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The Private Side of Public Universities: Third-party providers and platform capitalism

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ABSTRACT

The rapid rise of online enrollments in public universities has been fueled by a reliance on for-profit, third-party providers—especially online program managers. However, scholars know very little about the potential problems with this arrangement. We conduct a mixed methods analysis of 229 contracts between third-party providers and 117 two-year and four-year public universities in the US, data on the financing structure of third-party providers, and university online education webpages. We ask: What are the mechanisms through which third-party relationships with universities may be exploitative of students or the public universities that serve them? To what extent are potentially predatory processes linked to the private equity and venture capital financing structure of third-party providers? We highlight specific mechanisms that lead to five predatory processes: the targeting of marginalized students, extraction of revenue, privatization by obfuscation, for-profit creep, and university captivity. We demonstrate that contracts with private equity and venture capital financed third-party providers are more likely to include potentially problematic contract stipulations. We ground our findings in a growing body of work on “platform capitalism” and include recommendations for state universities, accreditors, and federal policy.

Keywords: online education, predatory inclusion, higher education, private equity, privatization

Over the past decade, public universities have dramatically increased their online offerings. The COVID-19 pandemic has also triggered additional investment in online education. In the face of escalating costs, difficulties in securing funding for infrastructure, and growing interest in online education, it has become commonplace for public university officials to contract out some portion of their online services to online program managers, or OPMs. OPMs are private, for-profit companies that provide a broad range of services, from instructional design, to marketing, student recruitment, curricular provision, operational services, technological platforms and more.

Some estimates suggest that up to 80% of the non-profit colleges delivering online education are utilizing OPM services of some kind (Newton 2016). These contracts are heavily concentrated in the public sector (GAO 2022; Mattes 2017). Large state systems, flagship universities, regional universities, and community colleges all utilize these third-party providers. However, faculty in public institutions often have very little knowledge of services provided by third-party providers at their university, as exclusively online programs are frequently run separately from in-person programs. The OPM market is currently estimated to

produce somewhere between \$4 and \$7 billion in annual revenue—at least as large, and likely substantially larger, than for-profit colleges at their apex (Hill 2021; Marcus 2021).

In recent years, non-profit advocacy organizations have been urging scholars, universities, policymakers, and the public to pay greater attention to non-profit university partnerships with for-profit OPMs (Hall and Dudley 2019; Marcus 2021). In May of 2022, the U.S. Government Accountability Office (or GAO) publicly released a report urging greater monitoring of universities' arrangements with OPMs. Yet, scholarly research on third-party providers like OPMs is almost non-existent. Researchers have noted an increasing reliance on private sources of funding in higher education (Loss 2012; Newfield 2016; many others), documented university outsourcing in public-private partnerships (Hamilton and Nielsen 2021), detailed the growing role of corporate finance in higher education (Eaton 2022), and meticulously uncovered the predatory practices of for-profit colleges (Cottom 2017). The work of OPMs—which are invisible by design—have largely escaped scholarly inquiry.

OPMs offer everything from single, specific services (e.g., the provision of online learning material) to full degree programs. They include companies such as 2U, Academic Partnerships, All Campus, Bisk Education, Education Dynamics, Keypath, Pearson Online, and Trilogi. “Bundled” contracts, in which whole programs or multiple services are offered, frequently include revenue share agreements, in which OPMs receive a substantial share of tuition and revenue (between 20% and 94% among contracts in our data that include revenue share agreements). There have also been conversions of for-profit colleges into OPM providers for large public universities, as in the case of Kaplan and Purdue Global or Ashford/Zovio and the University of Arizona Online. Providers that started as MOOCS, such as edX or Coursera, are now OPMs or operate in ways that are virtually indistinguishable from OPMs. Third-party providers of learning management systems (LMS), like Blackboard and D2L, also share many similarities with OPMs and now include some OPM services.

In what follows, we rely on a mixed methods analysis of 229 contracts between third-party providers and 117 unique two-year and four-year public universities originally obtained through the FOIA process by The Century Foundation, a non-profit public policy research institute. We also utilize a unique database of third-party financing structure and a content analysis of partner university online education homepages. We ask: *What are the mechanisms through which third-party relationships with universities may be predatory—that is, exploitative of university students or the public universities that serve them? And to what extent are potentially predatory features of contracts linked to the private equity and venture capital financing structure of third-party providers?* We do not start from the assumption that all third-party provider contracts are problematic. Rather, our goal is to investigate the financing structure of third-party providers and identify contract terms that may be risky for students, universities, or both.

Our analyses are grounded in Cottom's (2020) work on “platform capitalism.” Platform capitalism often refers to major companies such as Facebook, Apple, Google, Uber, and Airbnb that provide digital platforms for financial exchange around daily activities. OPMs provide a similar, although seldom recognized, digital “platform” for higher education. In public universities, third-party providers are also an example of private companies providing public services—as has occurred in healthcare, low-income housing, transportation, and other sectors (Hacker 2002; Milward and Howard 2000). We emphasize the links between platform capitalism in the public postsecondary sector and financial capitalism; our data demonstrate that third-party providers are often backed by venture capital and private equity, which tend to prioritize shareholder value (Eaton 2020; Fligstein 1993). We show that potentially predatory features are more common in contracts with venture capital or private equity backed third-party providers.

PLATFORM CAPITALISM COMES TO HIGHER EDUCATION

The study of capitalism in digital spaces is vital because, as Cottom (2020a) puts it, “Internet technologies are the politics and capital of capitalism as we presently experience it.” Higher education is no exception. Increasingly, digital technologies shape how universities market, recruit, enroll, monitor, assess, teach, and award degrees to students (Bowen 2015). The growth of online education in public universities suggests that the Internet has reached the core of the academic mission.

Platform capitalism occurs when digital platforms produce profit through the everyday activities of individuals; people increasingly rely on platforms to meet basic needs, such as connecting with family and friends, networking, locating housing, engaging in paid labor, purchasing goods, and participating in higher education (Cottom 2020a, 2020b). The advent of platform capitalism is a direct result of the growing power and centrality of financial markets, what scholars have referred to as the “financialization” of society (Epstein 2005; Krippner 2011; Eaton et al. 2016). Financialization injects financial logics into societal institutions, even those that previously did not center around financial markets, including higher education. Financial logics normalize profit as the central goal of any exchange and suggest that capital should be distributed to where it will yield the highest rate of return (Eaton 2022).

Platforms produce profit by commodifying the conduits through which goods and services flow. Because platforms control the conduits for everyday exchange, they may be involved in all manner of transactions. Platforms often require little to moderate upfront capital investment from financiers but yield a substantial share of revenue from each transaction. They also produce profit by extracting and commodifying information about users (Cottom 2020a) and may outsource risk from companies to individuals, consumers, organizations, and communities that are supplying or purchasing a good or service via platforms (Appelbaum and Batt 2014; Cottom 2020b; Srnicek 2017).

Venture capital and private equity investments have fueled platform capitalism (Srnicek 2017; Vallas 2019). Private equity and venture capital are forms of private capital financing that allow investors to directly invest in companies or purchase companies. Generally, venture capital firms tend to be involved in smaller deals and earlier-stage companies, often in technology sectors, while private equity firms invest in a broader range of mature companies, often in exchange for substantial power over the direction of a company (Gompers and Lerner 2001; Appelbaum and Batt 2014). There is substantial overlap, however, as the same firms sometimes operate leveraged buyout funds and venture funds. In addition, while venture capitalists do not typically have controlling stakes in a company, they may still sit on the boards of the companies in which they invest and influence company culture and decisions, as companies seek to extract more investment (Eaton 2022).

The increased power and scope of these forms of investment are due to the deregulation of financial markets in the 1970s and 1980s (Krippner 2011). Deregulation made it possible for investors to make bigger financial bets, with borrowed capital (via high-interest and high-risk vehicles known as junk bonds), while also evading capital gains taxes (Eaton 2022; Lin and Tomaskovic-Devey 2013; Tomaskovic-Devey and Lin 2011). Venture capital and private equity flooded into Internet startups beginning in the late 1990s, with a fervor that was only temporarily dampened by the dot.com crash (Vallas 2019).

The centrality of private equity and venture capital to platform capitalism suggests a high potential for exploitation. Platform capitalism expands the logic of capital extraction and profit-seeking to new groups and markets (Cottom 2020a). Digital platforms are often appealing to the disadvantaged because they appear to offer access to historically exclusive institutions and spaces. Marginalized consumer-citizens are

pressured to engage in “ostensibly democratizing mobility schemes on extractive terms”—what Cottom (2020a:443) and Seamster and Charron-Chénier (2017) describe as “predatory inclusion.” Inclusion is predatory because digital platforms produce profit for lenders, real estate brokers, banks, corporations, private equity firms, and other powerful social entities, in part through the financial exploitation of racially marginalized groups and communities who fail to see substantial benefit in the aggregate (Cottom 2020a). In this way, platform capitalism and racial capitalism (see Robinson 1990 and Fraser 2016) are interlinked, working together to reproduce intertwined racial and class hierarchies.

There are clear markers of predatory inclusion in online education. Online students, even in the non-profit sector, are more likely to be Black, Pell recipients, female, older, employed while in school, independent, enrolled part-time, and are more likely to have children (Protosaltis and Baum 2019; Smith et al. 2022). These students disproportionately gain “access” to higher education via online programs. Notably, predatory inclusion in higher education does not need to feel bad or seem obviously extractive to those involved, as it taps into human desires for status, belonging, and self-improvement (Cottom 2020a). This does not change the fact that “inclusion” for marginalized groups often comes with fewer benefits and different costs than for others (Seamster and Charron-Chénier 2017).

For instance, non-completion rates are higher in four-year online programs than they are in in-person programs, even accounting for institutional and individual characteristics (Bettinger et al. 2017; Smith et al. 2022; U.S. Senate Committee on Health, Education, Labor and Pensions 2012). Additionally, returns on online degrees are uncertain. Some evidence suggests that employers may devalue these degrees (Deming et al. 2016; Fogle and Elliot 2013; Roberto and Johnson 2019). Students in online universities, in general, face greater struggles in making progress on their student debt; in the four-year non-profit sector, students who enroll online are more likely to experience delinquency and to have student loans in forbearance than students who enroll in-person, even in analyses that address selection effects into online vs. in-person schooling (Smith et al. 2022).

Hoxby (2018) concludes that the vast majority of online enrollment generates earnings benefits which fail to cover either students’ and families’ personal costs of attendance or the direct costs to society associated with online provision (backed by federal loans and state subsidy). It may be, however, that negative student outcomes are, in part, a function of how online courses are developed and delivered. For instance, Chirikov et al. (2020) found that online and blended instruction produced similar outcomes as in-person learning in a large international online education platform established by eight leading national universities with governmental support. In contrast, in the US the largest online programs, even in public universities, are run by OPMs.

Along with predatory inclusion, another feature of platform capitalism is “privatization by obfuscation” (Cottom 2020a). The Internet introduces layers of opacity that obscure the extent to which companies are profiting from consumer use of a platform. As welfare state literature suggests, obfuscation is also frequently produced when vital public services are outsourced to for-profit providers (Hacker 2002; Milward and Howard 2000). For example, in the case of higher education, opacity can make it difficult for students at public universities to recognize that their courses and degrees are not, for all intents and purposes, provided by the non-profit university they believe they are attending, but rather the university’s for-profit partner. Opacity reduces questions about the quality of the degree and, to a certain extent, protects public universities from regulatory oversight.

