree programs. In fact, fall enrollment in for-profit degree-granting institutions grew by more than 100 fold from 18,333 in 1970 to 1.85 million in 2009 increasing from 0.2

[10] U.S. Department of Education, NCES (Fall 2009), table 37; and our own tabulations from the IPEDS.
[11] For the aggregate data, see U.S. Department of Education, NCES (Fall 2009), table 1, which uses fall enrollments. The for-profit data are from Table 1.
[12] U.S. Department of Education (2010) *Digest*, table 195.

percent to 9.1 percent of total enrollment in degree-granting schools.[13] The rapid growth of the for-profits from 2000 to 2009 is illustrated in various ways in Figure 2. The for-profit sector share of fall enrollments, which understate short and non-traditional programs in which new students enter throughout the year, grew from 4 percent of the total in 2000 to almost 11 percent in 2009. For-profits account for a larger share of all postsecondary enrollments as captured by the 12-month unduplicated headcount enrollment measure. The for-profit share of 12 month enrollment increased from 5 percent in 2000 to 12 percent in 2008. For-profits have expanded their enrollment share more rapidly for women than for men, and they play an increasingly large role in the higher education of older students. The for-profit enrollment share of students 25 years and older expanded from around 6 percent in 2000 to 18 percent in 2009.

Undergraduate completions from for-profit institutions grew from 13 percent of the total in 2000 to almost 18 percent in 2008. The fraction of completions is considerably larger than that for enrollments because more than half of for-profit completions are certificates. The Figure 2 data hide the fact that for-profit enrollments and completions in recent year have been growing most rapidly in longer degree programs.

The for-profits increased their share of completers in all types of undergraduate programs, but more so for AAs and BAs than for certificates (Figure 3). They produced about 39 percent of certificates in 2000 and 42 percent in 2008. For-profit AAs were 13 percent of all AAs in 2000 but 18 percent in 2008; BAs were less than 2 percent of all in 2000 but were 5 percent of all BAs in 2008.

The enormous growth in for-profit enrollments is partially a response to the substantial increase in the pecuniary returns to postsecondary education since 1980, particularly for BA and higher degrees.[14] At the same time, state budgetary difficulties have constrained the expansion of public-sector higher education.[15] Increases in the availability and generosity of federal and state financial aid for students going to for-profit institutions also played a role in their growth (e.g., Cellini 2010).

The expansion of the chains (including on-line institutions) accounts for 87 percent of the increase in fall enrollment during the past decade. The increase in on-line enrollment alone accounts for 54 percent of the total.[16] These facts imply that scale economies increase in

[13] U.S. Department of Education (2010) *Digest*, table 197. Fall enrollment is a usual way of measuring enrollment, which is useful for degree programs, and was devised to prevent double counting of students during the year. Total fall enrollment in all degree-granting institutions increased 2.4 fold from 8.58 million in 1970 to 20.43 million in 2009.

[14] See Autor, Katz, and Kearney (2008) and Goldin and Katz (2008) on long-run changes in the U.S. wage structure and returns to college.

[15] Cellini (2009) provides compelling evidence from California on the responsiveness of the rate of entry of for-profit colleges to public-sector funding constraints on community colleges.

[16] "Chains" and "on-line" institutions are not designated in the IPEDS. We define a "national chain" as a for-profit institution that operates in at least three separate census divisions. A "regional chain" operates

advertising and recruitment costs giving the for-profit chains and on-line programs an important edge.

The for-profit chains and the on-line institutions experienced phenomenal growth because of the extension of a business model that has emphasized the special client base of the for-profits combined with the ability to "clone" successful programs using web technology and the standardization of curriculum for traditional in-person courses. The rise of the chains is responsible, as well, for 80 percent of the increase in loan and grant volumes in the for-profit sector. We turn now to the financial and business aspects of the for-profits.

## IV. The business model of the for-profit sector

### A. Client base and recruiting

The Title IV eligible for-profit sector receives the majority of its revenues from federal financial aid programs in the form of loans and grants to their students. This feature is a common feature of this diverse group and is part of their "business model."

The business model for the for-profit sector is to appeal to particular segments of the population, to rapidly enter fields that are in increasing demand, and to replicate what they do well.[17] For-profits appeal to older individuals who are simultaneously employed and in school or taking care of family members. Some of the for-profits offer services, such as child care, to deter enrollees from dropping out, especially during the period when the student can get a refund and to minimize the institution's dropout rate to maintain accreditation (see, for example, Rosenbaum, Deil-Amien and Person 2006). The for-profits are attractive to non-traditional students, many of whom are low income, require financial aid and need help filling out aid forms. For-profits often give generous transfer credit to students who began their BAs at other institutions.

For-profit institutions devote substantial resources to sales and marketing. Advertising in 2009 was around 11 percent of revenue for the large national chains. Sales and marketing (including advertising) was around 24 percent of revenue. In consequence, the average new student recruit costs one of the large national chains about $4000.[18] Annual tuition at one of

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in more than one state or has more than five campus branches within a single state and operates in no more than two census divisions. A for-profit is designated as on-line if it has the word "on-line" in its name or, more commonly, if no more than 33 percent of the school's students are from one U.S. state. All on-line institutions are considered to be national chains.

[17] See Breneman, Pusser and Turner (2006) and Hentschke (2010) on the business strategies of for-profit colleges.

[18] See Steinerman, Volshteyn and McGarrett (2011). The large national chains in the study are American Public Education, Apollo Group, Bridgepoint Education, Capella Education, Career Education,

these national chains is about $16,000 for a BA program, $14,000 for an AA program, and $13,000 for a certificate program as compared to average undergraduate tuition of about $6,000 at public four-year institutions for in-state students and $21,000 for private non-profit schools (Steinerman, Volshteyn and McGarrett 2011).

B. Nimble critters

We characterize the for-profit postsecondary school sector as being comprised of "nimble critters." For-profits cater to the expanding market of non-traditional students, develop curriculum and teaching practices to be able to provide identical program at multiple locations and at convenient times, and offer highly-structured programs to make timely completion feasible (Hentschke 2010). They are attuned to the marketplace and are quick to open new schools, hire faculty, and add programs in growing fields and localities.[19] For-profits are less encumbered than public and non-profit schools by physical plant, alumni, and tenured faculty. Take the expanding health profession fields, for example.

Enrollment in the health professions doubled from 2000 to 2009. In the for-profit sector it increased by three times, whereas in all other postsecondary institutions it increased by 1.4 times. In consequence, the fraction of enrollment in the allied health fields in the for-profits increased from 35 percent to 52 percent (see Figure 4). The increase in the national and regional chains accounts for almost the entire 17 percentage point increase.

Looking more closely at the programs offered in these fields shows that the for-profits have rapidly entered the growing fields of medical assisting, phlebotomy, x-ray and ultrasound technicians, practical nursing, and even registered nursing. The total number of AA degrees in the health professions increased by about two times during the past decade but the for-profits increased their degrees by four times and the for-profit chains by almost six times. Similarly for certificates in the health professions, the for-profit national and regional chains more than tripled their awards from 2000 to 2009 whereas the public sector more than doubled theirs.

On-line education fits many of the features of the for-profit business model such as attracting older students who need to combine work with schooling and to appeal to students who do not want to learn on the academic calendar (as in the popular advertisement: "Earn your college degree in your pajamas"). Much of the growth of for-profits during the last decade has been in schools emphasizing on-line programs, as seen in Figure 1. Some of the increase was due to U.S. Department of Education regulatory changes, first in 1998 and then in 2005.

Prior to 1998 a Title IV eligible institution could not have more than half of its enrollment in distance education. That rule was dropped in 2005 but was preceded, by the 1998

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Corinthian Colleges, DeVry Inc., Education Management, Grand Canyon Education, ITT Educational Services, Lincoln Education, Strayer Education, and Universal Technical Institute.

[19] For example, Turner (2006) finds that for-profit enrollments are more responsive than public sector enrollments to changes in state college-age populations.

amendments to the Higher Education Act authorizing the U.S. Department of Education to grant waivers to promote new advances in distance education. In the early 2000's many of the larger chains were granted waivers. But the regulatory change in 2005 did spur the growth of institutions that are dedicated on-line institutions. Many are mega-institutions, such as the American Public University with an enrollment of more than 50,000. By 2007-08, 12 percent of undergraduates and 25 percent of graduate students at for-profits took their entire program through distance education as compared with less than 3 percent for undergraduates and 8 percent for graduate students at public and private non-profit institutions combined (U.S. Department of Education, NCES, 2011, tables A-43-1 and A-43-2).

C. Federal student financial aid

Federal student financial aid is the lifeblood of for-profit higher education in the United States. Federal grants and loans received under Title IV of the Higher Education Act (HEA) accounted for 73.7 percent of the revenues of Title IV-eligible private for-profit higher education institutions in 2008-09.[20] Under current regulations (the 90/10 rule), for-profit schools can derive no more than 90 percent of their revenue from Title IV financial aid sources to maintain Title IV eligibility, and the constraint comes close to binding for many for-profits. In fact, 30 percent of for-profit institutions, including many of the largest national chains such as the University of Phoenix and Kaplan University, received over 80 percent of their revenues from federal Title IV student aid in 2008-09. The Title IV revenue figures understate the importance of federal student aid to for-profit institutions since they do not include military educational benefits provided to veterans and active service members.[21]

For-profit institutions receive a disproportionate share of federal Title IV student financial aid both because they have higher tuition and fees than public institutions and because they attract large numbers of students who are financially independent or come from low-income families. For-profits accounted for 24 percent of Pell grant disbursements and 26 percent of federal student loan disbursements in 2008-09 even though they enrolled only 12 percent of the students.[22] In fact, 50 percent of undergraduates at for-profit schools received Pell grants as compared with 25 percent at public and private non-profit institutions combined.

The sharp rise in the enrollments at for-profit schools has been accompanied by a rapid rise in their share of federal student financial aid from 2000 to 2010 (Figure 5). The for-profit share of Pell grants increased over the last decade from 13 to 25 percent and their share of total

[20] Based on data in U.S. Department of Education, Federal Student Aid Data Center (2011).
[21] Military educational benefits do not count towards the 90 percent federal Title IV student aid revenues under the 90/10 rule. The for-profits have, in consequence, actively recruited military benefit recipients (veterans, service members, and their family members) especially under the generous Post-9/11 GI Bill of 2008. For-profits accounted for 36.5 percent of the Post-9/11 GI Bill benefits during the first year of the program (Health, Education, Labor and Pensions Committee, 2010, p. 4).
[22] Tabulations from the IPEDS and NSLDS.

federal student loans (both subsidized and unsubsidized loans) increased from 11 percent in 2000 to 26 percent in 2009 before dipping to 23 percent in 2010.[23]

On the other hand, public-sector institutions receive direct taxpayer support largely from state government appropriations that serve to lower tuition and fees. Taxpayer costs are actually lower to finance education in for-profits to the extent their federal student loans get repaid. But the rationale for public subsidies is somewhat different. Many public institutions and private non-profit schools produce research with potentially large spillover benefits and educate students in the liberal arts and other fields that may improve civil society and generate external benefits. But loans to students attending for-profits often do not get repaid.

