

March 19, 2013

Recent Deep State Higher Education Cuts May Harm Students and the Economy for Years to Come

By Phil Oliff, Vincent Palacios, Ingrid Johnson, and Michael Leachman

As states prepare their budgets for the coming year, they face the challenge of reinvesting in public higher education systems after years of damaging cuts — the product of both the economic downturn and states' reluctance to raise additional revenues. In the past five years, state cuts to higher education funding have been severe and almost universal. After adjusting for inflation:

- States are spending \$2,353 or 28 percent less per student on higher education, nationwide, in the current 2013 fiscal year than they did in 2008, when the recession hit.
- Every state except for North Dakota and Wyoming is spending less per student on higher education than they did prior to the recession.¹
- In many states the cuts over the last five years have been remarkably deep. Eleven states have cut funding by more than one-third per student, and two states — Arizona and New Hampshire — have cut their higher education spending per student in half.

Deep state funding cuts have major implications for public colleges and universities. States (and to a lesser extent localities) provide 53 percent of the revenue that can be used to support instruction at these schools.² When this funding is cut, colleges and universities generally must either cut spending, raise tuition to cover the gap, or both.

That's what has happened since the recession hit. More specifically, colleges and universities have:

- **Increased tuition.** Public colleges and universities across the country have increased tuition to compensate for declining state funding. Annual published tuition at four-year public colleges

¹ CBPP calculation using the “Grapevine” higher education appropriations data from Illinois State University, enrollment data from the State Higher Education Executive Officers’ Association, and the Consumer Price Index, published by the Bureau of Labor Statistics, and the U.S. Census Bureau’s (Sened Tw(F461(mm)5.4(.5n9j0 3g.365 0 TD0005 Tc.002tionstateau avail)-1e4(nlshedro b

has grown by \$1,850, or 27 percent, since the 2007-08 school year, after adjusting for inflation.³ There has been great variation across the states. In two states — Arizona and California — published tuition at four-year schools is up more than 70 percent, while other states' universities and many two-year colleges have held tuition increases closer to the rate of inflation. Major increases in federal student aid and tax credits, on average, have fallen well short of covering these increases.

These sharp increases in tuition have accelerated longer-term trends of reducing college affordability and shifting costs from states to students. The College Board reports that the price of attending a four-year public college or university, even after accounting for increased federal financial aid and tax subsidies, has grown significantly faster than the growth in median income over the last 20 years.⁴

- **Cut spending, often in ways that may diminish the quality of education.** Tuition increases have made up only part of the revenue loss resulting from state funding cuts. Public colleges and universities also have cut faculty positions, eliminated course offerings, closed campuses, shut down computer labs, and reduced library services, among other cuts. For example, Arizona's university system cut more than 2,100 positions; merged, consolidated or eliminated 182 colleges, schools, programs and departments; and closed eight extension campuses (local campuses that facilitate distance learning).⁵

Reversing these trends and reinvesting in higher education should be a high priority for state policymakers. A large and growing share of future jobs will require college-educated workers.⁶ Investing in higher education to keep tuition low and quality high at public colleges and universities, and to provide financial aid to those students who need it most, would help states to develop the skilled workforce they will need to compete for these jobs.

But policymakers will need to make sound tax and budget decisions in the coming years if they are to renew state investment in higher education. Significant investments in higher education in most states may require raising new revenue, as state revenues have yet to recover from the recession and a wide range of other crucial public services also require reinvestment after years of deep cuts.

Conversely, states that enact deep tax cuts will make it much more difficult to rebuild their higher education systems and jeopardize their ability to compete for the jobs of the future. Florida governor Rick Scott, for example, is calling for \$135 million in business tax cuts at a time when Florida's higher education funding has fallen by 41 percent over the last five years. Other states

³ Calculated from College Board, "Trends in College Pricing," figure 9, <http://trends.collegeboard.org/college-pricing>.

⁴ Calculated from "Trends in College Pricing," figure 9, and the Census Bureau's Income, Poverty and Health Insurance in the United States, September 2012, Table A-1, <http://www.census.gov/prod/2012pubs/p60-243.pdf>.

⁵ Arizona Board of Regents Media Release, "ABOR Responds to Governor's FY12 Budget Recommendations," January 14, 2011, <http://azregents.asu.edu/legislativeaffairs/newsreleases/ABOR%20Responds%20to%20Governor%27s%20FY12%20Budget%20Recommendations.pdf>.

⁶ Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, "Help Wanted: Projections of Jobs and Education Requirements through 2018," June 2010.

considering tax cuts also have reduced their higher education funding substantially in response to the recession.

States Have Cut Higher Education Funding Deeply Since the Start of the Recession

Public colleges and universities educate over three-quarters of the nation's undergraduates.⁷ In 2012 state and local government revenue made up 53 percent of educational revenue (revenue that can be used to support instruction) at public higher education institutions.⁸ The great majority of that 53 percent comes from state tax revenue.⁹

States have cut higher education funding deeply. Comparing current 2013 fiscal year spending with spending in fiscal year 2008, the fiscal year just prior to the recession, and adjusting for enrollment and inflation, we find that:

- State spending nationwide is down \$2,353 or 28 percent.
- Every state except North Dakota and Wyoming has cut funding.
- Thirty-six states have cut funding by more than 20 percent.
- Eleven states have cut funding by more than one-third.
- The two states making the largest cuts by percentage, Arizona and New Hampshire, have cut their higher education spending in half.¹⁰ (See Figures 1 and 2.)

Why Have States Cut Higher Education?

The cuts have resulted from state and federal responses to the deep recession and continued weak recovery.

⁷ National Center for Education Statistics, "Condition of Education 2012", May 24, 2012, Table A-10-1, <http://nces.ed.gov/pubs2012/2012045.pdf>.

