United States Government Accountability Office

Report to the Chairman, Committee on Health, Education, Labor, and Pensions, United States Senate

December 2014

HIGHER EDUCATION

State Funding Trends and Policies on Affordability

GAO-15-151

GAO Highlights

Highlights of GAO-15-151, a report to the Chairman, Committee on Health, Education, Labor, and Pensions, United States Senate

Why GAO Did This Study

There is widespread concern that the rising costs of higher education are making college unaffordable for many students and their families. Federal and state support is central to promoting college affordability; however, persistent state budget constraints have limited funding for public colleges. GAO was asked to study state policies affecting affordability and identify approaches to encourage states to make college more affordable.

This report examines, among other things, how state financial support and tuition have changed at public colleges over the past decade. It also examines how the federal government works with states to improve college affordability and what additional approaches are available for doing so. In conducting this work, GAO analyzed trends in state funding for public colleges, tuition, and state student aid using data from the U.S. Department of Education for all public sector colleges from fiscal years 2003 through 2012, the most recent data available at the time of this study. GAO also identified academic studies on state higher education policies and affordability published since 2011 and interviewed 25 academic experts and organizations in the fields of higher education or state policy. Finally, GAO reviewed Education programs and proposals and obtained perspectives from experts and organizations to identify approaches the federal government could use to incentivize state action.

What GAO Recommends

GAO does not make recommendations in this report.

View GAO-15-151. For more information, contact Melissa Emrey-Arras at (617) 788-0534 or emreyarrasm@gao.gov.

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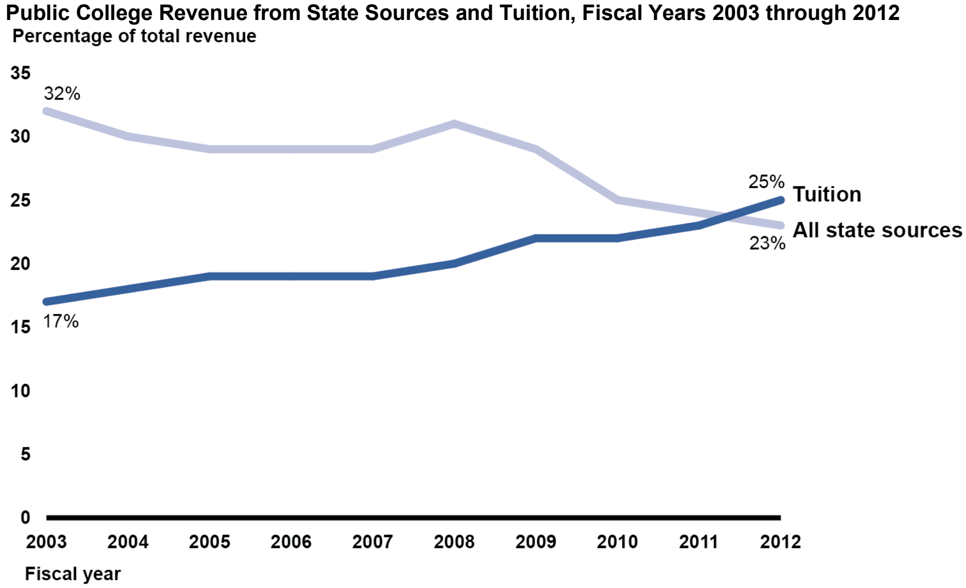
State Funding Trends and Policies on Affordability

What GAO Found

From fiscal years 2003 through 2012, state funding for all public colleges decreased, while tuition rose. Specifically, state funding decreased by 12 percent overall while median tuition rose 55 percent across all public colleges. The decline in state funding for public colleges may have been due in part to the impact of the recent recession on state budgets. Colleges began receiving less of their total funding from states and increasingly relied on tuition revenue during this period. Tuition revenue for public colleges increased from 17 percent to 25 percent, surpassing state funding by fiscal year 2012, as shown below. Correspondingly, average net tuition, which is the estimated tuition after grant aid is deducted, also increased by 19 percent during this period. These increases have contributed to the decline in college affordability as students and their families are bearing the cost of college as a larger portion of their total family budgets.

Public College Revenue from State Sources and Tuition, Fiscal Years 2003 through 2012



Source: GAO analysis of Integrated Postsecondary Education Data System (IPEDS) Finance component data. | GAO-15-151

GAO found that federal support for higher education is primarily targeted at funding student financial aid— over $136 billion in loans, grants, and work-study in fiscal year 2013—rather than at programs involving states. GAO identified several potential approaches that the federal government could use to expand incentives to states to improve affordability, such as creating new grants, providing more consumer information on affordability, or changing federal student aid programs. Each of these approaches may have advantages and challenges, including cost implications for the federal government and consequences for students.

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Abbreviations

Education	U.S. Department of Education
ERIC	Education Resources Information Center
FTE	Full-time equivalent
GEAR UP	Gaining Early Awareness and Readiness for Undergraduate Programs
IPEDS	Education's Integrated Postsecondary Education Data System
LEAP	Leveraging Educational Assistance Partnership
NASSGAP	National Association of State Student Grant and Aid Programs
NPSAS	National Postsecondary Student Aid Study

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

December 16, 2014

The Honorable Tom Harkin
Chairman
Committee on Health, Education, Labor, and Pensions
United States Senate

Dear Mr. Chairman:

The rising costs of higher education have led to widespread concern that college is becoming unaffordable for many students and their families. To help cover the cost of attending college, in fiscal year 2013, the U.S. Department of Education (Education) provided over $136 billion in assistance to students through loans, grants, and work study programs. In addition to these forms of federal financial aid, states play a key role in promoting affordability in higher education in that they provide a significant amount of financial support to public colleges and universities.[1] However, persistent state budget constraints have limited funding for public colleges.

We were asked to examine how state policies have affected college affordability and explore how the federal government can encourage state support to help make public colleges more affordable for students and their families. Specifically, we examined: (1) how state financial support and tuition have changed at public colleges over the past decade, (2) how states' higher education policies have affected affordability, and (3) how the federal government works with states to improve college affordability, and what additional approaches are available for doing so.

In conducting this work, we analyzed trends in state funding for colleges, state student aid, and tuition using public sector data from Education's Integrated Postsecondary Education Data System (IPEDS), National Postsecondary Student Aid Study (NPSAS), and the National Association of State Student Grant and Aid Programs (NASSGAP) databases for the fiscal year 2003 to 2012 time period (the most recent data available at the time of our analysis). We assessed the reliability of these data by (1)

[1] Throughout the report, we will refer to all publicly-funded institutions of higher education as public colleges. In addition to public colleges, there are private colleges, which can be nonprofit or for-profit.

performing electronic testing of required data elements, (2) reviewing existing information about the data and the system that produced them, and (3) interviewing agency officials or organizational representatives for more information when needed. We determined that the data were sufficiently reliable for the purposes of this report. We also identified academic studies published in approximately the last 3 years (January 2011 through April 2014, when we conducted the literature search) that are based on original research and that discuss the relationship between state-level higher education policies and college affordability. We assessed the quality of these studies by evaluating their research methods and determined that 23 studies were sufficiently reliable for use in our report. In addition, we met with six academic researchers who had recently published studies relevant to state higher education policy or college affordability and were recognized as experts in their field. We also met with a total of 19 organizations involved in higher education issues, some of which focus on sponsoring and conducting policy research, and others that represent public colleges—including community colleges, state colleges and universities, and public land grant universities—and all 50 states, as well as organizations that represent students.[2] See appendix I for more information on our selection criteria and other aspects of our methodology.

