

# REINVENTING HIGHER EDUCATION

The Promise of Innovation

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2011

HARVARD EDUCATION PRESS  
CAMBRIDGE, MASSACHUSETTS

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## Barriers to Innovation in U.S. Higher Education

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*Virtually every major innovation of recent decades builds on the work of the university community . . . Countless innovations revolutionizing American life and the American economy have emerged from a university setting. Here we come to a paradox. Though the university community is a major force of innovation in our society, it is curiously resistant—even hostile—to innovations attempted within the university.<sup>1</sup>*

HIGHER EDUCATION IS WIDELY lauded as an American success story.<sup>2</sup> Over four thousand public and private postsecondary institutions enroll some twenty-five million students.<sup>3</sup> During the past century, the sector has expanded greatly, providing educational opportunities for an increasingly diverse population and offering a plethora of courses of study, from certificates to doctorates in hundreds of subjects. New providers have emerged that are tailored to shifting student demands.<sup>4</sup> Universities continue to produce breakthrough scientific discoveries and inventions such that the research university remains a central driver for creative vibrancy across urban and regional areas.<sup>5</sup>

Yet despite this backdrop, there is increasing concern that the nation's colleges and universities are ill equipped to adapt to a rapidly changing environment and that traditional institutions are resistant to enabling new

providers to enter the marketplace.<sup>6</sup> Even today, the nation no longer leads other industrialized countries in terms of participation and graduation rates.<sup>7</sup> Whereas the country's colleges and universities were once thought of as key components of America's ability to compete in the marketplace, "The public perceives higher education to lack any ability to affect change and finds that most institutions are anything but innovative."<sup>8</sup>

Major challenges associated with demographic shifts, a changing economy, and a declining fiscal base present U.S. higher education with an imperative for major change.<sup>9</sup> First, demographic trends have put pressure on institutional capacity. Population growth, although slower than in past decades, continues to mean more potential students for the sector. Unless the number of seats grows, the fraction of the population attending college will decrease. Further, the population subgroups with the largest growth are those that have traditionally been underserved by postsecondary institutions, posing a challenge to institutions to expand access.<sup>10</sup> Second, the economic value of attending college has risen markedly over the past three decades.<sup>11</sup> Economic returns to schooling beyond a high school diploma have risen since the 1970s: the median income for a worker with a bachelor's degree is about double that of his or her high school counterpart, and the average college graduate will earn over a million dollars more during his or her lifetime than the average high school graduate.<sup>12</sup> As importantly, the income of those without a postsecondary degree has decreased significantly over the last two decades. A thriving postsecondary sector with plentiful capacity to meet the needs of a rapidly changing labor market is important for both individual and societal well-being.

Third, the overall state of the economy, growing fiscal demands from other sectors (including prisons, health and welfare, and K-12 education), and resistance to tax increases have led to a declining fiscal base to support the higher education sector. For example, California's per-student funding for the University of California (UC) has fallen 40 percent since 1990; while the state contributed \$15,860 per student in 1990, that figure has recently fallen to \$9,650 per student in constant dollars. The result is that, whereas the state used to pay 78 percent of the total cost of education,

its contribution has decreased to close to 50 percent.<sup>13</sup> The decline in the state's willingness to support public higher education has come at the same time that states are attempting to deal with consecutive years of historic budget deficits. As a result, each postsecondary segment has been forced to scale back on the number of students it is able to educate, to freeze faculty and staff hiring, and to raise tuition. In the longer term, the aging of the overall population will continue to shrink the proportion of working adult taxpayers whose taxes fund postsecondary education. This picture is similar across many states and will only get worse in the years ahead. Taken together, these forces threaten to limit the ability of institutions to provide educational opportunities for an ever-growing population.<sup>14</sup> Further, tuition has increased faster than inflation, without a comparable increase in quality or results. The sector has been marked by rapidly increasing costs, a fact that has not been lost on policy makers and consumers.<sup>15</sup> The Spellings Commission, for example, noted the ever-increasing costs of postsecondary education with concern and was extremely critical of the sector's overall lack of transparency and its inability to develop common learning outcomes that might be measured.<sup>16</sup>

Given these realities, the sector will have to change and adapt to new constraints and demands or risk being overtaken by a rapidly expanding for-profit sector. Although innovation is taking place within existing providers and through the entry of new providers, it has not dramatically increased the system's capacity to educate more students or driven down costs. Innovation appears to be too little and too slow, particularly when compared to other industries that have improved productivity via the introduction of technology or through strategies like outsourcing or the use of temporary workers who reduce labor costs. In most colleges and universities, the fundamental core technology of teaching and learning remains virtually unchanged. Throughout the twentieth century, colleges and universities essentially have utilized two modes of teaching—the seminar model where an instructor teaches by the Socratic method, or the lecture model with a "sage on the stage." With these teaching formats, the only way to increase capacity is through the reduction in the number of small seminars, an

increase in the number of students in the lecture classes, or the addition of more professors. Only relatively recently have low-cost computing and communications technologies made it possible to imagine fundamentally different ways of learning by breaking the constraints of physical space and time.<sup>17</sup> The use of technology to rethink the core business of teaching and learning is occurring primarily on the margins of the sector.

In this chapter, we examine how and why innovation occurs in U.S. higher education, focusing on the barriers that impede both the magnitude and the pace of change. We note that although progress has been made in the past decade in developing innovative instructional delivery mechanisms, progress is slow and confined to relatively few institutions. Many institutions face minimal competitive pressure, significant (but decreasing) state subsidies, and cumbersome internal and external governance structures that resist innovation. Further, accreditation diminishes the potential impact of for-profit institutions by erecting barriers to entry, and there are few systematic mechanisms for testing and disseminating proven innovations across the sector.<sup>18</sup> We suspect that the increasing fiscal and competitive pressure on traditional colleges and universities will force many to change, and that some institutions that resist change—wistfully hoping for a return to the good old days—may find themselves out of business altogether. We suggest that the federal and state regulatory and funding environments, which shape much of the postsecondary sector's behavior, need to change significantly. Existing organizations need strong incentives to change, encouraged purposively through a smarter—and more innovative—government role. Just as a regulatory environment can stymie new entrants and breed lethargic institutions, it also may provide incentives that spur innovation. Our purpose here, then, is not to advocate for innovation for innovation's sake. Rather, a moral imperative exists in higher education. Yes, higher education needs to be more competitive and more cost conscious. But, ultimately, a more innovative postsecondary industry will increase access to higher education, create a better educated workforce, and enable more individuals to participate fully in the democratic public sphere.

