



NEW DIRECTIONS IN PRIVATE FINANCING



Prepared for the
NATIONAL COMMISSION ON FINANCING 21ST CENTURY HIGHER EDUCATION
By: Andrew P. Kelly, American Enterprise Institute



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LETTER FROM THE COMMISSIONERS

The University of Virginia Miller Center created the National Commission on Financing 21st Century Higher Education in 2014 to recommend policy and funding changes to help the nation attain the goal of 60 percent of the labor force with a postsecondary degree or certificate by 2025. This means that 62 million Americans must graduate with a postsecondary degree or credential between 2015 and 2025. At current rates, the United States will produce only 39 million such graduates, leaving a gap of 23 million—a shortfall of more than 2 million per year.

To meet the goal, the nation must maintain high school graduation and college entrance rates at or above 75 percent and 70 percent, respectively—reachable goals close to historical norms. The nation must also *increase* college graduation rates from 40 percent to 60 percent. Increasing the college graduation rate is inherently challenging but made even more so because of major demographic changes. Many of the upcoming college-aged individuals will be people of color or from low-income families, populations that traditionally have needed additional counseling, mentoring, academic support, and financial assistance to successfully enter into and complete higher education. How to increase access and graduation rates and thus equality for these two population groups is the major focus of the commission.

The need to address these issues is also urgent given that other nations are catching up to—and even surpassing—the United States in postsecondary degree- and credential-attainment rates. The United States ranked 13th relative to other Organization for Economic Cooperation and Development countries in 2014 in the percentage of 25- to 34-year-olds with higher education degrees or credentials. The cost of failure in attaining this goal—to the nation in terms of international leadership and to citizens in terms of job creation and income—is too high, and so action is required now.

To learn more about these issues, the commission engaged highly qualified experts to create 10 white papers on different dimensions of the higher education problem. The commission asked all the authors to push the limits of their knowledge and engage in “blue sky” thinking on individual topics. Each paper represents the views of the individual authors, not the commission. Nevertheless, the papers provide a foundation for the recommendations in the final report. In addition, the commission hopes the papers stimulate further discussion and debate about higher education policy and funding.

The 10 papers and the final report focus on answering three primary questions related to reaching the 60 percent goal. First, how do we realign incentives and retarget existing public funding to make the entire system more efficient and to increase graduation rates for students generally and students of color and from low-income families in particular? Second, what are the new, innovative models to deliver postsecondary education that can both lower the cost and increase the productivity of the entire system? Third, what options do federal and state governments and the private sector have for increasing funding for higher education? It is important to stress here that the interest is in the “value proposition” that underlies these three primary questions. The “value proposition” focuses on the national imperative of building a more highly skilled and educated work force not merely a more credentialed one.

The U.S. higher education system is still the envy of the world, but it must become more affordable for the next generation. It must also become more innovative and adaptable, especially in its use of technology, and be more productive with regard to graduation rates. Finally, additional funding must be available from federal, state, and private-sector sources to reach the goal.

NATIONAL COMMISSION ON FINANCING 21ST CENTURY HIGHER EDUCATION

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WHITE PAPERS WRITTEN FOR THE NATIONAL COMMISSION ON FINANCING 21ST CENTURY HIGHER EDUCATION

Paper 1. Crowded Out: The Outlook for State Higher Education Spending

Authors: Dan White and Sarah Crane, Moody's Analytics

Paper 2. Transformations Affecting Postsecondary Education

Author: Jeffrey J. Selingo, Arizona State University and Georgia Institute of Technology

Paper 3. State Higher Education Finance: Best Practices

Authors: Martha Snyder, Brian Fox, and Cristen Moore, HCM Strategists

Paper 4. Financing American Higher Education in the 21st Century: What Can the United States Learn From Other Countries?

Author: D. Bruce Johnstone, professor, Higher and Comparative Education Emeritus, University at Buffalo

Paper 5. State Strategies for Leveraging Employer Investments in Postsecondary Education

Authors: Robert Sheets and Stephen Crawford, George Washington Institute of Public Policy, The George Washington University

Paper 6. Understanding State and Local Higher Education Resources

Authors: Sandy Baum and Kim S. Rueben, Urban Institute

Paper 7. New Directions in Private Financing

Author: Andrew P. Kelly, American Enterprise Institute

Paper 8. Higher Education: Social Impact Bonds and Income Share Agreements

Author: Carlo Salerno, higher education economist/analyst

Paper 9. State Support for Higher Education: How Changing the Distribution of Funds Could Improve College Completion Rates

Author: Bridget Terry Long, Harvard Graduate School of Education

Paper 10. The Federal Role in Financing 21st-Century Higher Education: Effectiveness, Issues, and Alternatives

Author: Gabriel R. Serna, Virginia Polytechnic Institute and State University

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Executive Summary

American higher education has traditionally been financed through a mix of public and private resources. Many advocates argue that college is a “public good” and should be financed entirely by taxpayers. But reserving a role for private financing is critical to expanding access, encouraging market discipline, and promoting innovation. The most common examples of private financing—student loans, employer tuition assistance, and private investment in new models—fall short of promoting attainment and affordability goals, however. Student loans provide little incentive to keep tuition low, employer benefits accrue to the already educated, and new models tend to serve students from privileged backgrounds.

This paper examines new ways to use private money in pursuit of public attainment goals. I begin by discussing different ways to fund students: rethinking college savings plans, creating space for new private lending models, and promoting innovative employer tuition-reimbursement programs. I go on to discuss different types of employer partnerships and the role of private investors in creating new services and educational organizations. I conclude with implications for policymakers.

Introduction

American higher education is caught between two conflicting trends. On one hand, transformative shifts in the economy have increased employer demand for workers who have some form of postsecondary education. Some estimates suggest that by 2020, roughly two-thirds of jobs will require a postsecondary credential, while the number of slots for workers who have a high school diploma will grow at about half that rate.¹ In response, policymakers and foundations have set ambitious attainment goals—for example, raising the proportion of adults who have a postsecondary credential to 60 percent by the year 2025.²

On the other hand, producing degrees is more expensive than ever before. At most institutions, college costs—both the cost of educating students and the price those students pay to attend—have grown faster than inflation. Although many colleges tightened their belts in response to the Great Recession of 2008 to 2009, these steps came after years of expansion and spending growth. Competition for prestige research dollars—and students—drove colleges to spend on amenities, facilities, and administration.

As enrollments increased (and boomed during the recession), state investments in public colleges did not keep pace, leading per-student funding to decline. The majority of institutions responded by raising tuition. Federal spending on need-based aid more than doubled during this period, keeping net prices from growing as quickly as the sticker price,³ but the influx of federal funding soon leveled off. Out-of-pocket costs are growing once again.

The bottom line: The higher education system needs to produce more workers who have some sort of postsecondary education or training, but public budgets are insufficient to cover the increasing cost of producing them. In a 2010 report, McKinsey & Company concluded that the United States would need 1 million more college degrees annually by 2020. Barring a marked increase in higher education productivity, the analysts estimated that the country would need to increase spending by \$52 billion per year over the \$301 billion spent in 2008.⁴ To put that in perspective, that \$52 billion is about 1.75 times the amount the federal government is spending per year on the Pell Grant Program and about 80 percent of all state appropriations to higher education in 2013.⁵

Where will the resources needed to raise attainment come from? Some believe it should come from taxpayers. Proponents of tuition-free or debt-free college argue that additional federal investments can compel states to slow, and then reverse the pattern in state funding, resulting in lower tuition prices. Given the number of competing spending priorities and continued federal budget deficits, these promises of more public spending seem optimistic, especially when projected into the future. When enrollments and college spending grow again, will policymakers be able to dedicate an increasingly large slice of tax revenue to higher education?

¹ Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Recovery: Job Growth and Education Requirements Through 2020* (Washington, DC: Georgetown University Center on Education and the Workforce, 2013), https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.FR_Web_.pdf (accessed June 4, 2016).

² Lumina Foundation's "Goal 2025" is to "increase the proportion of Americans who have high-quality degrees, certificates, and other credentials to 60 percent by 2025." See www.luminafoundation.org/goal_2025.

³ Sandy Baum and Jennifer Ma, *Trends in College Pricing 2013* (New York: College Board, 2013), <http://trends.collegeboard.org/sites/default/files/college-pricing-2013-full-report.pdf> (accessed June 4, 2016).

⁴ Byron G. Augustine et al., *Winning by Degrees: The Strategies of Highly Productive Higher-Education Institutions* (New York: McKinsey & Company, 2010), www.aascu.org/corporatepartnership/McKinseyReport.pdf (accessed June 4, 2016).

⁵ The Pew Charitable Trusts, "Federal and State Funding of Higher Education: A Changing Landscape," *Issue Brief* (Philadelphia: The Pew Charitable Trusts, June 11, 2015), www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/06/federal-and-state-funding-of-higher-education (accessed June 4, 2016).

Even with modest increases in public funding, the cost of boosting attainment rates while maintaining access and affordability will likely outstrip public generosity. In fact, relying exclusively on public funding could even lead to rationing and limits on access—outcomes that would run counter to the country’s attainment goals. Although productivity gains are possible, the highly educated labor responsible for the core business of higher education remains expensive. In other words, private sources of financing will continue to play a significant role in expanding opportunity.



Other reformers have argued that colleges can and must become more productive with the money currently invested. Some believe that productivity gains are not possible in higher education without jeopardizing educational quality (the so-called “cost disease”), but a growing number of institutions have shown possibilities on the productivity front.⁶ Rigorous studies suggest that institutions can increase cost-effectiveness by investing in interventions that boost student success and applying technology to rethink the student experience.⁷

Even with modest increases in public funding, the cost of boosting attainment rates while maintaining access and affordability will likely outstrip public generosity. In fact, relying exclusively on public funding could even lead to rationing and limits on access—outcomes that would run counter to the country’s attainment goals. Although productivity gains are possible, the highly educated labor responsible for the core business of higher education remains expensive. In other words, private sources of financing will continue to play a significant role in expanding opportunity.

This is not a particularly novel notion. Although the balance between public and private has shifted, private financing has traditionally been a major source of funding in American higher education. Unlike other industrialized democracies, where higher education is almost entirely financed by public dollars and is offered, tuition free, to a subset of qualified students, America has opted for a mixed system of public and private financing. More than half of the funding for American higher education comes from private sources, primarily the tuition that students and their families pay (often with the help of loans) but also from employers, philanthropists, and other stakeholders.⁸

Higher education is clearly both a public and a private good, and international experience suggests that mixed systems are most effective in striking a balance between higher education access and higher education quality.⁹ That does not mean that the American system as currently constituted is working particularly well for students and taxpayers, however. For reformers, then, the question is how private financing can be more effectively aligned with attainment and affordability goals. Can policymakers devise new ways to use private financing to drive improvements in student success, productivity, and affordability?

