

STRETCHING THE HIGHER EDUCATION DOLLAR



A M E R I C A N E N T E R P R I S E I N S T I T U T E

SPECIAL REPORT 3

Public Policies, Prices, and Productivity in American Higher Education

Arthur M. Hauptman | April 2013

Preface

The recent fiscal crisis has brought American higher education to a watershed moment. After decades of expansive growth in enrollments and spending, state budget cuts and damaged endowments have driven double-digit increases in tuition over the past decade. In the wake of significant increases in federal student aid over the past four years, a growing federal deficit suggests that aid programs will be hard-pressed to keep up with the growth in tuition prices. Meanwhile, lackluster employment outcomes for recent college graduates and ballooning student loan debt have created an increasing sense of disillusionment among policymakers and the public alike. More than ever, Americans are questioning whether a college degree is worth the cost of admission.

For their part, most colleges and universities have been reticent to rethink their cost structure—that is, what it actually costs to provide the education they deliver—in light of these fiscal challenges. Instead, they have typically chosen to raise tuition, cut course offerings, even close the door to qualified, tuition-paying students. In an era of declining public support and trust, battenning down the hatches and waiting for sunnier days is not a recipe for regaining public confidence, let alone meeting our human-capital needs.

But the future is not as bleak as it may seem. The stark fiscal challenges facing governments and endowments are forcing forward-thinking higher education leaders and entrepreneurs to reconsider the traditional model and to propose new, lower-cost modes of delivery and credentialing, arguments that resonate less during boom times. The prospect of reinventing higher education through online learning, long dismissed as being of low quality, has been renewed with the emergence of massive open online courses, some of which bear the imprimatur of elite universities.

Elsewhere, some institutions and systems are experimenting with ways for students to earn their degrees more quickly and at a lower price. Even President Obama has chimed in, famously declaring in his 2012 State of the Union address, “Let me put colleges and universities on notice: if you can’t stop tuition from going up, the funding you get from taxpayers will go down.”

To make sense of these developments, AEI’s Education Policy Studies department, along with Kevin Carey of the New America Foundation, commissioned new research from leading academics, journalists, and entrepreneurs on how to do more with less in higher education. The collection of essays was first presented at an August 2012 research conference entitled “Stretching the Higher Education Dollar.” You can find conference drafts of the papers online at www.aei.org/events/2012/08/02/stretching-the-higher-education-dollar/. A revised set of those papers will be released as an edited volume from Harvard Education Press in summer 2013.

This forthcoming volume does a superb job of identifying the barriers to cost containment and the opportunities to fundamentally redefine the cost structure of higher education in the future. But after conversations with stakeholders across the country, we also recognized an appetite for concrete, near-term steps that policymakers and leaders can take to help get control of college costs, as well as clearer data on how higher education revenue and spending have changed over time. To help satisfy these needs, we commissioned three new pieces of research.

In “Initiatives for Containing the Cost of Higher Education,” William F. Massy, professor emeritus and former vice president for business and finance at Stanford University, offers a comprehensive reform agenda for policymakers interested in cost containment. Massy lays out a series of initiatives that, working in tandem, can promote the larger goal of compelling colleges to spend money wisely. Among the individual reforms Massy proposes are creating a national database of cost-containment practices, a “Race to the Top” for college productivity, and process audits for all public institutions. The primary



aim, Massy contends, is to help provide the necessary information for a vibrant higher education market in a way that current policymakers and college leaders can get behind.

In “Addressing the Declining Productivity of Higher Education Using Cost-Effectiveness Analysis,” Douglas N. Harris, associate professor of economics and university endowed chair in public education at Tulane University, takes a rigorous, empirical look at the cost-effectiveness of popular higher education policies and programs. Harris argues that policymakers and school leaders have far more control over productivity than assumed, but tend to lack the requisite information on which strategies will be most productive. Running through an array of these programs and policies—from class-size reductions, to various financial aid programs, to student services—Harris provides a framework that can help college leaders determine which policies and practices provide the most bang for our higher education buck.

Finally, in “Public Policies, Prices, and Productivity in American Higher Education,” public policy consultant Arthur M. Hauptman examines the impact of federal and state policies on the escalating costs and diminishing productivity of higher education. After a brief overview of trends over the past 40 years in college tuitions and spending, Hauptman offers a series of suggestions for federal and state policy reforms. Among these are restricting the use of private student loans, pegging tuition at public institutions to a general measure of a family’s ability to pay (such as median family income), and rethinking funding formulas to invest more in lower-cost public institutions like community colleges.

We are excited to release these three papers as the concluding part of our Stretching the Higher Education Dollar series. Although the ideas in each are certainly open to discussion, we hope they present an informative and provocative set of actionable recommendations for policymakers and college leaders. For further information on the papers, or with any questions, please visit www.aei.org/policy/education/ or contact Daniel Lautzenheiser at daniel.lautzenheiser@aei.org.

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Public Policies, Prices, and Productivity in American Higher Education

Arthur M. Hauptman

Rapid increases in what colleges charge and what they spend per student have been and remain one of the most controversial aspects of American higher education. Tuition, fees, and other college charges have increased in both the public and private sectors at more than twice the rate of inflation for over a quarter century. Trends over time in what colleges and universities spend per student are harder to discern because recent changes in accounting conventions have made it difficult to compare spending patterns. We do know from various sources, though, that spending per student in the United States is high by international standards. For example, the Organisation for Economic Co-operation and Development (OECD) reports that in the United States more than \$25,000 is spent per student in higher education, by far the highest among OECD countries and more than twice the OECD average.¹

This report seeks to examine the extent to which public policies at both the federal and state levels have shaped these trends in price and cost productivity (measured as spending per student). To accomplish this, the report is divided into the following four sections:

1. A theoretical consideration of how public and private providers meet the demand for higher education.
2. An examination of trends over the past 40 years in what colleges charge, how much they spend per student, and tuition as a percentage of educational costs.
3. A discussion of the various theories that have been put forth for why prices and spending per student have increased so rapidly in the past three decades.
4. An analysis of the effects public policies may have had on pricing and productivity (measured as spending

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per student) and a series of suggestions for a series of federal and state policy reforms that could slow the future growth of what colleges charge and spend per student.

Thinking about the Demand for and Supply of Higher Education

In assessing what role government policy and politics play in shaping higher education costs and prices, it is instructive to ask why government gets involved in providing higher education in the first place.

For any type of higher education, economic theory suggests that a demand curve defines how many students would enroll at various prices, as shown in figure 1. The shape and slope of that curve is a function of many factors, including the economic value and social status attached to going to college and getting a degree and the opportunity costs of enrolling rather than entering the labor market without further education. To estimate how many seats would be supplied for a given type of higher education, it is useful to distinguish between public and private providers. We first consider how many seats private entities would provide without public subsidies and at what price.

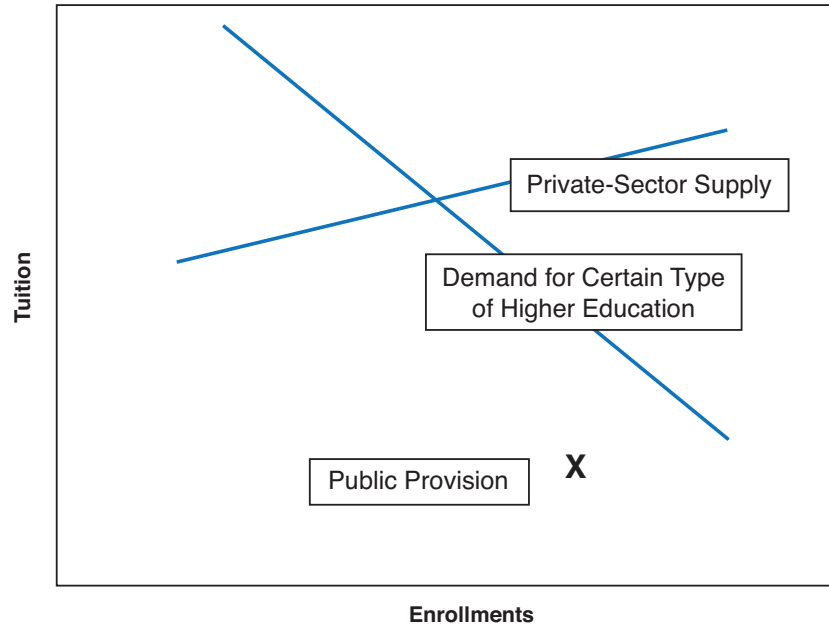
Private Provision. Figure 1 suggests that in the absence of government operating support, private providers would largely follow the rules of supply and demand in determining both their prices and the number of students who would be enrolled. The private supply curve assumes government has no role in higher education and that it will be provided only by private entities. It has the typical look of a supply curve in that the amount of higher education provided by private entities would increase as the price increases. In this idealized world, the amount of seats provided will be determined where the private supply curve intersects the demand curve for this type of higher education. In this scenario, the amount of higher education provided by the private sector would almost surely be less *for any given type of higher education* than

what is provided when government operating subsidies are involved.² We assume this because without direct government subsidies to the institutions the price will likely be higher than what publicly subsidized institutions would be able to provide.

A related question is how for-profit and nonprofit private providers might differ in this idealized world of higher education without any government subsidies. One answer to this question is that the prices charged by for-profit entities will cover the full cost of providing the education plus a profit margin and thus are likely to be higher for a given type of higher education than the prices that would be charged by nonprofit providers who have endowments and receive private gifts that allow them to charge less to provide an education than the cost. For nonprofit institutions, unlike for-profit entities, any year-end surplus would be reinvested in the institution rather than returned to owners or shareholders in the form of dividends or profits. This question could be viewed another way, however. For-profit providers have a greater incentive to drive down their costs per student so that they can maximize their profit, and they might end up charging a lower price even with built-in profit margins than nonprofit providers who would have less pressure to provide a more efficient set of educational services.³

Resolving this question of whether for-profit or nonprofit providers would charge a lower price for the same kind of higher education is beyond the scope of this paper. What we can say with a high degree of certainty is that the prices that either for-profit or nonprofit providers would charge would be higher, on average, than what public providers receiving a government subsidy will charge. Also, the number of seats provided by the private sector is likely to be smaller than the number of students public institutions would enroll. The reasons for this are indicated in the following paragraphs.

