

BY DUSTIN WEEDEN

SEPTEMBER 2015

Appropriations, along with financial aid and tuition, represent three of the strongest policy levers legislatures have at their disposal to craft a robust higher education finance policy structure capable of meeting state goals. These three levers should be considered together, since pulling one is likely to cause ripple effects in the other two. State appropriations to higher education institutions traditionally have been the most significant state investment in postsecondary education. In recent years, recessions, rapid increases in postsecondary enrollment, and increases in institutional operating costs have affected states' ability to maintain a steady investment in higher education. This brief is part of a series focusing on appropriations, financial aid, and tuition finance policy. It focuses on appropriations for higher education institutions and reviews the economic rationale for public investment in higher education, models for allocating state funding, and policy options states have taken or are considering to maintain future investment in higher education.

Economic Rationale for Public Investment in Higher Education

Individuals greatly benefit from personal investments in higher education (primarily through increased earnings), but society also benefits from such investments. Strong correlations exist between higher levels of education and lower demand for social services, corrections spending and the need for health care services.¹ Higher levels of educational attainment also correspond with increased tax revenues for states, increased worker productivity and value-added benefits such as greater civic engagement.² The best estimates indicate that more than half the

higher education benefits accrue to society rather than to individuals.³

Because society receives such a significant portion of higher education benefits, the public return on investment for higher education appropriations tends to be high. Estimating the specific return on investment for state governments is difficult because many of the benefits are not easily quantifiable. However, conservative estimates indicate the fiscal benefits accruing to state and local governments are approximately 2.35 times greater than the costs. This means that, for everyone \$1 state and local governments spend to produce higher education degrees, the public receives \$2.35 in return.⁴ This estimate understates the true return to state governments because it does not include the value-added benefits of an educated citizenry.

Individuals usually do not consider the societal benefits of increased educational attainment when they make higher education investment decisions. A market failure results where resources are not efficiently allocated toward higher education. Specifically, people will choose to invest less in higher education than is demanded by society.⁵ To correct this failure and more efficiently allocate resources, states provide financial support to students and higher education institutions. This financial support makes college more affordable to students, thus encouraging greater enrollment and attainment. However, states face the challenging task of balancing affordability for students and affordability for taxpayers. To meet this dual affordability challenge, many states are developing public agendas for higher education that outline strategic goals such as specifying the portion of state residents who will need a postsecondary credential

in the next decade. Once public agenda goals are determined, states can develop specific policies and strategies to achieve the goals.

Models for Allocating State Funding

In recent years, a growing number of states have re-examined how higher education funding is allocated to institutions. States use some combination of three methods to allocate funding: incremental, funding formulas and outcomes-based models (also called performance-based funding).

Incremental Funding. Incremental funding, also known as base-plus funding, is the simplest allocation method. Incremental funding uses the previous year's allocation as the starting point, then provides a percent increase to each institution. Institutions receive roughly the same proportion of total state funding year after year. The annual portion for each institution often is rooted in history or tradition and may not reflect changes in enrollment or student body makeup. While incremental funding may provide some stability in expected funding amounts year to year, it does not provide incentives for institutions to reduce costs or consider innovations. Rather, this funding method provides institutions with a stronger incentive to continue traditional methods of operation.⁶

Funding Formulas. Funding formulas typically are more complex than incremental funding approaches and often account for differences in institutional missions. Funding formulas have been used since the 1950s and are designed to estimate the cost of providing a service such as instruction. Most states that use funding formulas rely on enrollment—often by counting the number of students enrolled in courses a few weeks after the start of each semester. More complex formulas assign greater weight to research institutions and graduate instruction, recognizing the increased costs of these activities. The advantages of using a funding formula include allocating state support based on the costs associated with an activity and limiting the influence of politics in determining