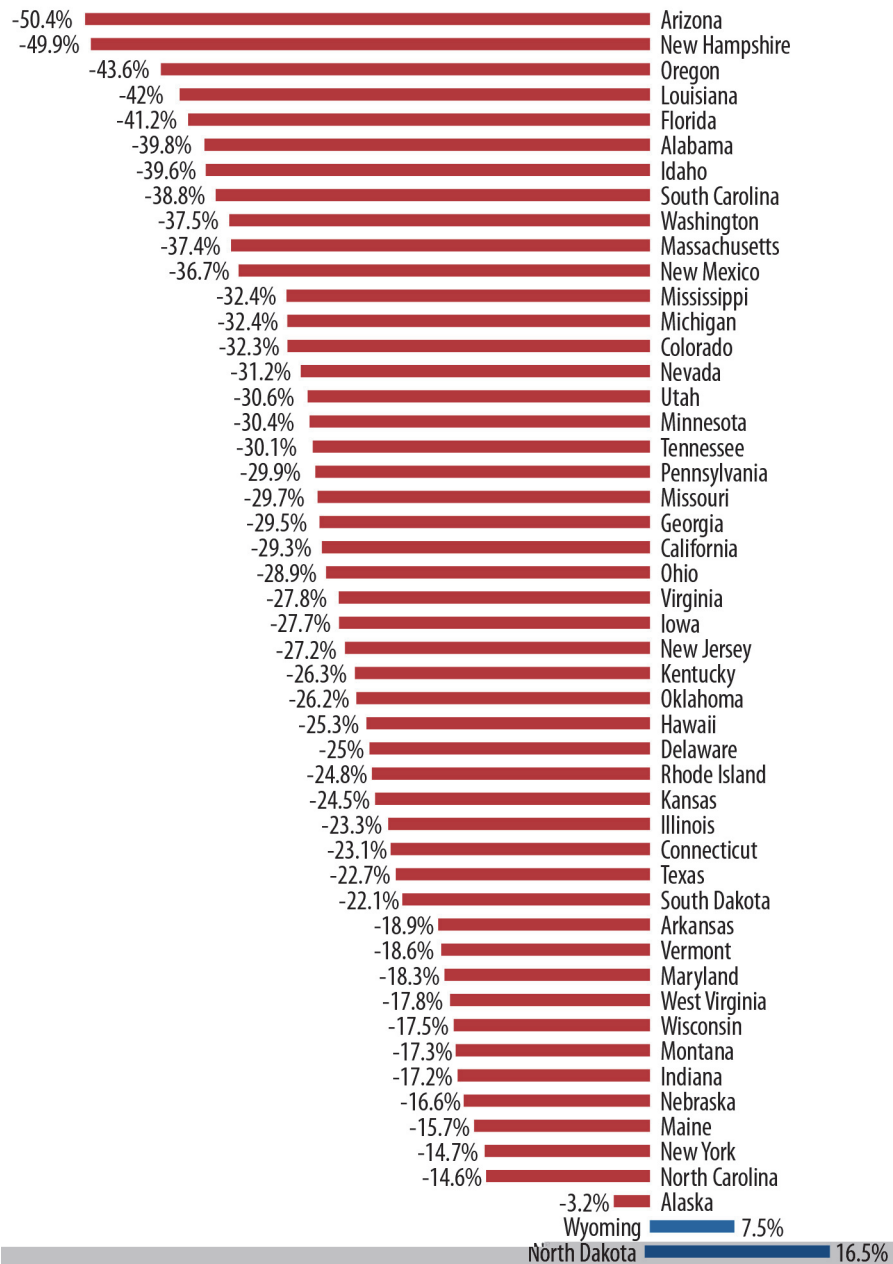
⁸ State Higher Education Executive Officers' Association, "State Higher Education Finance: FY2012," 2013, p. 23, <http://www.shceo.org/sites/default/files/publications/SHEF-FY12.pdf>.

⁹ Revenue available to support instruction at public colleges and universities comes almost exclusively from state and local appropriations and tuition, according to the State Higher Education Executive Officers Association (SHEEO). As SHEEO explains, "Very few public institutions have significant non-restricted revenue from gifts and endowments to support instruction." See SHEEO's "State Higher Education Finance FY2012", 2013, p. 13, <http://www.shceo.org/sites/default/files/publications/SHEF-FY12.pdf>.

¹⁰ CBPP calculation using the "Grapevine" higher education appropriations data from Illinois State University, enrollment data from the State Higher Education Executive Officers' Association, and the Consumer Price Index, published by the Bureau of Labor Statistics. Since enrollment data is only available through the 2011-12 school year, enrollment for the 2012-13 school year is estimated using data from past years.

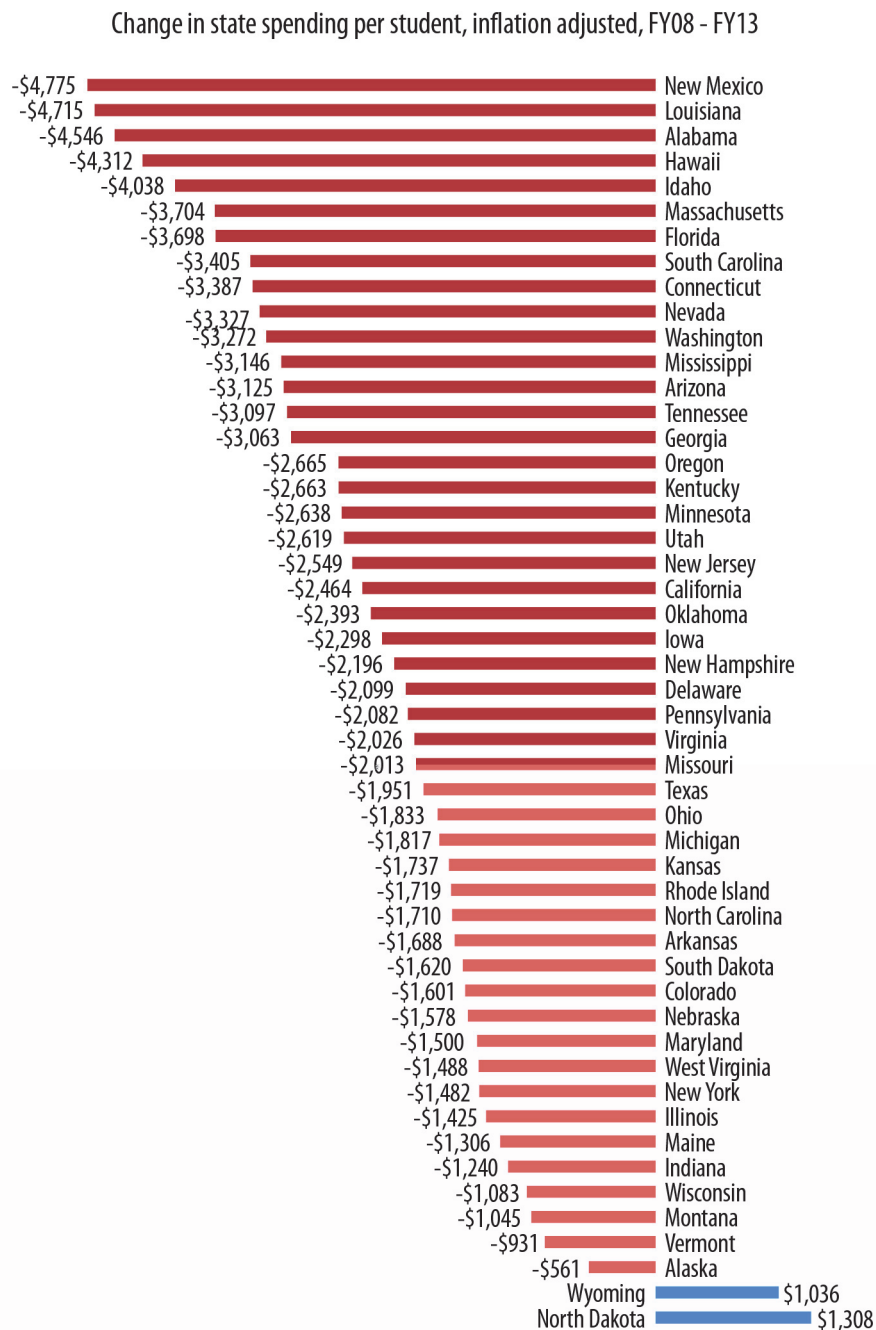
Figure 1
States Have Cut Higher Education Funding Deeply
in Recent Years

Percent change in state spending per student, inflation adjusted, FY08 - FY13



Source: CBPP calculations using data from Illinois State University's annual Grapevine Report. Illinois data is provided by the Fiscal Policy Center at Voices for Illinois Children. Because enrollment data is only available through the 2012 school year, the enrollment data for 2013 used in these calculations is estimated based on enrollment trends from past years.:

Figure 2
States Have Cut Higher Education Funding Deeply
in Recent Years



Source: CBPP calculations using data from Illinois State University's annual Grapevine Report. Illinois data is provided by the Fiscal Policy Center at Voices for Illinois Children. Because enrollment data is only available through 2012, the enrollment data for 2013 used in these calculations is estimated based on enrollment trends from past years.

