

## **For-profit colleges: Neither educationally nor economically equivalent**

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### **ABSTRACT**

Deregulation of for-profit colleges led to a precipitous rise in enrollments from 1990 to 2010. Since 2010, regulation, investigations, and sanctions have led to enrollment declines in for-profit postsecondary institutions. Initially barred from receiving Title IV federal funds, in the form of Pell Grants and Stafford Loans, for-profit colleges gained access to Title IV funds in 1972 on the grounds that these institutions were educationally equivalent to, or more economical than public and non-profit institutions. This paper examines Beginning Postsecondary Student longitudinal data from 2012/17, utilizing regression analyses to determine whether the for-profit college sector produces similar educational outcomes and student loan debt compared to the public higher education sector. Findings indicate that degree-seeking students enrolling in 2-year programs at for-profit colleges have approximately half the odds of degree attainment as demographically similar students at public colleges; students entering 4-year, for-profit programs have approximately a quarter the odds of achieving a bachelor's degree as their public college counterparts. Students at for-profit colleges, moreover, take on significantly greater student loan debt than demographically similar students at public colleges. Federal funds might better be spent subsidizing under-funded, overcrowded public colleges than enabling America's most disadvantaged students to incur debt at for-profit colleges that are neither educationally nor economically equivalent.

Keywords: for-profit colleges, public education, Title IV funding, graduation, student loans

## INTRODUCTION

For-profit higher education expanded precipitously during the 1990s and the early 2000s (Watkins & Seidelman 2017), only to contract again throughout the 2010s (Institute for College Access & Success 2019a; Liu & Belfield 2020). Fluctuations in the for-profit postsecondary sector are intimately tied to federal funding and regulation, or lack thereof. Deregulation throughout the 1970s and 80s opened the door to for-profit colleges taking advantage of enormous increases in Title IV grants and subsidized student loans throughout the 90s (Avery & Turner 2012:166). Consistently rising tuition (Archibald & Feldman 2012) has induced millions of students to supplement their federally subsidized grants and loans with unsubsidized and private loans (Lynch, Engle & Cruz 2010).

Education scholars and policy advocates have argued over whether for-profit colleges are providing effective human capital for disadvantaged students who are unable to access postsecondary education in the public and non-profit sectors (Deming, Goldin & Katz 2012:161), or whether for-profit colleges are taking advantage of disadvantaged students and federal funds to turn a profit without providing a quality education (Deming, Goldin & Katz 2012:143). These discussions, as well as discussions over how heavily to regulate for-profit colleges receiving Title IV funds (Institute for College Access & Success 2019a:19), raise the question: might taxpayer dollars be better spent subsidizing public higher education? If public colleges indeed provide superior educational outcomes at lower costs, compared to for-profit colleges, should governmental policy not steer students and federal funds toward public higher education?

This paper adds to the discussion of the relative costs of, and benefits provided by public vs. for-profit colleges by examining their respective graduation rates and student loan debt accumulation, utilizing the latest longitudinal Beginning Postsecondary Student (BPS) data from 2012/17. Using regression analyses that control for student demographics, it is found that for-profit college students seeking associate's degrees have approximately half the odds of attaining an associate's or bachelor's degree as their public college counterparts; similarly, for-profit bachelor's degree seeking students have approximately a quarter the odds of attaining a bachelor's degree as their counterparts at public colleges. Moreover, degree-seeking students at for-profit colleges accumulate more than \$20,000 and \$13,000 more student loan debt on average at 2-year and 4-year colleges respectively, compared to similar students who attend public colleges. These results, combined with those found by other researchers (discussed below) suggest that for-profit colleges are neither educationally nor economically equivalent to public and private non-profit colleges, the standard to which they are intended to be held in order to receive Title IV federal funds, according to the Education Amendments of 1972.