In this paper, I examine these questions, focusing in particular on how new directions in private financing could contribute to public goals. I describe new models for financing education that could provide students with needed capital while potentially nudging them toward valuable options. I also explore ways in which campuses can raise revenue from private sources other than student tuition or alumni donations to expand and improve their offerings. Finally, I explore ways in which private capital is funding new models of delivery that can help expand educational and labor market opportunity.

⁶ Robert Archibald and David Feldman, *Why Does College Cost So Much?* (London: Oxford University Press, 2010).

⁷ Eric P. Bettinger and Rachel Baker, “The Effects of Student Coaching: An Evaluation of a Randomized Experiment in Student Advising,” *Educational Evaluation and Policy Analysis* 36 no. 1 (2013): 3–19; Susan Scrivener et al., *Doubling Graduation Rates: Three-Year Effects of CUNY’s Accelerated Study in Associate Programs (ASAP) for Developmental Education Students* (New York: MDRC, 2015), www.mdrc.org/sites/default/files/doubling_graduation_rates_fr.pdf (accessed June 4, 2016); and Jessica Howell, Michal Kurlaender, and Eric Grodsky, “Postsecondary Preparation and Remediation: Examining the Effect of the Early Assessment Program at California State University,” *Journal of Policy Analysis and Management* 29 no. 4 (Fall 2010): 726–748.

⁸ Ryan Hahn, “The Global State of Higher Education and the Rise of Private Finance,” *Issue Brief* (Washington, DC: Institute for Higher Education Policy, 2007), www.ihep.org/sites/default/files/uploads/docs/pubs/globalstateprivatefinancing.pdf (accessed June 4, 2016).

⁹ Andreas Schleicher, “Education For All” (Paris: Organization for Economic Cooperation and Development, 2013), www.oecd.org/forum/education-for-all.htm (accessed June 4, 2016).

Why Private Financing?

Private financing is an extremely broad term, encompassing everything from tuition dollars that students and their families pay (increasingly through loans borrowed from government or private lenders) to partnerships between corporations and universities to philanthropic giving by foundations and alumni. In keeping with other research on this topic, I employ a broad definition: funding that pays for the provision of postsecondary education and does not come directly from public sources.

Why should private financing play a role at all? Four reasons stand out.

Higher education is both a private and a public good

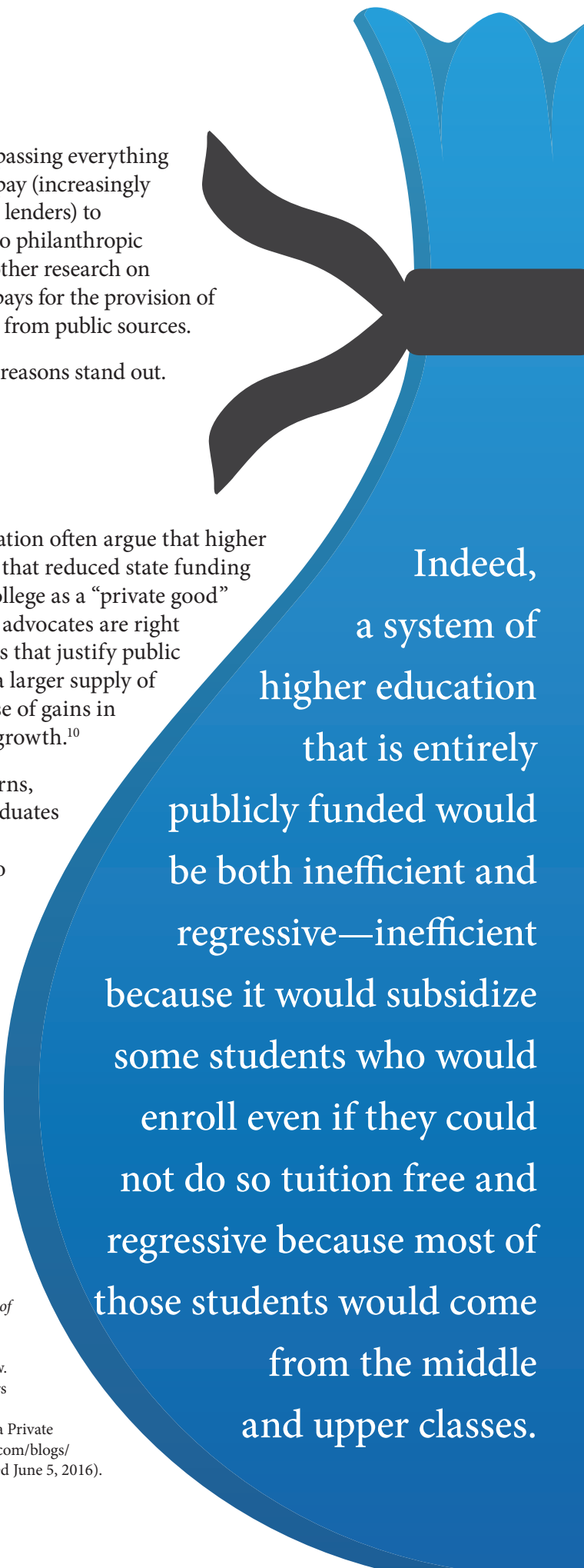
Advocates for more public spending in higher education often argue that higher education used to be treated as a “public good” and that reduced state funding for higher education signals a shift toward seeing college as a “private good” that consumers should finance on their own. Those advocates are right that higher education produces positive externalities that justify public investment, including additional tax revenue from a larger supply of skilled workers, higher wages for all workers because of gains in productivity, and innovations that drive economic growth.¹⁰

Higher education also produces sizable private returns, however. The best estimates suggest that college graduates earn at least \$450,000 more over their lifetime than high school graduates.¹¹ Although these returns also benefit the public, the benefits primarily accrue to the graduates themselves and are large enough that students still have incentive to enroll even though they have to pay something to attend. Therefore, as economists Sandy Baum and Michael McPherson have argued, “The debate should be over what fraction of the cost of postsecondary education students should bear and how large society’s subsidy to them should be. It should not be over whether education is a ‘public’ or a ‘private’ good.”¹²

¹⁰ Enrico Moretti, “Estimating the Social Return to Higher Education: Evidence From Longitudinal and Repeated Cross-Sectional Data,” *Journal of Econometrics* 121 no. 1 (2004): 175–212.

¹¹ Michael Greenstone and Adam Looney, *Regardless of the Cost, College Still Matters* (Washington, DC: The Hamilton Project, October 2012), www.hamiltonproject.org/papers/Regardless_of_the_Cost_College_Still_Matters (accessed June 5, 2016).

¹² Sandy Baum and Michael McPherson, “Is Education a Public Good or a Private Good?” *Innovations Blog*, entry posted January 18, 2011, <http://chronicle.com/blogs/innovations/is-education-a-public-good-or-a-private-good/28329> (accessed June 5, 2016).



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Indeed, a system of higher education that is entirely publicly funded would be both inefficient and regressive—inefficient because it would subsidize some students who would enroll even if they could not do so tuition free and regressive because most of those students would come from the middle and upper classes. As London School of Economics economist Nicholas Barr has argued, “A government committed to improving access should not spray scarce taxpayer pounds across the entire student body but should instead target those resources on people for whom access is most fragile.”¹³

Private financing is key to expanding access

Advocates who harken back to a time when public spending per pupil was higher and tuition was lower rarely highlight how the trend is partly a function of growing postsecondary enrollments. Growing enrollments, coupled with increases in the cost per student, increase the strain on public budgets. In 1961, roughly 4.1 million students were enrolled in degree-granting postsecondary institutions (2.6 million in public schools). By 2013, that number had grown fivefold to 20.4 million (14.7 in public schools).¹⁴ Per-student instructional spending has also grown, rising between 8 and 9 percent at public four-year colleges between 2003 and 2013.¹⁵

Public budgets are finite, and policymakers face competing priorities. In a system where institutions charged little or no tuition, expanding access would depend entirely on the level of public spending, which is subject to politics and fiscal constraints. If public spending does not keep pace with growing demand or costs per student, the supply of seats will be insufficient to meet the demand, leading to rationing, declines in quality, or both.

It is no surprise, then, that many countries looking to expand access to higher education have expanded the role of private funding sources. Writing in 2007 about the rise in private financing across the globe, Ryan Hahn argued that “the single most important driver behind the rise of private finance is the explosion of private demand for higher education.”¹⁶ In countries like the United Kingdom and Australia, for instance, policymakers have slowly given universities more freedom to charge tuition and created income-based loan programs to meet increasing demand. These changes helped expand the number of slots available to students.¹⁷

Looking across the Organization for Economic Cooperation and Development (OECD) countries, OECD analyst Andreas Schleicher has argued:

The data show that neither governments that regard tertiary education mainly as a private good nor students who are calling for abandoning tuition fees, have got this right. Instead, those countries that share the costs of higher education between students and taxpayers in line with their respective benefits are most effective.¹⁸

¹³ Nicholas Barr, *Funding Higher Education: Policies for Access and Quality* (London: House of Commons Education and Skills Committee, 2002), https://econ.lse.ac.uk/staff/nb/Barr_Selcom020424.pdf (accessed June 5, 2016).

¹⁴ U.S. Department of Education, National Center for Education Statistics, “Table 303.10. Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Attendance Status, Sex of Student, and Control of Institution: Selected Years, 1947 through 2024,” March 2015, https://nces.ed.gov/programs/digest/d14/tables/dt14_303.10.asp?current=yes (accessed June 5, 2016).

¹⁵ Donna M. Desrochers and Steven Hurlburt, *Trends in College Spending: 2003–2013* (Washington, DC: Delta Cost Project, American Institutes for Research, January 2016), www.deltacostproject.org/sites/default/files/products/15-4626%20Final01%20Delta%20Cost%20Project%20College%20Spending%2011131.406.P0.02.001%20....pdf (accessed June 5, 2016).

¹⁶ R. Hahn, “The Global State of Higher Education.”

¹⁷ Nick Hillman, *A Guide to the Removal of Student Number Controls* (Oxford: Higher Education Policy Institute, September 2014), www.hepi.ac.uk/wp-content/uploads/2014/09/Clean-copy-of-SNC-paper.pdf (accessed June 5, 2016).

¹⁸ A. Schleicher, “Education For All”

The point here is not to argue for less public financing, though there is certainly room for more efficient spending. Rather, it is to point out that the conventional wisdom—that relying on private finance represents a tragedy for college access—ignores the important role that private resources play in expanding capacity. Striking the right balance between public and private financing is key to maintaining access in the face of increasing demand.¹⁹

Private financing introduces market discipline that public funding cannot

Private financing can do more than expand budget constraints. The private sector can also inject market pressure into higher education that rewards providers that offer a valuable education and compels others to improve if they wish to compete. Consumers who spend their own resources or borrow against future income, firms that make loans to students, investors that back educational organizations—in theory all are driven to maximize the return on their investments. That, in turn, creates incentives to compare options, assess risk, and spend resources on the ones that provide the biggest return. In the aggregate, these incentives should push students and money toward valuable options and away from low-quality ones.