We conducted this performance audit from February to December 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

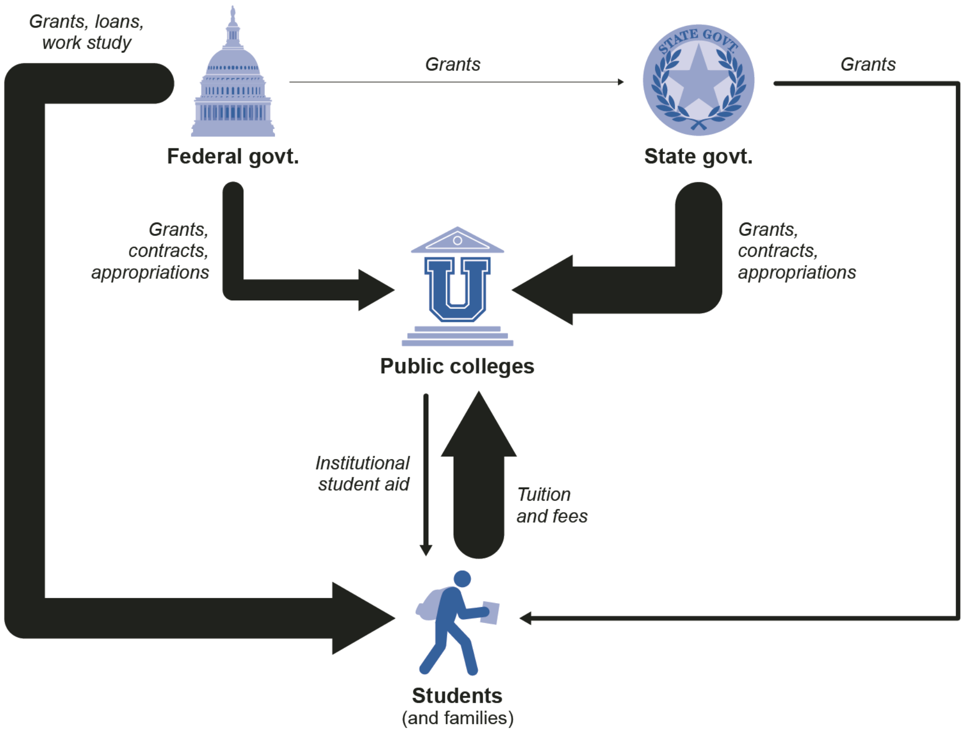
Higher education provides important private and public benefits, and multiple parties are involved in financing higher education costs. In terms of private benefit, students may seek a postsecondary degree as a key to a better economic future. In addition to providing such private benefits, higher education has also been crucial to the development of the nation's cultural, social, and economic capital. In particular, higher education helps

[2] Throughout this report, we refer to the collective group of 25 academic experts, research organizations, and advocacy organizations as "experts and organizations," unless otherwise specified.

maintain the nation's competitiveness in a global economy by providing students the means to learn new skills and enhance their existing abilities. The federal government, states, students, and colleges, in turn, all play important roles in financing higher education costs, thereby influencing affordability (see fig. 1). Affordability is an important factor affecting whether students access and complete degrees, and is commonly thought of as the cost of higher education relative to student or family income.[3]

[3] Additionally, some studies may factor returns on investment in college, such as increased future earnings potential, into measures of affordability. For example, a recent National Bureau of Economic Research study suggests that the benefits of higher education, as indicated through earnings premiums for college graduates vs. non-graduates may have increased over the past few decades. See National Bureau of Economic Research, *Making College Worth It: A Review of Research on the Returns to Higher Education* (Cambridge, MA: May 2013). We did not analyze earnings data as part of this review.

Figure 1: Public Higher Education Funding Relationships, 2012



Source: GAO analysis of Department of Education data and budget documents. | GAO-15-151

Note: Arrow thickness is scaled to fiscal year 2012 (or school year 2011-2012, where applicable) funding levels. State funding for colleges includes appropriations and grants and contracts for research. Federal and state aid arrows represent aid to undergraduates at public colleges. Federal grants to states include only higher education programs related to college affordability. Land-grant appropriations and federally funded research projects are included as part of the funding from the federal government to public colleges. Benefits from tax credits and deductions for higher education are not included.

Federal Role

The Department of Education was created in part to strengthen the federal government's commitment to assuring access to equal educational opportunity. To that end, the federal government offers several forms of financial aid to students and families through multiple programs authorized under Title IV of the Higher Education Act of 1965, as amended. These programs include the William D. Ford Federal Direct Loan program, the Federal Pell Grant program (Pell Grants), Federal Perkins Loans, and Federal Work-Study, and they are available at all eligible institutions of higher education, including both public and private colleges.[4] In fiscal year 2013, Education provided over $136 billion in financial aid to students, including loans and grants.[5] Some aid is targeted toward low-income students based on their financial need. For example, in fiscal year 2013, Education provided over $32 billion in Pell Grants to eligible low-income students. In addition to funding for student aid, Education provides higher education funding for states and colleges. Funding for states includes two grant programs to support increased access for low-income students: 1) the Gaining Early Awareness and Readiness for Undergraduates Programs (GEAR UP) and 2) the College Access Challenge Grant Program. The federal government also provides funding to colleges for institutional development and grants and contracts for research projects.

State Role

The states' role in higher education begins with establishing public colleges. In addition, states have been a significant source of revenue for public colleges through state appropriations for operating expenses. States may also fund public colleges through grants or contracts for activities such as research projects. In addition to state funding for colleges, most states have grant programs that provide financial aid directly to students.[6] State grant aid can be allocated based on financial need; merit, such as grades or test scores; or a combination of both.

Public Colleges

Public colleges charge tuition and fees, and may also provide aid to students depending on the college's financial aid programs. These colleges are generally administered by publicly elected or appointed officials and are supported primarily by funding from federal, state, and local sources—in addition to revenue from tuition and fees. They can also differ in type, length of degree programs, and mission. For example, while

[4] See GAO, *Higher Education: Improved Tax Information Could Help Families Pay for College*, GAO-12-560 (Washington, D.C.: May 18, 2012) for more information on financial assistance programs for students.

[5] Generally, while financial assistance provided through loans must be repaid, grants do not need to be repaid.

[6] According to information from the National Association of State Student Grant and Aid Programs, some states may also provide financial assistance to students through loan programs.

some public colleges may offer 2-year associate's degree programs, others offer 4-year bachelor's degree programs. As of the 2011-2012 school year, there were more than 2,000 public colleges that enrolled over 11 million students, which represented 67 percent of total college enrollment across all college types, including private nonprofit and for-profit colleges in the United States.[7] Moreover, enrollment at public colleges increased by almost 2 million students from school years 2002-2003 through 2011-2012 (see table 1).

Table 1: Number of Public, Private Nonprofit, and For-Profit Colleges and Enrollment by Type, School Years 2002-2003 and 2011-2012

	2002-2003		2011-2012	
	Number of Colleges	**Enrollment[b]**	**Number of Colleges**	**Enrollment[b]**
Public colleges				
All public colleges[a]	2,269	9,258,608	2,056	11,123,626
Public 4-year colleges	664	5,474,181	703	6,797,623
Public 2-year colleges	1,218	3,710,468	1,091	4,276,113
Private nonprofit colleges				
All private nonprofit colleges	2,305	2,893,458	1,950	3,482,156
Private nonprofit 4-year colleges	1,789	2,815,835	1,658	3,420,534
Private nonprofit 2-year colleges	327	57,928	197	47,303
For-profit colleges				
All for-profit colleges	2,949	817,156	3,553	2,047,844
For-profit 4-year	375	341,490	750	1,258,784
For-profit 2-year	829	239,996	1,077	489,042

Source: GAO analysis of U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS). | GAO-15-151

[a] The "All colleges" categories include data for less than 2-year colleges

[b] Enrollment figures represent full-time equivalent enrollment for undergraduate and graduate students

Students and Families

Aside from federal, state, and local funding, colleges also collect revenue through tuition and fees charged to students. The published tuition and fees can be referred to as the "sticker price" and do not necessarily reflect what students and families actually pay once financial aid has been taken into account. In contrast, net tuition and fees reflect the out-of-pocket

[7] Throughout the report, enrollment figures represent full-time equivalent enrollment for undergraduate and graduate students.

expenses for students and families in that they represent tuition and fees net of all grant aid received by the student.[8] Students may receive grant aid from the state, the federal government, or the college they are attending.

From Fiscal Years 2003 through 2012, State Funding for Public Colleges Decreased, while Tuition and Out-of-Pocket Costs for Students Increased

State Funding for Higher Education Decreased by 12 Percent Overall and by 24 Percent per Student

In the decade spanning fiscal years 2003 to 2012, state funding provided to public colleges decreased, both overall and when measured per student.[9] Specifically, state funding for public colleges decreased by 12 percent overall, from $80 billion in fiscal year 2003 to $71 billion in fiscal year 2012.[10] Most of the funding that public colleges receive from states is in the form of appropriations (funds provided by state appropriations acts for current operating expenses), while the rest of the funding from state sources is in the form of grants and contracts that are identified for a specific project or program.