## LITERATURE REVIEW

### Deregulation and Expansion of For-Profit Colleges

The Higher Education Act (1965), Title IV of which allows the federal government to aid college students with grants and subsidized loans, states that "The Commissioner is authorized to make grants to institutions of higher education and other public or private agencies, institutions, and organizations... except that no such grant may be made to a private agency, organization, or institution other than a nonprofit one." The Education Amendments (1972), famous for their Title IX prohibiting discrimination on the basis of sex, opened the door for federal assistance to

for-profit colleges, under the condition that they “provid[e] substantially equivalent education, training, or services more readily or more economically, or by preventing needless duplication of expensive physical plant and equipment, or by providing needed education or training... which would not otherwise be available.” For-profit colleges did not see an immediate increase in enrollments after gaining access to federal funds. Further deregulation of student loans in 1986, however, helped induce rapid expansion of the for-profit sector, which went from 1.5% of enrollments in higher education in 1990 to 9% by 2009 (Watkins & Seidelman 2017:368-70).

Students enrolling in for-profit colleges are disproportionately from traditionally marginalized communities and possess characteristics that are typically associated with decreased college attendance. Analyses of Beginning Postsecondary Students survey data from 2004/09 (Deming, Goldin & Katz 2013:139-40; Lynch, Engle & Cruz 2010:2) find for-profit students to be disproportionately Black and Latino, low-income, single parents, and possessors of GEDs. Students at for-profits are disproportionately likely to be financially independent of their parents (Baum & Payea 2011:2), and to receive federal financial aid. Seventy-five percent of financial aid for students at for-profit colleges comes from the federal government, as opposed to only 9% at private non-profits (Baum & Payea 2011:4).

Deming, Goldin, and Katz (2013:147) assert that one reason for the increase in for-profit enrollments is that students at overcrowded community colleges struggle to enroll in required courses. They point out, however, that this is due largely to public school budget shortfalls. “From 2000 to 2010, state tax appropriations for higher education increased by only about 5%,” (Deming, Goldin & Katz 2013:138), while Pell Grants and Stafford Loans tripled and doubled respectively. This privatization and financialization of higher education are merely one aspect of a larger neoliberal trend. The state engages less in service provision and more in financing, and enables powerful private entities to externalize liabilities by protecting them against loan default (Harvey 2005:67-73).

### **Investigations, Sanctions, and Decline**

The neoliberal turn within America’s education sector has not occurred without pushback. A U.S. Senate investigation into for-profit colleges found that they spent more on marketing than on instruction (Watkins & Seidelman 2017:371). In 2010, undercover investigators were sent by the Government Accountability Office to the admissions offices of fifteen for-profit colleges (Deming, Goldin & Katz 2013:148), and found four to be engaging in fraud, and all fifteen to be deceiving applicants. According to the Institute for College Access & Success (2019a:19), “over 200,000 students continue to wait for the Department of Education to hear their claims that they were deceived and misled about programs at for-profit colleges.”

Another initiative to prevent for-profit colleges from relying exclusively on federal funds was the imposition of the 85/15 rule (Ward 2019:2-3), later amended to the 90/10 rule. Under these rules, colleges are not allowed to receive more than 90% of their revenue from Title IV federal funds, under penalty of sanctions (Ward 2019:3). Analyzing IPEDS data from 2007-14, James Dean Ward (2019:8) found that 3% of for-profit institutions had violated the 90/10 rule.

Perhaps the most influential accountability measure has been to sanction colleges with high percentages of students defaulting on student loans. The U.S. Congress passed the Stafford Student Loan Default Prevention and Management Act (1989), denying Title IV funds to institutions with cohort default rates above 25%. Those rules were strengthened throughout the 1990s, and again in 2008 (Institute for College Access & Success 2019b:6). In the 1990s alone,

over 1,200 institutions were sanctioned for high cohort default rates (Cellini, Darolia & Turner 2020:51), the vast majority of which were 2-year for-profit colleges. Both Goodell (2016:181) and Guryan and Thompson (2015:15) find that student default rates – controlling for several student and institutional characteristics – to be higher at for-profit colleges than publics. Cellini, Darolia, and Turner (2020:48) find that approximately half of students who would have attended a for-profit college had it not been sanctioned would have defaulted on their student loans, and that 60-70% of students who would have attended a sanctioned for-profit college end up enrolling in a nearby community college instead.