FIGURE 1
DEMAND AND SUPPLY FOR HIGHER EDUCATION
PROVIDED BY THE PRIVATE AND PUBLIC SECTOR



Source: Author

The US Experience with Nonprofit Institutions

While there are few real-life examples of countries where for-profit companies operate without any government-funded higher education sector, the United States provides perhaps the best example of a country in which a nonprofit sector grew in the absence of government support. That is the story of colonial American history, as our early institutions were nonprofit entities and operated without any tangible government support. Though states then established public higher education sectors, as recently as 1950 half of all US college students were enrolled in nonprofit institutions. This market share has shifted dramatically in the past half-century as the baby boomers and subsequent generations were largely accommodated in the public sector; the nonprofit market share now is one-fifth or less of all enrollments.¹

1. National Center for Education Statistics (NCES), Digest of Educational Statistics 2012, table 198.

Public Provision. An extensive economics literature identifies various reasons that lead governments to enter the higher education market rather than leave it to private provision. These reasons include the notion of externalities, the nature of public goods, the inequities in private provision, and the broader concept of market failure. In general, public higher education springs from a recognition

that, left to market forces, the private sector will not produce enough higher education at a low enough price to meet the broad needs of society.

When government enters the higher education picture, the economic rules of supply and demand tend to be put on the back burner and replaced by more of a political framework. In the most typical case, government creates one or a series of public higher education institutions and decides to charge little or nothing for instruction. The decision of how much to charge typically has little to do with the demand curve for higher education, which would suggest that some price should be charged at any enrollment level. Over time, it becomes obvious to government policymakers that providing virtually free public higher education for a growing share of the population is financially unsustainable, and subsidy levels must be lowered. The state government role often includes deciding how many students will be allowed to enroll and benefit from this public higher education, which again may bear little or no relation to the laws of supply and demand. In short, in the public sector, prices typically are not set to achieve a market clearing result and enrollments are often not determined based on the dictates of the demand curve, as figure 1 suggests.

This raises some important questions regarding who decides price and volume in public higher education systems. Based on experience in countries around the world, government officials tend to impose lower prices and require public institutions to enroll more students than the underlying market conditions might dictate. Systems that rely on college and university officials to decide how many students to enroll and what prices to charge typically have fewer students and higher prices than government policymakers and society in general think appropriate. In this regard, there is a basic tension in higher education in every country: institutional officials tend to view their role as the protectors of quality while government officials tend to promote access by creating public-sector institutions and providing various forms of student financial assistance.

Governments want to educate more students at a lower price than what the private sector would offer. In terms of figure 1, they want to push enrollment and price levels in a southeast direction—more students at lower prices. Meanwhile, institutional officials want to protect quality by maximizing resources per student, by raising prices or by limiting enrollments; they want to move in the northwest direction on figure 1. As a society, we often need to push to the northeast direction so that we are providing a sufficient amount of higher education while still devoting enough resources per student to ensure quality.

The task of meeting rising demand when public resources are stable or declining is complicated by this difference in incentives for institutional and government officials.

That is not to say that the laws of economics no longer apply when politicians create a public higher education sector. The same issues of resource constraints, supply and demand, and diminishing marginal utility are still at work. In reality, however, politicians often come to a different conclusion than what economic forces would dictate.

Trends in What Colleges Charge and How Much They Spend per Student

The previous section examined why government provides higher education in the first place and some key differences in how public and private institutions operate. This section reviews the trends over the past 40 years in what public and private institutions charge, how much they spend per student, and the extent to which tuition and fees have increased relative to educational spending per student.

Trends in What Colleges Charge. College prices have been in the news for a long time and for good reason: increases for the past three decades in college charges for tuition, fees, and room and board have been much steeper than increases in what we pay for other goods and services in the economy, including for health care. Figure 2 indicates the cumulative percentage growth in tuition and fees for both the private and public sectors compared to inflation over the past four decades. In figure 3, these changes in tuition and fees are adjusted for inflation and compared to the real growth in median family income over that same time period.⁴ That tuition and fees have grown much faster than median family income is a good indicator of why college affordability has become such a prominent issue in our national debates.

After lagging behind inflation in the 1970s, tuition and fees in both sectors have grown much faster than the general rate of inflation since 1980. The base figures, as shown in figure 2, have led some observers to suggest that tuition has grown as much as five times faster than inflation during that time.⁵ When the current dollar figures are adjusted for inflation, however, a more accurate accounting shows that tuition and fees and other charges have grown slightly faster than twice as fast as inflation for the past three decades.⁶

The numbers and rates of growth in tuition shown in figures 2 and 3 are for sticker prices, however, and do

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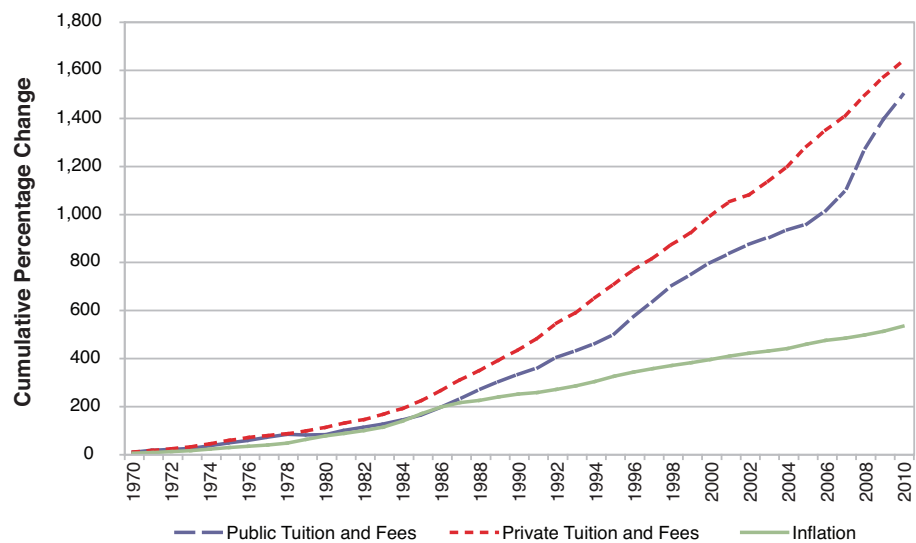


not take into account the aid institutions award in order to lower prices for some students. Data collected from various sources by the College Board indicate that institutional aid doubled in real terms over the past decade and has grown many-fold over the course of several decades.⁷ The growth in tuition discounting is especially important in explaining private-sector behavior, as most private institutions adopted a high tuition/high aid strategy beginning in the 1980s. (See discussion in section 3 for more on this trend.)

Data collected by the State Higher Education Executive Officers Association (SHEEO) show that discounting has become much more prominent at public-sector institutions in recent decades. According to SHEEO documents, the difference between sticker price revenues and net revenues from tuition and fees grew from roughly \$1 billion in 1990 to \$15 billion in 2010, with particularly rapid increases from 2000–2005.⁸ In other words, the gap between the amount public institutions would receive from tuition if all students paid full sticker price and what they actually receive has grown because colleges are giving out more institutional aid than ever before.

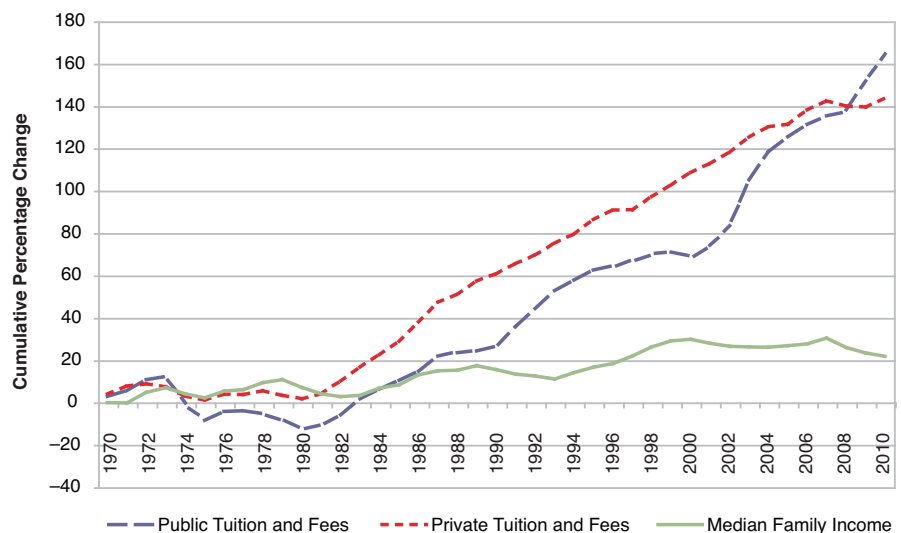
Interestingly, there is relatively little difference in the annual growth of sticker prices and net prices in either sector (with certain exceptions such as the aforementioned 2000–2005, when public-sector discounts grew much more rapidly than sticker price). The lack of difference in growth suggests that decisions to raise tuition typically have been matched proportionately by increases in aid or vice versa.