Public organizations that provide funding to students and colleges are subject to a very different set of pressures. Public agencies tend to have few real competitors, which weakens the incentive to focus on the cost or quality of their service (or the return on their investments). As James Q. Wilson has written, public agencies are also beholden to multiple principals, including legislators, special interest groups, and rank-and-file voters. Bureaucrats are often asked to pursue vague, sometimes conflicting goals, some of which may be more important to some principals than others. Finally, public organizations tend to attract “motivated agents” who are in it not for the money but because they are ideologically aligned with certain organizational goals.²⁰

When it comes to public provision of higher education funding, these incentives lead higher education agencies to focus on access above all else, an outcome that serves the immediate interests of institutions and voters and satisfies motivated agents. Other goals, like promoting institutional quality, protecting students and taxpayers from low-quality programs, and ensuring the long-term sustainability of public investments, are less acute. Pursuing reforms that would reward some and punish others is politically dangerous because changes would adversely affect some principals (like colleges).

In short, public subsidies provide access but not sufficient market discipline, but private financing can serve as a market-based complement to public programs. The incentive to maximize the return on private investments can push students and resources toward valuable options, thereby compelling institutions to compete on those grounds.

Striking the right balance between public and private financing is key to maintaining access in the face of increasing demand.

¹⁹ Of course, many higher education advocates will argue that this is entirely a question of political will and that free federal college plans could somehow require that public funding keep pace with demand. Although this may be true in theory, growth in spending on competing priorities like health care combined with political uncertainty would make it difficult for today's political coalition to tie the hands of a future group.

²⁰ James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989); and Avinash Dixit, “Incentives and Organizations in the Public Sector: An Interpretive Review,” *The Journal of Human Resources* 37 no. 4 (2002): 696–727.

Private financing can facilitate innovation

New models of service delivery often come from outside publicly subsidized systems. In the presence of public subsidies and the absence of competition, public organizations may have less reason to pursue new ideas that make them more efficient or effective. In addition, policymakers will be reticent to use taxpayer dollars to experiment with untested models.

Private providers outside the public subsidy system have more incentive to innovate. They must provide a product that is sufficiently affordable and effective to lure customers away from the subsidized public option. On the investor side, firms can finance risky investments by taking an equity stake in a new venture, thereby sharing in both the risk of failure and the payoff of success. Promising ideas can attract capital, while failing ones will be unable to remain in business.



The Status Quo in Private Financing: Plenty of Money, Little Market Discipline

In practice, private financing often strays far from these rosy scenarios. This section profiles the many ways in which private financing is not currently aligned with attainment and affordability goals.

Students can use federal loans to attend any accredited institution that meets basic federal performance standards, but accreditation and federal eligibility rules are notoriously weak quality assurance mechanisms.

Tuition and student financial aid

If charging tuition gives students “skin in the game” and portable aid (grants and loans) gives them the freedom to choose, why does the current system often lack the kind of market discipline described earlier? There are a few answers. First, the system does not lack competition entirely, but it certainly lacks competition on the dimensions that should matter: cost and quality. That is true in part because students lack the information necessary to make a comparison on those grounds. Because of price discrimination, students do not know what they will actually pay until they get a financial aid award letter—too late in the game to effectively shop around. On the quality side, data on student learning or labor market outcomes are either nonexistent or available only in some states.²¹ As a result, institutions compete on other dimensions, such as prestige, college sports, and amenities.²²

Federal student loans exacerbate these informational problems by providing cash up front to ill-informed students. Despite efforts at loan counseling, students typically do not feel the consequences of borrowing until much later. This situation would be less problematic if federal lenders assessed risk and underwrote loans like private banks do, but they do not. Students can use federal loans to attend any accredited

institution that meets basic federal performance standards, but accreditation and federal eligibility rules are notoriously weak quality assurance mechanisms.²³

In theory, purely private student loans should introduce market forces. An ideal student loan would be underwritten on a forward-looking basis, providing loans for programs that produce learning gains and equip students for the labor market. In practice, though, the existing private loan market appears to be both small (less than 10 percent of the market) and backward looking, with lenders

²¹ Mamie Voight et al., *Mapping the Postsecondary Data Domain: Problems and Possibilities Technical Report* (Washington, DC: Institute for Higher Education Policy, March 2014), www.ihep.org/sites/default/files/uploads/docs/pubs/mapping_postsecondary_data_technical_report_final_march_2014_0.pdf (accessed June 5, 2016).

²² Brian A. Jacob, Brian McCall, and Kevin Stange, *College as Country Club: Do Colleges Cater to Students' Preferences for Consumption?* (Cambridge, MA: National Bureau for Economic Research, January 2013), www.nber.org/papers/w18745.pdf (accessed June 5, 2016).

²³ Andrew P. Kelly and Kevin James, *Untapped Potential: Making the Higher Education Market Work for Students and Taxpayers* (Washington, DC: American Enterprise Institute Center on Higher Education Reform, October 2014), www.aei.org/wp-content/uploads/2014/10/Untapped-Potential-corr.pdf (accessed June 5, 2016); and U.S. Government Accountability Office, *Education Should Strengthen Oversight of Schools and Accreditors*, Report to the Ranking Member, Committee on Education and the Workforce, U.S. House of Representatives (2014), www.gao.gov/assets/670/667690.pdf (accessed June 5, 2016).

underwriting primarily on the basis of credit scores and the availability of a credit-worthy co-signer.²⁴ Indeed, 94 percent of private student loans to undergraduates feature a co-signer.²⁵ This approach to underwriting works well for lenders, but it leaves students who do not have a credit history or a co-signer out of luck and may not prevent loan dollars from flowing to poor programs. Even if the student fails, the co-signer is on the hook to repay. As such, private loans may not increase access or market discipline as much as one would expect.

Employer investment

Employers invest a sizable amount of private money in postsecondary education and job training through tuition reimbursement and corporate training programs (a mix of partnerships with outside providers and internal training). A recent study from Georgetown Center on Higher Education and the Workforce estimated that corporations spend \$177 billion per year on formal training and another \$413 billion on informal training. Of the \$177 billion spent on formal training, about one-third goes to outside organizations, 16 percent to tuition-reimbursement programs, and nearly half to in-house training.²⁶

Because private firms invest their own resources directly in corporate training, we would expect them to seek options that are most valuable to the firm, creating competition among corporate training providers to deliver the highest-quality education at the lowest possible price. This may in fact be true, but few studies have assessed the quality or effectiveness of corporate training.²⁷

It is also unclear how much access tuition reimbursement and corporate training provide. Participation in corporate training is usually limited to a firm's employees, not job seekers who want to develop skills to get a job. In addition, take-up rates on tuition reimbursement tend to be low within firms. One study found that 60 percent of employers reported participation rates between 1 and 7 percent.²⁸ The Society for Human Resource Management concluded, "Surprisingly few employees are taking advantage of tuition reimbursement programs offered by their employers."²⁹

What is more, those who do benefit from employer training tend to have a postsecondary credential already. The Georgetown study estimated that employers spent nearly 60 percent of their training investments on workers who have a bachelor's degree. Just 17 percent went toward workers who have a high school diploma or less (the other 25 percent went to those with "some college"). Likewise, 3 percent of the training budget went to training employees under age 24.³⁰

²⁴ Andrew P. Kelly and Kevin James, *Looking Backward or Looking Forward: A Look at the Private Student Loan Market* (Washington, DC: American Enterprise Institute Center on Higher Education Reform, June 2016), www.aei.org/wp-content/uploads/2016/05/Looking-Backward-or-Looking-Forward.pdf (accessed June 5, 2016).

²⁵ MeasureOne, "MeasureOne Private Student Loan Report Shows Continued Strong Performance Trends Through Third Quarter 2015—Delinquency Rates at Lowest Since Before 2008 Economic Crisis," Press Release, December 21, 2015, <http://measureone.com/measureone-private-student-loan-report-shows-continued-strong-performance-trends-through-third> (accessed June 5, 2016).

²⁶ Anthony Carnevale, Jeff Strohl, and Artem Gulish, *College Is Just the Beginning: Employers' Role in the \$1.1 Trillion Postsecondary Education and Training System* (Washington, DC: Georgetown Center on Education and the Workforce, 2015), <https://cew.georgetown.edu/wp-content/uploads/2015/02/Trillion-Dollar-Training-System-.pdf> (accessed June 5, 2016).

²⁷ Most of the work focuses on the take-up rates on tuition reimbursement plans and the effect of training options on employee retention. Colleen Flaherty Manchester, "General Human Capital and Employee Mobility: How Tuition Reimbursement Increases Retention Through Sorting and Participation," *Industrial & Labor Relations Review* 65 no. 4 (2012): 951–974; and George S. Benson, David Finegold, and Susan Albers Mohrman, "You Paid for the Skills, Now Keep Them: Tuition Reimbursement and Voluntary Turnover," *Academy of Management Journal* 47 no. 3 (2004): 315–331.

²⁸ Beth Masik, "Tuition Assistance: Does Your Employer's Plan Measure Up?," *U.S. News & World Report University Directory*, 2010, www.usnewsuniversitydirectory.com/resource-center/paying-for-school/tuition-assistance-does-your-employers-plan-measure-up/.

²⁹ Society for Human Resource Management, "Percentage of Employees Participating in Tuition," www.shrm.org/research/articles/articles/pages/metricofthemonthpercentageofemployeesparticipatingintuition.aspx#sthash.asBuGTUY.dpu (accessed June 5, 2016).

³⁰ A. Carnevale, *College Is Just the Beginning*.

Research and innovation at universities

Universities can generate revenue from private firms by patenting research breakthroughs and licensing those ideas for a fee. This tech-transfer process took off with passage of the Bayh–Dole Act in 1980, which gave universities the right to commercialize advances that emerged from federally funded research. One study from 2011 estimated that 5,000 companies had spun out of university research projects since 1980 and that Massachusetts Institute of Technology earned more than \$75 million through its Technology Licensing Office in 2009 alone.³¹

Patents and licensing have indeed brought large sums of private money to research universities, but those dividends have tended to go to a thin layer of elite campuses. In a recent Brookings Institution study of technology transfer at universities, Walter Valdivia found that “while universities rushed to open [technology transfer offices], only a few raised significant income from licensing their patents under Bayh–Dole.”³² In 2012, for instance, Valdivia found that the top 10 percent of universities (16 institutions) in terms of licensing income were responsible for 75 percent of the total licensing income across the 155 research universities in his sample.³³ Thus, tech transfer is not a reliable source of revenue for the majority of colleges, and resources spent in pursuit of such revenue could go toward more productive ends.

