The Crisis in Public Higher Education: A New Perspective

By RICHARD J. CEBULA* and JAMES V. KOCH†

ABSTRACT. Public higher education in the United States is being challenged, as never before, by numerous conditions that need to be addressed if the public college and university systems are to survive and fulfill their responsibilities to the American public. Student enrollment at these institutions has been on a significant downward trend for a full decade. There has been a discernible decline in the esteem with which the American public holds higher education. There are numerous dimensions to this phenomenon. In this brief article, we focus on only three dimensions of the problem: escalating college costs; mounting student debt; and the failures of boards of trustees to act as fiduciaries representing the interests of students, parents, and citizens. Once we address these issues broadly, we offer feasible solutions that could improve the circumstances surrounding public higher education and enable it to chart a new course.

Introduction

These are challenging times for higher education in America. Headcount collegiate enrollment has declined nine years in a row (Chronicle of Higher Education 2019). Campuses across the country have been depopulated by COVID-19. Students and their parents are restive because they are still being asked to pay full price for

*Department of Economics and Center for the Study of Public Choice, George Mason University, Fairfax, VA. Author or co-author of 15 scholarly books and over 500 peer-reviewed journal articles in economics, political science, and finance. Email: rcebula@gmu.edu

†Board of Visitors Professor of Economics emeritus, Old Dominion University. Author or co-author of more than 100 articles in economics and 15 books in economics and business.

Co-authors of *Runaway College Costs* (Johns Hopkins Univ. Press 2020). Interested readers are directed to that book for an in-depth and substantive empirical analysis of the topics addressed in this article.

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collegiate experiences that very well may not include any face-to-face contact with faculty, but that do involve ubiquitous Zoom sessions, minimal or zero on-campus activities, and diminished prospects of graduates turning their degrees into attractive, well-paying jobs.[1] It is little wonder that there has been a discernible decline in the esteem with which the American public holds public higher education.

All but a few campuses are experiencing financial strains unseen since the Great Depression. The presence of fewer students on most campuses has translated to lower tuition and fee collections, while economic recession has diminished state financial support. Empty dormitories and deserted football stadiums are exerting severe financial pressure on institutions, especially those that incurred significant bonded debt in order to build facilities to "keep up with the Joneses" of the academic hierarchy. In this harsh new world, some institutions face the specter of defaulting on the bond indebtedness that enabled them to construct wellness facilities, upgraded residence halls and food services, lazy rivers, and expanded stadiums. If institutions are unable to service their debts, then at least, in some cases, this may cause bondholders to repossess what they funded and then to close them or run them as for-profit facilities. Moreover, these dire prospects for bondholders may very well prevent the funding of future bond issues.

Given these circumstances, it should come as no surprise that the public's faith in higher education has been waning. This is part of a long-term trend. A decade ago, public opinion polls revealed declining citizen faith in the transformative power of the collegiate experience (Kelderman 2010). The slide has continued since then (Jaschik 2018; Pew 2018; Marken 2019). Gallup asserts that, since 2015, the decline in confidence that Americans have in higher education has arguably exceeded that of any other major American institution (Koch and Cebula 2020).

It is beyond the scope of this study to probe all the reasons that have contributed to the fall in public esteem for higher education. We refer readers to Koch and Cebula (2020) for that broader discussion. Instead, we will focus in the present study on only three dimensions of the problem as it applies to public institutions of higher education:

escalating college costs; mounting student debt; and the failures of boards of trustees to act as fiduciaries representing the interests of students, parents, and citizens. Our focus here is on public-sector, four-year institutions because of the availability of data describing public institutions and the selection, training, and duties of the members of public university governing boards. Such information is usually prescribed by law and therefore more readily subject to inspection than in the independent sector.

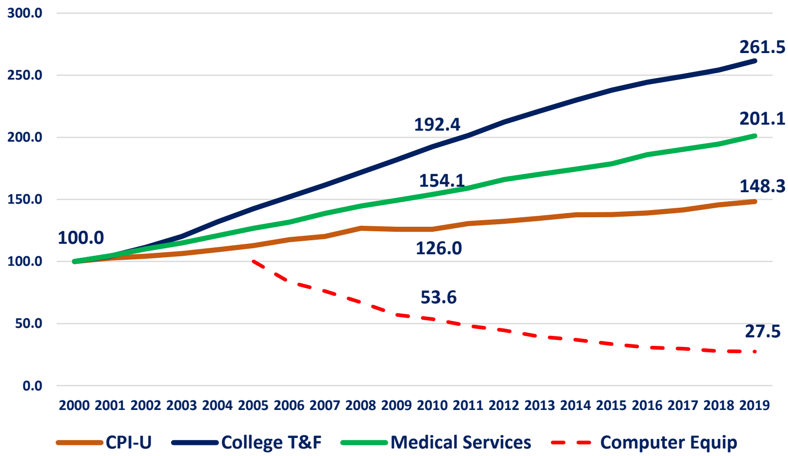
The Escalating Costs of Public Higher Education