FIGURE 2
GROWTH IN TUITION AND FEES AND INFLATION, 1970–2010



Source: National Center for Education Statistics, Bureau of Labor Statistics

FIGURE 3
PERCENTAGE CHANGE IN PUBLIC AND PRIVATE TUITION AND FEES AND MEDIAN FAMILY INCOME, CONSTANT 2010 DOLLARS, 1970–2010



Source: National Center for Education Statistics, Bureau of Labor Statistics

Trends in Spending per Student. Discerning trends in higher education spending in the United States is more difficult than examining tuition trends, in part because data on spending have not been kept consistently and also because the federal government has not provided

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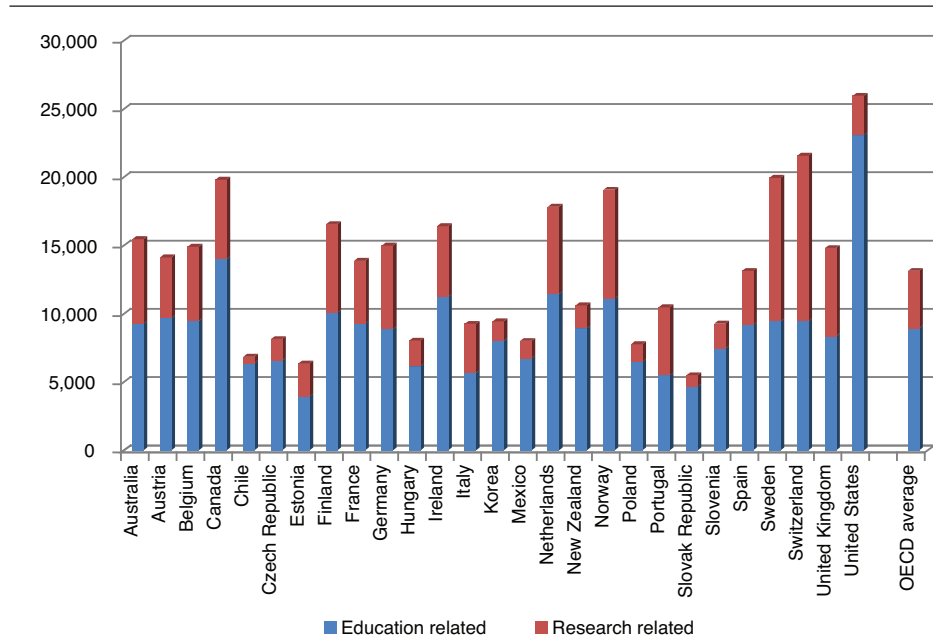


such data regularly for many years.⁹ While trends on spending per student tend to be harder to discern than trends in tuition and other charges, OECD data confirms that the United States spends more per student than any other country and is among the highest in share of GDP spent on tertiary education (see figures 4 and 5).

Perhaps because of these measurement difficulties, statements about US spending per student often do not conform with reality. In particular, the facts contradict the frequent statement that higher education spending per student has grown inexorably over time. As indicated in figure 6, spending per student in the public sector increased by roughly 25 percent when adjusted for inflation between 1970 and 2010, but this growth has not been consistent over time. It was relatively flat between 1970 and 1985, flattened again in the first half of the 1990s, and declined by roughly 10 percent in the first decade of the 2000s, such that spending per student in 2010 was roughly equal to what it was in real terms in 1995.

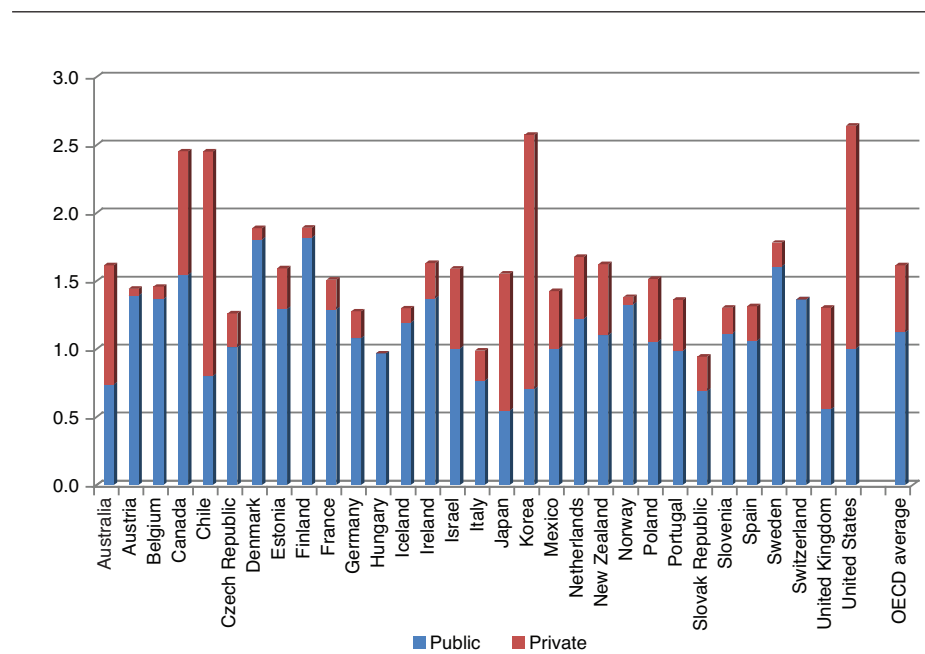
For private institutions, as figure 7 shows, educational spending measured as education and general expenditures per student fell slightly in real terms in the 1970s but then roughly doubled in real terms between 1980 and 2010.¹⁰ Figures 6 and 7 also make it clear that spending per student is roughly three times as large at private institutions than at public institutions, a function in part of the much smaller average size of private institutions.

FIGURE 4
TERTIARY EDUCATION SPENDING PER STUDENT AMONG OECD COUNTRIES, US DOLLARS, 2009



Note: Dollar amounts are adjusted for purchasing power parity index.
Source: OECD, *Education at a Glance 2012*.

FIGURE 5
SHARE OF GDP SPENT ON TERTIARY EDUCATION AMONG OECD COUNTRIES, 2009



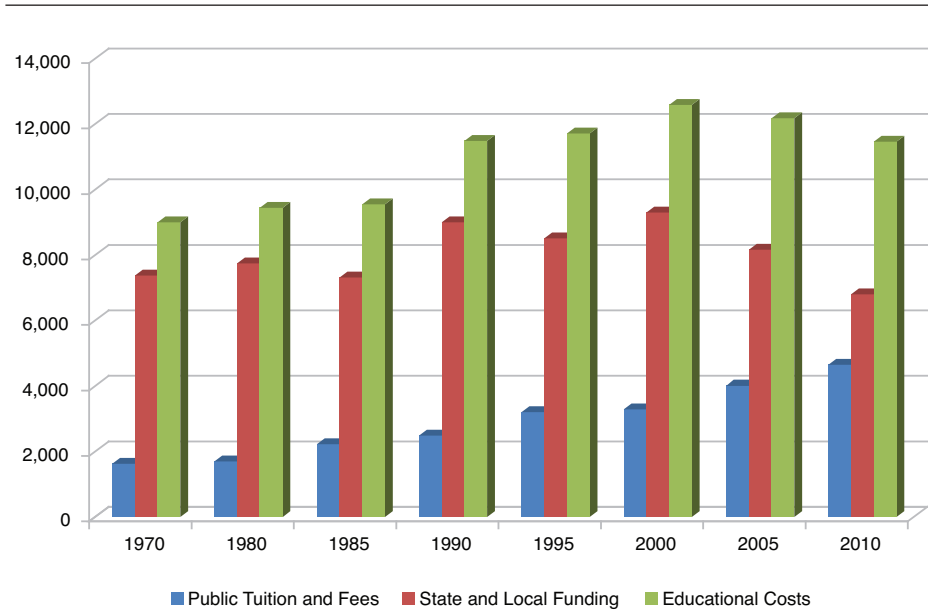
Source: OECD, *Education at a Glance 2012*.



One of the big confusions in the debate regarding spending in public higher education has to do with state funding patterns. It is a myth that state funding has been declining for decades and that states have been disinvesting in higher education. The national data on state funding trends as reported by SHEEO and shown in figures 8 and 9 tell a different story.¹¹ Figure 8 shows that state and local funding in current dollars has grown consistently over time. Even when adjusted for inflation, state and local funding grew in aggregate terms through the 1990s and has only declined in the past decade. Figure 9 shows that state funding per student climbed to record levels in the 1990s, and the real declines in state funding per student since 2000 are not nearly as drastic as they have often been presented.

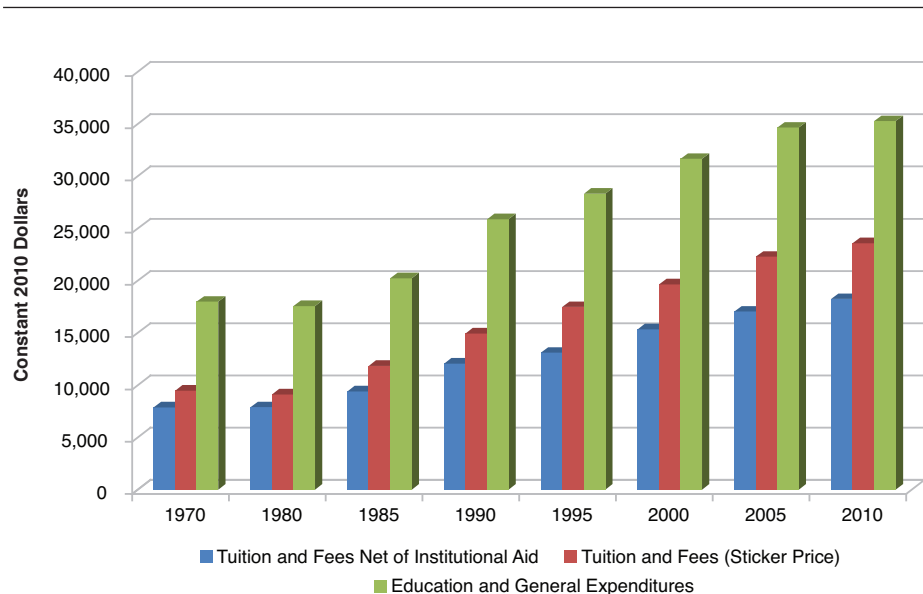
Taken together, figures 8 and 9 demonstrate that enrollment patterns are key in explaining trends in state funding per student over time. Figure 10 confirms that enrollments at public institutions grew slowly in the 1990s but grew much more rapidly since the turn of the century. These rapid increases in enrollments at public institutions over the past decade have contributed greatly to the decline in state funding per student while rapid increases in state funding per student were helped by slow enrollment growth in the 1990s. This underscores that when enrollments grow slowly, per-student spending will tend to grow. And when enrollments grow rapidly, as they have since 2000, per-student spending tends to decrease even if aggregate state funding continues to grow in real terms.