The reductions in state funding to public colleges are even more significant when enrollment levels are taken into account. The number of

[8] We use the term out-of-pocket costs to describe tuition and fees after grant aid is deducted. We do not deduct loans from these costs, as they generally have to be repaid. There may be other expenses associated with attending college, in addition to tuition and fees, such as living expenses, which we did not analyze in this report.

[9] Fiscal year in the IPEDS financial data refers to the institutional fiscal year, and therefore may vary across institutions. Each survey year the participating colleges report data from the last fiscal year that ended on or before October 31.

[10] All financial data presented in this report are adjusted for inflation and presented in constant 2012 dollars unless otherwise noted.

students enrolled in public colleges rose by 20 percent from school year 2002-2003 to school year 2011-2012. Correspondingly, median state funding per student declined 24 percent—from $6,211 in fiscal year 2003 to $4,695 in fiscal year 2012.[11] This trend has been driven mostly by 4-year colleges, which experienced faster enrollment increases and steeper declines in median state funding per student than 2-year colleges.

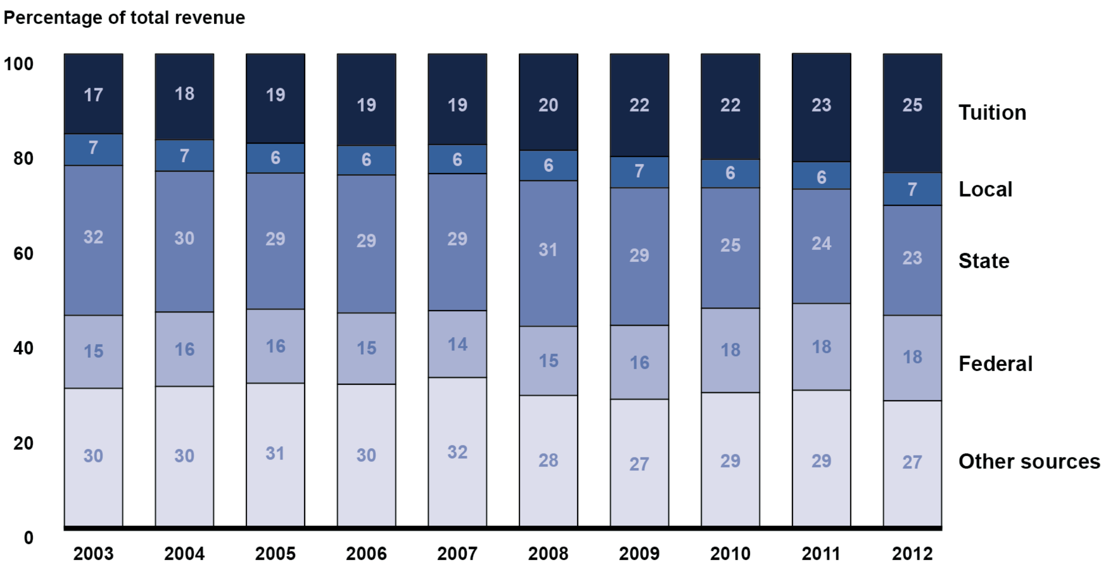
State funding declines may be attributable, in part, to prevailing economic conditions and competing state budget priorities. Likewise, 19 of 25 experts and organizations we interviewed cited the 2007 to 2009 recession as a factor that directed trends in state funding. Several of these experts and organizations described public higher education as the "balance wheel of state economies," where states reduce higher education funding during constrained economic times, in part because public colleges can use tuition as an additional funding stream unlike other program areas that do not have alternative sources of revenue. Our analysis of funding trends corroborates this characterization by showing that state funding for public colleges gradually increased between fiscal years 2005 and 2008, but began steadily declining in fiscal year 2008 during the most recent recession until fiscal year 2012, while tuition revenue began climbing at a faster pace to fill the gap. These reductions may have been mitigated to some extent by the Recovery Act.[12] Of the 19 experts and organizations we spoke with about the Recovery Act's effect on state support for higher education, 16 cited it as having influenced higher education funding levels of which 7 believed the effect was short-term. In addition to economic conditions, 19 of 25 experts and organizations we interviewed cited competing state budget priorities, such as healthcare and K-12 education, as a factor in declining state funding for higher education. State funding trends have contributed to shifting

[11] To calculate state funding per student, we divided total state funding by total full time equivalent (FTE) enrollment for all public colleges. The number of FTE students is calculated based on fall student headcounts as reported by the college to IPEDS. The full-time equivalent (headcount) of the college's part-time enrollment is estimated by taking a portion of the part-time headcount and adding it to the full-time enrollment headcounts to obtain an FTE for all students enrolled in the fall.

[12] The Recovery Act created the State Fiscal Stabilization Fund, which provided funds for states to use to restore state support for elementary, secondary, and postsecondary education. States were required to agree to meet maintenance of effort requirements as a condition for receiving these funds. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, div. A, tit. XIV, § 14005(d)(1), 123 Stat. 115 , 282-283.

public colleges' share of revenue away from state sources and toward tuition (see fig. 2).

Figure 2: Revenue for Public Colleges, by Source, Fiscal Years 2003 through 2012

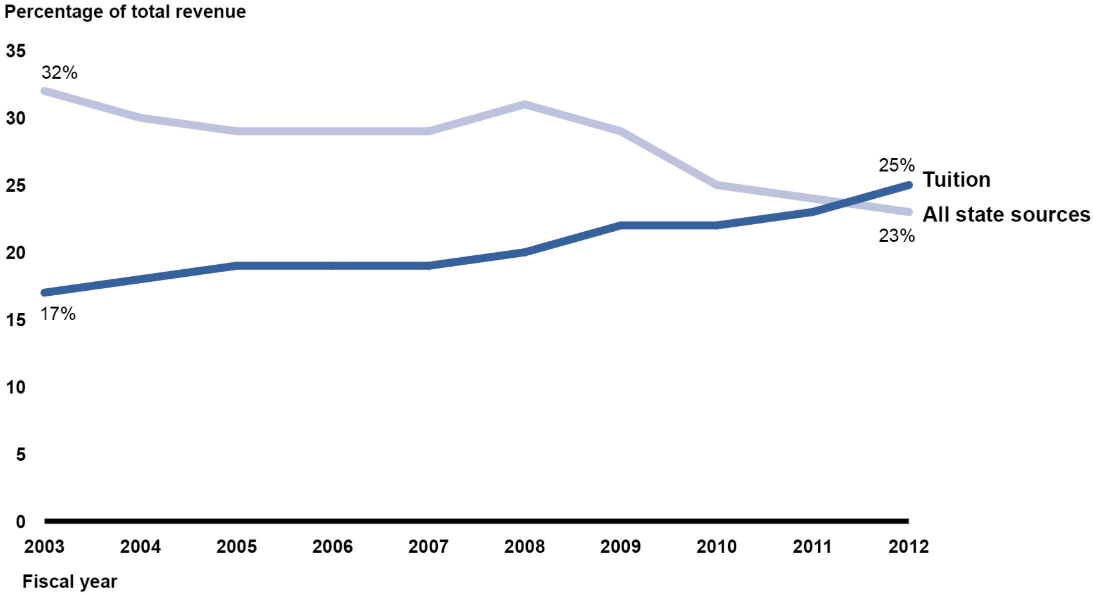


Source: GAO analysis of Integrated Postsecondary Education Data System (IPEDS) Finance component data. | GAO-15-151

Notes: Percentages may not sum to 100 because of rounding. "Tuition" includes revenues from all tuition and fees assessed against students, net of refunds, discounts and allowances, for educational purposes. "Local" sources refer to funds provided and grants made by local government. "State" sources refer to funds received by colleges through state appropriations laws or through grants and contracts from state government agencies. "Federal" sources include appropriations for meeting current operating expenses, grants, contracts, and federal grant aid to students such as Pell Grants. "Other sources" include private gifts, grants and contracts; sales and services of educational activities; auxiliary enterprises; hospital revenues.

From fiscal years 2003 to 2012, revenue from state sources shrunk from 32 percent of total revenue to 23 percent. Meanwhile, growth in tuition revenue outpaced that of all other types of revenue over this period, increasing from 17 percent to 25 percent and making tuition the top single source of revenue for public colleges. In contrast, shares of federal, local, and other revenue sources remained relatively stable. Total revenue figures from each source are displayed in appendix II. By fiscal year 2012, tuition had overtaken state funding as a source of revenue for public colleges (see fig. 3).