All of these investigations, regulations, and sanctions led to a precipitous drop in for-profit college enrollment, from 2.1 million students in 2013 to 1.2 million in 2018 (Institute for College Access & Success 2019a:6). As of 2016, students at for-profit colleges accounted for only 8% of all fall enrollees, down from 12% in 2010 (Liu & Belfield 2020:134). Cellini, Darolia, and Turner (2020:70-1) find evidence that sanctions of one for-profit college leads to declining enrollment at competitor for-profit colleges, suggesting tarnishing of the for-profit brand. As a result, several for-profit colleges have recently converted to non-profit status (Institute for College Access & Success 2019a:6); while dozens more have closed (Flores 2018).

### **Student Loans & Post-College Earnings**

High default rates among students attending for-profit colleges stem from numerous and large student loans, and students' poor post-college earnings (discussed below). Over 90% of students at for-profit colleges take out student loans, as opposed to approximately 13% of students at 2-year publics (Deming, Goldin & Katz 2013:152). Students at non-profit private colleges are roughly half as likely to take out student loans (Lynch, Engle & Cruz 2010:6). The median debt of students receiving bachelor's degrees at for-profit institutions is nearly four-times larger than for students graduating from four-year public colleges, and nearly twice as large as students the debt of their counterparts at non-profits (Lynch, Engle & Cruz 2010:6). The cost of attending for-profit colleges is so high that more than 40% of their students supplement their federally subsidized Stafford Loans with additional, unsubsidized private loans (Lynch, Engle & Cruz 2010:6).

Lang and Weinstein (2012) analyze the 2004/9 BPS using imputation and quantile regression, finding that the post-college earnings for students who earn associate's degrees or certificates from for-profit colleges are not significantly different from their counterparts who failed to earn an associate's or a certificate. Cellini and Turner (2019) utilize IRS data to demonstrate that certificate-seeking students at for-profits earn less and are less likely to be employed than their public-school counterparts. Liu and Belfield (2020:151) analyze data at two state community college systems from 2001 to 2006, finding that community college students who transfer to for-profit, 4-year programs earn significantly less than their counterparts who transfer to 4-year programs at public or non-profit colleges.

### **Graduation Rates**

A less well-explored topic is the graduation rate of for-profit enrollees, a major area of focus for this paper. Descriptive IPEDS data (Lynch, Engle & Cruz 2010:2-3) reports 6-year bachelor's completion rates of 65% at non-profits, 55% at public colleges, and 22% at for-profits. However, Deming, Goldin, and Katz's (2013:141) descriptive analysis of the 2004/9 BPS

cohort found no differences in degree completion rates between students who enter 2-year for-profit programs, compared with community colleges. Bachelor's degree completion rates at for-profits, meanwhile, were roughly half that of the combined non-selective four-year publics and non-profits sectors (Deming, Goldin & Katz 2013:141). Deming, Goldin, and Katz (2012:157-8) also carried out regression and propensity score matching analyses comparing graduation rates at for-profits with non-for-profits (combining public and private non-profit colleges), controlling for student demographic and socio-economic characteristics, finding that associate's degree-seeking students at for-profits were significantly more likely to attain associate's degrees, but less likely to attain any degree when including bachelor's degree achievement.

## **DATA AND METHODS**

### **Beginning Postsecondary Students 2012/2017**

The U.S. Department of Education's National Center for Educational Statistics (NCES 2020) has repeatedly carried out a longitudinal studies of college students beginning in their year after college entry, with follow-up surveys after three years, and again after six years. There are Beginning Postsecondary Students (BPS) surveys for 1990/1994, 1996/2001, 2004/2009, and 2012/2017, the most recent of which will be examined in this paper.

These analyses of the most recent cohort BPS 2012/2017 data were conducted using NCES' PowerStats, an online analysis system which allows users to create descriptive and inferential statistics without directly accessing the microdata. The BPS 2012/2017 survey has a sample of approximately 22,500 students (NCES 2020). Missing data for all variables were imputed by NCES itself (Bryan, Cooney, Elliott & Richards 2019:v). The weight **WTA000** was applied to all analyses.

The federal financial aid system distinguishes between independent students and dependent students. The latter group, which includes most undergraduates age 23 and younger who are financially dependent on their parents, with certain exceptions such as military veterans, and students who are themselves parents. The analyses in this paper are limited to dependent students: the income variable therefore refers to their parents' household income.

