The Impact of For-Profit College Graduation on Labor Market and Occupational Outcomes

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Project Summary

Using data from the *Beginning Postsecondary Students Longitudinal Study* and the *Baccalaureate and Beyond (B&B) Longitudinal Study*, two nationally representative samples of students who enrolled in college in the mid-2000s, I examine the relationship between for-profit degree attainment and labor market outcomes. Though there is a growing body of work that investigates this relationship, most have operationalized labor market outcomes as gross income (Cellini and Chaudhary 2014; Cellini and Turner 2018; Deming et al. 2013, 2012; Denice 2015; Lang and Weinstein 2012; Liu and Belfield 2014). This approach fails to account for student debt burdens, which are higher among those with for-profit degrees (Belfield 2013; Cellini and Darolia 2017) and other factors that impact discretionary income. This approach also overlooks disparities in time spent unemployed post-graduation. Moreover, there has been little work on whether or not students feel like their degree was worth the cost incurred to complete it.

Literature Review

Much of the extant literature on for-profit colleges has focused on the labor market and occupational outcomes of their graduates (Cellini and Chaudhary 2014; Darolia et al. 2015; Deming et al. 2016; Deming, Goldin, and Katz 2012; Denice 2015; Lang and Weinstein 2012). Moreover, this work has largely been grounded in the economics and higher education literatures, with little attention on the issue in sociological circles (Denice 2015; Deterding and Pedulla 2016; Gelbgiser 2018; Holland and DeLuca 2016). Recently, however, sociologists have begun to study for-profit colleges, the students they enroll, and labor market and occupational outcomes that they afford their graduates (Darolia et al. 2015; Denice 2015; Deterding and Pedulla 2016; Gelbgiser 2018; Holland and DeLuca 2016). Scholars, regardless of disciplinary affiliation, who have endeavored to understand the relationship between institutional sector and

labor market/occupational outcomes, have often sought to do so in one of two ways. First, those interested in micro-level interactional processes that govern employers' assessment of for-profit credentials have largely replied upon experimental methods (e.g., audit studies) (Pager 2003, 2007) to get at these questions (Darolia et al. 2015; Deming et al. 2016; Deterding and Pedulla 2016). By contrast, those interested in macro-level processes that govern how much value the labor market bestows upon individuals holding for-profit credentials have tended toward the use of large-scale survey data and sophisticated quantitative/quasi-experimental techniques (Cellini 2012; Cellini and Chaudhary 2014; Deming et al. 2012; Deming, Goldin, and Katz 2013; Denice 2015; Gilpin, Saunders, and Stoddard 2015; Harding, Rochmes, and Torres 2010; Lang and Weinstein 2012; Liu and Belfield 2014).

Results from audit studies assessing the value that employers bestow upon for-profit credentials have largely been consistent – showing that employers at best view for-profit credentials no more favorably than credentials from non-profit institutions (Darolia et al. 2015; Deterding and Pedulla 2016). Moreover, findings suggest that in some instances, employers may view for-profit post-secondary credentials no more favorably than they view prospective job candidates with just high school diplomas (Darolia et al. 2015; Deterding and Pedulla 2016). Deming et al. (2016) suggest that for-profit credentials may actually be a liability to job seekers in the labor market, finding that candidates with for-profit credentials are less likely to receive call backs then their peers with credentials from non-selective, public (non-profit) institutions. These findings have largely been consistent with the hypothesis that for-profit credentials act as a liability in the eyes of employers and other economic arbiters.

Another line of work looking at the impact of occupational sector on economic and occupational outcomes has relied on large scale observational data to determine the impact that

for-profit credentials have on holders' incomes post-graduation. Extant literature on the labor market returns to for-profit sub-baccalaureate credentials is somewhat consistent. The literature suggests that labor market entrants with credentials from certificate programs, regardless of institutional sector, do not experience an earnings gain relative to their peers with no formal education beyond high school (Lang and Weinstein 2012). Moreover, other work posits that holders of for-profit associate's degrees experience an earnings penalty relative to their peers with public or private non-profit credentials (Denice 2015; Lang and Weinstein 2012). Some research on the earnings of for-profit associate's degree holders opts to compare their outcomes with those of students who do not enroll in any post-secondary education at all after high school. This work concludes, perhaps unsurprisingly, that students with for-profit associate's degrees earn more than employees with just a high-school diploma (Cellini and Chaudhary 2014). One might logically conclude from this work that any degree post-high school will yield an earnings benefit, but that does not account for the debt burden incurred by students in for-profit associate's degree programs. A more appropriate comparison group here may be students who earn their associate's degrees from public institutions, which charge much less in tuition. Moreover, some work suggests that increases in enrollment and degree completion among for-profit two-year institutions mirror changes in labor market growth and wage increases in related occupations; these researchers posit that for-profit sub-baccalaureate institutions are more responsive to changes in the labor market than public community colleges (Gilpin et al. 2015).

The literature on outcomes of bachelor's degree holders is less clear. Some scholars find that for-profit bachelor's degree holders earn less than their peers with non-profit credentials[i] (Deming et al. 2012), while others find no significant difference (Denice 2015). Some suggest that community college students who transfer to and graduate from for-profit colleges experience

an earnings penalty relative to their peers who transfer from community colleges to public or private non-profit institutions (Liu and Belfield 2014). Extant work also finds that for-profit students are more likely to be unemployed, and to experience significant[ii] bouts of unemployment after they earn their degrees.