Private investment in educational delivery

The first decade of the 2000s saw a flood of private investment in the creation and expansion of private, for-profit postsecondary institutions, many of which developed new models of education designed to serve nontraditional students. Private equity firms, which invest in established companies in exchange for a share of those companies’ future profits, have been particularly active in this sector. A 2013 study by Mitch Leventhal and Ina Tang found that of 266 private equity firms that had investments in education (both kindergarten through grade 12 and postsecondary), 161 reported having made investments in approximately 200 new schools, half of which were new postsecondary institutions.³⁴

At the higher education level, these investments focused mainly on accredited, Title IV–eligible for-profit colleges. One popular investment strategy was to purchase a traditional nonprofit campus that was already accredited and approved for federal financial aid, convert it to for-profit status, and build an online learning arm (see Grand Canyon University and Post University, for example). Other firms invested in existing for-profit college networks and took them to scale, often through online learning (see Bridgepoint).

These investments helped fuel an expansion of for-profit college enrollments, which in turn attracted more investment. According to U.S. Department of Education data, private equity firms were involved in nearly 40 percent of the changes of ownership in 2006, up from 3 percent in

³¹ Richard Jensen and Michael Jones, *University Startups and Entrepreneurship: New Data, New Results* (June 2011), www.law.northwestern.edu/research-faculty/searlecenter/workingpapers/documents/Jensen_and_Jones_5-17-11.pdf (accessed June 5, 2016).

³² Walter D. Valdivia, *University Start-Ups: Critical for Improving Technology Transfer* (Washington, DC: Center for Technology Innovation at Brookings, November 2013), www.brookings.edu/~media/research/files/papers/2013/11/start-ups-tech-transfer-valdivia/valdivia_tech-transfer_v29_no-embargo.pdf (accessed June 5, 2016).

³³ *Ibid.*, 11.

³⁴ Mitch Leventhal and Ina Tang, “A Sector of Interest: Institutions & Schools,” Private Equity for Education Blog, entry posted October 14, 2013, <https://equityforeducation.wordpress.com> (accessed June 5, 2016).

2000.³⁵ Enrollments in the for-profit sector grew fourfold between 2000 and their peak in 2010, going from 400,000 to 1.7 million.³⁶

These institutions did expand access for nontraditional students, who often lacked a convenient public or nonprofit option nearby—typically working adults in search of flexible opportunities—but the expansion of for-profit institutions introduced far less in the way of market discipline. Profitability mainly reflected enrollment growth, not student success, pushing institutions to expand. Evidence suggests that students in two-year degree or certificate programs complete credentials at higher rates than those enrolled in two-year public colleges,³⁷ but for-profit outcomes at the four-year level lag behind. Studies have also raised questions about the labor market value of credentials from for-profit colleges, especially relative to their cost.³⁸

The bloom is now largely off of the for-profit rose. Enrollments in the sector have declined dramatically, thanks in part to the improving economy but also to greater scrutiny from government and accreditation agencies. State attorneys general launched a series of investigations, while accreditors began paying much closer attention to college purchases.³⁹ Although some are forecasting a rebound for the sector, many private investors in education have moved on to other investments.

³⁵ Goldie Blumenstyk, “Private Equity Juggernaut Rolls Through Higher Education,” *Chronicle of Higher Education* (August 3, 2007), www.csun.edu/pubrels/clips/July07/07-30-07E.pdf (accessed June 5, 2016).

³⁶ U.S. Department of Education, National Center for Education Statistics, “Table 303.70. Total Undergraduate Fall Enrollment in Degree-Granting Postsecondary Institutions, by Attendance Status, Sex of Student, and Control and Level of Institution: Selected Years, 1970 Through 2024,” March 2015, http://nces.ed.gov/programs/digest/d14/tables/dt14_303.70.asp (accessed June 5, 2016).

³⁷ Doug Shapiro et al., *Completing College: A National View of Student Attainment Rates – Fall 2009 Cohort* (Herndon, VA: National Student Clearinghouse Research Center, November 16, 2015), <https://nscresearchcenter.org/signaturereport10> (accessed June 5, 2016).

³⁸ David Deming, Claudia Goldin, and Lawrence Katz, “The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators?” *Journal of Economic Perspectives* 26 no. 1: 139–164, <http://scholar.harvard.edu/files/lkatz/files/dgk.pdf?m=1360042488> (accessed June 5, 2016).

³⁹ Scott Jaschik, “Standing Up to ‘Accreditation Shopping,’” *Inside Higher Ed*, July 1, 2010, www.insidehighered.com/news/2010/07/01/hlc (accessed June 5, 2016).



New Directions: Financing Students

Existing sources of private financing fall short of the access, affordability, and attainment goals discussed earlier. This section explores new directions in student finance that could promote these goals and discusses how state policymakers might facilitate them. (Note that because another paper in this series profiles income share agreements, where investors fund students in return for a percentage of their income, I do not discuss them here).⁴⁰

According to the U.S. Government Accountability Office, just 3 percent of families have a 529 or a Coverdell education savings account, and the median income of families who have such accounts was three times higher than the median income of families that did not.

Rethinking college savings

College savings are a major source of private finance in the higher education system, and various public policies are designed to incentivize families to save. Every state operates a 529 college savings plan. The federal government does not tax the interest that accrues under these plans, but we still do not know enough about who saves, how much they save, and how to encourage more families to do so. What we do know is that participation in 529 programs remains low and is skewed toward upper-income families. According to the U.S. Government Accountability Office, just 3 percent of families have a 529 or a Coverdell education savings account, and the median income of families who have such accounts was three times higher than the median income of families that did not.⁴¹

Why should policymakers want to promote savings? Saving for college obviously gives families more money to spend when it comes time to pay tuition, but saving may prompt other behavioral changes, as well. Studies of child development accounts (CDAs) in several states show a positive correlation between saving and child and family attitudes and behavior. Research shows that children formulate ideas about their future as early as elementary school and that having a savings account designated for college helps children build positive expectations about higher education and makes the future feel more proximate.⁴² Other research indicates that saving for college raises self-esteem, self-efficacy, hope for the future, and fiscal prudence, among other things.⁴³

⁴⁰ For more about this topic, see Miguel Palacios, Tonio DeSorrento, and Andrew P. Kelly, *Investing in Value, Sharing Risk* (Washington, DC: American Enterprise Institute Center on Higher Education Reform, April 2015), www.aei.org/wp-content/uploads/2014/02/-investing-in-value-sharing-in-risk-financing-higher-education-through-income-share-agreements_083548906610.pdf (accessed June 5, 2016).

⁴¹ U.S. Government Accountability Office, *A Small Percentage of Families Save in 529 Plans*, Report to the Chairman, Committee on Finance, U.S. Senate (December 2012), www.gao.gov/assets/660/650759.pdf (accessed June 5, 2016).

⁴² William Elliott III, *We Save, We Go to College* (Washington, DC: New America Foundation, January 2012), <http://files.eric.ed.gov/fulltext/ED540298.pdf> (accessed June 5, 2016); William Elliott III et al., *The Age Old Question, Which Comes First? A Simultaneous Test of Children's Savings and Children's College-Bound Identity* (St. Louis: Center for Social Development, Washington University in St. Louis, 2012), <http://csd.wustl.edu/publications/documents/wp11-04.pdf> (accessed June 5, 2016); and Daphna Oyserman, "Not Just Any Path: Implications of Identity-Based Motivation for School Outcome Disparities," *Economics of Education Review* 33 (April 2013): 179–190.

⁴³ Edward Scanlon and Deborah Adams, "Do Assets Affect Well-Being? Perceptions of Youth in a Matched Savings Program," *Journal of Social Service Research* 35 (2009): 33–46, http://csd.wustl.edu/Publications/Documents/RR06-00_KU_SEED_Study_Youth_Perceptions_of_Effects.pdf (accessed June 5, 2016).

Some states have sought to encourage more saving by matching contributions to 529 plans for middle- and lower-income families. According to the National Conference of State Legislatures, 14 states offered residents some sort of matching program for state 529 savings accounts.⁴⁴ A couple of studies (one in Maine and one in Oklahoma) have shown that matching might increase contributions among participants, but more data and research on savings behavior could help identify new ways to encourage savings.⁴⁵

States could start by answering basic questions about participation in their own 529 plans. What types of families use them now? Which groups might be worth targeting through outreach or incentives? States that are considering matching 529 deposits or already do so should consider how they might formally experiment with different matching designs to learn more about how various incentives might affect different types of families. Using surveys and administrative data, researchers could also assess any behavioral changes that may result from saving for college.

Policymakers should also think more creatively about how to encourage college savings among those who are currently unlikely to save. One approach that has begun to take root in banking is “prize-linked savings” (PLS) accounts. PLS accounts work as follows: Individuals save money in a traditional bank account, and each deposit enters account holders into a raffle. Participants are then eligible to win a regularly awarded prize. Prizes are funded by a slice of the interest payments on the savings accounts.⁴⁶ Unlike a lottery, however, individuals keep the deposits they make (and any accruing interest) regardless of whether they win the prize.⁴⁷ The idea is to induce those who may spend money on lottery tickets to save that money, instead.



⁴⁴ National Conference for State Legislatures, “Saving for College: 529 Plans,” www.ncsl.org/research/education/saving-for-college-529-plans.aspx (accessed June 5, 2016).

⁴⁵ Raquel Meyer Alexander and LeAnn Luna, “An Analysis of Individual Investor’s Response to New 529 College Savings Plans’ Disclosures,” *Proceedings of the 99th Annual Conference of the National Tax Association* 378–84 (November 2006); and Elton Davis, *An Overview and Comparison of 529 College Savings Plans* (Atlanta: Georgia State University Fiscal Research Center, February 9, 2015), <http://frc.gsu.edu/files/2015/02/529-College-Savings-Plans.pdf> (accessed June 5, 2016).

⁴⁶ Tina Rosenberg, “Playing the Odds on Saving,” *The New York Times*, January 15, 2014, <http://opinionator.blogs.nytimes.com/2014/01/15/playing-the-odds-on-saving> (accessed June 5, 2016).

⁴⁷ Patricia Cohen, “Using Gambling to Entice Low-Income Families to Save,” *The New York Times*, August 30, 2014, www.nytimes.com/2014/08/31/business/using-gambling-to-entice-low-income-families-to-save.html?_r=1 (accessed June 5, 2016).