Figure 3: Public College Revenue from Tuition and State Sources, Fiscal Years 2003 through 2012



Source: GAO analysis of Integrated Postsecondary Education Data System (IPEDS) Finance component data. | GAO-15-151

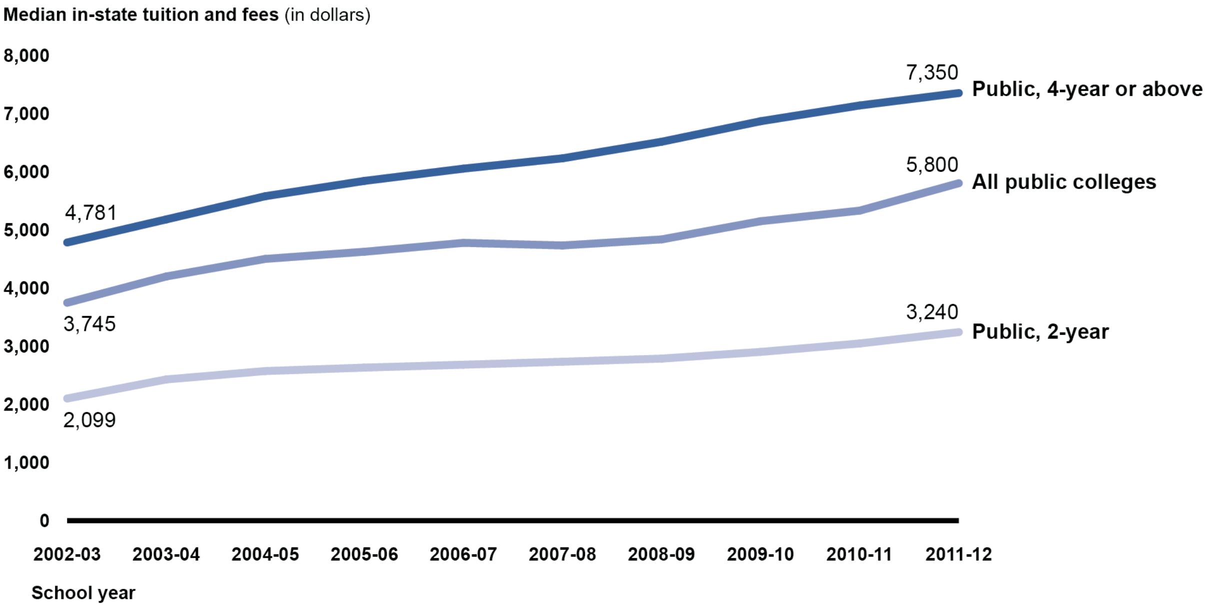
Notes: "Tuition" includes revenues from all tuition and fees assessed against students, net of refunds, discounts and allowances, for educational purposes. "State" sources refer to funds received by colleges through state appropriations laws or through grants and contracts from state government agencies.

Median Published Tuition Prices Have Increased by 55 Percent and Average Out-of-Pocket Costs Have Increased 19 Percent since Fiscal Year 2003

Published tuition prices and out-of-pocket costs increased for students in all income quartiles both at 4-year and 2-year public colleges, making college less affordable for students and families. Median published tuition prices for in-state students increased by 55 percent from about $3,745 in school year 2002-2003 to $5,800 in school year 2011-2012 (see fig. 4).[13] Though tuition is typically higher at 4-year colleges than at 2-year colleges, the increase over the period was similar between the two types of colleges: both increased by about 54 percent. Median published tuition also increased for out-of-state students during this period, though less dramatically than for in-state students, rising by 31 percent from the 2002-2003 school year to the 2011-2012 school year.

[13] All tuition figures cited in this report also include fees. Fees include all fixed sum charges that are required of a large proportion of all students.

Figure 4: Published In-State Tuition and Fees for All Public Colleges in 2012 Constant Dollars, School Years 2002-2003 through 2011-2012



Source: GAO analysis of Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics component data. | GAO-15-151

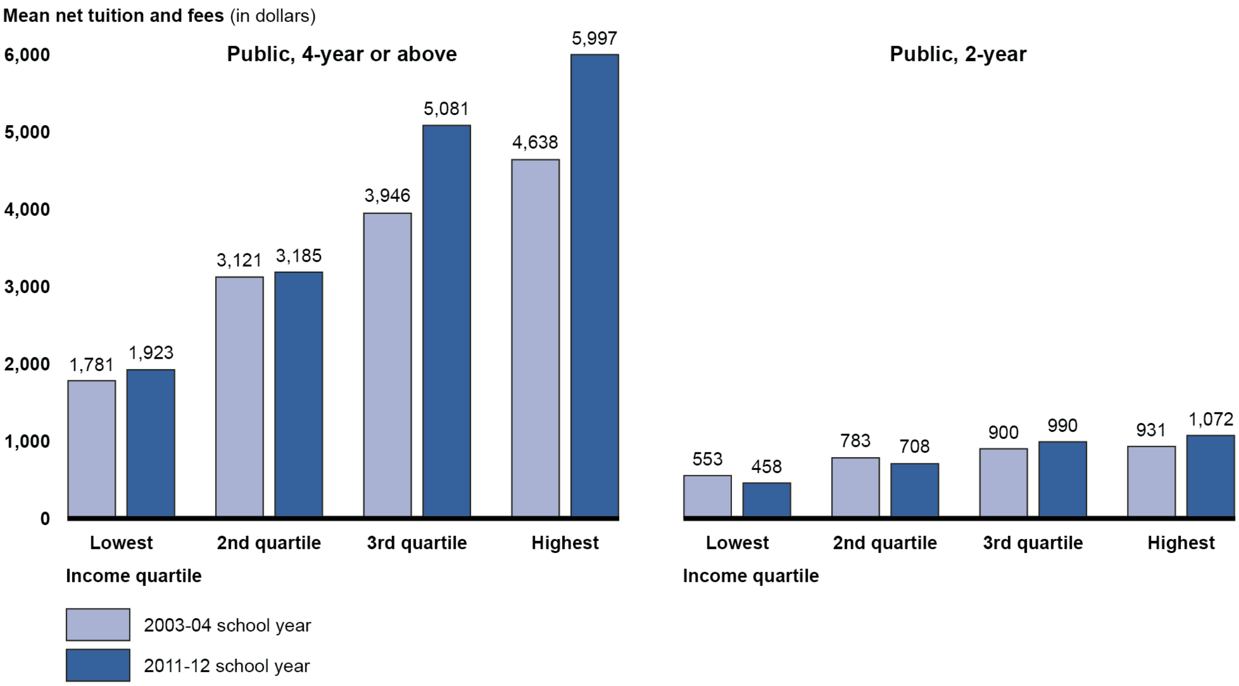
Note: All figures are adjusted for inflation and are presented in constant 2012 dollars.

Published tuition prices do not necessarily indicate actual costs incurred by students and families, in part because grant aid can help reduce out-of-pocket costs. Thus, when all grant aid is taken into account, out-of-pocket costs for students, or estimated average net tuition, increased by 19 percent across all public colleges from $1,874 in the 2003-2004 school year to $2,226 in the 2011-2012 school year.[14] The changes in estimated average net tuition vary by student's income quartile and college type

[14] Estimates of out-of-pocket costs are presented as averages and are therefore not comparable to published tuition estimates, which are presented as medians. The estimated out-of-pocket costs are based on the NPSAS sample and subject to sampling error. Unless otherwise noted, all percentage estimates in this report have 95 percent confidence intervals of within +/- 8 percentage points of the percent estimate, and other numerical estimates have confidence intervals within +/- 8 percent of the estimate itself. See appendix I for additional information on sampling error.

(see fig. 5).[15] In particular, the increases in average net tuition are largest for students in the higher income quartiles attending 4-year public colleges.

Figure 5: Estimated Average Net Tuition and Fees by College Type and Student's Income Group in 2012 Constant Dollars, School Years 2003-2004 and 2011-2012



Source: GAO analysis of National Postsecondary Student Aid Study (NPSAS). | GAO-15-151

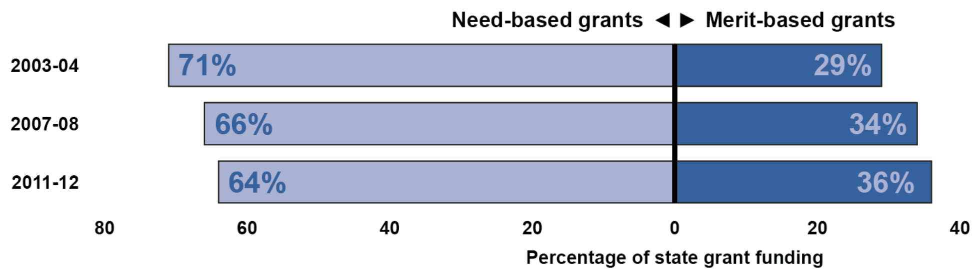
Notes: All figures are adjusted for inflation and are presented in constant 2012 dollars. Net tuition is tuition and fees after all grant aid is deducted, including all merit-based, need-based, combination, and other types of grant aid provided to students from local, state, federal, private, non-profit, institutional, and other sources.