In order to get a wholistic picture of the outcomes that for-profit students encounter in the labor market, it is important to understand the business model upon which these institutions are predicated. Unlike their public and private non-profit counterparts who rely on more varied sources of revenue (Tierney and Hentschke 2007), for-profit institutions rely almost exclusively on the revenue generated from their students' federal and private student aid. A very high proportion of for-profit students are recipients of federal financial aid under Title IV of the Higher Education Act of 1965; federal money also makes up a very large percentage of for-profit institutions' total revenue. An industry-wide average of 75% of total revenue comes from federal aid programs and the percentage at some large for-profit chains (e.g. University of Phoenix) is closer to 90% (Deming et al., 2013). By contrast, in 2001 tuition and fees comprised 28% of total revenues at non-profit public and private institutions (Tierney and Hentschke 2007).

Moreover, in what has become colloquially known as the 90/10 rule, section 487(d)(4) of the amended Higher Education Act of 1965 (HEA) prohibits for-profit institutions from acquiring in excess of 90 percent of their revenue from federal Title IV student aid funds.[iii] For-profit institutions also enroll a significant number of veterans who are eligible under the G.I. Bill[iv] for tuition benefits; in fact, for-profits received 35.6% of education benefits paid under the Post-9/11 GI Bill of 2008. Moreover, G.I. Bill education benefits and tuition remissions are not considered federal Title IV student aid and, therefore, do not count toward the 90% cap imposed upon for-profits by the Department of Education (Deming et al. 2012). This reliance on federal

student aid and veterans' benefits, combined with the fact that for-profit institutions charge more in tuition, on average, than their public and private non-profit counterparts (Deming et al. 2012, 2013; Harding et al. 2010) leads to a situation in which students who graduate from for-profit schools have a higher average student debt burden, and a higher loan default rate than their peers with non-profit credentials (Baum 2011; Belfield 2013; Cellini and Darolia 2017; Deming et al. 2012, 2013; Harding et al. 2010). Indeed, higher average student-debt burden coupled with poor educational/labor market outcomes along with a purported positive relationship between federal subsidies and tuition at for-profits (Cellini and Goldin 2014) has led some scholars to argue for the reduction of federal student aid funds directed to for-profits (Cellini and Koedel 2017).

Extant literature on the relationship between institutional sector and labor market outcomes has largely overlooked the influence of race, ethnicity, and gender and the ways in which these demographic groups interact with earnings and labor market outcomes more broadly. Studies mostly include race, ethnicity, and gender as mere control variables to help explain away some of the variation in labor market outcomes. Moreover, most mainstream datasets include small samples of for-profit students, which makes stratifying them further by ethno-racial group and/or gender more challenging from statistical power perspective. Nonetheless, given that a significant proportion of the students attending for-profit institutions are women and/or members of racial/ethnic minority groups (Deming et al. 2012, 2013; Holland and DeLuca 2016; Iloh and Toldson 2013; Kinser 2006; Pusser and Turner 2006; Tierney and Hentschke 2007), work that pays explicit attention to labor market outcomes for students that are members of underrepresented racial/ethnic minority groups and/or women deserves more attention in the growing corpus of literature on these institutions. More work on this relationship

would give us a better understanding of the major education-to-work pathways for key underrepresented groups in the U.S.

When thinking about evaluating the impact of institutional sector on post-graduation earnings, little attention in the extant literature has been paid to the impact that student debt burden has on these earnings. Similarly, virtually no attention has been paid to the impact that debt burden has on discretionary or disposable income, and how this varies across institutional sector. Most scholars have chosen to focus instead on the impact of institutional sector on gross earnings, as data on net earnings and incremental student debt burden is more difficult to come by (Cellini and Chaudhary 2014; Denice 2015; Lang and Weinstein 2012; Liu and Belfield 2014). Few would argue that discretionary income does not play an important role in the daily lives of many Americans. Many may argue that it plays an even more important role than do gross earnings, especially in the daily lives of those of working class, low-income, and/or racial/ethnic minority backgrounds, all of whom are overrepresented at for-profit institutions (Deming et al. 2012, 2013; Rothstein and Rouse 2011). Moreover, some research suggests that there are large gaps in rates of borrowing across sector, with for-profit students borrowing significantly more than their non-profit peers, especially at two-year schools; this work also shows that for-profit students have higher repayment rates than their non-profit peers (Belfield 2013; Cellini and Darolia 2017). Gaining a better understanding of how institutional sector influences earnings, after accounting for student debt burden, will allow a clearer picture of the tangible, immediate impact that institutional sector has on labor market outcomes.

Another thing missing from the literature on the relationship between institutional sector and labor market outcomes is the impact of that institutional sector has on prolonged unemployment. Some work suggests that job seekers with for-profit credentials are more likely

to experience prolonged periods of unemployment, but the literature has not further quantified this issue (Deming et al. 2012, 2013). Specifically, this literature has not been clear on how much longer for-profit job seekers are likely to remain unemployed than their peers with non-profit credentials, both in terms of the percentage of time they have remained unemployed since receiving their BA as well as the number of months of unemployment post BA. Furthermore, insufficient attention has been paid in the literature to the influence of periods of employment on post-BA earnings. Moreover, the work that has been done on post-credential unemployment has not focused specifically on job seekers who have received four-year Bachelor's degrees from for-profit institutions (Deming et al. 2012, 2013). Among Bachelor's degree holders, current literature also does not investigate overall satisfaction with the debt incurred to earn their degrees, and whether or not there is any heterogeneity in this effect across sector.