FIGURE 6
TUITION AND FEES, STATE AND LOCAL FUNDING, AND EDUCATIONAL COSTS PER FULL-TIME EQUIVALENT (FTE) STUDENT AT PUBLIC INSTITUTIONS, CONSTANT 2010 DOLLARS, 1970–2010



Source: State Higher Education Executive Officers Association

FIGURE 7
TUITION AND FEES AND SPENDING PER FTE AT PRIVATE, NONPROFIT INSTITUTIONS, CONSTANT 2010 DOLLARS, 1970–2010



Source: National Center for Education Statistics

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Tuition as a Percentage of Spending per Student. Integral to the debate over prices and spending per student in higher education is the relationship between the two. Figures 6 and 7 show that spending per student increased in fits and starts while tuition and other charges have consistently increased relative to that spending in both the public and private sectors.

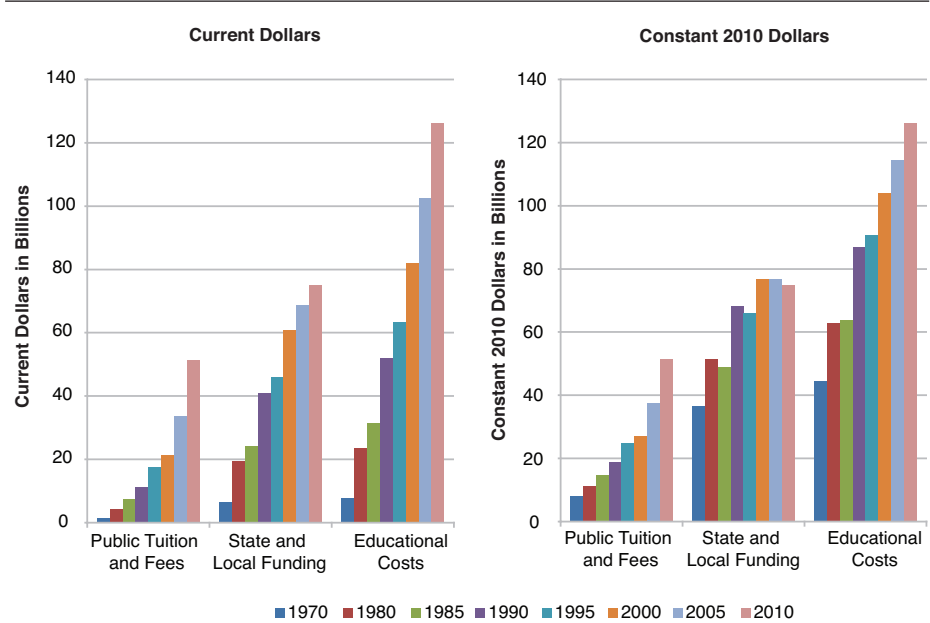
- For public institutions, tuition and fees grew to 40 percent of spending per student in 2010, up from 18 percent in 1980.
- For private institutions, tuition and fees were 52 percent of spending per student in 2010, up from 45 percent in 1980.

Whether prices have increased relative to spending per student is crucial to the issue of whether more spending leads to higher prices or whether pricing decisions then determine how much is spent per student. As such, it is a key part of the discussion in the next section.

Why Have College Spending and Prices Increased So Rapidly?

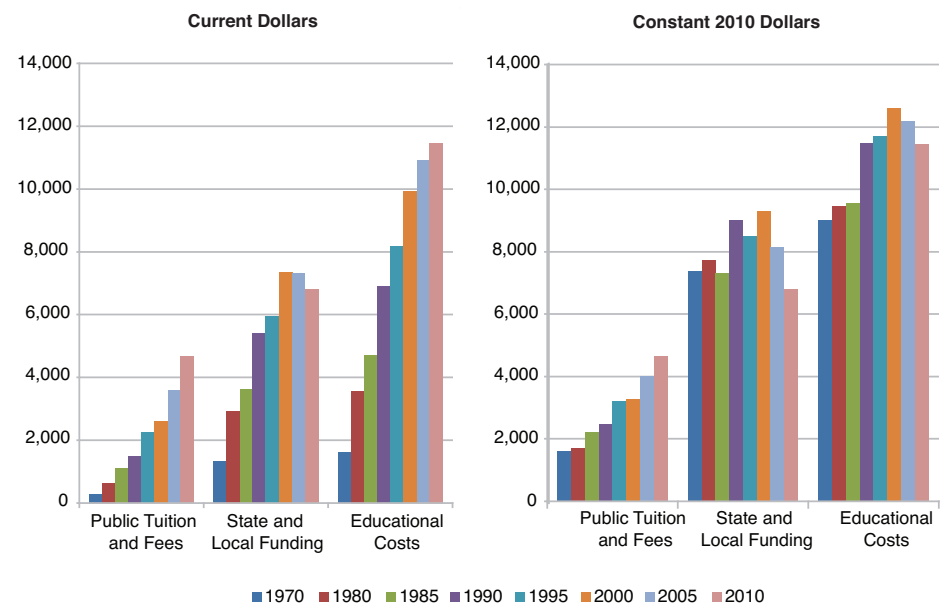
What explains why prices and spending per student have increased so rapidly over the past three decades? This raises some important chicken and egg questions: Are higher tuitions and other charges the cause of increased spending per student? Or are increases in what colleges spend to educate students

FIGURE 8
PUBLIC TUITION AND FEES, STATE AND LOCAL FUNDING, AND EDUCATIONAL COSTS, CURRENT AND CONSTANT 2010 DOLLARS, 1970–2010



Source: State Higher Education Executive Officers Association

FIGURE 9
PUBLIC TUITION AND FEES, STATE AND LOCAL FUNDING, AND EDUCATIONAL COSTS, CURRENT AND CONSTANT 2010 DOLLARS PER FTE, 1970-2010



Source: State Higher Education Executive Officers Association



driving the growth in prices? In the case of higher education, these chicken and egg questions correlate closely to the issue of whether increases in prices are a function of cost-push or demand-pull inflationary pressures. In economics terminology, cost-push inflation occurs when the underlying costs of producing a good or service lead to higher prices being charged. By contrast, demand-pull inflation occurs when high demand for a good or service leads to higher prices being charged regardless of underlying production costs.

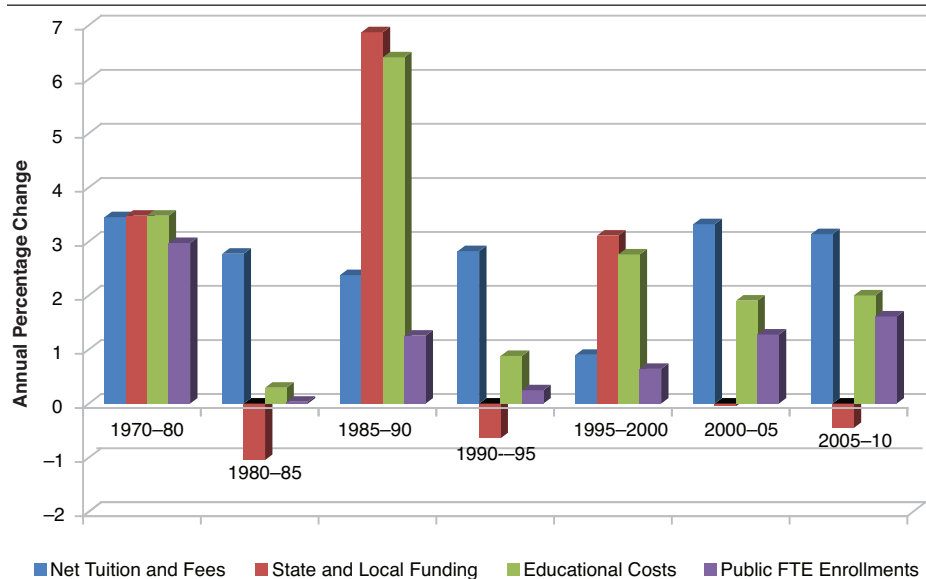
As in most chicken and egg debates, the answer is subject to considerable disagreement. This section tries to shed light on these questions by first examining the principal explanations that have been given for why spending per student has increased and then addressing the storylines behind tuition inflation over time in the public and private sectors of US higher education.¹²

Trends in Spending per Student. As the previous section indicated, the growth in spending per student has not been nearly as inexorable as the increase in tuition and fees over the past three decades. But to the extent that real spending levels have grown substantially over time, economist Robert Martin has identified four general theories that have been put forward to explain the rapid increase in spending:¹³

1. **Excessive Regulation of Higher Education.** Under this argument, higher education is heavily regulated and the costs of that regulation are built into higher spending levels. Underlying this argument is the notion that higher education faces more regulation than most other industries, often in the form of unfunded mandates such as Title IX.
2. **Bundling of Services.** Many colleges and universities bundle some of the nonacademic services they provide, such as student housing or meal plans, with academic services into a single price package. This

FIGURE 10

ANNUAL PERCENTAGE CHANGE IN KEY FINANCIAL INDICATORS
IN CONSTANT 2010 DOLLARS AND FTE ENROLLMENTS FOR
PUBLIC HIGHER EDUCATION, 1970–2010



Source: State Higher Education Executive Officers Association

bundling of services can be efficient if the costs of selling them together are lower than providing them separately, but there are negative consequences if the bundled price is higher than if the services were priced separately.

3. **Higher Education as a Labor-Intensive Industry.** In the 1960s, economists William Baumol and William Bowen argued that service industries like the performing arts, health care, and higher education suffer from the “cost disease” because they are labor-intensive and require expensive labor (musicians, doctors, professors).¹⁴ To the extent this is true, productivity in the sector tends to decline over time as spending per student must rise more rapidly to accommodate the growing costs for labor.
4. **The Revenue Theory of Higher Education.** The so-called revenue theory of higher education was posited by economist Howard Bowen in 1980. According to this theory, college and university officials raise all the money they can and spend all the money they raise. In other words, revenue levels dictate how much is spent, rather than the other way around.¹⁵



Where Does the Money Go?