THE USE OF OPMS BY NON-PROFIT UNIVERSITIES

Although OPMS are a relatively new phenomenon, distance higher education is not. Long distance courses, initially via postal correspondence, have been around since at least the 1800s. During the early to mid 1900s, the development of radio and television would expand distance learning options (American Center for the Study of Distance Education 2021). In 1989, the for-profit University of Phoenix launched the first online college degree program. For-profit universities would eventually develop disproportionately high online and exclusively online enrollments, compared to the non-profit sector.

Non-profit universities, especially public institutions, spent the 1990s and first decade of the 2000s grappling with how to incorporate new online technologies. The heavy state and federal subsidies that characterized the years between 1940 and 1980 were no longer available (Loss 2012; Stevens and Gebre-Medhin 2016). Leadership at public universities saw online education as critical to the financial future of their institutions (Allen and Seaman 2016). Indeed, as Ortagus and Yang (2017) demonstrate, public universities responded to declines in state appropriations by increasing online enrollments. Most schools had little capacity to grow this infrastructure internally and looked to outsource online education to for-profit technology providers.

Legal ambiguities, however, initially surrounded OPM services. In particular, the 1992 reauthorization of the Higher Education Act (or HEA) included language intended to block manipulative recruiting, by online providers and others, for the primary purpose of profit. Colleges that accept Title IV federal aid were barred from “provid[ing] any commission, bonus, or other incentive payment” based on enrollments to “entities engaged in any student recruiting or admission activities” (see U.S. Department of Education 2021).¹ This provision was tested in 2001, when an audit of two private Christian universities revealed that the schools had contracted the Institute of Professional Development (an affiliate of University of Phoenix) to run extension programs for working adults, in exchange for a 50% share of tuition. The inspector general argued that because the contract included the recruitment of students, this was a violation of the incentive compensation ban.

However, in 2002, under the Bush administration, the Department of Education granted safe harbors, as published in the Federal Register 67(212):67048-67083, that allowed incentive compensation to OPMS that deliver multiple services, including recruitment and admission. This is known as the “bundling loophole.” The Obama administration had proposed rescinding Bush’s bundling loophole and did in fact do so in 2010. Yet, in 2011, after heavy lobbying by existing OPMS, the Department of Education became convinced that non-profit colleges would not be able to compete against for-profit colleges in the online space without OPMS (Shireman 2019). The DOE issued official guidance reinstating the loophole.

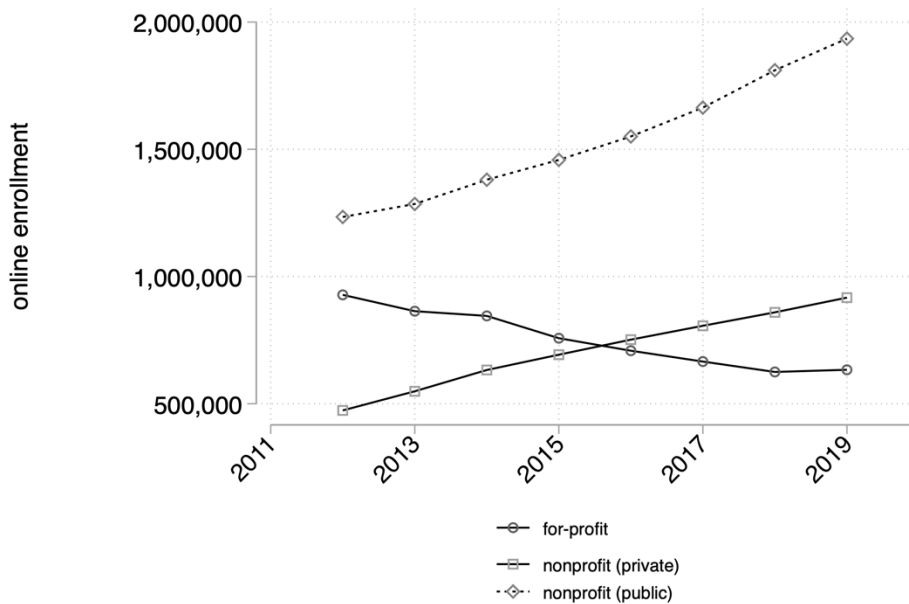
Starting in the early 2000s, the number of OPMS offering bundled services exploded and utilization by non-profits increased dramatically. For public universities aggressively seeking new revenue streams without substantial upfront costs, OPMS seemed a perfect solution; they saved public universities the infrastructure development needed to quickly launch online programs that could increase enrollments. With the bundling loophole in place, providers offering an array of services could charge public universities as much as 50-80% of tuition revenue. There were incentives on both sides.

OPMS have played a critical role in the explosive growth of online education at public universities. Figure 1 indicates that, since 2012 (the first year that the Integrated Postsecondary Data System collected data

¹ Note that this provision does not apply to the “recruitment of foreign students residing in foreign countries who are not eligible to receive Federal student assistance.”

on online enrollments), public universities have served more online students (undergraduate and graduate combined) than either for-profit or non-profit private schools. Growth in online enrollments is occurring only in the non-profit sector, with public universities increasing online enrollments at the highest rates. Nearly 2 million students were enrolled in exclusively online public universities by 2019—over a million more online students than at private universities and over 1.3 million more online students than in the for-profit sector. Online students make up a smaller share of public schools; however, the sheer size of the public sector, means that there are far more online students at public universities than anywhere else in the postsecondary system.

Figure 1. Number of IPEDS-Recorded Undergraduate and Graduate Students Enrolled Exclusively in Online Education at Two-Year and Four-Year Institutions, 2012-2019



Undergraduate enrollments make up the largest share of online enrollments (see Appendix A for breakdown by degree level). Third-party contracts for extension and continuing education programs have played a key role in boosting online undergraduate enrollment (Hall and Dudley 2019). At the graduate level, many universities have turned to “self-funding” graduate degrees and certificates, which generate revenue by reducing university subsidy for some forms of graduate study (Marcus 2017). OPMs made adding these programs online relatively easy. Self-funding degrees contrast with a model in which postsecondary schools heavily subsidize graduate study; the cost of graduate education is shifted away from universities to students and their families (Pyne and Grodsky 2019). In partnership with OPMs, universities can offer ready-made online master’s degrees or certificates in fields such as teaching, healthcare, and technology with little upfront investment.

Through the early 2000s, universities also began to rely heavily on third-party providers offering learning management systems (or LMS). Even in-person students utilize the university LMS when they go to their class Blackboard page to download assignments, message instructors, etc. However, with more extensive LMS contracts (which cover larger numbers of users and additional services), universities can provide scaled up online offerings. OPMs frequently run through a university’s LMS, and some LMS providers have evolved to market OPM services like technical assistance or marketing (e.g., Blackboard OPx). Of particular interest in this article is not whether the university has an LMS contract but identifying potentially problematic features that can appear in third-party provider contracts, overall.

Additionally, over time, providers of Massive Open Online Courses (or MOOCs), known for offering courses free to the public, have started to operate like OPMs. The MOOC financing model, dubbed a “consumer flywheel” in Coursera’s filings,¹ uses free university and industry branded content to attract a motivated global learner base. Some of these learners will pay for courses and degrees, resulting in revenue for MOOCs and their university partners.

In recent years, for-profit conversions have generated the largest OPM deals. Conversions occur when non-profit universities purchase for-profit universities that then become OPM providers. For example, in 2018 Kaplan sold the institutional assets and operations of Kaplan University (for \$1) to the newly established Purdue Global, a non-profit online university run by Purdue University. At the same time, Purdue Global entered a transitions and operations support agreement with Kaplan Higher Education, making it an OPM. With this deal, around 30,000 Kaplan students suddenly became students of OPM-managed Purdue Global.

The current postsecondary third-party provider landscape is characterized by a relatively small number of major companies, plus a handful of LMS providers (Hill 2021). Constant acquisitions of smaller OPMs by larger OPMs routinely trim the field. For instance, 2U acquired GetSmarter (offering short online courses), Critiquelt (a tech startup offering digital communication tools), Trilogy Education (online technology training), and edX (a MOOC created by Harvard and MIT) all between 2017 and 2021.

Major players like 2U often have a great deal of market power to set the terms of engagement. As Tomaskovic-Devey and Avent-Holt (2019:199) argue, “The less market competition in an industry, the greater the power to extract resources from both suppliers and customers.” These dynamics make it easier for third-party providers to establish contracts that hold universities captive to high prices. Universities may fear that, if the contract is terminated, the provider will essentially sell the same online degree to a competing university (which is often prohibited during the term of the agreement). The high costs and technical difficulties of switching—and lack of support from a previous provider in transitioning to a different provider—may also lead universities to agree to unfavorable terms.

Additionally, when universities contract with for-profit providers, over time these services may begin to extend into different programs and parts of the university, in a process that we refer to as “for-profit creep.” The more that these providers do, the more dependent universities may become. This is, in part, because universities may never develop infrastructure to offer services internally. Universities may also come to rely on profit streams from OPM partnerships. OPMs may even actively assist universities in identifying opportunities for “monetization” that would have otherwise gone unexploited (also see Irvine 2007).

In what follows, we first describe our methods, then provide a broad overview of the contracted services with third-party providers in our sample. We detail the level of venture capital and private equity involvement in our data, and the relationship between these ownership structures and several key contract features. The heart of the paper is devoted to qualitative analysis of third-party contracts and relationships with partner universities. We identify and provide illustrations of *specific mechanisms* in contracts and third-party operations that support five problematic processes—targeting marginalized students, revenue extraction, privatization by obfuscation, for-profit creep, and university captivity. These

¹ See Coursera’s IPO filings at: <https://www.sec.gov/Archives/edgar/data/0001651562/000119312521089500/d65490ds1a.htm>.

mechanisms may create exploitative dynamics for public universities and/or students. Finally, we conclude by discussing the policy implications of our findings.

METHODS

This mixed methods project relies on a database of 229 contracts between third-party providers and 117 unique universities.² It is the largest existing database of contracts with third-party providers. The Century Foundation (TCF), a non-profit research organization focused on economic, racial, and gender equity in healthcare, education, and work, obtained these data via Freedom of Information Act (FOIA) requests to individual public universities. FOIA states that any person or agency has the right to request access to federal agency records or information. This process does not extend to private universities. Thus, our database only includes third-party contracts with public institutions. We list the universities and contracts held with different third-party providers in Appendix B.

Sampling Strategy

In 2017, TCF issued FOIAs for a public flagship and a community college in each state. (Note that some states, however, do not respond to FOIAs from non-residents.) Other public schools were included randomly. In 2019, TCF targeted the top 100 public colleges by distance education enrollment, using NC-SARA enrollment data. In 2020, new FOIA requests were sent to schools from which TCF had received contracts in the past, and where the original contracts were at or near termination dates. In addition, because TCF was monitoring OPM uptake related to the pandemic, they sent requests to schools mentioned in the press as establishing new online programs. The final sample thus includes contacts from most states, including more and less selective schools, and allows for tracking contracts over time.

Quantitative Coding

Team members reviewed the full set of contracts. We confirmed the coding for several variables on 186 contracts previously coded by TCF, coded 43 new contracts that had not been reviewed, and coded for additional variables. This process was time consuming, as many contracts were several hundreds of pages long. New variables evolved as authors discussed differences between the contracts and highlighted themes that would benefit from quantitative coding. Table 1 details the quantitative variables systematically assessed of each contract.

Basic features included the length of the contract, determined from the initial date of the first contract or amendment included in documents provided by the FOIA process, to the latest end date for any contract or amendment. We also coded whether the contracted third party was a for-profit company; 95% of contracts are with for-profit companies. Notably, the non-profit contracts offer alternatives to for-profit OPMs; we return to these contracts in the discussion.