Extant literature that has investigated the institutional-sector related heterogeneity on labor market outcomes has almost always operationalized those outcomes as some measure of earnings, whether annual or incremental (Cellini and Chaudhary 2014; Cellini and Turner 2018; Deming et al. 2012, 2013; Denice 2015; Lang and Weinstein 2012; Liu and Belfield 2014). The literature has paid little attention to heterogeneity in the types of jobs that are occupied by holders of each type of credential. Since the horizontal dimension of stratification is linked to heterogeneity in labor market outcomes (Gerber and Cheung 2008; Gerber and Schaefer 2004), and some scholars have argued that institutional sector is one such dimension of horizontal stratification that is related to labor market outcomes (Denice 2015), more attention to the types of occupations that credential holders occupy is warranted. Presumably occupational stratification of this type, and associated wage stratification, play a role in wage differentials across sector. In order to more fully understand the mechanisms that undergird these differences

in earnings, more work on the relationship between institutional sectors and occupational prestige is necessary. Lastly, existing research on labor market outcomes has sometimes tended toward comparing for-profit students to comparison groups that are not entirely comparable (Cellini and Chaudhary 2014; Darolia et al. 2015). Quasi-experimental and experimental research on these institutions should utilize appropriate comparison groups in order to make fully valid and meaningful comparisons. For example, if we are interested in the effect that for-profit, sub-baccalaureate credentials have on outcomes relative to non-profit credentials, it may not be appropriate to compare them to students who have no post-secondary credentials (Cellini and Chaudhary 2014) but rather to students that have equivalent credentials from public or private, non-profit institutions.

Research Questions

In order to address the gaps in extant research identified in the previous section, this project will seek to answer the following questions:

1. How do students' race, ethnicity, and/or gender influence or interact with the relationship between institutional sector and labor market outcomes, and specifically earnings?
2. What is the role that student debt plays in the relationship between institutional sector and labor market outcomes? What is the relationship between institutional sector and discretionary/disposable income (operationalized as debt-to-income ratio)?
3. What is the impact of institutional sector on occupational prestige and what is the relationship between institutional sector and heterogeneity in occupational outcomes?
4. What is the impact of institutional sector on length/duration of unemployment and degree holders' level of satisfaction with the amount of debt incurred to earn their degrees?

Data

This paper will make use of the *Beginning Postsecondary Students Longitudinal Study* and the *Baccalaureate and Beyond (B&B) Longitudinal Study*.

Preliminary Results

Figures 8 through 12 and Tables 1 through 5 display my preliminary results for this project, drawing upon both BPS 04/09 and B&B 08/12 data. Figure 8 shows the Post-BA annual income distribution, stratified by institutional sector. Students who have BAs from non-profit institutions have somewhat higher median incomes than their counterparts with BAs from for-profit institutions. Moreover, there are two students with non-profit BAs that have higher incomes than the highest for-profit BA holder's income. In addition, there are generally more non-profit students whose incomes classify them as high outliers than there are for-profit students whose incomes do. Table 1 (a Student's t test) suggests that this difference in annual income across sector is statistically significant. Although, not shown, this significance holds when this test is run on the natural logarithm of annual income. Figure 9 highlights ethno-racial variation in annual income across sector. Within each ethno-racial group, distributional patterns of income seem to be reflective of the larger trend highlighted in Figure 8. Within each ethno-racial group, non-profit students have higher median annual incomes than their for-profit peers.

Curiously, the data from B&B 08/12 contradict the data from BPS with regard to annual income by sector. Figure 10 displays the distribution of annual income across sector. It appears that in B&B, for-profit students have higher median annual incomes than their non-profit peers. Moreover, Table 2 (a Student's t test), suggests that this difference is statistically significant, and holds when the natural logarithm of annual income is substituted. More work is needed to more identify the drivers of this disparity between BPS and B&B findings.

Tables 3 and 4 (Student's t tests) and Figures 11 and 12 use two different measures to get at the effect of institutional sector on unemployment, operationalized as both number of months unemployed (a count variable) since graduation and as the percentage of time unemployed four years post-BA. These results are also from B&B. Both measures yield relatively consistent and statistically significant results, suggesting that job candidates with for-profit BAs spend more time jobless after graduation than their peers with non-profit BAs. Lastly, Table 5 displays the results from a student's t test on a variable that measures the percentage of respondents that say that their BA was worth the cost four years out across institutional sector. These results suggest that those with for-profit degrees are much less satisfied with the financial cost of their degrees; these differences are statistically significant.

Multivariate Results:

- For-profit BA holders' gross earnings are significantly higher than their non-profit peers, a finding which is inconsistent with previous literature (Deming et. al. 2012; Denice 2015). This could be an artifact of the data and more work is needed to test the robustness of this effect.
- For-profit BA holders experience a significantly higher debt-to-income ratio than their peers with non-profit BAs, suggesting that for-profit BA holders have less discretionary month-to-month income than non-profit BA holders.
- For-profit BA holders are significantly more likely to experience employment instability than their peers with non-profit BAs.

