

Challenges for American Higher Education: The Cost Problem and a Comparison of Remedies

Abstract

The costs of attending U.S. four-year colleges and universities have steadily increased over four decades leading to high levels of student debt and many obstacles for low-income students. This paper provides an appraisal of the extent of the cost and affordability problems, debunking the sensationalistic claims that are common in the mass media. It considers the sources of cost increases and their consequences for low-income students. It examines possible remedies for the cost problem, including cost containment strategies, the possibility that universities can pursue alternative revenue sources, performance funding policies to improve productivity, increased state investment in institutional support, and financial aid reforms.

Introduction

Interested observers in Europe have become accustomed to seeing remarkable cost figures published by American universities, including total costs of more than \$75,000 USD for one undergraduate year at universities like Harvard and Stanford. They have also become accustomed to seeing similarly remarkable figures about student debt. Total student loan debt now amounts to well over \$1.5 trillion USD, with a significant sliver of students hundreds of thousands of dollars in debt. It is easy to come to the conclusion that profligate spending by universities is making it impossible for low-income students to attend college while creating a new class of lifetime debtors who will never have the opportunity to pay off their student loans.

Indeed, the average published cost of tuition at a four-year college or university in the United States rose by 497 percent between the 1985-86 and 2017-18 academic years, more than twice the rate of inflation (College Board 2020). Moreover, these alarming figures do not count room and board and other non-tuition expenses that can amount to as much or more than tuition for students who do not live with their parents and commute to campus. The views of Americans reflect increasing concerns about college affordability. According to the Gallup Organization, the proportion of respondents who say that higher education is available to anyone in the United

States who wants it dropped by 10 percent between 2011 and 2019. And fewer than half of respondents age 18-29 in 2019 said higher education is available to all who want it (Bauer-Wolfe 2020). It is consequently not surprising that many American perceive that the financial aid system as faltering (ibid.), and why proposals for tuition-free college and student loan forgiveness have become popular among college-age students and adults who favor stronger public support for higher education (Hartig 2021).

In this paper, I will describe the dimensions of the higher education cost problem in the United States, including scholars' analysis of why costs continue to rise in spite of consumer dissatisfaction. I will also discuss the consequences of the affordability issues faced by U.S. higher education institutions, emphasizing the constraints on student choices that are especially notable among low-income students. In the last section of the paper, I will discuss proposals for remedying the cost problem, and I will provide my assessment of the approaches that are most likely to sustain higher levels of access and completion, as well as acceptable quality levels.

Financing Higher Education in the United States

The American system of financing higher education (tertiary education in Europe) is very different from that found in most European countries. In the United States, taxpayers subsidize higher education in public institutions, but only rarely at more than half of the cost per student, while donors subsidize higher education in private, non-profit institutions, typically at about one-third of the cost per student. Students and their families pay for the rest either from personal or family savings or by applying for grants, loans, or community-based scholarships.

Higher education in much of the United States, whether public or private, is also more expensive than it is in most European countries. Even in Swiss private universities, which have the highest tuition fees in Europe (Balan 2020), the cost is only about 60 percent of the published

price at the most expensive American private universities. In addition, the standard European first university degree is three years compared to the American four-year degree, reducing total costs accordingly in those countries charging tuition.¹

Nevertheless, in many respects the American system of financing college is well designed to distribute burdens in a way that encourages broad accessibility. Costs are low in the parts of the system that draw mainly from lower-income and working-class students. They are high in the parts of the system that draw mainly from upper-middle-class students. Students in two-year colleges consequently rarely need to take out loans, while students at expensive private colleges and universities usually do – but their expected future earnings are high enough to make loans attractive. Moreover, low-income and working-class students who apply to and are accepted at expensive colleges can expect to receive sufficient financial aid from the college and the government to make college affordable. Regardless of the level of the institution, the baccalaureate degree remains a good investment. Those who graduate from college can expect to earn on average nearly one million dollars more over the course of a working lifetime than those who graduate only from secondary school (Tamborini, Kim, and Sakamoto 2015). Even \$33,700 USD in loan debt (the average amount for students who take out loans to attend a private, non-profit institution) seems like an outstanding investment given this rate of return. The system clearly does not work well for everyone – those people for whom it does not work well will be of special interest in this paper -- but it is important to keep in mind that it works acceptably well for most.

Dimensions of the Cost Problem

The affordability issue is more complex than the raw figures on the price of attending college suggest. Most importantly, the raw figures on college tuition costs do not include student

financial aid which reduces the bill substantially for most low-income students and for a great many middle-income students as well. Financial aid in the United States comes from the federal government in the form of so-called Pell Grants (named after the former U.S. Senator Claiborne Pell) for low-income students and also veteran's benefits for those who have been soldiers. All students who have demonstrated need are also eligible for relatively low-interest student loans. Some of the 50 states also have their own financial aid programs for college students, and a few operate so-called "Promise Programs" that provide tuition-free college in two-year community colleges. Colleges and universities also make financial aid available to low-income students through scholarship funds created by donors and from redistributing some tuition revenue from those who pay the full charge to those who cannot afford to pay the full charge. For these reasons, the net cost of college (that is the average costs of college after financial aid) has increased much more moderately than the published tuition rates before financial aid. In fact, over the last decade, net costs for tuition and fees at four year colleges and universities have increased at less than the rate of inflation (College Board 2020). However, costs for room and board have continued to increase over the last decade, climbing by 18 and 17 percent above inflation at four-year private and public colleges respectively (Akers 2020).