## WHAT IS INNOVATION?

Innovation is a new method, custom, or device—a change in the way of doing things. It is generally understood as the *successful* introduction of a new thing or method.<sup>19</sup> Innovation can be “supply pushed” through the availability of new technological possibilities in production, or “demand led” based on market or societal needs. In for-profit industries, firms are under continuous pressure to drive down the unit costs of production and to drive profitability up via the continuous refinement of production processes, internal systems, marketing strategies, and the like. The profit motive, and the pressure to innovate that it can encourage, is still quite rare in postsecondary education. Total postsecondary enrollment in the United States was over twenty-five million during the 2007 to 2008 academic year. Of this total, 91.5 percent of the students enrolled in nonprofit or public institutions and 8.5 percent in for-profit colleges and universities.<sup>20</sup> However, the desire to maximize outputs—the goal of accomplishing more (serving more students, generating more research, and so on)—at lowest cost exists, albeit with somewhat mediated incentives to do so. This picture is complicated by the fact that productivity is not directly measured in higher education. Measures of value-added to student learning, for example, are not widely used, nor are institutions typically held accountable (by the state or by markets) for the outcomes of higher education like degrees or higher earnings.

Innovation is linked to creativity, risk taking, and experimentation, attributes that are often lacking in large, public or nonprofit organizations. In the private sector, for example, it has been estimated that only 10 percent of all innovations are actually successful; trial and error are essential. For systematic learning, a research and development (R&D) process, along with evaluation, is required for positive innovation to take hold and spread, and for negative innovation to be abandoned. Innovation requires a willingness to fail, a capacity on the part of institutional leaders to engage in risk taking, an organizational reward structure that encourages such behavior, and a regulatory framework that supports it. Innovations may occur for a host

of reasons, and they occur whether supported by, or in spite of, the environment in which they take place.<sup>21</sup>

Although research universities have the production of new knowledge as a major component of their work, they are a relatively small part of the postsecondary sector. Teaching and learning, however, are key functions of every type of postsecondary institution. Whereas research infrastructure—how one conducts research, with whom, its funding, its transfer, and the like—has gone through enormous transformation over the last century, the same cannot be said of teaching and learning. There has been modest change in the core technology of higher education over the centuries—from a labor-intensive tutorial system to the mass lecture halls characteristic of the postwar enrollment boom to forms of online learning. Most examples of innovation—team teaching, first-year seminar, international experiences, service learning, undergraduate research, and writing across the curriculum—are not radical departures from the status quo. Indeed, if one transported John Dewey from when he first started teaching in the early twentieth century to a classroom of today, he most likely would recognize the basic components and infrastructure; the same could not be said if Emile Durkheim investigated how researchers now conduct research.

In order for successful innovations to drive gains in productivity, they not only must be created, but must be adopted by others. Colleges and universities have opportunities to adopt improved techniques in many areas of operation, but they do not all adopt new methods instantaneously. In their study of thirty innovations, Malcolm Getz, John Siegfried, and Kathryn Anderson found (based on a survey of 238 institutions) that higher education takes three times as long to adopt innovations as the average in for-profit industries. They found that “the overall impression is that relatively few measured attributes of colleges and universities are related to the time at which innovations are adopted.”<sup>22</sup> Interestingly, curricular and classroom innovations were particularly slow to spread. The core production process that dominates on campuses, namely, professors interacting directly with students, is expensive and difficult to scale. The result has been what we see as sustaining changes, rather than disruptive changes.<sup>23</sup> Rather than hire

tenure-track faculty, institutions are now prone to hire part-time or contingent faculty. Rather than have a class of two hundred fifty students with ten teaching assistants, universities increase class size to three hundred students and halve the teaching assistants. Rather than offer a potpourri of classes, institutions decrease class offerings. To maintain the same expectations of faculty is impossible; to increase class size and reduce teaching assistants make a weak pedagogical option weaker; to reduce class offerings while still maintaining that students need to take the same courses makes graduation with a bachelor's degree within a four-year time horizon less likely. These actions are essentially geared toward maintaining the current system rather than creating a more viable system based on new realities.

Labor-intensive industries like higher education are particularly difficult to make more productive. In the 1960s, economist William Baumol noted that in labor-intensive industries, it is difficult to change output without altering staffing.<sup>24</sup> This phenomenon of rising costs without increases in output has been labeled Baumol's “cost disease.” His prime example was the string quartet, which produces the same music from the time it is first assembled until the players all retire, yet experiences higher costs as the players demand salary increases to keep up with the wages that others earn.<sup>25</sup> There are compelling indicators that higher education suffers from this malaise: “Some economists have argued that the potential for productivity growth in higher education itself, as in many other service industries, is limited.”<sup>26</sup> However, it is not the case that innovation in a labor-intensive industry such as higher education is impossible; evidence from a range of service industries suggests several cures for the disease may exist.<sup>27</sup> Research suggests that service industries have accomplished productivity growth through a range of changes that have taken advantage of new technology, more flexible use of labor, changes to organizational structure, and changes to the external operating environment.