- **State tax revenues fell very deeply and remain depressed.** States are required to balance their budgets annually. The recession of 2007-09 hit state revenues hard, and the slow recovery continues to affect them. Persistently high unemployment and still-depressed housing values have left people with less income and less purchasing power. As a result, states are taking in less income and sales tax revenue, the main sources of revenue states use to fund education and other services. Indeed, state tax revenues remain 6 percent below 2008 levels after adjusting for inflation.¹¹
- **Limited revenues must support more students.** Higher education dollars are spread over increasing numbers of students. In part due to the “baby boom echo” causing a surge in the 18- to 24-year-old population, enrollment in public higher education increased by about 1.3 million full-time equivalent students, or 12.4 percent, between the beginning of the recession and the 2011-12 academic year (the latest year for which there is data).¹²

Other areas of state budgets are under pressure also. For example, about 535,000 more K-12 students are enrolled in the current school year than were enrolled in 2007-08.¹³ An estimated 3.9 million more people were eligible for subsidized health insurance through Medicaid in 2012 than were enrolled in 2008, as employers have cancelled health coverage and people have lost jobs and wages.¹⁴

- **States could have reduced the size of spending cuts by enacting significant new revenues, but many chose not to.** States have disproportionately relied on spending cuts to close the very large budget shortfalls they have faced over the last several years, rather than a more balanced mix of spending cuts and revenue increases. Between fiscal years 2008 and 2012, states closed 45 percent of their budget gaps through spending cuts and only 16 percent of their budget gaps through taxes and fees (they closed the remainder of their shortfalls with federal aid, reserves, and various other measures). States could have lessened the need for deep cuts to higher education funding if they had been more willing to raise additional revenue.
- **The federal government allowed aid to states to expire prematurely.** States used emergency funds from the federal government (including both education aid and increased Medicaid funds) to cover roughly one-third of their shortfalls through the 2011 fiscal year. After the 2011 fiscal year, the federal government allowed this aid to expire, even though states continued to face very large shortfalls in 2012 and beyond.¹⁵

¹¹ CBPP analysis of Census quarterly state and local tax revenue, <http://www.census.gov/govs/qtax/>

¹² State Higher Education Executive Officers’ Association, “State Higher Education Finance: FY2012,” 2013, <http://www.shceo.org/sites/default/files/publications/SHEF-FY12.pdf>.

¹³ National Center for Education Statistics, *Condition of Education 2012*, table A-3-1, <http://nces.ed.gov/pubs2012/2012045.pdf>.

¹⁴ CBPP calculations based on data from the Congressional Budget Office and Centers for Medicare and Medicaid Services.

¹⁵ Due in part to the expiration of federal aid, the year in which states made the largest higher education cuts since the start of the recession was the 2012 fiscal year.

Cuts Have Driven Up Tuition

Public colleges and universities across the country have increased tuition to help make up for lost state revenue.¹⁶ As a result, the average cost of attending a public college or university — particularly a four-year institution — has surged in recent years.

Average annual published tuition at four-year public colleges — the “sticker price” — has grown by \$1,850, or 27 percent, in real terms between the 2007-08 school year, the year just prior to the recession, and the current 2012-13 school year.

Tuition increases have been both substantial and widespread. Since the 2007-08 school year, after adjusting for inflation, the average tuition at public four-year colleges has increased by:

- More than 50 percent in seven states;
- More than 25 percent in 18 states; and
- More than 15 percent in 40 states.¹⁷ (See Figures 3 and 4.)

Two states, Arizona and California, have increased tuition by more than 70 percent.

Significant boosts in federal student aid and in the value of federal tax credits have reduced the impact of these tuition hikes on students and their families, but only partially so. Beginning in 2009, the federal government significantly increased Pell Grant awards for low-income families. The federal government also expanded a key higher education tax credit that mostly helps middle-income families and is available to individuals with incomes up to \$80,000 and married couples with incomes up to \$160,000. With few exceptions, states themselves have not increased financial aid to offset rising tuitions; per-student state grant aid has actually fallen slightly since the 2007-08 school year, after adjusting for inflation.¹⁸

Thanks to the boost in federal assistance, the College Board calculates that the annual value of grant aid and higher education tax benefits for students at four year public colleges has increased by an average of \$1,410 in real terms since the 2007-08 school year, enough to offset over three quarters of the \$1,850 tuition increase paid by the average student nationwide.¹⁹ But since the sticker price increases have varied so much while federal grant and tax-credit amounts are basically the same across all states, students in states with large tuition increases (such as Arizona or New

¹⁶ It is important to note that some states place limits on the extent to which public colleges and universities can raise tuition. Missouri, for example, requires institutions that raise tuition and fees above the rate of inflation to return a portion of their state funding.

¹⁷ CBPP calculation using College Board “Trends in College Pricing,” September 2012, Table 5, <http://trends.collegeboard.org/college-pricing>.

¹⁸ CBPP calculations using College Board, “Trends in Student Aid,” September 2012, Figure 1, <http://trends.collegeboard.org/student-aid>.

¹⁹ CBPP calculation using “Trends in College Pricing,” September 2012, Table 7 <http://trends.collegeboard.org/college-pricing/figures-tables/average-net-price-full-time-students-over-time-public-institutions>.

Hampshire) undoubtedly have borne a much higher share of the increased cost, while students in states with smaller tuition increases may have realized net reductions in cost.

The cost of college has spiked even as the recession and its aftermath have diminished students' and their families' financial resources. Between 2007 and 2011, even as tuitions surged, real median household income fell by 8.1 percent.²⁰ While the recession has ended, the slow recovery has meant continued high unemployment and still-depressed real estate values, leaving many families in a precarious financial position.

It is worth noting that, in contrast to these trends, two-year colleges generally have increased their tuition rates less than four-year colleges during the recession, both in dollar terms and in percentage terms. In fact, the College Board estimates that the increases have been small enough that — after taking into account increased federal aid and tax credits — the net cost to an average student for attending a community college has gone down during the recession. Here again, however, there are significant state-to-state variations, with community college tuition rising more than \$1,000 above inflation in Massachusetts, South Dakota, Virginia, and Washington.²¹

Public Colleges and Universities Also Have Cut Staff and Eliminated Programs

Recent tuition increases, while substantial in most states, have fallen far short of fully replacing the funding that public colleges and universities have lost due to state funding cuts.

Between 2009 and 2010 (the latest year for which data is available), tuition increases offset:

- Just over 60 percent of cuts to funding that state and local governments provided to public colleges that offer graduate degrees;
- About 30 percent of the cuts to funding that state and local governments provided to public colleges that offer bachelor's degrees but not graduate degrees; and
- Only 14 percent of the cuts to funding that state and local governments provided to community colleges.²²

Because tuition increases have not compensated for the loss of state funding, public colleges and universities have simultaneously cut spending to make up for declining state funding.