Discussion:

- Even if for-profit BA holders do earn more after graduation than their peers with non-profit degrees, their student debt-to-income ratios are higher.

- This means that they have less month-to-month disposable income than their peers with non-profit BAs (e.g., less money for monthly expenses such as rent, bills, etc.)
- For-profit BA holders are also more likely to experience employment instability (i.e., switching jobs multiple times after graduation), introducing another form of uncertainty into their lives.
- In an era of rising student debt, research that focuses solely on post-graduate gross earnings as a measure of financial security misses the mark, especially for for-profit graduates. More nuanced measures should be used.

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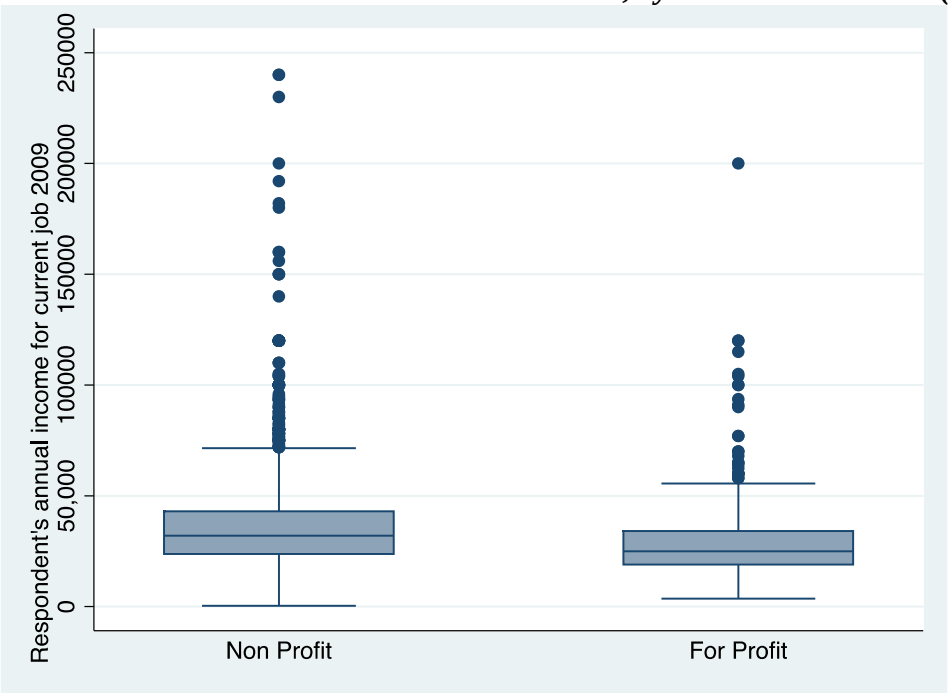
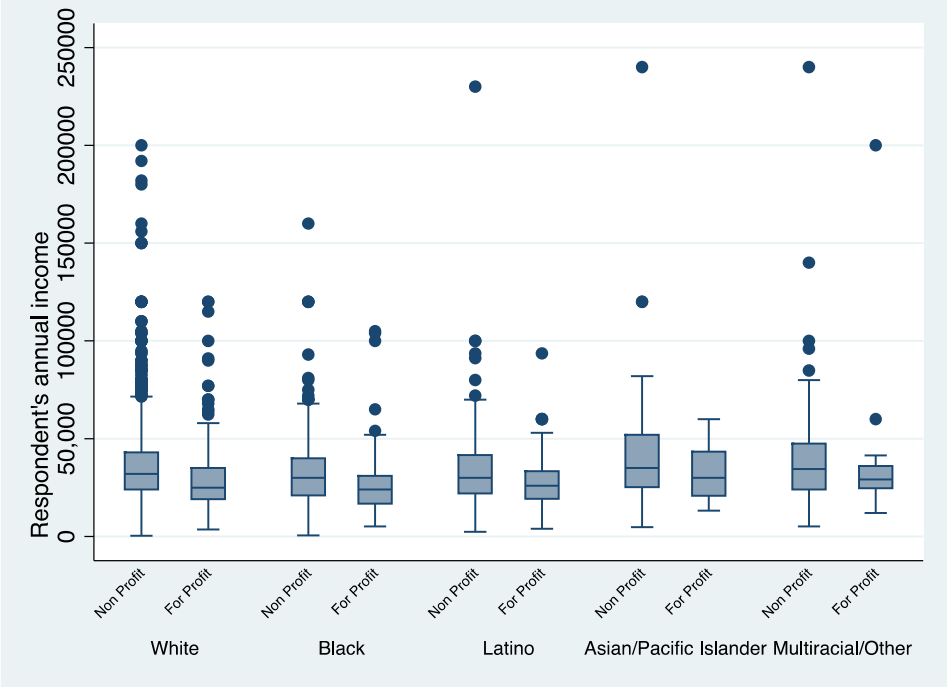
Figure 8. First Post-BA Annual Income Distribution, by Institutional Sector (BPS)