D. Default rates

The large increase in federal student aid dollars flowing to for-profits has attracted substantial scrutiny about the quality of their programs and whether they provide students with sufficient skills to enable them to thrive in the labor market and be able to pay off their student debts (e.g., Baum 2011). In fact, students from for-profit institutions have higher default rates on federal student loans than students in other sectors. And the default rates of for-profits have risen substantially over the last five years.[24]

The current official two-year Cohort Default Rate (CDR) measures the percentage of borrowers who enter repayment of federal student loans (by leaving a program through graduation or dropping out) during a fiscal year and default prior to the end of the next fiscal year. An institution loses Title IV eligibility if its two-year CDR exceeds 25 percent for three consecutive years or is 40 percent in any one year. The two-year CDR of for-profit institutions was 11.6 percent for fiscal year 2008 as compared with 6 percent for public institutions and 4 percent for private non-profits. The U.S Department of Education will be moving to a three-year cohort default rate standard for maintaining Title IV eligibility in fiscal year 2012. Three-year cohort default rates for fiscal year 2008 were 24.9 percent for for-profits, 7.6 percent for private non-profits, and 10.8 percent for public institutions (Steinerman, Volshteyn and McGarrett 2011). The sharp increase in default rates from a two- to a three-year window probably reflects incentives for institutions to minimize defaults within the current two-year regulatory window.

We examine the role of student demographics, financial aid take-up, and institutional characteristics (degree offerings, remedial course, student characteristics) in explaining the

[23] The slight decline in the for-profit share of loans in 2010 may reflect the shift from the Federal Family Education Loan program with bank lending under federal guarantees to the Direct Loan program where the federal government makes the loans directly to students.

[24] Current default rates at for-profits, however, remain lower than in the late 1980s and early 1990s before the 1992 amendments to the HEA that tightened institutional eligibility for Title IV funds and removed many non-degree proprietary schools with very high default rates from the Title IV financial aid programs (Bennett, Lucchesi, and Vedder 2010).

higher federal student loan default rates of for-profit institutions. Table 2 presents regressions of institution-level three-year CDRs on institution type and year dummies (with public four-year institutions as the base group) plus successive additions of controls for student and institution characteristics, geography, and school selectivity for pooled institution-year data covering the 2005 to 2008 fiscal years.

The raw default rates and those regression-adjusted for institutional characteristics are highest for the for-profit schools followed by community colleges and then four-year public and non-profit institutions. The unadjusted 11 percentage point higher three-year CDR for for-profits (col. 1) relative to the base group of four-year public institutions is reduced slightly to 10.5 percentage points with the addition of detailed controls for student demographics, institutional characteristics, and city fixed effects (col. 3) despite the fact that these controls explain a substantial fraction of the cross-institution variation in default rates. The addition of the covariates modestly expands the for-profit default rate gap relative to community colleges.

The for-profit default rate remains 8.7 percentage points higher than that for four-year publics and non-profits and 5.7 percentage points higher than for community colleges when the sample is limited to non-selective (open admission) institutions (col. 4). Higher three-year CDRs are apparent for all segments of the for-profit sector, including independent schools, regional chains, national chains, and largely on-line institutions (cols. 6 to 9). And the default rates at national chains and on-line for-profits soared in 2008.

For-profit institutions account for a large and rising share of federal financial aid. For-profit students have much higher default rates and account for 47 percent of defaults today. Default rates have been rising in recent years for the for-profit chains beyond what can be accounted for by basic student characteristics.

## V. Student outcomes

The for-profits seem to have forged a highly successful business model. They appeal to the non-traditional student that other higher-education institutions often ignore. They offer training in a wide range of vocational skills in high demand. Substantial debt burdens and high default rates, however, indicate a potential dark side.

But differences in (uncorrected) student outcomes between the for-profits and other institutions may be a misleading indicator of the treatment effect of attending a for-profit because the for-profits disproportionately attract minority, older, independent, and disadvantaged students. We assess student outcomes of the for-profits relative to other higher education institutions after adjusting for observable differences in students who have attended different types of schools.

The recent and rapid growth of for-profit colleges means that most of the standard individual-level longitudinal data sets do not identify those who went to for-profit institutions or do not have large enough samples of for-profit students for a meaningful analysis. To overcome these constraints we use the most recent cohort of the Beginning Postsecondary Students Longitudinal Study (BPS, known as BPS:04/09). The BPS:04/09 (subsequently called BPS) follows a sample of 2003-04 first-time beginning postsecondary students in their first, third, and sixth years since entering an undergraduate institution (through 2009). Because it covers a recent cohort, a significant fraction of BPS undergraduates initially enrolled in a for-profit institution. The BPS has detailed student background variables, low attrition rates, and an oversample of students at for-profit institutions yielding approximately 1,950 students starting at for-profits out of a total of about 16,680 students in our main sample.[25]

The BPS is representative for first-time postsecondary students (those starting an undergraduate program with no previous postsecondary schooling). Because a large fraction of students in for-profit institutions are older, nontraditional students returning to higher-education who do not get picked up in the BPS sampling frame, our BPS analysis cannot reveal the full for-profit school treatment effect.

The raw BPS data, given in cols. (1) to (3) of Table 3, reveal that new postsecondary students at for-profits accumulate larger student debt burdens, are more likely to default on their student loans, have poorer employment outcomes five years after entering postsecondary school, and are less likely to be satisfied with their course of study than students starting at public or private non-profit schools. The short-run (one-year) dropout rate is slightly lower for starting for-profit students than those starting in a community college. For-profit students in certificate and AA programs have higher completion rates than community college students. In contrast, BA completion rates of for-profit students are much lower than of those starting in four-year public and non-profit schools.

Using the BPS we assess whether the raw mean student outcome differences have been overstated because for-profit students differ from those in the public and the private non-profit sectors, as shown in the bottom panel of Table 1. We follow two complementary empirical approaches to adjust the raw outcomes for differences in baseline observables between for-profit students and others. We first present standard OLS regressions of student outcomes on a rich set of covariates (student baseline characteristics at entry into college) and a dummy variable for starting postsecondary schooling in a for-profit institution. The second approach takes students

[25] We use the BPS sampling weights in all our analyses to account for the variation in sampling rates among different student subgroups. The attrition rates from the BPS:04/09 by the final 2009 survey round are relatively balanced by starting institution at 6.4 percent for students from for-profits, 10.9 percent for community college students, and 10.7 percent for students from four-year public and non-profit schools. The differences in attrition rate by starting institution type are small and not statistically significant after conditioning on baseline covariates. Unweighted sample sizes are rounded to the nearest 10.

starting in for-profits as the treatment group and students starting in public and private nonprofit schools as the control group. We focus on comparing the outcomes of the for-profit students to the control group members who are observably comparable to for-profit students. More specifically, we estimate the average treatment on treated effect of starting in a for-profit institution using nearest neighbor (propensity score) matching models with replacement excluding observations outside of common support.[26]

The two estimation methods, OLS and matching model, are given in Table 3 cols. (4) and (5) using the full BPS sample. For educational attainment outcomes the estimation samples are separated into the sub-groups of students initially enrolled in each type of program (certificate, AA, BA).[27] The OLS and matching approaches generate qualitatively and quantitatively similar estimates for almost every outcome considered.

Our conclusions with regard to the relative performance of students starting in for-profit institutions are mixed. The for-profits do a first-rate job with respect to short-run student retention. For-profit students have a higher probability of staying with a program through its first year. Early persistence translates into a higher probability of obtaining a degree or certificate in a one- or two-year program. The OLS estimates imply that certificate seekers starting at for-profits are almost 9 percentage points more likely to gain a certificate than community college students. While for-profit students in AA programs are more likely than community college students to attain an AA degree, they are less likely to continue to college-level work and attain a BA degree. As a result, there is no difference between the two sectors in the probability that AA seekers will obtain an AA or more.[28]

Students in for-profit institutions are also much less likely to report taking remedial courses in their first year in postsecondary school than students in other institutions. The greater ability of for-profit students to take courses they consider directly relevant and not languish in remedial courses may play a role in their greater first-year retention rates.[29]

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[26] We implement the nearest-neighbor matching estimator in STATA using the routines developed by Becker and Ichino (2002).

[27] Appendix Tables 1 to 4 present comparable analyses for the full range of student outcomes for the sub-samples of BPS students starting in non-selective schools (dropping selective four-year schools), certificate programs, AA programs, and BA programs respectively.

[28] Appendix Table 3 contains all results for AA-seekers. They are about 4 percentage points more likely to attain an AA and about 7 percentage points less likely to attain a BA. The estimate for the combined outcome "AA or more" is in the main text Table 3. The Matching estimates indicate a somewhat more modest and not quite statistically significant for-profit advantage in completing certificate and AA programs.

[29] See Rosenbaum, Deil-Amien and Person (2006) for rich case study evidence of the roles of clearer program paths, more relevant courses, and student services in better retention and short program completion rates for students in for-profit schools relative to community colleges. Rutschow and Schneider (2011) summarize recent evidence from interventions designed to improve students' progress through remedial courses at community colleges.

For the longer undergraduate programs, such as BA, for-profits do not fare as well as four-year public and private non-profit institutions. The OLS estimate implies a 12 percentage point completion deficit and the matching model implies a 19 percentage point deficit for students starting BA programs at for-profits. The control group of students in the full range of public and private non-profit four-year schools is probably less comparable in the case of BA students than for certificate and AA programs. But even when the sample is restricted to students starting in non-selective schools, a statistically significant deficit of almost 5 percentage points remains (see Appendix Table 1).

Also on the negative side is that the for-profits leave students with considerably higher debt, even conditional on a rich set of observables. For-profit students face higher sticker-price tuition and pay higher net tuition (tuition plus fees minus grants) than comparable students at other institutions. Students who began at a for-profit school default on their loans at higher rates than other students conditional on controls for demographics, academic preparation, and pre-enrollment family resources. For-profit students have substantially higher default rates even when comparing students across school types with similar cumulative debt burdens.[30]

Although the vast majority of students from for-profits express satisfaction with their course of study and programs, they report significantly lower satisfaction than observably similar students starting in public and non-profit schools. Students who began in for-profit colleges are also less likely to state that their education was worth the amount they paid and are less apt to think their student loans were a worthwhile investment. Even though the for-profits have higher short-run retention of students, their students are more likely to leave their certificate or degree programs before completion because of dissatisfaction with the program.

