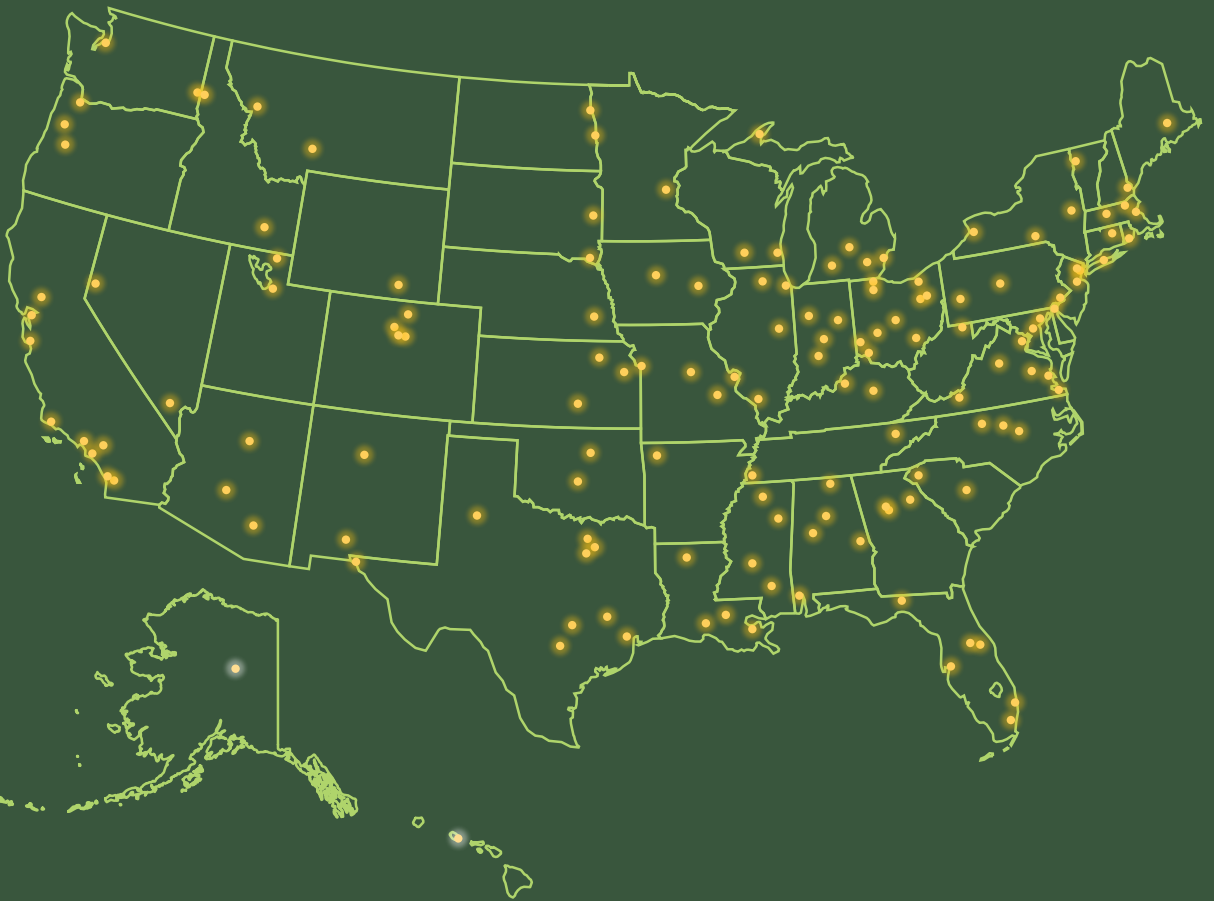


AMERICAN ACADEMY  
OF ARTS & SCIENCES

# Public Research Universities: Changes in State Funding



A Publication of The Lincoln Project: Excellence and Access in Public Higher Education

© 2015 by the American Academy of Arts & Sciences

All rights reserved.

ISBN:

This publication is available online at <https://www.amacad.org/LincolnProject>.

The views expressed in this publication are those held by the contributors and are not necessarily those of the Officers and Members of the American Academy of Arts & Sciences.

Please direct inquiries to:  
American Academy of Arts & Sciences  
136 Irving Street  
Cambridge, MA 02138-1996  
Telephone: 617-576-5000  
Fax: 617-576-5050  
Email: [LincolnProject@amacad.org](mailto:LincolnProject@amacad.org)  
Web: [www.amacad.org](http://www.amacad.org)

*Cover:* The lights on the map represent the locations of Carnegie-classified Very High Research Activity and High Research Activity public universities in the United States as of April 2015.

# Public Research Universities: Changes in State Funding



## Introduction

**Public research universities serve a distinct and indispensable role in America's educational landscape.** In addition to producing research and scholarship, public research universities provide economic development and technical assistance to their communities, states, and nation, as well as opportunities for interinstitutional collaborations. While other institutions may address these needs individually, public research universities are charged with addressing them together as effectively, efficiently, and affordably as possible. But today, public research universities are confronted with unprecedented reductions in state investment.

Between 2008 and 2013, states cut appropriation support by more than

**20 percent**

per full-time equivalent student in the median public institution, and cut support to the median public research university by more than

**26 percent.**

Higher education is the third-largest priority in state general fund budgets (the portion financed primarily by taxes), after elementary and secondary education and Medicaid.<sup>1</sup> In 2014, higher education accounted for approximately 9.4 percent of state general funding: about half as much as general fund spending on Medicaid, and one-fourth of state K–12 education spending.<sup>2</sup>

Measured in inflation-adjusted dollars per full-time equivalent (FTE) student, states have been cutting this support for well over a decade, and spending cuts accelerated in response to the Great Recession. Between 2008 and 2013, states cut appropriation support by more than 20 percent per full-time equivalent student in the median public institution, and cut support to the median public research university by more than 26 percent.

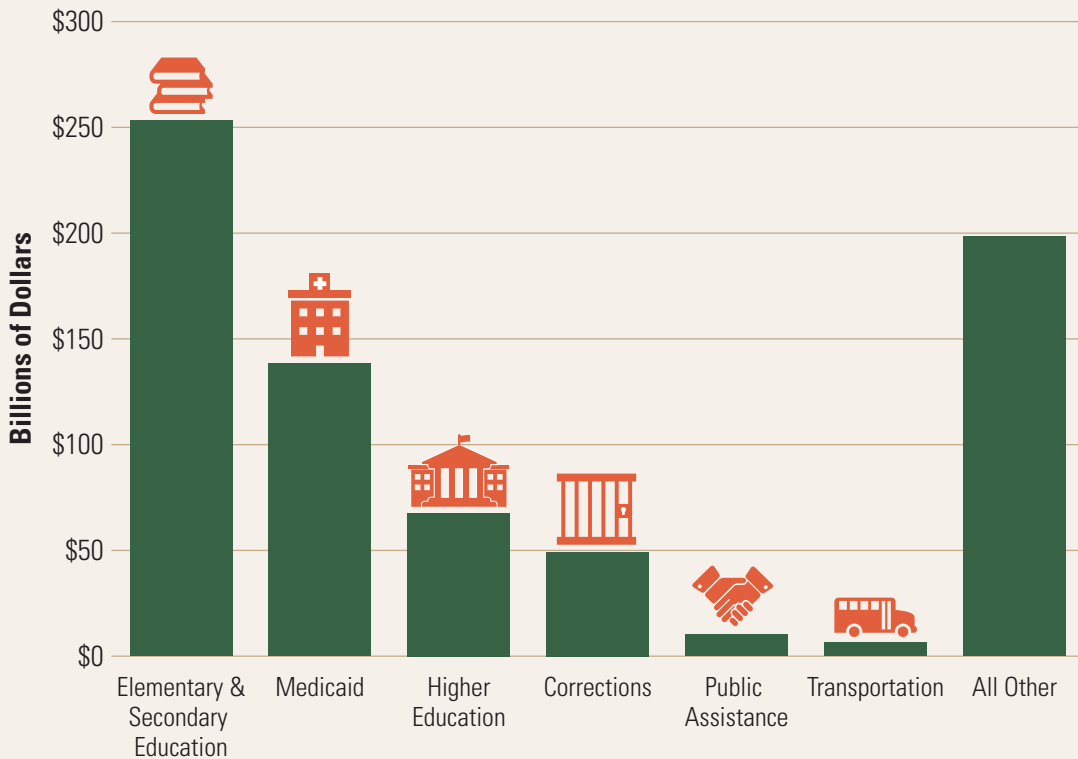
The decline in support in part reflects difficult choices states have made in response to mandatory spending programs like Medicaid, rising pension contributions, and a desire to preserve K–12 education.<sup>3</sup>

Today, public research universities still rely on state appropriations for approximately 51 percent of their educational revenue, although the percentage fluctuates widely by institution—UCLA, for example, receives only 7 percent of its funding from the state. But for most public institutions, further cuts could be devastating.