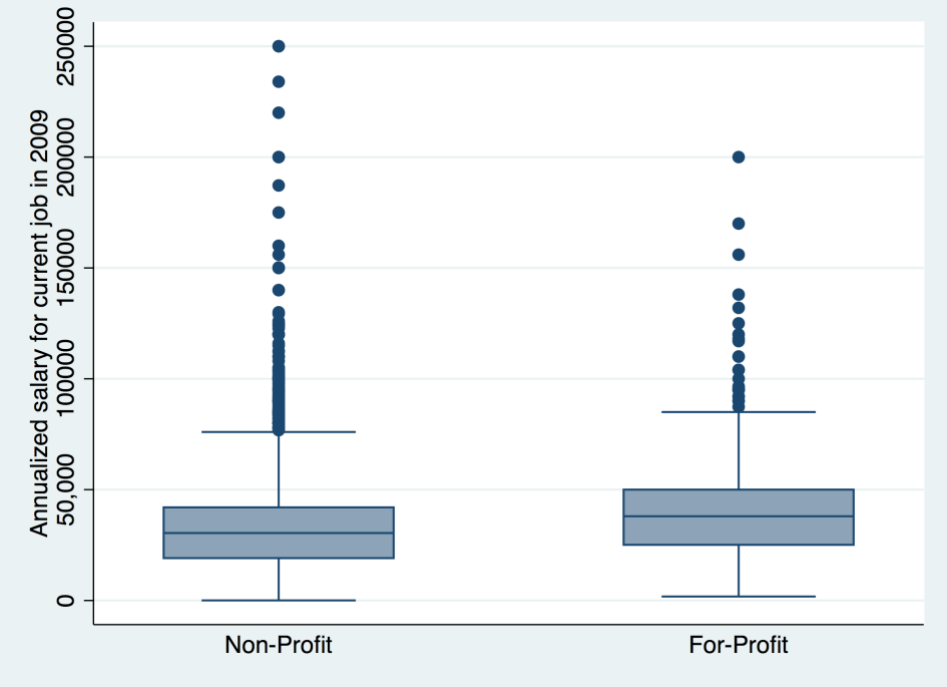
Source: 2004-8 Beginning Postsecondary Students Longitudinal Study

Figure 9. Racial variation in Post-BA Annual Income Distributions, by Institutional Sector (BPS)



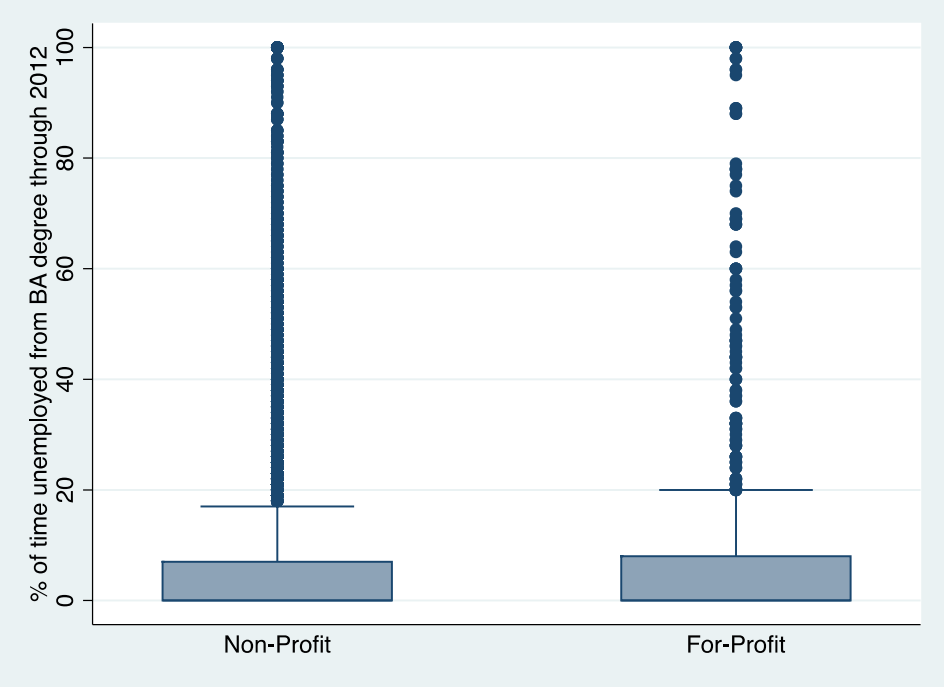
Source: 2004-8 Beginning Postsecondary Students Longitudinal Study

Figure 10: First Post-BA Annual Income Distribution, by Institutional Sector (B&B)