While most state grant aid to students is need-based, our analysis shows a gradual shift toward merit-based aid from school years 2003-2004 to

[15] Net tuition is tuition and fees after all grant aid is deducted, including all merit-based, need-based, combination, and other types of grant aid provided to students from local, state, federal, private, non-profit, institutional, and other sources. Income quartiles in this report follow the standard NPSAS methodology of calculating quartiles separately for dependent and independent students. Income for dependent students is typically parents' income, while for independent students it is their own income in addition to that of a spouse, if applicable.

2011-2012 (see fig. 6). As a result, states are targeting a smaller portion of their estimated available grant aid to students with the greatest financial need. Some of the experts and organizations we interviewed noted that the growth in merit-based aid may be related to its political popularity, especially among state legislators. Appendix II shows state-by-state shifts toward awarding either more need-based aid or less, between school years 2003-2004 and 2011-2012.

Figure 6: Estimated Ratio of State Need-Based and Merit-Based Grant Aid at Public Colleges, School Years 2003-2004 through 2011-2012



Source: GAO analysis of National Postsecondary Student Aid Study (NPSAS). | GAO-15-151

Notes: Need-based grant data in this figure also include combination grants that have both a need-based and merit-based component. Merit-based grant aid includes any aid that does not take need into consideration.

Students and their families are now bearing the cost of college as a larger portion of their total family budgets. Across all students, the ratio of net tuition to annual income has increased about one and a half times from the 2003-2004 school year to the 2011-2012 school year, and was greater for students in the lowest income quartile than those in the highest quartile. Specifically, the ratio of net tuition to annual income was about four times higher for students in the lowest income quartile when compared to those in the highest quartile. Combined, these factors make attending college less affordable for students.

State Policies Related to College Affordability Have Mixed Results

States, along with public colleges, have implemented various policies related to college affordability, but their effects are mixed or unclear according to the 23 studies we reviewed and the 25 experts and organizations we interviewed. These policies include financial strategies like investing in state grant aid and techniques aimed at reducing the time it takes a student to complete their degree (see table 2).

Table 2: Examples of State Policies Related to Affordability at Public Colleges

Financial Policies	Time-To-Degree Policies
Budget process, priorities, and rules	Credit transfer programs/Articulation agreements[b]
State grant aid (merit, need-based, hybrid)	Limits on credit accumulation[c]
Performance-based funding	Defining "full time" as 15 credits
Tuition limits or freezes	Guidance for completing degree requirements
Tuition differentiation and set-asides[a]	College preparation efforts/limiting need for remediation[d]
Fee waivers	Tuition refunds for timely completion
College cost containment and efficiency	

Source: GAO analysis of information from academic experts, higher education organizations, and literature review results. | GAO-15-151

[a]Tuition differentiation refers to the practice of charging different tuition to different types of students, commonly seen when public colleges offer different rates to in-state students and out-of-state students. Tuition set-asides are when colleges reserve a portion of their tuition revenue to fund financial aid programs, which may distribute aid on the basis of financial need.

[b]Credit transfer programs and articulation agreements specify whether course credits transferred between colleges are acceptable for meeting degree or program requirements.

[c]Credit accumulation refers to earning college credits. Not all credits count toward degree or program requirements.

[d]Remediation is coursework for students lacking skills necessary to perform college level work at the degree of rigor required by the college or program. We previously reported that students in remedial education have relatively low chances of completing their degrees or certificates within 8 years. See GAO, Community Colleges: New Federal Research Center May Enhance Current Understanding of Developmental Education, GAO-13-656, (Washington, D.C.: September 2013).

Financial Policies

As we noted previously, economic trends and competing budget priorities can affect state funding for higher education, which in turn has implications for affordability at public colleges. In addition, an individual state's budget policies may influence state spending patterns. One study we reviewed tested whether certain state fiscal policies, such as balanced budget requirements and debt limits, would reduce state spending on higher education. That study suggests these policies did not have a statistically significant relationship with state expenditures on public higher education. However, the study did show a negative relationship between another type of fiscal policy—tax and expenditure limits—and the level of state spending on public higher education.[16] Specifically, in

[16] See Serna, Gabriel R. and Gretchen Harris. "Higher Education Expenditures and State Balanced Budget Requirements: Is There a Relationship?" *Journal of Education Finance,* vol. 39, no. 3 (2014): 175-202.

states with tax and expenditure limits in place, such as those that limit the amount of revenue a state can take in from taxpayers, spending on higher education was about 3 percent lower than states without these types of policies.

There is wide variation in state policies related to setting tuition, as each state has its own higher education governance system that may delegate the primary authority to the governor, state legislature, governing boards, individual public colleges, or a combination of these stakeholders. Several experts and organizations who commented on this topic said that when tuition is set centrally by the state and colleges have less authority, there are positive effects on affordability for students. Given recent economic conditions, some states have negotiated agreements with their public colleges to curb tuition hikes, at times in exchange for more state funding. Most experts and organizations we spoke with—11 of 15 who commented on this issue—said these limits on tuition growth do not usually have long-term effects on improving affordability for students, or have negative effects on affordability. However, in the case of Maryland, a few experts and organizations said the state has successfully suppressed tuition increases through cost efficiencies achieved by its public colleges, which may result in more sustainable benefits for students.

Regardless of how tuition is set, it is clear that specific tuition levels directly affect students. For example, two studies found that policies allowing rising tuition negatively affected affordability for students at public colleges in California, even when considering contributions from financial aid.[17] In addition, some studies found that tuition levels can also affect student behavior and decision-making. For example, results from a survey of students at about 15 large public colleges found that an estimated 73 percent of students reported buying fewer or cheaper textbooks, and 46 percent reported skipping meals in response to increased college costs.[18] Moreover, tuition levels may influence students'

[17] See Jones, Jessika. "College Costs and Family Income: The Affordability Issue at UC and CSU." (Sacramento, Calif.: California Postsecondary Education Commission, Report 11-02, 2011) and Poliakoff, Michael, and Armand Alacbay. "Best Laid Plans: The Unfulfilled Promise of Public Higher Education in California." (Washington, D.C.: American Council of Trustees and Alumni, 2012).

[18] In addition to buying fewer or cheaper textbooks, this group of students reported reading books on reserve. See Chatman, Steve. "Wealth, Cost, and the Undergraduate Student Experience at Large Public Research Universities." (Berkeley, Calif: Center for Studies in Higher Education, University of California at Berkeley, 2011).

decisions about whether to attend college at all. For example, two nationwide studies of public colleges found that increased tuition levels were associated with decreased enrollment.[19]

Like tuition, state grant aid directly affects students in that it can reduce their out-of-pocket expenses for college.[20] In addition, evidence from five recent studies we reviewed suggests that state grant aid, both merit- and need-based, has positive effects on enrollment.[21] For example, a study of a state scholarship program in Washington suggests that receiving the aid increased a student's probability of enrolling in college by nearly 14 to 19 percentage points, depending on the cohort and controlling for other factors.[22] This positive effect on enrollment may indicate that students enroll because they perceive college to be more affordable. Additionally, a study of selected scholarships in four states shows that the aid helped students stay in college. Specifically, an additional $1,000 in aid received was associated with a 2 to 7 percent increase in persistence—the

[19] See Hemelt, Steven W. and Dave E. Marcotte. "The Impact of Tuition Increases on Enrollment at Public Colleges and Universities." *Educational Evaluation and Policy Analysis*, vol. 33, no. 4 (2011): 435–457: and Titus, Marvin A. and Brian Pusser. "States' Potential Enrollment of Adult Students: A Stochastic Frontier Analysis." *Research in Higher Education*, vol. 52, no. 6 (2011):555–571.