Data on spending at public institutions of higher learning in recent years are incomplete, but considerable evidence suggests that public colleges and universities have constrained spending to make up for lost state funding, often in ways that reduce the quality and availability of their academic offerings. For example, since the start of the recession, in response to state budget cuts:

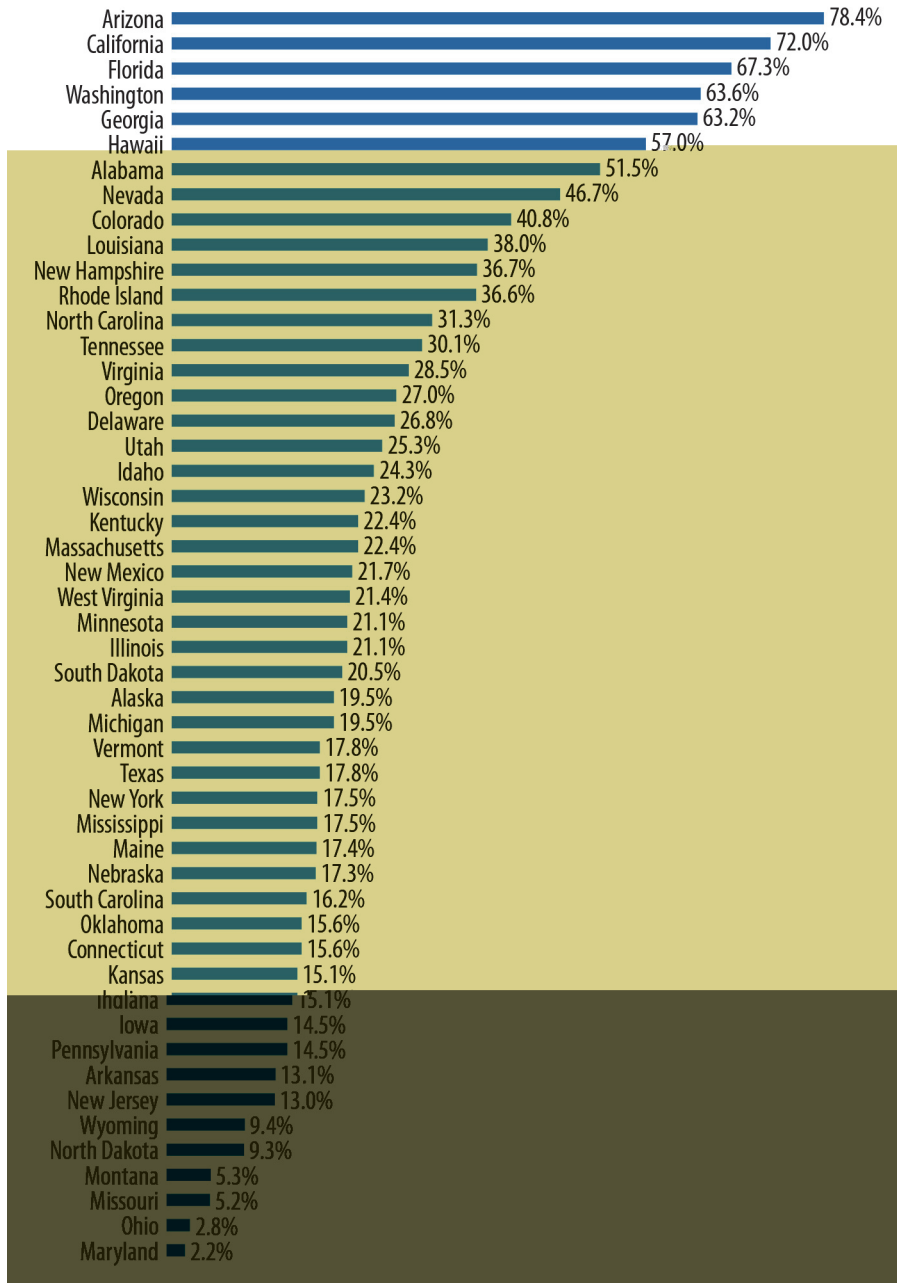
²⁰ The Census Bureau's Income, Poverty and Health Insurance in the United States, September 2012, Table A-1, <http://www.census.gov/prod/2012pubs/p60-243.pdf>.

²¹ College Board "Trends in College Pricing," September 2012, <http://trends.collegeboard.org/college-pricing>.

²² American Institutes for Research, Delta Cost Project, "Spending, Subsidies, and Tuition: Why Are Prices Going Up? What Are Tuitions Paying For?" September, 2012, p. 5.

Figure 3
Tuition Has Increased Sharply at Public Colleges and Universities

Percent change in average tuition at public, four-year colleges, inflation adjusted, FY08 - FY13