Much of the debate over the growth in college prices and spending revolves around where the money goes. The questions raised in this debate include the following:

To what extent do increases in faculty pay explain increases in spending over time? Available data suggest increases in faculty pay are not to blame for spending increases, as faculty salaries today are not very much higher than they were forty years ago when adjusted for inflation.¹ Howard Bowen's analysis suggests this has varied over time as faculty pay lagged behind that of most other professions in the first half of the twentieth century, but faculty pay grew faster than that of many other groups in the 1950s and 1960s.²

What have been the trends in student/faculty ratios? At a gross level, the number of full-time faculty to full-time equivalent (FTE) students has varied between 14:1 and 18:1 over the past four decades, with the changes over time being mostly a function of enrollment variations more than dramatic shifts in the number of faculty.³ Again, Howard Bowen is helpful on this question for earlier times. From his research, the ratio of students to faculty overall declined in the 1950s and then increased in the 1960s and 1970s.⁴

To what extent has administrative bloat added to the growth in spending per student and the decline in cost productivity? A number of recent reports indicate that the ratio of administrative staff to faculty has increased over time and that this shift has contributed to the growth in higher education spending over time.⁵

To what extent have adjunct faculty and graduate students replaced full-time faculty in the teaching function? Adjunct faculty now account for a much higher share of teaching in this country than was the case two or three decades

ago, especially in almost all community colleges and for-profit schools, but also in many public and private four-year institutions. Graduate students help teach a large number of introductory and other courses at many research universities although this trend may have slowed in recent years. The growing reliance on adjuncts and graduate students to teach courses previously taught by full-time professors undoubtedly has reduced the growth in spending per student below what it otherwise would have been and thus has improved cost productivity, although probably at the cost of reduced quality.⁶

What have been the trends in other measures of spending and productivity, such as spending per graduate? Alternative measures of cost productivity such as spending per graduate can be difficult to calculate but worthwhile in getting a different look at how productive colleges and universities have been when measured by the end product of graduates rather than students. Publications from the Delta Cost Project, which has taken the lead on this issue in recent years, generally suggest that spending per graduate has also increased in real terms over time.⁷

1. NCES, "Digest 2012," 2012, table 271.

2. Howard Rothmann Bowen, *The Costs of Higher Education: How Much Do Colleges and Universities Spend per Student and How Much Should They Spend?* (San Francisco, CA: Jossey-Bass Publishers, 1980).

3. Drawn from analysis of NCES, "Digest 2012," tables 198 and 263.

4. H. Bowen, *The Costs of Higher Education*.

5. See, for example, Jay P. Greene, "Administrative Bloat at American Universities: The Real Reason for High Costs in Higher Education," Goldwater Institute, August 17, 2010.

6. There is a series of articles on adjunct faculty in *Inside Higher Ed*, 2013. See, for example, Colleen Flaherty, "Making the Case for Adjuncts," January 9, 2013, www.insidehighered.com/news/2013/01/09/adjunct-leaders-consider-strategies-force-change.

7. See, for example, Nate Johnson, "What Does a College Degree Cost? Comparing Approaches to Measuring 'Cost per Degree'" (white paper, Delta Cost Project, American Institutes for Research, Washington, DC, May 2009).

Over time, the cost disease and the revenue theories have become the two most discussed theories about why college prices and spending per student have grown so fast in the past several decades. Like most oft-discussed theories, both can be and have been picked apart. Regarding the cost disease, higher education has always been labor-intensive so why have costs risen so much more rapidly in recent decades than before? Similarly, advocates of the cost

disease approach argue that higher education is immune to the kind of technological labor-saving devices that have affected most other industries. But the present day discussion of massive open online courses (MOOCs), along with earlier advances in online learning and video technology, suggest that this may not be true.

Howard Bowen's revenue theory also has been subjected to legitimate questioning. For example, Robert



Archibald, an economics professor from the College of William and Mary and a long-time analyst of higher education trends, argues that institutions neither maximize their revenues nor spend all the money they collect. To support his argument, Archibald notes that if colleges and universities were really maximizing their revenues, many of them would charge even higher tuitions, engage in even more fundraising, and would not end up with year-end surpluses.¹⁶

These are good arguments, but it is also important to recognize that college and university officials work within a number of organizational constraints, including legal restrictions and economic and political realities, and prices and other revenues may well be maximized within those constraints and year-end surpluses may also be the result of prudent planning.

My own view is that the revenue theory is more compelling than the cost disease theory in explaining higher education spending behavior for several reasons:

- Spending per student has not grown inexorably over time in either the public or private sector. For example, in the past decade spending per student has decreased in real terms in the public sector.
- Tuition has grown as a proportion of spending per student over time in both sectors, suggesting that tuition is often set independently of how much is spent per student.
- Reduced teaching loads at many institutions over the past several decades were not inevitable but rather a function of institutions having enough funds to allow for these kinds of changes.

I think the revenue theory is also helpful in explaining many institutional behaviors. For instance, observation suggests that most private institutions and many public ones (operating within constraints imposed on them by state governments) set their tuitions more in line

TABLE 1

THE DIRECTION OF CAUSATION FOR DIFFERENT FACTORS IN THE GROWTH OF TUITIONS AND SPENDING PER STUDENT

Theory	Increases in Tuitions and other Charges	Increases in Spending per Student
Excessive Regulation of Higher Education	←	→
Pricing Based on Bundling of Services	→	→
Labor Intensity of Higher Education	←	→
Revenue Theory of Higher Education	→	→

Source: Author

with their perception of market conditions than as a reflection of how much they spend. It also helps explain why institutional officials lobby aggressively for public funding for operational support, student aid, and research in order to increase revenues. And the obvious growth in a wide range of amenities on many campuses can be explained by saying that more revenues allow institutional officials to go further down their priority list.

This all brings us back to the chicken or the egg question. Explanations for why higher education spending per student has increased over time depend on whether one believes the situation is best described as cost push or demand pull. Table 1 shows how the four explanations of higher education spending and prices can be characterized along the lines of whether they are cost push or demand pull.

The question of whether spending increases are cost push or demand pull seems especially important in discussing which of the two major theories—the inherent labor intensity of higher education or that revenues drive spending—better explains reality. In making his argument, Archibald and others argue that higher education inflation is the result of cost-push pressures. My argument in favor of the revenue theory is drawn from the belief that demand-pull considerations have more explanatory value, at least when it comes to higher education.



Why Have College Tuitions Increased So Rapidly in Recent Decades? Asserting that higher education is governed more by demand-pull than cost-push pressures does not resolve why tuition and fees have increased so rapidly in real terms and as a share of spending per student over the past three decades. A cost-push view leads to the conclusion that growth in tuition is a direct function of institutional spending decisions: the more it costs to educate students, the more colleges must charge to offset those costs. Those of us who believe in the demand-pull explanation would say the decision about where to set tuition rates creates the framework for more spending but does not explain why prices have increased so fast. Under this demand-pull view, the story about why tuitions have increased so rapidly in recent decades needs to be told separately for the public and nonprofit sectors of higher education.

Public sector. The statistics over time on tuition and fee revenues as a share of total educational spending in the public sector make this relationship clear.¹⁷ For most of our nation's history, tuition and fees represented 10 percent or less of the educational spending at public institutions. But this share has increased consistently since the 1970s,¹⁸ and the most recent SHEEO data show the student share of educational costs at public institutions has grown from around 25 percent in the mid-1980s to more than 40 percent today. As this share is just an average, in many states the student share of educational costs now exceeds 50 percent.¹⁹

The series of SHEEO reports used to track state higher education finance trends are frequently cited as evidence that over time the student share of paying for public higher education has risen tremendously. But to a significant extent, these reports overstate the growth in the student share because the tuition and fee revenues include charges paid by out-of-state, international, and graduate students, which typically exceed what is charged to in-state undergraduates. Although systematic data are not available, a reasonable estimate is that if tuitions paid by non-state residents and post-baccalaureate students were excluded from the calculation, the student share of educational costs paid by in-state undergraduates would be closer to 30 percent than the more highly publicized rate of 40 percent or more. Nonetheless, it is clear that the student share has gone up over time for all students enrolled in public higher education, including state residents.

Another oft-repeated "fact" regarding public higher education is that the only way public institutions can react to cutbacks in state support during recessions is to

raise the tuitions they charge to state residents. While it is certainly true that public-sector tuitions and fees have increased over time, it is not the case that raising prices for resident undergraduates is the only way institutions have responded to tight budgets. Indeed, increasing the share of students from out-of-state or from other countries brings in additional revenue because these students typically pay a much higher share of the costs. And it is clear, at least from observation, that these nonresident students as a share of all enrollments have increased over time, especially at the state flagship universities.

In another, less publicized way, public institutions have consistently increased their tuition revenues over time: they have increased their enrollments. This alternative reflects the fact that increasing enrollments by 10 percent while charging current prices nets the same increase in cost recovery as a 10 percent increase in prices. Enrollment increases are also much more politically attractive than the alternative of raising prices.²⁰

This raises an important question. Why do public institutions rely so much on increasing prices when state funds are cut back instead of taking the politically more popular step of increasing enrollments? A primary reason may be that institutional officials view themselves as the protectors of quality and believe that increasing prices is a means for protecting quality. Increasing enrollments, meanwhile, would be perceived as leading to declines in quality.

Examination of the data also makes it clear that over time public institutions in many states have relied on enrollment increases as well as price increases to finance their operations. As figure 11 shows, public-sector enrollments have grown faster than tuition and fees, adjusted for inflation, since 1965. And table 2 shows that in several instances over the past four decades enrollment increases were far more prominent than price increases in determining the growth of tuition and fee revenues overall. This was certainly true in the 1970s, when enrollment increases accounted for almost all of the increase in net tuition revenues. By contrast, in the first halves of the 1980s and the 1990s, price increases almost totally explained the growth in tuition revenues. Interestingly, in the second half of the last decade, the increase in net tuition and fee revenues in constant dollars was split fairly evenly between enrollment increases and price increases.