In terms economic outcomes in the medium-run, for-profit students are more likely to be idle (that is, not working and no longer enrolled in school) six years after starting college. Among the BPS students who left school by the 2009 survey wave, those from for-profits are more likely to be unemployed and to have experienced substantial unemployment (more than three months) since leaving school. For-profit students no longer enrolled in 2009 have earnings from work in 2009 that are $1,800 to $2,000 lower (or 8 to 9 percent of their predicted mean earnings) than had they gone to another type of institution. For-profit students have modestly lower earnings conditional on employment in 2009 and slightly lower job satisfaction, but neither difference is statistically significant.

The comparable (but slightly lower) earnings combined with substantially higher loan burdens for students from for-profits relative to other school leavers imply that for-profit

[30] For example, the default rate by 2009 for the BPS:04/09 students with $5,001 to $10,000 in cumulative federal student loans is 26 percent for student from for-profits versus 10 percent for those from community colleges and 7 percent for those from 4-year public and nonprofit schools, and the difference is a 16 percent default rate among for-profit students versus a 3 percent rate for community college students and 2 percent rate for other 4-year college students among those with $10,001 to $20,000 in debt.

students will be less able to meet the new U.S. Department of Education "Gainful Employment" standard. [31] According to the standard, the debt burden (annual federal student loan yearly payments) should not exceed 12 percent of annual earnings for a typical graduate. In fact, we find conditional on observables that for-profit students would have had a 15 to 19 percentage point lower rate of meeting the recently enacted Gainful Employment earnings threshold in 2008 (four to five years after starting) than would students from other types of institutions.

For-profit schools, therefore, do better in terms of first-year retention and the completion of shorter certificate and degree programs. But their first-time postsecondary students wind up with higher debt burdens, experience greater unemployment after leaving school and, if anything, have lower earnings six years after starting college than observationally-similar students from public and non-profit institutions. Not surprisingly for-profits students end up with higher student loan default rates and are less satisfied with their college experiences.[32]

Part of the higher default rate reflects the weak labor market for many students leaving for-profits in recent years. But the lower satisfaction with the programs may provide an additional psychological factor accounting for the high default rates of for-profit students, even for those with modest absolute student debt levels.[33] These facts are troubling since the consequences of federal student loan default cannot be escaped through bankruptcy and can adversely impact an individual's credit rating and future access to credit let alone result in wage garnishment, harassment by private collection agencies, and tax refund offsets.

Although we have used the detailed background covariates in the BPS to make comparisons between individuals who are as similar as can be observed, we do not have quasi-experimental variation concerning who goes to which type of higher-education institution. Thus, one needs to be cautious in providing a causal interpretation of the estimated for-profit school treatment effects in Table 3 since the potential problem of selection bias from non-random sorting on unobservables remains.

Our comparison of the medium-term outcomes for students at for-profits versus and other institutions does not directly provide information on whether attendance at a for-profit college is a worthwhile investment. Cellini and Chaudhary (2011), however, do find similar Mincerian

[31] See U.S. Department of Education (2011). The new Gainful Employment regulations will require most for-profit programs and certificate programs at public and nonprofit institutions to pass at least one of three metrics to remain Title IV eligible: (1) at least 35 percent of former students repaying their loans (reducing their loan by at least $1 over the course of a year); (2) annual loan payments not exceeding 30 percent of typical graduate's discretionary income; or (3) annual loan payments not exceeding 12 percent of a typical graduate's earnings.

[32] The same basic qualitative pattern of findings is apparent when we drop students from selective schools (Appendix Table 1) and when we separately analyze the sub-groups of students starting in certificate programs (Appendix Table 2), AA programs (Appendix Table 3), and BA programs (Appendix Table 4).

[33] In fact, BPS students from for-profits with less than $2,500 in federal student loan debt had a default rate of 20 percent by 2009 as compared with 12 percent for students from community colleges and 4 percent for those from four-year public and non-profit institutions.

rates of return of around 15 to 17 percent (or 8 percent per year of education) to completing an AA degree at private postsecondary institutions (largely for-profit schools) and at public institutions (largely community colleges) using an individual fixed effects strategy (comparing earnings before and after college) implemented on workers under 30 years old in the 1997 National Longitudinal Survey of Youth.[34]

## VI. Nimble critters or agile predators?

The for-profit postsecondary school sector is the fastest growing part of U.S. higher education. It is large and it is highly heterogeneous. Evaluating its successes and failures must go beyond mean outcomes and consider the distribution of labor market effects and financial default rates.

For many, the for-profits have been a rousing success. They have played a critical role in expanding the supply of skilled workers in an era of tight state budgets and stagnating state appropriations to public sector schools. They have ever since their beginning provided educational services to underserved populations. Their innovative use of web services has further allowed them to accommodate nontraditional students. Their disproportionate share of federal student grants and loans has enabled them to provide skills to disadvantaged populations. Short-run retention is high and the for-profits do an admirable job completing students in shorter programs. The vast majority of their students are satisfied with their programs.

But the for-profits charge higher tuition and fees than public-sector alternatives, and their students are more likely to end up unemployed and with substantial debts. Students who attended a for-profit have much higher default and non-repayment rates on federal student loans than do observationally similar students who attended a public or private non-profit institution.

The for-profits have taken a large burden off the public sector. The high default rates of their students on federal loans, however, increase their cost to the taxpayer. The recent Gainful Employment regulation of the U.S. Department of Education is an attempt to hold the for-profits more accountable and put a greater burden on the schools rather than only on the students. The new regulations will also require institutions to disclose their program costs, and completion, placement, and loan repayment rates. These regulations will increase transparency but may be insufficient to contain an agile predator. A reality check by a third party counselor might be needed before the taking out of a student loan is made official. Regulating for-profit colleges is tricky business. The challenge is to rein in the agile predators while not stifling the innovation of these nimble critters.

[34] Under the assumption that these early estimated earnings gains from a private AA degree persist over one's career, Cellini and Chaudhary (2011) conclude that the increase in the lifetime earnings for getting an AA at a private college exceed the sum of foregone earnings, tuition and fees, and student loan borrowing costs.

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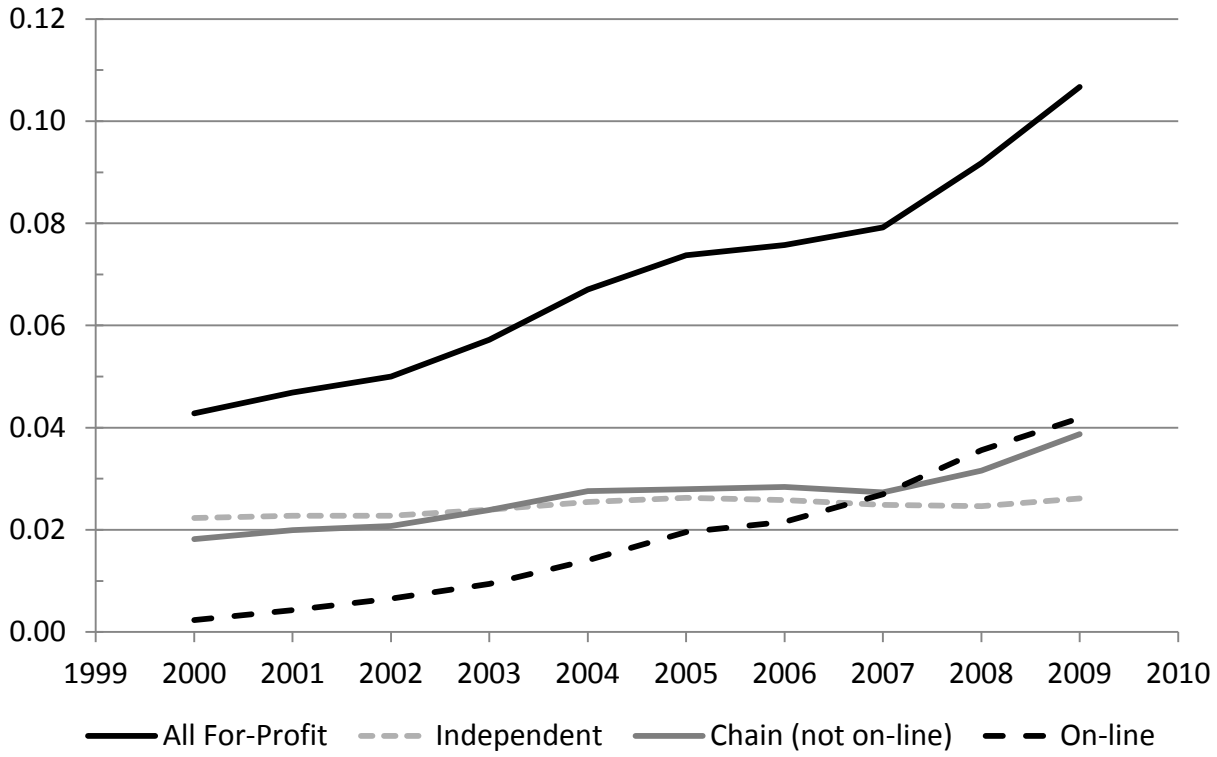
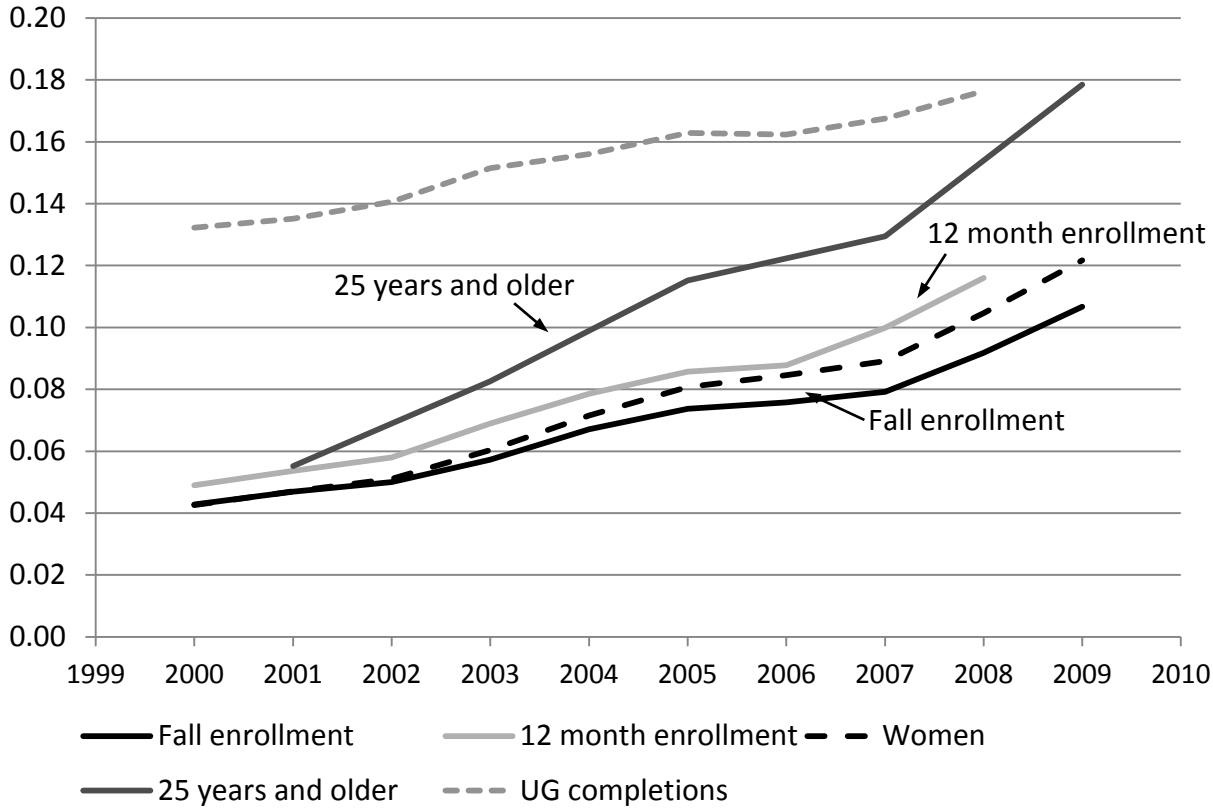
Figure 1: For-Profit Institution Share of Total Title IV Fall Enrollment: Total and by School Type, 2000 to 2009