There is widespread recognition among Americans that the cost of attending college has increased significantly in recent years. Long gone are the days when an undergraduate student could finance her college education from summer jobs and part-time employment during the academic school year on a public university campus. Even so, the pricing data presented in Figure 1 often come as a shock to many individuals. From 2000 to 2019, posted college tuition and fees rose 161.5 percent, which contrasts sharply with the only 48.3 percent increase for the overall Consumer Price Index over the same period.

The rising costs of medical care have become a recurrent political issue, but tuition and fees actually climbed 60 percent faster than medical care costs between 2000 and 2019. Nevertheless, the costs of higher education seldom have become a political issue and no effective national organization has emerged similar to the Consumer Union to advocate for students and parents. Indeed, many students and their parents count themselves as fortunate if their student applicant is admitted to a prestigious college, and therefore this presents them with the enviable opportunity (the obligation) to pay the higher price. Admission to some colleges has become a prestigious consumption good that is not unlike driving a Mercedes or wearing a Rolex watch. It sends a message.

Nonetheless, it is worth noting that other sectors of the economy often exhibit very different pricing behavior. Figure 1 discloses that computer equipment, which here includes computers, PCs, peripherals, Internet services, and telephone hardware, has become dramatically less expensive in recent years even while such items have

Figure 1
Comparing the Rise in Tuition and Fees to
Changes in Other Prices, 2000–2019



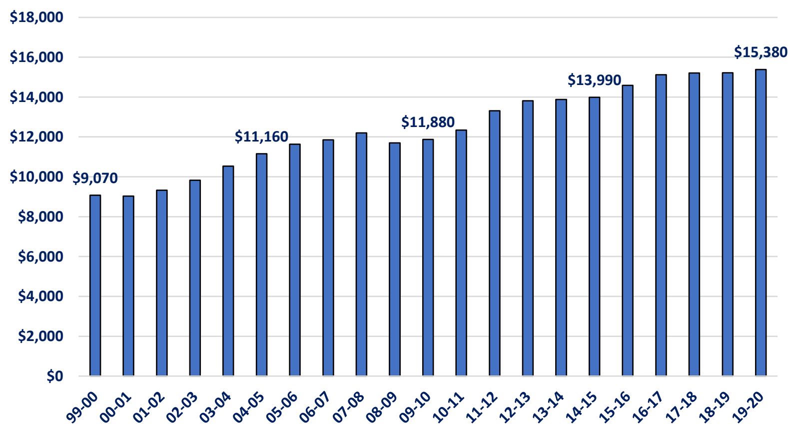
Source: Federal Reserve Bank of St. Louis (2020).

become faster and more powerful. Technological change and advances in efficiency have driven down prices in this arena. Higher education, however, has witnessed relatively few significant increases in productivity and (COVID-19 excepted) largely is utilizing the same general models of education and instruction as it was a century ago.[2] In fact, increased emphasis upon faculty research and publication has, at a majority of institutions, resulted in reduced faculty teaching loads and a decline in student/faculty ratios (Koch and Cebula 2020). Faculty may vote for Karl Marx or his equivalent in the next election, but often they are profoundly conservative or even reactionary where their own workplaces are concerned. Most faculty defend vehemently the status quo in terms of how higher education is delivered on their campus.

The tuition and fee price data presented in Figure 1 are *de facto* "sticker price" numbers that merely reflect institutions' *posted* tuition and fee prices. The typical student does not pay these full prices and receives a discount from sticker prices in the form of a scholarship or grant that frequently comes from the institution itself. In 2018–2019, the College Board (2019: 18) estimated that the typical four-year public institution discounted 30 percent of the net total cost of attendance for its in-state undergraduates by means of scholarships and grants. Figure 2 takes this "price discounting" into account and illustrates what has happened to net, inflation-adjusted costs between 1999–2000 and 2019–2020 at four-year public colleges. "Net" here means that scholarships and grants have been deducted from the cost, but not loans, which must be paid back. In context, the term "inflation-adjusted" signifies that the data have been adjusted to reflect price increases over this two-decade period so the data are comparable over these years. One can see that the price-adjusted costs of tuition and fees plus room and board (on-campus) rose from $9,070 in 1999–2000 to $15,380 in 2019–2020.

