

POSSIBLE FUTURES FOR
HIGHER
EDUCATION'S
ECONOMIC MODEL



A WHITE PAPER
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This is the second in a series of three white papers prepared as part of the NACUBO Higher Education Economic Models Project, an initiative undertaken in 2014 to:

- Provide NACUBO members with a comprehensive tool that provides the foundation for their institutions to engage in complex conversation about higher education economic models that are financially sustainable, efficient, and effective while meeting the needs of students, employers, and society.
- Influence the national debate on higher education economic models by providing NACUBO member institutions with objective quantitative and qualitative information.
- Develop a communications strategy that gives NACUBO leaders and our member chief business officers a prominent voice in the discussion about changes to the higher education economic model.

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What are the signs that a business model is running out of gas?

“The first clear stage is when the next-generation innovations offer smaller and smaller improvements. If your people have trouble thinking of new ways to enhance your offering, that’s a sign. Second, you hear customers saying that new alternatives are increasingly acceptable to them. And finally, the problem starts to show up in your financial numbers or other performance indicators.”

—Rita Gunther McGrath, Columbia Business School

On a daily basis, higher education is criticized for failing to maintain affordability and accessibility. Critics assail the industry’s resistance to change and Ivory Tower culture. Parents, students, and politicians demand new operating models and outcomes.

In response to these and other assaults on the current higher education economic model, NACUBO has undertaken its higher education economic models project. Prior project papers recount the historical background of the current model and NACUBO staff’s research into the factors inhibiting change to new ones. This paper describes some of the efforts undertaken by colleges and universities to ensure their future relevance and economic sustainability.

While we can’t forecast the future of higher education with certainty, we know the possibilities range from maintaining the status quo to replacing current institutions with something completely different. The unbundling of course delivery that began with online education may spread, as Selingo (2013) has forecast, to complete unbundling of higher education degrees with the expansion of competency-

based education, personalized adaptive learning systems, and other technologies that make learning available anytime, anywhere.

Although political, social, and financial factors point to the urgent need for colleges and universities to change their economic models, and the pace of change in our world is rapid and increasing, the pace of change in academe is relatively slow. Current rates of change remain slow because, as Menand (2010) notes, changing a system as old as American higher education is extremely difficult: Its structures and processes have become so ingrained that members lack the means to identify what and how to change. Philip Hanlon, president of Dartmouth College, concurs,

It might take a suitable shock from the outside before higher education leaders become—by necessity—inventive. If the next act of Congress, after the Affordable Care Act, is the Higher Education Affordability Act, institutions may face any number of requirements. Then leaders might say, “OK, we’ve

got to be creative. We've got to do something different." But, I just can't see it coming from within the system, because presidents at higher education institutions have learned to be cautious. (Shea, 2015, n.p.)

Consequently, most change, to date, is occurring at the margins and not truly transforming American higher education. Nonetheless, even higher education's "status quo" is a moving target as colleges and universities adjust their missions, structures, products, and processes in response to changing societal expectations and financial realities [see NACUBO White Paper #1: *What is the Current State of Economic Sustainability of Higher Education in the United States—and How Did We Get Here?*]. Much of the change is isomorphic—the tendency toward homogeneity—as colleges and universities increasingly emulate those above them in national rankings. Research has become increasingly dominant even at so-called "teaching institutions," and colleges and universities aspiring to the next level have moved up leagues in athletics. The result is less diversity among institutions. The pursuit of prestige places no limits on spending for faculty, facilities and research funding, and it is unclear who, if anyone, will declare an end to this "arms race."

In its *2016 Outlook for Higher Education*, Standard & Poor's (S&P) cites the need for institutions to increasingly focus on a distinctive niche and the unique experiences they might offer students. Referencing institutional reports of continued failures to meet enrollment and budget targets (even against downward-revised numbers), Craig and Williams (2015) advise,

Forced to demonstrate definitive value, midtier institutions will have to decide what they want to be when they grow up. If they're in the business of providing basic degree programs—where value to the student accrues primarily as a result of the credential itself—they will become a discount provider:

delivering the program as inexpensively as possible. If they can truly provide premium programs with a high return on investment, they will be able to continue to charge high tuition. What they must not do—if they want to survive—is stand still. (n.p.)

While these authors see future opportunities for these institutions, if they are willing to undertake necessary change, Lapovsky (2013) takes a dimmer view: "Most other industries facing similar conditions would contract. Yet, colleges and universities rarely shut down given the power of tradition and fearful alums" (p. 10).

This paper examines some alternative futures for higher education's economic model. These futures do not represent a prescriptive formula for institutions to follow but, rather, are extractions and syntheses of ideas being discussed and tried by institutions across the country. They are presented to engender conversations within and among institutions as well as to stimulate development of mission-appropriate action plans for colleges and universities who believe that their institutions must change to accommodate the realities of the 21st century and/or they need to hasten the pace of change. These futures reflect varying degrees of change to core aspects of college and university economic models, including their missions, structures, competencies and processes, and resource strategies.

Challenges to change in higher education are numerous. As many have noted, the multiversity is a composite of several business models, which engenders confusion and complexity:

...the problem is that higher education institutions as enterprises are not as neatly boxed as the value-adding process business model implies. Thinking about higher education's business models and how they might be changed, however, does provide an important analytic framework for asking about a higher education future

in which colleges and universities are better aligned with the market, are more productive, and are better able to respond to demands for lower operating costs, more convenient programs, and greater accountability.” (Zemsky, R. (2013), pp. 98-99)

Peter Drucker and other renowned management consultants have identified the core elements of business models for corporations and other for-profit industries. Applied to higher education, the four key elements of the economic model are: institutional mission (outcomes, why and for whom), organizational and industry structures, institutional competencies and processes, and resource strategies. Assessing the economic sustainability of an institution, then, requires looking at more than just the GASB- or FASB-compliant financial statements; it calls for a wider inspection of the institution’s activity, including its enrollments, programs, decision-making processes, and so forth. Current apparent success, however, Drucker cautions (1994), does not ensure continued longevity:

There are two more clear signals that an organization’s theory of the business is no longer valid. One is unexpected success—whether one’s own or a competitor’s. The other is unexpected failure—again, whether one’s own or a competitor’s. (n. p.)