Research has found that PLS accounts can boost savings behavior. One laboratory study found that even an extremely small chance of winning a large prize (0.01 percent) caused a 4 percent increase in savings relative to an interest-only savings account with the same expected payoff.⁴⁸ Another study asked subjects to allocate \$100 across a number of options: an immediate cash payout, a traditional savings account, a lottery ticket, or a PLS account. They found that the presence of a PLS option increased total savings and reduce lottery expenditures significantly, “especially among individuals with [the] lowest levels of savings and income.”⁴⁹ Finally, a look at an actual PLS program at a South African bank found that participants increased savings by 1 percent of annual income. The researchers also concluded that deposits in the PLS account served as a substitute for lottery gambling, not other savings.⁵⁰

In the United States, bank sweepstakes have begun to emerge after 15 states passed legislation to allow credit unions and other financial institutions to hold savings promotion raffles.⁵¹ The largest such initiative, Save to Win, was started by a nonprofit at eight credit unions in Michigan in 2008. It has since expanded to seven states, offering participants one entry per \$25 saved and monthly and quarterly prizes ranging from \$25 to \$5,000.⁵² Propel Schools, a charter school network in Pittsburgh, has started a prize-linked program called Fund My Future to help parents begin contributing toward their kids’ college education. Winners receive gift cards for local supermarkets and restaurants.⁵³

States that want to boost college savings among low- and middle-income families could experiment with prize-linked college savings plans and study the effects on populations of interest. They could add the prize-linked dimension to their existing 529 program or create a new set of CDAs.

What could it mean for access, affordability, and quality?

National survey data indicate a large gap between aspiring to postsecondary education and actually engaging in the behaviors necessary to get there (e.g., taking college prep coursework, sitting for entrance exams, filing the Free Application for Federal Student Aid).⁵⁴ Setting aside the financial benefits of saving and compound interest, if saving even modest amounts can help build college-going expectations among low-income students, it could encourage them to engage in the behaviors necessary to get there. Setting money aside early in a child’s life may encourage parents to start thinking about college for their children early and to focus on the steps necessary to get there. An observational study by the Assets and Education Initiative shows that having access to savings is associated with a host of positive outcomes, including better academic performance, college attendance, and college completion.⁵⁵

⁴⁸ Emel Filiz-Ozbay et al., “Do Lottery Payments Induce Savings Behavior? Evidence From the Lab,” *Journal of Public Economics* 126 (March 2015), <http://econweb.umd.edu/~filizozbay/savings.pdf> (accessed June 5, 2016).

⁴⁹ Kadir Atalay et al., *Savings and Prize-Linked Accounts* (Bonn, Germany: Institute for the Study of Labor, October 2012), <http://ftp.iza.org/dp6927.pdf> (accessed June 5, 2016).

⁵⁰ Shawn Cole, Benjamin Iverson, and Peter Tufano, *Can Gambling Increase Savings? Empirical Evidence on Prize-Linked Savings Accounts* (Oxford: University of Oxford Said Business School, November 2014), www.kellogg.northwestern.edu/faculty/iverson/papers/MaMa.pdf (accessed June 5, 2016).

⁵¹ Heather Morton, “Prize-Linked Savings 2015 Legislation,” National Conference of State Legislatures, January 5, 2016, www.ncsl.org/research/financial-services-and-commerce/prize-linked-savings-2015-legislation.aspx (accessed June 5, 2016).

⁵² Save to Win, “How Save to Win Works,” www.savetowin.org/product-info/how-save-to-win-works (accessed June 5, 2016).

⁵³ Fund My Future, “Program Details,” www.fundmyfuturepropel.com/program-details (accessed June 5, 2016).

⁵⁴ Andrew P. Kelly, KC Deane, and Taryn Hochleitner, *Staying on Target for College: How Innovation Can Improve the Pipeline to Higher Education* (Washington, DC: American Enterprise Institute Center on Higher Education Reform, 2014), www.aei.org/wp-content/uploads/2014/06/-staying-on-target-for-college_093613307290.pdf (accessed June 5, 2016).

⁵⁵ Assets and Education Initiative, “Building Expectations, Delivering Results: Asset-Based Financial Aid and the Future of Higher Education,” in *Biannual Report on the Assets and Education Field*, ed. W. Elliott (Lawrence, KS: Assets and Education Initiative, 2013), <https://aedi.ku.edu/sites/aedi.ku.edu/files/docs/publication/CSA/reports/Full-Report.pdf> (accessed June 5, 2016).

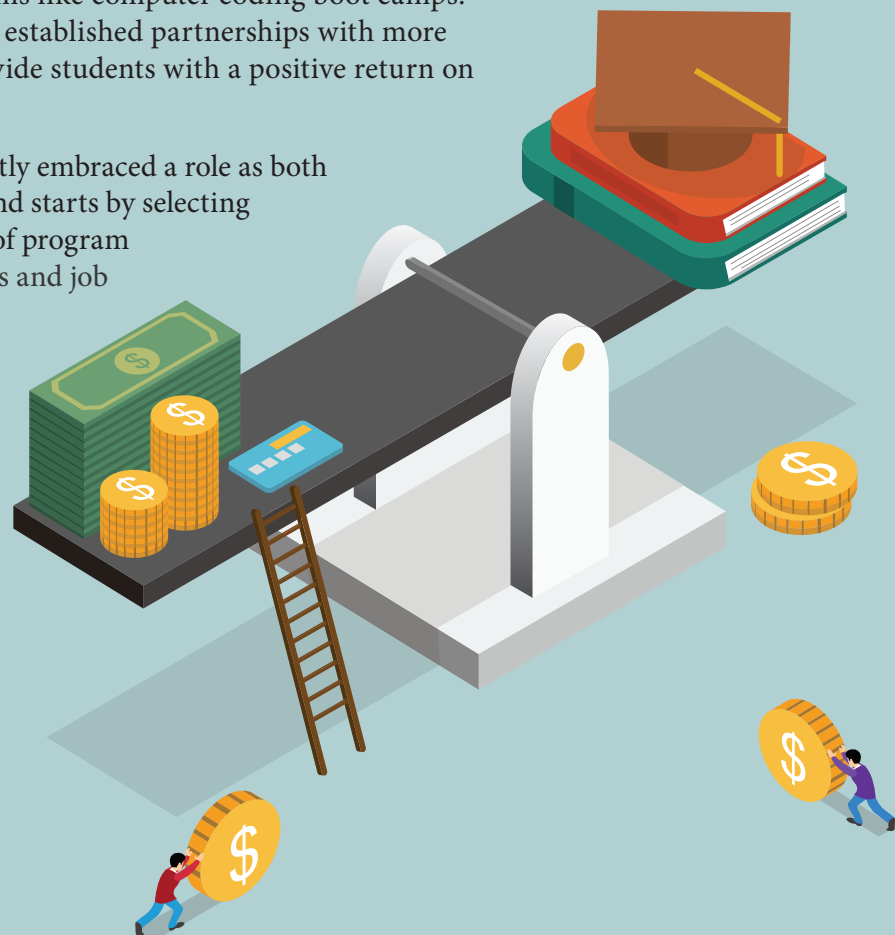
New private lending models

What role can private, for-profit lenders play? A few new firms are experimenting with new lending models that incorporate far more information than credit scores into their underwriting. The logic is that although credit scores measure past financial behavior, forward-looking dimensions also shape a borrower's risk profile—namely, students' behavior while enrolled, the economic value of the program they choose, and their chances of completing their degree. Incorporating such information into underwriting criteria could help students who lack a sufficiently high credit score or a co-signer access private capital. As SoFi, a new marketplace lender, explained on its blog recently, “[We take] a more holistic view of our applicants’ well-being—and where they’re headed.”⁵⁶

Many of these new lenders have focused on high-end, low-risk borrowers by specializing in refinancing the federal loans of college graduates (see SoFi and CommonBond). Other financial tech firms are experimenting with alternative measures of creditworthiness in lending to undergraduates and for new, nontraditional programs. MPOWER Financing, for example, does not consider a student's credit score or require a co-signer at all. Instead, its stated goal is to issue loans to “high-potential” students who may not be able to access financing from traditional banks, either because they are international students or because they lack a co-signer. They lend based on a student's future prospects, evaluating academic data such as the college a student attends, the student's grades, and his or her choice of major; employment data like job prospects, past internships, and field of interest; and financial data, including current debt load and debt-to-future income ratios.⁵⁷

MPOWER selectively chooses which institutions and individual programs within institutions are eligible for funding. It tends to target elite colleges and specialized schools like engineering colleges, and it is eyeing unaccredited programs like computer coding boot camps. Similarly, Climb Credit, founded in 2014, has established partnerships with more than 60 campuses that it has determined provide students with a positive return on investment (ROI).⁵⁸

Another new lender—Skills Fund—has explicitly embraced a role as both a lender and a quality assurance entity. The fund starts by selecting partner programs based on various measures of program quality: student outcomes like completion rates and job placement rates; graduate satisfaction with the program; employer engagement; the quality of the program's curriculum, instructors,



⁵⁶ Dan Macklin, “Lenders Don’t Really Care About FICO Scores Anymore,” *Business Insider*, January 13, 2016, www.businessinsider.com/lenders-dont-care-about-fico-scores-2016-1.

⁵⁷ MPOWER Financing, “About Us,” www.mpowerfinancing.com/about-us (accessed June 5, 2016); and Sanjib Kalita, “Rising From the Ashes, How the Credit Industry Transformed Post-Crash,” *Ngenuity Journal*, October 2015, <http://tsys.com/ngenuity-journal/rising-from-the-ashes-how-the-credit-industry-transformed-post-crash.cfm> (accessed June 5, 2016).

⁵⁸ Climb Credit, “About Climb,” <https://climbcredit.com/about> (accessed June 5, 2016).

and management; and the organization's financial sustainability. It then makes loans to students who are accepted at eligible programs. Skills Fund generally offers three- to five-year loans to cover the cost of attendance and living expenses, with fixed rates between 8 and 11 percent (although students accepted into exceptionally successful programs can get better rates).

Skills Fund's eligible program list is designed to help students identify quality programs. It may also create an incentive for ineligible programs to work to meet standards to gain access to the firm's loans. Skills Fund recently announced that it had decided not to partner with 25 percent of the schools the firm has evaluated. According to Rick O'Donnell, Skills Fund's founder, the primary reasons the firm passes on a provider are low ROI or a sense that the provider is "not ready for prime time"—in other words, that it has not shown sufficient employer engagement or gone through the licensure process, for example.⁵⁹

Programs on the list also retain some of the risk on the loans: Skills Fund requires that its provider partners enter into a risk-sharing agreement. If students do not pay back the loans, the institution is liable for some portion of the money. In other words, Skills Fund's model may help inject a dose of transparency and market discipline that is often missing in the traditional loan market.

What could it mean for access, affordability, and quality?

New lenders using augmented and forward-looking underwriting models could help promote access and quality, but they face challenges. On the plus side, providing capital to students who are making progress but need some additional financial help, as MPOWER is trying to do, could boost completion rates for students at risk of dropping out. Signaling value to consumers and encouraging providers to meet eligibility standards and share in risk, as Skills Fund is doing, can enhance market discipline, but the fact remains that most students do not have access to those programs in the first place. The question is whether these models can expand to cover a broader array of students and programs.

New corporate partnerships

Some major employers are rethinking the way they provide tuition assistance, with implications for access and attainment. Companies like Starbucks and Chrysler have partnered directly with individual institutions to provide employees access to bachelor's degree programs. Unlike most existing programs, which reimburse employees for relevant courses (and primarily assist college graduates), these programs are targeted at those without a bachelor's degree.