Sixty-seven contracts (29%) are with Learning Management System (LMS) providers, including Angel Learning/Blackboard/Anthology, Desire2Learn (D2L), Instructure, Longsight, and Moodle. LMS companies provide the platforms for most university learning and grading technology, and many OPM services are run through the LMS. Without the LMS, most universities cannot offer a large-scale catalogue of online courses. Four percent of contracts are with Coursera, a MOOC that operates in ways that are

² We use the term “third-party provider” when describing our coding to reflect the fact that some of the contracts are with non-profit providers or are for learning management systems (or LMS), which may be considered distinct from OPMs.

indistinguishable from other OPMs. The data also include two major for-profit to OPM conversions (the Kaplan-Purdue and Ashford/Zovio-University of Arizona deals).

Table 1. Quantitative Variables Assessed in Third-Party Contracts

Quantitative Variables	Description	Mean
<i>Basic Features</i>		
Term of the contract	Years from the initial date of the first contract to the anticipated end of the contract/ amendment	
Less than 1 year		.04
1 year		.19
Between 2 and 4 years		.37
Between 5 and 9 years		.23
10 years or more		.09
Indefinite		.08
For-profit third-party	Contracted third-party is a for-profit company (0/1)	.95
Learning Management System	Contract is for a learning management system (or LMS)	.29
<i>Third-party Financing</i>		
Venture capital	Contracted third-party is or has been financed by venture capital (0/1)	.27
Private equity	Contracted third-party is or has been financed by private equity (0/1)	.49
Neither	Contracted third-party has no venture capital or private equity involvement (0/1)	.24
<i>Payment Structure</i>		
Revenue Share	Contracted third-party receives a percentage of student tuition/fee revenue (0/1)	.35
Pricing per head/credit hour	Contracted third-party charges per student head or credit hour (0/1)	.15
Pricing per service	Contracted third-party charges per service (0/1)	.49
<i>Services</i>		
Recruitment	Contracted third-party provides recruitment services, involving direct contact with prospective students (0/1)	.29
Course or program development	Contracted third-party develops and delivers course or program materials to the university (0/1)	.43
Instructional services	Contracted third-party provides instructional services to the university (0/1)	.23
<i>Additional Features</i>		
(In)visibility	Website paints a clear and transparent picture of the partnership with a third-party provider (categories presented in Table 4)	---
Expansion	Contract was renewed or amended for new or expanded services (0/1)	.22
Captivity	Contract contains stipulations for auto-renewal or is indefinite (0/1)	.38

There are no existing data that detail private equity and venture capital involvement in OPM companies. Thus, we relied on four sources to assess contracts for third party financing. First, we conducted searches in the ThomsonOne and Preqin databases, which include details on private equity (PE) and venture capital (VC) deals. We also utilized Crunchbase.com and Pitchbook.com, comprehensive financial databases that provide information on companies' investors and investments, typically for use by investment and

business professionals. We searched for each company in all four of these databases. Because they present information in slightly different ways, triangulating across four sources allowed for greater coverage and confidence in our coding. Appendix C includes a list of all third-party companies involved in contracts in our dataset, information on PE or VC involvement, the date of earliest PE/VC involvement, the initial investor (excluding individuals), investors (or lead investors when there are many listed), and, when relevant, the date of initial public offering (or IPO).

Our coding for payment structure includes indicators for contracts in which third-party providers share a percentage of student tuition or fee revenue with the university. Seventy-nine contracts (35%) in the full database have this feature; however, we noticed a subset of contracts where third-party contract terms included a pricing scheme that did not share overall revenue; instead, they set up a price structure per head or credit hour (15%). A plurality of contracts in our database (48%), however, do not engage in revenue sharing or a price per head/credit hour structure and are instead priced per service.

We also coded contracts for three services; we only coded non-LMS contracts on these items, as LMS providers tend not to offer these services. The first is recruitment, which involved direct contact with prospective students on behalf of the university. Twenty-nine percent of contracts included recruitment services. Recall that recruitment is the OPM feature that explicitly violates the HEA compensation ban and is only allowed via the bundling loophole. We also code for the development of course or program materials by third-party providers (42% of contracts) and the provision of instructional services of some kind (e.g., a lecturer or teaching assistant) by the third-party provider. Twenty-three percent of contracts involve instructional services.

To assess the invisibility of the third-party provider's partnership with a university, we examined the university website. Our goal was to ascertain if a potential student could reasonably encounter information about the partnership via webpage content. We only examined websites for partnerships that involved revenue share or per student/course pricing or involved third-party providers in recruitment, course development, or instructional provision. We did not code LMS contracts, such as those with Blackboard, for invisibility.

For each contract under consideration, we went to the main online learning homepage of the corresponding institution. Then, using a control-F search on this page, we searched for each of the following terms: the name of the corresponding for-profit company, "public-private partnership," "P3," "for-profit," and "outsource"/ "outsourced." If this process yielded an explicit mention, we determined if it provided a reasonably transparent picture of the partnership. If there was no mention on the online homepage, we moved through a series of steps to ascertain if the partnership was mentioned anywhere in the institution's domain (not just the online learning homepage).

We searched for the for-profit company name within the entire web domain of the institution. Specifically, on Google.com, we conducted a search of the form: site: [institutional domain] "[name of for-profit company]."³ Any mentions were coded for their level of transparency. This analysis produced 5 categories of invisibility, ranging from no mention of the partnership anywhere on the institution's domain (22%) to an explicit mention painting a transparent picture on the online learning homepage (3%). The full analysis is presented in the results.

³ Note that, if the partnership corresponded to an entire system of universities, we searched within the domain of the system (e.g., utsystem.edu).

Finally, we coded two additional features that directly relate to problematic processes discussed in greater detail in the results. Contracts that included renewals or amendments for new or substantially expanded services beyond those in the initial contract were coded as demonstrating expansion. Twenty-two percent of contracts demonstrated expansion. Third-party providers can also hold universities captive. We coded a contract as demonstrating captivity when it contained stipulations for auto-renewal or was indefinite. Thirty-eight percent of contracts met these criteria.

Qualitative Analysis

Because of the sheer length of contracts and the frequency of blocked searchability functions, we did not load them into qualitative data analysis software. While we often used search and find features (when available) to locate quantitative data points, we read through full documents to understand the context of language and changes within agreements over time. Reading contracts became easier once we came to understand the formulaic nature of some. For example, there is typically a “Term” definition at the beginning of the agreement that provides information on the length of the contract. However, not all contracts followed a typical structure.

In addition, the FOIA process can produce a wide array of documents. Some schools sent every draft, communication, amendment, assessment of possible options, and price sheet in their files related to the third-party provider or selecting a third-party provider. In contrast, a smaller subset of contracts included only a price sheet or included redacted segments that made revenue share or contract amounts invisible. Others included unexpected items, such as unfiltered emails between university officials about third-party contracts and how to evade unfavorable contract terms, complaints by faculty members about previous or current third-party providers, and exact copy of advertisements that were to be run by a third-party firm.

We took copious notes on each contract, initially relating to the quantitative codes presented above. Authors selected illustrative examples of the codes and compiled them into documents to be shared with team members. During weekly team and one-on-one meetings, we discussed the examples (which, in several cases, generated new ideas for quantitative coding). In our meetings, we connected the illustrations to larger predatory processes that may disadvantage marginalized student groups and/or universities that contract with third party-providers. Our conversations coalesced around five main processes: targeting marginalized students and revenue extraction (as features of predatory inclusion), privatization by obfuscation, for-profit creep, and university captivity. Then we returned to reading (and re-reading) contracts to highlight mechanisms through which these processes were occurring. The results are structured around the five main processes and the mechanisms we identified. For each mechanism, we offer examples from the contracts.

Private Equity and Venture Capital Analysis

In a final set of analyses, we determine if third-party financing is associated with quantitative measures that reflect the five main predatory processes detailed in the results. Given the small number of contracts and some similarities between private equity and venture capital financing, we use a single indicator of whether the third-party provider is or has been financed by private equity or venture capital.

We estimated linear probability models to determine if PE/VC funded third-party company contracts are more likely to include: a) recruitment (related to targeting of marginalized students), b) a revenue share structure (related to revenue extraction), c) invisibility (related to privatization by obfuscation), d) expansion (related to for-profit creep), and e) captivity (related to university captivity). Models for

recruitment and invisibility only included non-LMS contracts, as these items were not assessed of LMS contracts. Models for payment structure and expansion include a control for whether the third-party provider is an LMS, as LMS contracts have very different pay structures and are less likely than OPMs to expand the type of services over time. The captivity measure that we included (auto-renew or indefinite contract) operates the same across contract types; an LMS control is not significant and reduces model fit, thus this control is not included. We present our PE/VC analyses throughout the results below.

RESULTS

In what follows, we highlight five problematic processes that define public university relationships with third-party providers, most of whom are OPMs. We rely on content analysis of contracts with third-party providers, as well as university websites, to break down the specific mechanisms that lead these partnerships to exhibit the targeting of marginalized students, revenue extraction, privatization by obfuscation, for-profit creep, and university captivity. Table 2 provides an overview of the mechanisms underlying each of these predatory processes. For each process, we also determine the degree to which a private equity/venture capital financing structure is associated with greater incidence of a problematic feature.

Table 2. Predatory Mechanisms in Third-Party Partnerships with Public Universities

Targeting Marginalized Students	Revenue Extraction	Privatization by Obfuscation	For-Profit Creep	University Captivity
-Using targeted advertisements	-Revenue share pricing structure	-Failing to provide a transparent picture of the partnership on the web	-Allowing OPMs to identify new monetization opportunities	-Creating contracts that auto-renew or are indefinite
-Offering aggressive recruitment services	-Allowing for-profit providers to play a role in setting cost	-Utilizing the university web domain	-Contracting with multiple for-profit providers	-Requiring notification of intent to terminate 6 or more months in advance
-Targeting students who do not qualify for in-person admission	-Building in annual increases	-Limiting the brand visibility of the for-profit partner	-Expanding involvement with a for-profit provider over time	-Assigning university costs for early termination
	-Including aggressive growth plans	-Allowing OPMs to market and recruit on behalf of universities		-Erecting barriers to transitioning from a for-profit provider
	-Setting university marketing requirements			-Allowing for-profit providers to influence other contracts
	-Specifying additional fees for students			

Targeting Marginalized Students

As noted earlier, 29% of third-party contracts involve recruitment. In these cases, OPMs are hired to target and recruit students for the university’s online programs—utilizing the incentive compensation ban. As Table 3 suggests, contracts with providers that are financed by private equity or venture capital are 30 percentage points more likely to include recruitment ($\beta = .30, p < .001$). This is not surprising: the inclusion

of recruitment in a contract allows OPMs to aggressively grow programs in ways that increase shareholder profit.

Table 3. Relationship between Third-Party Financing Structure and Partnership Features

	Recruits	Revenue Share	Charges per Head	Charges per Service	Invisibility	Expansion	Captivity
PE/VC	.30*** (.08)	.50*** (.06)	-.17* (.07)	-.33*** (.07)	-.07 (.09)	.16** (.06)	.13+ (.07)
LMS	--- ^a	-.62*** (.05)	-.12** (.04)	.74*** (.05)	--- ^a	-.12* (.06)	--- ^b
Constant	.22*** (.06)	.16*** (.05)	.32*** (.06)	.52*** (.07)	.28*** (.08)	.13** (.05)	.29*** (.06)
Observations	157	224	224	224	131	226	225

Notes: Point estimates represent linear probability coefficients. Standard errors are in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
^a LMS contracts were not assessed for this feature. ^b LMS is not significant when included in the model and reduces model fit.