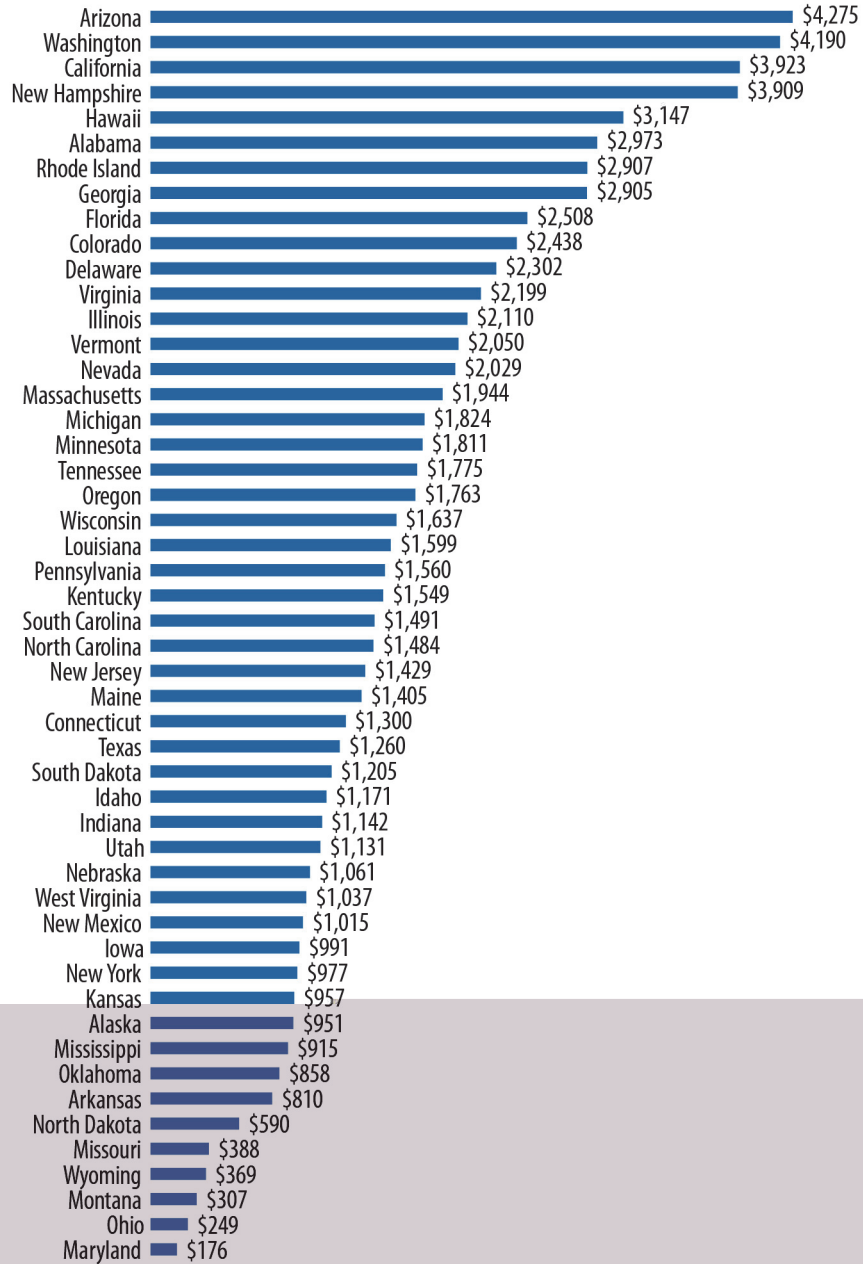


Source: College Board

Figure 4

Tuition Has Increased Sharply at Public Colleges and Universities

Change in average tuition at public, four-year colleges, inflation adjusted, FY08 - FY13



Source: College Board

- **Arizona's** university system cut more than 2,100 positions; consolidated or eliminated 182 colleges, schools, programs, and departments; and closed eight extension campuses (local campuses that facilitate distance learning).²³
- The University of **California** laid off 4,200 staff and eliminated or left unfilled another 9,500 positions; instituted a system-wide furlough program, reducing salaries by 4 to 10 percent; consolidated or eliminated more than 180 programs; and cut funding for campus administrative and academic departments by as much as 35 percent.²⁴
- **California's** community colleges have cut enrollment by 485,000 students or about 17 percent, cut course offerings by 15 percent resulting in hundreds of thousands of students being denied access to classes, increased class sizes, laid off faculty and staff, and instituted furloughs.²⁵
- The University of **Colorado** system between 2009 and 2011 laid off 339 staff and faculty, even as enrollment grew by 2,100 students.²⁶
- The University System of **Louisiana** furloughed 727 employees, laid off another 210 staff and faculty members, and cut 217 academic programs. In addition, campuses have reduced library services and cut funding for athletics, student scholarships, and research.²⁷
- Since 2007, the University of **Nevada**-Las Vegas eliminated more than 700 faculty and staff positions, 15 academic programs, and 31 degree programs.²⁸
- The University of **New Hampshire** eliminated nearly 200 staff positions, implemented a hiring freeze, and froze staff salaries.²⁹

²³ Arizona Board of Regents Media Release, "ABOR Responds to Governor's FY12 Budget Recommendations," January 14, 2011, available at: <http://azregents.asu.edu/legislativeaffairs/newsreleases/ABOR%20Responds%20to%20Governor%27s%20FY12%20Budget%20Recommendations.pdf>.

²⁴ University of California, "Actions to Address Budget Shortfalls," June, 2012, available at: http://budget.universityofcalifornia.edu/files/2012/07/uc_budget_shortfall_actions.pdf.

University of California, "The Facts: UC Budget Basics," November 2011, available at: http://budget.universityofcalifornia.edu/files/2011/12/Budget_fact_11.29.11.pdf.

²⁵ California Community Colleges Chancellor's Office, "Key Facts About California Community Colleges," available at: <http://californiacommunitycolleges.cccco.edu/PolicyInAction/KeyFacts.aspx>.

²⁶ University of Colorado Boulder, "University of Colorado Announces Budget-Balancing Measures," April 7, 2010, <http://www.colorado.edu/news/releases/2010/04/07/university-colorado-announces-budget-balancing-measures>.

²⁷ University of Louisiana System, "Fiscal and Operational Facilities," December, 2010, <http://www.ulsystem.net/assets/docs/searchable/spotlights/UL%20System%20Fiscal%20and%20Operational%20Efficiencies%2012-10.pdf> and "Joint Legislative Committee on the Budget," November 9, 2012, http://www.lsusystem.edu/docs/budget/JLCB%20Presentation%2011092012/LSU%20System%20Presentation%20to%20JLCB_11-9-12.pdf.

²⁸ University of Nevada-Las Vegas, "Cumulative Budget Reduction Impact Summary," <http://www.unlv.edu/assets/budget/pdf/budredsummaryunlv.pdf>.

²⁹ University of New Hampshire, "An Update on our Challenges and Opportunities," <http://www.unh.edu/president/update-our-challenges-and-opportunities>.

- The University of **North Carolina**-Chapel Hill eliminated 493 positions, cut 16,000 course seats, increased class sizes, cut its centrally supported computer labs from seven to three, and eliminated two distance education centers.³⁰
- Since 2009, Highline Community College in **Washington** eliminated 72 staff positions, increased the number of courses taught by part-time faculty, and reduced Adult Basic Education and English-as-a-Second-Language programs by 10 percent.³¹

Nationwide, employment at public colleges and universities has grown modestly since the start of the recession, but that growth has been well below the growth in the number of students. Between the 2007-08 and the 2011-12 school years the number of full-time equivalent instructional staff at public colleges and universities grew by about 6 percent, while the number of students at these institutions grew by 12 percent. As a result, the ratio of students to instructors grew from 19.7 to 1 to 20.9 to 1 during that period.

In five states — California, Maine, Minnesota, Nevada, and New Hampshire — full-time equivalent instructional staff at public colleges and universities fell between the 2007-08 and the 2011-12 school years, even as enrollment grew.³²

Funding Cuts and Tuition Increases Exacerbate a Longer-Term Erosion of Higher Education Affordability

The decline in state funding and the resulting rise in tuition since the start of the recession have accelerated a longer-term cost shift from states to students and families.

For at least the last quarter-century, state and local funding for higher education has been dropping, and tuition has been increasing. Per-student revenue from state and local governments fell by \$2,600, after adjusting for inflation, between 1987 and 2012. During that same period, per-student tuition increased by \$2,600. In other words, the entire increase in tuition at public colleges and universities over the last 25 years has gone to make up for declining state and local revenue, leaving no additional funding available to improve programs and services or fund costs that are rising faster than the rate of inflation such as employee health care.

This trend has meant that students have assumed much greater responsibility for paying for public higher education without those institutions receiving more money to fund quality improvements. In 1987, public colleges and universities received 3.3 times as much in revenue from state and local governments as they did from students. They now receive about 1.1 times as much from states and localities as from students.

