

Federal Policy to Promote Innovation in US Higher Education

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For decades, the US higher education system has been lauded as a significant contributor to national economic, scientific, and social progress. The eclectic array of over 4,000 public and private institutions has experienced significant growth over the past century: full-time student enrollment is estimated to reach more than 23 million students by 2025.¹ Much of this growth has been in the number of nontraditional students (i.e., students who do not immediately enroll in postsecondary education after high school and students who do not attend college on a full-time basis), who now make up about 40 percent of all students.

The considerable challenge of expanding access comes after decades of rapidly increasing tuition levels. The reasons posited for this escalation are numerous, ranging from an “arms race” for top faculty and student talent, to administrative bloat, to changing student tastes necessitating ever greater services, to declining teaching workloads for full-time faculty. Despite higher tuition revenues from students, many colleges and universities are under severe financial pressure because operational costs (including institutional financial aid) have risen faster, and for public institutions, state support has declined. If the sector is to meet the needs of the United States in the coming years, innovation is crucial.

Innovation in US higher education can be defined as the introduction of new methods and customs to enhance efficiency in producing outputs (Brewer and Tierney 2011). For most of the sector focused on teaching and learning, this means enrolling students and enabling them to complete a degree (ultimately with the hope of producing productive and successful citizens), the result of some instructional process combined with an array of operational support services. Innovation is possible in either instruction or operational support and is linked to creativity, risk taking, and experimentation at the institutional level.

Whether institutions innovate depends on a complex array of factors, including the availability of new technological possibilities and the market and societal context in which they operate. Labor-intensive industries have innovated using a range of approaches, including (1) use of information technology; (2) various labor strategies, such as greater differentiation of job roles, use of contingent workers, and creative compensation schemes; (3) reengineered key processes, such as through subcontracting; and (4) a focus on core mission and divestiture of ancillary activities.

Federal policy plays a critical role in promoting innovation in higher education, through funding level and rules, as well as the broader regulatory environment, both of which affect instruction and operations.

In 2015–16, the federal government invested \$240 billion in financial aid to students in the form of grants, loans, work study, and tax credits. During the same time frame, \$38 billion in federal funds was dedicated to research at postsecondary institutions.² Colleges and universities compete for these federal dollars by enrolling students eligible for aid and assembling faculty teams and facilities to win research awards. Intuitively, the higher the amounts of funding available, the more likely institutions are to tailor their operations to “capture” funding.

The availability of federal funding may or may not promote innovation. If students with federal aid gravitated toward institutions that offered them the most value added (e.g., in terms of learning or postgraduation outcomes), this would provide an incentive to institutions to devise curriculum, pedagogical formats, and support services to attract and retain such students. If the levels of funding are inconsequential to institutional operations, however, this incentive is minimal. Conversely, if students do not have good information on value added, they do not necessarily enroll at postsecondary institutions that innovate to meet their needs.

Although money alone may only weakly affect institutional behavior, the rules and regulations that accompany federal dollars may have a more significant effect. Pell grants—the primary federal student financial aid—are awarded to students when they enroll at a college or university. But once a college or university enrolls a student who is receiving federal student aid, it must comply with a range of stipulations. The US Department of Education’s *Federal Student Aid Handbook*, a guidebook for administering student aid detailing these rules, is more than 1,050 pages (Federal Student Aid 2015). A similar slew of requirements accompany federal research dollars.

In addition to rules that may be associated with specific streams of funding (either student aid or research dollars), the US higher education industry is subject to a myriad of regulations that directly affect how it operates.³ Federal rules are anchored in the Higher Education Act of 1965 and subsequent reauthorizations. These are layered on a complex mixture of state and local government rules and requirements, in addition to those stemming from private and professional organizations, notably accreditors. Most of these requirements stem from a desire to protect students (and patients, research subjects, employees, donors, etc.) and ensure institutions maintain quality (albeit usually defined in terms of “inputs” and “process” rather than student outcomes).

But regulation can impede innovation by limiting student choice (i.e., how financial aid can be used), adding to institutional costs (i.e., infrastructure to ensure compliance), and protecting existing providers from new competitors.