Lest the importance of Figure 2 be lost or underestimated, it should be observed that the $9,070 to $15,380 upward surge in costs is *in excess of* increases in the Consumer Price Index. This situation reflects a harsh reality for many students and parents. In other words, the net, inflation-adjusted cost of public higher education moved upward by

Figure 2
Net, Inflation-Adjusted Tuition and Fees Plus Room and Board: Four-Year Public Colleges, 1999-2000 to 2019-2020

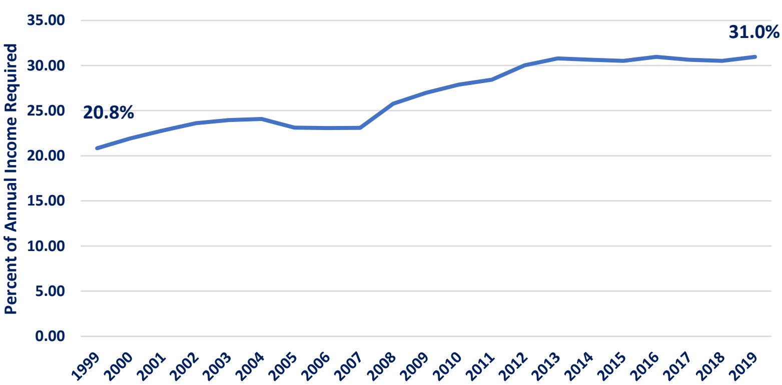


Source: College Board. (2019: 18, Figure 9).

an annual average of 2.7 percent faster than increases in the Consumer Price Index.

Borrowing legal terminology, we stipulate that the cost of obtaining an undergraduate education at a four-year public university in the United States has, for some time, been increasing faster than the Consumer Price Index. Let us now investigate how this affects a typical working-class family. Figure 3 reports the percent of the average income of a production worker in the United States that has been required to pay average tuition and fees plus room and board at one of the nation's four-year public universities. One can see that in 1999–2000, only 20.8 percent of a typical production worker's income was required to pay annual tuition and fees plus room and board for one student at the typical four-year public institution, but by 2019–2020, this outlay had risen to 31 percent. In practical terms, this means that payment of tuition and fees plus room and board took an additional 10.2 percent slice out of the production worker's annual income by the end of this period. Note that this does not include the additional costs of books, incidentals, and travel, which would increase this economic burden significantly.

Figure 3
Percent of a Production Worker's Annual Income Required to Pay Average Public Four-Year Tuition and Fees Plus Room and Board



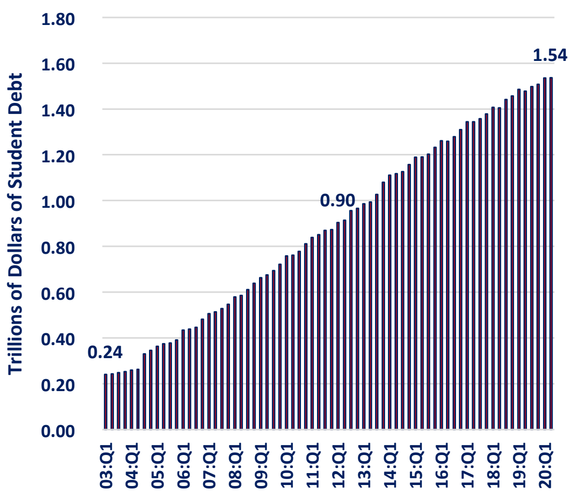
Sources: U.S. Bureau of Labor Statistics (2020) for incomes of production workers. College Board (2019: 18, Figure 9) for tuition and fees and room and board.

Mountains of Student Debt and Implications Thereof

Confronted with the rising prices of higher education just noted, a representative student coming from a typical family often finds herself unable to pay these prices without incurring debt. In 2016–2017, an estimated 70 percent of undergraduate students who received a bachelor's degree and 56.5 percent of all undergraduate students had some student debt (Urban Institute 2020). Student Loan Hero (2020) estimates that the average amount of student debt for the Class of 2019 was $29,900. Figure 4 reveals that student loan debt, as of this writing, exceeds $1.54 trillion, up from only $0.24 trillion in 2001. These data reflect a 10.28 percent average annual compound rate of growth over the nearly two-decade period.