Recruitment efforts frequently target economically and racially marginalized students. For example, the 30-year agreement between Purdue Global and private-equity-backed Kaplan states that the intent of the contract is to “create a new U.S. degree-granting online institution designed specifically to serve non-traditional students” and to “expand access to higher education for adult learner and other nontraditional students.” Zovio’s website, describing the University of Arizona-Ashford conversion, similarly notes that the partnership “will focus on serving underrepresented and non-traditional students.” Other contracts use similar terms—e.g., “non-traditional,” “working adult,” and “diverse populations.”

As the National Center for Education Statistics (2021) states, non-traditional learners are defined by the following: delaying enrollment in higher education by a year or more and/or attending part-time; financial and family statuses associated with heavy responsibilities—such as being a single parent, working full-time, and financial independence from parents; and not having a standard high school diploma but rather some type of certificate of completion, like a GED. Students who are considered non-traditional according to these criteria are more likely to be women, belong to a racial-ethnic minority group, have parents with lower levels of education than traditional students, and struggle with completion.

Non-traditional students increase the pool of students on which these programs draw and may provide access to students who would not attend otherwise. However, heavy recruitment in online programs occurs separate from public universities’ more established in-person programs. That is, non-traditional students are particularly targeted for online enrollment.

Contracts reveal three mechanisms through which OPMs actively seek to recruit non-traditional students. First, companies *use targeted ads*. To provide an illustration, the University of Massachusetts Online contract with Get.Educated.Com, an advertising site that misleadingly touts itself as “America’s First Free Online Counseling Center,” included the following advertisement copy:

Since 1971, thousands of adults living throughout the U.S. and internationally have been awarded bachelor’s degrees through the University Without Walls (UWW). UMass UWW is an academic major

at the University of Massachusetts Amherst designed to help adults just like you to complete your first bachelor's degree at a world-class public university. At UWW, you can:

- Design your own program of study
- Take 100% online, blended, or on-campus courses that fit into your busy life and
- Earn up to 100 credits for your prior learning and experience

We understand the real-life challenges faced by adult students and are committed to providing you with outstanding one-on-one support and guidance from your first class through degree completion. You are not alone, we will be here to help, every step of the way. You deserve a degree completion program that respects your experience, supports you and your dreams, challenges you intellectually, and leads to a degree you can be proud of. You deserve UMass UWW.

This advertisement simultaneously works to convince non-traditional students that UMass UWW is legitimate, compatible with work and family demands, and offers individualized support—while tapping into individuals' desire for status and mobility (Cottom 2017; 2020a). Other ads in the contract appear targeted to non-white adult learners, as they are peppered with words like “diversity,” “diverse,” “social justice,” “community,” and “urban populations.”

Beyond targeted ads, OPM companies *offer aggressive recruitment services* that identify, market, and seek to actively “convert” working adults into paying students. Thus, alongside its ad campaign, UMass also contracted Education Dynamics for “prospecting services.” The company website promises to “INCREASE ENROLLMENTS. REDUCE COSTS. ACHIEVE YOUR GOALS,” with an “exclusive focus on adult and non-traditional students,” using “highly targeted multi-channel marketing” [sic]. Channels include “DRTV [direct response TV advertising], SEO [search engine optimization], call center, paid search, display, e-mail, mobile, and social media.” Potential converts could thus be hit through multiple channels.

Recruitment strategies utilized by OPMs may replicate or even amplify existing disadvantages in the online student population. The University of Nebraska contract offers an example, with Thruline Marketing using detailed “current student data [including name, email, phone number, zip code, and program] for geography analysis and lookalike creation.” “Lookalike creation” leads marketing companies to target populations already disproportionately enrolled in online programs.

Even when an OPM is not a marketing firm, its recruitment apparatus can be extensive, especially in comparison to its infrastructure to support student success. The Southeastern Oklahoma State-Academic Partnerships contract offers an illustration. Academic Partnerships provides “Enrollment Specialist Representatives” (ESRs) who serve as the “primary point of contact for all prospective Students for the Online Programs.” ESRs staff and equip a call center, work as a team to contract potential students, provide a toll-free number and website, inform students about programs, refer them to financial aid for processing, provide application support (including informing applicants of application requirements, reminding them of upcoming registration deadlines, and reminding them to submit necessary paperwork). ESRs, somewhat tellingly, also provide whatever support services exist for existing students. Of the nine lines of contract text devoted to student support, most of the “supports” are linked to revenue collection (e.g., reminding students of registration and payment deadlines).

Contracts also appear to explicitly *target students who do not qualify for admission to in-person campuses*. For instance, the University of Texas at El Paso-Pearson contract notes that “UTEP agrees to provide Pearson with the following information for the purpose of promoting and marketing of the e-Learning

Programs: Prospective students who applied for admission to UTEP but were not admitted.” Universities can even sell contact information for students who did not qualify for their online program to for-profit providers, who will then recruit those students for other partner university programs with open admission or very low requirements. The University of California, Berkeley-2U contract includes \$4.2 million dollars in financial “compensation” to UC-Berkeley for such a provision: 2U can recruit students for lower-ranked partner school Southern Methodist University, if the students are those whom “UC Berkeley reasonably predict[s] are not otherwise academically qualified” or appear to “have disengaged with 2U” as is stated in the program criteria.

Revenue Extraction

Predatory inclusion requires not just the targeting of marginalized groups but also the extraction of revenue from marginalized populations. OPM contracts often include at least five different mechanisms that dramatically increase revenue production, especially for OPMs. The most extractive of these, as detailed earlier, is *revenue share pricing*.

The revenue share payment structure allows OPMs to charge a percentage of overall tuition and fees to the university. In our data, 35% of non-learning-management-system contracts included revenue share ranging from 20% to 94%. A revenue share structure ties profit for the OPM directly to the amount charged to students. The more that students are charged, the more OPMs profit. Additionally, revenue share is also linked to enrollment. The more students that are enrolled, the more revenue that the OPM collects.

As Table 3 indicates, contracts with PE/VC financed providers are fifty percentage points more likely to have a revenue share structure ($\beta = .50, p < .001$). Revenue share strongly incentivizes for-profit providers to charge as much as the market will bear, and to push universities to enroll as many students as possible, regardless of the university’s actual capacity to serve those students. In contrast, the second most extractive model, pricing per student or credit hour, ties the payment structure only to enrollment size. Finally, the least extractive financing structure, pricing per service, is linked to neither the amount charged or enrollment and is most common with LMS providers. Contracts with PE/VC financed providers are less likely to include these two, relatively less extractive, payment structures.

In addition, bundled contracts with OPMs frequently *allow for-profit providers to play a role in setting cost*. For instance, the Michigan State University-Bisk contract grants Bisk the ability to influence tuition rates. As the contract states, “MSU, with the recommendation of Bisk based on market analysis, shall determine the tuition rates and other academic fees for the Offering. Tuition rates and other academic fees will be subject to review by MSU, once again with a recommendation based on industry analysis from Bisk.” Similarly, the UCLA Extension-Trilogy contract states, “The optimal price point for the PROGRAM will be determined by mutual agreement. Any amendment to the optimal price point must be agreed to in writing.... The Parties agree to raise the price point if and to the extent that market factors permit.” These contracts walk a fine line: the 2011 Department of Education guidance assumes “independence of the third party... from the institution that provides the actual teaching and educational services.” Yet, these contracts protect the ability of for-profit providers to play an active role in setting prices. A similar issue occurs when contracts set minimum tuition rates.

Contracts may also *build in annual increases* for the same services. This is most common in learning management system (or LMS) contracts. The Mississippi Community Colleges-Blackboard contract, for example, specifies “no more than 10%” increases year after year. However, a 10% increase on a large sum

quickly becomes unaffordable. Indeed, the Mississippi Community Colleges-Blackboard contract goes from 51,000, starting in 1999, to over 3.5 million in 2012. Without clear accounting, we do not know if this cost escalation is due to increases in use of Blackboard, the 10% contract stipulation, or both. However, Mississippi Community Colleges eventually moves to Instructure, provider of Canvas. The Instructure contract includes a provision that the cost will “not increase[e] annually beyond five percent (5%)”—which likely aided the campus. Note, however, that five percent of 4.3 million is still substantial and greatly outpaces general inflation.

Aggressive enrollment growth plans in OPM contracts similarly work to extract greater revenue over time. For example, the Ocean County College-Pearson contract indicates that “the parties’ joint objective [is] to grow OCC’s online programs in accordance with the growth targets set forth in... this Agreement.” The proposed annual growth rates are between 13% and 25%. The Arizona State University-Pearson contract includes “annual key performance indicators... to be evaluated for each academic session,” including “ASU Online student growth of fifteen percent (15%) year-over-year, subject to [additional] specific enrollment goals set by the Governance Committee.” The “Governance Committee” has the authority to “forecast, target, and set new and returning enrollment goal numbers” for ASU Online—and it “consist[s] of an equal number of members representing each party.” Thus, Pearson has a strong say in enrollment goals.

Another way that OPMs can ensure aggressive growth is to *set university marketing requirements*. This was most common in ed2go contracts and also appeared in some Academic Partnership contracts. For instance, as the Montgomery Community College-ed2go contract indicates, “Partners shall promote Education to Go courses... As part of an effective marketing program, Partner should offer at least seventy-five percent (75%) of Education to Go’s course catalog for a minimum of eight (8) months (sections) each year. As such Partner should dedicate a minimum of ten to twenty (10-20%) per edition of Partner’s promotional catalog(s) to Education To Go courses.” If these criteria are not met, “Education To Go may terminate this Agreement.” These terms ensure that the university will continue to offer and advertise more ed2go courses.

Finally, contracts can *specify additional fees for students*. For instance, the Black Hawk College-ed2go contract postulates that “enrollees will incur an additional service charge when requesting the following services” and notes that the prices are “subject to change.” The services include “Study Time Extension” (\$75), “Replacement Course” (\$165), “Replacement Textbook” (Cost plus 15%), among others. Some of these fees—for instance, changing a course—are for services typically rendered by non-profit colleges for free. Additional fees, often paid directly by students to for-profit providers, allow OPMs to produce revenue without working through university pay structures.

Privatization by Obfuscation

As Cottom (2020a:443) notes, “When full privatization is not possible, obfuscation privatizes information by making it inaccessible in practice.” University relationships with third-party, often for-profit, providers are often deeply obscured. Students enrolled at non-profit universities may be unaware that third-party OPMs are providing their educational experiences. Indeed, as the ed2go account activation form in circulation during the early 2000’s stated: “EducationToGo courses will be delivered to your students as *if your organization were actually providing the courses*” (emphasis added).

We identified four mechanisms through which these deals obfuscate the role of for-profit companies in educational provision. First, as described in the methods section, we analyzed the visibility of partnerships with third-party providers on the webpages of participating institutions. We found that universities often

fail to provide a transparent picture of the partnership on their webpages. Table 4 provides a summary of our analyses. As noted earlier, around a quarter of partnerships are not listed anywhere within the institution's domain. In these cases, it is simply not possible for potential students to locate information about the partnership, even when scouring the web domain armed with the name of the OPM.