In this climate, the American Academy of Arts & Sciences created the **Lincoln Project: Excellence and Access in Public Higher Education** to study the importance of public research universities, analyze economic trends affecting their operations, and recommend new strategies to sustain these critical institutions. In its first publication, *Public Research Universities: Why They Matter*, the Lincoln Project demonstrated the many ways in which public research universities are a vital public good.<sup>4</sup> This publication examines state financing of higher education, describes the challenges that state governments face, and assesses the prospects for greater state support in the future.

## Section 1: An Overview of State Funding for Higher Education

Figure 1: **State General Fund Expenditures in 2014 (Estimated), by Category**



Higher Education is the third-largest spending area in the typical state budget. In this figure, "All Other" is defined as expenditures from revenue sources that are restricted by law for particular governmental functions or activities.

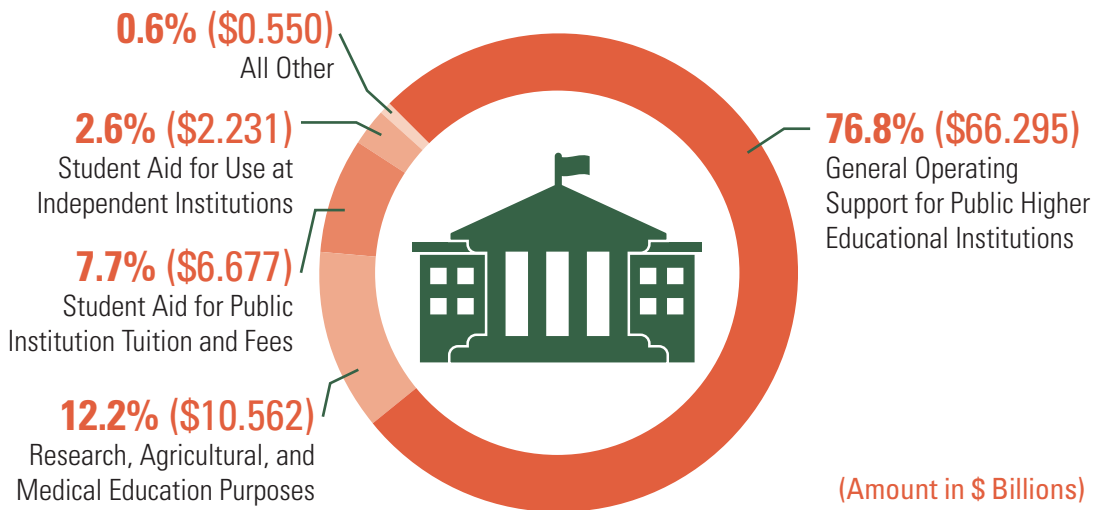
**Source:** National Association of State Budget Officers, *State Expenditure Report: Examining Fiscal 2012–2014 State Spending* (Washington, D.C.: National Association of State Budget Officers, 2015). See also State Higher Education Executive Officers (sheeo) Association, *SHEF: FY 2014—State Higher Education Finance* (Boulder, Colo.: State Higher Education Executive Officers Association, 2015); State Higher Education Executive Officers Association and Illinois State University Center for the Study of Education Policy, "Grapevine Compilation of State Fiscal Support for Higher Education, Fiscal Year 2014–2015," <http://education.illinoisstate.edu/grapevine/>; National Center for Education Statistics, IPEDS [Integrated Postsecondary Education Data System] (U.S. Department of Education, Institute of Education Sciences), <https://nces.ed.gov/ipeds/>; and David A. Tandberg and Casey Griffith, "State Support of Higher Education: Data, Measures, Findings, and Directions for Future Research," in *Higher Education: Handbook of Theory and Research*, vol. 28, ed. Michael B. Paulsen (Dordrecht: Springer Netherlands, 2013), 613–685, [http://link.springer.com/10.1007/978-94-007-5836-0\\_13](http://link.springer.com/10.1007/978-94-007-5836-0_13).

Higher education has been described as the “balance wheel” of state budgets: state appropriations for higher education tend to rise disproportionately when the economy is strong, and fall disproportionately when the economy is weak.

Three observations support this argument: 1) Unlike state agencies, higher education institutions have separate budgets, reserves, and revenue streams (tuition and fundraising), and therefore possess a perceived capacity to absorb cuts; 2) Higher education institutions have a greater capacity to cut or slow the growth of employee pay in bad times, or raise it in good times, because they are not bound by statewide pay scales; and 3) Higher education institutions can vary program elements, such as course offerings and class sizes, and therefore associated spending, in ways that may be difficult for state agencies.

Since public higher education is perceived as a relatively flexible budget item—a rarity among the proliferating mandatory spending programs that dominate state budgets—each institution contends separately with unpredictable funding patterns, a volatility that has a profound impact on their operations. This volatility complicates long-term planning and may reduce their attractiveness as employers, since professors and other staff face greater uncertainty about their job security and long-term career prospects. And the inability to count on state funding

Figure 2: **State and Local Government Noncapital Support for Higher Education in 2014**



Source: State Higher Education Executive Officers (SHEEO) Association, *SHEF: FY 2014—State Higher Education Finance* (Boulder, Colo.: State Higher Education Executive Officers Association, 2015).

leads to tuition increases at the very times when those increases are most difficult for students and their families to bear. Between 2008 and 2014, published public higher education tuition increased by 28 percent after adjusting for inflation. Tuition increased by more than 20 percent in twenty-nine states, more than 40 percent in ten states, and more than 60 percent in six states. Tuition in Arizona rose by 81 percent per student, after adjusting for inflation.<sup>5</sup>

A number of factors drive the variation in state spending on higher education (see Figure 3):

- Economic and demographic variables such as per capita income, the size of the college-age population relative to the total population (with a relatively greater college-age population associated with lower spending per student), and the proportion of students attending college out-of-state;
- Fiscal variables such as pressures to spend in other areas, particularly K–12 education and Medicaid; and
- Local, institutional factors such as the political parties of governors and legislative majorities, the demographic compositions of state legislatures, and tax and expenditure limits.<sup>6</sup>

In this report we focus primarily on spending per FTE student as an important measure of the resources available per student, and of the potential consequences of cuts. Governors and legislatures do not, of course, have the luxury of simply funding a desired amount of spending per FTE student: they must make choices about