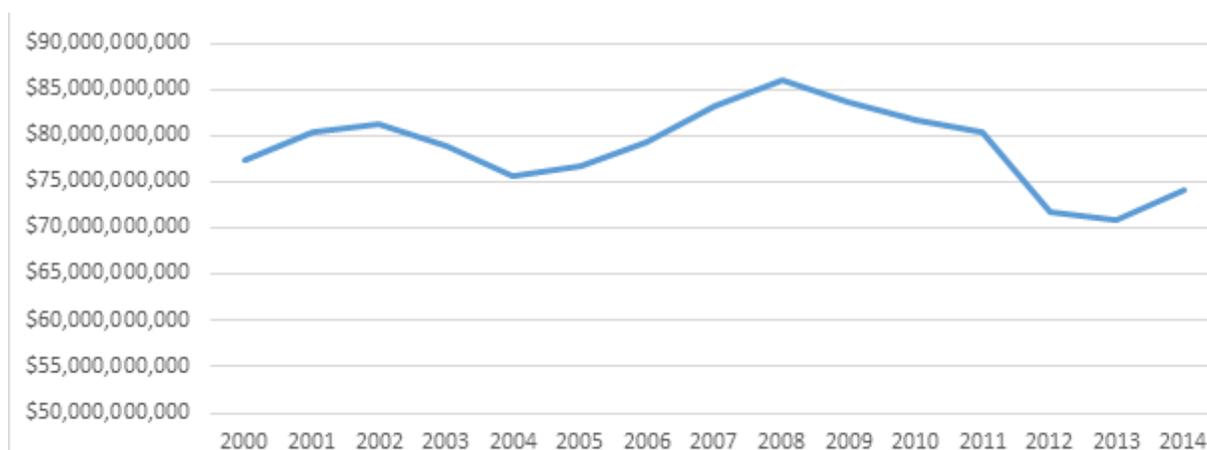
allocations to individual institutions. However, the incentive structure built into funding formulas rewards institutions for pursuing activities that increase revenue. For example, enrollment-based formulas not only will increase access to higher education, but also create an incentive structure where institutions are rewarded for keeping students enrolled longer.

Outcomes-Based Funding. Outcomes-based funding (or performance-based funding), allocates appropriations based on the outcomes (e.g., number of degrees) each institution produces rather than on inputs or the previous year's allocation. States that implement outcomes-based funding typically begin the process by establishing clearly defined higher education goals and then developing metrics to evaluate institutions' progress toward meeting these state goals. This creates an incentive structure where institutions that produce more outcomes linked to state goals receive more state funding. Outcomes-based formulas must balance the risk of volatility (large swings in yearly outcomes) with making progress toward state goals. Outcomes formulas typically build in safeguards to ensure funding does not become too volatile. Common safeguards include using multiple years of data, including stop-loss provisions, and combining outcomes-based funding with one of the funding methods described above. For example, Tennessee reserves a certain amount of funding for base operations, then allocates the remaining state funding based on outcomes using a three-year rolling average of data. Outcomes funding models also allow states to tailor metrics to each institution's mission and to reward institutions for educating underserved populations. Many states have turned to outcomes-based funding as a tool to link state and institutional goals. In the current environment of revenue volatility and competing budget priorities, states may wish to consider strategically allocating resources to meet state goals.

Revenue Volatility and Competing Priorities

Business cycle volatility and competing budget categories represent two of the greatest challenges

**Figure 1. State Higher Education Support 2000-2014
(in Constant 2014 Dollars)**



Source: State Higher Education Executive Officers, *State Higher Education Finance, FY 2014*

states face to maintain and grow their investments in higher education. The boom-bust economic cycles cause unstable state revenues, and higher education appropriations tend to be one of the most adversely affected expenditure categories. During economic downturns, higher education expenditures are likely to face the greatest percentage decrease, while it tends to receive one of the greatest percentage increases year over year during economic boom times. This pattern requires that there be enough time between recessions for state revenues to fully rebound so that subsequent allocations match previous highs. As Figure 1 illustrates, the economic recovery was robust and long enough between the recessions in 2001 and 2008 that appropriations (at least nationally) surpassed the previous pre-recession high. However, the 2008 recession was much more severe, and the ensuing recovery has been much slower, causing appropriations to lag behind previous trends. If states were able to smooth the cycles so that state revenues and higher education spending are more even over time, institutions would be able to plan for a more stable revenue stream and limit tuition increases.

Because higher education spending tends to be a discretionary budget item, it has gradually been crowded out by increases in mandatory expenditures

such as Medicaid, elementary and secondary school spending, and pension obligations. In the 1980s, Medicaid expenditures accounted for less than 10 percent of all state spending, but it now consumes approximately 16 percent of state spending.⁷ The credit rating agency Moody's Analytics analyzed how future Medicaid expenditures are likely to affect higher education spending and concluded that higher education likely will continue to be "crowded out" by mandatory expenditures. The Moody's models predict that in the coming decade only two states will increase higher education spending as a share of total state spending. Conversely, 16 states are predicted to decrease higher education funding as a share of total state funding by more than .05 percent.⁸

The slow economic recovery, future recessions and crowding out due to mandatory spending together create a challenging future for higher education spending. States that proactively address these challenges and plan for the future will likely be the most successful in meeting state attainment goals. States that wait until the next recession to act or allow mandatory spending to gradually crowd out higher education will struggle to meet the educational attainment needs of the state economy. The following section outlines a few options states have taken or

discussed to address future higher education funding challenges.