The best known of these new partnerships is the Starbucks College Achievement Program (CAP), which provides tuition reimbursement for Starbucks employees who lack a college degree and sign up for a four-year degree program at Arizona State University (ASU) Online. As part of the deal, students receive a 42 percent discount in the form of a scholarship from ASU, and they must apply for federal aid. Students then pay any remaining tuition (after the scholarship and federal grant aid); those who complete credits are reimbursed 6 weeks after the end of the semester through their Starbucks paycheck. Reimbursements cover tuition only, and students are not obligated to remain at Starbucks after finishing their degree.

⁵⁹ Rick O'Donnell, "We Don't Finance Students to Attend Crappy Programs," Skills Fund Blog, entry posted May 3, 2016, <http://skills.fund/you-got-skills/we-dont-finance-students-to-attend-crappy-programs> (accessed June 5, 2016).

All full-time and part-time U.S. employees without a degree are eligible and can choose from among 49 programs of study. Starbucks estimates that 140,000 out of 191,000 employees are eligible. The firm plans to spend \$250 million to help 25,000 employees over the next decade, and the program currently serves nearly 3,500 students.

Starbucks CAP is unique in that it provides counseling and guidance services in addition to tuition reimbursement. Before they start classes, CAP students get access to enrollment, academic, and financial aid advisers and to a personal “success coach” who helps students stay on target while taking classes.⁶⁰ The program also uses ASU’s student success tools, like major maps and eAdvisor, which help students chart their path to a degree. Research suggests that such coaching and advising can significantly boost student success rates.⁶¹

Similar corporate partnerships have followed. Automaker Chrysler has partnered with Strayer University, a regionally accredited for-profit university that primarily serves adult students, to provide dealership employees with access to bachelor’s degree programs. Unlike Starbucks, Chrysler is paying 100 percent of tuition and related expenses up front, meaning that students do not have to pay out of pocket. The effort is designed to boost employee retention, and Chrysler estimates that about 120,000 employees will potentially be eligible. Pizza Hut has signed a partnership with Excelsior College that provides employees with a 45 percent discount on tuition.

What does it mean for access, affordability, and quality?

These new approaches to employer tuition reimbursement are unique in their focus on degree completion and the promise to provide financing for full degrees. These programs seem likely to boost access, and they may also increase degree completion—especially those programs that couple tuition money with advising, counseling, and coaching.

The primary limitation is the small scale of these programs in the broader higher education landscape. Starbucks is a large company, but the 140,000 potential students represent a tiny slice of overall enrollments. Critics have also criticized these models for limiting employees to a single institution with a limited number of programs and to online degree programs, which may not be the best mode of instruction for working adults.⁶² These concerns may have some validity, but they fail to acknowledge the counterfactual: a tuition reimbursement program that does not cover the cost of earning a degree and where the employer is unlikely to vet every provider.

⁶⁰ Amanda Ripley, “The Upwardly Mobile Barista,” *The Atlantic*, May 2015, www.theatlantic.com/magazine/archive/2015/05/the-upwardly-mobile-barista/389513 (accessed June 5, 2016).

⁶¹ University Innovation Alliance, “The Effects of Student Coaching,” www.theuia.org/sites/default/files/UIA_predictive_onepagers.pdf (accessed June 5, 2016).

⁶² For instance, see Alan Pyke, “Critics Warn Starbucks Employees to Read the Fine Print of New Tuition Plan,” *ThinkProgress*, June 17, 2014, <http://thinkprogress.org/education/2014/06/17/3449906/starbucks-tuition-plan-fine-print> (accessed June 5, 2016).

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New Directions: Raising Institutional Revenue From Private Sources

The previous section asked how private financing could help students pay tuition bills. This section asks how institutions themselves may be able to use private financing to expand access and improve program quality.

Bond financing of education and training

Bond financing is common in higher education: Individual public and nonprofit institutions issue tax-exempt bonds to generate additional revenue. In a down economy, colleges have increasingly relied on debt to finance new projects, leading some to warn of a looming debt crisis for colleges and borrowers alike.⁶³ Universities typically use bond financing to fund capital projects and improvements, but it is unclear what effect these projects have on access and attainment.

A handful of states have created space for public two-year institutions to finance customized job training programs for employers through the sale of revenue bonds. Iowa, Kansas, and Michigan have all created so-called “new jobs” training programs designed to attract new employers or encourage existing employers to add jobs. The setup varies from state to state, but it generally works as follows: Employers and community colleges enter into a training agreement that specifies the training program and the planned number of new hires (and the likely wage). The community colleges then sell bonds to fund delivery of the training, and the bonds are repaid by diverting a portion of new employees’ payroll tax withholding.⁶⁴ Instead of going to state coffers, employers send those tax dollars to the community college, which then repays bondholders with interest.⁶⁵ Alternatively, the employer finances the training up front and is repaid through the diverted tax revenue.

To ensure that these programs spawn quality offerings that meet labor market needs, employers must have some “skin in the game.” In Michigan, for instance, if the tax diversion is insufficient to cover the repayment or the employer chooses to leave the state prior to the end of the bond term, the employer is on the hook to repay the debt.⁶⁶ This arrangement provides employers with incentive to partner with institutions on programs that can deliver valuable training. In other states, the bonds are backed by the full faith and credit of the state, which raises questions about the amount of market discipline they engender. In Iowa, for instance, community colleges can backstop their bonds through “standby property tax,” although they have rarely done so.⁶⁷

⁶³ For instance, see Jeff Deneen and Tom Dretler, *The Financially Sustainable University* (Boston: Bain & Company, 2013), www.bain.com/Images/BAIN_BRIEF_The_financially_sustainable_university.pdf (accessed June 5, 2016); and Josh Freedman, “The Hidden College Problem: When Universities, Not Just Students, Take on Debt,” *Forbes*, March 19, 2014, www.forbes.com/sites/joshfreedman/2014/03/19/the-hidden-college-problem-when-universities-like-students-take-on-debt/#4a0260102aed (accessed June 5, 2016).

⁶⁴ In Michigan, community colleges can either pay for the training out of existing resources or issue bonds, with most choosing to issue revenue bonds. See Craig Thiel and Erin Grover, *The Economic Benefits of the Michigan New Jobs Training Program* (East Lansing, MI: Anderson Economic Group, 2013), www.mcca.org/uploads/fckeditor/file/Final%20Report_MNJTP%20Economic%20Impact%20Study%281%29.pdf (accessed June 5, 2016).

⁶⁵ Heath Prince and Jeff Jablow, “Bond Financing,” in *Strategies for Financing Workforce Intermediaries: Working Papers*, ed. Heath Prince (Boston: National Fund for Workforce Solutions, 2007), www.jff.org/sites/default/files/publications/FinancingWI.pdf (accessed June 5, 2016).

⁶⁶ Michigan Community College Association, “The Michigan New Jobs Training Program,” www.mcca.org/uploads/fckeditor/file/MCCA%20Jobs%20book%20LOW%20RES.pdf (accessed June 5, 2016).

⁶⁷ H. Prince, “Bond Financing,” 55.

These programs are obviously not entirely private. The freedom to issue bonds allows community colleges to borrow from the private market against the future tax withholding, which expands access to services beyond what would be possible through state appropriations. The state then foregoes tax revenue to retire the bonds, which essentially constitutes a public subsidy to the job-creating employers. Those employers only get the subsidy, however, if they hire those workers. As the Michigan Community College Association explains, “If any employer hires the number of new employees and pays the wages it certified to the college, the program costs the employer nothing.”⁶⁸

What effect have these programs had on skills, wages, and employment? Most analyses have focused on the effect they have on earnings, employment, and tax revenue rather than education or skill attainment. Indeed, it is unclear how many of these projects provide new employees with a recognized credential. Still, positive economic effects suggest that the training does benefit new employees. Experts estimated in April 2010 that since the start of Iowa’s New Jobs Training Program, which dates to 1983, \$137 million in bonds have been issued, creating 26,000 new jobs.⁶⁹ A 2011 analysis of four of the 15 participating community colleges showed positive, statistically significant effects on trainee wages and retention.⁷⁰ An independent evaluation commissioned by the state community college association found that Michigan’s New Jobs Training Program had positive effects on aggregate earnings, job creation, and tax revenue. The study estimated that in 2012 alone, the program accounted for \$76 million in additional earnings and just over 2,250 new jobs and that it will have “little to no net fiscal impact” in the long-term.⁷¹

Giving community colleges the power to self-finance customized training allows them to design workforce development that better reflects local and regional economic needs.

What could it mean for access, affordability, and quality?

The benefits of these models go beyond access. These programs are designed to be “demand driven” in that firms, not government agencies, decide “what skills or training are required to fill new jobs” and which community colleges to partner with.⁷² In addition, because in most cases the employers bear some of the risk of failure, they have incentive to seek high-quality training partners. Giving community colleges the power to self-finance customized training allows them to design workforce development that better reflects local and regional economic needs.⁷³

⁶⁸ Michigan Community College Association, “The Michigan New Jobs Training Program.”

⁶⁹ Angela Gullickson and Zhong Jin, *Iowa New Jobs Training Program (260E), Part 1: Background* (Des Moines: Iowa Department of Revenue, April 2010), https://tax.iowa.gov/sites/files/idr/job_training_programs_study_part1.pdf (accessed June 5, 2016).

⁷⁰ Zhong Jin and Michael Lipsman, *Iowa New Jobs Training Program (260E), Part 2: Economic Impact Analysis* (Des Moines: Iowa Department of Revenue, July 2011), https://tax.iowa.gov/sites/files/idr/job_training_programs_study_part2.pdf (accessed June 5, 2016).

⁷¹ C. Thiel, *Michigan New Jobs Training Program*.

⁷² *Ibid.*, 27.

⁷³ H. Prince, “Bond Financing,” 57.

New Directions: Funding Alternative Modes of Delivery

Up to now, the discussion has focused on ways to use private financing to improve access to and the quality of the existing system of colleges and universities. This final section asks how private financing can fund new educational models, either within existing institutions or outside the system entirely.

Building new programs in partnership with industry

Colleges and employers often collaborate to develop new programs and courses that meet employers' needs, but many observers argue that there is not nearly enough contact between these two stakeholders. Jamie Merisotis, president of Lumina Foundation, summarized this frustration in 2011:

Too often, employers, local chambers of commerce and workforce-development groups stay on the sidelines when it comes to higher education reform. In far too many cases, employers tend to assume either the role of detached critic of higher education generally or unabashed supporter of a particular institution, usually their alma mater.⁷⁴

As a result, although college leaders and students themselves believe that graduates are prepared for success in the workforce, employers have a very different view.⁷⁵

Existing collaboration tends to take one of two forms. Many institutions and programs work with “industry advisory boards,” which give local employers an opportunity to provide input and feedback to local colleges. Other partnerships are narrower, consisting of a single employer funding the creation of a specific training program at a local community college geared toward its current or prospective employees. Such programs may serve employer needs well, but they are limited to a subset of students, may not be eligible for student aid, and may provide skills and knowledge that are applicable only to that employer.