Perhaps the most obvious source of potential productivity enhancement is information technology (IT). Estimates suggest that roughly a quarter of service-industry labor productivity growth can be attributed to investments in IT. IT helps industries track outputs, monitor operations, communicate

with customers, and react to shifts in external demands. Service industries such as communications, wholesale trade, retail trade, and finance have dramatically redesigned their delivery systems around IT advancements. Despite some limited incorporation of technology into internal university systems (such as library services, payroll, e-mail), higher education has only just begun to introduce technology into direct instructional services for students. Most colleges and universities have resisted making production process changes, relegating technology to supplementary uses such as course support. In many cases, this has resulted in an increase in staff; for example, the number of library staff people has remained constant, at the same time that IT personnel have increased significantly.<sup>28</sup> Frequently, individuals are performing similar functions, but in different media—one in print and the other in cyberspace. Other technological advances such as computer-based design, modeling, and robotic production prevalent in other innovative sectors can be applied only to back-office functions in colleges and universities.

A second source of innovation in service industries has been the rethinking of labor strategies, including greater differentiation of job roles, creative compensation and retention strategies, and use of less permanent workers. Unlike many service industries where workers increasingly specialize and professional staff perform noncore high-level tasks, colleges and universities continue to rely largely on the professor as a general practitioner who knows what students need to learn and who carries out many leadership and administrative roles. Many organizations, public and private, consciously manage their workforces in reference to the broader labor market by trying to retain individuals who have specialized skills, resulting in salaries that are highly differentiated. There are also examples in the public sector—for instance, the military—where there are limits on the number of people at the high points in the pay scale, clear promotion processes, and dismissal of ineffective employees. Some elements of this meritocracy, including compensation tied to productivity, exist in higher education, particularly in private institutions and in the competition for top research talent in the nation's elite research institutions. However, until recently, the vast majority of insti-

tutions whose primary mission is teaching retain a civil service-like structure with uniform salary scales. What is occurring, however, is a significant increase in the hiring of part- and/or full-time nontenure-track faculty to do the teaching that tenure-track faculty have traditionally done. The difference between this trend and the changes taking place in private-sector hiring, however, is that hiring in the private sector frequently occurs according to strategic design, whereas in traditional higher education, this kind of hiring is done to fill gaps and needs. Even though there has been a growth in contingent faculty, tenured professors continue to meet with students a couple of times a week on residential campuses, just as they did decades ago.<sup>29</sup> Institutions in the for-profit sector, however, have institutionalized new strategies for recruitment, training, and compensation.<sup>30</sup>

A third, related strategy for increased productivity involves reengineering of key processes and the elimination of others. Some firms have abandoned in-house production of key components and assigned them to independent contractors. Others have reassigned key tasks to different layers of production or shifted them to the consumer. Postsecondary institutions have moved in this direction only to a limited degree and frequently with a great deal of controversy. The outsourcing of labor such as custodial services to private contractors has been of greatest concern to students and faculty at public institutions where equitable labor standards are a key concern. In general, the most significant changes have been in secondary activities such as dining and food services. Reduced costs and equitable contracts in private universities have resulted in the public sector tentatively moving in the same direction. Those who have proven most adept at increasing efficiency are the newest entrants to the postsecondary market—for-profit colleges and universities. Between 2007 and 2008, for example, public four-year institutions added very little capacity (18.8 percent of total new enrollment) and are now maxed out, given ineffective business practices. At the same time, for-profits have been responsible for 33.5 percent of the total growth with only 8.5 percent of total enrollment.

Fourth, private-sector services have tended to become more focused, divesting themselves of businesses that took them away from their core. In

many cases, this divestiture has increased the productivity of both the parent firm and the ones spun off, eliminating inefficiencies caused by corporate bureaucracy and internal cross-subsidies. U.S. colleges and universities have more often moved in the opposite direction and are plagued with mission creep: teaching institutions sought to add doctoral programs; liberal arts colleges added professional degrees; community colleges attempted workforce preparation, college transfer, and adult continuing education simultaneously; second-tier athletics departments built facilities to become NCAA Division I; rising universities added teaching hospitals, and so on.<sup>31</sup> When one looks at the history of higher education in the twentieth century, the norm is to see institutions that sought to become more complex institutions rather than distinctive institutions with a singular focus. Thus, teachers colleges evolved into state colleges that offered multiple degrees and then changed to universities that offered master's degrees and, in many instances, doctoral degrees. Concomitant changes in the expectations of the faculty—from one of primarily concentrating on teaching to one of doing more research than teaching—and increases in student costs, such as room and board, were the outcome of this evolutionary process. The overall result was a movement away from a singular focus on the organization's *raison d'être*—student learning.

Finally, research suggests that the regulatory environment in which an industry operates can have effects on its ability to increase productivity and innovate. Studies of the retail, communications, and banking sectors indicate that deregulation has been associated with increases in productivity.<sup>32</sup> Limits on labor use, information exchange, and service-delivery models may restrict productivity; removing them can generate greater competition and development of new products, and spur the entry of new talent into a sector. On the other hand, reckless deregulation may remove important protections for consumers and workers, and result in the destructive failure of institutions. Striking the right balance among regulation, incentives, and accountability is the key task of policy makers. The framework that undergirds the postsecondary sector has undergone relatively little change over the past several decades. As with the other sources of produc-

tivity growth in labor-intensive industries we identified earlier, U.S. higher education has only just begun to take advantage of some of these trends. In the next section, we explore some of the barriers that appear to limit innovation and expand on our discussion about the environment in which postsecondary institutions operate.

## BARRIERS TO INNOVATION

Though many widely bemoan the lack of innovation in higher education, there is relatively little systematic research on the topic. In part, until recently, people around the world have considered American higher education the best in the world, so there has been little incentive to rethink conventional practices and structural arrangements. Further, it is virtually impossible to test competing explanations for why or how innovation takes place in the sector. Extrapolating from research in other industries provides some clues. And higher education commentators and researchers have suggested possible explanations, albeit often indirectly. On a basic level, however, innovation occurs when the incentives to innovate are strong and conversely is less likely when the incentives are weak. Hence, if new technologies generate significant cost savings without a deleterious effect on product quality, institutions have a large incentive to adopt them, to generate either higher profits or a surplus that they can spend in other ways (on fancier buildings, administrator perks, reduced workloads for some faculty, and so on).