The figures on college costs also mask a tremendous amount of cross-sectoral and interstate variation. The tuition costs of a selective private college education have increased much faster than those of a public college education, but financial aid in these institutions has risen fast enough to cover most of these cost increases, thanks to plentiful scholarship funds earned from endowments. Even students whose families are in the top ten percent of income are eligible for financial aid at some of the wealthiest private institutions. Within the state-subsidized or public college and university sector, variations in costs to students are quite large with comparatively

high costs in low-tax New England states like Vermont and New Hampshire and comparatively low costs in a few mineral-rich states like Wyoming and New Mexico that use proceeds from mining contracts to help support higher education. In all public institutions, out-of-state students pay considerably more than students who reside in the state, but they usually also come from more affluent families. The same is true for international students.

The student debt issue is also more complex than the most sensational raw figures suggest. For those who take out student loans (now 70 percent of post-secondary students), the average debt was above \$25,000 for those who graduated from public institutions and nearly \$34,000 for those who graduated from private universities (College Board 2020). The most common repayment plans require monthly payments spread out over a 10-year term in monthly increments following graduation or withdrawal (U.S. Department of Education 2021). Using data from a decade ago, Akers and Chingos (2017) found that the great majority of students did not have unmanageable debt due to student loans. On average, they spent about as much in loan repayment every month as they did going out for meals. Debt loads have increased over the decade, but the general point holds.

The meaning of unmanageable student loan debt is contested, but it is clear that unmanageable debt loads will vary with household income. Those with household incomes at 50 percent of the median will have trouble repaying student loans regardless of how much they have taken out in loans. Those with household incomes at the median will have difficulty paying off loans if they devote more than 10 percent of their income to loan repayment. But those with very high incomes can afford to devote as much as 18 percent of their gross income to loan repayment without feeling the pinch (Baum and Schwartz 2005). With these rules of thumb in mind, a reasonable estimate is that 10-15 percent of student borrowers have unmanageable debt

levels – too high a proportion, to be sure, but a far cry from those who see a looming crisis if the system is not radically reformed. This figure accords with the proportion of borrowers who are in default, 11.6 percent according to data from 2017-18 (U.S. Department of Education 2021).² Three groups are most at-risk for accumulating unmanageable debt leading to severe financial hardships and/or defaults: (1) graduate students who can take out much larger loans than undergraduates; (2) those who start but never complete their degrees; and (3) those who attend for-profit colleges (Akers and Chingos 2017).

Predatory lending by for-profit colleges has been curtailed, to some degree, by the requirement that for-profit colleges show that most of their students obtain meaningful employment after graduation. It has also been limited by the transition of many formerly for-profit colleges into non-profits as a result of the gainful employment act. These qualifications temper the level of concern policy makers in the United States express about weaknesses in the American system for financing higher education. Their concerns are tempered further by the existence of income-contingent loan repayment options for students and loan forgiveness options for those who spend time in public service.

Although many students and parents think of loans mainly as a burden, it is clear that they should be considered also as an investment. They allow students to attend and encourage them to persist in college (Black et al. 2020; Marx and Turner 2019), and that persistence pays off many times over in the labor market for most students. But even so it is clear that lower- and lower-middle income students are facing an increasing burden in financing post-secondary education. In general, expenses are rising faster than financial aid can keep up for lower and lower-middle-income students. In large part, this is due to the very slow growth of incomes

below the median and the related high levels of inequality the United States has experienced over the last half-century.

Many students think that they cannot afford to attend college – and others are burdened by loan repayments that come due early in their post-college careers when their incomes are lowest and least stable (Dynarski 2014). Cohort studies have shown that while post-secondary attendance has increased across all socio-economic strata and all major racial-ethnic groups, the gaps in completion have also widened. Degree completion is very nearly universal among top quartile families, and especially among top quartile women, but rates of completion have lagged in the bottom two quartiles and among African American males (Bailey and Dynarski 2011). The decade-long decline in two-year community college enrollments provide further evidence that those who can least afford higher education are opting out in larger numbers (Fields and Brint 2021). Many community colleges require tuitions of only \$500 USD a term, but for students from low-income families an extra \$500 USD may be very difficult if not impossible to find. This is one reason why students drop in and out of community colleges rather than continuing across terms until they finish their degrees.

The distribution of students across institutions has also changed over time. Researchers at Georgetown University found that in the 15 years between 1995 and 2010 more than 80 percent of new enrollments among white students went to the 468 most selective colleges in the country, while 70 percent of enrollments from under-represented minorities (blacks, Hispanics, and indigenous peoples) went to two-year or four-year minimally selective or open access institutions (Carnevale and Strohl 2013). Other research indicates that in the years prior to the pandemic, it was already true that many lower-income students were priced out of the most expensive state universities (Haycock, Lynch, and Engle 2010). At highly selective private universities, it is not

uncommon to find a higher proportion of students from the top one percent in family income than from the entire bottom half of the family income distribution (Chetty et al. 2017).