## State Support for Higher Education (Both Public and Private Institutions) Outside of Normal Budgetary Appropriations:

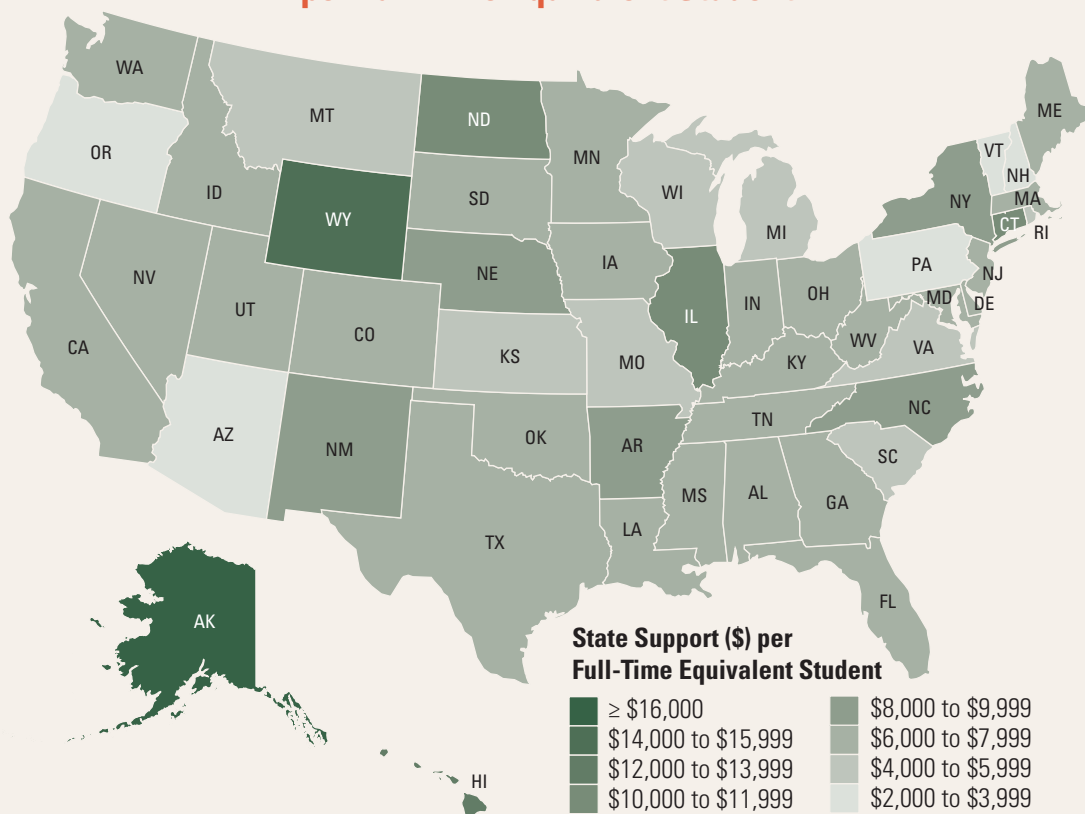
- Subsidized loans required to be repaid to the state
- Tax systems
- IRS section 529 plans that allow tax-advantaged savings for higher education<sup>7</sup>
- Additional tax benefits for education, including tuition tax credits, tuition deductions, deductions for interest on student loans, and exclusion of scholarship income from state personal income tax calculations. There is no comprehensive tally for the cost of these loans and tax expenditures, but it is likely to be at least several billion dollars annually (based on review of selected state tax expenditure reports).

One reason that states **willingly cut higher education support** is that, unlike other areas of the budget, colleges and universities have their own revenue source:

**tuition.**



Figure 3: **State Support for Public Higher Education (All Colleges and Universities) in 2014, per Full-Time Equivalent Student**



State support for public higher education per full-time equivalent student ranges from about \$3,000 to over \$18,000.

**Source:** State Higher Education Executive Officers (SHEEO) Association, *SHEF: FY 2014—State Higher Education Finance* (Boulder, Colo.: State Higher Education Executive Officers Association, 2015).

how much funding to provide for public priorities such as K–12 education, higher education, corrections, and health care, in dollar terms. The amount needed or desired will depend in part on whether the population involved is growing or shrinking—more or fewer children in school, students in college, prisoners in prisons, and elderly persons in nursing homes—but must fit into overall priorities. Except for K–12 education, there is no universal access guarantee. While higher education funding will not necessarily follow enrollment, spending per FTE student is a good indicator of how overall changes in spending will affect students.



## Section 2: The Decline in State Funding

Overall, states have been cutting their support for higher education for well over a decade. Reductions were most dramatic between 2001 and 2004, and in the wake of the Great Recession and its accompanying decline in tax revenue. Although spending increased slightly in 2013 and again in 2014, these increases are dwarfed by the magnitude of prior cuts, and spending per FTE student in 2014 was nearly 30 percent below its level in 2000, after adjusting for inflation (see Figure 4). And in many states, even with a turnaround in the level of state funding, the situation has gotten worse due to corresponding tuition-increase freezes or caps. In states where tuition is constrained, universities are experiencing a net loss even when states do increase funding.

Figure 4: **Percent Change in State Support for Public Higher Education (All Colleges and Universities) per Full-Time Equivalent Student, in Constant 2014 \$, since 2000**



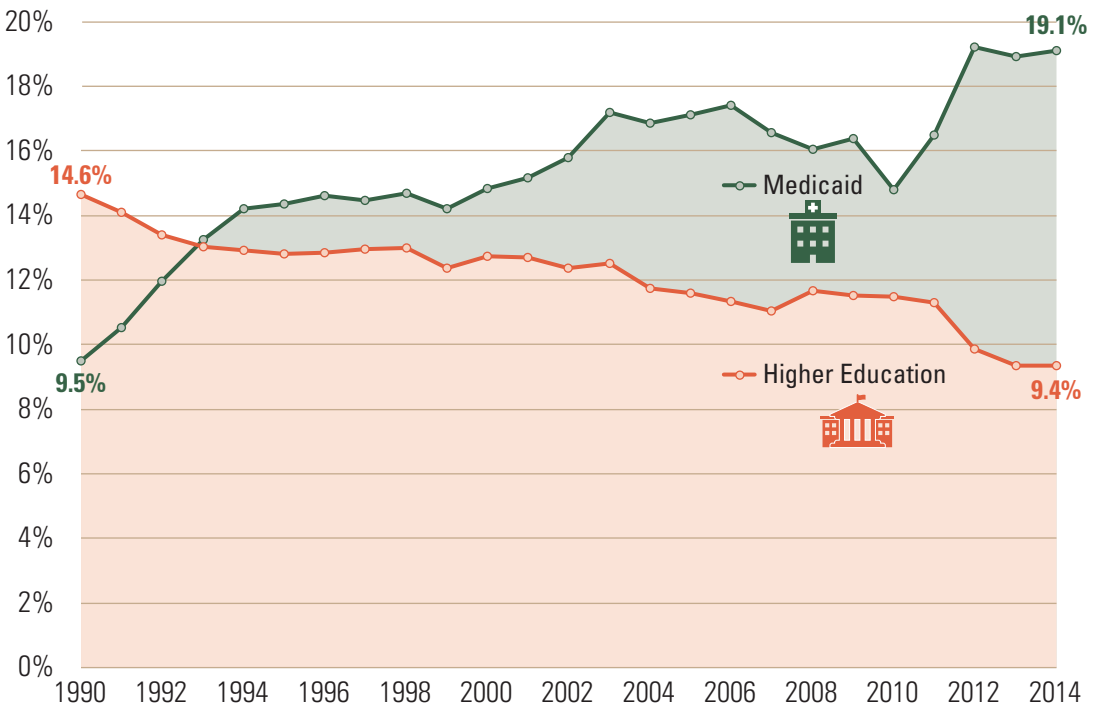
Despite modest increases in 2013 and 2014, state support for public higher education per full-time equivalent student remains nearly 30 percent below spending in 2000, after adjusting for inflation using the State Higher Education Finance cost adjustment. **Source:** State Higher Education Executive Officers (SHEEO) Association, *SHEF: FY 2014—State Higher Education Finance* (Boulder, Colo.: State Higher Education Executive Officers Association, 2015).