Nonprofits. The data presented in section 2 make it clear that private-sector tuition increases lagged behind inflation in the 1970s and have far outstripped inflation since. What explains this trend? One prime consideration is



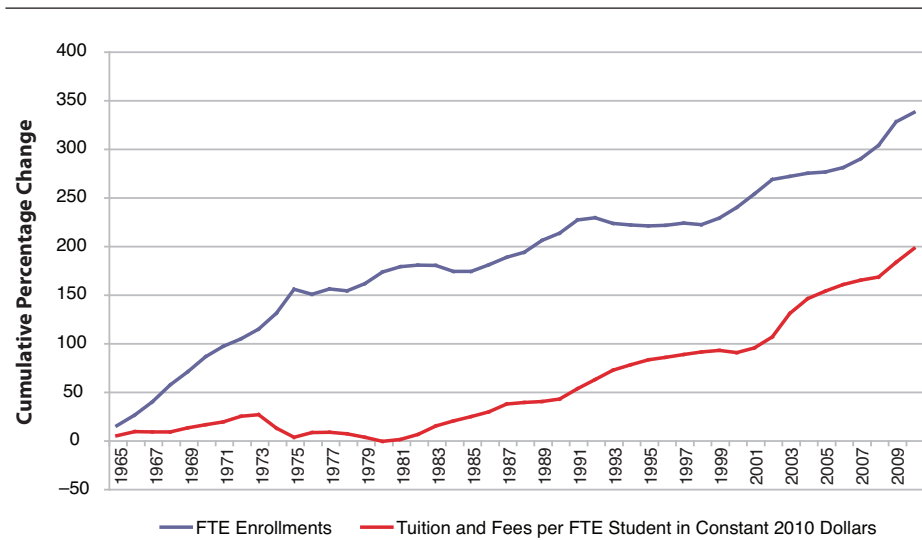
that the late 1970s ushered in a new way of thinking among officials at Princeton University and a handful of other leading private institutions who decided their institutions were underpriced relative to value because of the extended lag in tuition growth behind inflation.²¹ As a result, officials at these institutions decided to buck the trend of the preceding decade and raise their tuition and other charges substantially while at the same time increasing how much student aid they provided to ensure or improve the diversity of their student body. This high tuition/high aid strategy model worked well for these industry leaders in that they expanded their revenues net of the student aid provided while also introducing greater student diversity. As a result, an increasing share of private colleges and universities adopted a similar approach in the 1980s and 1990s.

Figures 2 and 3 show that in those two decades private-sector tuition and other charges increased much more rapidly than the rate of inflation. The story since 2000 is a bit different. In light of growing complaints about sticker shock coupled with the effects of two recessions, the rate of growth in their tuition and other charges since 2000 has slowed at many private institutions, although, on average, the sector sticker prices have

continued to grow much faster than inflation and spending per student.

Thus, the basic story in private higher education is that the rapid increases in tuitions, fees, and other charges have continued long after most institutions caught up from the high-inflation 1970s. It also seems fair to say that if most private institutions had stopped increasing their charges at double the rate of inflation at the end of the 1980s after they had caught up from the 1970s and instead tracked with inflation over the past two decades, the highest-priced private institutions would now be

FIGURE 11
CUMULATIVE PERCENTAGE CHANGE IN PUBLIC-SECTOR ENROLLMENTS
AND TUITION AND FEES IN 2010 DOLLARS, 1965–2010



Source: National Center for Education Statistics

TABLE 2
ANNUAL PERCENTAGE CHANGE IN NET TUITION AND FEE REVENUES AND NET TUITION AND FEE REVENUES
PER FTE IN CONSTANT DOLLARS AND FTE ENROLLMENTS IN PUBLIC HIGHER EDUCATION, 1970–2010

	1970– 1980	1980– 1985	1985– 1990	1990– 1995	1995– 2000	2000– 2005	2005– 2010
Net Tuition and Fee Revenues in Constant 2010 Dollars	3.5%	2.8%	2.4%	2.8%	0.9%	3.3%	3.1%
Net Tuition and Fees per Full Time Equivalent Student in Constant 2010 Dollars	0.5%	2.7%	1.1%	2.6%	0.3%	2.0%	1.5%
Full Time Equivalent (FTE) Enrollments	3.0%	0.0%	1.3%	0.3%	0.6%	1.3%	1.6%

Source: National Center for Education Statistics



charging \$35,000–40,000 rather than \$55,000–\$60,000, and we probably would not be having much of the discussion about runaway tuitions we are now having.

Using Policy Reforms to Reduce Prices and Improve Productivity

For many years, the rallying cry in the national health care debate has been that we must bend back the health care cost curve if reforms are to have the desired effect of reducing federal spending without reducing accessibility and quality in the sector. Just as with health care, it is hard to imagine a successful higher education reform effort that does not include slowing or reversing the growth of both spending and prices. Without such reforms, future higher education policies will continue to simply allow bad dollars to follow good ones in paying for the growing costs of college.

Reforms must go beyond reducing costs to be successful. The system must be made more productive and more inclusive. A productivity agenda should include changes that ensure colleges and universities do not react to cutbacks in government funding simply by cutting services or becoming less accessible. This will require a change in the mindset of institutional officials who see themselves as the protectors of quality. It may also require policies that provide incentives to college leaders to advance an equity agenda that seeks to increase the number of college graduates from low-income and minority families.

Beyond the possible effects of excessive regulation, higher education discussions in this country often fail to recognize that policies may have contributed to the rapid growth of spending and prices. As the discussion in section 3 indicates, the focus has tended to be on institutional practices as the primary cause of price and cost increases. The logic then is that institutional behavior must change before the growth in prices and spending per student will slow down. The Obama administration recently has lent credence to this view through its efforts to expand student aid while the president calls on institutions to take the lead when it comes to price and cost moderation. In this section we look at how public policy and institutional practice may interact, how federal and state policies may have affected how much colleges charge and spend, and what can be done about it.

Possible Effects of Federal Policies on Prices and Spending per Student. The ways federal policies may have had an effect on the rapid growth of what colleges and univer-

The Curious Case of Higher Education and Health Care

Much has been made about the fact that college prices have grown faster than even health care premiums in recent decades.¹ Less discussed but equally clear from the national data is that health care spending has increased much faster than higher education spending. Health care spending has increased from 6 to 18 percent of GDP since 1965 while total spending on higher education has stayed between 2 to 3 percent of GDP during that same period.² This strongly suggests that while aggregate spending for higher education has certainly increased over time in real dollars, the bigger problem when it comes to higher education is the increase in prices relative to what is spent per student.

It seems worth considering what possible differences between higher education and health care might account for the difference in trends in prices and spending as a share of GDP between the two sectors. One difference may be that the government has paid an increasing percentage of the health care bill since 1965 and thus consumers are paying less of that total bill. And while third-party payers are certainly prominent in higher education, they are much less so than in health care. Still another possibility is that while spending per student has grown in higher education over time, the growth of community colleges and other lower-cost institutions over an extended period of time has meant that higher education spending as a share of GDP has not grown as sharply as per-student spending.

1. H. Bowen, indicates that various health care fees lagged behind higher education spending during the third quarter of the twentieth century. See H. Bowen, *The Costs of Higher Education*, 44–45.

2. For higher education historical data on price increases and spending as a percentage of GDP, see NCES, *Digest of Education Statistics*, 1990, table 27; H. Bowen, *The Costs of Higher Education*, 35 (table 2); and OECD, *Education at a Glance 2012*, table B1. For health care spending as a share of GDP, see Centers for Medicare and Medicaid Service, Office of the Actuary, “National Health Expenditure Accounts, Historical,” table 1.

sities charge and what they spend mirror the two primary ways the federal government provides funds for higher education: federal student aid programs (including tax benefits) and federal support for university-based research.

The Possible Effects of Federal Student Aid. A principal federal intervention in higher education for more than a half century has been the provision of student financial aid in



the form of grants, loans, and work-study funds, as well as service-related benefits such as the GI Bill and a range of tax-related benefits that help families pay for college. A key question is whether and how much these federal programs had an effect on enrollments, prices (including possible substitution effects), and spending.

Research indicates that the growing availability of federal aid over time has stimulated enrollments far beyond what otherwise would have been provided. There also is a large volume of literature on how the various types of student aid have differential effects on students' decisions to enroll.²² In sum, it is clear that federal student support programs have had varying effects on how many students enroll and that these enrollment trends in turn have had a direct impact on trends in how much is spent per student.

Another key question is whether the rapid growth over the past three decades in what colleges charge has been an unintended consequence of federal student aid policies. As US secretary of education in the mid-1980s, Bill Bennett helped stimulate this debate when he asserted that student aid was a major factor in the explosion of tuition then starting to occur. Since Bennett first made his observation, researchers have been unable to establish a causal relationship between student aid increases and increases in tuition, leading many to conclude that Bennett was wrong.²³

There is good reason to believe that neither position is entirely sound. On the one hand, those like Bennett who say student aid is a primary culprit behind increased prices often fail to consider whether different types of aid might have different effects on prices. On the other hand, those who rely on the lack of an established causal relationship between aid availability and prices fail to recognize that there is a strong correlation between the growth in aid and growth in prices over time, especially in the case of student loans.

Here it is crucial to distinguish between the possible influence of loans and grants on the run-up of tuition over the past three decades. Twenty years ago I cowrote an article which argued there were several reasons to believe that loans have had more of an impact on prices than grants, including that many more students borrow than receive grants, and loan amounts vary with costs of attendance while the amount of Pell grants do not.²⁴ Andrew Gillen, currently at Education Sector, has written more recently on this topic, raising a number of issues that should be considered in this regard, including differences in effect stemming from the type of institution attended as well as the type of aid.²⁵

This analysis may need to be revisited in light of the massive increase in Pell Grant funding and coverage in recent years. Nonetheless, there still is relatively little evidence to show that grants have had a large impact on what colleges charge. There is much more reason to worry that the ready availability of loans has been a major factor in the rapid growth of tuition and other charges in recent decades.