### **Dependent Variables**

This paper utilizes 6-year degree-completion and 6-year student-loan totals for the dependent variables in its regression models. BPS surveys individual students, and thus collects graduation information on transfer students as well as those who begin and graduate from the same institution (NCES 2019). It also follows students who stop out or drop out of college.

The associate's degree analyses include only those students who entered college in 2012 at a 2-year institution, while bachelor's degree regressions are limited to students entering college in 2012 at 4-year institutions. For the AA model, any student who had achieved either an AA or a BA within six years is considered to have graduated; for the BA model, students must have achieved a BA in that timeframe.

The second dependent variable is "cumulative student loans: total amount borrowed through 2017," (NCES 2019) which includes private loans, Title IV loans, and Parent PLUS loans for undergraduate education. This broadest of loan categories was chosen in order to capture both loans taken out by students and/or their parents. 41% of respondents in the BPS

2012/2017 dataset had accumulated zero student loans on this measure (NCES 2019). Zero loan students were included in the models below.

### **Independent Variables**

The central independent variable is whether a student enrolled in a public, or a private for-profit, or a private not-for-profit institution in 2011, according to the institution's IPEDS classification (NCES 2019). Additional control variables include the following:

1. Gender (Male, Female)
2. Race (White, Black, Hispanic, Asian, Other)
3. Age upon enrollment in 2011 (continuous)
4. Immigrant generation (1<sup>st</sup> generation immigrant, 2<sup>nd</sup> generation immigrant, 3<sup>rd</sup> plus & mixed heritage)
5. Parental adjusted gross income (\$1-\$19,999, \$20,000-\$39,999, \$40,000-\$69,000, \$70,000-\$99,000, \$100,000+)
6. Parents' highest education level (High school or less, AA + some college or training, BA, Graduate degree)
7. Degree attainment (No degree, AA, BA+; only for student loan model)

The adjusted gross income variable uses dependent students' parental income, as opposed to the household income of independent students (NCES 2019), who are not included in this analysis. Degree attainment is coded as dichotomous when used as the dependent variable in the graduation model, but is used as a control variable for the analyses predicting the student loan amount.

### **Regression Analyses**

For the graduation model, there are separate logistic regression analyses for AA and BA entrants, with respective degree attainment as the dependent variable. Results are expressed as odds ratios with standard errors. In the student loan model, there are separate Ordinary Least Squares regression analyses for AA and BA entrants, with the total dollar amount taken out in student loans by a student and/or their family as the dependent variable. Results are expressed as regression coefficients.

The null hypothesis is that there will be no relationship between a student's institution type at entry (public, private for-profit, private non-profit) and their graduation or student loan accumulation, when controlling for all independent variables. The research hypothesis is that students initially enrolling in public schools will have significantly higher graduation odds and loan accumulation than students entering at private for-profit institutions, and lower graduation odds and loan accumulation than students entering at private non-profit institutions. Significance tests for all models require  $p < .05$ .

## **RESULTS**

### **Graduation**

Table 1 (Appendix) displays the results of two logistic regressions predicting graduation ( $N=5,200$  for AA model;  $N=9,400$  for BA model). The coefficients reported are odds ratios, and

the reference category is public colleges. Students who initially enrolled at private for-profit, 2-year institutions had about half the odds of obtaining at least an AA compared to their public-school counterparts (OR=0.524), controlling for gender, race, parental education and parental income. They were much less likely to complete a degree. Private non-profit, 2-year students, meanwhile, had over double the odds of degree attainment as their public-school counterparts (OR=2.052).

For-profit colleges had even worse graduation levels for bachelor's degree students. After controls, students initially enrolling in private for-profit, 4-year colleges had less than a quarter the odds of attaining a BA (OR=0.229) than public-college students; students enrolling in private non-profit universities were 1.878 times as likely to graduate as those in public colleges.