The higher education share of general fund spending fell from **14.6 percent in 1990 to 9.4 percent in 2014.**

As a result of sustained cuts and governmental spending pressures elsewhere, higher education has declined as a share of state budgets. While states once spent more on higher education than Medicaid, higher education has been overtaken, and the gap is widening. The higher education share of general fund spending fell from 14.6 percent in 1990 to 9.4 percent in 2014, while the Medicaid share more than doubled, from 9.5 percent to 19.1 percent. States now spend more than twice as much on Medicaid as they do on higher education.

**Figure 5: Higher Education (All Colleges and Universities) and Medicaid as Share of State General Fund Expenditures**

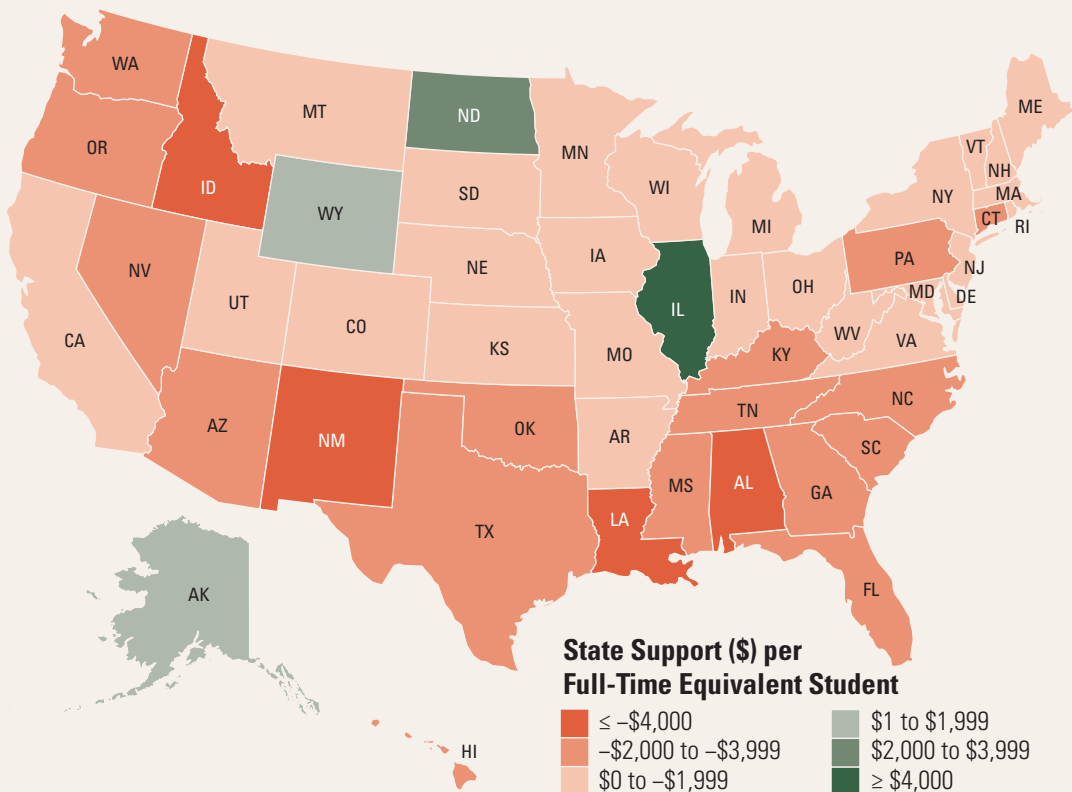


Higher education has fallen as a share of state budgets, while Medicaid has risen. **Source:** National Association of State Budget Officers, *State Expenditure Report* (various years, 1990–2014) (Washington, D.C.: National Association of State Budget Officers, 1990–2014), <http://www.nasbo.org/publications-data/state-expenditure-report/archives>.

Higher education has suffered relative to other priorities, too, particularly elementary and secondary education and corrections. According to one recent analysis, “eleven states spent more of their general funds on corrections than on higher education in 2013. And some of the states with the biggest education cuts in recent years also have among the nation’s highest incarceration rates.”<sup>8</sup>

In all, forty-six states cut support for public higher education per FTE student between 2008 and 2014, after adjusting for inflation (see Figure 6). And these cuts were deep: thirty-six states cut inflation-adjusted spending per FTE student by more than 20 percent, nineteen cut by more than 25 percent, and ten cut by more than 30 percent.<sup>9 10</sup>

Figure 6: **Change in State Support for Public Higher Education (All Public Colleges and Universities) per Full-Time Equivalent Student, 2008 to 2014**

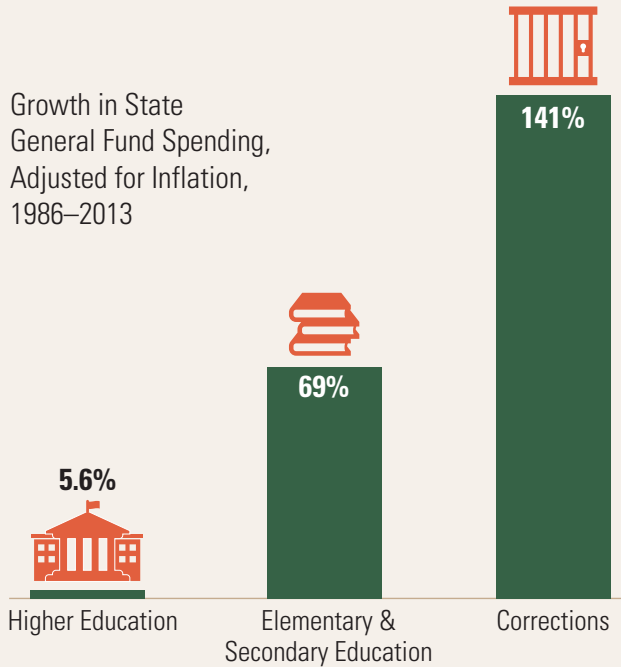


State support for public higher education, per full-time equivalent student, is below the 2008 level in forty-six states. Although the map shows a substantial increase in Illinois, that does not reflect increased spending to support current students. Rather, it reflects an increase to support underfunded university pensions: support to pay for services delivered years or even decades in the past. **Source:** State Higher Education Executive Officers (SHEEO) Association, *SHEF: FY 2014—State Higher Education Finance* (Boulder, Colo.: State Higher Education Executive Officers Association, 2015).

## State Spending on Corrections

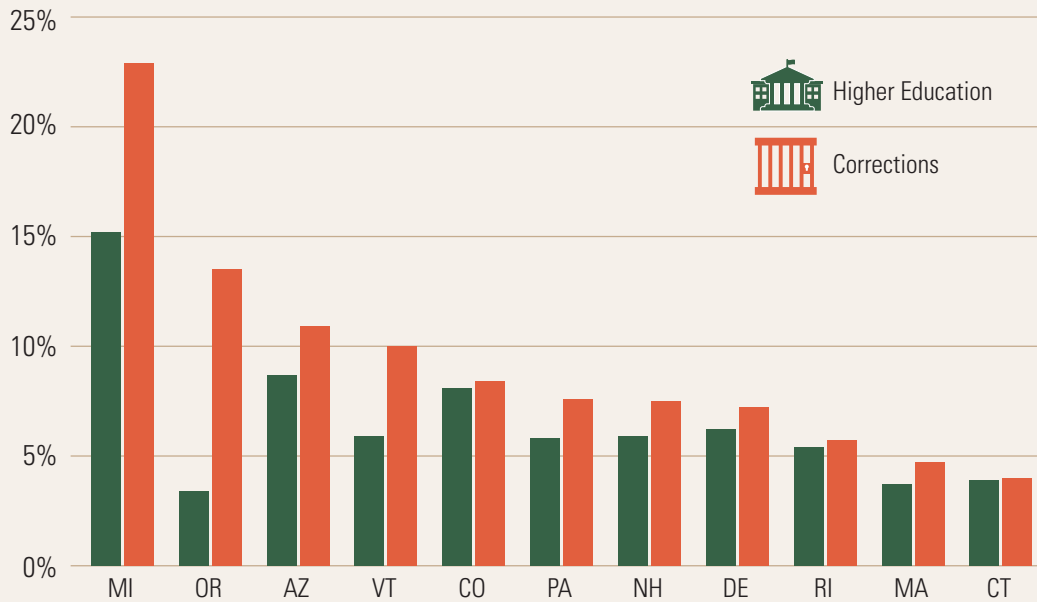
In general, state spending on corrections has grown much faster than education spending. In eleven states, corrections has now surpassed higher education as a percentage of funding.