[20] While grant aid in general directly affects students' out of pocket costs, one academic expert and one higher education organization we spoke with said that the availability of federal financial aid may unintentionally provide colleges with the opportunity to raise tuition knowing that eligible students would be able to cover it through financial aid. We did not examine this assertion in the course of our work as we did not identify any studies on this topic that met the criteria for our literature review. For a discussion of how federal student loan limit increases relate to tuition levels, see GAO, *Federal Student Loans: Impact of Loan Limit Increases on College Prices Is Difficult to Discern*, GAO-14-7, (Washington, D.C.: February 18, 2014).

[21] See Hemelt 2011; Rae, Brian. "2013 Alaska Performance Scholarship Outcomes Report." (Juneau, Alaska: Alaska Commission on Postsecondary Education, 2013); Scott-Clayton, Judith. "On Money and Motivation: A Quasi-Experimental Analysis of Financial Incentives for College Achievement." *Journal of Human Resources,* vol. 46, no. 3 (2011); Welbeck, Rashida et al. "Piecing Together the College Affordability Puzzle: Student Characteristics and Patterns of (Un)Affordability." (New York, New York: MDRC, 2014); Zhang, Liang, Shouping Hu and Victor Sensenig. "The Effect of Florida's Bright Futures Program on College Enrollment and Degree Production: An Aggregated-Level Analysis." *Research in Higher Education,* vol. 54, (2013): 746–764.

[22] See O'Brien, Colleen. "Expanding Access and Opportunity: The Washington State Achievers Scholarship." (Washington, D.C.: Pell Institute for the Study of Opportunity in Higher Education, 2011).

likelihood that students will continue their education, on average.[23] Regarding state grant aid programs, there is general consensus among experts and organizations we interviewed that investing in need-based grant aid is a more efficient use of resources than merit aid in that the aid is targeted to those students who need it most. Specifically, 20 of 25 experts and organizations we spoke with said that prioritizing need-based aid over merit-based aid is important for improving affordability.

Many states have established or are considering policies that financially reward public colleges for progress toward performance goals, which most experts and organizations we spoke with—19 of 25—said could improve affordability for students. The link between these types of policies (called performance-based funding) and college affordability depends on the specific goals being measured. For example, goals such as targeting college-provided aid to low-income students or moderating tuition increases are more relevant to affordability than to other performance outcomes. While the studies we reviewed on existing performance-based funding policies do not examine their effect on affordability, they show mixed results on their effectiveness in incentivizing desired outcomes in other areas. For example, a study on performance-based funding in Washington, a state policy that was designed to incentivize degree completion, suggests that the policy did not affect the number of Associates' degrees that public colleges produced. However, the number of certificates completed rose after the policy was introduced. The authors noted the possibility that colleges were encouraged to award certificates that could be completed more quickly.[24] In another case, a study of performance-based funding in Tennessee suggests that the financial incentive tied to the policy, even when doubled, was not associated with increases in retention rates. [25] That is, the policy was not successful in achieving the desired outcome, possibly because there was not enough of a financial incentive to influence institutional outcomes.[26] Recently,

[23] See Welbeck 2014.

[24] See Hillman, Nicholas W., David A. Tandberg, and Alisa Hicklin-Fryar. "Evaluating the impacts of 'new' performance funding in higher education." Forthcoming.

[25]Tennessee refers to this policy as outcomes-based funding, but for the purposes of this report we use the term performance-based funding to refer to all policies that tie state funding to how well a public college performs on state-determined metrics.

[26] See Sanford, Thomas and James M. Hunter. "Impact of Performance-funding on Retention and Graduation Rates." *Education Policy Analysis Archives*, vol. 19, no. 33 (2011).

however, Tennessee started channeling all of its higher education funding through a performance-based system,[27] and this level of financial commitment may be effective in shaping colleges' behavior. Time may also be a factor in whether performance-based funding policies are successful incentives. For example, a recent, nationwide study of performance-based policies shows that there is little evidence tying performance funding to positive outcomes, in part because so few states maintain their policies long enough to change colleges' behavior.[28] Nevertheless, the study did suggest a positive outcome of performance-based funding— increased degree completion in several states—but only after states kept the policy in place for an average of 7 years.[29] As of early 2014, 30 states were in the process of implementing performance-based funding policies or had already done so, according to a national organization representing state legislatures. For many of these policies, it is too soon to know whether they will be effective at improving affordability or achieving other desired outcomes.

Time-to-Degree Policies

Experts and organizations also pointed to state policies that allow students to make more efficient use of their time in college, which may help them save on tuition costs. While much of the research we reviewed did not specifically address state policies on timely degree completion, as many of them are relatively new, there was general agreement among those we interviewed that reducing the time it takes for a student to complete their degree can help make college more affordable. Various states have implemented policies or launched voluntary initiatives encouraging students to take the appropriate number of credits for their degree program—neither too few nor too many. For example, Hawaii's "15 to Finish" media campaign is designed to raise awareness that students should take 15 credit hours per semester to graduate on time.

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[27] In addition, Tennessee recently established a program offering in-state high school graduates two free years of education at the state's community and technical colleges. The results of this wide-reaching program remain to be seen.

[28] See Tandberg, David A. and Nicholas W. Hillman. "State Higher Education Performance Funding: Data, Outcomes, and Policy Implications." *Journal of Education Finance,* vol. 39, no. 3 (2014): 222-243 and Dougherty, Kevin J., Rebecca S. Natow, and Blanca E. Vega. "Popular but Unstable: Explaining Why State Performance Funding Systems in the US Often Do Not Persist." *Teachers College Record,* vol. 114, no. 3 (2012): 1-41.

[29] See Tandberg 2014. At the time of the study, less than a third of the states that had implemented performance funding systems maintained their program for 7 years or more.

Several states have policies to limit credit accumulation so that students do not take—and pay for—more courses than necessary to complete their degree.

According to the experts and organizations we interviewed, states and public colleges are also working to ensure students take and get credit for courses that count toward their degrees. To that end, states play a role in enabling credit transfer programs and articulation agreements[30] between public colleges to ensure that students do not have to re-take courses they have already passed and paid for at another college. We have previously noted that students taking additional credits as a result of being unable to transfer credits would likely have to pay additional tuition, though the extent to which these costs are borne by the student, for example, would vary depending on the student's eligibility for financial aid.[31]

There are also state policies that establish dual enrollment programs that allow high school students to begin earning college credits early, as well as college preparation programs—like Indiana's 21st Century Scholars —that could help students avoid taking remedial college courses that may not count toward a degree.[32] State aid programs may also help with college preparation by raising awareness of the academic requirements to get into college. For example, in a study of merit scholarships offered to high school graduates in Alaska who planned to attend selected colleges in-state, eligible students were prepared for a more efficient college experience.[33] They took far fewer remedial courses and enrolled in more total credit hours on average than did their non-eligible peers. Specifically, the study shows that after one semester, the average scholarship recipient would have accumulated 13.2 credit hours toward a

[30] An articulation agreement is an agreement between or among colleges that specifies whether course credits transferred between colleges count toward meeting specific degree or program requirements.

[31] See GAO, *Transfer Students: Postsecondary Institutions Could Promote More Consistent Consideration of Coursework by Not Basing Determinations on Accreditation* , GAO-06-22 (Washington, D.C.: October 2005)

[32] The National Center for Education Statistics defines remedial courses as those for students lacking skills necessary to perform college level work at the degree of rigor required by the institution.

[33] See Rae 2013.

degree compared to 8.5 hours for a non-recipient, which brings them closer to a full-time schedule of 15 credit hours.

Another state or public college policy to minimize students' time-to-degree focuses on granting credit for knowledge gained outside of the classroom, which can ultimately reduce the overall cost of college. This can include taking tests to demonstrate knowledge or skills developed through work experience or prior learning. According to a survey of public college students at about 15 large public colleges, 22 percent of students chose to take tests for course credit instead of paying to take the actual courses.[34] Known as competency-based education, this effort has recently gained traction at the national level, as Education recently invited colleges to participate in a research study involving this type of policy.

Current Federal Higher Education Programs Engaging with States Are Limited, but Various Approaches Could Help Expand Federal Incentives to States to Improve College Affordability

[34] See Chatman 2011.