*Source:* IPEDS.

*Notes*: A for-profit institution is classified as "On-line" if it has the word "on-line" in its name, or if not more than 33 percent of the school's students are from one U.S. state. The "Chain (not-on-line)" category covers all other for-profit institutions that operate in more than one state or have more than five campus branches within a single state. The "Independent" category includes for-profits that operate in only one state and have fewer than five campus branches.

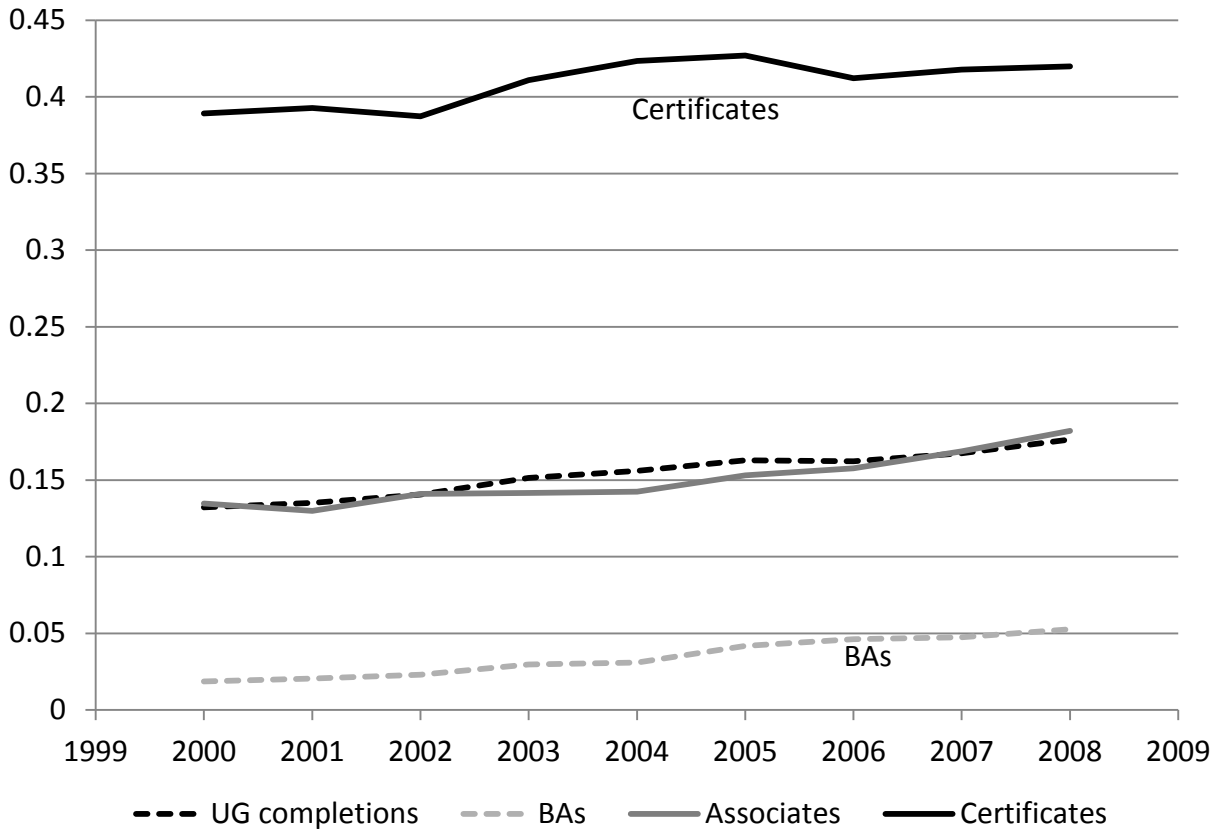
Figure 2: For-Profit Share of Enrollments and Undergraduate Completions: 2000 to 2009




*Source*: IPEDS

*Notes*: Fall enrollment = enrollment at the beginning of the academic year; 12 month = unduplicated enrollment during the entire year; 25 years and older = fall enrollment of those 25 years and older; Women = female fall enrollment; UG completions = all undergraduate completions (certificates + associate's degrees + bachelor's degrees). The series for "25 years and over" is for the odd-numbered years and the even-numbered years are interpolated from those.

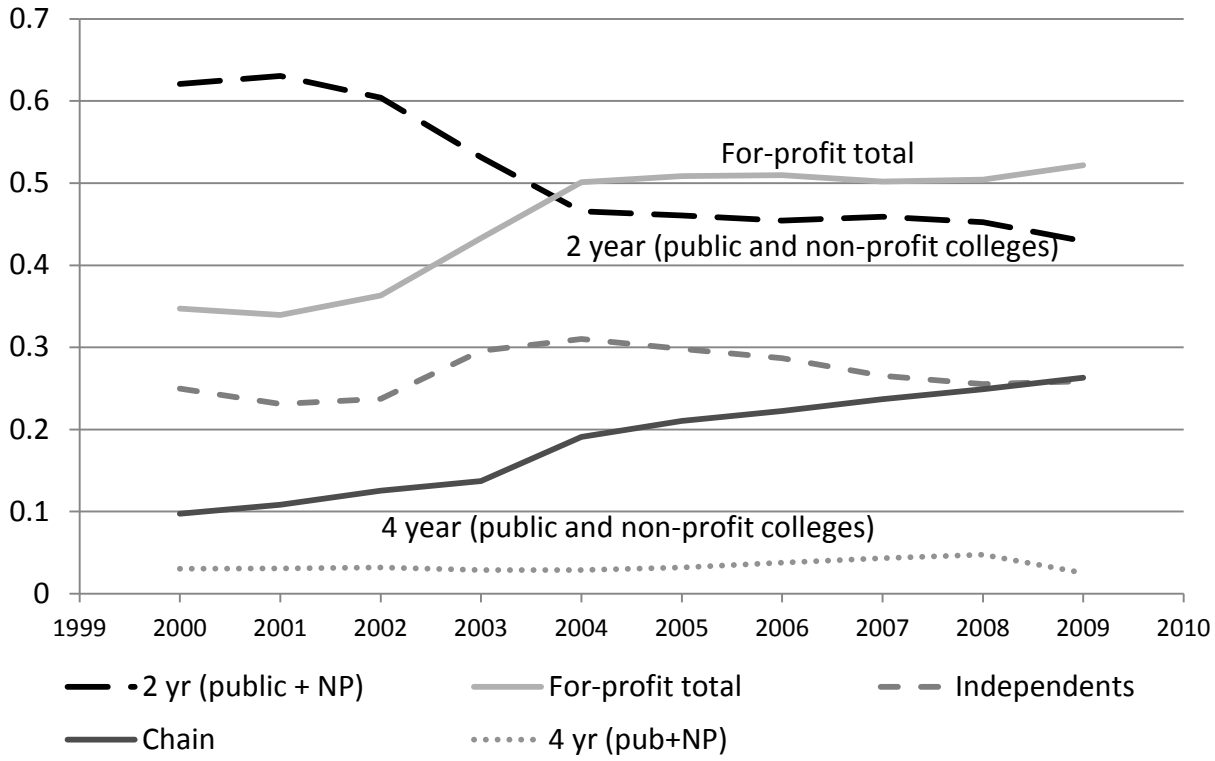
Figure 3: For-Profit Shares of Undergraduate Completions: Certificates, Associate's Degrees, Bachelor's Degrees




*Source*: IPEDS

*Notes*: UG completions = for-profit share of all undergraduate completions (certificates + associate's degrees + bachelor's degrees).