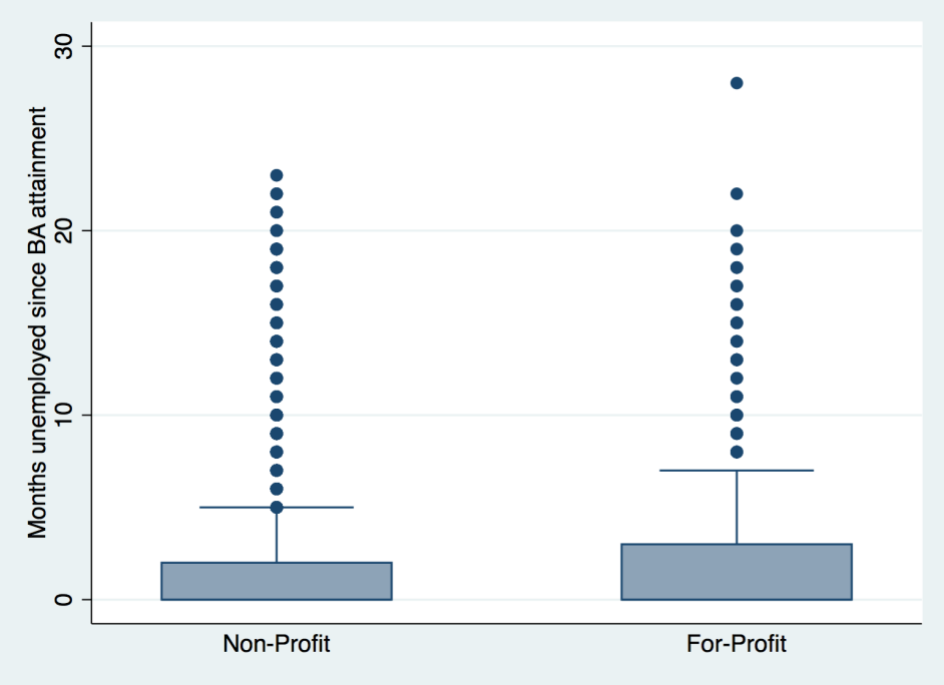
Source: 2008-12 Baccalaureate and Beyond (B&B) Longitudinal Study

Figure 11. Distribution of Percentage of Time Unemployed Post-BA through 2012, by Institutional Sector (B&B)



Source: 2008-12 Baccalaureate and Beyond (B&B) Longitudinal Study

Figure 12. Distribution of Months Unemployed since BA attainment, by Institutional Sector (B&B)



Source: 2008-12 Baccalaureate and Beyond (B&B) Longitudinal Study

Table 1. Mean Annual Income from First Post-BA Job, by Institutional Sector (BPS)

	For Profit Degree	Non-Profit Degree	Significance
Annual Income from first post-grad job (USD)	**29,467 (18,479)**	**35,026 (17,985)**	*******
Total N	**469**	**4735**	

Source: 2004-8 Beginning Postsecondary Students Longitudinal Study
Notes: Standard deviations are in parentheses. *** $p < .001$; Significance holds when income is substituted with the natural logarithm of income

Table 2: Mean Annual Income from First Post-BA Job, by Institutional Sector (B&B)

	For Profit Degree	Non-Profit Degree	Significance
Annual Income from first post-grad job (USD)	**40568.7 (23514)**	**32610.02 (19197)**	*******
Total N	**640**	**11,620**	

Source: 2008-12 Baccalaureate and Beyond (B&B) Longitudinal Study
Notes: Standard deviations are in parentheses. *** $p < .001$; significance holds when income is substituted with the natural logarithm of income

Table 3. Mean percent of time unemployed from post-BA thru 2012, by Institutional Sector (B&B)

	For Profit Degree	Non-Profit Degree	Significance
% of time spent unemployed	**10.01 (20.82)**	**6.548 (13.37)**	*******
Total N	**716**	**13820**	

Source: 2008-12 Baccalaureate and Beyond (B&B) Longitudinal Study
Notes: Standard deviations are in parentheses. *** $p < .001$.

Table 4. Mean months unemployed since BA attainment, by Institutional Sector (B&B)

	For Profit Degree	Non-Profit Degree	Significance
Months unemployed	**2.37 (2.99)**	**1.66 (4.24)**	*******
Total N	**762**	**14286**	

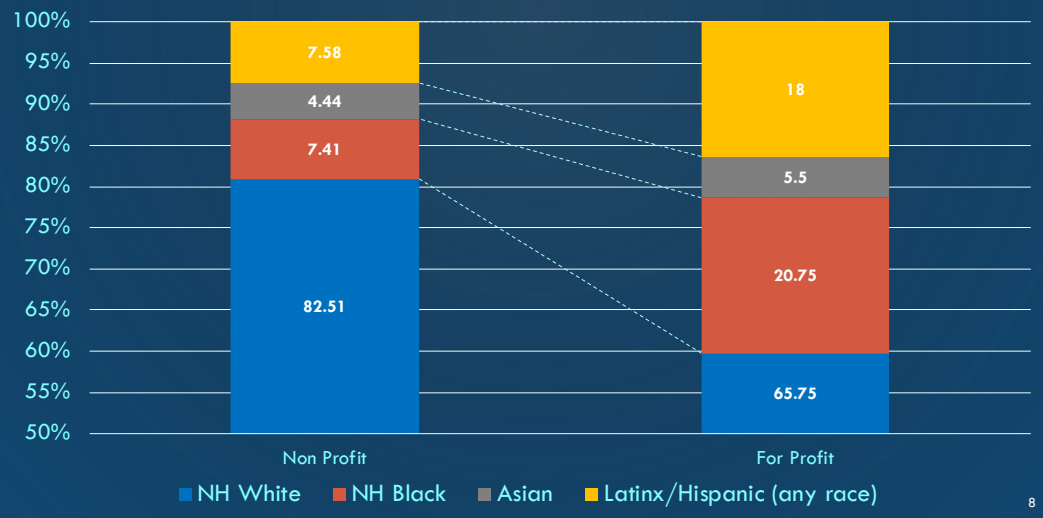
Source: 2008-12 Baccalaureate and Beyond (B&B) Longitudinal Study
Notes: Standard deviations are in parentheses. *** $p < .001$.