The Causes of Rising Costs

The causes of rising costs in American universities has been a topic of interest among higher education scholars since the mid-1990s when the economists Robert Frank and Philip Cook argued that an “arms-race” in higher education was incentivizing colleges and universities to compete with one another to provide amenities that would be attractive to student-consumers (Frank and Cook 1995: chap. 8). Frank and Cook pointed out trends on college campuses toward such features as buildings designed by leading architectural firms, single-occupancy rooms in plush dormitories (replacing the old doubles and triples), the installment of expensive climbing walls in student recreation centers, and the construction of man-made lakes and rivers to create more scenic vistas on college campuses.

In 2011, the American political scientist Benjamin Ginsburg argued instead that administrators’ ambitions were behind it all:

Every year, hosts of administrators and staffers are added to college and university payrolls, even as schools claim to be battling budget crises that are forcing them to reduce the size of their full-time faculties. As a result, universities are filled with armies of functionaries – the vice presidents, associate vice presidents, provosts, associate provosts, vice provosts, assistant provosts, deans, deanlets, deanlings, each commanding staffers and assistants – who, more and more, direct the operations of every school.

Indeed, at most institutions the growth in the size of administrative staffs has driven cost increases more than any other factor. Where full-time faculty outnumbered administrators and staff in 1975 by two to one, full-time faculty were outnumbered by administrators and staff 30

years later by about 1.25 to one. Most of the attention has been on the size and salaries of managers at the level of deans and above, but most of the growth has been among the professional staff who support them (Brint 2018: 251).

Economists tend to agree about five sources of the larger administrative staffs. First, as institutions have grown larger, they have required more staff to meet already established functions. A larger college or university will mean more admissions counselors, more accountants, more student health professionals, more maintenance people., and more police officers – as well as more of those who supervise them. Second, as the number of stakeholders expands, colleges and universities require more staff to interact with stakeholders. This leads to more development staff to interact with donors and potential donors, more government affairs staff to interact with legislators and community groups, more recruitment staff to interact with prospective students and their parents, and in the case of research universities more technology transfer and entrepreneurship staff to interact with faculty inventors, patent attorneys, and those who may be interested in licensing technology. Third, as Frank and Cook (1995) argued, students have tended to demand or at least be attracted by new amenities. Preferences for larger recreation centers, new campus cuisine options, new technology infrastructure, online courses, and more plentiful off-campus study opportunities have led to growth in staff in each of these areas – and of those who supervise them. Fourth, universities have become more highly regulated places, requiring more staff to fill out reports and to respond to inquiries. As Ginsberg himself noted, “The federal government requires the reporting of mountains of data on everything from affirmative action through campus crime and the treatment of laboratory animals in university research facilities (p. 29). Fifth, colleges and universities have felt the need to add some functions in an effort to help students and faculty succeed. They have added

academic support services such as advising and tutoring to help less well prepared students. They have added specialized offices to provide services to particular student groups, including minority students, LBGTQ students, military veterans, and students with disabilities. They have added teaching improvement centers to help faculty succeed in their instructional activities. Few European universities would consider adding the full range of such activities and services, but in the American context these are considered necessary to support policies of social inclusion.

What economists have not agreed upon is a likely sixth source of staffing increases: the extent to which administrators are prone to expand their own empires by thinking of new projects that require new assistants and support staff to implement. “Most academics,” Ginsberg wrote, “are familiar with the creativity...shown by administrators in inventing new tasks for themselves and the diligence they can demonstrate when endeavoring to capture established functions from the faculty” (p. 33). Others were not as sure. Empire building no doubt occurs at every institution, but the extent to which it is a factor in universities cannot be easily determined because every administrative position can be justified by proponents for its contributions to one of the five other sources of staff growth.

Unfortunately, the standard reporting categories used by the federal government to describe college and university expenditures do not align very well with these explanations for the growth of administration. The economist Ronald Ehrenberg (2012) examined real changes in these expenditure categories during the period fiscal year 1987 through fiscal year 2008 and his findings are nevertheless revealing. Gains over time in the budget for instruction lagged behind every other expenditure category, and the much higher gains for student services, academic support services, research, public service, and administrative support were evident at both public and private colleges and universities. Most of those who have looked carefully into the matter

have concluded with Ehrenberg that a rebalancing in the direction of administrative cost reduction and augmentation of instructional expenditures could have been possible – and would have benefited students (see Desrochers and Hurlburt 2016; Descrochers and Wellman 2011; Leslie and Rhoades 1995; Massy 2016).

Factors other than administrative costs are clearly also involved in cost increases – and they are important at the top of the system. The leading U.S. higher education institutions face competitive pressures for faculty and student talent. Those institutions that want to compete for prestige have had to come up with funds to keep pace, or at least seem to be in the race (Ehrenberg 2000; Clotfelter 1996). The bidding up of faculty salaries is most notable at the top 15 private, non-profit universities where full professors earn on average more than \$200,000 USD annually (Chronicle of Higher Education 2020). Financial aid is another large expense item, required to attract top students of modest means and now distributed quite widely, including to many families whose incomes place them in the top ten percent of all households (Harvard College 2021). The rising cost of benefits is an expenditure factor more relevant to the broad stratum of more modestly paid professors. Nearly all professors receive contributions to their retirement plans, with an average expenditure of nearly 11 percent of salary. Medical benefits add another 12 percent on average to total compensation (Flaherty 2020).

Why Can't the Market or Governments Control Costs?

