Social Science Research 52 (2015) 161–178

Contents lists available at ScienceDirect

Social Science Research

journal homepage: www.elsevier.com/locate/ssresearch

# Does it pay to attend a for-profit college? Vertical and horizontal stratification in higher education

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ARTICLE INFO

*Article history:*
Received 17 March 2014
Revised 15 December 2014
Accepted 1 February 2015
Available online 9 February 2015

*Keywords:*
College education
Economic returns
For-profit sector
Stratification

ABSTRACT

Despite the recent growth of for-profit colleges, scholars are only beginning to understand the labor market consequences of attending these institutions. Using data from the National Longitudinal Survey of Youth 1997, I find that for-profit associate's degree holders encounter lower hourly earnings than associate's degree holders educated at public or private, nonprofit colleges, and earnings that are not significantly different than high school graduates. However, individuals who complete a bachelor's degree by attending college in either the for-profit or nonprofit sectors encounter positive returns. These findings, robust to model selection, suggest that the distinction between for-profit and nonprofit colleges constitutes an important axis in the horizontal dimension of education at the sub-baccalaureate level, and complicate notions of vertical stratification such that higher levels of educational attainment do not necessarily guarantee a wage premium.


## 1. Introduction

While labor market outcomes such as earnings are most crucially shaped by one's level of educational attainment, qualitative differences in where and how that education is obtained matter, too. A large body of research on what can be termed the vertical dimension of education demonstrates a strong correlation between earnings and educational attainment (for reviews, see Hout, 2012; Oreopoulos and Petronijevic, 2013). Among individuals with equivalent levels of education, however, substantial variation in earnings are associated with a horizontal dimension of stratification—that is, such features of their education as the type or selectivity of college they attend and the kinds of experiences they have while there (Charles and Bradley, 2002; Gerber and Cheung, 2008). But do such patterns of vertical and horizontal stratification obtain for the for-profit college sector? That is, does pursuing higher education at a for-profit college result in higher earnings than stopping at a high school diploma and comparable earnings as compared to similarly educated individuals who attended public or private, nonprofit colleges?

Enrollment in for-profit colleges has skyrocketed in recent decades, outpacing growth in postsecondary enrollment as a whole. This sector has seen its student population triple over the last decade alone, compared to postsecondary education enrollment's overall growth of 22% (Deming et al., 2012), and increase sixfold since 1986 (Bennett et al., 2010). In the fall of 2008, the for-profit sector enrolled about 9% of all college students, 12% of those enrolled at any point during the 2008–2009 academic year, and 14% of full-time equivalent students in all institutions of higher education eligible for federal financial aid (Bennett et al., 2010). The Great Recession was a particular boom time for for-profit colleges, which absorbed

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http://dx.doi.org/10.1016/j.ssresearch.2015.02.002
0049-089X/

roughly 30% of this period's enrollment growth (Barr and Turner, 2013). This expansion reflects in part widespread economic changes in the U.S. labor and higher education markets. As globalization, its accompanying technological changes, and an increasingly information-dominated economy helped precipitate a growing need for educated, skilled workers, and as state support for public postsecondary institutions has declined, more and more students have looked to the open-access for-profit sector for opportunities to gain the competitive labor market advantages garnered by a college education (Machin and Van Reenen, 1998; Morey, 2004; Cellini, 2009; Barr and Turner, 2013).