Federal Higher Education Programs are Targeted More at Student Financial Aid than Programs Involving States on College Affordability

Current federal funding for higher education is primarily targeted at supporting students rather than on collaborating with states on higher education policies affecting affordability. In fiscal year 2013, for example, Education provided over $136 billion directly to students through loans, grants, and work-study to help cover the costs of higher education through seven different federal programs. That same year, Education spent a relatively small amount, $358 million, on two higher education programs that we found could be related to college affordability and that involve states: 1) the College Access Challenge Grant and 2) the Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP).[35] These two programs provide grants to states and are targeted at increasing access and success for low-income students in higher education:

- **The College Access Challenge Grant program** was a formula matching grant that provided funding to states based, in part, on the relative number of state residents between the ages of 5 and 17 and between the ages of 15 and 44 who are living below the applicable poverty line.[36] Funds could be used to provide information to students and families on financing options for college, provide need-based grant aid to students, and conduct outreach activities for students who may be at risk of not enrolling in or completing college, among other uses.[37] To receive grants under the College Access Challenge Grant, states were required to maintain their funding commitment to higher education—at a level equal to the average amount provided over the 5 preceding fiscal years for public colleges—through a maintenance of effort provision.[38] States had the option to apply for a waiver from

[35] In contrast to the funding system in higher education, there are over a dozen K-12 education programs where the federal government works with states, such as making grants to states for providing education to children with disabilities under the Individuals with Disabilities Education Act. Funding for these programs is sizable. For example, in fiscal year 2013, Education's Office of Elementary and Secondary Education and Education's Office of Special Education and Rehabilitative Services provided over $36 billion combined in grants to state and local governments. See Office of Management and Budget, *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2015* (Washington, D.C.: March 4, 2014).

[36] 20 U.S.C. § 1141(c).

[37] 20 U.S.C. § 1141(f).

[38] The maintenance of effort provision also requires that states maintain funding for financial aid to students attending private colleges. 20 U.S.C. § 1015f.

this requirement.[39] In fiscal year 2013, $142 million was appropriated for the program, and of this amount, only $72 million was provided to states because not all states met the maintenance of effort requirements for receiving grant funding, according to Education officials.[40] Education's authority to award grants under this program expired at the end of fiscal year 2014, further limiting federal incentives to states to improve affordability.[41]

- **The GEAR UP program** provides competitive matching grants to states, as well as to partnerships composed of local educational agencies, colleges, and other community organizations or entities.[42] The program is intended to encourage grantees to provide support to assist low-income students prepare for and succeed in postsecondary education. State grantees are required to use GEAR UP program funds for a variety of required activities, including providing scholarships and encouraging students to enroll in rigorous coursework to reduce the need for remedial coursework at the postsecondary level, and grantees are also permitted to use grant funds for certain other purposes. These activities could improve affordability by helping students obtain financial aid to cover higher education costs or reducing the amount of time necessary to complete a degree. In fiscal year 2013, $286 million was appropriated for the program, and of this amount, almost $123 million was provided for 34 state grant awards and over $163 million was awarded to partnership grants.

In addition to the programs listed above, Education officials said that they currently draw attention to college affordability through consumer information and ad hoc communication such as letters to state governors,

[39] 20 U.S.C. § 1015f(c).

[40] According to Education officials, 28 states received grant awards in fiscal year 2013, which included 16 states that met maintenance of effort requirements, 6 states that received waivers from these requirements, and 6 states that did not receive waivers but demonstrated significant efforts to take corrective action towards meeting maintenance of effort requirements. The term "states" here and in subsequent references to the College Access Challenge Grant program include both states and territories.

[41] 20 U.S.C. § 1141(a).

[42] 20 U.S.C. §§ 1070a-21 – 1070a-28. Partnerships consist of one or more local educational agencies, one or more degree-granting colleges, and not less than two other community organizations or other entities such as businesses. Partnership grants must support an early intervention component and may support a scholarship component.

speeches at conferences, and speaking with state officials at other venues.

Several Potential Approaches Were Identified That Could Be Used to Incentivize States to Improve Affordability

Based on interviews with experts and organizations as well as our review of Education documents and relevant literature, we identified three approaches that could be used to incentivize states to improve college affordability. While not mutually exclusive or exhaustive, our research identified these possible approaches to incentivize state action: the creation of new grant programs, informational activities, or changes to federal student aid programs. Lessons learned from current or past programs can be instructive in identifying potential advantages and implementation considerations associated with these approaches. Moreover, some experts and organizations cautioned that the approaches could have cost implications for the federal government and consequences for students.

Grants

A majority—18 out of 25—of experts and organizations we interviewed cited federal grant programs, such as providing grants for state student aid, as an approach that could be used to encourage state policies that improve affordability.[43] The federal government uses grants to stimulate or support a variety of activities at the state level, and our prior work has shown that these grants represent a significant component of federal spending.[44] Grants may have a matching component that requires the grant recipient to provide funding along with the federal government. Furthermore, grants have already been used in several higher education programs, such as Leveraging Educational Assistance Partnership (LEAP), GEAR UP, College Access Challenge Grant, as well as in K-12 education through programs such as Title I funding and Race to the Top.[45]

[43] In addition, two experts and organizations mentioned the federal government could develop a new program to provide a free 2-year college option for students attending public colleges as a way of improving affordability.

[44] See GAO, *Grants to State and Local Governments: An Overview of Federal Funding Levels and Selected Challenges,* GAO-12-1016 (Washington, D.C.: September 25, 2012) for more information on grants to state and local governments.

[45] To improve educational programs for schools with high concentrations of students from low-income families, Title I of the Elementary and Secondary Education Act of 1965, as amended provides flexible funding to state and local educational agencies.

Grants can help spur innovation or state-level investment, and they can be a useful tool when states do not have sufficient resources to fully support a certain activity that has public benefits. Both competitive and formula grants have been used to support current and past state-level education programs. In K-12 education, there are several grant programs to support state and local education efforts. For example, Education spent almost $14 billion on Title I grants to school districts in fiscal year 2013, and our prior work has found that funds have supported a variety of initiatives related to instruction in selected school districts.[46] We have also found that competitive Race to the Top grants have supported the development of teacher evaluation systems in 12 states.[47] For higher education programs, the LEAP program provided formula matching grants to states to fund state need-based student aid grant programs prior to fiscal year 2011. According to a 2006 report, the LEAP program provided almost $66 million in federal funding, and states provided $840 million in funding, which exceeded the amount they were required to match, for need-based grant programs in fiscal year 2005.[48] When the LEAP program was discontinued in fiscal year 2011, all states had a need-based grant program for students, up from only 28 when the program was first authorized as the State Student Incentive Grants in 1972.[49] To help ensure that federal funding does not replace state spending, some grant programs have maintenance of effort provisions, which generally require that states maintain a certain level of funding. According to Education officials, maintenance of effort provisions are one lever the department has for certain grant programs it administers to directly influence state spending. They stated, for example, that these provisions in the College Access Challenge Grant program contributed toward affordability goals because they incentivized some states to maintain their funding commitment to higher education with a relatively

[46] See GAO, *Disadvantaged Students: School Districts Have Used Title I Funds Primarily to Support Instruction,* GAO-11-595 (Washington, D.C.: July 15, 2011).

[47] GAO, *Race to the Top: States Implementing Teacher and Principal Evaluation Systems despite Challenges,* GAO-13-777 (Washington, D.C.: September 18, 2013).

[48] Dushin, Jamie H. "Examining LEAP" (National Association of State Student Grant and Aid Programs position paper, October 2006).

[49] In its fiscal year 2011 budget request, Education proposed that the LEAP program be eliminated because it had accomplished its objective of stimulating states to establish need-based student grant programs and federal incentives in this area were no longer required. See Department of Education, *Fiscal Year 2011 Budget Summary and Background Information* (Washington, D.C.: February 2010).

small investment from the federal government. Maintenance of effort provisions were also used in Recovery Act funding for higher education, and 16 out of 19 experts and organizations said that this funding helped states alleviate budget cuts to higher education during the recession.[50] Of this group, four attributed this trend specifically to the maintenance of effort provision associated with the funding.

In creating grant programs, it is important to consider how the program would be monitored and administered. Our prior grants management work has identified several challenges associated with grants to state and local governments, such as difficulty in ensuring grant funds are used appropriately and lack of agency or recipient capacity.[51] There could be additional challenges for grant programs with maintenance of effort requirements. For example, Education officials also observed that states may be more responsive to maintenance of effort provisions when larger amounts of federal funding are associated with the provision, and funding for the College Access Challenge Grant program was not large enough to influence states to a significant degree. In addition, our prior work found that maintenance of effort provisions have often been difficult to monitor, and in 2009, we recommended that Education take further action to enhance transparency associated with maintenance of effort provisions in the Recovery Act.[52] Creating new grant programs would also have cost implications for the federal government and could have consequences for students. Three experts and organizations we spoke with cited limited funding as a challenge associated with this option, and one organization indicated that the matching requirements for grant programs could create incentives for states to increase funding in some higher education programs while reducing it in others, which could affect students.