Table 5. Invisibility of OPMs on Websites of Partner Institutions

Level of Invisibility	Count	Percent
Category 1: Nowhere within the institution's domain is the partnership or a specific service provided by the private corporation mentioned	30	22%
Category 2: Somewhere within the institution's domain but not on its online learning homepage, a specific service provided by the private corporation is mentioned or the partnership is mentioned very vaguely, but the institution's domain does not contain a reasonably transparent picture of the extent of the partnership	9	7%
Category 3: The partnership is explicitly mentioned somewhere within the institution's domain, in a way that gives a reasonably transparent picture of the extent of the partnership, but the partnership is not mentioned on the online learning homepage ^a	92	67%
Category 4: On its online learning homepage, the institution mentions a specific service provided by the private corporation or mentions the partnership vaguely, but falls short of giving a reasonably transparent picture of the extent of the partnership	3	2%
Category 5: The institution explicitly mentions the partnership on the online program homepage, in a way that gives a reasonably transparent picture of the extent of the partnership	4	3%

Notes: 138 contracts that involved revenue share or per/student pricing or utilized third-party providers for recruitment, course development, or instructional provision were included in these analyses. LMS contracts were not coded for visibility.
^a Common examples of mentions in this category include: news releases by the institution; privacy policy statements that detail how the corporation will use students' data; and notes from meetings of administrators, board members, and/or faculty.

Two-thirds of webpages list the partnership explicitly somewhere in the institution's domain, in a way that is reasonably transparent, but the partnership is not mentioned on the online learning homepage. In most of these cases, finding information about the OPM requires knowing that there is a partnership in place and searching for the for-profit provider's name using the web page search engine function. This additional step is unlikely for the typical potential student.

For instance, from Eastern Michigan University's online education webpage, a search for "Academic Partnerships" leads to a story in the school newspaper, *EMU Today* (Larcom 2018). As the piece explains, the school faculty union filed a grievance asserting that the university had entered into the agreement "without appropriate input from the faculty in terms of curriculum development, personnel, and instruction." In another case, the University of Washington's contract with Noodle Partners is not visible on the online webpage, but a search on the web domain leads to a 2021 "Dean's Message" in which the Dean of the Information School argues that the online Master of Science in Information Management (MSIM) program is "fulfilling our mission as a public university and helping people in our state and region improve their professional prospects" while also "providing opportunities for historically minoritized populations." He notes that the university "worked behind the scenes with Noodle Partners, an education technology company, to help us operate it." (Note, 2021 tuition rates for the self-funded program range from \$33,228 for the 36 credit "Mid-Career Track" to \$59,995 for the 65 credit "Early-Career Track.") In

both instances, mentions of the third-party provider were buried in alternative streams of communication not designed for prospective student outreach.

In 9% of cases (categories two and five), it was possible to find the partnership on either the online homepage or the web domain—but not to ascertain a transparent picture of the partnership. For instance, the University of Michigan’s online homepage includes a bar near the top that states, “Michigan+: Free access to 4,000+ Coursera learning experiences for current U-M students, faculty, and staff,” which leads to a listing of free courses. However, the online *degrees* provided by the University Michigan Online are not free. The online Master of Public Health degree will cost a student between \$43,500-\$47,500. The online webpage does not clarify that the Coursera partnership extends to expensive self-funded degrees. Nor does the online webpage clarify key functions of the third-party OPM, notably its recruitment function. In some cases, such as the partnership between 2U and University of North Carolina at Chapel Hill, the webpage does not even make clear that the third-party OPM, rather than the university partner, develops the online courses.

We only found four cases, or 3% of the sample, in which the university explicitly mentioned the partnership on the online program homepage, in a way that was transparent and clear. For example, near the top of Truckee Community College’s online courses webpage, “EPIC Online Education Partners”—including ed2go—are introduced: “Take courses from some of the world’s best content experts through ed2go and ProTrain.” There is no ambiguity about who is providing the courses, and students are then directed to “view *their* entire course catalogues” (emphasis added).

Invisibility is a problematic feature that is not tied to private/equity financing structure, as is indicated in Table 3. For these analyses, we tried several coding schema, all with consistent results. The coefficient in the table reflects analyses for category 1—nowhere within the institution’s domain is the partnership or service provided by the third-party visible. There is no difference between contracts with PE/VC financed structures and other contracts in invisibility. This is not surprising, as the degree of third-party visibility in our analyses was overall so low. That is to say, partnerships with third-party providers, regardless of third-party financing, tend to be poorly advertised by universities. We suspect that this is because opacity may shield public universities and private providers from demands for transparency, access, and equity.

Outside of limited webpage visibility, contracts may specify that the for-profit provider will *utilize the university web domain*. This occurs primarily when the OPM is involved in central student services: recruitment, curriculum delivery, or student support. As a result, potential students cannot distinguish courses provided by the for-profit provider from those provided by the university via the web browser address. The University of Kansas-Everspring contract, for example, specifies that the “Institution shall provide and configure an appropriate Internet subdomain utilizing the Institution’s ‘.edu’ domain that may be used by Everspring to host, display and promote the Program(s) online.” The university is even contractually obligated to “provide Everspring’s applicable staff with Institution-branded email addresses for use by Everspring in connection with providing the Services for the Programs(s) hereunder.” Students, therefore, are unable to differentiate their email contact with Everspring employees from those with University of Kansas faculty and staff.

OPM contracts also reveal efforts to *limit the brand visibility of the for-profit partner*. For instance, the Louisiana State-Academic Partnerships contract indicates that the “Contractor will customize all marketing materials with the LSU ‘look and feel’ so that they blend into LSU’s existing brand identity.” Campuses often grant for-profit providers the ability to utilize university logos and trademarks for OPM provided courses. To provide an illustration, the Arizona State University-Pearson contract states: “ASU

hereby grants Pearson the right and license to reproduce, display and use the name, trade names, trademarks, service marks, logos, symbols and trade dress owned or licensable by ASU... to promote and market ASU Online and Managed Programs, to facilitate Student recruitment activities, and to support and service the Managed Programs,” (although this is subject to ASU review). Branding permissions such as these help to blur the line between for-profit and university services, as the university logo is attached to services that it does not provide.

Finally, contracts may *allow for-profit partners to market and recruit without revealing OPM involvement*. The Eastern Michigan University-Academic Partnerships contract (covered in the school newspaper) reveals a troubling clause: “University shall deliver to AP its branding and style guidelines to be used by AP in marketing and recruiting associated with the Online Programs and hereby grants the right to AP to use its intellectual property (including to represent the University in forming affiliate relationships and related promotions without necessarily referencing AP).” This clause suggests that Academic Partnerships personnel can act on behalf of Eastern Michigan in recruitment activities with prospective students, companies, or organizations, without revealing employment by the for-profit provider. This is a high level of obfuscation that conceals Academic Partnerships’ status as a for-profit provider.

For-Profit Creep

OPMs have been gradually creeping into spaces and services where monetized online platforms previously did not exist or play a large role. This process occurs as for-profit providers identify ever more services to provide, and public universities increase their dependence on these providers to produce compensatory revenue streams. Our data reveal three different mechanisms through which for-profit creep can occur.

We identified 22% of contracts in which a university *expanded involvement with an OPM provider over time*. Universities frequently offered new types of degrees or courses with the provider, or significantly expanded the scope of initial services with the provider. Expansion was typically visible in amendments to original contracts, and likely reflects efforts on the part of the for-profit provider to increase the profit collected from a university partner.

Contracts with private equity or venture capital financed providers are 16 percentage points more likely to demonstrate expanded involvement ($\beta = .16, p < .01$; see Table 3). To provide an illustration, the University of West Florida first contracted private-equity financed The Learning House to offer a 12-month bootcamp. A year later, a new contract with The Learning House included 16 new programs—three BA programs, and 13 new self-funded MA programs in fields like nursing, health sciences, lab sciences, computer sciences, educational leadership, and social work.

Expansion of this type can result in massive increases in revenue for OPMs, as well as for universities. For instance, as the Louisiana State-Academic Partnerships contract increased to accommodate more learners and programs, expected profit for Academic Partnerships (with a 50% revenue share) grew from an initial two million in 2012 to 24.8 million in 2017—a twelve-fold increase in just five years. Academic Partnerships is financed by private equity, and this financing structure may have intensified pressures to increase profits in contracts where universities were amenable to expansion. At the same time, Louisiana State was also likely financially motivated to increase its engagement with Academic Partnerships, as it took in roughly the same revenue. Expanded involvement with for-profit providers is thus often enticing to both OPMs and public universities.

Relative to OPM contracts, contracts with LMS providers are less likely to expand over time—but some display expansion when the provider adds new services and functionalities (typically at an additional cost). As an illustration, the Blackboard contract with Kentucky Community College system started in 2011. Beginning in 2013, more services were added, such as collaborative conferencing, expanded presence training (which appears to entail on-site training with Blackboard employees), and Wimba voice hosting (i.e., storage for audio recordings). Notably, Wimba Inc. was acquired by Blackboard in 2010, and reflects the ongoing consolidation of the market. Additional services play a key role in the exponential growth of the Blackboard contract, from \$100,000 annually to quarterly invoicing for between \$777,000 and 1.5 million dollars by 2016-2017. In 2016, emails between university and Blackboard officials refer to university “budget issues” surrounding continued use of Blackboard.

Another mechanism driving for-profit creep is *contracting with multiple for-profit providers*. This is not uncommon. Although the median number of providers per school in our data is one, the mean is 1.96 and the range is from 1 to 14. There are 43 universities with more than one contract. Contracting with multiple for-profit companies can mean that universities are potentially paying several for-profit providers to provide overlapping services and/or serve the same cohort of students. The potential for substantial revenue extraction from the university to a set of OPMs is thus quite high.

The University of North Dakota provides a useful example. In 2014, the school indefinitely contracted ed2go, with a 2-year contract addendum in 2018 that specified professional development graduate courses for teachers and school administrators. A 2016 three-year contract with the Professional Development Institute, a 2018 two-year contract with Public Consulting Group, a 2018 two-year contract with Digital Learning Tree, a 2018 two-year contract with Hoonuit, and a 2018 two-year contract with Virtual Education Software, Inc (VESi), were also for graduate-level teacher training. All of these contracts included pricing per head/course. During 2013-2018, the university entered contracts with a total of thirteen unique for-profit OPMs. It will take many years for the university to extract itself from contracts developed during this period.

The final mechanism relates to expansion in what services third-party providers offer to universities. Our analyses reveal that OPM providers routinely *identify new opportunities for monetization*. The OPM field continuously evolves, as new providers come online or existing providers pivot to extract new, previously untapped sources of revenue. For instance, Emporia State University contracted with Instructional Connections for online academic coaching. The Instructional Connections webpage indicates that the company “Improve(s) Online Education with an Online Academic Coach.” Online academic coaches are the equivalent of online Teaching Assistants (or TAs)—a relatively novel OPM service in a sector focused primarily on providing platforms, technical assistance, content, and course instructors. In many academic fields, TA positions have traditionally been filled by graduate students working closely with faculty. Instructional Connections’ model outsources graduate student labor.

The pandemic has also opened new possibilities for OPM expansion. When global travel came to a halt, CAPA, a for-profit provider known for its study and internship abroad programs, began offering online programs for the first time—even though online travel does not approximate travel in person. In 2020, Michigan State contracted CAPA for a 6-week summer “global remote internship” program in which “each participant [was placed] in a non-paying internship [online] based in an international city” for a fee of \$1250 per student. CAPA’s pivot was likely an effort to capture revenue during a period in which typical services were severely constrained. The online internship, however, may remain beyond the pandemic if it continues to produce profit for CAPA.