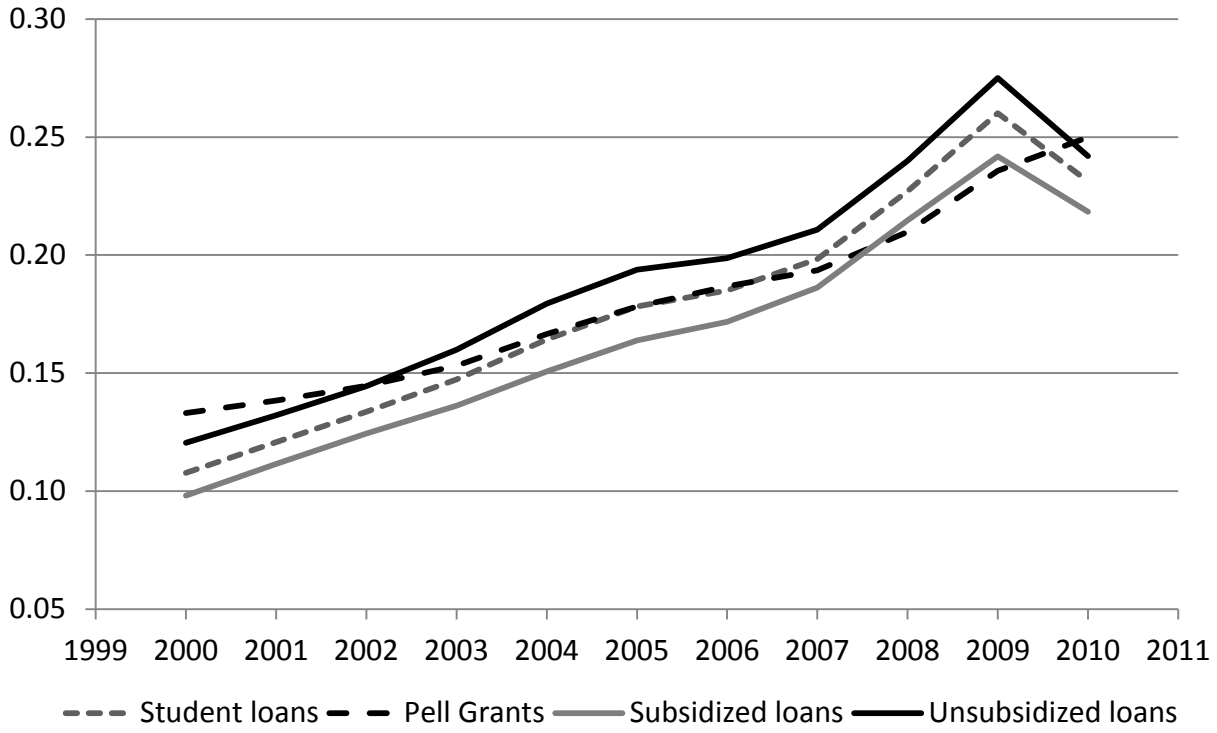
Figure 4: Enrollment in Allied Health Fields by Institutional Status and Control




*Source*: IPEDS.

*Notes*: 4 yr (public and NP) = public and private non-profit four-year institutions; 2 yr (public + NP) = two year public (community colleges) and two-year private non-profit colleges; Independents = for-profit independent (non-chain) institutions; Chain = for-profits institutions with "on-line" in the school name or that operate in more than one state or that have more than campus branches in a single state.

Figure 5: For-Profit Share of Federal Financial Aid (Pell Grants and Student Loans): 2000 to 2010




*Source*: National Student Loan Data System (NSLDS).

*Notes*: Student loans include subsidized and unsubsidized federal student loans under the Federal Family Education Loan (FFEL) and Direct Loan Programs

Table 1: Student Characteristics from the BPS and IPEDS for For-Profits, Two-Year Public Colleges, and Four-Year (Non-Profit) Colleges

| | Student Characteristics by IPEDS Institution Type, 2009/10 | | | |
|---|---|---|---|---|
| | For-Profit Institutions | Two-Year Public Colleges | Four-Year Public Colleges | Four-Year Private Non-Profit Colleges |
| Female | 0.651 | 0.570 | 0.552 | 0.576 |
| African-American | 0.221 | 0.136 | 0.109 | 0.104 |
| Hispanic | 0.150 | 0.157 | 0.105 | 0.093 |
| Full-time | 0.579 | 0.410 | 0.733 | 0.742 |
| Age 25 years and over | 0.651 | 0.404 | 0.306 | 0.392 |
| Federal loans per student | 11,415 | 759 | 3,512 | 5,769 |
| Pell Grant per student | 2,370 | 773 | 738 | 632 |
| Tuition (in-state) | 13,103 | 2,510 | 5,096 | 24,470 |
| Number of institutions | 2,995 | 1,595 | 690 | 1,589 |
| | BPS 2004-2009 Sample Characteristics | | | |
| | For-Profit Institutions | Community Colleges | Four-Year Public and Non-Profit Colleges | |
| Female | 0.659 | 0.564 | 0.558 | |
| African-American | 0.248 | 0.140 | 0.141 | |
| Hispanic | 0.264 | 0.159 | 0.103 | |
| Age | 24.4 | 23.8 | 19.5 | |
| Single parent | 0.288 | 0.124 | 0.030 | |
| Delayed enrollment after HS | 0.576 | 0.481 | 0.142 | |
| HS Diploma | 0.754 | 0.852 | 0.947 | |
| GED | 0.172 | 0.095 | 0.022 | |
| Mother HS dropout | 0.224 | 0.137 | 0.055 | |
| 2003 Family income if a dependent | 36,854 | 60,039 | 76,509 | |
| 2003 Family income if independent | 17,282 | 31,742 | 78,664 | |
| Enrolled full-time | 0.809 | 0.460 | 0.903 | |
| Worked while enrolled, 2003-2004 | 0.635 | 0.755 | 0.499 | |
| Enrolled in a certificate program | 0.551 | 0.072 | 0.015 | |
| Enrolled in an AA program | 0.326 | 0.774 | 0.061 | |
| Enrolled in an BA program | 0.106 | 0 | 0.891 | |
| Expects to earn a BA | 0.643 | 0.799 | 0.980 | |
| Sample size (unweighted) | 1,950 | 5,970 | 8,760 | |

*Sources*: BPS:04/09; IPEDS.

*Notes*: Community colleges include two-year public and private non-profit institutions. In Unweighted sample sizes are rounded to the nearest 10.

Table 2: Regression of Three-Year Cohort Default Rate on Type of Institution: 2005 to 2008

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| Non-profit four year | -0.015 | -0.006 | 0.001 | 0.002 | 0.000 | -0.015 | -0.007 | -0.001 | 0.001 | -0.001 |
| | (0.003) | (0.003) | (0.004) | (0.011) | (0.003) | (0.003) | (0.003) | (0.004) | (0.010) | (0.004) |
| Community college | 0.063 | 0.049 | 0.046 | 0.030 | 0.046 | 0.063 | 0.047 | 0.045 | 0.030 | 0.044 |
| | (0.003) | (0.004) | (0.005) | (0.009) | (0.004) | (0.003) | (0.004) | (0.005) | (0.009) | (0.005) |
| For-profit | 0.110 | 0.105 | 0.105 | 0.087 | 0.105 | | | | | |
| | (0.003) | (0.004) | (0.005) | (0.009) | (0.004) | | | | | |
| For-profit × 2008 | | | | | 0.005 | | | | | |
| | | | | | (0.007) | | | | | |
| Independents | | | | | | 0.102 | 0.096 | 0.098 | 0.080 | 0.098 |
| | | | | | | (0.003) | (0.005) | (0.005) | (0.010) | (0.005) |
| Independents × 2008 | | | | | | | | | | -0.013 |
| | | | | | | | | | | (0.010) |
| Regional chain | | | | | | 0.123 | 0.113 | 0.111 | 0.091 | 0.110 |
| | | | | | | (0.006) | (0.007) | (0.007) | (0.011) | (0.007) |
| Regional chain × 2008 | | | | | | | | | | 0.011 |
| | | | | | | | | | | (0.015) |
| National chain | | | | | | 0.152 | 0.131 | 0.127 | 0.108 | 0.124 |
| | | | | | | (0.006) | (0.006) | (0.006) | (0.010) | (0.006) |
| National chain × 2008 | | | | | | | | | | 0.032 |
| | | | | | | | | | | (0.008) |
| On-line | | | | | | 0.079 | 0.076 | 0.089 | 0.075 | 0.081 |
| | | | | | | (0.016) | (0.014) | (0.017) | (0.019) | (0.017) |
| On-line × 2008 | | | | | | | | | | 0.059 |
| | | | | | | | | | | (0.020) |
| R-squared | 0.295 | 0.428 | 0.642 | 0.553 | 0.642 | 0.305 | 0.433 | 0.644 | 0.555 | 0.645 |
| Sample Size | 14,655 | 14,655 | 14,655 | 9,281 | 14,655 | 14,655 | 14,655 | 14,655 | 9,281 | 14,655 |
| Demographic controls | No | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes |
| Financial aid controls | No | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes |
| Degree types, offerings | No | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| City fixed effects | No | No | Yes | Yes | Yes | No | No | Yes | Yes | Yes |
| Limit to open admission | No | No | No | Yes | No | No | No | No | Yes | No |

*Source*: National Student Loan Data System and IPEDS.

*Notes*: The dependent variable is the three-year cohort default rate for an institution-year observation. The sample covers institution-year observations for the fiscal years 2005 to 2008. "Independents" are for-profit schools that operate in only one state and have no more than five branches. A "regional chain" is a for-profit institution that operates in more than one state, or has more than five campus branches within a single state, but operates in no more than two census divisions. A "national chain" is a for-profit institution that operates in at least three separate census divisions. A for-profit institution is "online" if it either has the word "online" in the school's name, or if no more than 33 percent of its students come from any single U.S. state. Demographic controls are fractions part-time, 25 years and over, female, African American, and Hispanic. Financial aid controls are the number of recipients of Pell grants and subsidized and unsubsidized federal loans, total yearly disbursement amounts for each, and total loans and Pell grants per enrollee. Degree types and offerings are indicators for distance education, remedial course offerings, whether the institution offers assistance with job placement, whether it offers part-time employment services for enrolled students, the highest award or degree offered by the institution, and whether it has open admissions. Standard errors are clustered by institution and are in parentheses. Omitted category is four-year public.