Not surprisingly, these incentives, opportunities, and costs vary across the array of institutions in the postsecondary sector. Many colleges and universities must be responsive to student needs because their revenues depend on enrollments—notably for-profit privates and nonelite privates that have neither a large endowment to subsidize operations nor prestige to guarantee hungry applicants willing to pay sky-high prices. The result is that these types of institutions may be quite willing to innovate. Public institutions where funding is only loosely tied to student numbers, and even more loosely linked to actual results, are liable to have weaker incentives

to innovate. Hence, innovation is likely to vary by several characteristics, including type of institution, institution size, market niche, and resources. Incentives are partly driven by economics and partly by politics and policy. The faculty, boards, administrators, accreditors, legislators, and others can help drive or stifle change. Just as importantly, the environment in which the organization operates also needs to reward, or at least not sanction, innovation and experimentation.

### Federal and State Funding Mechanisms

Arguably, the mechanisms by which federal and state governments fund higher education represent a major barrier to innovation, both for new entrants of any type and for existing public institutions. Funding flows from federal and state governments to all kinds of institutions through research funding, direct institutional subsidies, and student financial aid. Research funding via the National Science Foundation (NSF) and the National Institutes of Health (NIH), among others, is significant. Research funding, although critical for the well-being of the country, is unlikely to influence more than one hundred of the country's elite institutions. Though the success of the research enterprise is crucial to America's ultimate productivity, our focus here is more on the vast panoply of institutions that are more typically affected by the other factors we have discussed than by the federal (and sometimes state) funding of research.

The public subsidy of public postsecondary institutions is typically provided to state university systems directly. Although typically granted some governing autonomy, institutions are publicly financed and operated; employees are state workers, funding is loosely tied to student enrollments, and money is provided directly out of state general-fund tax revenues. In this environment, few incentives for innovation are built into financing formulas. When the funding for an institution is certain from year to year, the need to reform is not acute. More recently, states have cut funding in order to balance their budgets, without any plan for systematic reform or organizational experimentation.

In contrast to postsecondary education, in K-12 systems, many states have purposively enabled alternatives to the status quo, such as charter, pilot, and magnet schools. The idea that public educational institutions must be both publically funded *and* publicly operated has clearly been breached.<sup>33</sup> Although the outcomes of K-12 charters are in question, a similar approach has not permeated public higher education. There is no public charter university in any state. Over a decade ago, then-Chancellor Barry Munitz invited the California State University (CSU) campuses to become a charter university where they would have increased autonomy and reduced regulation; not a single administration or faculty group wanted to move away from what was then perceived as the security of state funding and operation. Indeed, when California decided to expand its campuses for the UC and the CSU systems, the institutional leaders and faculties chose to create institutions that were far more similar than different from what currently existed. The newest public institutions in California—for example, CSU Channel Islands and UC Merced—offer traditional programs in traditional formats. The workloads of tenure-track faculty are equivalent to their counterparts in the other institutions, there are similar numbers of part-time faculty, and the teaching and learning format is equivalent to what one finds on every other campus. Even the geography of the campuses also seeks to recreate what students have elsewhere.

Student debt levels, particularly among students who attend for-profit institutions, have recently become a target for federal regulators, in part because of the housing crisis. Some in the government believe that students who graduate from a for-profit institution have often assumed too large a debt load because they do not understand what they agreed to when they first enrolled (rather than smart student choices based on relevant curriculum, flexible schedule, or career placement services). Insofar as the housing crisis occurred partly because low- to moderate-income individuals took out loans that they could not afford, the U.S. Department of Education has struggled to come up with ways it might ensure that students do not find themselves in a fiscal situation that is equally untenable. Currently, the department is considering a policy that will tie debt load



to future earnings. The levels vary, but one possible scenario is that a for-profit institution cannot allow a student to take on a (ten-year) loan that is more than 8 percent of anticipated, median gross income; in other words, if a student has a loan of approximately \$30,000, then he or she would need to be able to anticipate earning \$60,000 in the first job. Although the attempt is well intentioned—to assure that consumers recognize the amount of financial obligation they are assuming when they attend a postsecondary institution—the ability of the government to estimate future earnings in this manner is weak at best, and ironically the rule would apply only to for-profit institutions. Presumably, philosophy majors who graduate from a public university might have similar, if not greater, issues with regard to debt load relative to earnings potential, but the traditional institutions are exempt from this proposed regulation.

### Federal and State Regulation

Funding and regulation have tended to go hand in hand, although conceptually they are separable. On the one hand, the state has funded public institutions in a manner that has discouraged innovation, and on the other hand, it has tightened oversight such that it dampens experimentation. The regulatory environment for postsecondary providers is made up of three primary layers. First, the federal government provides a significant amount of student aid through Title IV of the Higher Education Act of 1965 and related legislation, and this aid comes with regulatory strings attached. Second, states have regulatory control of their public institutions and, to a certain extent, private and for-profit colleges and universities. Third, accreditation occurs via regions and professions.

Various policies have acted as a brake on allowing new entrants into the market. Although each state recognizes that it needs to increase participation in the postsecondary sector in order to improve its economic well-being, most states have made no plans whatsoever to work with private and for-profit institutions in a manner that would enable them to increase capacity and help the state achieve increased participation. Some states, such as Mis-

souri, have even moved in the opposite direction and proposed eliminating state financial aid to students who attend nonpublic institutions. Legislation often arises that seeks to prevent for-profit providers from offering courses in a state, thereby forcing students to attend the public system or established private colleges and universities. Online learning, for example, has become particularly problematic insofar as the learning may cross state borders; some states have tried to put limits on these sorts of innovations by not allowing the online provider to offer transfer credit to other state institutions. Accrediting associations also try to make online providers gain licensure in every state where they operate; the expense of jumping through this regulatory hoop in multiple states is prohibitive. Some states also restrict the forms of financial aid students are allowed to apply for if they attend a for-profit institution. Other states insist that only accredited institutions offer doctoral-level courses. California recently passed Assembly Bill 48, which reinforced the regulation of for-profit institutions after the previous bill had lapsed, but the new bill pleased no one. Those who sought stricter controls were dismayed that the state does not have greater oversight of institutions that seem to engage in unscrupulous practices. The for-profits were disappointed that they were again being subject to reporting requirements that are not required of the rest of the postsecondary system.