The New York Federal Reserve Bank's Liberty Street Economics (2019) reported that of all students who borrowed funds in 2009, 26 percent had defaulted at least once on the repayment of their debt sometime during the following five years. Default rates were particularly

Figure 4
Growth in Student Loan Debt, 2003 to 2020 (trillions of dollars)



Source: Federal Reserve Bank of New York,
Center for Microeconomic Data (2019).

high for students who dropped out before earning a bachelor's degree, those attending a for-profit institution, African Americans, and those coming from lower income households. Default rates were lowest for students who had attended flagship institutions and substantially higher at historically Black colleges and universities (HBCUs).

So, what is the significance of all of this? This is a legitimate question to pose when confronted with the student debt data shown in Figure 4 and the accompanying default rates. The answer is that student debt constitutes a significant drag upon the American economy and adversely affects the future lives of the students facing this burden. Student debtors are less likely to purchase a home (Federal Reserve Bank of New York 2017). They are less likely to start a new business (Ambrose et al. 2015). They are more likely to be living with their parents (Fry 2015). They are less likely to save for their retirement (Gale et al. 2019). Finally, they are more likely to have negative household wealth (Armantier et al. 2016).

Additionally, student debt usually is not dischargeable in a bankruptcy proceeding. This means unpaid student debt obligations follow a bankrupted student debtor the remainder of her life. Indeed, student loans very well may preclude or at least limit her ability to obtain a significant line of credit.

It will suffice for us to observe that the acquisition of debt often is a positive thing when it is used to help individuals acquire homes, businesses, or significant assets. Unfortunately, this is unlikely to be the case when students either acquire too much debt and subsequently default, or their indebtedness does not lead them to productive employment. Witness the sad observation of a highly indebted 32-year-old former college student who remarked "I kind of ruined my life by going to college" (Consumer Reports 2016).

The Failure of Trustees to Act as Fiduciaries

Black's Law Dictionary (Garner 2020) defines a "fiduciary" as "one who owes to another the duties of good faith, trust, confidence, and candor." One of the Latin roots of the word fiduciary is *fiducia*, which translates in English to confidence, trust, and assurance. Thus, a fiduciary is expected to exhibit loyalty to her clients or charges and to look out for their best interests.

Many members of public university governing boards do not act as proper fiduciaries *per se*. Practically speaking, this means that they do not acknowledge or are even unaware that their primary fiduciary responsibilities ought to be to students, parents, and citizens rather than to the institution's president, its faculty, or even its football team. There are multiple reasons underlying this phenomenon, but the duties and responsibilities of governing board members (most often called trustees or regents) are seldom well defined in law or effectively and clearly transmitted to the parties involved. Consider the University of Virginia. The Virginia Constitution merely states that "[t]he General Assembly may provide for the establishment, maintenance and operation of educational institutions which are desirable for the intellectual, cultural and occupational development of the people of this Commonwealth." Credit Virginia because its constitution does expressly indicate that its universities should be operated for the benefit of its citizens. Yet, neither that constitution nor subsequent statutes provide critical guidance concerning clearly identified goals and values. Nor do they define specifically the duties, qualifications, training, and activities of the members of governing boards. Fiduciary responsibility needs to be clarified.

Nationally, qualifications are seldom specified for the position of trustee. At four-year public institutions, governors appoint almost 80 percent of all trustees, with these appointments typically requiring legislative approval. In the remaining 20 percent of institutions, usually the legislature elects board members or in a few cases, such as Michigan and Pennsylvania, board members are elected in statewide contests (Koch and Cebula 2020). Whichever method is used to populate a governing board, that membership tends to reflect political realities—who has given money to politicians in power, whose appointment would settle a political debt, whose appointment would appeal to a particular political constituency, or who is friends with influential people. The needs of the board or institution in question often are secondary.

When a new trustee joins a public university governing board, ordinarily she does not have a legally defined lodestar to follow or to inform her decisions. Since many trustees predictably turn out to be alumni of the institution they now govern, they often already are familiar with its favorite narrative. Too often, this narrative reads like a Dr. Pangloss "best of all possible worlds" story that showcases campus triumphs, usually ignores its deficiencies, and enunciates glowingly how the campus wishes to be viewed—"State U's program in basket weaving is ranked #1 in the West." With careful nurturing by the institution's president and senior administrators and some co-opting, most board members buy into the narrative and emerge as proponents of the institution and its president (Koch and Cebula 2020).