Table 5. Percent that say BA was worth the financial cost (2012), by Institutional Sector (B&B)

	For Profit Degree	Non-Profit Degree	Significance
% agree that BA was worth the financial cost (2012)	**49.72**	**73.60**	***
Total N	**716**	**13820**	

Source: 2008-12 Baccalaureate and Beyond (B&B) Longitudinal Study
Notes: Standard deviations are in parentheses. *** $p < .001$.

DESCRIPTIVE STATISTICS – RACE/ETHNICITY



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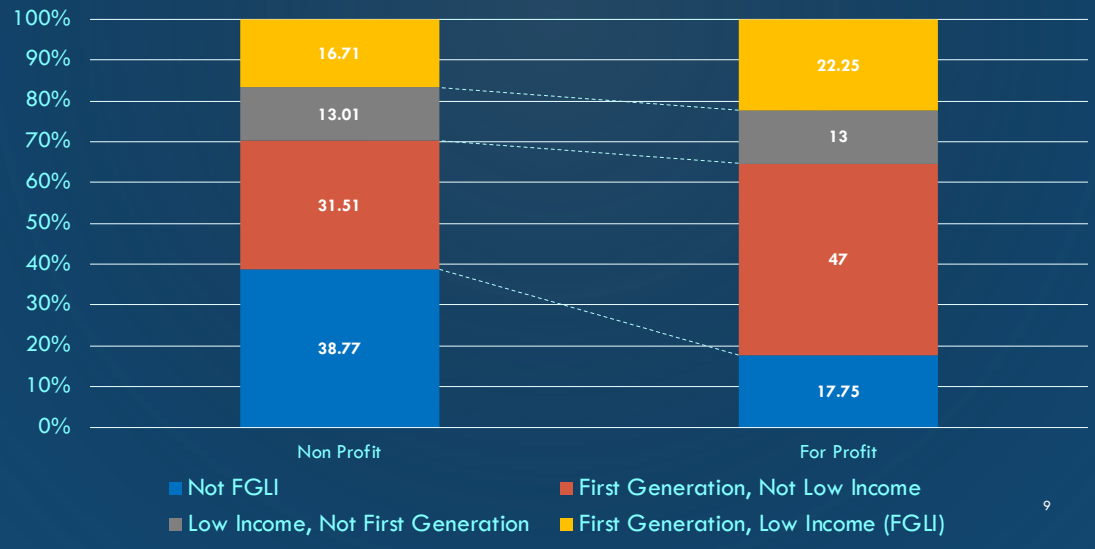
DESCRIPTIVE STATISTICS – TRIO ELIGIBILITY



