

Comments

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Hoxby’s research makes an important contribution to our understanding of the role online delivery of higher education plays in the earnings dynamics of the students who use it. This online focus is highly policy relevant: as Hoxby details in the chapter, many have hoped that online education would be a low-cost way to avoid the increasing costs of traditional higher education while effectively—and perhaps even more effectively—providing students with skills needed for current labor market success. The current study provides strong evidence that online education is not going to serve as such a panacea.

Hoxby brings the most comprehensive data to date on earnings dynamics following online enrollment. The present study speaks to a similar set of policy questions as the literature on returns to brick-and-mortar higher education, some of which have been under scrutiny in recent years particularly as they pertain to for-profit colleges. Do students have access to accurate and timely information about how a degree from a particular institution is likely to pay off? Would they make different choices with access to such information? Do institutions of higher education engage in deceitful marketing? Do some institutions devote too many resources to marketing and recruitment, and too few to student supports and instructional quality? Hoxby’s analysis suggests online institutions are far from exempt from these familiar problems.

Finally, a critical contribution of this piece is its focus on social returns to online higher education, given the fact that its costs are shared between enrolled
students and taxpayers. This is an important point when considering all higher education, including more traditional institutions. While the social costs of student loan default have played prominently in policy discussions, the true full cost to taxpayers includes federal tax expenditures through higher education credits and deductions as well. Hoxby explicitly includes these in her calculations of social return on investment (ROI) to online higher education.

**Strengths and limitations of data and methods**

Hoxby uses IRS data for all students enrolled in at least partially online enrollment. The IRS data allow linkage of the higher education tax credits or deductions and a student’s earnings—before, during, and after the period of enrollment. She links these to IPEDS data on institutional characteristics. She then uses these rich data to describe how earnings dynamics evolve differently post-attendance depending on “how online” the at-least-partially-online institution attended is and estimate ROI to online enrollment with individual fixed effects.

This is necessarily a descriptive study, as there is no experimental or quasi-experimental assignment into online environments. Students self-select into the institutions she observes them attending. The appropriate interpretation of the findings, then, is as presented in the paper: how have wages been affected by online education—for the types of students who have chosen to use it to date? With relatively few caveats, the data permit a deep exploration of that question and reveal consistent, disappointing patterns about limited wage growth after enrollment in online education.
One significant data limitation Hoxby faces is the need to infer the online nature of a student’s coursework. The IRS data link the student to an institution. In the IPEDS data, institutions report how many students are enrolled solely, partially, or not at all in distance education courses, separately for non-degree/certificate-seeking undergraduates, degree/certificate-seeking undergraduates, and graduate students. Hoxby then uses these data to calculate student-level probabilities and classify students’ experiences as exclusive, substantially, or hardly online.

Given the IPEDS language, Hoxby must make some assumption about just how online the experience of those students taking “some but not all” distance courses is in order to estimate such probabilities. She interprets it as meaning 50 percent of the student’s experience is online. She chooses this share based on the federal “50 percent” rule in place through 2005 requiring institutions to deliver at least half of their instruction in person in order to qualify for federal aid, loans, and tax assistance. She notes that, “many institutions were tightly bound by the 50 percent rule up through 2005,” and that “in more recent years, the substantially-online category has become, if anything, more online.” Fifty percent therefore seems an upper bound of “online-ness” through 2005, and a likely underestimate of the concept in later years (the analysis of online students is weighted towards later years, due to their higher online enrollments). Hoxby acknowledges the imprecise nature of the “substantially online” category throughout the piece. Going forward, it would be useful for the IPEDS (if not already doing so) to collect more precise data based on the number of student-course units that are online versus in person.
The entire universe of students analyzed attended institutions with at least some online offerings. The relevant comparisons are therefore between how individual wages evolve following enrollment for students in more (in Hoxby’s terminology, “exclusively” or “substantially”) or less (“hardly”) online institutions. Among the “hardly” online institutions, Hoxby notes which are non-selective, to best compare with the (nearly universally non-selective) exclusively or substantially online institutions.

Because of the selection into online education, it is important to understand how online (going forward, shorthand for exclusively or substantially online) students differ from their counterparts attending hardly online non-selective institutions. The online students are older, and earn more before and during their schooling. An unavoidable limitation of this approach is that it does not permit speculation about what would happen in response to particular policy changes, such as an entire state system switching to online-only, or a selective institution choosing to offer a greater share of its courses online. It also cannot speak to differences in quality of online instruction. The estimates should be interpreted just as Hoxby does: as impacts of online instruction in the types of institutions that offered it, on the wages of the types of students who enrolled in it.

**Policy implications**

Higher education in the United States is under scrutiny for a host of issues, including cost, access, and quality. Online instruction as implemented during the timeframe of this study, through 2013, appears an unlikely solution to these
problems: wage boosts are small, and costs, both private and social, are high. In fact, the most significant policy implications of this work are independent of the online nature of the institutions studied. These findings fit into a broader and entirely consistent literature highlighting low returns to higher education in a subset of institutions, in large part due to low completion rates. For example, Cellini and Chaudhary (2014) find that private returns to for-profit colleges may be too small to warrant their private costs for the average student.

Why would students choose to invest their time and money—and take on debt burden to finance—enrollment in institutions that consistently fail to put their students on a trajectory that yields sufficient income to repay their loans? Recent policy efforts have focused on information problems. Students lacked comprehensive information about how others fared after attending specific institutions, but were offered plenty of persuasive marketing materials from the institutions themselves. This line of reasoning prompted the Obama Administration’s gainful employment rule for career college programs. In order to comply with this rule, “the estimated annual loan payment of a typical graduate...” could not “exceed 20 percent of his or her discretionary income or 8 percent of his or her total earnings.” Institutions failing to reach this benchmark would lose access to federal student aid. The rule also requires institution-specific data on debt, graduation rates, and later earnings to be made publicly available. The Trump Administration’s Education Department has slowed implementation efforts and the rule’s ultimate fate remains to be seen.
The gainful employment rule notably applies only to career—vocational—programs. The poor social returns to online education identified here include enrollments in other programs. And many brick-and-mortar institutions including not only for-profits but also public community colleges have low attainment rates as well. Efforts to protect student and taxpayer investments should acknowledge that low-quality programs are not confined to online or traditional, or to particular sectors or subject areas: accountability for public dollars should apply across all these realms.

Distance learning is an evolving field, and advances in its pedagogy may well help students learn more online. Low returns on the enrollment dollar, however, are unfortunately far from unique to this context. Improving returns—to both students and taxpayers—on investments in online higher education will require solving the same policy problems that have plagued brick-and-mortar education. The enforcement and potential impact of the gainful employment rule is an interesting potential solution to these problems to watch going forward.