Economists have wondered why neither market forces nor governmental controls have been able to restrain the rise in college costs. One early idea was that labor-intensive industries, especially those that rely on highly specialized professionals like higher education, suffer from a “cost disease” because they are unable to increase the productivity per worker (Baumol and Bowen 1966). However, colleges and universities can and do increase productivity by raising

class sizes, sending more students off to study abroad, expanding summer term, hiring less expensive instructors, and employing technology to reduce labor costs.

Inefficiencies in the Higher Education Market

More recently, economists have given more thought to deficiencies in the higher education marketplace, deficiencies that prevent institutions that provide higher quality at lower cost to exercise downward pressure on prices. Akers (2020) argued that college students do not have adequate information on prices and outcomes to make informed decisions. She also criticized the “oligopolistic” nature of higher education, given that most students attend colleges near their homes. Finally, she faulted the current regulatory regime which she alleges keeps innovative producers out of the market by making accrediting decisions based on the traditional model of a two- or four-year college experience with designated numbers of credits required for degrees. She recommended that the federal government provide better statistics on expected outcomes of attending every college that receives federal aid, as well as greater transparency about the actual costs of attending a given college earlier in the application process. She argued online providers will eventually provide the kind of competition needed to restrain prices and argues that the current accrediting process needs to be overhauled to encourage innovation rather than inefficient traditionalism.

These policy recommendations are unlikely to bring about changes that will improve the system or restrain prices. The research evidence suggests that most students will not take the time to do careful comparison shopping, even if statistics on prospective labor market outcomes are improved and easier to use. Instead, they will tend to accept the best college that admits them or take the best financial aid offer they can obtain from among the range of colleges to which they apply and are admitted (Hoxby 2015). Because college is a social experience as well

as an economic investment, the choices of a student's secondary school friends are often as important to them as any (potentially inaccurate) information about labor market prospects that colleges can provide. Also because the college experience is both social and economic, the isolating experience of attending school remotely will likely never prove particularly popular among traditional college-age students, however popular it becomes among working adults. For-profit higher education providers were initially touted as system disrupters and cost cutters. But many loaded students up on loans to pay for inflated college costs and then did not deliver gainful employment. The predatory practices of unscrupulous for-profit providers lead to wariness about how best to introduce "innovation" into the system.

The Limits of State Regulation

Governments have also failed to restrain price increases, in spite of the fact that they do enact many regulations to control college and university costs. For public institutions, state governments often specify how much colleges can pay for construction costs per square foot and how much they can spend on office furnishings and classroom equipment. They send in auditors to make sure that top administrators' expenditures on entertainment and travel are not excessive. They put on constant pressure to improve productivity by admitting more students or improving time to degree. Some regulate faculty workload.

But in most states funding is based on the previous year's budget plus increments or decrements depending on the extent of growth or decline in tax revenues. When tax revenues go down, higher education is cut; when tax revenues go up, budgets are restored (though rarely to the level that prevailed before the last set of cuts) (Geiger 2004; Mitchell, Leachman, and Masterson 2016). The reason for this roller coaster effect is clear: unlike most state services, colleges and universities have alternative sources of funding, notably from student tuition and

secondarily from donor philanthropy. Under the circumstances, it is common for governors and legislatures to look to higher education first when they find that budget cutting is required. The typical pattern is for colleges and universities to raise tuition charges to make up for cuts in state subsidies and in some cases also to finance new initiatives. Few states consider capping tuition at the same time that they have cut higher education budgets for fear of igniting nasty conflicts between the state government and universities, with the latter benefiting from the full force of alumni mobilization.

Private colleges and universities face their own set of constraints around cost cutting. A few dozen private colleges have the prestige to charge very high prices and large enough endowments to provide high salaries and luxury amenities. But most operate under very tight margins. They have smaller endowments and are tuition dependent. Most are forced to discount tuition deeply in order to attract large enough classes to pay the bills. By 2015, some 88 percent of first-time students were receiving tuition discounts and the average discount rate reached nearly 50 percent (Selzer 2016). The trick was to raise tuition faster than discounts. But these continuous rises in tuition did scare away some families. Small declines in enrollments were common following the Great Recession of 2007-08. A few colleges tried another strategy – cutting tuition (and discounts) to show dramatically lower prices. This strategy also presented problems. Influenced by the logic of status rather than the logic of cost comparison, students and their parents tend to identify high tuition charges as an indicator of institutional quality and high discounts as an indicator of the campus's special regard for them.

Policies to Remedy the Cost Problem: How Effective Are They?

The cost problem has not suffered from a shortage of proposed remedies. The goal of any responsible policy proposal is to cut the costs assumed by students and their parents, with

particular emphasis on under-served populations, while maintaining acceptable levels of quality. I will discuss five types of proposals – and their likelihood of success: (1) greater efforts to cut costs at the campus level, (2) performance-based funding, (3) expansion of the role of the state in higher education financing, (4) expanding non-tuition revenue sources, and (5) financial aid reforms.