The federal government also plays a significant role in blocking new entrants to the market and restricting their growth. The Department of Education has sought to play a larger role that some claim inhibits the expansion of the for-profit sector.<sup>34</sup> The dispute largely centers on financial aid and student debt loads. The federal government has long been troubled by for-profit institutions that enroll students for courses and succeed in obtaining federal financial aid for the students (and tuition revenue for the institution) but have many students default on their loans, graduate with a very high debt load, and/or fail to attain the jobs that the students thought they were guaranteed. To combat the rise in student loan defaults, some states have instituted policies requiring that institutions obtain accreditation, while others have established punitive measures if an institution's default rate is determined to be too high. Failure to adhere to or



meet the standards established by such policies results in penalties ranging from fines to forced closure. Such policies seek to ensure that fly-by-night companies do not bilk the taxpayer; while one cannot argue that unscrupulous practices should not be eliminated, these policies have the unfortunate consequence of fainting the entire industry in a manner that does not occur when scandals take place in the private nonprofit or public sector. Just because a public university in Louisiana, for example, may be found to violate the privacy rights of students does not suggest that all public universities in California act in a similar manner. Nevertheless, these restrictive policies have limited the entry and expansion of for-profit institutions, which rely on tuition revenue as their primary means of capital.

Until recently, for all of the other postsecondary institutions, the federal and state governments and the accrediting agencies have been interrelated and played a critical role in shaping the ability of existing institutions to innovate or new providers to enter the market. Another component of Title IV, for example, has stipulated how many online courses an institution may offer and still be eligible to receive federal student aid. Further, eligibility is also contingent on the percentage of the overall operating budget that comes from student aid. That is, if a private or for-profit institution has no resources other than student aid, it will be ineligible for federal support. Institutions also have to be accredited in order to be eligible for student aid. If an institution is ineligible, then a student may not apply for federal financial aid, which in turn prohibits the individual from acquiring state aid. States will prohibit the transfer of credits from an unaccredited institution to an accredited institution; states also may have regulatory control over who is able to offer courses. The result is that for-profit institutions and, to an increasing degree, private colleges and universities pay a great deal of attention to federal and state legislation. The new push by President Barack Obama to increase participation in postsecondary education has come under a great deal of scrutiny with regard to what role, if any, the government sees for nonprofit providers.

Finally, a major concern of for-profit institutions is that the data the federal government collects do not accurately portray their students. Na-

tional databases provide broad brushstrokes with regard to crucial issues such as retention, completion rates, default rates, debt burden, and a host of other issues, but they do not realistically reflect the students who attend a for-profit institution. Currently, the Integrated Postsecondary Education Data System (IPEDS) at the National Center for Education Statistics accounts for less than 50 percent of all students in four-year institutions and an even lower percentage of two-year students, because of the way they track and count students. IPEDS does not account for the graduation rates of incoming transfer students or of part-time students. The result is that IPEDS does not analyze over 50 percent of the total student population. Instead, the portrait is often of students who are duped by unscrupulous admissions agents in for-profit institutions. Such a portrait results in stultifying policies and legislation that creates an organizational straitjacket that stifles innovation.

#### Accreditation and Nongovernmental Associations

Accreditation was a well-intentioned and useful idea that initially provided careful oversight without unnecessarily stifling innovation. One only need look at any developing country to see the problem that accreditation sought to overcome. In much of Latin America, for example, anyone may open a college or university. In Central America, the phrases *universidades garajes* or *universidades patio* are used to signify that if someone has a garage, then he or she is able to advertise that a new university has opened and offer classes to the unsuspecting public.<sup>35</sup> From this perspective, accreditation can function like the U.S. Food and Drug Administration, warning the public about the health of a particular drug (or institution). Accreditation has the potential to regulate an industry and keep out providers that offer substandard services.

Accreditation in the United States has also helped some struggling institutions make themselves into reputable organizations. The tribal college movement, for example, started in the 1960s with federal legislation as a way to enable Native Americans to open community colleges on Indian

reservations. Frequently, with a small staff and a miniscule budget, administrators had the best of intentions—to educate individuals in areas where unemployment rose as high as 70 percent—but they had no idea how to go about creating a viable institution. Accrediting bodies worked with the institutions on many levels—from creating a curriculum to professionalizing administrators—to ensure that these new institutions eventually met minimal standards for accreditation.

While such attempts may have been useful in the past, a great deal of literature highlights how standardization affects innovation.<sup>36</sup> Accreditation can be seen as a normalizing agent; in some instances, such standardization can be useful to protect against consumer fraud and to help struggling institutions develop. Setting standards for outcomes, for example, is helpful, but accrediting agencies also tend to have specific expectations about the processes that must be employed to meet those outcomes. The challenge, however, comes about when new entrants wish to enter a market. These new entrants are capable of developing on their own and believe that they have a product equivalent to or better than those institutions that are currently accredited. Accreditation fosters risk aversion and standardization, but by definition, aspiring new institutions are start-up companies that must be risk takers and are often offering something new and different. Accreditation is a model that wants institutions to conform to norms, while new providers, like those in the for-profit world, work against those norms.

Online courses, for example, challenge educators to think in new ways about learning and pose a challenge to traditional accreditation. Courses that begin every other week or are not based on credits but instead on what a student learns differ from what one may find in traditional two- and four-year institutions. The process by which students find their way to a for-profit institution and the tactics employed to gain financial aid for those students will be a dramatic departure from the norm. These differences may not all be bad, but the tension emerges when the dominant institutional norms are process based rather than outcome based. That is, if a traditional education is where one achieves a degree after the accumulation of a set number of credits over a set time horizon, then those provid-

ers who suggest alternative processes will find barriers thrown in their way until they meet the norms that have been created. However, if one were to focus on outcomes—what does a student learn, what is the satisfaction level of future employers, and so forth—then processes can be dramatically different from one another. Accreditation, however, is more process focused, where a template of possible processes exists, and if one does not adhere to those processes, they will not receive accreditation. As we noted earlier, the lack of accreditation for an organization can be a death knell insofar as the students will be unable to access federal and state grants and loans. So long as accreditation continues to focus on process rather than outcomes, innovations in program design, competency-based credits, and online delivery may not take root, which will preclude innovative providers from setting up shop.