In both AA and BA models in Table 1, women were more likely than men to complete a degree, holding all other variables constant. Black Americans were approximately half as likely to attain degrees as their White counterparts (OR=0.473 for AA model; OR=0.500 for BA model). Hispanic students entering the 2-year sector were significantly less likely to graduate than their White counterparts (OR=0.636); by contrast, there was no significant difference between Hispanic and White graduation rates in the 4-year sector. Immigrants were almost twice as likely to graduate in the AA model than their third-generation-plus counterparts (OR=1.856); however, immigration generation status was not a significant predictor among 4-year college entrants.

Parental income proved to be a significant predictor of graduation at every income level in the BA model, with students coming from higher-income families far more likely to graduate. However, parental income was *not* a significant predictor of degree completion among two-year college entrants, after controlling for parental education and other covariates. Parental education had a more complicated relationship to graduation in these models, after controlling for parental income. Table 1 shows that those undergraduates whose parents had no college experience were significantly less likely to graduate in both models (OR=0.677 for AA model; OR=0.501 for BA model). Four-year college entrants whose parents had some college experience, or an AA were less likely to graduate (OR=0.539).

### **Student Loans**

Table 2 (Appendix) displays an OLS regression predicting student loan amount and shows that students initially enrolling in for-profit colleges accumulate higher loans when controlling for other variables. Holding other variables constant, students entering 2-year, private for-profit colleges accumulated an average of \$20,365 more in loans from 2012 to 2017 compared to similar public-college entrants. Students initially enrolling in 2-year private non-profit colleges accumulated an average of \$10,762 higher loans than students in public community colleges.

Student loan accumulation among 4-year college entrants indicated that, compared to entrants to public four-year colleges, undergraduates who started at for-profit colleges accumulated \$13,496 more in loans and those who entered private non-profit four-year colleges accumulated \$12,470 more in loans.

In the four-year sector, female students on average accumulated higher loans than male students (\$2,650 more). Younger students borrowed less than older students (\$2,076 less). The only significant racial differences were that Black students accumulated higher student loans than White students (\$6,776 more for AA entrants; \$11,928 more for BA entrants). First- and

second-generation immigrants accumulated lower student loans on average than their third generation and mixed counterparts (-\$5,609 for immigrants; -\$7,290 for second-generation immigrants).

Net of other covariates, students with parents in the lowest income bracket accumulated lower student loans in both models (\$2,646 less for AA model; \$6,531 less for BA model) than the reference category (\$40,000-\$69,999). No other income brackets were significant for the AA model. In the BA model, however, students with parents in the second-lowest income bracket also accumulated lower loan amounts (\$6,436 less), as did students whose parents were in the highest income bracket (\$3,545 less). The lower loan amounts of students coming from poorer families may either represent greater financial aid for very low-income students and/or some degree of risk-aversion among those students. The lower loan amounts of undergraduates with higher income parents are likely due to more affluent undergraduates' families affording college without loans. The only significant relationship between parental education and loan amounts were that 4-year entrants whose parents had graduate degrees accumulated an average of \$5,079 less in loans than students whose parents only had a BA.

Degree attainment, in both models, was predictive of significantly higher loan amounts. Completing an associate's degree cost 2-year entrants an average of \$3,842 extra in student loans, compared to similar students who did not receive a degree. A bachelor's degree cost 2-year entrants an average of \$16,120 extra in student loans, and \$14,940 extra for 4-year entrants.

## DISCUSSION

The results of this analysis of the latest BPS data (2012/17), as well as the results of prior studies mentioned in the literature review, suggest that the for-profit educational sector does not "provid[e] substantially equivalent education... more readily or more economically," (Education Amendments of 1972), which was the chief legislative justification for allowing for-profit colleges to receive Title IV funds. Students at for-profit 2-year and 4-year colleges, controlling for various demographic variables, graduate at significantly lower rates than their counterparts at both public and private non-profit colleges, and end up with significantly higher student loan debt. Students at for-profit colleges are the most likely to take out loans to fund their education (Deming, Goldin & Katz 2013). Certificate-seeking students at for-profit colleges are less likely to be employed and earn on average less than public-school students (Cellini & Turner 2019), and don't significantly benefit from earning certificates or associate's degrees at a for-profit institution (Lang & Weinstein 2012). Finally, for-profit college students are significantly more likely to default on their student loans (Goodell 2016; Guryan & Thompson 2015), even after controlling for individual and institutional characteristics.