State Policy Options to Maintain Future Investment in Higher Education

Create a Stabilization Fund. In 2008, Maryland created a Higher Education Investment Fund that relies on a dedicated revenue stream to function like a rainy day fund for higher education. Six percent of corporate income tax revenues are deposited into the fund each year. Ideally, the fund will grow during good economic times and then be used to offset a decline in annual appropriations during a recession. In 2010, Maryland took an additional step to specifically link the investment fund with tuition increases. The 2010 legislation established the goal of limiting tuition increases to no more than the three-year rolling average of increases in the state’s median income. The goal is to link tuition with families’ ability to pay. This arrangement requires the state to avoid the volatility normally associated with higher education support. In Maryland, revenue in the Higher Education Investment Fund can be used to minimize a decline in state support in any given year. Since the beginning of the Great Recession, Maryland’s average state tuition at four-year institutions increased nine percent compared to 26 percent nationally.⁹

Improve Efficiency. Efficiency as considered here refers to producing more outcomes with less revenue—in other words, producing more degrees, research or other outcomes using only the current resources. While improvements to higher education efficiency often must come from institutional behavior and policy changes, legislatures may wish to take a leadership role by initiating discussions and ensuring the proper structures for reform are in place. Legislatures can create transfer and articulation policies to ensure that students are not required to duplicate courses when they transfer. Aligning state goals with institutional goals can also lead to improved efficiency. Shifting resources to improve

Policy Options

- **Create a Stabilization Fund**
- **Improve Efficiency**
- **Focus on Financial Aid**
- **Understand Privatization**

the competitiveness of an athletic program is a perfectly legitimate institutional goal, but does very little to help a state meet the goals established in a public agenda. If an institution is responsive to state goals, it may shift resources toward student services or instruction to help retain and graduate students in a timely manner. Many states have aligned state and institutional goals by implementing outcomes-based funding formulas or awarding incentive grants.

Focus on Financial Aid. Some economists argue that allocating state funding to institutions for operational costs is inefficient.¹⁰ Rather than focusing on support for institutions, some say, states would be wise to increase financial aid investments. The argument in favor of this approach is that wealthy students are likely to attend college even if the price is high. However, low-income students are more sensitive to price and will forego attending college if the price is too high. Focusing higher education support on need-based aid programs allows states to target and influence the behavior of students who would not otherwise attend college. Improving these students’ educational attainment will help states to meet attainment goals. However, there are trade-offs to this approach. First, this high-aid model leads to increased tuition prices, which can cause “sticker shock.” As a result the students targeted by need-based programs may decide to forego college altogether. Second, family incomes have been fairly stagnant in recent years, and this model requires families who are relatively better off to pay higher tuition expenses, possibly without a concomitant increase in household income.

Understand Privatization. Since tuition revenue has grown as a percentage of institutional revenue while state support has declined, several states have discussed privatizing public institutions. Privatization proposals vary, but most provide institutions with more autonomy and modify the structure for allocating state appropriations. Rather than receiving direct appropriations from the state, several proposals call for state support to follow students, similar to voucher programs.¹¹ Although no state has completely privatized its public institutions, Colorado has implemented a market-oriented approach to funding higher education institutions that includes elements of many privatization proposals.