Figure 7: **State Corrections Spending Has Grown Much Faster than Education Spending over the Last Three Decades**



**Source:** Center on Budget and Policy Priorities analysis of data from National Association of State Budget Officers, *State Expenditure Report* (various years, 1986–2013) (Washington, D.C.: National Association of State Budget Officers, 1986–2014), <http://www.nasbo.org/publications-data/state-expenditure-report/archives>.

Figure 8: **Corrections and Higher Education Spending as Percentage of State General Fund Expenditures (FY2013)**



Source: The Henry J. Kaiser Family Foundation, "Distribution of State General Fund Expenditures (in millions): Fiscal year 2013," <http://kff.org/other/state-indicator/distribution-of-general-fund-spending/>.

## Section 3: Public Research Universities Have Been Hit Harder than Public Higher Education in General

While public higher education in general has been hit by cuts in state support, public research universities have been hit harder. Between 2008 and 2013, inflation-adjusted state appropriation support for public higher education per FTE student declined by 26.3 percent in the median public research university. Of the 138 public research universities for which there was comparable data, inflation-adjusted support per FTE student declined by more than 20 percent at 98 institutions, and declined by more than 40 percent at 29 institutions.<sup>11</sup>

To be sure, tuition increases have abated recently in response to modest increases in state support in 2013 and 2014. Indeed, states that have continued with deep cuts are now the outliers. In Washington State, the latest budget reportedly provides for tuition reductions of 15–20 percent at four-year institutions, making it the only state to provide widespread tuition cuts.<sup>12</sup> Other states have experienced modest increases in state support, but with corresponding tuition freezes. For example, the University of California recently agreed to freeze resident undergraduate tuition for two years in exchange for additional state support of 4 percent per year for two years. California expects to raise nonresident tuition by 8 percent.<sup>13</sup>

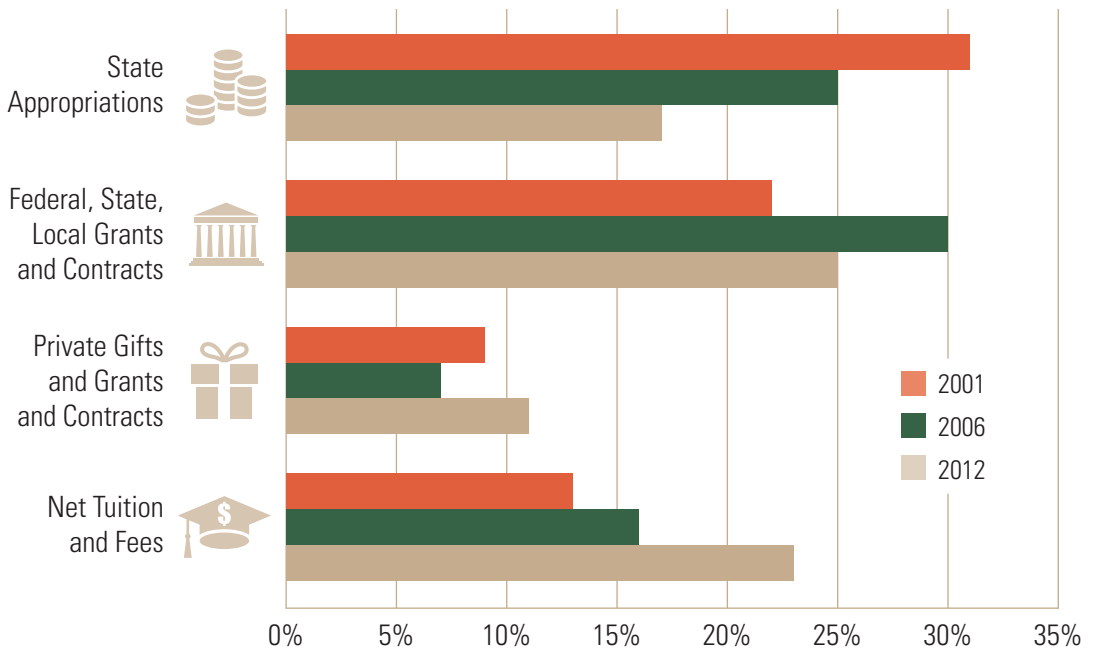


Between 2008 and 2013, inflation-adjusted state appropriation support for public higher education per full-time equivalent student

**declined by 26.3 percent**

in the median public research university.

Figure 9: **Revenue Sources of Selected Public Research Universities, 2001, 2006, and 2012**



Public research universities are increasingly reliant on tuition and fees in the wake of cuts in state appropriations.

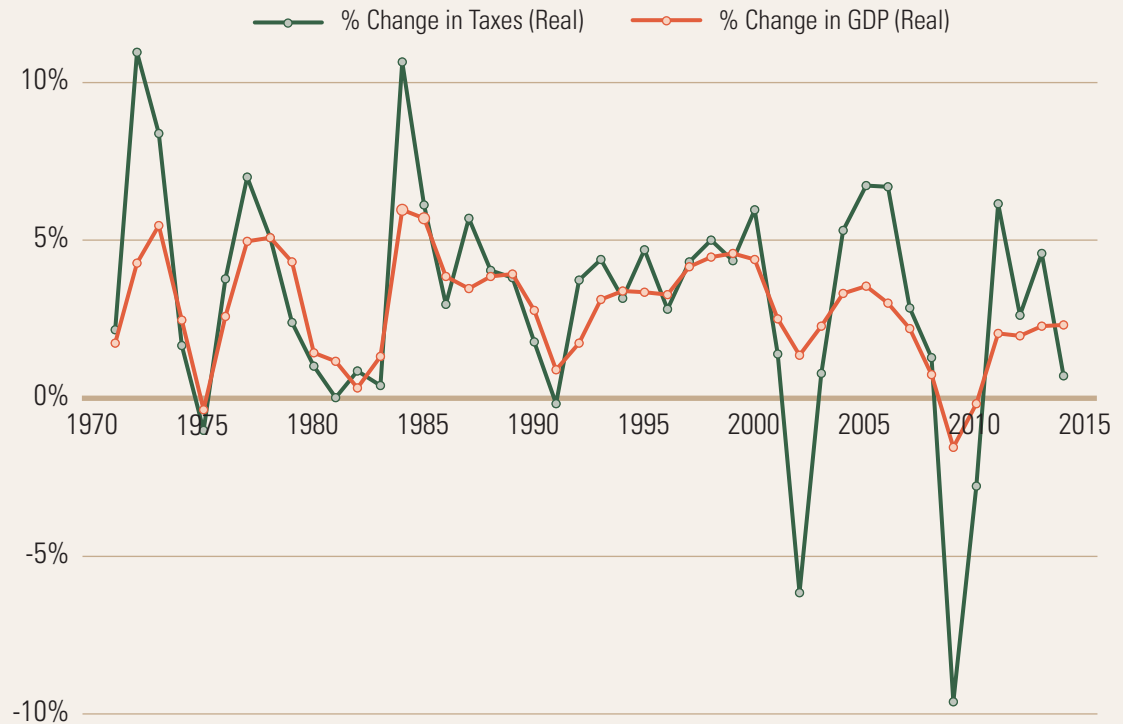
**Source:** COGR Costing Committee, "Finances of Research Universities, June 2014 Version" (New York; Washington, D.C.: Council on Governmental Relations, 2014).