One method of addressing the educational shortcomings and economic disadvantages within the for-profit educational sector has been to increase regulation, sanctioning colleges that fund their operations with too high a percentage of federal grants and loans (Ward 2019), and whose alumni are underemployed or defaulting on their loans (Institute for College Access & Success 2019b). Such a piecemeal approach to institutional regulation recognizes that not all for-profit colleges are overly expensive and underperforming. This regulatory regime, however, is beholden to the whims of the American President. Regulations have recently been curtailed under Donald Trump's Department of Education (Institute for College Access & Success 2019b:4), headed by Secretary of Education Betsy DeVos, who has no background in the field of

education (Henderson 2016), but who does have investments in companies that own for-profit colleges, as well as companies that collect student loans (Miller & Jimenez 2017).

The second legislative justification for Title IV funds flowing to for-profit colleges is that they “provid[e] needed education or training... which would not otherwise be available” (Education Amendments of 1972). This, however, is somewhat of a self-fulfilling prophecy. Increases in government spending on Pell Grants and Stafford Loans have far outpaced increases in spending on public higher education. Every dollar spent subsidizing and regulating private education is a dollar that could be spent funding public education instead. According to Scott, Bailey, and Kienzl’s Oaxaca decomposition analysis of 6-year IPEDS graduation rates (2006), public colleges are more efficient with their resources, when controlling for various institutional, student demographic, and high school achievement measures. It is reasonable for markets to respond to overcrowded community colleges by offering comparable programs at for-profit colleges. More dubious, however, is the government responding to heightened demand at community colleges by subsidizing for-profit institutions.

A more reasonable policy than subsidization and regulation of the for-profit higher education industry may be to revert back to the Higher Education Act of 1965, which denied Title IV funds to for-profit institutions altogether, thus precluding the federal government’s responsibility to regulate the sector. The limited scope of for-profit higher education prior to 1990 (Watkins & Seidelman 2017), as well as the tendency for students to attend nearby community colleges after sanctions deny Title IV funding of specific for-profit colleges (Cellini, Darolia, & Turner 2020) suggest that for-profit higher education is a niche market in the absence of federal subsidies.

Reverting to the Higher Education Act of 1965 would represent a shift away from neoliberal governmental policies that prioritize finance capitalism over service provision. Pell Grants can be thought of as service provision. Stafford Loans, on the other hand, may carry lower rates than private loans, but still charge students compound interest to attend college, often at public schools. A U.S. Government Accountability Office report (2014) that discussed the circumstances under which the federal government is going to profit, break even, or lose money from their student loans takes for granted the value of profit-making entities, rather than one whereby the government raises revenue through taxes and spends it on public goods.

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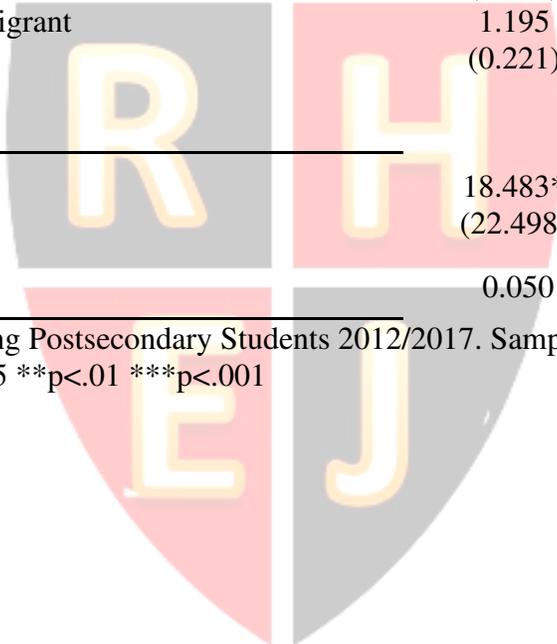
**APPENDIX**