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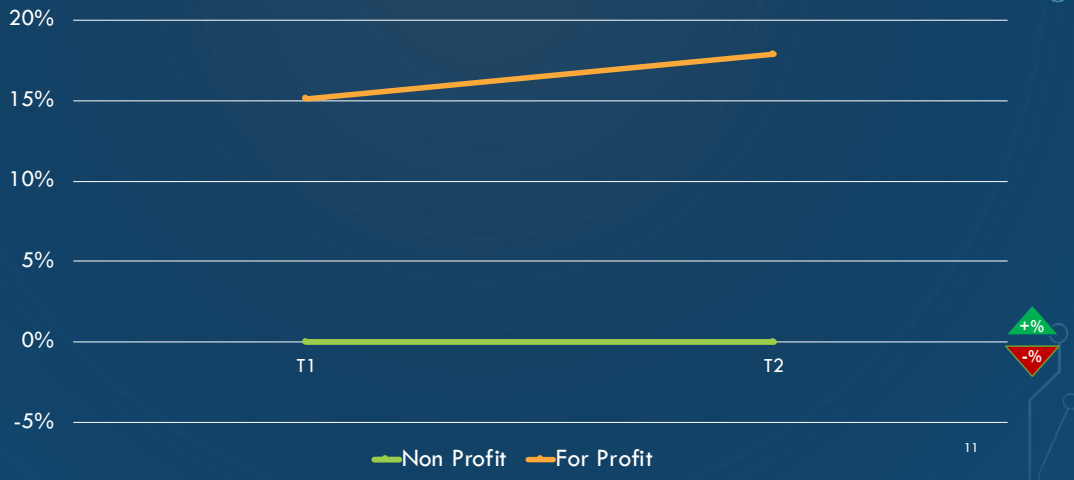
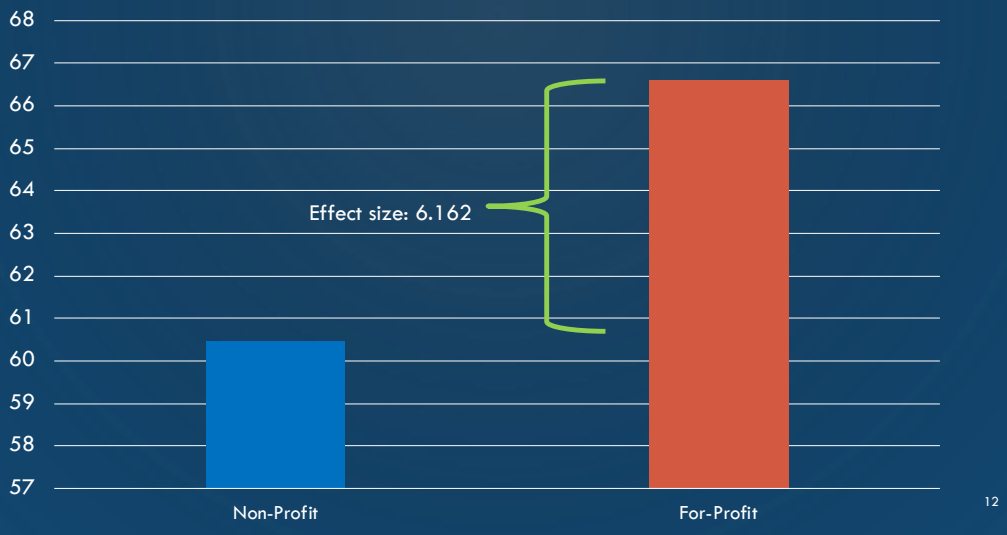
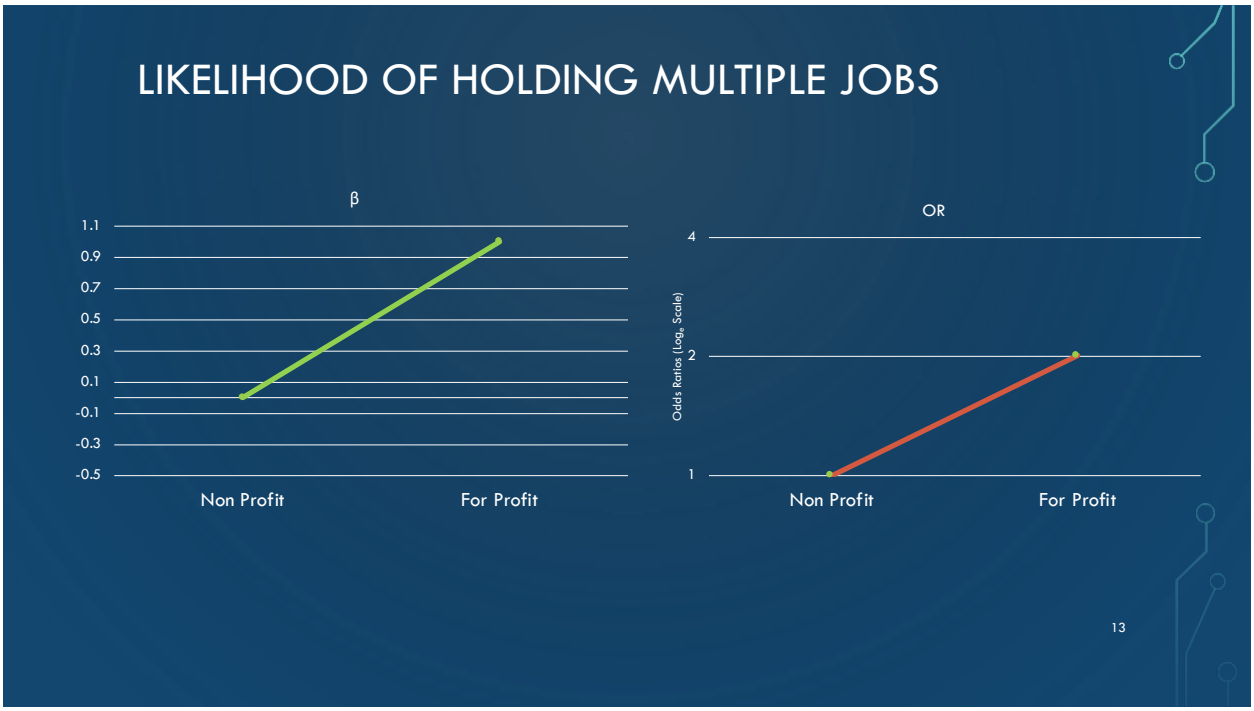
PERCENTAGE CHANGE (%) IN FOR-PROFIT BA HOLDERS' ANNUAL INCOME COMPARED TO NON-PROFIT BA HOLDERS, OVER TIME.



DEBT TO INCOME RATIO BY SECTOR





[i] Deming et al. (2012) point out that some of this earnings differential can be attributed to lower rates of employment among for-profit students. Nonetheless, they conclude that "first time postsecondary students wind up with…lower earnings six years after starting college [compared to] observationally similar students from public and nonprofit institutions (Deming et al. 2012:160).

[ii] Deming et al. (2012) define a significant period of unemployment as one that lasts for three or more months.

iii Higher Education Act of 1965, 89th U.S. Cong., Pub. L. No. 89-329 (1965) (amended).

iv The Servicemen's Readjustment Act of 1944 and the Post-9/11 Veterans Educational Assistance Act of 2008, 201, and 2014 provide financial benefits in the form of tuition funding toward post-secondary education for veterans of the U.S. Armed Forces.