That is not to say that Pell Grants have no effect on institutional behavior. Indeed, the bigger worry may be that the amount of institutional aid channeled toward Pell recipients may be reduced when Pell grants increase. This substitution effect occurs if institutions view Pell grants as 'access money' and move more of their institutional discounts to other students or to other purposes.

Thus, when Pell Grant funding increases, one thing to consider is whether institutions respond by reducing the amount that Pell recipients must borrow or the institutional discounts available to the Pell recipients. Unfortunately, evidence suggests that the incidence of substitution has increased sharply over time as surveys of student aid recipients indicate that institutions are moving more and more of their aid up the income ladder and that middle-income students now are more likely to receive institutional aid, and more of it, than low-income students.²⁶

In terms of whether federal student aid affects how much colleges spend per student, the relationship is more an indirect one and depends to some large extent on whether one believes in the cost-push or demand-pull theory of higher education finance. To the extent that demand pull is operating, one could surmise that both grants and loans provide additional revenues to institutions, which then allow institutions to spend more. In any case, the effect of government-funded student aid on spending would seem to be more indirect and smaller than its possible effect on pricing patterns.

Federal Support of Research. The other major federal role in higher education is support for university-based research, which represents more than half of what universities spend for research.²⁷ The volume and variety of the theories, patents, and discoveries produced with federal support of university-based research make this undoubtedly one of the great public policy initiatives of the past half century.

The amount universities spend on research-related activities is much more than what would have been spent if the federal government had not become so involved, at least for those universities whose faculties conduct that research. Federal research funding also obviously plays a



major role in what faculty and administrators are paid at the universities that receive substantial research funds.

It also seems reasonable to believe that federal indirect cost reimbursement practices, which pay universities based on the amount of administrative costs they report, lead to increased spending at research universities. To the extent that the ratio of administrative costs to total spending is the basis for the indirect cost reimbursement rate for these institutions, the incentives are inflationary as institutions are being reimbursed for what they spend.

With regard to whether research policies have an impact on pricing, the connection is likely to be more indirect than the effect on spending. One possible connection has to do with the frequent supposition that some of the tuition that undergraduates pay at research universities is used to cross subsidize research-related activities at those institutions. If this is the case, the concern would be that many research universities are leaders in American higher education and thus what they charge their students and pay their faculty gets transmitted throughout the system.

Is There a Federal Role in Slowing the Growth in Higher Education Prices and Spending? President Obama's recent focus on cutting the growth in tuition raises the question of what the federal role might be in slowing the future growth in college prices and spending. One way to answer this question is to say what federal officials should *not* do about runaway prices and rapidly rising spending per student: impose price controls. There is little evidence that price controls in higher education would work, first and foremost because of the difficulty in defining what prices would be subject to control—tuition and fees or total charges, the sticker price or the price net of aid, or other measures? Focusing on any one of these price measures will inevitably lead to adjustments in others. This would result in unintended consequences, such as institutions reining in tuition while increasing other fees, such as room and board charges, with little or no effect on the overall amount charged or its growth over time.

What some in Congress also have discussed is to stop short of price controls and instead shine a spotlight on those institutions with the highest tuitions or the highest increase in prices over a period of time. But such shaming efforts are unlikely to be successful and could cause harm if not done properly. For example, institutions with high tuitions could reduce their discounts in order to reduce their sticker prices and cut back on their aid for needy students, another example of how a well-intentioned effort to restrain prices can have adverse consequences.

Recommendation: The federal government should take steps to break the connection between the ready availability of loans and the increases in tuitions and other charges over time.

It is worth noting that only two basic groups of students now pay full sticker price at the most expensive institutions: those from the wealthiest families who can afford the full price, and many of the students who borrow because sticker prices are used to determine their student loan eligibility. This structure, which allows institutions to maintain or raise their prices and shift the cost sharing to loans for a broad range of their students, needs to be changed if the pattern of ever-mounting student debts and the upward pressures on college pricing are to be reversed.

One way to accomplish this would be to require institutions to provide discounts to the students who must borrow because they lack other resources. For example, take an upper-middle class student who attends an institution where the total sticker price is \$50,000 and the financial aid process indicates the family can contribute \$40,000. Rather than require that student to borrow \$10,000 to make up the difference, the institution could be required to provide a discount of \$5,000 that would allow the student to borrow only \$5,000. There are other ways limits on borrowing might work, such as no longer allowing the highest-priced institutions to use their sticker price in calculating total costs of attendance. The important point is that institutions must have some role to play in efforts to reduce the reliance on loans if we are to put a dent in the size of student debt burdens and reverse the cost curve.

In this same regard, the federal government should attempt to restrict the use of private loans to pay for college. The growing use of private college loans since 2000 has left far too many students with unwieldy debts while serving as fuel for the continued growth in tuition and other charges at many institutions. As in the case of federal student loans, it is very hard to imagine that many institutions would have been able to raise their prices without private loans to supplement federal loan availability. Finding a way to restrict the use of private loans thus also is a key to slowing the cost and price spiral, although such a restriction could be tricky to implement if institutions were to argue it was restraint of trade.

Recommendation: Steps should be taken to reduce the upward cost pressures inherent in the federal funding of university-based research.

Another area ripe for reform is how research universities are reimbursed for the indirect costs of research. We



should move instead to a system of uniform indirect costs in which all research universities are reimbursed at the same rate for their administrative costs regardless of whether they rent or own their facilities and buy or lease their equipment.

Federal support of research activities at individual institutions is one of the primary sources of the explosion of earmarks that evolved into such a large federal spending item over the past several decades. Universities now spend millions of dollars hiring lobbyists to gain these earmarks from politically powerful legislators. *Earmarks for university research facilities should be eliminated or sharply reduced as part of the broader effort to reduce federal funding of earmarks.*

The Effects of State Policies on Prices and Spending per Student. State and local funding of higher education occurs in three ways: operating support that allows public institutions to charge less than what it costs to provide that education, a capital commitment to build enough seats at public institutions to ensure adequate access, and a growing amount of state student financial aid (although still much smaller than what the federal government provides or sponsors). Despite recent slowdowns in funding and large increases in tuition over time, states and localities on average still provide more than half of what public institutions spend on instruction and administration. In addition, state regulations can have large effects on how public institutions operate. How does state support and regulatory authority affect prices, enrollments, and productivity at public institutions?

In terms of what public-sector institutions charge, government in most states has a large influence. The most direct effect is that government officials in many states play a direct role in setting tuitions or placing limits on tuition rates. Less direct but nonetheless important is the effect that state funding trends have on how public institutions set their prices when they have the autonomy to do so. Over the past 40 years, public tuitions jumped each time there was a recession which leads to the correct observation that tuition increases are one way public institutions make up for shortfalls in state funding. The tougher question is why public tuition growth does not moderate much during economic expansions.

Because state student aid is much smaller than federal student aid and constitutes 10 percent of what states spend in operating support, the effect of state student aid on prices may seem modest.

State policies also affect how much institutions spend in some obvious ways. For example, the more funds that state or local governments provide to a public

institution, the more that institution is likely to spend, all else being equal. State policies affect what public institutions spend in other ways that are less obvious but still very important in determining spending patterns. For example, to the extent that funding formulas and budget negotiations in many states often provide a disproportionate share of funds to the higher-cost institutions (often flagship research universities), the result is that the system spends more per student. By the same token, though, a primary reason that higher education spending as a share of GDP has not increased appreciably over the past half century may be that an increasing share of higher education occurs in community colleges and other open-access public institutions that spend much less per student than higher cost research universities and more expensive private liberal arts institutions.

Another means by which states can have an impact on spending per student comes in how they deal with enrollments. Some of these effects are direct, including when states impose caps on how many students a public institution may enroll. This typically occurs when a state decides to limit enrollments to conform with how much funding was provided to that institution. State officials also frequently impose caps on how many out-of-state or international students a public institution may enroll. Other effects are indirect such as if states were to set floors on the number of students that institutions may enroll and then let the institutions decide how many more students to enroll above that floor.

Changes in State Policies That Would Slow the Growth in Tuition and Spending per Student. When it comes to containing the future growth in what public institutions charge and how much they spend, states must be at the center of the action. This is because not only do states spend more than the annual federal support of university-based research and other federal funding for institutions, but they also are often directly involved in how prices are set at public institutions and how many students enroll.

Recommendation: State practices should be changed to encourage greater cost moderation and more productivity in public higher education.

As the preceding discussion indicated, major reforms are needed in how states fund higher education. State funding formulas traditionally have led to higher spending and encourage enrollment but not completion. These incentives must be changed if we are to unwind the higher education cost spiral and increase the number of college graduates. Part of this process will require that



states revisit how funds are allocated to different parts of the public higher education sector. States should also rethink their role in setting price and volume in public higher education. To be successful, state reform efforts must recognize that it is never a good idea to pay organizations based on what they actually spend, because inevitably they will spend more to get more. Any successful effort to moderate the growth of tuition and spending per student in public higher education should consider the following ideas:

- *States should move to a system in which tuition at public institutions is pegged to general measures of ability to pay, such as state GDP per capita or median family income.* Traditionally, public-sector tuitions are thought of as a way to pay a portion of what institutions spend per student. As a result, tuition is principally viewed as an instrument of institutional finance, and students increasingly bear the burden of paying the costs at public institutions. States could help bend back the cost curve if they shifted to policies that base tuitions more on general measures of ability to pay, such as state median family income or GDP per capita.
- *States should use normative costs rather than actual or average costs per student in their funding formulas.* A major component of any funding formula is how much is paid for each unit, and a principal concern is raised when the formula is based on how much each institution spends per student. If so, this is an invitation for cost creep—when institutions are paid on the basis of how much they spend, they are likely to spend more. This problem could be addressed if states develop and use funding formulas that pay institutions instead on the basis of normative costs—what it ought to cost to educate a student in a given field of study rather than what it actually costs. The institutions would then be responsible to figure out how to pay for the difference between their actual costs per student and normative costs.
- *More states should include numbers of graduates in their funding formulas and pay premiums for low income and minority graduates.* One of the most encouraging recent trends in higher education is the fact that two dozen states now base at least some of their funding formulas on performance measures, up from just a handful a couple of years ago. This trend should continue as supply-side incentives represent the best chance to improve the productivity of the public higher education system. If states also decide to include premiums in their funding formulas for low-income and minority students, that would be a welcome development as well. To maximize their effectiveness, these reforms work much better if they are based on the numbers of graduates rather than graduation rates, because it is easier to target certain types of graduates and there is less incentive for institutions to become more selective.
- *States should reallocate some funds toward lower-cost public institutions, such as community colleges.* Another way to lower the cost structure of public higher education is for states to reallocate even more funds toward those public institutions that spend less per student. Part of this reallocation strategy would be for states to allow higher cost and presumably higher quality public institutions to charge their students more in tuition and other fees, which many states in fact do. But many of these same states also provide a disproportionate share of public funds to higher cost institutions, which is why the rich tend to get richer in public higher education. A system that allowed tuition and fees to pick up quality differences while the states and localities fund the basics at all institutions would go a long way toward slowing or reversing the spending spiral in public higher education in this country.
- *States should set floors on the number of in-state students that public institutions must enroll.* Another important reform would be for state policymakers and institutional officials to recognize that raising tuition is not the only way public institutions react to cutbacks in state funding. For a given level of state funding, the reality is that cost recovery rates can also be increased by increasing the number of students who pay current prices. One reason this is not used more often is that institutions and faculty tend to worry that having more students will diminish quality. One feasible solution to these challenges is for states to set enrollment floors based on the number of resident students funded by the state, rather than capping enrollments. Under this arrangement, states would provide funds for a target number of in-state students, which in combination with the tuition and fees that the institutions were allowed to charge, would provide an adequate level of funding. These public institutions would then be allowed

to decide for themselves how many additional students to enroll in various fields of study based on faculty workloads and capacity utilization formulas.²⁸

- *Public institutions should be allowed to retain all the tuition and fees they charge.* Public institutions in many states do not retain all the tuition and fees they charge as states collect these revenues and then re-appropriate them. For enrollment floors to be effective, though, they must be combined with policies that allow public institutions to retain the tuition and fees they collect. A particularly striking example of this is the California community college system, where the individual colleges do not retain the fees they charge and instead must rely on the state to fund enrollment growth. The state often diverts some of these funds to other institutions or to entirely other purposes, and the community colleges are asked to educate rapidly increasing numbers of students without additional public or private funds to support this enrollment growth. This is an unsustainable arrangement that must be changed if we hope to increase access and bring spending down in a meaningful way. One way forward is to allow public institutions to retain all the tuition and fees they charge to support the additional students they enroll. To prevent the abuse that would come with allowing institutions to charge market-like prices and enroll all the students they can, certain limitations should be imposed. One such limitation would be for states to set limits on how much institutions could charge.

Table 3 summarizes the described recommendations for how federal and state policy reforms could help reduce the future growth of what public and private institutions charge and improve productivity by reducing how much is spent per student. Implementation of these policy

TABLE 3
RECOMMENDATIONS FOR BENDING BACK THE HIGHER EDUCATION
COST CURVE AND IMPROVING PRODUCTIVITY

Level	Policies
State	<ul style="list-style-type: none"> • Tie tuition at public higher ed institutions to general measures of ability to pay • Reform state funding formulas <ul style="list-style-type: none"> • Use normative costs rather than actual or average costs • Allocate at least some state funds based number of graduates • Reallocate funds toward institutions that spend less per student • Institute enrollment floors to ensure public higher ed institutions meet in-state student targets • Allow public higher ed institutions to retain all the tuition and fees they charge
Federal	<ul style="list-style-type: none"> • Break the connection between loan-availability increases in college charges <ul style="list-style-type: none"> • Require higher ed institutions to give discounts to students who must borrow • Limit the use of private loans • Reduce spending pressures in federal funding of campus-based research <ul style="list-style-type: none"> • Move to uniform indirect cost reimbursement for federal research • Reduce the use of earmarks in funding of university-based research

Source: Author

suggestions would go a long way toward putting US higher education on a more solid footing of lower tuition growth and greater productivity in the form of restrained spending per student.

Notes

1. See Organisation of Economic Co-operation and Development (OECD), *Education at a Glance 2012*, tables B1.1 and B2.1.

2. This stipulation about similar types of higher education is important because it is possible that vocational training or low-cost academic programs would be offered at a lower price by a for-profit institution than the cost of a research-intensive program offered by a nonprofit or public institution.

3. For two good recent articles on for-profit and nonprofit higher education in an international context, see Andrés Bernasconi, "The For-Profit Motive," *International Higher Education*, no. 71 (Spring 2013); and Daniel C. Levy, "Squeezing the Nonprofit Sector," *International Higher Education*, no. 71 (Spring 2013).

4. Tuition figures from NCES, *Digest of Educational Statistics*, "Average Undergraduate Tuition and Fees and Room and Board Rates Charged for Full-Time Students in Degree-Granting Institutions, by Level and Control of Institution: 1964–65 through 2010–11," table 349, http://nces.ed.gov/programs/digest/d11/tables/dt11_349.asp.

5. See, for example, "Higher Education: Not What It Used to Be," *Economist*, December 1, 2012. The article indicates that tuition has grown five times as fast as inflation since 1983, based on a chart similar to figure 2.



6. Both public- and private-sector charges are adjusted in constant 2011–12 dollars, as shown in NCES, *Digest of Educational Statistics*, “Average Undergraduate Tuition and Fees and Room and Board Rates Charged for Full-Time Students in Degree-Granting Institutions,” table 349, http://nces.ed.gov/programs/digest/d11/tables/dt11_349.asp.

7. College Board, “Trends in Student Aid 2012,” 10 (table 1).

8. Data collected by SHEEO as part of its annual finance figures for net tuition revenues.

9. Changes in accounting procedures are one of several factors that have greatly complicated these data collection efforts. As a result, data on spending per student in private-sector institutions, for example, has not been part of the regular reporting by the US Department of Education since 1995–96.

10. For private institutions, the data presented are actually for resources per student as private-sector data on spending has not been consistently presented by the US Department of Education because of changes in accounting conventions and other data-collection issues. To the extent that current funds revenues and current funds expenditures track well over time, using resources per student provides a comparable time series.

11. SHEEO, Higher Education Finance Annual Reports and backup tables provided by SHEEO.

12. The story of how for-profit postsecondary institutions price themselves is different from either the nonprofit or public sectors as this is the one postsecondary sector where observation and research indicate that the prices charged directly reflect the impact of federal student aid on pricing patterns. See, for example, C. Goldin and S. R. Cellini, *Does Federal Student Aid Raise Tuition? New Evidence on For-Profit Colleges* (National Bureau of Economic Research [NBER] Working Paper No. 17827, Cambridge, MA, 2012).

13. Robert Martin, “Higher Education Governance as a Barrier to Cost Containment” (paper presented at “Stretching the Higher Education Dollar,” AEI, Washington, DC, August 2, 2012), www.aei.org/files/2012/08/01/-higher-education-governance-as-a-barrier-to-cost-containment_181717510002.pdf.

14. William Baumol recently wrote a book titled *The Cost Disease*, which follows up on his earlier work four decades earlier, although *The Cost Disease* is almost wholly an analysis of the economics of health care. See William J. Baumol and William G. Bowen, *Performing Arts: The Economic Dilemma* (Cambridge, MA: MIT Press, 1968).

15. Howard Rothmann Bowen, *The Costs of Higher Education: How Much Do Colleges and Universities Spend per Student and How Much*

Should They Spend? (San Francisco, CA: Jossey-Bass Publishers, 1980).

16. Robert Archibald, remarks at “Stretching the Higher Education Dollar,” AEI, Washington, DC, August 2, 2012.

17. For the past quarter century, see SHEEO, State Higher Education Finance reports, various years; and for earlier years, State Grapevine Annual Reports, Illinois State University, relevant years.

18. Two national reports issued in the early 1970s by the Carnegie Commission on Higher Education and the Committee for Economic Development argued that public-sector tuitions should be increased to one-third of cost per student at public institutions to more nearly reflect the private benefit of going to public higher education. In the forty years since these reports were issued, that has become the case.

19. SHEEO, *State Higher Education Finance FY 2011*, 2011, 24, figure 4.

20. Arthur M. Hauptman, and Philip Nolan, “Assessing the Effects of Four Budget-Balancing Strategies in Higher Education,” *Higher Education Management and Policy* 23, no. 1 (2011): 1–14.

21. See, for example, William G. Bowen, *Lessons Learned: Reflections of a University President* (Princeton, NJ: Princeton University Press, 2010).

22. See, for example, Susan M. Dynarski, “Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion,” *American Economic Review* 93, no. 1 (March 2003): 278–88; and Thomas J. Kane, “Rising Public College Tuition and College Entry: How Well Do Public Subsidies Promote Access to College?” (NBER Working Paper No. 5164, Cambridge, MA, 1995).

23. See, for example, Bryan J. Cook and Terry W. Hartle, “Myth: Increases in Federal Student Aid Drive Increases in Tuition,” *The Presidency Magazine*, Spring 2012.

24. Arthur M. Hauptman and Cathy S. Krop, “Federal Student Aid and Tuition Growth: Examining the Relationship,” Council for Aid to Education, 1998.

25. Andrew Gillen, “Introducing Bennett Hypothesis 2.0, Center for College Affordability and Productivity,” February 2012.

26. Data reported from National Postsecondary Student Aid Survey, various years as reported in K. Haycock, *Promise Abandoned*, a report by the Education Trust, 2006.

27. National Science Foundation, “Survey of Research and Development Expenditures at Universities and Colleges,” 2012.

28. This requires institutional officials to understand the differences between average and marginal costs and to follow the economic principle to expand as long as marginal revenues (price) exceed marginal costs.