Despite Drucker’s warning, some higher education leaders continue to assert a “stay the course” philosophy. They believe the current environment is yet another downturn that will pass and/or that historic resiliency will ensure their institutions endure despite current threats—remaining oblivious to the significant changes higher education’s economic model has undergone over the centuries in order to remain relevant (moving, for example, from religious to secular, from undergraduate liberal arts to graduate research institution). Unwilling to cut

programs or employees despite underenrollments or obsolete services, these leaders have engaged in traditional budget-cutting strategies of across-the-board cuts or further deferring deferred maintenance. Some institutions have even reacted by adding programs – in some cases, academic, and, in others, in student life and athletics with little evidence of the programs’ long-term benefit or relevance to mission. Seeking to emulate more prestigious colleges, they have invested in new dorms and athletic facilities and expanded research enterprises resulting in increasingly similar institutions but virtually no change in relative rankings.

The response to diminishing resources in these institutions frequently manifests as increased expenditures on marketing and enrollment management, despite the lack of evidence of the success of such efforts. The title of Carlson’s October 2015 article, “Missing the Mark on Enrollment and Revenue: No Easy Fix,” aptly describes the results of these initiatives.

Despite the positive view taken by some institutions, both Moody’s and S&P project continuing difficulties and question institutional survival rates, at least for smaller colleges and universities. This view is shared by many participants in the NACUBO Economic Models Project focus groups conducted in 2015 and 2016. And while larger institutions may be immune from the day-to-day struggles of their smaller counterparts, all of higher education continues to bear the brunt of critique of increasing price and perceived diminishing outcomes while dealing with diminished public resource support (if public) and variances of the economic cycle on fundraising and investment returns (whether public or private). Thus, the remainder of this paper focuses on efforts colleges are undertaking to change their economic models. While long-term outcomes will not be known for years, we include case stories of institutions whose strategies to date appear to place them on positive trajectories.

Assumptions

To frame the discussion of future economic models of colleges and universities, it is useful to first enumerate our assumptions:

- Current students (Generation X and Millennials) and those of the future (Generation Z and beyond) have different expectations for higher education than those of past generations. They learn by doing, seek engaging learning, want to co-create and self-educate, and are entrepreneurial and interactive. These characteristics have significant implications for how colleges and universities need to organize and deliver.
- Public funding from states and local sources will, at best, remain static or, more likely, continue to decline on a per capita basis.
- Faith in higher education is wavering, and there will be continued public skepticism about outcomes and debate about public vs. private value.
- The changing demographics of the U.S. will dramatically shift the demographics of college campuses. Among the changes, traditional aged students (aged 18 to 22) will decline as a share of college enrollees, while older students will return to college to gain skills and knowledge needed in a changing job market.
- Federal funding for student financial aid will not expand in scope or significantly per student.
- As Moody's and others have forecast, with more than 4,000 higher education institutions, the U.S. has too many; some will not survive the current economic reality.
- Federal funding for research will continue to decline.
- Tuition costs will continue to rise, albeit much more slowly than in the past 20 years in response to affordability limits.
- Demand is elastic, so increasing numbers of students will be driven to the relatively less expensive providers. Students and their parents who would have once considered upper tier privates will decide to attend publics, and community college education will be seen as an affordable substitute for lower division education at four-year institutions.
- Globalization of higher education will increase both demand and supply. In 2009 U.S. colleges and universities attracted 20 percent of the world's international students as growth economies, particularly in Asia and the Middle East, generated sizable enrollments. Increasingly, competition from institutions in other countries, including new colleges and universities in former major exporters such as India and China, will eventually decrease the numbers coming to the United States. However, as long as U.S. higher education is recognized as the international "gold standard" and growth of the middle class economies abroad continues, many students will continue to opt for education in the U.S.
- The U.S. will continue to set goals to increase the number of post-secondary completers in order to meet labor market needs. Federal and state governments will use performance funding and other metrics to incent colleges to respond to the market.
- Students will continue to recognize a return on investment for higher education and will increasingly need to engage in lifelong learning to maintain currency in jobs and professions. Their return on investment will encompass not only economic benefits in terms of higher earnings, including fringe benefits and reduced likelihood of unemployment, but also increased well-being resulting from better health and active social and civic participation.
- Colleges and universities will increasingly rely on part-time and non-tenure-track faculty to fill instructional roles rather than tenure track faculty. Unbundling of the faculty role

will also lead to expansion of support staff in instructional design and advising.

- Competition within the industry will continue, both for students and faculty. Competitors from outside traditional higher education will play increasingly significant roles.
- Financial volatility and government regulation will continue to play significant roles in higher education's external environment.

Four Levers of the Economic Model

Mission

Mission identifies an institution's "ends"—that is, its purpose, outcomes and the individuals it serves. As such, it enumerates the degrees a college or university will award, in what disciplines, and directed toward what type(s) of students. The centrality of "mission" to an institution's sustainability is the focus of Zemsky, Wegner, and Massy's *Remaking the University: Market Smart and Mission Centered*. While they concur that market domination can cause a college to sacrifice its mission, they argue that the market is both a reality and a benefit to balance declines in public funding. Further, the market's provision of "discretionary" income allows colleges to subsidize activities that are critical to mission attainment: "But what happens when a college or university is barely making it financially?...Without the ability to subsidize programs, the institution has no way to assert its mission. The institution must remain market smart to survive, but it can no longer be mission centered." (n. p.)

While aspects of an institution's mission may appear immutable (for example, its doctrinal orientation if religiously affiliated), the past two decades have seen significant shifts in missions of at least three types of institutions. First, in some states—Florida is a prominent example—two-year, associate's degree-granting institutions have dropped "community" from their names as they have transitioned to granting bachelor's degrees in addition to associate's degrees. [See Community to State College sidebar on this page].

Community to State College

In 2014 Paseo Hernando State College ("PHSC") in New Port Richey, Florida, began offering two baccalaureate programs, in Nursing, and Supervision and Management and transformed from a community college to a state college. These new programs respond to local workforce needs, ascertained during community summits that included governmental, educational, and business leaders. CBO Ken Burdzinski reports that local hospitals wanted opportunities for their nurses to obtain Bachelor's degrees without leaving the local community and saw PHSC as an excellent partner given the extremely successful RN and LPN programs already in place. In order to leverage opportunities with institutions in the region, PHSC also partners with local four-year colleges and universities to provide 2+2 programs in IT and education, with delivery of upper-division courses on the PHSC campuses.