Table 3: Differences in College Costs, Financial Aid, and Student Outcomes between For-Profit Institutions and Other Schools for First-Time Undergraduates: 2004/2009 Beginning Postsecondary Students Longitudinal Study

| Dependent Variables | Beginning Postsecondary Students (BPS, full sample) | | | | |
|---|---|---|---|---|---|
| | Dependent Variable Means | | | For-Profit Institution Impact | |
| | (1) Four-Year Public and Non-profits | (2) Two-Year Public and Non-profits | (3) For-profits | (4) OLS | (5) Matching |
| | | | Financial Aid, 2003-2004 | | |
| Applied for aid | 0.895 | 0.749 | 0.986 | 0.094 | 0.072 |
| | | | | (0.010) | (0.011) |
| Title IV loan and grant aid | 3,837 | 1,022 | 6,852 | 4,439 | 3,417 |
| | | | | (183) | (164) |
| Tuition | 9,230 | 1,269 | 8,434 | 5,632 | 5,108 |
| | | | | (173) | (201) |
| Net tuition minus grants | 5,183 | 734 | 5,573 | 4,521 | 4,418 |
| | | | | (157) | (158) |
| Pell grant | 0.285 | 0.294 | 0.790 | 0.190 | 0.061 |
| | | | | (0.014) | (0.020) |
| Pell grant amount | 771 | 633 | 2,149 | 557 | 180 |
| | | | | (48) | (68) |
| | | | Financial Aid through 2009 | | |
| Cumulative Pell grant | 2,923 | 2,399 | 4,084 | -170 | -852 |
| | | | | (146) | (223) |
| Cumulative Title IV borrowing | 8,702 | 3,502 | 7,699 | 3,960 | 2,239 |
| | | | | (421) | (381) |
| Title IV loan balance in 2009 | 8,024 | 3,306 | 7460 | 4,071 | 2,242 |
| | | | | (460) | (401) |
| Repaid any amount on loan, conditional on a student loan | 0.642 | 0.640 | 0.529 | -0.093 | -0.040 |
| | | | | (0.029) | (0.046) |
| Defaulted on loan, conditional on a student loan | 0.035 | 0.056 | 0.188 | 0.067 | 0.082 |
| | | | | (0.018) | (0.018) |
| | | | Persistence and Educational Attainment | | |
| Left school in 2003-2004 | 0.062 | 0.233 | 0.212 | -0.046 | -0.051 |
| | | | | (0.016) | (0.018) |
| Attained certificate (enrolled in certificate program) | – | 0.424 | 0.537 | 0.086 | 0.046 |
| | | | | (0.036) | (0.034) |
| Attained AA or more (enrolled in AA program) | – | 0.283 | 0.291 | -0.006 | -0.016 |
| | | | | (0.028) | (0.030) |
| Attained BA (enrolled in BA program) | 0.658 | – | 0.262 | -0.115 | -0.194 |
| | | | | (0.045) | (0.052) |
| Idle (not employed, not enrolled) at 2009 survey | 0.106 | 0.133 | 0.236 | 0.052 | 0.058 |
| | | | | (0.017) | (0.017) |
| Enrolled in 2009 | 0.271 | 0.389 | 0.216 | -0.114 | -0.080 |
| | | | | (0.018) | (0.019) |

| | | | | | |
|---|---|---|---|---|---|
| | Employment and Earnings (for those no longer enrolled in 2009) | | | | |
| Any job in 2009 | 0.839 | 0.784 | 0.706 | -0.028 | -0.031 |
| | | | | (0.021) | (0.022) |
| Earnings from work in 2009 | 28,613 | 24,795 | 19,950 | -1,771 | -1,936 |
| | | | | (931) | (950) |
| Earnings from work in 2009, conditional on employment | 34,080 | 31,622 | 28,243 | -1,355 | -243 |
| | | | | (934) | (937) |
| Unemployed and seeking work | 0.121 | 0.148 | 0.232 | 0.048 | 0.067 |
| | | | | (0.019) | (0.020) |
| Unemployed 3 months or more after leaving school | 0.238 | 0.259 | 0.404 | 0.077 | 0.084 |
| | | | | (0.022) | (0.023) |
| Earnings less than gainful employment standard | 0.135 | 0.046 | 0.271 | 0.194 | 0.147 |
| | | | | (0.019) | (0.017) |
| | Satisfaction with Program, School, Loans, Job | | | | |
| Remedial coursework in 2003-4 | 0.181 | 0.289 | 0.076 | -0.180 | -0.187 |
| | | | | (0.015) | (0.017) |
| Left school because dissatisfied (2003-2004) | 0.012 | 0.024 | 0.081 | 0.043 | 0.048 |
| | | | | (0.009) | (0.009) |
| Left school because dissatisfied (2003-2006) | 0.032 | 0.051 | 0.117 | 0.052 | 0.053 |
| | | | | (0.013) | (0.011) |
| Education was worth the cost | 0.802 | 0.821 | 0.648 | -0.204 | -0.179 |
| | | | | (0.019) | (0.017) |
| Loans were a worthwhile investment | 0.836 | 0.803 | 0.664 | -0.143 | -0.121 |
| | | | | (0.022) | (0.024) |
| Satisfied with major or program | 0.860 | 0.871 | 0.789 | -0.097 | -0.065 |
| | | | | (0.017) | (0.015) |
| Satisfied with current job, (employed, not enrolled) | 0.772 | 0.764 | 0.752 | -0.011 | -0.032 |
| | | | | (0.025) | (0.023) |
| Sample Size | 8,760 | 5,970 | 1,950 | | |

*Source*: BPS:04/09 Restricted-Use Data File.

*Notes*: The OLS column reports coefficient estimates (robust standard errors) for a for-profit institution dummy variable in regressions for each dependent variable that include the following covariates: dummy variables for race, sex, citizenship, born in the US, parents born in the US, English as the native language, household size, distance of school from home, lives with parents, marital status, single parenthood, independent student, number of kids, use of child care, maternal and paternal education categories, high school diploma, GED receipt, delayed enrollment after HS, certificate or degree program, degree expectations, region, and on or off campus residence; and second order polynomials in age, prior income (own for independent students and family for dependent students), household income percent of the poverty line, expected family contribution from the FAFSA, individual adjusted gross income from tax returns and government transfers. Each number in the Matching column represents the average treatment on the treated estimate (standard error) for going to a for-profit institution using from nearest neighbor (propensity score) matching with replacement and excluding observations outside of common support. The same covariates used in the OLS regressions were used for the matching models. The OLS and Matching model estimates use the BPS sampling weights. Unweighted sample sizes are rounded to the nearest 10.

# Appendix

*IPEDS and student financial aid*

We have constructed a consistent institution-year panel data set using the 2000 to 2009 micro data from the Integrated Postsecondary Education Data System (IPEDS) collected and maintained by the National Center for Education Statistics of the U.S. Department of Education. We use the IPEDS data on enrollments (fall, 12 month, and full-time equivalent), degrees and awards, tuition, revenues and expenditures, and other institutional characteristics. The IPEDS data are available from and documented at http://nces.ed.gov/ipeds/.

We match the IPEDS data to institution-level data on Pell grants, student loans volumes and cohort default rates from the National Student Loan Data System (NSLDS). For the financial data, see: http://federalstudentaid.ed.gov/datacenter/index.html.

Student loan volumes by institution come from the Direct Loan program (where the federal government gives loans directly to students) and the Federal Family Education Loan (FFEL) Program, and includes both subsidized (where the government pays interest while students are still enrolled in school) and unsubsidized loan programs. Under FFELP, private lenders provided capital for loans that were subsidized and guaranteed against default by the federal government. The FFEL program was terminated in 2009.

Institutions in IPEDS are assigned a unique "unitid" that is constant across years. Unitids are assigned to physical branches of an institution, and a single school will have one unitid for each branch. However, each school is also assigned an Office of Postsecondary Education ID (known as "opeid") that is constant across branches. The NSLDS data are linked to the opeid and are not broken out separately by branch. For example, IPEDS has enrollment and degree information separated by campus branch (i.e., by unitid), but information from NSLDS on student loan and Pell grant volumes is only available for the overall institution (i.e., the opeid).

*Match rate between IPEDS and NSLDS*

We are able to match about 94 percent of the unitids in IPEDS to an opeid from NSLDS. Around 67 percent of the schools are classified in IPEDS as for-profit institutions. The unmatched 6 percent of schools (722 of 11,889) contain 1.4 percent of total enrollment in 2009 and less in earlier years.

We were unable to match about 5.6 percent of the opeids in NSLDS to any IPEDS unitid. About 61 percent (405 of 661) of those institutions were classified by NSLDS as "proprietary" schools, or for-profits. Schools without unitids are about 1 percent of subsidized and unsubsidized loan volumes in 2009 and about 2.4 percent of Pell Grants. Among proprietary schools, those that were not successfully matched to IPEDS represent less than 1 percent of loans and about 1 percent of Pell grants.

Appendix Table 1: For-Profit Institution Impact on Student Outcomes for First-Time Undergraduates at Non-Selective Institutions: BPS:04/09

| | Beginning Postsecondary Students, Non-selective Institutions | | | | |
|---|---|---|---|---|---|
| | Dependent Variable Means | | | For-Profit Institution Impact | |
| | (1) | (2) | (3) | (4) | (5) |
| Dependent Variables | Four-Year Public and Non-profits | Two-Year Public and Non-profits | For- profits | OLS | Matching |
| | | | Financial Aid, 2003-2004 | | |
| Applied for Aid | 0.905 | 0.749 | 0.986 | 0.092 | 0.056 |
| | | | | (0.010) | (0.011) |
| Title IV loan and grant aid | 3,989 | 1,022 | 6,852 | 4,628 | 3,567 |
| | | | | (179) | (156) |
| Tuition | 6,737 | 1,269 | 8,434 | 5,979 | 5,243 |
| | | | | (160) | (176) |
| Net tuition minus grants | 3,457 | 734 | 5,573 | 4,660 | 4,351 |
| | | | | (148) | (143) |
| Pell grant | 0.407 | 0.294 | 0.790 | 0.190 | 0.053 |
| | | | | (0.014) | (0.021) |
| Pell grant amount | 1,092 | 633 | 2,149 | 570 | 195 |
| | | | | (49) | (68) |
| | | | Financial Aid through 2009 | | |
| Cumulative Pell grant | 3,545 | 2,399 | 4,084 | 100 | -657 |
| | | | | (145) | (212) |
| Cumulative Title IV borrowing | 8,489 | 3,502 | 7,699 | 4,562 | 2,781 |
| | | | | (417) | (354) |
| Title IV loan balance, 2009 | 8,153 | 3,306 | 7,460 | 4,640 | 2,759 |
| | | | | (449) | (371) |
| Repaid any amount on loan, conditional on a student loan | 0.588 | 0.640 | 0.529 | -0.098 | -0.033 |
| | | | | (0.030) | (0.044) |
| Defaulted on loan, conditional on a student loan | 0.073 | 0.056 | 0.188 | 0.058 | 0.078 |
| | | | | (0.018) | (0.019) |
| | | | Persistence and Educational Attainment | | |
| Left school in 2003-2004 | 0.134 | 0.233 | 0.212 | -0.053 | -0.054 |
| | | | | (0.016) | (0.018) |
| Attained certificate | 0.031 | 0.112 | 0.316 | 0.038 | 0.043 |
| | | | | (0.014) | (0.19) |
| Attained AA | 0.071 | 0.177 | 0.112 | -0.043 | -0.021 |
| | | | | (0.015) | (0.015) |
| Attained BA | 0.532 | 0.110 | 0.040 | -0.049 | -0.044 |
| | | | | (0.011) | (0.012) |
| Still enrolled in 2009 | 0.336 | 0.389 | 0.216 | -0.118 | -0.098 |
| | | | | (0.018) | (0.020) |
| Idle (not employed, not enrolled) | 0.132 | 0.133 | 0.236 | 0.046 | 0.056 |
| | | | | (0.017) | (0.017) |
| Left survey | 0.113 | 0.109 | 0.064 | -0.024 | -0.020 |
| | | | | (0.011) | (0.012) |