Some recent collaborations are taking a different approach. Faced with the prospect of having to train and retrain thousands of engineers, AT&T has helped fund the creation of a low-cost online master's degree in computer science that is a partnership between the Georgia Institute of Technology (Georgia Tech) and online course provider Udacity. The program is identical in content, structure, and assessment to the in-person master's program but costs just \$7,000 (compared to the in-person price of \$38,000).⁷⁶ Georgia Tech houses the program, admits students, develops courses, provides instructors, and grades assessments. Udacity delivers the courses through its massive open online course (MOOC) platform and offers “mentors” to field questions from students (one source of the cost savings).⁷⁷ The program has enrolled about 3,000 students, and Georgia Tech projects enrolling 10,000 students.

⁷⁴ Jamie P. Merisotis, “Skilling Up: Why Employers Must Champion Higher Education Reforms for a Secure Economic Future” (speech presented at the Committee for Economic Development, Washington, DC, September 15, 2011), www.luminafoundation.org/news-and-events/skilling-up-why-employers-must-champion-higher-education-reforms-for-a-secure-economic-future (accessed June 5, 2016).

⁷⁵ Scott Jaschik, “Well-Prepared in Their Own Eyes,” *Inside Higher Ed*, January 20, 2015, www.insidehighered.com/news/2015/01/20/study-finds-big-gaps-between-student-and-employer-perceptions (accessed June 5, 2016).

⁷⁶ Melissa Korn, “Online Degree Hits Learning Curve,” *Wall Street Journal*, December 13, 2015, www.wsj.com/articles/online-degree-hits-learning-curve-1450055726 (accessed June 5, 2016).

⁷⁷ Ry Rivard, “Massive (But Not Open),” *Inside Higher Ed*, May 14, 2013, www.insidehighered.com/news/2013/05/14/georgia-tech-and-udacity-roll-out-massive-new-low-cost-degree-program (accessed June 5, 2016).

AT&T sank \$3.5 million into the new program to cover some of the development and startup costs. The company benefits from the program in that it provides a direct pipeline of potential employees and an opportunity for its current employees to build new skills. In the process, however, AT&T's investment helped build a low-cost program in a high-demand field from which many other students can benefit. Although Georgia Tech has maintained its high admission standards in the online program, that program can accommodate far more students, which relaxes the usual capacity constraint—a departure from the traditional logic of selectivity and prestige.⁷⁸

The AT&T–Georgia Tech–Udacity program serves master's-level students in computer science. Could a similar model work in skilled trades? A couple of examples stand out, although they are of limited scale. Josh Wyner of the Aspen Institute profiles one such partnership around the petrochemical industry at Brazosport College in Texas. Manufacturing giants BASF and Dow have spent millions of dollars to create a series of stackable credentials in petrochemical process technology and to provide the equipment necessary for the training. According to Wyner, the relationship is mutually beneficial: Brazosport does such a good job educating students that Dow “sends its own hires to be trained at the college” in a 14-week program.⁷⁹

Similarly, the state of South Carolina has encouraged several automobile, technology, and engineering companies to create apprenticeship programs for state residents. Companies sponsor a high school junior or senior to complete coursework toward an associate degree while also working and training. At Siemens, for example, six or seven students complete a four-year program, including 6,400 hours of training on site and 1,600 hours of courses at a local community college, after which the company hires each employee.⁸⁰ Apprenticeships are costly—roughly \$170,000 per apprentice at Siemens—meaning that employers must sink a sizable amount of their own money into these new programs. To encourage such investment, South Carolina has introduced a tax credit of \$1,000 per apprenticeship position, which has proven beneficial for smaller companies.⁸¹



⁷⁹ Josh Wyner, *What Excellent Community Colleges Do: Preparing All Students for Success* (Cambridge, MA: Harvard Education Press, 2014).

⁸⁰ Laura Putre, “Starting a Successful Apprentice Program: Tips From a Siemens Trainer,” *IndustryWeek*, May 8, 2015, www.industryweek.com/education-training/starting-successful-apprentice-program-tips-siemens-trainer (accessed June 5, 2016).

⁸¹ Katherine Peralta, “Apprenticeships Could Be Gateway to Middle Class,” *U.S. News & World Report*, January 12, 2015, www.usnews.com/news/articles/2015/01/12/apprenticeships-could-provide-a-pathway-to-the-middle-class (accessed June 5, 2016); and Nelson D. Schwartz, “Where Factory Apprenticeship Is Latest Model From Germany,” *The New York Times*, November 30, 2015, www.nytimes.com/2013/12/01/business/where-factory-apprenticeship-is-latest-model-from-germany.html?_r=0 (accessed June 5, 2016).

What does it mean for access, affordability, and quality?

These new corporate partnerships have essentially used private employer dollars to create new programs that a broader range of students—not just current employees—can use. The Georgia Tech model clearly increases access far beyond where it was, but the other partnerships are still operating at limited scale. Because employers fund the programs to train current and future employees, the programs are likely held to a higher quality standard than the typical postsecondary program.

Private equity and venture capital

Private equity firms that remain in the postsecondary market have moved on from the online for-profit college model. In an interview, former Bridgepoint Education founding director and University Ventures managing director Ryan Craig argued that the “idea of the general, undifferentiated for-profit degree, primarily online” is over. In its place, the few private equity firms still active in the sector are looking for “student-centric” companies that either:

... partner with universities to do things that universities can't do (or don't want to do) but they need to do in order to successfully serve students, or [develop] new models that are arguably competitive with universities but that might get folded into the postsecondary infrastructure.⁸²

What do these offerings look like? The next section describes some of the innovations that private investors have helped bring to scale.

The so-called “completion agenda” has pushed campuses and systems to rethink traditional approaches to student service to raise retention, completion, and job placement rates. Forward-thinking campuses have increasingly shifted from a passive system of student supports, where struggling students can opt into academic advising and counseling, to a proactive approach in which student service interventions are targeted at students on the basis of back-end data and analysis.

⁸² Ryan Craig, Managing Director of University Ventures, interview by author, December 2015.

New services

The so-called “completion agenda” has pushed campuses and systems to rethink traditional approaches to student service to raise retention, completion, and job placement rates. Forward-thinking campuses have increasingly shifted from a passive system of student supports, where struggling students can opt into academic advising and counseling, to a proactive approach in which student service interventions are targeted at students on the basis of back-end data and analysis.

Take, for instance, the move to using predictive analytics to help boost retention rates. Starfish Retention Solutions provides campuses with an “early alert” system to improve retention. The system coordinates data from a wealth of sources to identify students whose attendance and performance indicate that they are at risk of dropping out and nudge them toward tutoring and advising services that can help. Civitas Learning works to harness the power of big data and machine learning for a similar purpose. By analyzing thousands of student records, Civitas can predict student success and help campuses tailor interventions to students’ specific circumstances. Civitas has raised millions in funding from investors like Warburg Pincus, New Markets Venture Partners, and Rethink Education. Starfish was part of New Market Venture Partners’ portfolio before Hobsons acquired it in February 2015.⁸³

An increasing number of campuses are also trying to take advantage of digital learning tools to improve instruction and contain costs. Private investors have therefore sought opportunities to fund providers who specialize in digital learning. 2U is an online learning provider that has partnered with name-brand universities like Washington University in St. Louis and the University of North at Carolina Chapel Hill to build accredited online graduate degrees in business, data science, nursing, law, and social work.⁸⁴ 2U’s degree programs boast live, face-to-face classes through an online interactive classroom, with content developed by university faculty.⁸⁵ Partner universities complement 2U’s online learning with in-person, “real-world” experiences like clinical placements, intensive on-campus sessions, or work experience practica.⁸⁶ The company received nearly \$100 million in funding from venture capital and private equity firms before going public in March 2014.⁸⁷

Colleges are also under new pressure to help students land good jobs after graduation, and entrepreneurs have built solutions to this problem. Koru runs short, immersive career training programs for soon-to-be and recent college graduates, partnering with 40 top colleges that pay to provide their students with access to the program. The four-week programs are designed to teach the hard and soft skills that employers desire and culminate in an on-site project with one of Koru’s high-profile corporate partners (which include Yelp, Zillow, and LinkedIn, among others). Koru guarantees program graduates an interview with one of its partner companies, and it reports that 87 percent of its graduates are hired for highly competitive jobs after completion of the program.⁸⁸ Koru has received more than \$12 million in funding from investors Maveron, Andreessen Horowitz, and others.⁸⁹

⁸³ Carl Straumsheim, “Completing the ‘Student Life Cycle,’” Inside Higher Ed, February 23, 2015, www.insidehighered.com/news/2015/02/23/student-success-company-hobsons-acquires-starfish-retention-solutions (accessed June 5, 2016).

⁸⁴ 2U, “Online Graduate Programs,” <https://2u.com/online-graduate-programs> (accessed June 5, 2016).

⁸⁵ 2U, “The 2U Platform,” <https://2u.com/2u-platform> (accessed June 5, 2016).

⁸⁶ 2U, “Real-World Learning Experiences,” <https://2u.com/2u-platform> (accessed June 5, 2016).

⁸⁷ 2U, “Investor FAQs,” <http://investor.2u.com/faq.cfm> (accessed June 5, 2016); and Rip Empson, “Fast-Growing 2U Files for \$100M IPO, But Is It Poised to Be the Next Big Education Company?” TechCrunch, <http://techcrunch.com/2014/02/25/2u-files-for-100m-ipo-adds-ex-citigroup-chief-to-board-but-is-it-really-poised-to-be-the-next-big-education-technology-company> (accessed June 5, 2016).

⁸⁸ Koru, “Our Program,” www.joinkoru.com/our-program (accessed June 5, 2016); and PR Newswire, “Koru Launches New, Unique Job Finder to Help Recent College Grads Find Best-Fit Jobs and Connect With Top Employers,” Press Release, October 6, 2015, www.prnewswire.com/news-releases/koru-launches-new-unique-job-finder-to-help-recent-college-grads-find-best-fit-jobs-and-connect-with-top-employers-300154783.html (accessed June 5, 2016).

⁸⁹ Frederic Lardinois, “Koru Raises \$8M Series A Round for Its Talent Marketplace,” TechCrunch, January 29, 2015, <http://techcrunch.com/2015/01/29/koru-raises-8m-series-a-round-for-its-talent-marketplace/>.