CBO Burdzinski notes that one of the challenges to making these changes is addressing them with the regional accreditor, in this case the Southern Association of Colleges and Schools. He likens the transition to a baccalaureate institution to the scope and complexity of reaffirmation of accreditation. In preparation for such a structural change, the Business Office needs to be prepared to show the economic feasibility of the new programs with pro forma financials, thereby demonstrating that the new programs will not adversely impact the institution's sustainability.

Liberal Arts With Helping Hands

Cedar Crest College, a small women's college in Allentown, Pennsylvania, found a way to stay true to its liberal arts tradition in the 21st century while adapting to student employment aspirations. Amid calls by politicians and others for job relevancy, Cedar Crest focuses on its core value of women as leaders and has adopted a "liberal arts with helping hands" mission, according to Chief Financial Officer Audra Kahr.

"Liberal arts are embedded in all we do," states Kahr. She cites the importance of skills garnered from the liberal arts curriculum—problem solving, communications, and critical thinking—to Cedar Crest's growing nursing program. Art Therapy, introduced a few years ago as part of the college's efforts to reinvent and reinvigorate its programming, leverages the college's strengths in the visual arts and multiple media. The college has also closely linked nursing with its performing arts program, with theater students acting as patients in simulations that afford enhanced interaction over that with lab mannequins.

Another group of institutions, including Point Loma and Cedar Crest College, have expanded their liberal arts missions to include professional programs, often in business, education or healthcare [see Liberal Arts with Helping Hands sidebar on this page]. Other liberal arts colleges have revamped and refocused their curricula to demonstrate enhanced relevance in a world increasingly aligning higher education outcomes with employment. Agnes Scott with its focus on leadership in a globalized world, Augustana's (Illinois) "coming of age" theme, and Bennington

College's reinvention of the liberal arts to cross-disciplinary models focused on solving the great problems of our times are all examples of such changes. These re-branding initiatives have also responded to the need for these colleges to differentiate themselves and define their niche. In particular, small, private liberal arts colleges trying to sustain a high-price, high-cost model have a significant need to establish distinctive products and services. Summarizing the impetus for these changes, Colleen Hester, president of MacMurray College in Illinois, stated, "We realized that in order to be sustainable, you have to be novel" (Strahler, 2015, n. p.).

A third group of institutions, women's colleges, have elected to broaden their student populations by going coed; since 1950, approximately 160 (80%) of the then women-only institutions have adopted coeducation. Other strategies have been implemented to expand institutions' demographic reach. Some colleges have begun to look outside the traditional student markets to recruit individuals who have "stopped out" and may be enticed to return to complete degrees. Public colleges and universities now compete across state borders to bring increased numbers of out-of-state residents to their campuses. Both public and private institutions employ enrollment management strategies to increase international student enrollment. One example is the "gold rush" observed by Associated Press Reporter Collin Binkley (2015) when the U.S. eased trade and exchange restrictions with Cuba. Numerous colleges and universities from across the United States promptly rushed to establish student exchange opportunities or to even open Cuba-based campuses, as in the case of Florida International.

In addition to expanding the number of students from abroad enrolling on U.S. campuses, colleges and universities are constructing branch campuses in other countries. In one of the largest endeavors, Qatar has established its Education City—home to branches of Northwestern, Cornell, Carnegie

Mellon, Georgetown, Texas A&M, and Virginia Commonwealth—to bring classes ranging from fine arts to medicine to engineering to Qataris on their home ground. Even community colleges, typically chartered to provide workforce development and transfer education for local constituents, are expanding their horizons and opening campuses overseas in efforts to offset diminishing public funding. For instance, Lone Star Community College in Texas now operates a vocational school in Jakarta, and Nebraska’s Central Community College assisted Bahrain Polytechnic to open an entrepreneurship program. As Otter (2015) notes, creating international campuses allows colleges and universities to expand their mission and brand but also requires adaptation to the region’s norms:

The successful ventures have been established in collaboration with the communities into which they are planting new roots and they have thoroughly researched and know the cultures into which they are moving. The successful relocated campuses know and are able to capitalize on how their brands are perceived in that region, whether domestic or international. . . . The delivery of international education requires the expertise to contextualize that education and the engagement in discussions with countries about their political and educational systems. (n. p.)

While most institutional recruitment and admission changes have resulted in broader missions, Trinity Washington University (Washington, D.C.) decided to change its focus to educating women in its own community, in contrast to its traditional demographic and regional geographic market. Under President Patricia McGuire’s leadership, Trinity has nearly doubled its enrollment, educating more graduates of Washington, D.C. public schools than any other private college or university. During its 2006 accreditation, evaluators

Nine Universities in One

Thanks to collaboration between local business leaders and the University System of Maryland, Rockville, Maryland, is no longer a higher education desert for those wanting a bachelor’s or graduate degree. Although well-served by Montgomery College for two-year programs and degrees, the largest county in Maryland had lacked access to four-year institutions.

Since 2000 the Universities at Shady Grove (USG) have provided access to not one but nine Maryland universities. Eighty on-site programs are offered ranging from exercise science through Salisbury University, to simulation and digital entertainment through the University of Baltimore, to accounting through the University of Maryland. Programs focus on workforce needs for the region and are offered on full- and part-time schedules, as well as in the evenings and weekends, to accommodate student needs. Students are also attracted by USG’s campus, which includes many student clubs and activities.

“USG was designed as a way to offer affordable and accessible higher education,” explains Karen Mitchell, USG’s chief operating officer. “It is a commuter campus, and undergrad and grad students primarily live or work in the area. Undergrad students save money by attending a community college for the first two years. The state and county save money on this model as well.” One economy comes from the way USG provides on-site student services and faculty support. These shared services include admissions and registration, financial aid, library, information technology, academic success, and career services.

commended the university's faithfulness to its historical mission and social justice vision despite the notable transition in constituent focus and substantial growth.