| | | | | | |
|---|---|---|---|---|---|
| | Employment and Earnings (conditional on no longer enrolled) | | | | |
| Any job in 2009 | 0.790 | 0.784 | 0.706 | -0.020 | -0.093 |
| | | | | (0.021) | (0.021) |
| Earnings from work in 2009 | 24,626 | 24,795 | 19,950 | -1237 | -4168 |
| | | | | (967) | (970) |
| Earnings from work in 2009, conditional on employment | 31,188 | 31,622 | 28,243 | -885 | 234 |
| | | | | (969) | (902) |
| Unemployed and seeking work | 0.164 | 0.148 | 0.232 | 0.041 | 0.062 |
| | | | | (0.019) | (0.021) |
| Unemployed more than 3 months since leaving school | 0.277 | 0.259 | 0.404 | 0.078 | 0.085 |
| | | | | (0.022) | (0.024) |
| Earnings do not meet the Gainful Employment standard | 0.156 | 0.046 | 0.271 | 0.204 | 0.152 |
| | | | | (0.019) | (0.017) |
| | Satisfaction with Program, School, Loans, Job | | | | |
| Remedial coursework | 0.235 | 0.289 | 0.076 | -0.196 | -0.198 |
| | | | | (0.015) | (0.017) |
| Left school because dissatisfied, 2003-2004 | 0.036 | 0.024 | 0.081 | 0.038 | 0.039 |
| | | | | (0.009) | (0.009) |
| Left school because dissatisfied, 2003-2006 | 0.073 | 0.051 | 0.117 | 0.046 | 0.048 |
| | | | | (0.013) | (0.011) |
| Education was worth the cost | 0.771 | 0.821 | 0.648 | -0.204 | -0.179 |
| | | | | (0.019) | (0.018) |
| Loans were a worthwhile Investment | 0.804 | 0.803 | 0.664 | -0.142 | -0.118 |
| | | | | (0.023) | (0.024) |
| Satisfied with major or course of study | 0.846 | 0.871 | 0.789 | -0.101 | -0.070 |
| | | | | (0.017) | (0.015) |
| Satisfied with current job (employed, not enrolled) | 0.772 | 0.764 | 0.752 | -0.014 | -0.011 |
| | | | | (0.026) | (0.024) |
| Sample size | 1,920 | 5,930 | 1,950 | | |

*Source*: BPS:04/09 Restricted-Use Data File.

*Notes*: The regression samples exclude students who started at selective four-year institutions. The OLS column reports coefficient estimates (robust standard errors) for a for-profit institution dummy variable in regressions for each dependent variable that include the same additional covariates as those listed in the notes to Table 3. Each number in the Matching column represents the average treatment on the treated estimate (standard error) for going to a for-profit institution using from nearest neighbor (propensity score) matching with replacement and excluding observations outside of common support. The same covariates used in the OLS regressions were used for the matching models. The OLS and Matching model estimates use the BPS sampling weights. Unweighted sample sizes are rounded to the nearest 10.

Appendix Table 2: For-Profit Institution Impact on Student Outcomes for First-Time Undergraduates in Certificate Programs: BPS:04/09

| | Beginning Postsecondary Students, Certificate Program Enrollees | | | | |
|---|---|---|---|---|---|
| | Dependent Variable Means | | | For-Profit Institution Impact | |
| | (1) | (2) | (3) | (4) | (5) |
| Dependent Variables | Four-Year Public and Non-profits | Two-Year Public and Non-profits | For- profits | OLS | Matching |
| | | | Financial Aid, 2003-2004 | | |
| Applied for Aid | 0.883 | 0.836 | 0.991 | 0.069 | 0.068 |
| | | | | (0.014) | (0.020) |
| Title IV loan and grant aid | 3,693 | 1,362 | 6,285 | 3,353 | 3,005 |
| | | | | (252) | (238) |
| Tuition | 7,171 | 1,425 | 8,129 | 5243 | 4979 |
| | | | | (176) | (276) |
| Net tuition minus grants | 4,227 | 757 | 5,212 | 4,023 | 3,911 |
| | | | | (242) | (242) |
| Pell grant | 0.465 | 0.409 | 0.888 | 0.191 | 0.061 |
| | | | | (0.023) | (0.033) |
| Pell grant amount | 1,272 | 785 | 2,480 | 583 | 264 |
| | | | | (78) | (105) |
| | | | Financial Aid through 2009 | | |
| Cumulative Pell grant | 2,961 | 2,127 | 3,780 | 41 | -734 |
| | | | | (220) | (265) |
| Cumulative Title IV borrowing | 5,019 | 2,033 | 4,599 | 1702 | 1119 |
| | | | | (331) | (404) |
| Title IV loan balance, 2009 | 4,471 | 1,884 | 3,975 | 1326 | 847 |
| | | | | (349) | (418) |
| Repaid any amount on loan, conditional on a student loan | 0.593 | 0.622 | 0.604 | -0.019 | 0.134 |
| | | | | (0.063) | (0.090) |
| Defaulted on loan, conditional on a student loan | 0.073 | 0.113 | 0.234 | 0.084 | 0.098 |
| | | | | (0.045) | (0.037) |
| | | | Persistence and Educational Attainment | | |
| Left school in 2003-2004 | 0.240 | 0.355 | 0.288 | -0.020 | -0.071 |
| | | | | (0.032) | (0.032) |
| Attained certificate | 0.227 | 0.424 | 0.537 | 0.086 | 0.046 |
| | | | | (0.036) | (0.034) |
| Attained AA | 0.296 | 0.076 | 0.017 | -0.085 | -0.065 |
| | | | | (0.017) | (0.019) |
| Still enrolled in 2009 | 0.319 | 0.261 | 0.206 | -0.035 | -0.079 |
| | | | | (0.031) | (0.029) |
| Idle (not employed, not enrolled) | 0.178 | 0.166 | 0.269 | 0.064 | 0.051 |
| | | | | (0.030) | (0.029) |
| Left survey | 0.040 | 0.067 | 0.040 | -0.022 | -0.026 |
| | | | | (0.014) | (0.015) |

| | | | | | |
|---|---|---|---|---|---|
| | Employment and Earnings (conditional on no longer enrolled) | | | | |
| Any job in 2009 | 0.711 | 0.779 | 0.669 | -0.065 | -0.100 |
| | | | | (0.036) | (0.033) |
| Earnings from work in 2009 | 22,652 | 24,138 | 17,471 | -3,041 | -3,584 |
| | | | | (1490) | (1422) |
| Earnings from work in 2009, conditional on employment | 31,873 | 30,967 | 26,119 | -1,576 | -2,473 |
| | | | | (1414) | (1520) |
| Unemployed and seeking work | 0.250 | 0.144 | 0.256 | 0.055 | 0.121 |
| | | | | (0.033) | (0.032) |
| Unemployed more than 3 months since leaving school | 0.415 | 0.271 | 0.439 | 0.079 | 0.086 |
| | | | | (0.039) | (0.038) |
| Earnings do not meet the Gainful Employment standard | 0.092 | 0.031 | 0.229 | 0.130 | 0.146 |
| | | | | (0.025) | (0.023) |
| | Satisfaction with Program, School, Loans, Job | | | | |
| Remedial coursework | 0.206 | 0.244 | 0.049 | -0.198 | -0.199 |
| | | | | (0.026) | (0.027) |
| Left school because dissatisfied, 2003-2004 | 0.060 | 0.033 | 0.100 | 0.065 | 0.064 |
| | | | | (0.018) | (0.013) |
| Left school because dissatisfied, 2003-2006 | 0.084 | 0.067 | 0.122 | 0.060 | 0.066 |
| | | | | (0.023) | (0.015) |
| Education was worth the cost | 0.798 | 0.878 | 0.712 | -0.230 | -0.221 |
| | | | | (0.030) | (0.028) |
| Loans were a worthwhile Investment | 0.823 | 0.806 | 0.680 | -0.109 | -0.192 |
| | | | | (0.038) | (0.040) |
| Satisfied with major or course of study | 0.870 | 0.913 | 0.823 | -0.074 | -0.063 |
| | | | | (0.022) | (0.023) |
| Satisfied with current job (employed, not enrolled) | 0.691 | 0.816 | 0.777 | -0.013 | -0.083 |
| | | | | (0.042) | (0.035) |
| Sample size | 230 | 890 | 1,130 | | |

*Source*: BPS:04/09 Restricted-Use Data File.

*Notes*: The regression sample only includes BPS students originally enrolled in a certificate program. The OLS column reports coefficient estimates (robust standard errors) for a for-profit institution dummy variable in regressions for each dependent variable that include the same additional covariates as those listed in the notes to Table 3. Each number in the Matching column represents the average treatment on the treated estimate (standard error) for going to a for-profit institution using from nearest neighbor (propensity score) matching with replacement and excluding observations outside of common support. The same covariates used in the OLS regressions were used for the matching models. The OLS and Matching model estimates use the BPS sampling weights. Unweighted sample sizes are rounded to the nearest 10.