Revature is an online experiential internship for budding computer programmers. The program serves as an intermediary between academia and industry, providing technical training geared toward industry needs to current students and recent graduates at partner colleges.⁹⁰ Revature then hires those graduates and outsources them to its more than 70 major corporate partners.⁹¹ For graduates whom partner companies hire, Revature bills itself as a “no risk pathway to high-value careers in IT.”⁹²

New providers and credential issuers

Private funders are also investing in new organizations that provide education, training, and credentialing outside the higher education system. Coding boot camps are the most visible example. These programs offer short-term, immersive training closely aligned with the needs of tech employers.⁹³ Their labor market outcomes—job placement rates of 95 percent or above are common—have garnered plenty of interest from investors and policymakers alike. Galvanize is one of the more established models, offering in-person programs in full-stack web development (24week program) and data science (12week program) at a cost of \$21,000 and \$16,000, respectively.⁹⁴ Like other boot camps, the program boasts high job placement rates: 94 percent of the graduates from its data science program find employment in 6 months, with a \$114,000 salary on average.⁹⁵ Galvanize is a part of University Ventures’ portfolio and has received more than \$27 million in funding since its founding.⁹⁶

The growing popularity of boot camps suggests another opening for entrepreneurs. As increasing numbers of students and workers learn skills and earn credits from multiple organizations, somebody has to help aggregate, measure, and accurately display that learning. Degreed is a credentialing platform that provides users with an online repository to measure and validate their prior learning holistically. Degreed scores users’ prior learning—everything from a traditional college degree to a MOOC to an industry certification.⁹⁷ Degreed has built a professional development tool for employers, as well, which is a similar platform that scores employees’ learning activities and measures other employment competencies.⁹⁸ Degreed has received more than \$30 million in total funding from Rethink Education, Signal Peak Ventures, and others.⁹⁹

com/2015/01/29/koru-raises-8m-series-a-round-for-its-talent-marketplace (accessed June 5, 2016).

⁹⁰ Revature, “Home,” <https://revature.com/index.html>.

⁹¹ Revature, “FAQs,” <https://revature.com/faqs.html>.

⁹² Revature was formerly called eIntern. See Ryan Craig, “Revolution on Campus: No-Risk Pathways to High-Value Careers,” *Forbes*, January 7, 2016, www.forbes.com/sites/ryancraig/2016/01/07/revolution-on-campus-no-risk-pathways-to-high-value-careers/#4f87483559ea (accessed June 5, 2016).

⁹³ Andrew P. Kelly and David A. DeSchryver, *Beyond Bootcamps: Policy Considerations for Accelerated Learning* (Washington, DC: Whiteboard Advisors, 2015), https://ga-core.s3.amazonaws.com/cms/files/files/000/002/750/original/General_Assembly_Beyond_Bootcamps_Policy_Report.pdf (accessed June 5, 2016).

⁹⁴ Galvanize, “Become a Full Stack Developer,” www.galvanize.com/courses/full-stack/#.VqfhzPkrLIU (accessed June 5, 2016); and Galvanize, “Become a Data Scientist,” www.galvanize.com/courses/data-science/#.Vqfh0PkrLIU (accessed June 5, 2016).

⁹⁵ Galvanize, “Become a Data Scientist.”

⁹⁶ CrunchBase, “Galvanize,” www.crunchbase.com/organization/galvanize-2#/entity (accessed June 5, 2016).

⁹⁷ Iris Mansour, “Degreed Wants to Make Online Courses Count,” August 15, 2013, <http://fortune.com/2013/08/15/degreed-wants-to-make-online-courses-count> (accessed June 5, 2016).

⁹⁸ Blake Montgomery, “Degreed Gets to Work: Collects \$21M in Second Fundraiser in 10 Months,” EdSurge, January 6, 2016, www.edsurge.com/news/2016-01-06-degreed-gets-to-work-collects-21m-in-second-fundraise-in-10-months (accessed June 5, 2016).

⁹⁹ Ibid.

What does it mean for access, affordability, and quality?

These new services and delivery models are still in their infancy, and their markets are small relative to the entire higher education system. They are often expensive, too, perhaps constraining their popularity in an era of stagnant incomes and declining college revenue. Finally, augmented services may help students currently enrolled but not those who do not have a seat. Similarly, boot camps' selective admissions policies necessarily exclude some students who would likely benefit from the service.

In time, though, these new organizations could increase access by creating entirely new pathways to the middle class or helping existing institutions improve retention, completion, and job placement. Continued pressures from policymakers and the public will likely drive more schools to adopt such innovations. In addition, continued tuition increases will push more students to seek nontraditional routes to skills.



Implications for Policy

Efforts to leverage private financing more effectively are worthwhile, but it is important that reformers have realistic expectations. Investing in higher education is inherently risky, and that risk has a chilling effect on private investment both in students and in organizations. This is precisely why we provide public subsidies to higher education; without them, students would underconsume a good that has positive outcomes for the student and the public.

As the previous sections illustrated, however, there seems to be space to channel private financing toward more productive ends than has often been the case. This paper is an attempt to identify some of those opportunities, but we must also ask: How can policymakers create the conditions under which such opportunities are possible? I conclude with a set of considerations for state and federal policymakers.

Experiment with new approaches to college savings

State policymakers have an opportunity to help us learn more about how to encourage college savings. Some basic descriptive research—and better data—on 529 plan participation would help inform the policy debate. In addition, carefully designed experiments would enable researchers to assess the incentive effect of different benefits—tax benefits, matching, prizes, and so on.

Many state 529 plans already feature one-time raffles where families that complete certain tasks are eligible to win a limited number of deposits to a 529. Under Iowa Student Loan's (ISL) Save Now, Save Later program, for instance, parents who register and complete the lenders' Student Loan Game Plan curriculum are eligible to win a \$1,500 deposit to a College Savings Iowa 529 account. In Kentucky, parents or guardians of newborns can enter into a quarterly drawing that awards \$529 to a state-run 529 account. North Carolina's NC 529 Holiday Drawing gives families one entry for every contribution they make between July and December.¹⁰⁰

These raffles may well induce savings behavior, but there is room to build and test programs that are explicitly prize linked and targeted to particular income groups. Interested states could set up a pilot project via state legislation, perhaps in partnership with existing financial institutions, that could provide some of the prize money. In states with matching programs, the pilot could give eligible families the option of either the existing program or the prize-linked approach. Researchers could exploit oversubscription to randomly assign interested families and study the results.

Should the "prize" be a cash deposit into an existing college savings account (as is the case in the state raffles listed above)? Or should they resemble existing prize-linked efforts, which hand out cash, gift cards, and consumer goods? Experiments across different states could help clarify which approach (if any) is effective and whether incentives to save generate the hypothesized behavioral benefits of early saving. States should require a rigorous third-party evaluation of such experiments.

Policymakers may need to reform banking regulations to allow for experimentation with prize-linked college savings. Fifteen states have passed such reforms, and 14 more had such legislation on the agenda in the 2015 legislative session. If a pilot project shows positive results, states will have to consider how to pay for the prize-linked program; modification of the existing tax benefits or matching monies could keep the program budget neutral but may prove controversial.

¹⁰⁰ Megan Hurley Donovan, "Celebrate College Savings Month," August 17, 2015. www.savingforcollege.com/articles/Celebrate_College_Savings_Month (accessed June 5, 2016).

Clarify how fair lending laws relate to forward-looking underwriting

Traditional underwriting of student loans—based on credit scores and the availability of cosigners—is backward-looking: It bases lending decisions on students’ past behavior rather than their future trajectory. Investing in human capital is designed to fundamentally change a borrower’s ability to repay, though, and ideal student financing would be forward-looking: It would build information about a student’s likely outcome into the underwriting process.

Significant questions have arisen about how new underwriting models might relate to federal fair lending laws designed to prevent “disparate impact.” For instance, CFPB has issued a report that raises questions about underwriting on the basis of CDRs because “racial and ethnic minority students are disproportionately concentrated in schools with higher CDRs.”¹⁰¹ The same logic likely applies to underwriting based on program of study. Providing better rates to engineers than to social science majors may well lead to scenarios where particular groups do better than others.

Policymakers should therefore work to clarify how disparate impact might relate to new underwriting models. Doing so would clear up uncertainty and encourage more entrepreneurs to get involved in this area.

Empower institutions to be entrepreneurial

Existing public institutions are under growing financial and political pressure to increase student success. State policymakers should identify ways to encourage entrepreneurship, whether that means partnering with businesses on job training, contracting with new service providers that offer promising models, or developing entirely new models that may not fit into tidy degree and certificate programs. Colleges need both the latitude and the resources to do so, and so states should consider reforms that provide them.

In some places, these reforms might mean adapting the bond- or tax revenue–financed job training model in place in Iowa, Kansas, and Michigan. Other states could consider how such a structure might work to finance campus improvement projects designed to boost college completion or job placement rates. The new service providers described in the last section often require some up-front investment but pay dividends in terms of increased retention and completion rates; more graduates, in turn, should create additional tax revenue. Although the math is not as simple as it is in the new jobs case, where a chunk of new hires’ withholding goes toward bond retirement, states could consider a formula that diverts “additional” tax withholding from recent graduates to repay bonds. (Another paper in this series examines social impact bonds, a specific variation on this idea).

One key question in such bond financing schemes is whether these bonds should be fully or partially guaranteed by the state—meaning that investors are paid back out of state funds in the event the project fails to generate the expected revenue. On one hand, such a guarantee reduces the risk to investors, making the bonds more attractive even at low interest rates. On the other hand, guarantees insulate those investors against losses, which may lead them to be less discerning in whom to invest in or partner with. In the case of job training bonds, for instance, if employers must pay the difference if the diverted payroll tax revenue falls short of bond repayment, they

¹⁰¹ Consumer Financial Protection Bureau, *Fair Lending Report of the Consumer Financial Protection Bureau*, December 2012, http://files.consumerfinance.gov/f/201212_cfpb_fair-lending-report.pdf (accessed June 5, 2016).

will have greater incentive to identify the best partners and contribute to program design. If bond repayment is guaranteed regardless of whether targets are met, employers may be more eager to get involved, but they may have less incentive to seek the most effective partners.

One option is to provide partial guarantees, especially when the goal is to encourage investors to front the money for new, unproven models—innovative job training programs or student loan underwriting models, for instance. These partial guarantees can nudge investors into the market to finance the new program. As the program builds a track record and investors gain confidence, policymakers can relax these guarantees.

Promote accountability and collect labor market data

Finally, continued attention to accountability and transparency will help channel private financing to productive ends. Holding institutions accountable for their performance—typically through outcomes-based funding—has pushed colleges to seek and adopt promising interventions. This movement has also led investors to shift private resources toward innovations that help campuses improve and help students gain access to the labor market.

For private capital to flow to valuable options, investors, lenders, and entrepreneurs must be able to identify which those are. In higher education, that means detailed data on retention and completion rates, the ROI from different programs, and projections of labor market demand for particular credentials. States have made advances in these areas, building longitudinal databases that track students through postsecondary education and into the workforce, but only a handful allow for program-level analysis of completion and earnings. Collecting and reporting such data can help lay the groundwork for many of the reforms discussed here.