Similar narrowing of mission focus is observed in institutions that have spun off their educational medical centers. While some institutions (for example, Rutgers University in New Jersey) have moved in the opposite direction, Vanderbilt, Georgetown, and Emory Universities have chosen to re-assess their hospital and clinical operations and distance themselves from them. There are numerous reasons for doing so. Perhaps the first is that hospitals and universities have significantly different business models. Separating them can lend simplification to two independently complex systems. Second, while such hospitals were once considered "cash cows," they have become increasingly expensive to operate and, in urban environments, serve increasing numbers of uninsured or Medicaid patients. In light of the changing world of healthcare financing and state funding arrangements, these enterprises face increasing financial risk. Universities, such as Loma Linda and Ohio State, who are maintaining university-affiliated hospitals, are depending on increased operational efficiencies to sustain them.

Broader missions are evident in increased entrepreneurial endeavors. Issues of ownership of intellectual property and procedures for technology transfer have led institutions to create dedicated offices to help secure revenue from sale and licensing agreements. Promotion and tenure decisions now reward patents awarded, in addition to grants secured and papers written, as university research becomes increasingly applied. In yet another move closer to the market, the University of Maryland's University College now includes a for-profit business intelligence company. This college, known for its online degree programs, identified yet another way to monetize university intellectual capacities.

Structure

A second dimension of economic sustainability is structure. In the higher education domain, structure encompasses intra- as well as inter-institutional structures, processes for decision making and organizational roles.

Inter-institutional relationships have been, perhaps, the most publicly discussed and visible aspect. Mergers may be seen as a preferable alternative to closure in a challenging demographic and economic environment. Since World War II, the number of higher education institutions has grown dramatically. The baby boom, as well as increased college-going—first by veterans, later by women and minorities—fueled the expansion. Demographics, however, are changing in the 21st century, and alternatives to traditional colleges and universities are dotting the landscape. Institutional economics can benefit from a merger, as described by Thomas and Chabotar (2015),

Mergers can facilitate the achievement of economies of scope, making it more cost-effective for the resulting HEI [higher education institution] to offer the range of distinctive programs and services than for two separate institutions to do so. Merger also provides clear opportunities for achieving economies of scale and lowering fixed costs through consolidating academic, administrative and support assets.

A merger can improve brand, reputation and institutional identity for one or both HEIs. It can broaden and enrich courses, programs, degrees, activities and resources available to students and faculty. Mergers present critical opportunities (particularly when one of the institutions is financially troubled) to execute needed changes and difficult decisions. The post-merger integration

process also provides opportunities to drive change, efficiency, alignment, reorganization and the achievement of economies. (p. 6)

In September 2015 Moody's predicted a doubling of institutional mergers, most recently evidenced in the Berklee College of Music and Boston Conservatory union. At the same time, Georgia State University and Georgia Perimeter College are joining forces amid a significant move by the Georgia Board of Regents to garner fiscal efficiencies through institutional consolidations, and the state of Alabama is undertaking initiatives to merge seven of its community colleges.

Mergers, however, represent only one end of a spectrum of collaborative efforts institutions are undertaking—or could undertake—to improve their economic well-being. They also represent the most difficult strategy to master, as evidenced in the failed efforts between Salem State University and Monserrat College of Art. Sometimes merger negotiations fail, as is the case here, because of the resulting financials and the fact that the two institutions—one public and one private—encounter financing or regulatory obstacles.

Culture and mission, however, can pose even greater—though not unassailable—hurdles, as in the merger of Albany State University and Darton State College. Both are public institutions in Georgia, a state that has been pushing mergers since its board of regents approved consolidation guidelines in 2011. Albany State is a historically black regional university with a liberal arts focus. Darton primarily awards two-year associate's degrees, although it recently added a bachelor's degree in nursing. With the merger approved in November 2015, the institutions now must determine what their future together will look like.

While mergers present one option for institutional restructuring, other colleges and universities have undertaken more modest collaborations. Thomas and Chabotar (2015) advocate for expansion of such strategic alliances. Such alliances can be configured to ensure the participants remain

Distinction and Cooperation

St. Olaf College and Carleton College have more than a century of shared history in Northfield, Minnesota. Students have long been allowed to take courses on both campuses, and the two colleges have experimented with sharing faculty and staff. Some of these efforts resulted in ongoing collaboration, but most have been limited in scope and impact.

Since 2014, the colleges have undertaken strategic cooperative efforts, believing, in the words of St. Olaf's Vice President and Chief Financial Officer Janet Hanson, 'Go it alone' inclinations are not financially or academically feasible for addressing present and future opportunities and challenges. "We believe that collaboration between our two organizations will provide a critically important strategy to meet these challenges and enable us to advance our liberal arts mission and contain costs while maintaining our distinctive identities and strengths."

Both institutions have a "tradition of autonomy and self-reliance," says Fred Rogers, vice president and treasurer at Carleton. Recognizing the institutions' inherent desire to maintain their unique identities, the project has engaged a wide range of constituents—library and IT directors, human resources and grant personnel, and faculty—to identify and define opportunities for collaboration. Nearly \$200,000 in grants have been awarded for 32 collaboration projects involving more than 200 faculty and staff and more than 500 students. Such projects have resulted in establishment of shared technology and library services, under the direction of shared staff.

independently governed colleges as well as maintain their individual identities and brands. However, “effective alliances must capitalize on multiple key design criteria: substantial HEI business model changes (academic and administrative); cost savings, efficiencies and integration; expanded capabilities that drive growth and revenues, and a model of joint control” (p. 2). Examples of successful alliances include the Five College Consortium in western Massachusetts and the Claremont University Consortium. While their respective websites focus on different areas of collaboration—the Five Colleges on shared educational opportunities, Claremont on the provision of shared administrative and support services—both consortia afforded students expanded options and benefitted the participating institutions with reduced costs and shared expertise.

A different model of inter-institutional collaboration is evident at the Universities at Shady Grove (USG) in Montgomery County, Maryland. Begun in 2000, USG offers 80 degrees from nine universities in the University System of Maryland. Within one regional facility, each institution offers its own programs and awards its own degrees, while USG provides the on-site academic, student and administrative functions [see Nine Universities in One sidebar on p. 11].

In these and other examples, institutions may see successful strategies for sharing everything from faculty to student services to facilities and back-office functions. Additional initiatives are now underway in Minnesota, where St. Olaf and Carleton Colleges are taking advantage of geographic proximity and organizing to share library, technology, and human resources functions today and, in the future, academic programs [see Distinction and Cooperation sidebar on p.13]. Geographic proximity has also played a role in bringing Gettysburg, Muhlenberg, Juanita, Ursinus, and Washington and Jefferson Colleges in Pennsylvania together to discuss possible alliances.