## Section 4: Looking Forward: Prospects for the Future

**States’ potential to provide support for higher education depends crucially on tax revenue.** Unfortunately, state tax revenue has remained weak: seven years after the start of the recession, inflation-adjusted state government tax revenue is only 5 percent above its prerecession level. By contrast, in four preceding economic recoveries, state tax revenue had grown from 15 to 25 percent above prerecession revenue in the same amount of time.<sup>14</sup>

The outlook for tax revenue growth is subdued. Most major economic forecasters expect that the national economy will continue to improve throughout 2015 and 2016, inflation will be low but will gradually rise, and interest rates will rise slightly.<sup>15</sup>

Figure 10: **Percent Change in Gross Domestic Product and State Tax Revenue Adjusted for Inflation**



State taxes are more volatile than the economy and more volatile than they used to be. Note: Years are twelve-month periods ending in June, corresponding to the fiscal year of the typical state budgetary office. **Source:** Analysis of data from the United States Census Bureau, <http://www.census.gov/>; and U.S. Department of Commerce, Bureau of Economic Analysis, <http://www.bea.gov/>.



State income taxes and sales taxes accounted for 35.9 percent and 31.3 percent of state tax revenue in fiscal year 2014, respectively. Income taxes are unlikely to grow much faster than the overall economy over the next several years: progressive tax structures will drive growth up slightly, but this will likely be offset by drag from slow growth in nonwage income. Sales taxes have grown more slowly than the economy for more than forty years.<sup>16</sup> This is a result of the difficulty in taxing the service industry and in collecting taxes on Internet sales, among other causes. The sales tax is likely to continue to grow more slowly than the economy for years to come. Thus, the overall outlook is for relatively slow revenue growth in the two major tax sources for the typical state.<sup>17</sup>

## Conclusion

**Tax revenue, although growing, is growing slowly.** States face increases in spending areas that are difficult or impossible to cut, particularly Medicaid and pension contributions. They also face demands for spending on primary and secondary education: a popular priority that does not have its own revenue source (tuition) and might more easily garner legislative support. In addition, states have made sharp cuts in infrastructure spending and face considerable demand to restore some of that spending, allowing repairs of roads and bridges and improvements in other areas. Thus, higher education, despite its importance to the economy, is continuing to fall behind these other priorities.

Most universities have instituted new programs to reduce costs, but years of dramatic budget cuts have left little room for austerity: public research universities increasingly are expected to serve more Americans with less funding. In response to this need, the Lincoln Project is developing new strategies for ensuring that public research universities continue to serve the nation as engines of innovation, growth, and opportunity for Americans of all backgrounds.

This is the second in a series of five publications that will examine the importance of our public research universities. Subsequent publications will include the current financial models of public research universities and how they are changing; and the impacts of the research conducted at these institutions on people, the economy, and the nation. Ultimately, the Lincoln Project will offer substantive policy recommendations for sustaining public research universities and will call on all funding partners—states, the federal government, philanthropies, business, and the public—to maintain and enhance their investment in them.

Public research universities increasingly are expected to serve **more Americans** with **less funding**.



## Major Spending Items that Compete with Higher Education

States face significant spending pressures in several areas that compete with higher education for resources.

### Medicaid



Medicaid is an entitlement; as a practical matter, as enrollments rise, states must raise their expenditures, at least in the short run. Approximately two-thirds of Medicaid spending is for the elderly and disabled. Demographic forces will put increased pressure on the elderly component of this spending. Between 2014 and 2034, the population aged sixty-five and over is expected to grow by approximately 2.6 percent annually, compared with 0.8 percent for the population overall.<sup>18</sup> Furthermore, many economists believe that health care will continue to struggle with “excess cost growth,” in which costs grow more rapidly than the economy as a whole. Moody’s Analytics projects that total state Medicaid spending will grow faster than state tax revenue in every year from 2017 through 2024.<sup>19</sup>

### Primary and Secondary Education



The 2007 recession was so severe that states cut inflation-adjusted spending on K–12 education by approximately 4 percent between 2008 and 2013.<sup>20</sup> The National Center on Education Statistics projects that the number of pupils will rise 0.6 percent annually from 2015 through 2024.<sup>21</sup> Given the depth of recent state cuts in primary and secondary education and anticipated growth in the number of pupils, states will face pressure to raise spending on primary and secondary education in coming years.

### Pensions



State and local government pensions for all workers (not just higher education) are underfunded by at least \$1.1 trillion under conservative estimates, and by some estimates the underfunding is much greater.<sup>22</sup> While some states are trying to cut these benefits, with varying degrees of success, states are likely to have to pay the vast majority of this obligation. In aggregate, states and localities are underpaying actuarially determined contributions by approximately \$21 billion annually, and under some scenarios, expenditure needs could be much higher still.<sup>23</sup> This will place great pressure on state finances in many states, crowding out funds that might otherwise be available for higher education.

### Infrastructure



While it is difficult to obtain objective measures of infrastructure needs, it is clear that states and localities cut back on this spending very sharply during the Great Recession and in the years that followed. Between the fourth quarter of 2007 and the fourth quarter of 2014, real gross investment in infrastructure [confirm change; or is it investment overall?] by state and local governments fell by 18 percent, and net investment (after allowing for capital consumption) plummeted more than 55 percent.<sup>24</sup>

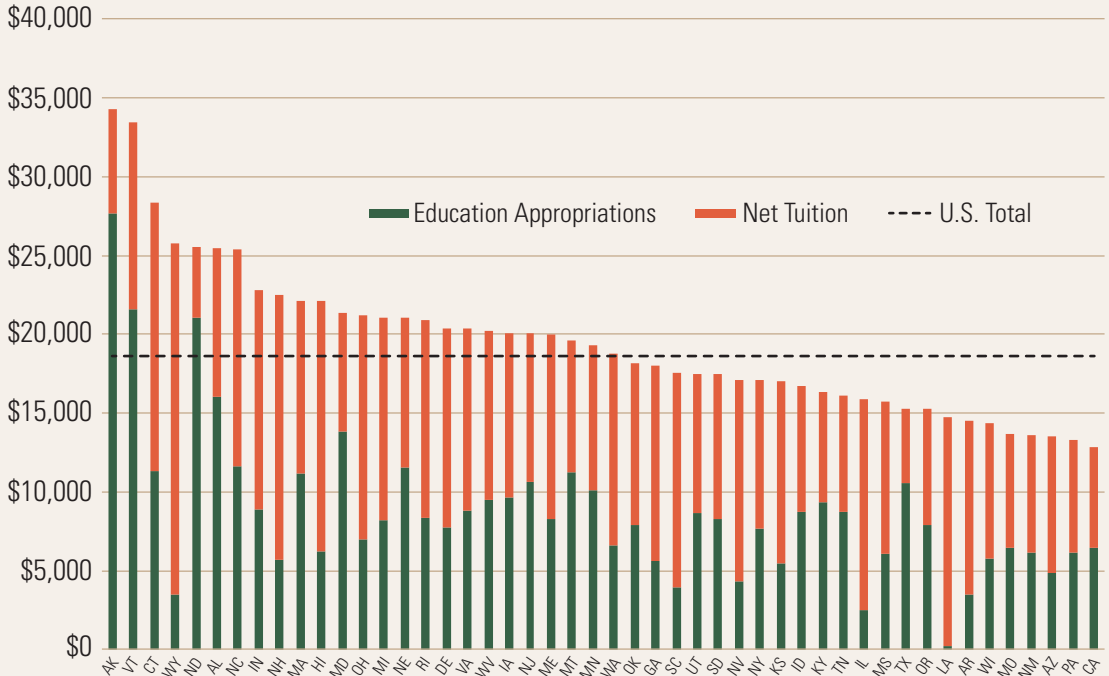
States feel great pressure to increase spending for infrastructure. In fact, it is one of the few activities for which the public appears willing to pay higher taxes. A recent national poll by the Mineta Transportation Institute found that 69 percent of respondents would support a ten cent gas tax increase for improved road maintenance.<sup>25</sup>