Appendix Table 3: For-Profit Institution Impact on Student Outcomes for First-Time Undergraduates in Associate's Programs: BPS:04/09

| | Beginning Postsecondary Students, Associate's Program Enrollees | | | | |
|---|---|---|---|---|---|
| | Dependent Variable Means | | | For-Profit Institution Impact | |
| | (1) | (2) | (3) | (4) | (5) |
| Dependent Variables | Four-Year Public and Non-profits | Two-Year Public and Non-profits | For- profits | OLS | Matching |
| | | | Financial Aid, 2003-2004 | | |
| Applied for Aid | 0.911 | 0.770 | 0.983 | 0.108 | 0.077 |
| | | | | (0.015) | (0.015) |
| Title IV loan and grant aid | 4,372 | 1,031 | 7,296 | 5,089 | 4,423 |
| | | | | (247) | (254) |
| Tuition | 6,883 | 1,301 | 8,500 | 6,301 | 5,693 |
| | | | | (254) | (281) |
| Net tuition minus grants | 3,829 | 745 | 5,798 | 4,885 | 4,795 |
| | | | | (234) | (247) |
| Pell grant | 0.433 | 0.311 | 0.717 | 0.188 | 0.072 |
| | | | | (0.022) | (0.031) |
| Pell grant amount | 1,101 | 664 | 1,862 | 494 | 110 |
| | | | | (72) | (103) |
| | | | Financial Aid through 2009 | | |
| Cumulative Pell grant | 3,440 | 2,615 | 4,537 | 125 | -318 |
| | | | | (201) | (331) |
| Cumulative Title IV borrowing | 8,145 | 3,683 | 10,657 | 5,891 | 5,214 |
| | | | | (639) | (558) |
| Title IV loan balance, 2009 | 7,854 | 3,467 | 10,888 | 6,309 | 5,615 |
| | | | | (675) | (612) |
| Repaid any amount on loan, conditional on a student loan | 0.547 | 0.644 | 0.432 | -0.142 | -0.080 |
| | | | | (0.039) | (0.044) |
| Defaulted on loan, conditional on a student loan | 0.074 | 0.052 | 0.152 | 0.073 | 0.053 |
| | | | | (0.022) | (0.022) |
| | | | Persistence and Educational Attainment | | |
| Left school in 2003-2004 | 0.138 | 0.217 | 0.121 | -0.083 | -0.095 |
| | | | | (0.020) | (0.024) |
| Attained AA | | 0.224 | 0.284 | 0.041 | 0.019 |
| | | | | (0.028) | (0.029) |
| Attained BA | 0.238 | 0.106 | 0.034 | -0.073 | -0.068 |
| | | | | (0.014) | (0.017) |
| Still enrolled in 2009 | 0.351 | 0.400 | 0.234 | -0.145 | -0.110 |
| | | | | (0.028) | (0.030) |
| Idle (not employed, not enrolled) | 0.138 | 0.122 | 0.199 | 0.037 | 0.046 |
| | | | | (0.025) | (0.025) |
| Left survey | 0.351 | 0.400 | 0.234 | -0.012 | -0.005 |
| | | | | (0.017) | (0.019) |

| | | | | | |
|---|---|---|---|---|---|
| | Employment and Earnings (conditional on no longer enrolled) | | | | |
| Any job in 2009 | 0.789 | 0.797 | 0.749 | 0.002 | -0.043 |
| | | | | (0.032) | (0.031) |
| Earnings from work in 2009 | 25,867 | 25,232 | 21,413 | -1,880 | -552 |
| | | | | (1449) | (1423) |
| Earnings from work in 2009, conditional on employment | 32,786 | 31,673 | 28,593 | -2,794 | -542 |
| | | | | (1476) | (1657) |
| Unemployed and seeking work | 0.162 | 0.136 | 0.205 | 0.035 | 0.087 |
| | | | | (0.029) | (0.029) |
| Unemployed more than 3 months since leaving school | 0.270 | 0.260 | 0.373 | 0.084 | 0.045 |
| | | | | (0.035) | (0.036) |
| Earnings do not meet the Gainful Employment standard | 0.187 | 0.050 | 0.340 | 0.256 | 0.176 |
| | | | | (0.031) | (0.030) |
| | Satisfaction with Program, School, Loans, Job | | | | |
| Remedial coursework | 0.248 | 0.307 | 0.106 | -0.178 | -0.191 |
| | | | | (0.022) | (0.026) |
| Left school because dissatisfied, 2003-2004 | 0.039 | 0.022 | 0.058 | 0.023 | 0.016 |
| | | | | (0.012) | (0.013) |
| Left school because dissatisfied, 2003-2006 | 0.074 | 0.049 | 0.108 | 0.045 | 0.053 |
| | | | | (0.019) | (0.017) |
| Education was worth the cost | 0.789 | 0.807 | 0.571 | -0.230 | -0.221 |
| | | | | (0.030) | (0.028) |
| Loans were a worthwhile Investment | 0.810 | 0.792 | 0.641 | -0.155 | -0.079 |
| | | | | (0.031) | (0.031) |
| Satisfied with major or course of study | 0.849 | 0.859 | 0.742 | -0.120 | -0.088 |
| | | | | (0.028) | (0.025) |
| Satisfied with current job (employed, not enrolled) | 0.794 | 0.751 | 0.704 | -0.033 | -0.030 |
| | | | | (0.040) | (0.037) |
| Sample size | 870 | 3,720 | 570 | | |

*Source*: BPS:04/09 Restricted-Use Data File.

*Notes*: The regression sample only includes BPS students originally enrolled in an associate's degree program. The OLS column reports coefficient estimates (robust standard errors) for a for-profit institution dummy variable in regressions for each dependent variable that include the same additional covariates as those listed in the notes to Table 3. Each number in the Matching column represents the average treatment on the treated estimate (standard error) for going to a for-profit institution using from nearest neighbor (propensity score) matching with replacement and excluding observations outside of common support. The same covariates used in the OLS regressions were used for the matching models. The OLS and Matching model estimates use the BPS sampling weights. Unweighted sample sizes are rounded to the nearest 10.

Appendix Table 4: For-Profit Institution Impact on Student Outcomes for First-Time Undergraduates in Bachelor's Programs: BPS:04/09

| | Beginning Postsecondary Students, Bachelor's Program Enrollees | | | | |
|---|---|---|---|---|---|
| | Dependent Variable Means | | | For-Profit Institution Impact | |
| | (1) | (2) | (3) | (4) | (5) |
| Dependent Variables | Four-Year Public and Non-profits | Two-Year Public and Non-profits | For- profits | OLS | Matching |
| | | | Financial Aid, 2003-2004 | | |
| Applied for Aid | 0.897 | 0.754 | 0.989 | 0.123 | 0.111 |
| | | | | (0.019) | (0.028) |
| Title IV loan and grant aid | 3,837 | 1,227 | 8,518 | 5,199 | 3,505 |
| | | | | (692) | (641) |
| Tuition | 9,680 | 1,494 | 10,060 | 5,084 | 2,205 |
| | | | | (475) | (795) |
| Net tuition minus grants | 5,415 | 918 | 6,741 | 4,464 | 3,498 |
| | | | | (520) | (600) |
| Pell grant | 0.268 | 0.274 | 0.564 | 0.112 | -0.028 |
| | | | | (0.031) | (0.056) |
| Pell grant amount | 733 | 631 | 1535 | 319 | -173 |
| | | | | (111) | (176) |
| | | | Financial Aid through 2009 | | |
| Cumulative Pell grant | 2,903 | 2,398 | 4,257 | -358 | -1,067 |
| | | | | (412) | (608) |
| Cumulative Title IV borrowing | 8,993 | 4,483 | 13,750 | 4,744 | 3,222 |
| | | | | (1262) | (1383) |
| Title IV loan balance, 2009 | 8,273 | 4,284 | 13,924 | 5,240 | 3,439 |
| | | | | (1392) | (1503) |
| Repaid any amount on loan, conditional on a student loan | 0.652 | 0.638 | 0.476 | -0.138 | -0.189 |
| | | | | (0.062) | (0.075) |
| Defaulted on loan, conditional on a student loan | 0.029 | 0.058 | 0.092 | 0.020 | -0.013 |
| | | | | (0.036) | (0.034) |
| | | | Persistence and Educational Attainment | | |
| Left school in 2003-2004 | 0.043 | 0.151 | 0.108 | -0.020 | -0.028 |
| | | | | (0.032) | (0.036) |
| Attained BA | 0.658 | 0.203 | 0.262 | -0.115 | -0.194 |
| | | | | (0.045) | (0.052) |
| Still enrolled in 2009 | 0.257 | 0.409 | 0.222 | -0.142 | -0.022 |
| | | | | (0.041) | (0.050) |
| Idle (not employed, not enrolled) | 0.099 | 0.112 | 0.199 | 0.088 | 0.072 |
| | | | | (0.039) | (0.045) |
| Left survey | 0.109 | 0.146 | 0.116 | -0.016 | -0.028 |
| | | | | (0.034) | (0.038) |
| | | | Employment and Earnings (conditional on no longer enrolled) | | |
| Any job in 2009 | 0.852 | 0.821 | 0.749 | -0.078 | -0.069 |
| | | | | (0.046) | (0.055) |

| | | | | | |
|---|---|---|---|---|---|
| Earnings from work in 2009 | 29,434 | 25,130 | 28,159 | 500 | -1,065 |
| | | | | (2629) | (2723) |
| Earnings from work in 2009, conditional on employment | 34,528 | 30,617 | 37,578 | 3,471 | 1,014 |
| | | | | (2707) | (2685) |
| Unemployed and seeking work | 0.110 | 0.142 | 0.223 | 0.091 | 0.136 |
| | | | | (0.044) | (0.049) |
| Unemployed more than 3 months since leaving school | 0.227 | 0.255 | 0.353 | 0.098 | 0.047 |
| | | | | (0.052) | (0.051) |
| Earnings do not meet the Gainful Employment standard | 0.131 | 0.060 | 0.298 | 0.157 | 0.183 |
| | | | | (0.051) | (0.055) |
| | | Satisfaction with Program, School, Loans, Job | | | |
| Remedial coursework | 0.167 | 0.295 | 0.122 | -0.098 | -0.128 |
| | | | | (0.033) | (0.043) |
| Left school because dissatisfied, 2003-2004 | 0.007 | 0.020 | 0.046 | 0.025 | 0.033 |
| | | | | (0.019) | (0.019) |
| Left school because dissatisfied, 2003-2006 | 0.026 | 0.038 | 0.101 | 0.060 | 0.072 |
| | | | | (0.029) | (0.025) |
| Education was worth the cost | 0.806 | 0.799 | 0.581 | -0.207 | -0.167 |
| | | | | (0.048) | (0.050) |
| Loans were a worthwhile Investment | 0.843 | 0.819 | 0.685 | -0.133 | -0.058 |
| | | | | (0.049) | (0.053) |
| Satisfied with major or course of study | 0.862 | 0.898 | 0.776 | -0.089 | -0.067 |
| | | | | (0.045) | (0.039) |
| Satisfied with current job (employed, not enrolled) | 0.776 | 0.772 | 0.787 | 0.057 | -0.011 |
| | | | | (0.053) | (0.069) |
| Sample size | 7,180 | 650 | 180 | | |

*Source*: BPS:04/09 Restricted-Use Data File.

*Notes*: The regression sample only includes BPS students originally enrolled in a bachelor's degree program. The OLS column reports coefficient estimates (robust standard errors) for a for-profit institution dummy variable in regressions for each dependent variable that include the same additional covariates as those listed in the notes to Table 3. Each number in the Matching column represents the average treatment on the treated estimate (standard error) for going to a for-profit institution using from nearest neighbor (propensity score) matching with replacement and excluding observations outside of common support. The same covariates used in the OLS regressions were used for the matching models. The OLS and Matching model estimates use the BPS sampling weights. Unweighted sample sizes are rounded to the nearest 10.