Campus-Level Cost Cutting

College and university administrators are under constant pressure to cut costs, either from state regulators or to preserve their own bottom lines. And in fact they have found a number of ways to contain costs and they have saved millions of dollars by doing so. Some of the more popular practices have included renovating campuses for energy efficiency, consolidating administrative offices, outsourcing expensive campus services to outside vendors, centralizing procurement to put pressure on rates, and refinancing debt at lower market rates. Some campuses have phased out very small classes and aggressively reduced administrative support costs. Some have assigned administrative support functions to less expensive student workers. And many have experimented with introducing technology as a replacement for human workers – for example, to reduce advising staffs. By looking for inefficiencies and analyzing the value added of every administrative position, the University of Nebraska, for example, claimed to have cut administrative personnel costs by five percent (Rogers 2013) and New York University claimed a seven percent savings (NAICU 2016).

Groups of institutions in the same region, state, or quality stratum have also banded together in cost-cutting consortia to put downward pressure on insurance, procurement, and health care costs, to eliminate duplicate courses and to provide new educational opportunities for students. A Wisconsin consortium of private colleges, for example, offered its 20 members more

than 45 cost-saving collaborations, including joint administration of health plans, professional development for faculty and departmental chairs, environmental safety audits, and data sharing and management. Over a five-year period, it reported savings of \$38 million USD (NAICU 2016). Dozens of other consortia following similar paths have sprouted up over the last several decades.

These cost savings have not fully counterbalanced cost increases – they have only slowed them down. And even where they potentially allow institutions to “bend the cost curve,” few universities escaped the temptation to invest cost savings in new projects rather than passing them on to consumers in the form of lower tuition or lower room and board costs. The University of Chicago, for example, reported saving \$75 million USD over three years; these savings were not used to make the university more competitive on price but rather allowed it “to invest in its core academic mission, including a continuing expansion of the faculty” (quoted in NAICU 2016). Something similar has been true at Arizona State University which claims to have cut costs by \$25 million USD on an annual basis through “strategic internal reallocations” (Crow and Dabars 2020). Only a tiny handful of campuses have reported lowering tuition after undertaking cost-savings measures (Affordableschools.net 2021).

Performance Funding

Between 1979 and 2007, 25 U.S. states enacted performance funding with the goal of improving productivity and therefore reducing per capita costs. In these states, financial resources allocated to public colleges and universities were conditioned, in part, on institutional performance in specified areas. These areas typically included some combination of student retention and graduate rates, student scores on licensing examinations, job placement rates, faculty research productivity, and measure of undergraduate access and campus diversity

(McLendon, Hearn, and Deaton 2006). In most cases, states allocated relatively small amounts of budget conditioned on performance. The results were disappointing. Performance funding proved to be costly to implement, susceptible to institutional manipulation of performance measures and subject to reversal under new administrations or when state unstable state finances caused deep cuts in regular higher education funding (Dougherty and Natow 2015). Ten states eventually dropped performance funding.

Performance funding, however, continued to interest state policymakers, even after scholars and policy analysts identified persistent problems with its implementation and outcomes. It also won the backing of influential private philanthropies like the Bill and Melinda Gates Foundation. In spite of its rocky history, performance funding consequently gained momentum again, and by the middle of the 2010s, 25 states were either using performance funding or planning to do so. During this new wave of adoptions, larger portions of funding were based on performance and states allowed institutions at different selectivity levels to adjust metrics to suit their student populations (Li 2014). Even so, the expected outcomes failed to materialize. Most studies showed “no statistically positive impacts” of performance funding on graduation rates (Dougherty and Reddy 2011; Shin 2009; cf. Tandberg and Hillman 2014). And reports continued to trickle in of institutions adjusting graduation requirements downward in efforts to improve their performance profiles (Li 2014).

Expanding Alternative Revenue Sources

Colleges and universities in the United States can access several revenue sources other than tuition from domestic students. These revenue sources include donations, research grants, licensing from patented technologies, and tuition from international students. Each of these revenue sources increased dramatically in the period 1980-2010. Most have plateaued since that

time, and the prospects for rapid growth in the future are debatable. Moreover, the funds that come from philanthropy, research grants, and licensing income do not tend to aid students who are most in need of financial support.

Philanthropy. Private donations to colleges and universities reached \$49.5 billion USD in 2020 (CASE 2021) – an annual figure that has changed little over the last decade (ACE 2019). Whether this decade-long stasis will continue is an open question. As income inequality has increased in the United States, huge fortunes have been amassed and philanthropy has also increased, encouraged by tax laws that have allowed for deductions for charitable giving. These conditions could lead to continuing growth in private philanthropy as a source of funding to colleges and universities. One limitation is that private philanthropy is heavily skewed toward the wealthiest universities. Wealthy people tend to want to be associated with “the best” institutions whether or not they graduated from the university – and of course most donors do give primarily to the institutions from which they have graduated. The most well-known American universities are also the ones with the largest endowments – Harvard (\$41 billion USD in 2020), Yale (\$30 billion), Stanford (\$27 billion), and Princeton (\$26 billion). Research universities in the middle of the pack typically have endowments in the range of \$200-\$500 million USD, or 50 to 100 times less than those in the very top rung. Giving is also highly skewed by field with medicine, business, engineering, and the natural sciences very far ahead of other fields as recipients of private philanthropy (Brint 2018: 243-46).