In addition to inter-institutional collaborations, colleges and universities have been looking internally to garner economic efficiencies. Recognizing that the vertical, disciplinary structure of institutions results in course duplication, administrative redundancy, unbalanced workloads and program enrollments, and confusion and difficulty for students in completing or changing programs, several have concluded, “we can’t afford what we’ve become.” (The Advisory Board Company, 2012, p. 8). Such disciplinary autonomy results in higher administrative costs, lower academic productivity, and a lack of research and instructional collaboration. Consequently, organizational restructurings (as at Arizona State University where disciplinary departments have merged into multi- and trans-disciplinary units) and changes in budget models (such as implementation of responsibility-centered management at Rutgers, the University of Arizona, and others) have become increasingly common. Key to successful implementation of these new models has been use of data. Data analytics, including use of sophisticated statistical procedures and modeling techniques and incorporating “big data” concepts, has become an important institutional capacity. New financial models also require institutions to address the complexity of the “multiversity” and to re-segment or reduce the numbers of business models in play.

While perhaps initially seen as ways to directly drive costs down, changing structures also induce behavioral changes in response to new incentives and opportunities, which may further reduce costs and/or otherwise improve institutional outcomes and performance. Indeed, reshaping the academic department may offer a key strategy to changing faculty behavior and organizational culture. On the administrative side of the institution, shared service and outsourcing initiatives have engendered similar results, allowing both academic and administrative functions to leverage core competencies and innovative opportunities to focus on the college’s niche. Possible hindrances to transitions in administrative functions are the

college's enterprise systems. Such systems, developed from institution-centric paradigms, may not quickly or readily adapt to new, more student-centric operations that incorporate new pedagogy and new types of students.

Looking internally, institutions have also examined the components of their organizational structures. Frequently in response to financial limitations, many colleges and universities have resorted to expanding services with non-tenure-track faculty and staff. This expansion through contingent employees has also increased institutional flexibility to respond to changing demand and expectations. For some institutions, this has resulted in an abandonment of faculty tenure. Both Georgia Gwinnett and Florida Polytechnic were created with staffing models that excluded tenure. Because both are new institutions, they did not need to address the economics of eliminating tenure for existing faculty. Bennington College, founded in 1932, did away with presumptive tenure (the college did not have a formal tenure system) in 1994 as part of an effort to reinvent and reinvigorate itself. The implications of abandoning tenure have not been researched, but the economic and market costs to institutions of eliminating tenure create substantial obstacles.

Another internal structure under fire in some quarters is shared governance. Bowen and Tobin (2015) argue that new decision-making structures are needed to support necessary change: "Nimbleness implies a need for a well-understood locus of authority, with administrators expected to listen carefully to those with ideas and expertise to contribute, but then have the confidence and courage to decide" (pg. 211). They concur with Clark Kerr's assessment that successful changes in higher education have been generated from the top. Faculty offer expertise in curriculum and pedagogy but, because of disciplinary silos, often lack the institution-wide perspective and responsibility of administrators. College and university administrators, however, have been criticized for their inability to make the

tough decisions and exercise vision. Samels and Martin (2013) assert that these factors, as well as churning in leadership ranks, exacerbate the institutional stress of changing economics.

Competency/Capacity/Process

Institutional core competencies, capacities, and processes comprise the third component of a higher education institution's economic model.

Cohort Model Leverages Student Success and Institutional Efficiency

Agile learning systems—characterized by unique, foundational, customizable curricula—are at the heart of the University of Minnesota Rochester's response to changing workforce needs and career opportunities for its students.

Founded in 2006, this campus of the University of Minnesota uses a cohort model for the first two years of instruction. According to Chancellor Stephen Lehmkuhle, this benefits both students and the university. "The cohort model leverages student peer support, while also providing a pedagogically efficient and effective model because the curriculum is comprised of a set of interconnected courses," says Lehmkuhle.

The two foundational years provide opportunities for students to explore a variety of career options while not being bound to any particular career trajectory. These career options shape year 3 coursework, and the student designs year 4 with faculty assistance. During the capstone year, Lehmkuhle notes, "Students stipulate where they will study (not necessarily with us), what courses they will take (not necessarily ours), and what experience they will pursue."

Traditionally, colleges' core functions have been seen as instruction, research, and service, with faculty engaged directly in the production of each. The institutions deliver these products and services within and by classes and schedules organized by discipline-based faculty and designed to serve young adults just out of high school. Time to degree is fixed by credit hour required. For some, like Catherine Hill, a higher education economist and president of Vassar College, colleges and universities "need to find the magic 'technology productivity advance' (speaking to ACE Annual Meeting, 2015) to transform the cost structures of institutional competencies. Others see changes being developed and piloted in the core competencies of higher education—curriculum and pedagogy—as offering the necessary options to colleges and universities to re-invent themselves into sustainable enterprises.

The industrial production model of higher education has come into question for a number of reasons. Perhaps the most-voiced concern is that of cost, but others regarding the efficacy of seat-time as a measure of competency, as well as the opportunities presented by technology, have led colleges and universities to re-evaluate their core competencies. Patrick Harker, former president of the University of Delaware, believes the leverage point for change is in the curriculum, stating, "design of the curriculum drives the ultimate success or failure of universities" (p. 211). He argues that the excessive variety evident in many college catalogues is inefficient for the institution and ineffective for students; rather, the curriculum must be intentionally redesigned with a focus on critical learning outcomes for students. Zemsky (2013) also advances the need for a "competent curriculum" (p. 183) built around focused learning pathways and specified, measurable student mastery.

Curriculum-focused change may also yield substantial changes in faculty ranks, akin, as Zemsky notes, to the way Nurse Practitioners and Physician Assistants have changed healthcare.

Thus, non-tenure-track, instructional faculty may increase in prominence and team with tenure-track, research faculty to produce enhanced outcomes for students and "bend the cost curve." The University of Minnesota Rochester, established in 2006, exemplifies the ability of collective work by faculty to develop a compact and focused curriculum [see Cohort Model Leverages Student Success and Institutional Efficiency sidebar on p. 15].