A perusal of board meeting agendas reveals that the topics that struggle for attention include important issues, such as student access, affordability, the indebtedness of students, dropout rates, the subsequent employability of graduates, and the extent to which they gain economic mobility, as well as measures of what students actually learn (Koch and Cebula 2020). A few trustees may actively pursue such issues, but most trustees give them only lip service. Thus, boards spend far more time discussing new building construction, land acquisitions, admissions numbers, research activities, proposed new academic programs, and budgets—topics of great interest and concern to them, but not necessarily to students or the citizens of that state.

The result of this system is that when proposals that would increase costs come before trustees, nearly all members end up backing the administration and voting in favor of things made to appear vital and necessary, if not inevitable. One study of 323 sitting trustees on 12 public university governing boards in Virginia discovered a total of only three negative tuition and fee votes by individual board members over a three-year period (Partners 2020).

Ultimately, two primal forces constrain board behavior, even at elite institutions: 1) the extent of the institution's pricing power (which reflects its reputation and the strength of its branding); and 2) the possibility of adverse reactions from external parties such as the governor, legislators, media, and, on rare occasions, students. Nevertheless, elite flagship public institutions such as UCLA, the University of California, Berkeley, the University of Michigan, and the University of Virginia have considerable ability to charge elevated prices. For example, UCLA (ranked #1 among public universities by *U.S. News & World*

Report [2020]) received more than 111,000 applications for undergraduate admission in fall 2019 (U.S. Institute for Education Sciences 2020). Further, even though UCLA's nonresident undergraduate tuition and fees were a lofty $42,994 in 2019–2020, about 9,000 nonresident undergraduate students enrolled in fall 2019 (U.S. Institute for Education Sciences 2020). It would be inaccurate to say that UCLA and its elite brethren can charge any price they wish, but these universities need not worry about whether they can fill the slots in their undergraduate student bodies unless their prices skyrocket.

The pricing power of public universities may wax and wane in step with their rankings and reputation. An institution's rankings (and its attractiveness to students) may reflect factors in addition to its academic programs and prowess. Location, the quality of the facilities, the nature of the student body, the achievements of graduates, and even the success of an institution's athletic teams may influence where an individual applies and decides to attend school.

In any case, many public university governing boards adopt tuition and fee ordinances without any input from students, parents, or the public. Approximately one-half of all public university governing boards now have a student member, but only in less than one-half of those instances can students vote. Nevertheless, when students do have the ability to vote, the evidence demonstrates that it typically makes no difference in the outcome. Relying upon a sample of nearly 200 public institutions, Koch and Cebula (2020) show that extending board membership and voting rights to students, or faculty, or staff, or even to all three, has no perceptible impact on the size of tuition and fee increases over a 15-year period (holding other things constant, as do all of the estimation findings).

One of the factors that *does* make a difference in board receptivity to cost increases is the size of the board membership. Larger boards are associated with higher cost increases than smaller boards, presumably because larger boards diminish active participation and involvement. One factor *does* make a difference: if a statewide board must approve a cost increase *in addition to* an institution's own board, cost increases are smaller.

Furthermore, institutions that are heavily involved in graduate work usually charge their undergraduate students more to attend. Also, institutions that are more heavily involved in educating STEM students charge higher prices (Koch and Cebula 2020). It is not clear whether this reflects an anticipated greater ability to pay on the part of STEM students or legitimately higher costs of education.

Like most for-profit businesses, universities size up the ability of their "customers" to pay. Harvard's Opportunity Insights Project (2020) revealed that between 1999 and 2013, 69 percent of undergraduate students at the University of Michigan, Ann Arbor emanated from families with incomes in the top quintile of all households nationally. Only 3 percent came from the bottom quintile. Contrast Michigan's situation to Mississippi Valley State University, where only 4 percent of students came from families whose incomes placed them in top quintile nationally and 45 percent from the bottom income quintile.

Nor do institutions with large endowments dedicate significant portions of these funds to reducing the costs of education. The University of Michigan (UM) enjoyed an endowment valued at $12.7 billion as of June 30, 2019 (Morano and Coletti 2020). As a thought experiment, suppose 4.0 percent of this endowment annually is dedicated to reducing the undergraduate tuition and fees of Michigan residents. In 2019, this would have generated $508 million, or slightly in excess of $30,000 per student. In essence, the UM administration could have permitted all 16,700 in-state undergraduates to attend for nothing. Of course, this is not about to happen. [3] But this exercise does underline the *ability* of elite institutions and their boards to make choices. Has this choice (or anything even approaching it) ever been presented to the Board of Regents at UM or to any other institution of higher education in the United States? Has any individual board member actually ever asked for such a calculation? If so, such instances have gone unreported.