Philanthropy does not for the most part address the cost problem for students from low-income households. Some up-by-the-bootstraps entrepreneurs do provide scholarships exclusively for needy students. But most philanthropists who provide scholarship aid target it for high-achieving (typically higher socio-economic status) students and for students who participate

in activities in which they excelled themselves in college. If a donor played sports in college, he or she is likely to provide scholarship aid to an athlete in the sport they played. If they studied finance, they are likely to provide aid to a student who writes a strong paper on finance. Looking at private scholarship winners as a whole, Kantrowitz (2011) found that minorities represented about one-third of applicants for private scholarships in both 2003-04 and 2007-08 but received a smaller proportion of awards than they applied for. Less than ten percent of all scholarships explicitly considered students' race in making awards. By contrast, white students applied for two-thirds of private scholarships and received more than 70 percent of them. Kantrowitz concluded that private scholarships tilted sharply toward supporting students from more privileged groups.

Research Grants. Research grants from all sources increased by nine times in constant dollars between 1980 and 2010 (Brint and Carr 2017). Since that time growth has been much slower and colleges have seen some decline in research grants from industry (Brint 2018: chap. 6). Research grants go nearly exclusively for the support of research. They are not reallocated to reduce costs in other areas. Moreover, research grants do not pay for the full price of conducting research. Research grants from the federal government are divided between direct and indirect costs. Indirect costs are intended to cover the costs of facilities and administration. A 2000 Rand Corporation study showed that federal indirect cost recovery rates failed to cover approximately 17 percent of the costs of the full indirect costs of research (Goldman et al. 2000: 18-19). The remainder must be made up from other university revenue sources. Philanthropic foundations and private firms pay much less, on average, for indirect costs than the federal government, making these sources of research support particularly costly for universities. The only benefit of

research grants for needy students comes for those relative few who are hired as undergraduate research assistants – and are paid for their work.

Licensing Income. Licensing income is a minor part of university finances. Fewer than 20,000 revenue-generating licenses were held by university offices of technology transfer in 2018, a considerable increase over time but a drop in the bucket relative to new commercial activity in the economy as a whole. The group of universities that generated revenue through technology transfer is also surprisingly small. Only four universities or university systems generated at least \$100 million in annual licensing income over the decade 2008-18 (Nag, Gupta, and Turo 2020). The net returns to institutions were much lower once legal fees, other expenses and receipts to faculty inventors were deducted from earnings. Most universities do not earn enough on licensing to pay for the costs incurred and those that do obtain net revenue from licenses earn a relative pittance. The University of California system, for example, earned approximately \$108 million in licensing revenue in 2014 but netted just \$58 million. This net amount represented about 0.2 percent of the University's \$26 billion operating budget (Gordon 2015).

International Students. The United States has attracted more international students than any other country – in recent years twice as many as its nearest competitor, the United Kingdom (IIE 2020). These students enrich the learning environment of American colleges and universities and also contribute significantly to their operating budgets. In private universities, international undergraduates pay the same tuition as other admitted students, but they are typically not eligible for financial aid. In public universities, they pay considerably more than in-state students, and are also typically not eligible for financial aid. Unlike revenue from

philanthropy, research grants, and licensing of new inventions, revenue from international students' tuition can be used to support low-income students.

However, this source of income is currently falling. International enrollments in the U.S. hit a peak in 2018-19 at more than 1.1 million students, including over 400,000 undergraduates. Weakness in the international market was, however, evident as early as 2016-17 when declines in new first-time enrollments were first registered (Israel and Batalova 2021). International student enrollments fell by 16 percent in 2020 and by 43 percent for first-time enrollees (Baer and Martel 2020). It is reasonable to predict that international enrollments will rebound as the pandemic wanes, but it is an open question whether international enrollments will again reach their 2018-19 peak. The higher education systems of the leading originating countries, China and India, are improving, and it is possible that political and cultural conflicts in the United States – and the widely reported upsurge in anti-Asian violence – will dampen the enthusiasm of international students to study in the United States. Moreover, as is true of most revenue sources in U.S. colleges and universities, international student tuition is concentrated at comparatively wealthy institutions and therefore does not materially affect the prospects of the great majority of low-income, first-generation, and under-represented minority students (Israel and Batalova 2021).

Reinvestment by the 50 States

Higher levels of investment by the 50 American states would of course be another way to address the cost problem, at least for the nearly three-quarters of students who attend public institutions. Public goods theory suggests that states would have good reasons to raise their subsidy levels. Even in the narrowest sense of the term, it is clear that higher education produces public goods. It produces many more adults who pay high taxes that support other state services.

Many of these state services, such as welfare and the criminal justice system, are used only very rarely by the highly educated. Higher education is also strongly correlated with lower levels of crime, higher levels of civic participation (including volunteering), and better health. Areas with highly education populations also attract strong employers who pay their employees competitive wages (Moretti 2013).

Yet state governments have, by and large, shown no appetite for investing more heavily in higher education. Constrained by other priorities (including commitments to lower levels of education, as well as health care and prisons), unconvinced that limits to families' willingness to adapt to price increases has been reached, and facing tax-averse populations, governors and legislatures have made additional higher education spending a low priority.