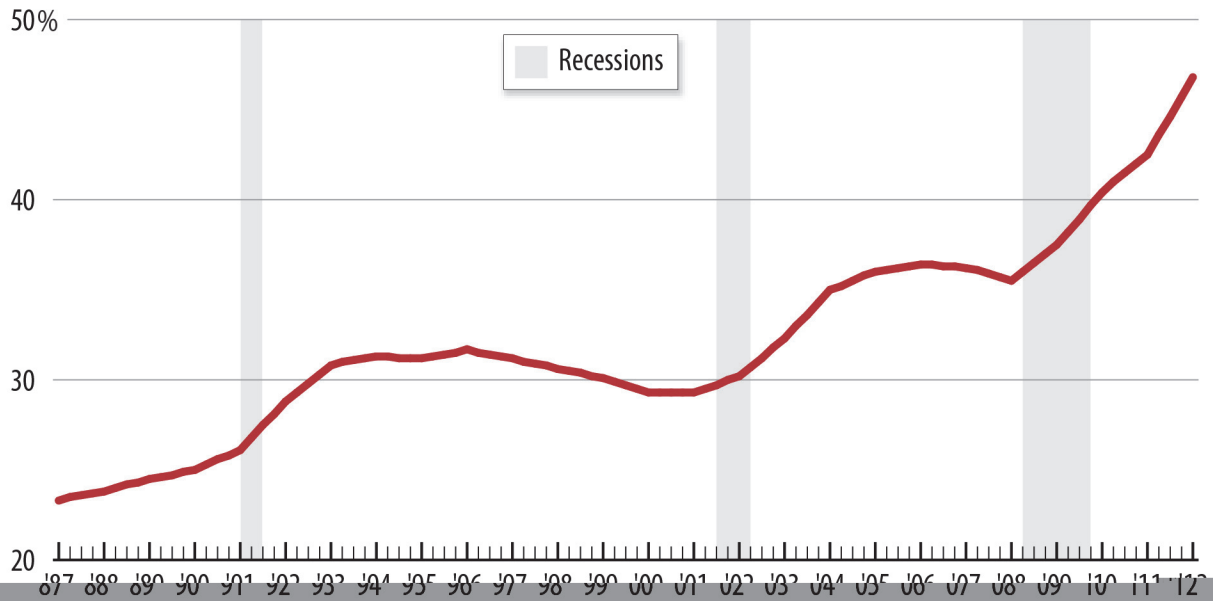
³⁰ University of North Carolina at Chapel Hill, “Impact of Budget Reductions,” September 2011, <http://execbranch.web.unc.edu/files/2011/09/2011-12-UNC-CH-Budget-Reduction-Impacts.pdf>.

³¹ Highline Community College, “Highline Community College hit by another round of budget cuts.” April 14, 2011, http://communications.highline.edu/news/NRs/10-11-NRs/HCC_hit_by_another_round_of_budget_cuts_041411.htm.

³² CBPP analysis of employment data from the National Center for Education Statistics and enrollment data from the State Higher Education Executive Officers Association.

Figure 5
Students Are Shouldering A Larger Share of the Cost of Funding Public Higher Education

Tuition revenue as a percent of total educational revenue, FY 1987 - FY 2012



Note: Total educational revenue combines net tuition with state and local appropriations for higher education, excluding medical students, and represents the vast majority of instructional funding.

Source: State Higher Education Financing FY2012, State Higher Education Executive Officers Association

The cost shift from states to students has not occurred in a steady, straightforward way. During and immediately following recessions, state and local funding for higher education has tended to plummet, while tuition has tended to spike. Funding has tended to largely recover, and tuitions have tended to stabilize, during periods of economic growth.³³ But the long-term trend is clear: states have been reducing their contributions to public higher education, while students have been picking up a larger share of the costs. (See Figure 5.)

This trend — along with slow growth in middle-class incomes — has caused a decline in higher education affordability. As students have shouldered greater responsibility for paying for college, the growth in the cost of their education has far outstripped the growth in students' and their families' financial resources. Over the 20-year period between 1991 and 2011 (the latest year for which there is data), median household income grew by about 3 percent, after adjusting for inflation.³⁴ Between the 1990-1991 and the 2012-13 school years (the current school year), tuition at four-year public colleges grew by 159 percent in real terms. Grants and tax benefits for higher education also grew during that time, somewhat mitigating the growth in the cost to students. But

³³ State Higher Education Executive Officers' Association, "State Higher Education Finance: FY2012," 2013, p. 21, <http://www.shceo.org/sites/default/files/publications/SHEF-FY12.pdf>.

³⁴ CBPP calculation using Census Bureau's "Income, Poverty and Health Insurance in the United States: 2011," Table A-1, <http://www.census.gov/prod/2012pubs/p60-243.pdf>.

even after taking those grants and tax benefits into account, the cost of college grew by 58 percent in real terms, well above the rate of growth in household income.³⁵

Adequate Financing for State Higher Education Systems Will Be Required for Student Success and National Prosperity

Reinvesting in public higher education should be an urgent priority for policymakers who are concerned about the long-term economic success of their state and its residents. Diminished educational resources and rising tuition at the nation's public colleges and universities have serious consequences for students, their families, and the broader economy.

Rapidly Rising Tuition Threatens College Access and Burdens Students with Increasing Levels of Debt

Rapidly rising tuition makes it less likely that students will attend college. Research has consistently found that college price increases result in declining enrollment.³⁶ While many universities and the federal government provide financial aid to help students bear the price, research suggests that *both* the advertised tuition cost *and* the actual price net of aid affect whether students go to college; in other words, a high sticker price can dissuade students from enrolling even if the net price doesn't rise.

Research further suggests that college cost increases have the biggest impact on students from low income families. For example, a 1995 study by Harvard University researcher Thomas Kane concluded that states that had the largest tuition increases during the 1980's and early 1990's "saw the greatest widening of the gaps in enrollment between high- and low-income youth."³⁷

Gaps in college enrollment among higher- and lower-income youth are already pronounced, even among prospective students of similar ability levels. In a 2008 piece, Georgetown University scholar Anthony Carnavale pointed out that "among the most highly qualified students (the top testing 25 percent), the kids from the top socioeconomic group go to four-year colleges at almost twice the rate of equally qualified kids from the bottom socioeconomic quartile."³⁸ (See Figure 6.) Rapidly rising costs at public colleges and universities likely widen these gaps further.

³⁵ CBPP calculation using tuition data from "Trends in College Pricing," table 7.

³⁶ See, for example, Steven W. Hemelt and Dave E. Marcotte, "The Impact of Tuition Increases on Enrollment at Public Colleges and Universities," *Educational Evaluation and Policy Analysis*, September 2011; Donald E. Heller, "Student Price Response in Higher Education: An Update to Leslie and Brinkman," *The Journal of Higher Education*, Volume 68, Number 6 (November-December 1997), pp. 624-659.

³⁷ Thomas J. Kane, "Rising Public College Tuition and College Entry: How Well Do Public Subsidies Promote Access to College?" National Bureau of Economic Research, 1995, http://www.nber.org/papers/w5164.pdf?new_window=1.

³⁸ Anthony P. Carnavale, "A Real Analysis of Real Education," *Liberal Education*, Fall 2008, p. 57.