In joint efforts to focus curriculum and promote student progress, community colleges across the country are working with four-year institutions to ensure credit transfer and program articulation. Maricopa County Community Colleges' Maricopa-ASU Pathways Program (MAPP) provides a cost-effective way for students to ensure transferability of credits and guaranteed admission to Arizona State University from the local two-year institutions. Stetson University's 3+3 Bachelor's/J.D. program with the University of South Florida (USF) exemplifies yet another attempt to provide more efficient learning opportunities for students. In this program, high-performing students at USF can spend their senior year at Stetson, completing their bachelor's degree and first year of law school concurrently.

Some institutions have initiated curriculum reform by attacking "gen ed creep." General education became an important component of organized curriculum in the early 20th century in response to growing concerns that the utilitarianism and specialization of the research university were driving out education's social function. Restructuring general education has allowed institutions to improve the quality of the educational experience by focusing on a limited number of courses designed to bring multidisciplinary perspectives to big questions and issues. It is also designed to help ensure timely student progress through their program of study. Both of these outcomes can improve an institution's bottom line through enhanced retention and completion. Some observers,

however, agree with columnist Steven Pearlstein (2015), who believes, “this approach will achieve significant [economic] savings only if the courses are designed to use new technology that allows large numbers of students to take them at the same time.” (n. p.)

Other models of learning have also been put forward. Some, such as massive open online courses (MOOCs), have involved faculty use of technology to expand the reach of traditionally structured classes. Others, such as competency-based education (CBE), have bypassed the traditional faculty role, asserting that learning should not be place- or time-bound. Hoxby (2014) describes the limitations and potential consequences of MOOCs:

The analysis suggests that MOOCs will be financially sustainable substitutes for some non-selective postsecondary education, but there are substantial risks. The analysis suggests that MOOCs will be financially sustainable substitutes for only a small share of highly selective postsecondary education (HSPE) and are likely to collapse the economic model that allows HSPE institutions to invest in education and research. (n. p.)

While Coursera and Udacity are the well-known MOOC providers, by 2012 more than 60 percent of colleges and universities surveyed by Allen and Seaman of the Babson Survey Research Group offered fully online programs—and an even higher number engaged in some form of online learning. In its 2015 Survey of Faculty Attitudes on Technology, *Inside Higher Ed* reports that 32 percent of faculty report having taught an online course.

Nonetheless, despite early predictions to the contrary, MOOCs have not replaced traditional higher education. Some institutions have used online formats, however, to enroll larger numbers of students, increase class size, and reduce institutional costs. Online formats can also serve

to outsource “commodity” classes, allowing the institution to focus on unique, value-added programming. The impact on student tuition has, however, been highly variable, ranging from online courses being offered at far less expensive prices than on-campus rates—although rarely for free—to including premium fees above on-campus rates.

While online classes are often used by an institution’s students to supplement their schedules of on-campus classes, some colleges have designed their programs to attract specific constituencies or to reduce costs by alleviating costs of constructing and operating new facilities. The University of New Haven’s College of Lifelong and eLearning, for example, reaches out to place-bound students. Champlain College in Burlington, Vermont, responded to market needs by creating a second college that offers online programs through employers. The U.S. Chamber of Commerce advocates this supply-chain approach to collaboration between higher education and industry, in which preferred-provider institutions develop programs based on forecast demand from employer partners. Curriculum is developed based on the expressed needs of employers (often, government agencies). Because marketing is the employer’s responsibility, Champlain was able to reduce tuition for its online programs by 70 percent compared to its campus-based programs.

Notably, both Champlain and the University of New Haven—and others—have developed their online degree programs outside regular academic structures. This happens for a number of reasons, which range from bypassing faculty and others’ concerns about roles and responsibilities for academics and governance to finding ways to accommodate alternative financial models. Arizona State University is one institution working to embed online ventures in its traditional delivery programs.

Competency-based education, which assumes learning can take place anywhere and the time needed is variable, is rapidly gaining

acceptance. Fleming (2015) reported 50 institutions offered CBE in 1990, with 50,000 students enrolled; by 2013, those numbers had grown to more than 150 institutions serving more than 200,000 students, with hundreds of additional programs in development. Craig (2015) argues for the benefits of CBE:

Done properly, competency-based learning reduces the cost of delivery by half over standard online delivery. Equally important, competency-based learning improves efficacy by replacing a highly complex system—in which students demonstrate mastery in an arbitrary period of time in order to progress—with simplicity, which is more important than you might think. (p. 83)

Because CBE can reduce time to degree, students incur less direct and indirect costs of college enrollment, and are ready to join the professional workforce earlier. CBE is based on the premise that knowledge and skills can be broken down into component parts termed “badges.” One challenge to CBE is the need to develop a standard rubric that will be universally recognized and accepted. Another challenge is to develop a meaningful way to aggregate and communicate the badges earned. In some cases, badges may be assembled into degrees, as colleges and universities begin to recognize them as criteria for assessment; in others, badges will stand alone, particularly if tied to a direct employment skill. Colleges and universities may see increased enrollment from individuals seeking these alternative credentials, once there is wide recognition of the credentials by business and industry in hiring decisions.

Institutional capacities are also evolving as colleges and universities adapt to changes in technological capacities. Personalized or adaptive learning, while in relative infancy, allows students to progress through material at their own pace, with frequent assessment of progress and understanding punctuated by appropriate

intervention. In this scenario, the faculty member moves from directly providing the instruction to participating on a team that develops the learning software and serving as the human guide or tutor during the class. Arizona State President Michael Crow believes this change in role, based on a team-based approach and use of technology, will empower faculty to become “enhanced super professors” (DeMillo, 2015, p. 124) with capacity to significantly expand institutional capacity and outputs, both in instruction and research. Some unbundling of the traditional faculty role, however, has merely shifted work from faculty to staff, resulting in a growing professional class in higher education institutions.

One possible model for colleges in the future may be akin to a general contractor building a home. In this situation, rather than directly providing all the services, a college may organize and aggregate a suite of experiences and skills, customized for the student. The learning experiences themselves may be offered by a range of types of institutions and modalities, from traditional classes to microcredentials. Such a system requires the “contractor” university to recognize others’ courses while managing the final outcome and quality control on the student’s behalf. Notably, in this model, concepts such as “transfer credit and courses that don’t apply to your major will be anachronistic” (Craig, 2015, p. 87).