Financial Aid Reforms

Because none of the other proposed remedies are likely to fix the problem of rising costs and the consequent restricted access for low-income students, analysts are left with the traditional approach to addressing college affordability: reforms to the financial aid system. Because of weak interest and capacity in the 50 states to augment state financial aid budgets,³ attention has focused on the federal government as a source of reform. The discussion has revolved around four types of federal interventions that have the potential to contribute to college affordability. These are: (1) tuition-free college plans, (2) loan forgiveness plans, (3) the strengthening of Pell Grants, and (4) the expansion of income-contingent loan repayment plans. Each one faces policy design issues and/or political obstacles. I will argue that increasing the size of Pell Grants and introduction of comprehensive income-contingent loan repayment are remedies that could improve both affordability and equity.

Free College Plans. Calls for tuition-free college have become popular among politicians on the left. Most such calls argue that the federal government should fund tuition-free college by raising taxes on wealthy Americans. Of course, such plans seem almost obvious as a proper responsibility of government to many Europeans because the state has long shouldered all or most of the responsibility for funding public institutions. In the United States, they remain controversial – appealing to progressives and less appealing to conservatives.

We have early evidence about the potential consequences of tuition-free college. Nineteen states have already funded tuition-free community college and New York State adopted a tuition-free four-year college plan in 2017. However, eligibility for these programs varies from state to state. Frequently, household income has been used as a means test so that college is not actually tuition-free for everyone. The New York program, for example, provided tuition for all students attending New York State public colleges up to \$100,000 USD in family income (Campaign for Free College Tuition 2017), and it required students to reside in the state for as many as years as they had received tuition funding. None of the plans addressed the costs of attending college other than tuition – including room and board, health care fees, course materials fees, and charges for extracurricular activities – leaving half or more of the affordability problem unattended for students who did not commute from their parents' homes.

As attractive as these plans have been to college students and politicians on the left, they have not always led to the expected results of improving access for low-income students. Studies of tuition-free community colleges have not found that enrollments of lower-income students always increase following implementation. Fields and Brint (2021) found that these programs were associated with net negative associations in within-state community college enrollments, the opposite of both the expected and the intended outcome of these programs. It is possible that

tuition-free is interpreted as a signal of low quality by potential enrollees. It is also possible that free community college programs do not provide sufficient incentives to override resistance to post-secondary education in at least most states in which they have been enacted. Finally, it is possible that some programs are working well but the majority have design flaws that are hampering their effectiveness. Existing studies indicate wide variation in the design of these tuition-free college programs and the kinds of students who are eligible for them, suggesting that the third possibility may be the most likely explanation (Jones, Ramirez-Mendoza, and Jackson., 2020).

Not surprisingly, conservative politicians who are attentive to the interests of taxpayers have shown scant interest in supporting tuition-free college. It is also unknown whether higher subsidies to students might in the end lead to lower appropriations for colleges and universities when the federal government comes under financial pressure (see Samuels 2017). Lower appropriations have negative consequences for quality, as the experience of very tight budgets in France (Institute Montaigne 2021) and Japan (*Nature* 2017) has shown.

Ironically, free-college plans also have the potential to result in what amounts to regressive taxation. Rather than improving the opportunities of low-income students, tuition-free college may in the end aid mainly students from middle- and upper-middle income homes (Chingos 2017). Low-income students often already attend college tuition-free or nearly tuition-free thanks to low-tuition costs at lower levels in the system, the availability of Pell Grants for students whose families qualified, institutional financial aid in the case of more expensive colleges, and in some states need based financial aid programs at the state level. According to one analysis by two respected higher education economists, nearly two-fifths of the benefits of a national free-tuition program for full-time students would go to families with incomes above

\$120,000 USD, while about eight percent of the benefits would go to students from families with incomes below \$35,000 USD (Baum and Turner 2019).

Loan Forgiveness. Another popular proposal by progressive politicians is to forgive some portion of student loan debt. Some U.S. Senators have suggested forgiving up to \$50,000 USD in student loan debt; others have focused on loan forgiveness up to \$10,000. These proposals have been especially appealing during the pandemic period as many students surveyed a bleak labor market. Yet the problems of regressive taxation are, if anything, more severe in the case of loan forgiveness. Upper-income people hold the largest loan debt. The top quintile of households holds \$3 in student loans for every \$1 held by the bottom quintile of households (Cooper 2020). Very often students take out sizable loans to pay for expensive graduate programs in business, law, and medicine – or expensive undergraduate educations at private colleges. These people are more likely to obtain salaries after graduation that allow them to pay back these sizable loan amounts more or less quickly. The issue of fairness is compounded by the fact that only about one in seven Americans holds student loan debt. It is reasonable to ask why this relatively privileged group should benefit from loan cancellation when the majority of Americans who hold no student loan debt receive no benefit of this type. As Preston Cooper (2020) observes, as an alternative to cancelling \$10,000 USD in debt per borrower, the government could issue a check for \$1,500 to every American. Many would say that the latter is a fairer approach to government expenditure.

Loan forgiveness is, in addition, backward looking; it obviously does not address the cost problem that upcoming cohorts of students will face. Indeed, it is possible that loan forgiveness could stimulate more borrowing among these upcoming cohorts of college students in anticipation of future loan forgiveness programs that may or may not materialize.

Raising Pell Grant Amounts. Pell Grants are targeted to students from the bottom half of the income distribution. The current maximum Pell Grant amount is approximately \$6,500 USD for full-time students. Although Congress has consistently raised Pell Grant amounts to keep up with inflation, they have not kept up with increases in tuition charges. The current maximum amount covers all or nearly all of in-state tuition at four-year colleges in only five American states. Supplements to this amount from state financial aid sources and institutional reallocations of tuition from high to low-income students are common but these supplements are unevenly distributed across the 50 states. In addition, Pell Grants do not typically cover any part of non-tuition expenses for room, board, book purchases, and other expenses.