Not only do trustees on the typical governing board approve cost-increasing proposals proffered by university presidents, they are seldom asked to consider ways to constrain or reduce costs on the campus. It is far more pleasant for board members to lunch at board meetings with faculty members who have just received multi-million-dollar research grants, students who have just been appointed Rhodes Scholars, or the staff member who just returned from a work session with Mother Teresa than it is to listen to single mothers struggling to pay for their education.

Simply put, few board members view themselves as fiduciaries on behalf of students, parents, and citizens. They carry other agendas, one consequence of which has been rapidly rising student costs and a gradual, but perceptible, fall in the esteem of the general public for higher public education in America.

Solutions

Obvious starting places for solutions to these governing problems with public universities include gubernatorial offices and legislative halls. New laws must be written that clearly specify that trustees should act as fiduciaries on behalf of students, parents, and citizens and, in addition, stipulate general goals and values, such as "provide high quality education at the lowest possible cost." Newly written statutes should clearly enunciate desired qualifications for trustees, specify how they should be trained and retrained, and, when necessary, how they can be removed.

Once appointed, board members should pay attention to the mission of the institutions they govern. Mission creep and board indifference can result in institutions supporting programs and activities of marginal importance. Every dollar spent has an opportunity cost—the same funds could have been used for other meritorious, quite possibly more meritorious, purposes. Administrative expenditures are no exception, and the faculty's notion that the same funds might have been used to improve instruction and research is definitionally correct.

Board members are well advised to be measurement-oriented and to seek information that will better inform their decision-making. How many students does the typical faculty member teach per semester? To what extent are prized research grants subsidized by the institution? How many hours per week is the typical classroom or laboratory used? What evidence is there that the institution as a whole and the specific academic programs at that university have a positive value-added? In other words, which indicators demonstrate that students learn and progress at the institution? How much debt does the typical student incur and what is the institution's rate of student loan default? Not all decisions made by board members depend upon data, but having reliable, pertinent data available usually results in more enlightened board discussions and votes.

Boards should encourage the circumspect pricing of scarce resources on campus in order to promote more intelligent/efficient usage. Consider space in university buildings, which is limited in supply and yet nearly always has alternative uses. When space is provided for free, it tends to be misused and even hoarded. Placing prices on space will stimulate more efficient use of buildings, just as placing prices on the use of university automobiles and graduate assistants promotes wiser decisions with respect to their use.

Boards also should keep an eye on student costs other than tuition and fees. For instance, room and board prices and the cost of textbooks deserve serious attention because on some campuses they exceed tuition and fees. Official policies that strongly encourage faculty promotion of *e*-textbooks would seem to be a path deserving of more common adoption.[4]

Boards that acknowledge a fiduciary duty toward students, parents, and the public must recognize the need for and act to emphasize transparency in their discussions, decision-making, and budgets. Boards are well advised to post university budgets, transactions, cost information, student debt, the employment success of graduates, information on student employability in the various disciplines in which majors are offered, and university productivity measures on easily accessed websites. Constituents will make better decisions when they are better informed, and paranoia will decline.

Board members should respect the university president, who benefits from having an unmatched view of the entire institution, as well as senior administrators, and faculty. Nevertheless, as Olson (1971) and others have demonstrated, one must recognize that the personal welfare of these senior-level individuals may not be compatible either in whole or in part with the best interests of the entire institution, especially its students and their families.[5] Thus, wherever possible, it is wise to evaluate and incentivize these key campus personnel in a fashion that encourages them to give greater weight to the interests of students and the broader society. Deferred compensation arrangements sometimes are helpful in this regard. This issue and the topics identified above are explored in considerable detail in Koch and Cebula (2020).

Alas, we are not sanguine about the prospects for improvements in this "higher education is in some trouble" scenario unless overall economic conditions and especially those in higher education deteriorate more than they have in recent years. This is certainly not a circumstance that we would welcome, but an emergency may be just what is required in order to stimulate meaningful departures from current behavioral models. Among the circumstances that qualify as emergencies, however, are sharply declining enrollments. Increasingly, these are circumstances faced by small, regional public institutions located in rural areas and so we might well expect to see proportionately greater changes at these institutions in coming years than at the flagships.