Like all trade associations, the higher education lobby exists to preserve the missions of its various constituencies, whether the American Council on Education (ACE) for traditional institutions, the American Association of University Professors (AAUP) for the faculty, the Association of Governing Boards (AGB) for trustees, or the Association of Public and Land-grant Universities (APLU) and the Association of American Colleges and Universities (AAC&U) for public institutions. Given their emphasis on preservation, these groups are unlikely to push for innovation or the entrance of new providers; on the contrary, their job is often to fight any changes that seek to alter current arrangements. They have been particularly successful acting as gatekeepers that keep new entrants out. ACE, for example, has a history of working actively against the interests of for-profit institutions; the AAUP has worked with their member campuses on legislation that would privilege institutions that employ full-time faculty as opposed to contingent labor.

Of course, any set of organizations with common interests has an incentive to create groups that lobby to advance and protect those interests. Indeed, the for-profit colleges and universities have an association, the Association of Private Sector Colleges and Universities (APSCU), which was particularly effective during the Bush administration. Regardless, when one

looks at the alphabet soup of higher education associations in and around One Dupont Circle in Washington, D.C., one cannot help but conclude that their emphasis is largely on maintaining the status quo. For example, the publications from ACE over the last decade do not suggest that significant changes are either imperative or even necessary in the way higher education is structured or functions. The underlying assumption is that the system works relatively well, and innovation is relatively unimportant compared to the ability to expand the current structures that characterize the status quo.

#### Faculty Governance and Contracts

At the turn of the twentieth century, no one looked to the United States for primacy in higher education. Elite institutions existed in Europe, primarily Germany and England, and America's colleges and universities were largely considered intellectual backwaters, many of them small, private, religious institutions. They could fire and hire faculty at will, and faculty governance did not exist except in a handful of institutions such as Harvard and Yale. During the ensuing century, the dynamic changed. The United States now has a preponderance of institutions rated the best in the world in whatever international ranking systems you choose. Tenure for faculty developed in the United States and, with it, structures of shared governance. One can reasonably argue that throughout much of the twentieth century, a great deal of innovation has occurred in the presence of tenure and academic governance (which themselves were innovations in an earlier era) and, further, that quality institutions have emerged in a manner unexpected in 1900. While we certainly make no claims of a causal relationship between faculty tenure, for example, and institutional quality, we also would be foolish to argue the opposite: that tenure ensures institutional stagnation and loss of quality.

Rather, we suggest that the parameters of innovation are subject to shifting determinants, and what may be an innovative structure or practice at

one moment may appear rigid and sclerotic at another. By the end of the first decade of the twenty-first century, American higher education has arrived at a moment when institutions hire more part-time and nontenure-track faculty than tenure-track faculty, but the panoply still gear their reward structures toward tenure. Similarly, as faculty compensation contracts have shrunk and some institutions expect faculty expect to do additional work, governance has become more akin to labor negotiations than to discussions about how to improve academic offerings. Budget cuts in states such as California, for example, are a useful illustration of the current state of faculty governance. Over the last several years, California has cut the budgets of its state higher education systems and raised student tuition. The result has been reduced services for students, some sizable reductions in faculty pay via furloughs, and hiring freezes. Not surprisingly, a great deal of faculty energy has been concentrated on how to handle the budget cuts, but the recommendations underscore how traditional institutions have moved away from innovation. Faculty have called for greater transparency in the budget and demanded that the state restore full funding. Nowhere are there recommendations that faculty should teach more—an obvious cost reduction—or that institutions could eliminate program duplication. Indeed, if full funding were restored to public higher education in California, one suspects that the legislators, regents, administrators, and faculty would breathe a collective sigh of relief and go back to business as usual. The faculty and their contractual and governing obligations, then, are not so much a roadblock to reform; instead, the manner in which these contractual and governing obligations are interpreted preclude faculty decision makers from developing innovative ideas that might improve the teaching and learning capacity of the institution.

Private universities have tenure-track faculty and an elaborate governance system; for-profit institutions do not. Both types of institutions, however, are more experimental and innovative than their public counterparts. The point is not only that such contractual obligations can retard innovation, but also that the environmental and historical contexts in

which institutions reside largely determine whether an institution's actors embrace or reject innovation and change. In higher education, progress toward organizational change has been muted partly because the traditions of faculty governance lead to deliberative, drawn-out change, driven by those who see little value in it.

## LEVERS FOR CHANGE

We have argued that American higher education, although long considered the best in the world, is in need of creative and innovative ways to transform itself to meet the changed realities of the twenty-first century if it wishes to maintain its preeminence. Whereas reward structures and governance mechanisms once worked to help create a productive system, we suggest that they are now frequently retarding innovation in academe. Although consumers once wanted leafy campuses where their teenage children might spend four years studying for a degree, today the new majority of postsecondary learners—working, adult, part-time students—demand a different model. The conventional model—of a traditional curriculum taught by full-time tenured professors with a workload of a handful of classes a semester—certainly had its advantages, but it is impossible to scale this model to meet the growing demand for postsecondary education in an era of declining resources. A few entrepreneurial nonprofit traditional institutions, particularly privates, have begun to move away from this model. USC, for example, through a partnership with the for-profit company 2tor, Inc., has launched an online master of arts in teaching. The partner provides marketing, student recruitment, and technology support, while USC provides admissions, curriculum design, and instructional delivery. As part of the attempt to scale high-quality instruction, it has hired new clinical faculty who have the exclusive task of online instruction. The new barbarians at academe's gates are for-profit providers; whereas once they were but an insignificant number of trade schools in primarily urban locales, the demands of the knowledge economy have made these providers the fastest-growing sector in higher education.