The heart of the regulatory environment is the specification of *core instructional technology*—that is, students sitting in physical classrooms in front of certain types of faculty, for a specified period of time, to accumulate a number of “credits” bundled together to constitute a credential (typically a degree). Embedded in this format is the definition of the credit hour, “regular and substantive interaction” between students and faculty, requirements around program length, and others. Commitment to this format essentially locks in many of the traditional elements of higher education that make up most of the costs of doing business (full-time faculty, classroom facilities). This format restricts innovation.

Regulation such as differing state-by-state requirements permitting which institutions can grant degrees to students, rules limiting what credits can be awarded remotely (online) versus in person, and restrictions on what kinds of courses are eligible for student financial aid may also impede new approaches. Many states (e.g., Maryland, Montana, and Texas) require approval or place detailed regulations on institutions that operate outside the given state's border but wish to grant degrees to in-state residents via online education.

In recent years, fueled by the development of communication technology, there has been some experimentation in residency requirements for students. Massive Open Online Courses, for example, have enabled millions of students to enroll in courses, though rarely as part of a standard credential and often with low completion rates (as little as 15 percent). Some traditional institutions have begun offering degree programs in an online or hybrid format. A third of undergraduate students take an online course, though few do more than a course or two.⁴ A small number of highly innovative institutions have begun to aggressively expand by offering online degrees—for example, Arizona State University (more than 150 programs online) and Western Governors University. The goal is typically to expand access or generate new revenues, rather than drive down costs to students (Georgia Institute of Technology being the notable counterexample).

Historically in US higher education, assessment of student knowledge and skills has been largely left to professors and institutions and subject to accreditation checks. Another form of experimentation in recent years has been to reward students based on competencies attained rather than seat time. Such an approach requires a radical reconceptualization of curriculum content and student assessment, but if it were to transplant the more typical “seat time” approach, it could be hugely disruptive to virtually every aspect of the way colleges and universities have historically been organized. To date, only a handful of established institutions have begun to experiment in this space (e.g., Southern New Hampshire University), with the lead being taken by for-profit providers.

Beyond the essential components of instruction and credentials, regulation (at the federal, regional, and state levels) designed with the intent of protecting students (or others) profoundly affects higher education institutions' operations. There is a dizzying array of rules specific to colleges and universities ranging from the treatment of research subjects, gender equity in student athletics, campus violence reporting, and rules pertaining to university finances. Although they may not directly affect instruction, these rules drive up operational costs and increase risk aversion, potentially impeding innovation.

Policy Levers

Federal policy to promote innovation in higher education can be tied to the two major levers discussed above: (1) funding levels and mechanisms, particularly in student financial aid and research funding and (2) the broader regulatory environment. To these, we should add (3) the power to facilitate experimentation and learning about what works. Because the federal government does not directly operate colleges and universities, it is critical to design policies that provide the best incentives for innovation for those that do (states and institutions) and for those who influence them (e.g., students, accreditors, and employers).

On funding, there is a strong case to be made for both continued high and increasing levels of federal assistance to students and increasing research funding to universities. Both have compelling economic and societal imperatives. Although the level of funding can affect institutional behavior, it alone is unlikely to promote much innovation. More significant is who gets funded to do what. Hence, refining the ways students and institutions are funded is key to providing more direct incentives for innovation.

On regulation, the need to protect students and others remains a priority. But there are undoubtedly federal rules that deserve systematic and close scrutiny—in particular, considering how they may discourage alternatives to the dominant in-person credit hour format and how they add to institutions' operational costs. (Some institutions have estimated they spend more than 10 percent of their budget complying with federal mandates.⁵) Sometimes, there may be formal federal requirements that are outdated or overly burdensome. In other cases, federal rules may explicitly or implicitly reinforce state and local rules and those of accreditation agencies.

On experimentation and learning about what works, there may be a unique federal role. Creating exemplars by conducting small- and large-scale demonstration projects, documenting evidence of efficacy of innovations and capturing implementation lessons, and disseminating best practices has long been a federal endeavor in other fields (e.g., health, welfare, and K–12 education). There are few formal engines of experimentation in the postsecondary sector. It is feasible to envisage a much more activist federal role. New forms of educational credentials, instructional delivery mechanisms, organizational types, and the like can be encouraged *explicitly* with federal policy.

Recommendations

We make recommendations in three major areas: reworking student financial aid, creating a regulatory framework conducive to institutional experimentation, and generating new exemplars for wider adoption. Our suggestions are for fairly broad policy approaches rather than narrow blueprints.