Pennsylvania presents us with a mini case study. Its State System Universities (a list including 14 institutions, but *not* Penn State, Pittsburgh, or Temple) enrolled 83,700 students in fall 2020, down from 120,000 a decade previous (Snyder 2020). This is among the reasons why the Commonwealth has been considering merging six of these one-time state teacher's colleges into two institutions. Extracting meaningful economies from such mergers, however, will depend critically upon institutions' abilities to part ways with significant numbers of faculty, an uncertain task given the faculty union contracts that exist at these institutions. Further, achieving significant savings also will require alteration to the programmatic mix of the campuses and increased sharing of faculty and programmatic majors among campuses. Increased campus specialization and the narrowing of missions is a likely outcome.

Even if we assume cost-saving reforms occur in Pennsylvania, it is not clear that students will realize the benefits. Pennsylvania has a history of being a high-cost, low-financial-aid state. By way of illustration, in 2018–2019, the average net price paid by an in-state undergraduate at Pennsylvania's Slippery Rock University was $18,144, but it was only \$14,843 at California State University–Chico and an even lower \$14,631 at SUNY's Fredonia campus (U.S. Institute for Education Sciences 2020). The distance between cup and mouth often is frustratingly long when the topic is lowering student costs.

Assuming that the changes being contemplated in Pennsylvania do actually move forward, will they provide a viable model for action in other states? Perhaps. However, when considering solutions, we also must keep in mind that one size seldom fits all in American higher education because of the tremendous variety of existing institutions. The circumstances facing the University of Central Florida (with roughly 69,400 students, a medical school, and more than \$204 million in funded research in 2019–2020) differ dramatically from those confronting Vermont's Castleton University with 2,399 students and no graduate programs (U.S. Institute for Education Sciences 2020).

American public higher education has demonstrated considerable resilience and an ability to adjust in previous crises such as the Great Depression. It presumably has the ability to do so once again. It remains to be seen if it will be equal to the task. COVID-19 has introduced new complexities to the challenges already faced by higher education. The inevitable economic consequences of the pandemic include reduced state financial support for public higher education and the compromised ability of families to pay for a four-year degree. In the face of those new challenges, now is the time to develop and implement constructive adaptations.

Notes

1. To some extent, the value of a college degree is questioned due to employability and income prospects associated with it. These are practical considerations that differ widely according to major, such as a business degree or engineering degree versus a degree in art or English (Cebula and Lopes 1982). Arguably, universities should avail students, parents, and other audiences with information that will educate decision-makers on which major and degree to pursue.

2. COVID-19 has prompted huge increases in online instruction and Zoomed courses. It remains to be seen whether this alternative model will continue and, if so, on what scale, once COVID-19 ceases to be a dominant factor in American society's way of life.

3. Significant portions of the UM endowment are earmarked for specific purposes and therefore could not be used in the way described in the experiment we hypothesize.

4. The environmental aspects of *e*-textbooks might even be found to appeal to many students.

5. This circumstance is a *de facto* "agency problem."

References

Ambrose, Brent, Larry Cordell, and Shuwei Ma. (2015). *The Impact of Student Loan Debt on Small Business Formation*. Working Paper No. 15-26. Philadelphia: Federal Reserve Bank of Philadelphia. www.philadelphiafed.org/-/media/research-and-data/publications/working-papers/2015/wp15-26.pdf

Armantier, Olivier, Luis Armona, Giacomo De Giorgi, and Wilbert van der Klaauw. (2016). *Which Households Have Negative Wealth?* New York: Liberty Street Economics, Federal Reserve Bank of New York. https://libertystreeteconomics.newyorkfed.org/2016/08/which-households-have-negative-wealth.html

Cebula, Richard J., and Jerry Lopes. (1982). "Determinants of Student Choice of Undergraduate Major Field." *American Educational Research Journal* 19(2): 303–312.

Chronicle of Higher Education. (2019). "Tuition and Fees, 1998–99 through 2018–19." December 30. https://www.chronicle.com/article/tuition-and-fees-1998-99-through-2018-19/

College Board. (2019). *Trends in College Pricing and Student Aid, 2019*. New York: College Board. https://research.collegeboard.org/pdf/trends-college-pricing-2019-full-report.pdf

Consumer Reports. (2016). "[Cover Page]." August: 81.