University Captivity

The OPM and third-party provider field is relatively constrained. There are often only a few choices for certain services; for example, there are only a handful of LMS providers. Buyouts keep the field trim, so that there are a few providers that dominate in offering fully “bundled” services. As a result, companies may have market power to set the terms of engagement. Universities may accept unfavorable contract conditions designed to benefit the third-party provider and continue the partnership—even if university administrators and employees wish to terminate. Contracts reveal five mechanisms through which for-profit providers hold public universities captive.

Contract auto-renewal and the indefinite contract can increase captivity. As is visible in Table 3, contracts with third parties financed by PE/VC had a 13-percentage point greater probability of including auto-renewal or indefinite term clauses ($\beta=.13, p<.10$). These stipulations made it more difficult for universities to leave partnerships that were unfavorable to the university.

Auto-renewal is a common feature of Blackboard contracts, which dominated the LMS field for decades. To provide a typical example, as the University of Vermont-Blackboard contract reads: “Upon expiration of the initial License Term, the License may be renewed thereafter for successive terms.... Unless otherwise agreed in writing by the parties, the term of each License renewal shall begin immediately as of the expiration of the prior license term.” This Blackboard contract, and many others, has the potential to infinitely auto-renew on a yearly basis.

OPM providers utilize a similar tactic. The University of Nebraska-iDesignEdu contract, for example, auto-renews for successive 7-year periods. With the Ohio University-Pearson contract, auto-renewal starts another 10-year term. OPM providers Pearson, ed2go, and Coursera, also frequently include indefinite terms. For instance, as the University of Florida-Coursera contract indicates, “This Agreement will commence on the Effective Date and will continue in effect until terminated.” Auto-renewals and indefinite contracts may prolong partnerships that would otherwise phase out at the end of a term. They tend not to save costs in the long-term, as these clauses are often coupled with annual increases, as discussed earlier.

An additional impediment to termination is the *requirement to notify intent to terminate far in advance*. The Century Foundation (Dudley et al. 2021) indicates that six months or more notice required is “very risky” and indicative of captivity. Yet, Trilogy Education Services contracts, for instance, routinely include a 6-month advance notice by the university. Providers appear to set variable requirements for termination, seemingly dependent on negotiations with university officials. Thus, the Boise State University-Academic Partnerships contract specifies a 9-month (specifically, 270 day) notice, while the SUNY Binghamton contract with the same provider requires 12-month advance notice, and the Louisiana State Contract with AP only requires 30-days’ notice.

Contracts tend to layer on impediments; thus, not only does the Boise State University-Academic Partnerships contract require substantial advance notice, it also auto-renews for successive three-year periods and includes substantial *costs associated with termination*. The school is required to continue paying for students actively utilizing AP courses after cancellation. In addition, if the university terminates the contract early, it is prohibited from “contract[ing] with another service company for similar services for Programs covered by this agreement before the natural termination date of this agreement (5 years after the Effective Date).” Academic Partnerships has no such constraint. The company can turn around

and offer those same courses to Boise State University's competitors who may be interested in offering similar degrees.

The Boise State-AP contract thus also highlights *barriers in transitioning to a new service* that may keep universities in contracts, even with escalating costs. This is also a common issue with LMS contracts. Providers routinely require long standing customers to upgrade to new software (at a new rate and/or with a one-time fee) and may include substantial annual increases that universities must accept—or else risk losing service.

To provide an illustration, Central New Mexico Community College had been using Blackboard for five years to host over 650 distance learning courses. In 2012, the campus needed to add the Blackboard Hosting and Learn Academic Suite for Collaboration to continue using Blackboard. The school opted to do so at a significant cost because “CNM has significant financial and human resources invested in the Blackboard Learning Management System.... To replace the Blackboard system would result in a severe disruption of CNM's delivery of quality education both in the classroom and for our distance learning courses.” The university estimated that the need for “faculty and students to retool and relearn an LMS” would “cause[e] unnecessary chaos and confusion.” The estimated time for the transition “based on experience of other... institutions... [was] two years” and the estimated cost of reconstructing the distance learning courses on a new LMS was estimated at “more than two million dollars.” As a result, campus leadership chose to update their Blackboard license for around \$400,000 annually.

LMS providers can even actively make transitioning to a new provider difficult. Documents submitted by New Mexico Highlands University include conversations with other universities about leaving Blackboard. As Louisiana State University shared with Highlands leadership, “Conversions have gotten significantly more difficult with later versions, as Blackboard tries to lock down their courses. We wrote a converter to handle our move, but it does not work with [Blackboard] in its current state.” LSU reported working with the University of Minnesota (who was switching to Moodle) to write code that could circumvent some of these problems. LMS providers typically have no interest in ensuring smooth transition to other learning management systems—leading at least some campuses to stick with systems that users find problematic for longer than they might have otherwise.

Third-party providers can also *influence contracts with other providers*. For instance, buried in the 446 pages of the material obtained on the University of Texas-Blackboard contract is an email about a new contract with Embanet (eventually acquired by Pearson). The email notes that “there was supposed to be an amendment 2 [to the Embanet contract] but we would not agree to the terms that Blackboard wanted so amendment 2 never happened. This gets very confusing.” As this email reveals, the university ran the Embanet contract by Blackboard and ultimately had to scrap an amendment (potentially a new program or service) because the university and/or Embanet could not meet Blackboard's demands. The university was thus constrained by Blackboard's interests.

Similarly, OPM contracts may specify a “right of first refusal,” that gives for-profit providers a substantial say in university relationships with other OPMs. For example, the Purdue-Deltak (acquired by Wiley) contract has an “Exclusivity/ Right of First Refusal” section stating that “Purdue agrees that it shall not launch any programs that compete, in scope or target audience, with the Programs developed under this Agreement.” If “market conditions change” the contract indicates that it might “be necessary or desirable to change or add to the Programs,” but this can only occur with “mutual agreement between the Parties.” Occasionally, right of first refusal can even extend beyond a contract term, leaving universities hamstrung while providers form ties with new clients.

DISCUSSION

Our analyses of contracts between third-party providers and two-year and four-year public universities reveals relationships that are often hidden and obscured. We focus specifically on five processes through which online program managers (or OPMs) and Learning Management System (LMS) companies may establish predatory partnerships with public universities and highlight specific mechanisms that lead to the targeting of marginalized students, extraction of revenue, privatization by obfuscation, for-profit creep, and university captivity.

We document the targeting of marginalized students by OPMs involved in marketing or direct recruitment. These providers use advertisements pointed at adult learners, low-income individuals, and racially marginalized communities. They employ aggressive recruitment services that may bombard individuals with phone calls, ads, and social media. OPMs explicitly target students who do not qualify for in-person admission. A generous read of these activities is that they are increasing access to public higher education for underrepresented students.

However, inclusion is predatory when “members of a marginalized group are provided with access to a good, service, or opportunity from which they have historically been excluded but under conditions that jeopardize the benefits of access” (Seamster and Charron-Chénier 2017: 199-200). Emerging research indicates that students who attend online are less likely to complete their degrees and more likely to struggle in paying back student loan debt (Smith et al. 2022; U.S. Senate Committee on Health, Education, Labor and Pensions 2012; also see Hoxby 2018). Online education may thus jeopardize the potential benefits of postsecondary access.

We also highlight revenue extraction by providers. A revenue-share pricing structure, in which OPMs charge an often-hefty percentage of student tuition and fees, may encourage universities to boost the amount that students are charged for tuition and raise enrollment numbers. Contracts often allow third-party providers, whose primary goal is profit, to play a role in setting cost. It is not uncommon for contracts, especially with LMS providers, to build in annual increases that rapidly escalate the cost to the university. OPM contracts may include aggressive growth plans and marketing requirements that push universities to expand enrollment faster than the campus can support. Third-party providers can also build in hidden charges for online students that are not in place for the university’s in-person programs.

Opacity in the ways that third-party providers operate makes it difficult for students and their families to recognize that their education is being provided by for-profit companies—not a public university. This is an example of what Cottom (2020a) refers to as “privatization by obfuscation.” Our analysis of webpage visibility for OPMs providing core academic services revealed that only a handful of schools provide a clear and transparent picture of the relationship with a third-party provider on the university website, in a way that prospective students are unlikely to miss. Contracts can also allow third-party providers to utilize the university web domain and hide or modify the OPM brand to conform to university branding. In some cases, OPM employees are granted the ability to market and recruit on behalf of universities, without revealing that they are employees of a for-profit company.

We observed a process of for-profit creep, or the increased infiltration of for-profit providers into non-profit education. Over time, for-profit providers often expanded their contracted programs or the scope of their services with a given university. For instance, if a provider initially provided online undergraduate programs, they could branch out to self-pay online graduate degrees. Universities could also contract with multiple for-profit providers. Often this occurred quickly; once the university decided to work with one

OPM, they would contract with several. We also highlighted the role third-party providers play in expanding the menu of possible services to outsource; companies appear to seek new monetization opportunities to supplement other profit streams. The ever-increasing menu of options is likely to increase university engagement with these providers.

Finally, we highlighted mechanisms through which universities can be held captive in contracts with third-party providers. Contracts that auto-renew or are indefinite make it challenging for campuses to end a problematic partnership—particularly when other provisions are in place. For instance, contracts could require notification of intent to terminate far in advance and assign universities heavy costs for termination. In addition, LMS contracts often involve barriers to transitioning to another provider that keep universities with the provider, even as costs and complaints escalate. In some cases, third-party providers also have contractual rights to influence the university's potential contracts with other providers.

These five processes highlight the extractive nature of “platform capitalism” in the postsecondary sphere. As Cottom (2020a, 2020b) theorizes, digital platforms for financial exchange around daily activities—in this case schooling, but also employment, transportation, housing, and many other activities—are designed to produce profit for powerful companies, at the cost of marginalized individuals and communities. Because racially and economically marginalized students are more likely to attend college online than their more privileged peers, they are more likely to interface with extractive for-profit providers, even when enrolled at public universities (Protopsaltis and Baum 2019; Smith et al. 2022). OPMs thus illustrate how platform capitalism, financial capitalism, and racial capitalism are intertwined.

Financing Structure and Profit Production

Nowhere are the links between platform capitalism in higher education and financial capitalism clearer than in our analyses of private equity and venture capital investments in third-party providers of online services for universities. Of the 88 unique providers in our data, 60% have some private equity or venture capital financing. Most of the major players in the OPM field—for example, 2U, Academic Partnerships, All Campus, Bisk, ed2go, Kaplan, Keypath, and Zovio (Ashford/Bridgepoint)—as well as most leading LMS companies, including Blackboard, D2L, and Instructure (Canvas), are private equity or venture capital financed.

Recall that private equity and venture capital financing allow investors to directly invest in or purchase companies that they subsequently influence, by sitting on the board of the company and/or holding a controlling stake in the company. Companies financed by PE or VC may therefore be particularly oriented toward maximizing profit for investors. There are pressures to increase “shareholder value” for outside investors and pressures to boost profitability for firms hoping to capitalize on initial investments (Applebaum and Batt 2014; Eaton 2020, 2022; Fligstein 1993).

These pressures may play a role in leading third-party providers to include problematic features in their contracts with public university partners. Specifically, quantitative analyses indicate that contracts with PE/VC-financed providers are more likely to stipulate a revenue-share payment structure that, as noted above, incentivizes increasing tuition cost and enrollment growth. Although third-party providers often take a substantial—and even majority—cut, it may take little convincing to nudge universities toward actions that bring in more revenue. This partial alignment of financial interests can eclipse other interests held by public universities, such as keeping student costs low and the quality of the educational experience high.