First, unlike federal funding for K–12 schools, which flows to local education authorities on the basis of number of students enrolled, federal financial aid for higher education is predominantly in the form of a “voucher” to students. Funding this kind of aid at a high enough level provides significant incentives for institutions to attract students. Arguably, recent declines in the value of federal aid have weakened this incentive. A strong first policy step would be to rectify this by increasing the maximum amount of the Pell grant. More significantly, policymakers should consider ways Pell (and other student financial aid) could more directly encourage institutions to innovate. There are many ways this could be done. The structure of financial aid might better provide incentives for college completion rather than just college attendance, aid could be allowed for year-round study (as provided in Congress's most recent budget and the Trump administration's first budget proposal), and for some nondegree credentials. For example, to receive federal student aid dollars currently, institutions must meet *state* authorization requirements in any state where students live, limiting online degree options in some states.

Second, federal policy should be directed toward encouraging innovation at the institutional level, through both its own rules and through “encouragement” for states and other agencies to establish an appropriate regulatory framework. One option would be to proceed on a narrow basis, revisiting those federal regulations that limit innovation in instructional formats. A more comprehensive approach would be to undertake a systematic overhaul of federal rules along the lines recommended by the 2013 Task Force on Federal Regulation of Higher Education for the reauthorization of the Higher Education Act (Task Force, n.d.). One might consider how to devise waivers from particular regulations in exchange for meeting certain criteria, such as increasing graduation rates or reducing the rate of tuition increases. If such an experimental approach were used, it would be possible to monitor the effects of targeted deregulation and learn how waivers could be more widespread if successful. Taking this idea to an even more radical level would be to consider something akin to “charter schools” in the higher education sector, allowing some institutions to remove themselves from much day-to-day regulation in exchange for outcome-oriented accountability.

Third, federal policy should play a critical role in creating exemplars of innovation and spreading effective ones. The lack of fungible resources makes it difficult for a state or institution to make the investments and take the risks needed to develop new ways to serve students. Barriers to entry limit the incentives for new providers to enter the sector or offer radically new approaches. Hence, there is limited experimentation in the postsecondary sector (particularly in types of credentials and instructional delivery) and a limited research base on the efficacy of what innovations exist. A small number of dollars could have high impact in changing this landscape by generating interest in innovation and creating an evidentiary basis for diffusion of new approaches.

One option would be to establish a stream of federal funding for innovation in higher education. Funding could be provided on a competitive basis to universities, consortia of institutions, or state systems to design, pilot, validate, or expand innovative practices. Money could be for *development* of high-potential but relatively untested practices, strategies, and programs; *validation* grants aimed at validating and spreading promising programs on a state or regional scale; or *scale up* grants to bring “proven” programs to scale. The scope could be narrow and prescriptive (e.g., confined to new ideas that focused on improving instructional quality with technology at the undergraduate level). Or it could be broader and outcomes focused (e.g., any intervention focused on improving student retention, reducing instructional costs, or any number of defined goals).

Conclusion

US colleges and universities face significant challenges over the coming decades. Although the higher education sector traditionally receives less policy attention than other arenas, such as health care or K–12 education, the federal government has a profound impact and *could* play a critical role in encouraging innovation. The next four years present an opportunity for creative and pragmatic policy approaches that could help students access the benefits of higher education, push institutions to become more efficient, and move the sector to a more secure future trajectory.

Notes

1. “US college enrollment statistics for public and private colleges from 1965 to 2014 and projections up to 2025 (in millions),” Statista, accessed June 23, 2017, <https://www.statista.com/statistics/183995/us-college-enrollment-and-projections-in-public-and-private-institutions/>.
2. “Historical Trends in Federal R&D,” American Association for the Advancement of Science, last updated June 22, 2017, <https://www.aaas.org/page/historical-trends-federal-rd#Char>.
3. “Compliance Matrix,” Higher Education Compliance Matrix, accessed June 23, 2017, <http://www.higheredcompliance.org/matrix/>.
4. “Distance Education in Postsecondary Institutions,” Institute of Education Sciences, National Center for Education Statistics, accessed June 23, 2017, https://nces.ed.gov/programs/coe/indicator_sta.asp.
5. Jon Marcus, “The \$150 million question—what does federal regulation really cost colleges?” *Hechinger Report*, July 16, 2015, <http://hechingerreport.org/the-150-million-question-what-does-federal-regulation-really-cost-colleges/>.

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