Federal Reserve Bank of New York. (2017). *Echoes of Rising Tuition in Students' Borrowing, Educational Attainment, and Homeownership in Post-Recession America*. Staff Report 820. New York: Federal Reserve Bank of New York. www.newyorkfed.org/research/staff_reports/sr820

______. (2019). *Default Rate by Student Loan Cohort* [graph]. New York: Liberty Street Economics, Federal Reserve Bank of New York. https://libertystreeteconomics.typepad.com/.a/6a01348793456c970c01b7c74c5c80970b-pi

Federal Reserve Bank of New York, Center for Microeconomic Data. (2019). *Household Debt and Credit*. New York: Federal Reserve Bank of New York. www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/hhdc_2019q2.pdf

Federal Reserve Bank of St. Louis. (2020). *College Tuition, CPI-U, Medical Services and Computer Equipment Indexes*. St. Louis, MO: Federal Reserve Bank of St. Louis. https://fred.stlouisfed.org

Fry, Richard. (2015). *More Millennials Living with Family Despite Improved Job Market*. Washington, DC: Pew Research Center. www.pewsocialtrends.org/2015/07/29/more-millennials-living-with-family-despite-improved-job-market

Gale, William, Hilary Gelfond, and Jason Fichtner. (2019). "How Will Retirement Savings Change by 2050? Prospects for the Millennial Generation." *Economic Studies at Brookings*. March. www.brookings.edu/wp-content/uploads/2019/03/How-Will-Retirement-Saving-Change-by-2050.docx.pdf

Garner, Bryan, ed. (2020). *Black's Law Dictionary*, 11th ed. Toronto: Thomson Reuters.

Jaschik, Scott. (2018). "Falling Confidence in Higher Ed." *Inside Higher Education* October 9. www.insidehighered.com/news/2018/10/09/gallup-survey-finds-falling-confidence-higher-education

Kelderman, Eric. (2010). "Public Opinion of Higher Education Continues its Downward Slide." *Chronicle of Higher Education* February 17. www.chronicle.com/article/public-opinion-of-higher-education-continues-downward-slide/?cid=gen_sign_in

Koch, James V., and Richard J. Cebula. (2020). *Runaway College Costs*. Baltimore, MD: Johns Hopkins University Press.

Marken, Stephanie. (2019). "A Crisis in Confidence in Higher Ed." *Gallup Blog* April 12. https://news.gallup.com/opinion/gallup/248492/crisis-confidence-higher.aspx

Morano, Julianna, and Dominic Coletti. (2020). "$12 Billion Dollars of …What? Understanding the University's Endowment." *Michigan Daily* July 13. https://www.michigandaily.com/section/news/12-billion-dollars-%E2%80%A6-what-understanding-university%E2%80%99s-endowment

Olson, Mancur.(1971). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.

Opportunity Insights. (2020). *Mobility Report Cards: The Role of Colleges in Intergenerational Mobility*. Cambridge, MA: Opportunity Insights, Harvard University. https://opportunityinsights.org/paper/mobilityreportcards

Partners for College Affordability and Public Trust. (2020). *Trustee Votes Project: Virginia*. Washington, DC: Partners for College Affordability. https://www.pcapt.org/initiatives/trustee-vote

Pew Research. (2018). "Most Americans Say Higher Ed Is Heading in Wrong Direction, But Partisans Disagree Why." *Fact Tank*. July 26. www.pewresearch.org/fact-tank/2018/07/26/most-americans-say-higher-ed-is-heading-in-wrong-direction-but-partisans-disagree-on-why

Snyder, Susan. (2020). "Faculty Cuts and University Integrations Looms, as Enrollment Declines at Pennsylvania State Universities." *Philadelphia Inquirer* October 14. www.inquirer.com/education/pennsylvania-state-university-consolidation-faculty-cuts-20201014.html

Student Loan Hero. (2020). *A Look at the Shocking Student Loan Debt Statistics for 2020*. Charlotte, NC: Lending Tree. https://studentloanhero.com/student-loan-debt-statistics

Urban Institute. (2020). *Understanding College Affordability*. Washington, DC: Urban Institute. http://collegeaffordability.urban.org/covering-expenses/borrowing/#/

U.S. Bureau of Labor Statistics. (2020). *Average Hourly Earnings of Production Workers*. Series CEU0600000008. Washington, DC: U.S. Bureau of Labor Statistics, U.S. Department of Labor. www.bls.gov

U.S. Institute for Education Sciences. (2020). *College Navigator*. Washington, DC: National Center for Education Statistics, U.S. Department of Education. https://nces.ed.gov/collegenavigator

U.S. News & World Report. (2020). *2021 Best National University Rankings*. www.usnews.com

Virginia Constitution. Article VIII, §9. https://law.lis.virginia.gov/constitutionexpand/article8

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