Additionally, contracts with PE/VC financed providers are more likely to involve recruitment. Most of these contracts are with full-service OPMs who offer course development and/or instruction. Including recruitment in a “bundled” service contract gives the OPM substantial control over enrollment and the ability to target marginalized populations. Outsourcing recruitment to a third-party provider should be a violation of the incentive compensation ban, but the 2011 loophole created by the Department of Education currently allows third-party providers to include recruitment, among other services.

Our data also indicate that PE/VC financed companies are more likely to display expansion, whereby the initial contract includes an increase in services over time. Expansion increases the profit to a third-party provider—the more services for which they can be contracted, the greater the revenue. Financial pressures to engage a university partner in a more extensive contract are an important driver of for-profit creep in non-profit universities. For-profit creep has structural implications: As engagement with for-profit providers grows, public universities may become less likely to build the infrastructure required to provide these services internally, creating greater reliance on third-party providers.

Contracts with companies financed by PE or VC more frequently include auto-renew stipulations or are indefinite—keeping universities captive. Contracts that display captivity are difficult for universities to escape, ensuring that for-profit providers continue to collect revenue for longer than they might have otherwise. Finally, we assess invisibility by examining online content for university OPM-driven programs. This is the only problematic feature for which a PE/VC financing structure did not differentiate contracts—as virtually all third-party partnerships were invisible to a casual browser.

The degree to which private equity and venture capital are embedded in online education reflects an ongoing “financialization” of higher education (Fligstein 1993; Eaton 2016 et al.). Companies with this financing structure help to normalize the notion that profit-seeking should be central to the postsecondary endeavor—even in public institutions. This logic is directly at odds with some of the founding principles of public higher education, including social equity and the provision of educational opportunity for those who seek it (Douglass 2007). The effectiveness of social institutions designed for the public good may be negatively impacted by the financial logics of financial markets (Hacker 2002; Young and Chen 2020).

Policy Implications

Our findings have policy implications for action by public universities, accreditors, and the federal government. First, we provide clear evidence of contract stipulations that university officials should avoid in forming new partnerships with third-party providers. Our data reveal that providers will modify terms for universities. Stipulations that university officials crossed out, modified, or marked as non-negotiable were typically addressed in the final versions of contracts. Third-party providers seem to bank on the fact that many schools will simply accept the proposed terms. However, there is room to negotiate.

In addition, there are steps that universities can take to limit their dependence on for-profit third-party providers. A small number of contracts with non-profit providers obtained via the FOIA process provide illustrations. For instance, universities can avoid for-profit OPMs that develop basic content by searching for non-profit (and often wildly more affordable) options. Washington State University and Victoria College both have contracts with the Monterey Institute for Technology and Education (MITE). MITE is a non-profit corporation founded in 2003 that developed a National Repository of Online Courses (or NROC), with philanthropic support. For a small annual institutional membership fee, universities are granted access to all online learning materials in the repository. The NROC project is geared toward

content that supports college-readiness—the kind of content that is often part of a “remedial” sequence for college entrants.

Universities may also improve their bargaining power with providers that tend to ratchet up price by working as a collective unit. Our data included three contracts with Unizin (Indiana University, Miami University of Ohio, and The Ohio State University). Unizin is a member-based non-profit organization that supports universities in the areas of digital content, learning analytics, and community-initiated innovations. There is potential for a group like Unizin to keep the worst excesses of for-profit provider contracts in check, by using large university membership as leverage in negotiating terms with third-party providers.

Some universities are bypassing external providers entirely. The North Carolina state college system, for example, will use \$97 million dollars to build its own non-profit online program management operation. The goal is to “avoid the expense of the profit-driven OPM model for building online education programs,” while also leveraging in-house knowledge of how to provide a high-quality college education (Newton 2021). This approach may be costly in the short-term, but in the long-term it will likely save the system substantial amounts of money, as North Carolina public colleges will not be handing over 50% or more of the revenue from online education to investor-owned companies pursuing profit. Revenue produced by online education may thus be re-invested in improving the quality of the state’s programs.

Accreditors also have a role to play in regulating for-profit companies in non-profit spaces (Hill 2019). For-profit conversions to non-profit OPM’s must be approved by regional accrediting agencies that should be taking a much closer look at the legal histories and student outcomes of the for-profit universities in question. Recently, a California court’s \$22.4 million dollar judgement against Zovio, the for-profit OPM involved in the University of Arizona-Ashford deal, underscores the importance of accreditor scrutiny. Zovio was found to have “violated the law by giving students false or misleading information about career outcomes, cost and financial aid, pace of degree programs, and transfer credits, in order to entice them to enroll at Ashford” (Halperin 2022).

However, with the sale of Ashford, the University of Arizona agreed that Zovio would be paid to operate central aspects of University of Arizona Online, including recruitment, until June 2036. Accreditors also need to better examine typical OPM, and even LMS, contracts. Only one agency, the Northwest Commission on Colleges and Universities (NWCCU) has a policy that requires additional review of third-party contracts with OPMs; this was the result of the closure of NWCCU-accredited Concordia University, a private university in Oregon, triggered partly by a financially problematic relationship with an OPM.

One of the most central, and easily remedied, policy changes would be ending the “bundling loophole” that allows OPMs to be involved in and profit from recruitment. The Department of Education could enforce the Higher Education ban on incentive compensation to contractors by rescinding the “bundling loophole” that allowed universities receiving federal aid to hire OPMs and financially reward them for recruitment. This could be swiftly accomplished by Department of Education leadership, without action in Congress (Shireman 2019). The Department of Education could also ban the use of revenue share agreements that build in problematic incentives for third-party providers to pressure universities on tuition costs and enrollment growth, even if the provider is not directly involved in recruitment.

Universities receiving federal loans should also be required to publicly disclose who runs their online programs, in a way that is visible to the typical prospective student (Hall 2019). The intentional invisibility of OPM partnerships currently protects OPMs from scrutiny and legal oversight, to the extent that former

for-profit colleges converting to OPMs, like Kaplan, treat non-profit status as a legal shield. Purdue's Global's status as a non-profit public university was a condition of partnership—and fears over the financial and legal repercussion of the loss of such status pepper Kaplan's annual reports. Students, families, and policy makers need to know when a public university program is, in reality, for-profit. This information should be front and center on the university's online homepage.

Our findings may be surprising to readers who have spent their entire careers in academia, especially in public universities. The movement of for-profit third-party providers into public institutions is part of an ongoing shift of services typically managed by state and university actors to private entities (Hamilton and Nielsen 2022). This shift is happening at a rapid clip in online spaces, which are less visible to faculty and administrators involved in the in-person operations of the university. However, the outsourcing of central university services to private companies is already occurring, for everything from grounds maintenance, to dining, bookstore operations, building design and construction, custodial services, IT, academic grading, curricular design and assessment, instruction, organizational management, and more (Connell 2019; Edwards, Crosling, and Edwards 2010; Wekullo 2017). We urge states and university leadership to proceed with caution.

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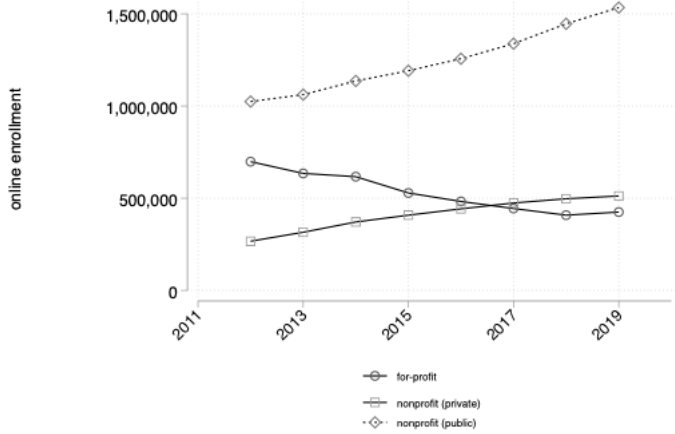
Appendix A: Universities and Third-Party Providers

American Distance Education Consortium (ADEC) Apollidon	Florida State University Keypath	Miami University of Ohio Iparadigmns, Kaltura, Proctorio, Unizin	Ohio University Pearson/ EmbanetCompass	University of California San Diego Extension Trilogy	University of Southern Mississippi Blackboard
Alabama State University Kaplan	Framingham State University Blackboard	Michigan State University Bisk, Capa, Connect123, Coursera, D2L, Virtual Internship Partners Limited	Ozarks Technical Community College Instructure	University of Central Florida Guild	University of Texas Academic Partnerships, Alivetek, Big Tomorrow, Blackboard, BrightLeaf Group, Classmate/MathHelp, Council for Aid to Education, Elephant Productions, Enspire
Albany State University The Learning House	Georgia College and State University Ed2Go	Michigan Technological University Instructure	Pasadena City College Smart Sparrow	University of Cincinnati Academic Partnerships, Compass Knowledge-Pearson	University of Texas at Austin Trilogy
Arizona State University Coursera, Pearson	Grand Rapids Community College Blackboard, Ed2Go	Minnesota State Colleges and Universities D2L	Pennsylvania State System of Higher Education D2L	University of Connecticut Alivetek, Everfi, Saba, Trilogy	University of Texas at San Antonio Trilogy
Auburn University Everspring	Highland Community College Ed2Go	Mississippi Community Colleges Blackboard, D2L, Instructure	Purdue University All Campus	University of Florida 352, All Campus, Apollidon, Bisk, Continuing Education Network, Coursera, New Horizons, Pearson/ EmbanetCompass /Intelicus, Wiley/Deltak	University of Texas El Paso Pearson
Ball State University Blackboard	Idaho State Board of Education Blackboard	Missouri University of Science and Technology Internet2	Purdue University Kaplan, The College Network, Wiley/Deltak	University of Idaho Blackboard, NetLearning	University of Vermont Bisk, Blackboard, Ed2Go
Black Hawk College Ed2Go, Edmentum, Instructure, McGraw-Hill Education, Pearson, RedShelf, Tutor.com	Indiana University Unizin	Montana State University Blackboard	Rutgers University Blackboard, Instructure, Pearson	University of Illinois Blackboard, Coursera, Pearson/ EmbanetCompass	University of Virginia Noodle Partners
Blue Mountain Community College Blackboard, Instructure, TPC Training Systems	Institute for American Indian Arts Blackboard	Montana University System D2L	Sam Houston State Blackboard	University of Kansas Blackboard, Everspring, Trilogy	University of Washington Noodle Partners
Boise State University Academic Partnerships, Harvard Business School HBX, Instructional Connections	Iowa State University Instructure cloud	Montgomery County Community College Ed2Go	San Juan College AHIMA Vlab, Evaluation KIT (by Watermark LLC)	University of Mary Washington Instructure	University of West Florida Academic Partnerships, Instructional Connections, The Learning House
Central New Mexico Community College Blackboard	Jacksonville State University Blackboard, Instructure	Nevada System of Higher Education Pearson	Southeastern Oklahoma State University Academic Partnerships	University of Massachusetts Avenue100/ Digital Media Solutions, Education Dynamics, GetEducated.com, HigherEducation.com, Pearson/ EmbanetCompass	University of Wisconsin Trilogy