For those who do attend college, rapidly rising costs make it more likely that they will need to work a significant number of hours every week to finance their education. Working a significant number of hours, in turn, places students at greater risk of dropping out of school. A 2003 study from the U.S. Government Accountability Office (GAO) found that students who work more than 20 hours a week are less likely to complete their degree.³⁹

Moreover, rising tuition burdens students with mounting levels of debt. Indeed, student debt levels have swelled since the start of the recession. Between the 2007-08 and the 2010-11 school years, the amount of debt incurred by the average bachelor's degree recipient at a public four-year institution grew from \$11,800 to \$13,600 (in 2011 dollars), an inflation adjusted increase of \$1,800, or 15 percent. The average level of debt incurred had grown from \$11,100 to \$11,800, an increase of \$700, or about 6 percent, over the previous eight years.⁴⁰

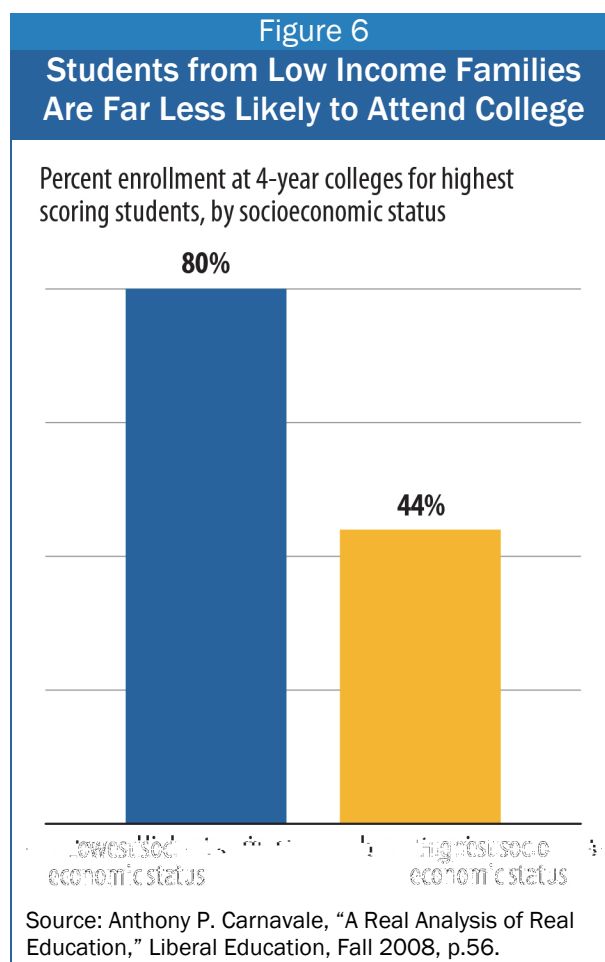
Diminished Educational Resources May Make It Harder to Improve Graduation Rates and Academic Quality

Research supports the idea that smart investments in higher education can help students — especially those from lower-income families — stay in school and complete their degrees. Both instructional spending (spending directly related to classroom instruction) and student services spending (spending on counseling, career guidance, tutoring, and other services intended to support students outside of the formal instructional program) positively affect student graduation rates according to research by Ronald Ehrenberg and Douglas Webber of Cornell University.⁴¹ Student services expenditures have a particularly large impact on the graduation rates of students with lower levels of academic preparation and fewer financial resources. The authors' findings make intuitive sense. Students with less academic preparation and fewer financial resources are more likely to need intensive tutoring to ensure that they are keeping up with their coursework and guidance navigating the complexities of college course offerings to ensure that they get the credits they need to graduate.

³⁹ United States Government Accountability Office, "College Completion: Additional Efforts Could Help Education with Its Completion Rates," May 2003, available at <http://www.gao.gov/new.items/d03568.pdf>.

⁴⁰ "Trends in Student Aid," Figure 12A.

⁴¹ Douglas A. Webber and Ronald G. Ehrenberg, "Do Expenditures Other Than Instructional Expenditures Affect Graduation and Persistence Rates in American Higher Education," National Bureau of Economic Research, August 2009, http://www.nber.org/papers/w15216.pdf?new_window=1.



But state funding cuts are reducing public colleges and universities' ability to make these kinds of investments.

Additionally, funding cuts have made it harder for public colleges and universities to staff classrooms with full time, tenure-tracked professors, which may also threaten student outcomes. Many schools have turned to part-time and non-tenure-track faculty as a cost-saving measure, but the use of those types of instructors reduces the likelihood that students will graduate from college, according to a study by Ehrenberg and Liang Zhang (also of Cornell).⁴² Dr. Ehrenberg explained in an interview with the *New York Times*, "It's not that some of these adjuncts aren't great teachers. Many don't have the support that the tenure-track faculty have, in terms of offices, secretarial help, and time. Their teaching loads are higher, and they have less time to focus on students."⁴³ Another study by Paul Umbach of the University of Iowa finds that part-time and non-tenure track faculty spend less time preparing for class, are less likely to challenge their students, and interact with students less frequently than their full-time, tenure-track peers.⁴⁴

Moreover, increased class size and larger student loads for faculty — also consequences of reduced state aid — negatively affect student assessments of class quality, according to research by James Monks and Robert Schmidt of the University of Richmond.⁴⁵

Funding Cuts Jeopardize Both Students' and States' Economic Futures

The reduced college access and reduced graduation rates that research suggests are likely to result from budget cuts affect more than just the students, because college attainment has grown increasingly important to long-term economic outcomes for states and the nation.

Getting a college degree is increasingly a pre-requisite for professional success and for entry into the middle class or beyond. A young college graduate earns \$12,000 a year more annually than someone who did not attend college, after adjusting for inflation, according to research from the Hamilton Project at the Brookings Institution.⁴⁶

The benefits of academic attainment extend *beyond* those who receive a degree; research suggests that the whole community benefits when more residents have college degrees. Areas with highly educated residents tend to attract strong employers who pay their employees competitive wages. Those employees, in turn, buy goods and services from others in the community, broadly benefitting

⁴² Ronald G. Ehrenberg and Liang Zhang, "Do Tenured and Tenure-Track Faculty Matter?" National Bureau of Economic Research, August 2004, available at <http://www.nber.org/papers/w10695.pdf>.

⁴³ From Alan Finder, "Decline of the Tenure Track Raises Concerns," *The New York Times*, November 20, 2007.

⁴⁴ Paul Umbach, "How Effective are They? Exploring the Impact of Contingent Faculty on Undergraduate Education." *The Review of Higher Education*, Volume 30, Number 2, Winter 2007, pp. 91-123.

⁴⁵ James Monks and Robert Schmidt, "The Impact of Class Size and Number of Students on Outcomes in Higher Education," September 2010, Cornell University ILR School Working Papers <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1145&context=workingpapers&sei-redir=1&referer=http%3A%2F%2Fwww.google.com%2Furl%3Fsa%3Dtr%26rct%3Dj%26q%3Dthe%2520impact%2520of%2520class%2520size%2520and%2520number%2520of%2520students%252>

⁴⁶ Michael Greenstone and Adam Looney, The Hamilton Project, "Regardless of the Cost, College Still Matters," October 5, 2012, <http://www.brookings.edu/blogs/jobs/posts/2012/10/05-jobs-greenstone-looney>.

the area's economy. Economist Enrico Moretti of the University of California at Berkeley finds that as a result, the wages of workers at *all* levels of education are higher in metropolitan areas with high concentrations of college-educated residents.⁴⁷ This finding implies that — even though not all good jobs require a college degree — having a highly educated workforce can boost an area's economic success.