## Appendix: State Spending on Public Higher Education, per Full-Time Equivalent Student, Varies More than Six-Fold

State support for public higher education in 2014 ranged from more than \$18,000 per FTE student in Alaska to about \$3,000 per FTE student in New Hampshire, a six-fold difference (see Figure 3). While Alaska and New Hampshire are often extremes on fiscal measures, the differences between less polar states were still quite large. Connecticut, the fifth-highest spending state, spent three times as much per FTE student as did Vermont, the fifth-lowest spending state; and North Carolina, the tenth-highest spending state, spent 74 percent more than did Wisconsin, the tenth-lowest spending state.

The variation in state appropriations for higher education means that states also vary greatly in their relative reliance on appropriations versus net tuition. Alaska and Wyoming, which provide very high state support for public higher education, rely relatively little on net tuition. New Hampshire and Vermont, which provide relatively little state support for public higher education, rely heavily on net tuition revenue.

Figure 11: **Public Research Universities Education Appropriations and Net Tuition per Full-Time Equivalent Student, 2013**



States vary in their reliance on appropriations versus net tuition. **Source:** State Higher Education Executive Officers (SHEEO) Association, *SHEF: FY 2014—State Higher Education Finance* (Boulder, Colo.: State Higher Education Executive Officers Association, 2015).

The relationship between education appropriations and net tuition also reflects state philosophies and policies about who should pay the costs of higher education. For example, New Mexico, which has a relatively high appropriation share, has a policy of keeping tuition low to allow a large number of students to participate. Vermont, by contrast, prefers to keep tuition higher for those who can afford college and provide significant financial assistance for those who cannot.<sup>26</sup>

How have changes in state support affected individual public university systems, and how have these institutions responded?

## California

“Prior to 2010–11, state funding was the largest single source of support for the education function of the University. Over the past ten years, state educational appropriations have fallen more than \$1 billion in inflation-adjusted dollars despite UC’s enrollment growth. State educational appropriations constituted only 9 percent of UC’s operating budget in 2012–13 compared to 23 percent in 2001–02.”<sup>27</sup>

## Colorado

“Colorado State this year [2011] received \$94 million in funding from the State of Colorado, a reduction of about \$36 million over the past three years. Colorado State has managed these state funding cuts by freezing hiring and salaries, reducing expenses (with an emphasis on cuts to administration), and increasing student tuition.”<sup>28</sup>

## New York

In New York, the percent change in state educational appropriations per full-time equivalent (FTE) student from 2008 to 2014 is –11.1 percent, a decrease of \$1,154 per student.

To offset these cuts, tuition has increased by \$1,215 per FTE student (21.3 percent) in the same six years. Additionally, the state is considering making sizeable tax cuts in 2015, which would prevent investments in higher education that would otherwise “increase access to college, improve graduation rates, and reduce student debt.”<sup>29</sup>

## Tennessee

“In Tennessee, total appropriations remain below FY 2008 levels. As a result, in FY 2015 there is no funding for general salary increases for state and university employees, leading the state to lag in providing compensation at the market rate. In order to maintain current operations and continue progress in supporting student success and completion, the in-state maintenance fee will increase 6 percent, from \$9,780 to \$10,366 for in-state students at the University of Tennessee, Knoxville. It should be noted that the University of Tennessee continues to allocate additional funding to student aid to keep the net cost of student fees as low as possible—expenditures for institutional scholarships and fellowships grew by over 233 percent from FY 2003 to FY 2013.”<sup>30</sup>

## Endnotes

- 1 National Association of State Budget Officers, *State Expenditure Report: Examining Fiscal 2012–2014 State Spending* (Washington, D.C.: National Association of State Budget Officers, 2015). These numbers are for general fund spending rather than spending from all funds because in many states, higher education spending in other funds includes spending by institutions from tuition revenue and other sources not derived from states' own resources, and thus does not measure state "effort" to fund higher education. The data in for 2014 are estimates collected before final fiscal reports for the 2014 fiscal year were complete. However, they are not forecasts prepared before the start of the fiscal year, and tend to offer good estimates of actual expenditures. See *ibid.*, 102: "For higher education, states were requested to include expenditures made for capital construction, community colleges, vocational education, law, medical, veterinary, nursing and technical schools, and assistance to private colleges and universities, as well as tuition, fees and student loan programs. Higher education expenditures exclude federal research grants and endowments by universities." Because the data in are for the general fund, most higher education capital expenditures are excluded.
- 2 Some reports have calculated different spending shares based upon total expenditures rather than general fund expenditures. Given that our focus is state tax support for higher education, the general fund is more appropriate here.
- 3 According to the Pew Charitable Trusts (The Pew Charitable Trusts, Fiscal Federalism Initiative, "Federal and State Funding of Higher Education: A Changing Landscape," June 11, 2015, <http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/06/federal-and-state-funding-of-higher-education>), federal spending for higher education now exceeds state government spending for higher education slightly, the result of a surge in federal spending after the Great Recession and sharp cutbacks in state spending. The nature of federal spending on higher education is very different from state spending: state funding is primarily for operating support to institutions, while federal spending is mainly for financial assistance to students (such as Pell grants), specific federal research projects, and veterans' education benefits. In addition, the federal government provides nearly half again as much support for higher education through tax expenditures as it does through direct spending, particularly through the American Opportunity Tax Credit, the successor to the Hope Tax Credit.
- 4 American Academy of Arts & Sciences, *Public Research Universities: Why They Matter* (Cambridge, Mass.: American Academy of Arts & Sciences, 2015).
- 5 Michael Mitchell, Vincent Palacios, and Michael Leachman, *States are Still Funding Higher Education below Pre-Recession Levels* (Washington, D.C.: Center on Budget and Policy Priorities, 2014), <http://www.cbpp.org/research/states-are-still-funding-higher-education-below-pre-recession-levels>; and Michael Mitchell and Michael Leachman, *Years of Cuts Threaten to Put College Out of Reach for More Students* (Washington, D.C.: Center on Budget and Policy Priorities, 2015), <http://www.cbpp.org/research/state-budget-and-tax/years-of-cuts-threaten-to-put-college-out-of-reach-for-more-students>.
- 6 For recent reviews of research on this topic, see Jennifer A. Delaney and William R. Doyle, "State Spending on Higher Education: Testing the Balance Wheel over Time," *Journal of Education Finance* 36 (4) (2011): 343–368; Jennifer A. Delaney and William R. Doyle, "The Role of Higher Education in State Budgets," in *State Postsecondary Education Research: New Methods to Inform Policy and Practice*, ed. Kathleen M. Shaw and Donald E. Heller (Sterling, Va.: Stylus Publishing, 2007); and Michael K. McLendon, James C. Hearn, and Christine G. Mokher, "Partisans, Professionals, and Power: The Role of Political Factors in State Higher Education Funding," *The Journal of Higher Education* 80 (6) (2009): 686–713, doi:10.1353/jhe.0.0075.
- 7 National Conference of State Legislatures, "Saving for College: 529 Plans," May 22, 2014, <http://www.ncsl.org/research/education/saving-for-college-529-plans.aspx>.
- 8 Mitchell, Palacios, and Leachman, *States Are Still Funding Higher Education below Pre-Recession Levels*.
- 9 Analysis derived from State Higher Education Executive Officers (SHEEO) Association, *SHEE: FY 2014—State Higher Education Finance* (Boulder, Colo.: State Higher Education Executive Officers Association, 2015).
- 10 These numbers differ slightly from numbers in a report by the Center on Budget and Policy Priorities, likely because these numbers reflect updated data for 2014. See Mitchell, Palacios, and Leachman, *States Are Still Funding Higher Education below Pre-Recession Levels*.
- 11 Analysis of IPEDS data, see National Center for Education Statistics, IPEDS [Integrated Postsecondary Education Data System] (U.S. Department of Education, Institute of Education Sciences), <https://nces.ed.gov/ipeds/>.
- 12 Stacy Teicher Khadaroo, "Dramatic Cuts to College Tuition in Washington State: Will Others Follow?" *The Christian Science Monitor*, July 2, 2015, <http://www.csmonitor.com/USA/Education/2015/0702/Dramatic-cuts-to-college-tuition-in-Washington-State-Will-others-follow>.
- 13 Bay City News, "University of California to Freeze Undergraduate Tuition for California Residents for 2