Due to unique budget constraints, Colorado began allocating a portion of state funding directly to students in the form of a stipend known as the College Opportunity Fund. The idea was that this funding model would function like a voucher program, where the money follows students. Students receive a stipend per credit hour, and students can use the College Opportunity Fund for a maximum limit of 145 credit hours. Legislation in 2014 that created a new funding formula for higher education institutions requires at least 52.5 percent of institutional funding be allocated through the College Opportunity Fund. Proponents of this approach argue it creates market incentives for institutions to compete for students. As a result of this competition, institutions may be encouraged to provide better and more cost-efficient educational experiences to retain students. Initial research indicates mixed results for achieving these goals. Two-year colleges in Colorado became more cost-efficient—the costs per student declined—after the College Opportunity Fund was implemented, but four-year institutions became more inefficient—meaning the costs per student increased.¹² In addition, enrollment of low-income students declined at community colleges after implementation of the College Opportunity Fund.¹³

Link Appropriations with a Public Higher Education Agenda

With limited funds available to invest across all state priorities, a growing number of states are developing public agendas to identify the most important higher education goals and then strategically investing state dollars to meet the goals. Direct appropriations for institutions will likely continue to be the primary state higher education investment in the foreseeable future. Although the recent recession limited available state revenue for higher education, states still invest a significant amount in their state higher education institutions—more than \$76 billion for FY 2014.¹⁴ Maintaining this investment will be important not only to continue to offer affordable postsecondary opportunities, but also to meet state attainment goals.

States that invest strategically in higher education and link appropriations with financial aid policy and tuition policy will likely be in the best position to meet the challenges higher education faces in the coming years. These links can take many forms and will differ in each state based on unique demographic, economic and political constraints. For example, a state may create a tuition policy linking increases to median income and then create a stabilization fund like Maryland's to maintain appropriations to institutions and financial aid programs. Linking state appropriations with financial aid programs also can help states achieve the goals outlined in the state public agenda. For example, maintaining grant aid during a recession at the expense of general appropriations might prove to be a cost-effective policy and potentially have a more significant effect on degree completions.¹⁵ It also will be important to monitor the effectiveness—as well as any unintended consequences—of any policy change.

Notes

1. Sandy Baum, Jennifer Ma, and Kathleen Payea, *Education Pays 2013* (Washington, D.C.: The College Board, 2013).

2. P.A. Trostel, “The fiscal impacts of college attainment,” *Research in Higher Education* 51, no. 3 (2010): 220-247.

3. W.W. McMahon, *Higher Learning, Greater Good: The Private and Social Benefits of Higher Education* (Baltimore, Md.: Johns Hopkins University Press, 2009).

4. P.A. Trostel, “The fiscal impacts of college attainment.”

5. M.B. Paulsen, “The economics of the public sector: The nature and role of public policy in the finance of higher education,” *The finance of higher education: Theory, research, policy, and practice* (2001): 95-132.

6. T.R. Sexton, C.L. Comunale, and S.C. Gara, “Efficiency-based funding for public four-year colleges and universities,” *Education* 7, no. 3 (2012): 331-359.

7. D.White and S. Crane, *Crowded Out: The Outlook for State Higher Education Spending*. (Charlottesville, Va.: National Commission on Financing 21st Century Higher Education, Miller Center at the University of Virginia, 2015).

8. Ibid.

9. Sandra R. Baum and Jennifer Ma, *Trends in College Pricing, 2014* (Washington, D.C.: The College Board, 2014).

10. R.K. Toutkoushian and M.N. Shafiq, “A conceptual analysis of state support for higher education: Appropriations versus need-based financial aid,” *Research in Higher Education* 51, no. 1 (2010): 40-64.

11. R.B. Archibald and D.H. Feldman, *Why Does College Cost so Much?* (New York, N.Y.: Oxford University Press, 2010).

12. N.W. Hillman, D.A. Tandberg, and J.P. Gross, “Market-based higher education: Does Colorado’s voucher model improve higher education access and efficiency?” *Research in Higher Education* 55, no. 6 (2014): 601-625.

13. Ibid.

14. State Higher Education Executive Officers, *State Higher Education Finance, FY 2014* (Boulder, Colo.: Publisher, 2014).

15. M.A. Titus, “No college student left behind: The influence of financial aspects of a state’s higher education policy on college completion,” *The Review of Higher Education* 29, no. 3 (2006): 293-317.

NCSL gratefully acknowledges Lumina Foundation
for its financial support of this brief.

NCSL Contact

Dustin Weeden | Policy Specialist | (303) 856-1653 | dustin.weeden@ncsl.org



NATIONAL CONFERENCE of STATE LEGISLATURES

William T. Pound, Executive Director

7700 East First Place, Denver, Colorado 80230, 303-364-7700 | 444 North Capitol Street, N.W., Suite 515, Washington, D.C. 20001, 202-624-5400

www.ncsl.org

©2015 by the National Conference of State Legislatures. All rights reserved.

ISBN 978-1-58024-808-2