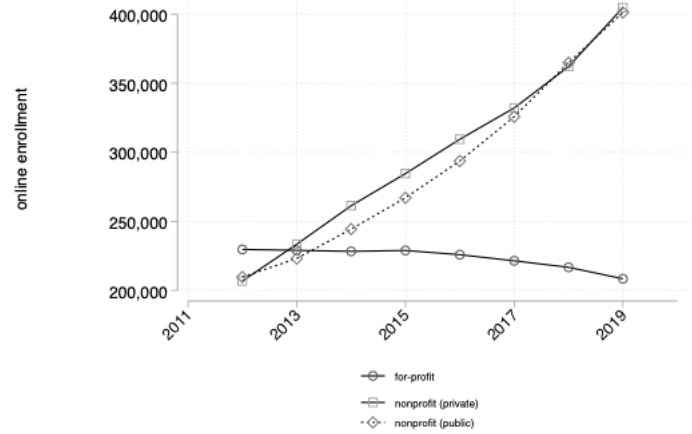
Central Texas College Blackboard	Johnson County Community College Instructure	New Jersey Institute of Technology Pearson	Southern Illinois University Carbondale Career Step, Ed2Go, JER Group	University of Michigan Coursera, Noodle Partners	University of Wyoming Wiley
Chadron State College Longsight	Kent State University Everspring	New Mexico Higher Education Department Blackboard	SUNY Binghamton Academic partnerships	University of Montana Moodle, Wiley, Zoom	Victoria College Ed2Go, Instructure, Monterey Institute of Technology
Cleveland State University Blackboard	Kentucky Community and Technical College System Blackboard, Cengage, Civitas, Pearson	New Mexico Highlands University Aspect Consulting, D2L	Texas A&M Blackboard, iLawVentures, Instructure	University of Nebraska iDesignEDU, Inside Track, Ranku, Thruline	Washington State Board for Community and Technical Colleges Blackboard, Instructure
Cochise College Ed2Go	Lamar University Academic Partnerships	New Mexico Junior College Instructure	Truckee Meadows Community College Ed2go	University of Nevada Reno Pearson/ EmbanetCompass	Washington State University Angel Learning/ Blackboard, Blackboard, Monterey Institute of Technology, Pearson/ EmbanetCompass
College System of Tennessee Coursera, D2L	Los Angeles Community College District Ed2Go	New Mexico Military Institute Instructure	University of Alabama Blackboard	University of North Carolina at Chapel Hill 2U, Coursera, Time	West Virginia University Coursera
Dakota State University D2L	Louisiana State University System Academic Partnerships	New Mexico State University Blackboard, Centra, Instructure	University of Arizona All Campus, Ashford (Bridgepoint Education, Zovio), Coursera, D2L	University of North Carolina Wilmington Academic Partnerships	Western New Mexico University Blackboard
Eastern Kentucky University Blackboard, Learning Objects, Pearson/ EmbanetCompass, Smarthinking	Louisiana State University Shreveport Academic Partnerships	North Carolina Community Colleges Remote Learner	University of California Berkeley 2U	University of North Dakota Career Step, Continuing Education Associates, Digital Learning Tree, Ed2Go, Exeter Education, Hoonuit, Kaplan, Kimberly Williams, Pearson, Professional Development Institute, Protrain, Public Consulting Group, The CE Shop, Virtual Education Software, Inc (VESi)	Wichita State University Blackboard
Eastern Michigan University Academic Partnerships, Instructure	Luna Community College Blackboard	Northern Illinois University Blackboard	University of California Davis Instructure, Internet2	University of North Texas Blackboard	Youngstown State University Academic Partnerships
Eastern New Mexico University Blackboard	Marshall University Blackboard	Ocean County College Pearson	University of California Los Angeles Extension Instructure, Trilogy Education Services	University of Rhode Island Academic Partnerships	
Emporia State University Academic Partnerships, Instructional Connections	Mesalands Community College MindEdge	The Ohio State University Trilogy, Proctorio, Unizin	University of California Riverside Trilogy	University of South Alabama Longsight	

Appendix B. Number of IPEDS-Recorded Students Enrolled Exclusively in Online Education at Two-Year and Four-Year Institutions by Level, 2012-2019

Panel 1. Undergraduate Online Enrollment



Panel 2. Graduate Online Enrollment



Appendix C. Third-Party Providers and Private Equity/Venture Capital Financing

Provider	Earliest Date	Initial PE/VC Investor ^a	Investors/Lead Investors ^{a,b}	IPO
Private Equity (N=29)				
2U	2009	City Light Capital, Redpoint	Bessemer Venture Partners, City Light Capital, Highland Capital Partners, Hillman Ventures	2014
Academic Partnerships	2011	Insight Partners	Insight Partners	---
All Campus	2012	Noson Lawen Partners	Noson Lawen Partners	---
Angel Learning/ Blackboard	2009	Bonsol Capital	BancBoston Ventures, Chase Capital Partners, @Ventures	---
Ashford (Bridgepoint Education, Zovio)	2003	Warburg Pincus (Bridgepoint)	Warburg Pincus	2009 (Zovio)
Avenue100/ Digital Media Solutions	2018	Clairvest Group	Clairvest Group	2020 (Digital Media Solutions)
Blackboard/ Anthology	1999	Bonsol Capital	BancBoston Ventures, Chase Capital Partners, @Ventures	2004
CAPA: The Global Education Network	2021	Infinedi	Infinedi	---
Career Step	2009	DW Healthcare Partners, Five Points Capital	DW Healthcare Partners, Five Points Capital, Norwest Mezzanine Partners	---
Cengage Group	2007	Apax Partners	Apax Partners	---
Ed2Go (Cengage)	1995	Apax Partners	Apax Partners	---
Edmentum	2010	HarbourVest Partners, Thoma Bravo	Vistria Group	---
EducationDynamics	2007	Halyard Capital	Renovus Capital Partners	---
Evaluation KIT/ Watermark Insights	2018	Exceed Capital Partners, TCV, Quad Partners	Exceed Capital Partners, TCV, Quad Partners	---
EverFi (Vector Solutions)	2010	Greenspring Associates, New Enterprise Associates, Tomorrow Ventures	LLR Partners	---
Exeter Education/ Woz-U (Southern Careers Institute)	2009	Endeavour Capital	Endeavour Capital	---
HigherEducation.com	2008	ABRY Partners	ABRY Partners, Red Ventures, Vistria Group	---
Hoonuit (PowerSchool)	2020	Group One, Snider Capital, Warburg Pincus	Group One, Snider Capital, Warburg Pincus,	2021
iLawVentures (Barbri Bar Review)	2017	Francisco Partners	Francisco Partners	---
Instructure	2010	Epic Ventures	Thoma Bravo	2021
Kaplan	1998	Investech, Sprout Capital (financed Quest which Kaplan acquired to enter the market)	Investech, Sprout Capital (financed Quest which Kaplan acquired to enter the market)	2011

Keypath	2006	Arlington Capital Partners	Arlington Capital Partners, Sterling Partners	---
Learning Objects (Cengage)	2015	Apax Partners	Apax Partners	---
McGraw-Hill Education	2012	Apollo Global Management	Platnum Equity, Vector Capital	---
NetLearning	2012	Insight Partners	Insight Partners	---
Remote Learner (Learning Pool)	2020	The Carlyle Group	The Carlyle Group	---
The CE Shop	2020	Waud Capital Partners	Waud Capital Partners	---
The Learning House	2007	Evermore Investments	Acquired by John Wiley & Sons 2018	1978 (Wiley)
TPC Training	2018	Frontenac Company	Frontenac Company	---
Venture Capital (N=24)				
Apollidon	2011	Vocap Partners	Sopris Capital Associates, Vocap Partners,	---
Bisk Education/ Bisk Ventures	2015	Bisk Ventures	Bisk Ventures	---
Centra Software (Saba Software)	2006	Sequoia Capital	Berkeley International Capital Corporation, Crosslink Capital, HarbourVest Partners, Sequoia Capital	2000
Civitas Learning	2011	Austin Ventures, First Round Capital, Floodgate	Emergence, Rethink Education, Francisco Partners, Rethink Education, Warburg Pincus	---
Coursera	2012	Kleiner Perkins, New Enterprise Associates	EDBI, Global Secure Invest, GSV Asset Management, Kleiner Perkins, New Enterprise Associates, SEEK, The World Bank	2021
Desire2Learn or D2L	2012	OMERS Ventures, New Enterprise Associates	Government of Canada, New Enterprise Associates, OMERS Ventures	2021
EmbanetCompass (Pearson)	2007	TCV	Acquired by Pearson in 2012	1999 (Pearson)
Everspring	2011	Accretive	Accretive, Carrick Capital Partners	---
Guild Education	2015	1776 Ventures, Cowbody Ventures, Harrison Metal, Ulu Ventures	Bessemer Venture Partners, Felicis Ventures, General Catalyst, Harrison Metal, Redpoint	---
InsideTrack	2004	Baird Capital, Eldorado Ventures	Baird Capital, Eldorado Ventures	---
iParadigms	2014	Insight Partners, Georgian, GSV Ventures, Lead Edge Capital	Insight Partners	---
Kaltura	2007	Avalon Ventures	.406 Ventures, Avalon Ventures, Common Fund, Gera Venture Capital, GS Growth, Mitsui Global Investment, Nexus Venture Partners, NGP Capital, Sapphire	2021
MindEdge	2003	SNL Partners	SNL Partners	---
New Horizons	2005	Camden Partners	Camden Partners	---
Noodle Partners	2016	500 Startups, New Markets Venture Partners, Osage Venture Partners	BlackRock, Osage Venture Partners, Owel Ventures, ValueAct Capital	---

Ranku	2013	Archangel, Kaplan EdTech Accelerator, Microsoft Accelerator, Techstars	Acquired by John Wiley & Sons 2016	Wiley (1978)
RedShelf	2016	Coniston Capital	Coniston Capital, DNS Capital, National Association of College Stores	---
Saba	1998	Sequoia Capital	Crosslink Capital, Berkeley International Capital Corporation, HarbourVest Partners, Sequoia Capital	---
Smart Sparrow	2011	OneVentures, Uniseed Ventures, Yellow Brick Capital Advisors	Aquired by Pearson in 2020	2000
Smarthinking	2000	Bonsal Capital	Bonsal Capital	---
Trilogy	2017	City Light Capital, Highland Capital Partners, Rethink Education	Exceed Capital Partners, Highland Capital Partner, Macquarie Group	---
Tutor.com	1999	Garage Technology Ventures	Dawntreader Ventures, Garage Technology Ventures, Intel Capital, MMV Capital Partners, Scholastic, Sodexo Ventures	---
Virtual Internship Partners Ltd	2018	Surge	500 Global, Arc Impact Foundation, Hustle Fund, iSeed (India),Surge	---
Zoom	2011	Amino Capital, TSVC	ARK Investment Management, Emergence, Horizons Ventures, Sequoia Capital, Qualcomm Ventures,	2019

Notes: ^a Does not include individual investors. ^b Includes some non-PE/VC investors. Non PE/VC contracts (N=35) include: 352/ three five two, Alivetek, Aspect Consulting, Big Tomorrow, BrightLeaf Group, Classmate, Connect-123, Continuing Education Associates, Continuing Education Network, Digital Learning Tree, Elephant Productions, Enspire Studios/Enspire Learning, GetEducated.com, Harvard Business School HBX, iDesignEDU, Instructional Connections, Internet2, JER Online, John Wiley & Sons, Longsight, Moodle Pearson, Proctorio, Professional Development Institute, Protrain, Public Consulting Group, The College Network, ThruLine, Time, Virtual Education Software Inc., AHIMA Vlab, Council for Aid to Education, Kimberly Williams, Monterey Institute of Technology, Unizin