And the economic importance of higher education will continue to grow into the future. The Georgetown Center on Education and the Workforce projects that by 2018, 62 percent of all jobs will require at least some college education. That is up from 59 percent in 2007, 56 percent in 1992, and 28 percent in 1973.⁴⁸

The Georgetown center further projects that the nation's education system will not be able to keep up with the rising demand for educated workers. By 2018 the country's system of higher education will produce 3 million fewer college graduates than the labor market will demand, Georgetown projects.⁴⁹

The increase in student debt in recent years also has important implications for the broader economy. While debt is a crucial tool for financing higher education, excessive debt can impose considerable costs on both students and society as a whole. Research finds that higher student debt levels are associated with lower rates of homeownership among young adults;⁵⁰ can create stresses that reduce the probability of graduation, particularly for students from lower-income families;⁵¹ and reduce the likelihood that graduates with majors in science, technology, engineering, and mathematics will go on to graduate school.⁵²

This research suggests that states should strive to expand college access and increase college graduation rates to help build a strong middle class and develop the skilled workforce needed to compete in today's global economy. It suggests further that the severe higher education funding cuts that states have made since the start of the recession will make it harder to achieve those goals.

⁴⁷ Enrico Moretti, "Estimating the Social Return to Higher Education: Evidence from Longitudinal and Repeated Cross-Sectional Data," *Journal of Econometrics*, Vol. 121, 2004, pp. 175-212.

⁴⁸ See Anthony P. Carnevale, Nicole Smith and Jeff Strohl, "Help Wanted: Projections of Jobs and Education Requirements Through 2018," Georgetown University Center on Education and the Workforce, June 2010, p. 14.

⁴⁹ Ibid, p. 16.

⁵⁰ See Jennifer M. Shand, "The Impact of Early-Life Debt on the Homeownership Rates of Young Households: An Empirical Investigation," November 2007, http://www.fdic.gov/bank/analytical/cfr/2008/jan/CFR_SS_2008Shand.pdf.

⁵¹ See, for example, Rachel E. Dwyer, Laura McCloud, and Randy Hodson, "Debt and Graduation from American Universities," *Social Forces*, June 15, 2012.

⁵² Lindsey E. Malcolm and Alicia C. Dowd, "The Impact of Undergraduate Debt on the Graduate School Enrollment of STEM Baccalaureates," *The Review of Higher Education*, Volume 35, Number 2, Winter 2012, pp. 265-305.

States' Budget Choices Will Determine Whether They Can Successfully Rebuild Their Higher Education Systems

There is significant room for concern that the trends described in this paper will continue, and along with them the negative effects on states' economies and families' financial prospects. State revenues are starting to improve, but at current rates the recovery is too slow to return them to full health any time soon. Under current trends, it will be many years before states can resume funding services at pre-recession levels.

Nor can states simply cut other areas of their budgets to make more room for higher education. Elementary and secondary education, like higher ed, has been cut in most states in recent years.⁵³ Health care services require states' continued support, given rising health costs and declining access to employer-provided coverage. The nation's infrastructure is deteriorating and in need of new public investments, and states have limited ability to cut back on public safety or human services without real harm to communities. Those areas of spending account for more than 80 percent of state and local government funding; the rest of state budgets pay for environmental protection, the court system, and other important areas that also are hard to cut without significant negative consequences.

This means that to make significant progress in renewing state investment in higher education, and to prevent investment from sliding even further, many states may need new revenues. These revenues could come from repealing ineffective tax deductions, exemptions and credits, rolling back past years' tax cuts, or raising certain rates, for instance.⁵⁴ In California, for example, a recent increase in revenue has helped to sustain funding for higher education and avert a tuition increase. In November 2012, California voters passed Proposition 30, which raised income tax rates for very high-income California residents and increased the state sales tax by one quarter of a percent, devoting the proceeds to fund education and other state services. After Proposition 30 passed, the California State University (CSU) system announced that additional state revenue resulting from the initiative would allow CSU to avoid a \$250 million mid-year budget cut and roll back a planned \$249 per semester tuition increase.⁵⁵

States may also wish to consider more funding for higher education as an alternative to new tax cuts. This may be particularly true in a number of states that have made deep cuts to higher education funding and where policymakers are proposing deep new tax cuts that would lock in — even add to — those higher education cuts.

Florida governor Rick Scott, for example, is calling for \$135 million in business tax cuts at a time when Florida's higher education funding stands 41 below pre-recession levels, and tuition at its public four year colleges has increased by 67 percent over the last five years. Other states that have made deep cuts to higher education funding and yet are now considering tax cuts include Idaho,

⁵³ Phil Oliff, Chris Mai, and Michael Leachman, "New School Year Brings More Cuts in State Funding for Schools," Center on Budget and Policy Priorities, September 4, 2012, <http://www.cbpp.org/files/9-4-12sfp.pdf>.

⁵⁴ Nicholas Johnson and Michael Leachman, "Four Big Threats to State Finances Could Undermine Future U.S. Prosperity," Center on Budget and Policy Priorities, February 14, 2013, <http://www.cbpp.org/files/2-14-13sfp.pdf>.

⁵⁵ See California State University, "With Passage of Proposition 30, California State University to Roll Back Tuition," November 7, 2012, <http://www.calstate.edu/pa/news/2012/release/prop30.shtml>.

Indiana, Kansas, Louisiana, Nebraska, New Mexico, North Carolina, Ohio, South Carolina, and Wisconsin.

To the extent that states do not fully offset the revenue loss from tax cuts, those tax cuts will further reduce the resources that states have to invest in higher education. Kansas, for example, passed an income tax cut last year that contributed significantly to a \$267 million budget gap for the 2014 fiscal year. To close that gap, the state will now need raise additional revenue, cut services such as higher education and K-12 education that have already absorbed significant reductions in recent years, or both. Indeed, Kansas' House Appropriations Committee has advanced a proposal that would cut higher education funding by 4 percent, on top of deep cuts from previous years, to help balance the state's budget.⁵⁶ The governor is proposing more tax cuts this year and wants to eliminate the state's income tax entirely in the future.

Tax cuts are often sold as a recipe for economic growth. But to the extent that tax cuts prevent investments in higher education that would increase access to college, improve graduation rates, and reduce student debt, their net effect could be a drag on the economy.

Economic growth in and of itself will not be sufficient to propel higher education funding to previous levels any time soon. To rebuild their states' higher education systems, policymakers in many cases will need to raise additional revenue and, at the very least, to avoid shortsighted tax cuts that stifle higher education investments, making it harder to develop the skilled workforce that states will need to compete in the future.

Conclusion

States have cut higher education funding deeply since the start of the recession. These cuts were in part the result of a revenue collapse caused by the economic downturn. But they also resulted from misguided policy choices. State policymakers relied overwhelmingly on spending cuts to make

tax cuts, which would make it much harder for them to invest in higher education, strengthen the skills of their workforce, and compete for the jobs of the future.

Appendix Table

Change in State Higher Education Appropriations, Enrollment, and Appropriations Per-Student, 2007-08 School Year to 2012-13 School Year

	2007 - 2008	2012 - 2013	Change	Percent Change
State Appropriations for Higher Education	87,172,406,161	70,361,814,675	(16,810,591,486)	-19.3%
Full-time Equivalent Enrollment at Public Colleges and Universities	10,271,685	11,471,488	1,199,803	11.7%
State Appropriations Per Full Time Enrolled Student	8,487	6,134	(2,353)	-27.7%

Sources: Education appropriations data comes from the Grapevine survey conducted by Illinois State University, enrollment data comes from the State Higher Education Executive Officers' Association. Since enrollment data is only available through the 2011-2012 school years, enrollment data for 2012-13 is an estimate based on data from past years. Dollar figures adjusted for inflation using the consumer price index.