Nevertheless, organizations will not automatically become innovative simply because the environment demands change. Our concern is that some may rise to the challenge, but many will remain wedded to past structures and fall into mediocrity, or even die out. The recent economic crisis and the resulting impact on state budgets have not yet brought about creative ideas that might lead to structural solutions. Instead, they have forced state policy makers and institutions to attempt quick fixes with little strategic foresight.

In order to stimulate the climate for innovation, we argue that federal and state governments must have a more active and purposeful approach in shaping the environment that colleges and universities face. Institutions themselves must recognize the changed realities and aggressively move to implement new approaches to instruction and other services. Several levers suggest themselves to us. Each can be spurred in part from action *outside* the institutions themselves—by more focused mission differentiation, smarter regulation, new funding mechanisms, systemic federal R&D, and so on—and in part from *inside* institutions themselves through creative use of online technologies, specialization of faculty and staff roles, more market-oriented labor contracts and working conditions, and so on. One is unlikely to happen without the other. Essentially, we argue that the key to the success of the postsecondary sector in the new millennia will be the resolution of several critical tensions.

### Mindless Mimicry Versus Strategic Differentiation

We noted earlier that the history of the twentieth century was one in which postsecondary institutions tried to become more alike than different from one another. The result was not only that a teachers college became a university but also that the teachers college created the concomitant trappings of a research university—a campus, a research profile for the faculty, athletic facilities, and the like. The outcome is that four-year public institutions and two-year community colleges are more alike than different. However, to foster a creative environment, an institution's leaders need to

determine the niche they want to fill. Once that is done, a variety of other changes may come into play. Tenure as a system, for example, may well suit some subset of institutions, but not all campuses. A traditional semester system may work for St. John's College, which caters to eighteen- to twenty-two-year-old students who wish to study the classics, but would certainly be inefficient for an organization that desires to speed up learning for a part-time adult clientele in need of immediate employable skills. New providers are particularly adept at market focus, whereas traditional colleges and universities have had a difficult time determining what their market niche should be. Productivity increases seem likely to come about across the sector if institutions become more focused and more differentiated from one another.

Although decisions about institutional strategy are under the purview of trustees, regents, donors, and administrators, federal, state, and accrediting agencies have considerable sway. Indeed, although it would be politically difficult, state legislatures could clearly define the missions of the institutions they fund. The California Master Plan for Higher Education of 1960 is often considered the benchmark. It clearly delineated UC as the primary academic research institution, responsible for undergraduate, graduate, and professional education, and with exclusive jurisdiction in public higher education for doctoral degrees. CSU's primary mission was undergraduate education and graduate education through the master's degree, including professional and teacher education. The California Community Colleges were to have as their primary mission providing academic and vocational instruction for older and younger students through the first two years of undergraduate course work. Over time, a combination of legislative, board, and institutional decisions have muddled this delineation, adding doctoral degrees to CSU's mission, remedial education to the community colleges, noncredit extension to UC, and so on. Extra campuses have been added that mimic existing ones, based only on the notion of geographic service. A disciplined state legislative approach could force public universities and colleges to become more focused and better delineated, eliminating duplication, and speeding up the time to a degree.

### Guaranteed Funding Versus Incentive Funding

Although state budget cuts have challenged all entities receiving public dollars to find ways to save money, as we noted earlier, the response has generally been haphazard and reactive rather than strategic. Given that the long-term prospects for state support returning to prior levels are grim, the time has surely come to reexamine how higher education receives public funding, both at federal and state levels. Although there is no clear blueprint for guaranteeing that funding mechanisms ensure innovation—and any changes would likely be met with fierce political resistance from the state institutions themselves—it is plausible that current structures could be improved. For example, rather than ensuring funding simply on the basis of enrollments, some form of performance-based funding (for example, based on student graduation rates) for some fraction of revenues is possible.

Funding tied to real costs per student could be an incentive for institutions to find ways to drive down costs while maintaining quality. When a student has reached a particular credit limit, he or she could receive no more funding; for this formula to work, students would need to be able to take available courses and not take unnecessary courses because they are closed out of the courses they need. Courses also must be available year-round rather than when faculty wish to teach them. States could cap funding for certain levels of education (for example, first-year undergraduate student courses), thereby encouraging institutions to offer what they do best. States could also encourage large public research universities to become either private nonprofit or for-profit institutions.

Finally, similar to the Obama administration's changes in K-12, the funding of higher education could occur in part through competitive grants. This happens now on the research side, but not on the student side. If states removed automatic funding and instead made institutions competitive based partly on outcomes, they could strengthen incentives to innovate. Of course, probably sooner rather than later, states will need to face the reality that direct operation of public higher education institutions may no longer be viable. State legislators and the taxpayers will need



to come to terms with whether they can maintain public commitment to educational opportunity without professors and custodians on the public payroll, and without dozens of state institutions offering every subject and every degree.

### Responsible Regulation Versus Restrictive Oversight

Except for the starkest libertarians, most people will acknowledge that the government has a reasonable role to play in the oversight of various industries. The problem arises when that oversight is so restrictive that it stifles creativity and drives potential new entrants from a market or the regulations apply to some, but not all. Regulation is not inimical to innovation, and without it, consumers are left unprotected from those in the marketplace who seek to make a profit at the expense of the individual. However, much of the state, federal, and related oversight by regional and professional accrediting agencies now serves to stifle creativity in large part because those who make the rules and regulations are unable, or have no incentive, to keep pace with changes in technology, outsourcing, and globalization. The organizational literature is replete with examples of how policy incentives are generally more successful than sanctions if one wants to bring about long-term reform. Incentives that promote clear outcomes in student learning might appear to be a more fruitful avenue to explore, for example, than those that restrict new entrants to the market based on an unclear prediction about debt-load accumulation.