While the sector's growth has been quite profitable for its schools, particularly for those owned by the fifteen large, multistate, publically-traded companies that enroll nearly half of the sector's students (Bennett et al., 2010), their students have fared less well. Indeed, the Apollo Group, which owns the University of Phoenix, saw its earned revenues grow from $12 million in 1994 to $1.3 billion in 2003 and $3.7 billion in 2013 (Mettler, 2014, p. 88; Apollo Group, Inc., 2013). But this explosion in revenue is due in no small part to the high financial burden taken on by these schools' students (Mettler, 2014). Not only are these schools more expensive to attend than public institutions, particularly community colleges (Knapp et al., 2011; Cellini, 2012), the sector's disproportionately low-income and at-risk students take on an outsized share of federal student loans (Deming et al., 2012; Mettler, 2014). In the first decade of the twenty-first century, federal student aid increased by 325% (from $7.6 billion to $32.3 billion) at for-profit institutions, compared to the 106% and 78% increases, respectively, at public and private, nonprofit schools (GAO, 2011). For-profit students received nearly a quarter of all Pell grant disbursements and 26% of all federal loan disbursements, and they account for roughly 47% of all defaults on educational loans (Deming et al., 2012). The for-profit sector has also been criticized by the media and government agencies for its aggressive recruiting strategies, its students' low completion rates, and the questionable employment outcomes secured for its students (e.g., GAO, 2011; Stratford, 2012a, 2012b; Weinberg, 2013; Health, Education, Labor and Pensions Committee, 2012; Pérez-Peña, 2014). Anecdotal evidence further suggests that employers in certain industries—including those for which for-profit schools have marketed specialized programs like video game development (Williams, 2013)—pass over applicants educated at for-profit institutions.

Anecdotes and the higher costs notwithstanding, does attending a for-profit college pay off? Despite their surge in enrollment and their present nontrivial share of the higher education market, little empirical research has investigated how the post-college earnings of for-profit students compare to the earnings of individuals who did not attend for-profit colleges. The research that exists has demonstrated that students earning degrees or certificates at for-profit colleges earn less or about as much as their nonprofit college-educated counterparts (Deming et al., 2012; Lang and Weinstein, 2012; Cellini and Chaudhary, 2012). Yet less attention has been paid to how wages of for-profit students compare to *less* educated individuals. That is, we do not know at what level of attainment for-profit postsecondary education becomes a wise investment relative to not attending college at all, especially given the debt burdens carried by many attendees of for-profit schools.

This paper thus has two goals. First, this study examines whether the positive correlation between earnings and educational attainment—the vertical dimension of stratification in education—holds for for-profit college students. To this end, I compare the earnings of individuals who pursued some college (but did not earn a degree), an associate's degree, and a bachelor's degree at a for-profit college to those who possess only a high school diploma. Second, this paper re-examines the horizontal dimension of education—that is, whether college sector is associated with heterogeneity in earnings among college-educated individuals. Specifically, I test whether those who attended for-profit colleges in part or exclusively to complete some college, an associate's degree, or a bachelor's degree earn more, less, or about the same in hourly wages as those with the same education levels who attended only public or private, nonprofit colleges. Using data from the 1997 cohort of the National Longitudinal Survey of Youth, I find that the wages of individuals who complete some college or an associate's degree by attending for-profit colleges do not differ significantly from those with only a high school diploma. However, bachelor's degree holders who attended for-profit colleges do earn significantly more than high school graduates and about the same as bachelor's degree holders who attended only a public or private, nonprofit college. These results indicate that college sector, particularly at the sub-baccalaureate level, represents a meaningful dimension of horizontal stratification within higher education as well as a complication to the vertical dimension of education by failing to provide a consistently positive wage premium as compared to possessing only a high school diploma.

## 2. Stratification within higher education and for-profit colleges

I explore how college sector fits into recent discussions of vertical and horizontal stratification in education by comparing the wages of individuals who attended for-profit colleges to the wages of both high school graduates and individuals who attended public or private, nonprofit colleges. While some research on for-profit students has focused on the horizontal dimension, this work has largely addressed individuals who set out to earn a two-year degree or has not included in their samples those with no college experience. For instance, Lang and Weinstein (2012) employ the Beginning Postsecondary Student Survey (BPS) and find that students beginning associate's degree programs at for-profit colleges earn yearly incomes about $3000 less than those who began at public or nonprofit institutions, a statistically significant difference. Similarly, Deming et al. (2012), also using the BPS data, find that individuals who began their college careers at for-profit schools earn about $1800–2000 less annually than they would have had they started out at a public or private, nonprofit institution. In contrast, Cellini and Chaudhary (2012), using the National Longitudinal Survey of Youth 1997 (NLSY97) and focusing on