Early adopters of these new and evolving pedagogies may help identify the challenges and opportunities they afford institutional economic models. CBE and the data generated from resultant earned credentials may, for example, offer new roles and revenue streams for institutions in match-making between individuals, employers, and educational providers. Craig and Williams (2015) believe that

There’s a great deal of money to be made here, but it hinges on the very real question of ownership of the competency. If ownership is held by the

competency marketplace, we may find ourselves in a world where there's more money to be made from owning the competency profile than from delivering postsecondary education. (n.p.)

While they go on to forecast a consequent diminishment of the importance of colleges, their position assumes that colleges do not assume the new roles provided by this new market.

Unaccredited providers are already experimenting with these models. Because they do not need to satisfy accreditation agencies' and government regulators' requirements for financial aid, these providers can offer flexible programs and novel payment plans. StraighterLine, for example, uses a subscription payment plan that enables individuals to flexibly adapt their class taking, dropping in and out as their schedules permit.

Resource Strategies

Resources are the fourth lever colleges and universities can maneuver to adjust their economic model and enhance the probability of institutional sustainability. On the revenue side, institutions have increased tuition significantly. For public institutions, increases averaged 138 percent from 1995 to 2015 and were, in large, a response to declining public support. The tuition increases, while substantial to student and parent payees—and, hence, the target of much political and social dialogue—nonetheless were not enough to offset the declines in state and local appropriations.

During the same period, average tuition at private institutions increased 70 percent. For privates, tuition increases resulted from a combination of factors, including sharply declining endowment returns (NACUBO-Commonfund) and increasing competition for students, to which they have applied an array of tuition-discounting strategies; net tuition increased 32 percent over the same period. Rising costs have also factored into tuition increases at both privates and publics—

notably for healthcare benefits and technology purchases—as well as the inability to garner economies of scale. In addition to general tuition increases, colleges and universities have turned

Tuition Reset for Affordability

Utica College's "affordability initiative" reset the college's tuition for the 2016-17 academic year. The decision to adjust the college's sticker price and, concurrently, its financial aid discount rate, responds to "intense public and governmental pressures, as well as increased scrutiny from prospective students and families regarding growing student debt and the cost to attend college," explains Pamela Salmon, chief business officer at Utica, a small, private college in upstate New York. With the dual goals of increasing future admissions and retention of existing students, the new sticker price applies not only to new but also returning students, each of whom was promised a tuition savings.

A small team led by the president and executive vice president, which included several members of the college's board of trustees, worked nearly two years to develop and assess tuition reset options. Their work included continuous budget modeling and analysis and financial statement projections. Recognizing that the first year would be an "investment year," the college expects to incur an operating budget deficit due to the guarantee that every returning student will pay less with the tuition reset than they would have without the move to the new tuition model. Future enrollment growth is expected to provide increased revenues, an assumption supported by trends in applications for FY2017.

to differential tuition rates and program fees, particularly to subsidize more costly programs.

Attempting to balance price and quantity in their efforts to maximize overall revenue, colleges and universities have engaged in tuition discounting—the use of institutional resources to reduce the actual price paid by selected students. Just as revenue management has become a fixture in the airline industry, tuition discounting has expanded from privates to publics and has risen from a rate of 26.7 percent at private colleges in 1990 to nearly 50 percent (48.6%) in 2015, according to the *NACUBO Tuition Discounting Study*.

This startling rate of growth has refocused institutional leaders on net tuition metrics and led some to question the efficacy of the discounting strategy. As a result, at least a dozen schools—including Utica College in New York [see Tuition Reset for Affordability sidebar on page 19], Ashland University in Ohio, and Rosemont College in Pennsylvania—have reverted to a flat tuition rate. It remains to be seen how Millennials and Generation Z students will respond to flat tuition at these institutions. Will the model result in reduced access for low-income students? Will it result in damaged egos for those who now receive no “merit” aid or reduced competition because higher education is an industry where quality and cost have been seen as positively correlated? Given the discount rate’s growth over the past two decades, it is unclear if results reported by institutions 20 years ago will be duplicated:

Lapovsky has studied several schools that have enacted tuition resets and found the strategy is most successful at colleges that lower their discount rate and advertise to a wider pool of students. She points to Muskingum University in Ohio, which first cut tuition from \$14,000 to \$10,000 in 1996. Since then, the school has seen a fairly steady increase in enrollment, said Jeff Zellers, vice president for

enrollment. Prices have risen, but it took nearly a decade before tuition returned to where it was before the reset. And ultimately, the price reduction attracted more students. (Douglas-Gabriel, 2015, n. p.).

Colleges and universities measure quantity by enrollment. Elite institutions engage in selective admissions to enroll classes of their desired size and composition. For the non-elite institutions, enrollment and the related functions of marketing, recruitment, and admission have become key operational strategies, resulting in entire new departments and even new vice presidencies. Some have focused on means to attract more of their traditional population—through construction of enticing dorms, addition of new athletic programs, and so forth—while others have identified new potential constituencies.

At the same time, colleges and universities have been busy tightening their belts. In the case of many public institutions, the divestment by states that resulted in price increases also mandated cuts. Varying strategies were followed, ranging from traditional across-the-board cuts to targeted reductions based on various prioritization schemes. Currently there is debate about institutions’ ability to make further significant cuts; on the one hand, some cite increases in non-faculty staffing as administrative bloat ripe for cuts. Others, however, cite the continuing impact of past budget reductions on faculty salary growth, the increase in contingent faculty, and increasing deferred maintenance. As institutions have dealt with maintenance issues they have emphasized cost-saving building systems and energy-saving operations. Outsourcing, commonly used in institutional auxiliary services such as bookstores and food services, has expanded to nearly any non-core function of colleges from parking (Ohio State University), to accounting and payroll, to facility maintenance (Texas A&M). Increasingly, outsourcing is making inroads into activities closer to the core: student services, tutoring, and even packaged courses.

While cost control may lengthen an institution's lifespan, however, it is unlikely to suffice to make a college or university truly sustainable.