A fully fledged system of outcomes-based accountability in higher education is surely coming, but the pace of change has been slow. A system of largely autonomous institutions and a large public sector that receives funding on a per-student enrollment basis with little or no consequence for student outcomes is unlikely to ever have strong incentives to innovate. Although several states and accrediting agencies have moved toward measuring student retention, graduation rates, learning, or long-term labor success, progress has been painfully slow. Students still have virtually no comparable information on performance of colleges and universities, and

policy makers have not based funding or regulation on systematic criteria that would spur innovation.

### Business Models Versus Educational Models

The future is likely to lie in higher education organizations adopting a mixture of business and educational models rather than reflexively assuming that one set of institutions has nothing to learn from the other. For traditional, nonprofit, private institutions and public institutions, this means that many of the current ways of organizing are in need of reform—including everything from more flexible scheduling; streamlined program offerings; professional student advising, marketing, and recruiting; starker differentiation of roles among research and teaching faculty; and integration of IT in instruction. Though tenure may be confined to a handful of elite research universities, uniform salary schedules for professors are unlikely to survive, and light teaching loads will be a thing of the past. These kinds of innovations are, of course, controversial, but those entities that adopt them will likely grow and flourish, while those that resist will slowly wither and eventually die. Traditional providers will have to adopt some of the business models they fear and dislike. They may do so in the form of partnerships with new or existing companies that effectively outsource some of their functions, or which are able to make the needed investments in the development of technology.

Similarly, just as traditional public and private colleges and universities need to overcome their reluctance to reform and become more focused on costs, benefits, and outcomes, so too will the for-profit world need to reform its ways. Part of the challenge for for-profit providers has been that they are profit-seeking organizations in a traditionally nonprofit environment. The drive for federal and state oversight did not come out of thin air. Some providers were unscrupulous and some companies did bilk consumers—and these excesses were of consequence to the taxpayers. While we entirely concur that for a company to have long-term sustainability, consumer confidence is essential, we also know that in any environment

there will be grifters and scam artists. The for-profit industry's response, however, has largely been one of extreme reluctance to open its books and an unwillingness to provide greater transparency. In the educational world, however, such transparency is critical; without it, for-profits will continue to struggle against the guilt by association that plagues their image today.

### Disjointed, Lethargic Innovation Versus Purposeful R&D

Finally, for an industry to innovate, it must invest in new ideas, test and evaluate them, spread successful ones, and drop failed efforts. This requires an R&D process. In U.S. higher education, relatively few mechanisms exist for this process to take place. Most institutions have limited slack resources and are unable to make large-scale investments in potentially significant breakthroughs, particularly in the development of instructional technology, for example. Tuition or state-based subsidies, rigid labor rules, administrator perks, and aging infrastructures tie up resources, with few incentives for strategic investment capital. Accreditors and policy makers may spread innovation through rules and regulations, but game-changing innovation is unlikely to spread this way. The for-profit sector, by investing in innovation from marketing to recruitment to instruction, has developed an R&D process. But traditional providers have been slow to adopt many of its practices. Competitive forces will, over time, likely increase adoption, but slowly.

This point suggests to us a further redefinition of the role of government. As we noted earlier, through changes to financing and regulatory environments, both federal and state agencies might spur colleges and universities to develop and experiment with new techniques and products. But government could also be much more activist—in partnership with the private sector, think tanks, and academic researchers—in supporting large-scale efforts to develop innovations, particularly in instruction. An infrastructure could systematically test the efficacy of newly developed innovations and potentially spread them. Currently, we know very little about what works in college instruction and curriculum, and what we do know often comes from innovative online learning programs. Through the NSF, the

Department of Education, or some new entity, government could solicit competitive proposals that encourage traditional higher education institutions to develop and test operational innovations. It could give grants to test how an innovation already developed elsewhere could be transplanted to the university setting. Although not all institutions would play in such a competition, and many would oppose the effort entirely, such programs could effectively serve as federal incentives to innovate. States could do the same, but given the scale of investments needed, this seems like an appropriate role for the federal government.

### CONCLUSION

We have not intended to draw a vulgar distinction between traditional colleges and universities that have not changed and the new entrants that have. As we noted at the outset of this chapter, the research enterprise within colleges and universities has gone through a sea change in the last generation, and these institutions remain the envy of the world. Different institutions and states also are undertaking experiments in teaching and learning that could have far-reaching impacts for students and taxpayers. Nevertheless, we remain troubled by an industry that all too frequently seeks answers to difficult problems by aping what it has done in the past rather than thinking about how it might do things differently in the future.

There is a clear imperative for greater innovation in U.S. higher education. Buffeted by demographic, economic, and technological forces that are unlikely to abate soon, the traditional way of doing things will lead to a deterioration in access and quality. Although the products, structures, and organization of the industry once served the nation well, that set of arrangements no longer appears sustainable. Without significantly greater innovation to drive productivity increases, many colleges and universities will struggle. Other labor-intensive industries provide some clues as to what is needed, as do the increasingly successful for-profit colleges and universities that were once confined to the fringes of the sector. We suspect that the increasing fiscal and competitive pressure on traditional



colleges and universities will force many to change: movement toward the redefinition and even eradication of tenure in some classes of postsecondary institutions, higher class loads, use of contingent faculty, mission specialization, consolidation of programs, and outsourcing of some noncore functions (technology support, marketing, recruitment) are likely to accelerate. Some institutions that resist change may find themselves out of business altogether.

An institution's actors are capable of bringing about discrete changes within their institution; a more competitive environment is also likely to enhance the climate for innovation. Nevertheless, discrete internal changes and a competitive environment on their own will not bring about wholesale reform of the postsecondary industry. The solution to increasing innovation in higher education is not to abandon public funding or consumer protections. Rather, it is to redefine the state's role in a way that is much more purposeful: designing a regulatory framework for the twenty-first century that protects students but encourages new entrants into the market, compels mission focus, provides systematic incentives for existing institutions to reduce costs and devise high-quality-at-scale solutions, and reserves a federal role for R&D in instruction. Such changes are likely not only to enhance cost savings and increase economic competitiveness, but also to increase access to higher education and help the country become more equitable.