A large number of advocacy groups have proposed doubling Pell Grants and the current Administration has proposed as a first step toward this goal an increase of nearly \$2,000 USD in the maximum Pell Grant amount for academic year 2022-23. The reasons for this advocacy are clear: Pell recipients currently have higher student debt burdens than their peers and borrow at double the rate of non-Pell recipients. This is because Pell Grants currently cover the lowest share of college costs in the program's history, and are not keeping up with the growth of college costs (Gravelly 2021). Even an immediate doubling of the size of the maximum Pell Grant would cover just three-fifths of the average cost of a four-year college (including room and board and other non-tuition costs) (NCAN 2021). Yet such an increase would be a major improvement over the current coverage of about one-quarter of all costs (ibid).

Whether doubling the size of maximum Pell Grants is politically feasible in the United States remains to be seen. Thus far, the proposal has been popular only among one of the two major parties, namely the Democrats. However, some conservative higher education policy professionals have supported the idea, and raising Pell Grant amounts to keep up with inflation

have been supported by Republicans in the past (Mettler 2013). It is also possible that the first steps in doubling the Pell Grant amount can be accomplished without the support of Republicans through mechanisms that require only a simple majority of Congressional votes during a period of Democratic Party control (Gravelly 2021).

Income-Contingent Loan Repayment. A viable option is also available for students who are not eligible for Pell Grants but must take out loans to finance college. Income-contingent loan repayment adjusts the amount students repay on their loans each month to their current incomes. The enactment of a comprehensive system of income-contingent repayment would solve one of the biggest problems of the current system. Most students begin repaying their loans immediately after they graduate or immediately after they withdraw from college, at a time when their incomes are typically lowest and least stable (Dynarski 2014). Income-contingent plans allow students to pay more as they earn more.

An income-contingent option does currently exist in the United States, and it has become more popular in recent years. About one-quarter of undergraduate borrowers and about two-fifths of those who borrowed for graduate study in 2017 have opted to repay based on their earnings rather than repaying a fixed amount each month (Fain 2020). Payments are capped at 10 or 15 percent of discretionary income. In addition, if students do not pay the full amount back within 25 years, remaining balances are forgiven. Moreover, those who work in public service can have their remaining balances forgiven in ten years' time (ibid.)

Studies suggest that those who pursue the income-driven option default on their loans at about half the rate of those who repay in fixed amounts. Income-driven plans are, nevertheless, expensive for the government. Loan forgiveness is costly, and inflation erodes the value of repaid amounts if repayment occurs over a longer period than the standard ten-year term. The

Congressional Budget Office estimated that about half of the of the \$1.05 trillion in federal student loans projected to be disbursed to students over the next decade will be repaid through income-driven plans. According to the study, the total estimated federal subsidy for income-driven plans would be \$83 billion. In contrast, the federal government would earn \$72 billion on the it is projected to issue over the next decade that will be repaid through fixed-payment plans (CBO 2020).

Given these difficulties, adjustments will need to be made before income-contingent loan repayment could be politically popular enough to be introduced in a comprehensive way through payroll systems. A good first step would be to eliminate the provision allowing loan forgiveness after 25 years, a step that would encourage full repayment of loans (Baum and Johnson 2016).

Conclusion

Although college cost and student debt problems in the United States are often exaggerated in the media, it is true that some costs, especially for room and board, have continued to run higher than the rate of inflation in recent years and that a growing affordability gap between rich and poor has limited the opportunities and increased the burdens on low-income students. The sources of increasing costs have to do with the growth of enrollments, requiring larger staffs, the desire of student consumers for more amenities, and increasing regulatory requirements. They may also be influenced by empire building among university unit administrators.

The rising cost of attending college is offset by the career benefits of attending college, but it has also led to problematic adjustments beyond limiting the capacity of lower-income students to attend and complete the best colleges to which they can be admitted. These include larger classes, taught by less qualified instructors, and a rapid increase in fully online courses.

They also include delay in the attainment of such markers of adult status in the United States as marriage, children, and home ownership. Inefficiencies in the higher education marketplace and limitations of state regulation have contributed to failures in curbing college costs. Institutional incentives and public policy remain as possible remedies.

Among the numerous remedies considered, financial aid reforms promise the most help for students who are struggling to pay for higher college prices. These include doubling the size of the largest federal grant program targeted to low income students and the adoption of a comprehensive and better-designed income-contingent loan repayment program.

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Notes

¹ Great differences exist in the financing of tertiary education across Europe. Average tuition for home students is higher in England, for example, than it is for public university students in the United States, while other countries such as Finland, Norway, and Sweden charge no tuition fees (OECD 2021). Differences in pricing can also affect home country versus international students, as they do in the United States.

² Student loan default is defined by the U.S. government as non-repayment for more than 270 days (U.S. Department of Education 2021).

³ Just eight American states provide nearly three-quarters of need-based financial aid that derive from (Eaton et al. 2019). Some states provide mainly merit-based aid, which tends to benefit middle and upper-middle income students. Others provide little or no financial aid of any sort.