**Table 1**  
*Logistic Regression on Graduation from For-Profit vs. Public Colleges*

	<b>Odds Ratios (SE)</b>	
	<b>AA Model (N=5,200)</b>	<b>BA Model (N=9,400)</b>
<b>Treatment variable (Ref = Public)</b>		
Private For-Profit	0.524** (0.129)	0.229*** (0.021)
Private Not-For-Profit	2.052** (0.526)	1.878*** (0.179)
<b>Control variables</b>		
<b>Gender</b>		
Female	1.300* (0.133)	1.489*** (0.102)
<b>Race (Ref = White)</b>		
Black	0.473*** (0.090)	0.500*** (0.063)
Hispanic	0.636*** (0.088)	0.814 (0.108)
Asian	0.927 (0.311)	1.260 (0.254)
Other	0.858 (0.189)	0.562*** (0.079)
<b>Parental income (Ref = \$40,000-\$69,999)</b>		
\$1-\$19,999	0.846 (0.136)	0.672* (0.105)
\$20,000-\$39,999	0.792 (0.124)	0.781* (0.091)
\$70,000-\$99,999	1.345 (0.235)	1.376** (0.158)
\$100,000+	1.244 (0.194)	1.601*** (0.179)
<b>Parents' highest degree (Ref = BA)</b>		
High school or less	0.677**	0.501***

	(0.102)	(0.062)
AA + some college or training	0.782	0.539***
	(0.106)	(0.051)
Graduate Degree	1.131	1.087
	(0.206)	(0.133)
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Age at college entry (Continuous)		
	0.833**	0.702***
	(0.053)	(0.036)
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Immigrant generation (Ref = 3+ generation & mixed)		
Immigrant	1.856**	1.260
	(0.406)	(0.232)
2 <sup>nd</sup> generation immigrant	1.195	1.105
	(0.221)	(0.166)
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Constant	18.483*	1,209.832***
	(22.498)	(1,152.291)
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<i>Pseudo-R</i> <sup>2</sup>	0.050	0.129

Notes: Data from Beginning Postsecondary Students 2012/2017. Sample only includes dependent students. \*p<.05 \*\*p<.01 \*\*\*p<.001



**Table 2**  
*OLS Regression on Student Loans from For-Profit vs. Public Colleges*

	$\beta$ (SE)	
	AA Model (N=5,200)	BA Model (N=9,400)
<b>Treatment variable (Ref = Public)</b>		
Private For-Profit	20,365** (7,010)	13,496*** (1,431)
Private Not-For-Profit	10,762*** 1,443	12,470*** (1,426)
<b>Control variables</b>		
<b>Gender</b>		
Female	442 (683)	2,650* (1,150)
<b>Race (Ref = White)</b>		
Black	6,776* (2,769)	11,928*** (1,554)
Hispanic	-625 (851)	3,512 (2,269)
Asian	1,987 (2,639)	1,253 (2,738)
Other	2,646 (1,678)	3,877 (2,362)
<b>Parental income (Ref = \$40,000-\$69,999)</b>		
\$1-\$19,999	-2,646*** (736)	-6,531*** (1,605)
\$20,000-\$39,999	-1,450 (753)	-6,436*** (1,637)
\$70,000-\$99,999	215 (994)	-850 (1,559)
\$100,000+	925 (1,466)	-3,545* (1,733)
<b>Parents' highest degree (Ref = BA)</b>		
High school or less	-246 (869)	-414 (1,454)

AA + some college or training	1,014 (956)	2,329 (1,475)
Graduate Degree	79 (2,055)	-5,079** (1,599)
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Age at college entry (Continuous)	-677 (347)	-2,076** (665)
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Immigrant generation (Ref = 3+ generation & mixed)		
Immigrant	1,345 (1,488)	-5,609** (2,071)
2 <sup>nd</sup> generation immigrant	1,928 (2,683)	-7,290*** (1,934)
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Degree attained through 2017 (Ref = No degree)		
AA	3,842*** (680)	NA NA
BA	16,120*** (1,851)	14,940*** (1,247)
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Constant	16,206** (6,000)	54,218*** (12,554)
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<i>Pseudo-R</i> <sup>2</sup>	0.159	0.074

Notes: Data from Beginning Postsecondary Students 2012/2017. Sample only includes dependent students. Zero not treated as missing for loans. No AA attainment category for BA model. \*p<.05 \*\*p<.01 \*\*\*p<.001