Changing budgeting approaches and methods is yet another resource strategy undertaken by institutions. Responsibility-centered management (RCM), introduced in the 1980s, has become an increasingly utilized tool, particularly for large research institutions. Rutgers and the University of Arizona recently adopted this methodology, which transforms colleges within the university from cost centers to profit centers in an effort to garner the benefits of local control and incentives. Other institutions have adopted new costing strategies. For example, the University of California, Riverside is implementing an activity-based costing system to provide data about disciplinary and course costs to support improved decision making about future resource deployment [see Better Decisions Through A-B-C sidebar on this page]. Other institutions are employing Dickeson's (2010) program prioritization framework to evaluate costs and benefits of academic and support programs and determine which provide opportunities for growth and which have become obsolete or otherwise non-value-added to the college's future. The goal of all of these methods is to provide increased and improved data for institutional decision making. The re-engineering of budget processes does not increase revenue or cut cost, but it can provide better understanding and transparency for the economics of institutional activities and set the stage for inquiry into the impact of changes in the business model's other dimensions: mission, structure, and competencies.

Another resource strategy that colleges and universities are undertaking is monetizing assets. Seeking to emulate the University of Florida's commercial success with Gatorade, colleges are establishing offices to manage intellectual property and technology transfer and

incentivizing to faculty who develop patentable products of their research. Institutions are also looking at existing real property assets and, where they have idle assets, seeking long-term deals, such as with Howard University's land lease for condominium development or short-term (renting vacant dorm rooms on Airbnb) revenue opportunities. When their current inventory of buildings needs expansion, renovation, or replacement, colleges and universities are looking to partnerships with private and public entities to provide needed resources. For instance, the Georgia Board of Regents signed a 65-year, \$517 million deal to

Better Decisions Through A-B-C

Working in tandem, University of California Riverside's Chief Business Officer Maria Anguiano and Provost Paul D'Anieri are transforming the university's approach to resource deployment decision-making with activity-based costing (ABC). A project is underway to provide deans and other academic leaders with the information needed to make optimal decisions about course delivery to enhance student success. Anguiano and D'Anieri concur that the incentive-based budget model implemented previously created the foundation for their ABC methodology.

Tools being developed will allow UC Riverside's deans and department chairs to understand the cross-subsidization of their programs and the impact of alternative resource allocation strategies. They will also support scenario planning and assessment of enrollment and program changes. The ultimate goal, says Anguiano, is to provide "actionable data for academic leaders to achieve desired educational outcomes for students."

develop and manage student housing for nine campuses across the Georgia system.

Some partnerships, especially those with private developers, have focused on the mutual financial benefits; others, such as the creation of Arizona State University's Downtown Campus, also serve as economic development drivers within the local community. Still other schools have addressed the capital-intensive nature of their facilities by rethinking the agrarian calendar that dominates educational planning. Brigham Young University—Idaho, for example, has adopted a year-round calendar. This new academic calendar not only ensures more effective use of BYU's costly assets but also enables students to complete their degrees in shorter timeframes.

After a few years of higher returns to endowments, market activity at the beginning of 2016 may foreshadow a return to leaner times. While not good news for any college or university, it is particularly distressing for institutions that supplement tuition-dependent budgets with endowment earnings. Such institutions may need to re-evaluate their investment and consumption strategies and pump up their already substantial fund-raising efforts. Unfortunately, there are some indicators that the philanthropy model for higher education may be on a downward slope, at least for some institutions. This may seem counterintuitive, given the significant donations to colleges and universities in 2014 (totaling \$38 billion, as reported by the Council for Aid to Education). Indeed, donations were up from all sectors: alumni, foundations, and corporations. Yet “while donations were up at most categories of institutions, a huge chunk of the total was brought in by a small group of elite American institutions” (Mulhere, 2016, n. p.). In fact, \$10 billion accrued to just the top 20 fund-raising colleges. Thus, gifts to endowments are not benefiting all institutions equally. In addition, gifts can come with restrictions or in forms—art collections, for example—that make it difficult for the college to use the resource to advance its plans and goals.

Another indication of the problems with dependence on philanthropy is the decreased willingness and ability of Millennials to engage in charity to the extent and in the ways that previous generations have. Strategically directed funds, such as the Bill and Melinda Gates Foundation, are altering the focus of philanthropy from general beneficence to outcomes-based programs. As more aging baby boomers die, the greatest wealth transfer in history is occurring, already evident in today's large institutional gifts. Ensuing generations—saddled with college debt in a slower growth economy and having a different perspective on charitable giving—may not have the capacity for similar levels of generosity.

Leadership

The preceding pages provide examples of actions taken by colleges and universities to transform their economic models. Some will argue that the changes are too modest to impact the long-term sustainability of American higher education institutions. Perhaps, taken individually, they are small innovations. Indeed, Kenny (2016) might argue that they are mere “repositioning” rather than truly new models. However, they exemplify the fact that American education is not uniformly managing to the status quo and that small successes can set the foundation for more significant innovation. An important role of leadership is to share their institution's stories about successful change initiatives, to respond to and rebut the negative public discourse about the demise of higher education in the U.S.

Common denominators at each of these change-oriented institutions have been institutional leadership and articulated vision coupled with the supportive engagement of faculty and staff. To accomplish necessary economic model change, colleges must overcome barriers of culture and tradition. Individuals within the institution must exhibit

the courage to ask the difficult questions about mission, structure, competency, and resources, and have the tenacity to ensure that candor uncovers the unmentionables and the unconscious assumptions.

Throughout discussions with chief business officers, academic leaders and provosts, presidents, trustees, and other higher education leaders, individual shortcomings have emerged as the paramount concern. College and university leadership has been characterized as lacking in innovation, vision, and courage. Needed institutional change is stalled or forestalled by leaders' unwillingness or inability to take risks or make bold decisions. These gaps are exacerbated by the churning in leadership ranks, particularly at the presidential level, and lack of aligned leadership teams at many institutions.

Clearly, a first step in changing the economic model of an institution is ensuring it has leaders who embrace change, inspire a vision of the future, and communicate a sense of urgency in moving toward that future. They must be able to work across the vertical silos of their colleges and effectively use institutional structures—including shared governance—to communicate needed change. Fear of no-confidence votes and inherent institutional resistance cannot deter leaders intent on ensuring institutional long-term sustainability and, most critically, continuing to meet the higher education needs of future generations of students.

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