Years,” May 14, 2015, <http://abc7news.com/education/uc-to-freeze-undergraduate-tuition-for-ca-residents-for-2-years/722871/>.

14 Donald J. Boyd and Lucy Dadayan, *The Economy Recovers While State Finances Lag*, The Blinken Report (Albany, N.Y.: Nelson A. Rockefeller Institute of Government, June 2015), [http://www.rockinst.org/pdf/government\\_finance/2015-06-23-Blinken\\_Report\\_Two.pdf](http://www.rockinst.org/pdf/government_finance/2015-06-23-Blinken_Report_Two.pdf).

15 For surveys of major forecasters, see The Wall Street Journal, “Economic Forecasting Survey,” <http://projects.wsj.com/econforecast/>; and Federal Reserve Bank of Philadelphia, “Survey of Professional Forecasters,” <http://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/>. For the latest forecasts available at the time of writing, see The Wall Street Journal, “WSJ Economic Survey June 2015,” <http://online.wsj.com/public/resources/documents/wsjecon0615.xls>. See also Boyd and Dadayan, *The Economy Recovers While State Finances Lag*.

16 John L. Mikesell, “The Disappearing Retail Sales Tax,” *State Tax Notes* (March 5, 2012): 777–791.

17 Boyd and Dadayan, *The Economy Recovers While State Finances Lag*.

18 Donald Boyd, *The Potential Impact of Alternative Health Care Spending Scenarios on Future State and Local Government Budgets*, The Future of U.S. Health Care Spending Conference, April 11, 2014 (Washington, D.C.: Engelberg Center for Health Care Reform at Brookings, 2014).

19 Dan White and Sarah Crane, *Crowded Out: The Outlook for State Higher Education Spending: Prepared for the National Commission on Financing 21st Century Higher Education* (New York: Moody’s Analytics, 2015).

20 Boyd and Dadayan, *The Economy Recovers While State Finances Lag*.

21 Analysis of Institute of Education Sciences, National Center for Education Statistics, “Digest of Education Statistics 2014,” Table 203.10, [https://nces.ed.gov/programs/digest/d14/tables/dt14\\_203.10.asp](https://nces.ed.gov/programs/digest/d14/tables/dt14_203.10.asp).

22 Donald J. Boyd and Peter J. Kiernan, *Strengthening the Security of Public Sector Defined Benefit Plans*, The Blinken Report (Albany, N.Y.: Nelson A. Rockefeller Institute of Government, January 2014), [http://www.rockinst.org/pdf/government\\_finance/2014-01-Blinken\\_Report\\_One.pdf](http://www.rockinst.org/pdf/government_finance/2014-01-Blinken_Report_One.pdf).

23 Don Boyd, “National Economic Forces Affecting State Budgets and Pension Systems,” Governor’s Forum: Pensions at the Harris School, University of Chicago, Gleacher Center, Chicago, April 27, 2015.

24 Boyd and Dadayan, *The Economy Recovers While State Finances Lag*.

25 More than a dozen states considered gas tax increases in 2015, and the Nebraska legislature even overrode a gubernatorial veto of a gas tax increase. See *ibid*.

26 Julie Davis Bell, *The Nuts and Bolts of the Higher Education Legislative Appropriations Process*, Getting What You Pay For Policy Brief (Boulder, Colo.: National Conference of State Legislatures and Western Interstate Consortium for Higher Education, November 2008), [http://www.wiche.edu/info/gwypf/bell\\_appropriations.pdf](http://www.wiche.edu/info/gwypf/bell_appropriations.pdf).

27 University of California, *Accountability Report 2014* (Oakland: University of California Regents, 2015), “Chapter 12: University Finances and Private Giving,” <http://accountability.universityofcalifornia.edu/2014/index/chapter/12>.

28 Colorado State University, *Financial Accountability Report: Fiscal Year 2011 Financial Highlights* (Fort Collins: Colorado State University, 2012), 2, <http://busfin.colostate.edu/finstmt/finacct11.pdf>.

29 Mitchell, Palacios, and Leachman, *States Are Still Funding Higher Education below Pre-Recession Levels*.

30 The University of Tennessee, *Budget Document FY 2014–2015* (Knoxville: University of Tennessee System Budget Office, 2014), [http://www.tennessee.edu/budget/docs/FY15\\_Proposed.pdf](http://www.tennessee.edu/budget/docs/FY15_Proposed.pdf).

# The Lincoln Project: Excellence and Access in Public Higher Education

## Advisory Group

**Robert Birgeneau**, *Cochair*, University of California, Berkeley

**Mary Sue Coleman**, *Cochair*, University of Michigan

**Lawrence S. Bacow**, Tufts University

**Gene D. Block**, University of California, Los Angeles

**Henry Brady**, University of California, Berkeley

**Phil Bredezen**, former Governor of Tennessee

**Nancy Cantor**, Rutgers-Newark

**John T. Casteen III**, University of Virginia

**Jonathan Cole**, Columbia University

**Gray Davis**, former Governor of California

**Patrick Doyle**, Domino's

**David B. Frohnmayer**†, University of Oregon

**E. Gordon Gee**, West Virginia University

**Matthew Goldstein**, The City University of New York

**Donald Graham**, Graham Holdings Company

**Carl Guardino**, Silicon Valley Leadership Group

**Robert D. Haas**, Levi Strauss & Co.

**Jim Hackett**, Steelcase

**Ann Weaver Hart**, University of Arizona

**Michael Hout**, New York University

**Kay Bailey Hutchison**, former United States Senator, Texas

**Jim Leach**, University of Iowa

**Earl Lewis**, The Andrew W. Mellon Foundation

**Ann Marie Lipinski**, Nieman Foundation for Journalism at Harvard University

**William Powers, Jr.**, The University of Texas at Austin

**John Rogers**, Ariel Investments

**Thomas Siebel**, C3 Energy; First Virtual Group

**Shirley M. Tilghman**, Princeton University

**Phyllis M. Wise**, University of Illinois at Urbana-Champaign

**Frank Yeary**, CamberView Partners LLC; University of California, Berkeley

**Pauline Yu**, American Council of Learned Societies

## Funders

The William and Flora Hewlett Foundation

The Spencer Foundation

Carnegie Corporation of New York

Thomas and Stacey Siebel Foundation

Robert and Colleen Haas

## Contributing Author

**Donald J. Boyd**, Rockefeller Institute of Government

## Project Staff

Samantha Carney

Eliza Berg

John Tessitore

Elissa Chin Lu, *Consultant*

Beata FitzPatrick, *Consultant*

† Deceased





AMERICAN ACADEMY  
OF ARTS & SCIENCES