[50] There were some instances where given topics were not discussed at every interview with experts and organizations.

[51] Other challenges that we have previously identified with grants to state and local governments include: effectively measuring grant performance, uncoordinated grant program creation, and need for better collaboration. See GAO-12-1016.

[52] See GAO, *Temporary Assistance For Needy Families: State Maintenance of Effort Requirements and Trends,* GAO-12-713T (Washington, D.C.: May 17, 2012), and GAO, *Recovery Act: Planned Efforts and Challenges in Evaluating Compliance with Maintenance of Effort and Similar Provisions,* GAO-10-247 (Washington, D.C.: November 30, 2009).

Education proposed a new grant program in its fiscal year 2015 budget request, the State Higher Education Performance Fund, as a possible way to incentivize states. This competitive grant program would reward states that have a strong record of investment and states that show a commitment to increasing support for higher education. States would be required to match federal grant funds, and resources would be allocated to institutions based on performance formulas developed by states. This program has not been authorized by law.[53] As mentioned previously, state funding can be a significant source of revenue for public colleges, and increased state support may have positive effects on affordability if public colleges do not have to rely as much on revenue from tuition. However, the ultimate effect of increased state support or maintenance of effort requirements on college affordability depends on the extent to which states or public colleges limit or refrain from increasing tuition.

Information

Providing information for consumers or on best practices is another approach to influence behaviors, thinking, or knowledge in certain areas. Information can be provided through a variety of methods, including public communication or training. Education has undertaken efforts to disseminate information on affordability to current and prospective students which could help them make decisions on which colleges—including those that are state-supported—would provide a good value. Education provides multiple sources of information, including the College Navigator and College Scorecard websites, which help students compare colleges based on various measures, such as costs.[54] Additionally, Education is currently developing a college ratings system to provide students with information on the affordability of individual colleges.[55] Depending on its design, a ratings system could encourage colleges to improve on measures associated with affordability to garner a higher

[53] Education officials said that while the Department has considered states' capacity to implement the proposed State Higher Education Performance Fund program, final decisions, such as the criteria for state programs, have not been made pending authorization of the program.

[54] See http://nces.ed.gov/collegenavigator/for College Navigator website and http://collegecost.ed.gov/scorecard/index.aspx for the College Scorecard website. Education also provides information on state spending via a website, including state funding for higher education and aid to students. See http://collegecost.ed.gov/statespending.aspx.

[55] In its fiscal year 2015 budget request, Education requested $12 million to support the development and refinement of the college ratings system.

rating. One consideration with implementing this initiative may be concerns about protecting student privacy. For example, we reported in 2010 that states were unclear whether they could disclose data on individual college graduates to assess program performance without violating requirements related to student privacy.[56] In particular, student privacy could be a concern when linking a student's education record to their employment records even if earnings and other employment outcome data could help assess college affordability.

According to Education officials, the department has used training to disseminate best practices to state grantees for GEAR UP programs. If certain state policies are shown to be effective in promoting affordability, the federal government may be able to use similar methods of providing information to encourage the adoption of promising practices across multiple states. However, as mentioned previously, various state policies on college affordability show mixed results and others have only recently been implemented, limiting the extent to which best practices may be available.

Changes to Federal Student Aid Programs

Nearly half —11 out of 25—experts and organizations identified modifying federal student aid programs as an option for improving affordability, but modifications could also potentially have negative consequences for students. Such changes could affect multiple parties, including public colleges that must meet certain eligibility requirements before they can receive and disburse federal funds to students. These suggestions generally fell into two categories:

- Tie a public college's eligibility to participate in federal student aid programs or the level of federal student aid its students receive to certain state activities or the state's level of investment in higher education. For example, Pell Grant funding could be increased for students attending public institutions in states that achieve certain goals related to investment in higher education.
- Create incentives for students to complete their degrees on time, for example through changing Pell Grant eligibility requirements, which

[56] See GAO, *Postsecondary Education: Many States Collect Graduates' Employment Information, but Clearer Guidance on Student Privacy Requirements is Needed,* GAO-10-927 (Washington, D.C.: September 27, 2010) for more information on federal-state information sharing in higher education.

Education officials said would require a change in statutory authorization.

Education officials, experts, and organizations noted a number of challenges associated with modifying federal student aid programs. One such concern is inadvertently reducing students' access to federal financial aid. Because students are the ultimate recipients of financial aid, restricting the aid flowing through states or colleges that do not meet certain requirements could have the unintended consequence of reducing aid for some students. Moreover, one organization indicated that this type of policy change could face resistance from states or colleges. Similarly, tying financial aid to students' progress toward a degree could also have negative effects on students. Education officials noted that changing the definition of full-time enrollment from 12 to 15 credit hours per semester could disadvantage students who have difficulty handling an increased course load, such as students who need to work during the school year to pay for college costs.

Agency Comments and Our Evaluation

We provided a draft of the report to the Department of Education for review and comment. Education provided technical comments, which we incorporated as appropriate. We are sending a copy of this report to the Secretary of Education. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (617) 788-0534 or emreyarrasm@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.

Sincerely yours,

Melissa Emrey-Arras

Melissa Emrey-Arras
Director, Education, Workforce, and Income Security

Appendix I: Objectives, Scope, and Methodology

Overview

This report examines: (1) how state financial support and tuition have changed at public colleges over the past decade, (2) how states' higher education policies have affected affordability, and (3) how the federal government works with states to improve college affordability, and what additional approaches are available for doing so.

In conducting this work, we analyzed trends in state funding for public colleges, state student aid, and tuition using public sector data from Education's Integrated Postsecondary Education Data System (IPEDS), National Postsecondary Student Aid Study (NPSAS), and the National Association of State Student Grant and Aid Programs (NASSGAP) databases. We assessed the reliability of IPEDS, NPSAS, and NASSGAP data by (1) performing electronic testing of required data elements, (2) reviewing existing information about the data and the system that produced them, and (3) interviewing the managing organizations where additional information was needed. We determined that the data were sufficiently reliable for the purposes of this report. Data from all types of public colleges were included in the analysis, including 2-year, 4-year, and less than 2-year colleges. However, when analysis is provided by college type, less than 2-year colleges are included only in the totals. Private and for-profit colleges were excluded from this analysis. To account for inflation, all monetary data are presented in school year 2011-2012 constant dollars. In the report, we describe this inflation adjustment as presenting data in constant 2012 dollars.

We also identified academic studies published in approximately the last 3 years (January 2011 through April 2014, when we conducted the literature search) that are based on original research and discuss the relationship between state-level higher education policies and college affordability. We assessed the quality of these studies by evaluating their research methods and determined that 23 studies were sufficiently reliable for use in our study. In addition, we met with six academic researchers who had recently published studies relevant to state higher education policy or college affordability and were recognized as experts in their field, as well as 19 organizations involved in higher education issues. We also reviewed relevant federal laws, regulations, and agency documents, including the Higher Education Act of 1965, as amended, and selected Education budget requests. Lastly, we reviewed Education documents on current higher education programs and policy research on tools the federal government has used to incentivize states.

We conducted this performance audit from February to December 2014 in accordance with generally accepted government auditing standards.

Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Data Analysis

IPEDS

To provide information on sources of college revenue and state support per student we analyzed institutional data from the finance component of IPEDS for fiscal years 2003 through 2012. We used the institutional characteristics component of IPEDS to obtain data on published tuition prices for school years 2002-2003 through 2011-2012. We chose these time periods because they were the most recent available data at the time of our analysis and cover a 10-year span. IPEDS gathers data from every college, university, and technical and vocational institution that participates in federal student aid programs and therefore the data cover the entire population of interest for this study.

NPSAS

NPSAS data were used to analyze trends in the amount of need-based grant aid compared to non-need-based grant aid and to show net tuition levels over time. As NPSAS compiled data at 4-year intervals during the time frame of the data used in our report, data were used for school years 2003-2004, 2007-2008, and 2011-2012 to present the most recent available data. NPSAS compiles student-level records on financial aid provided by the federal government, states, colleges, employers, and non-profit organizations. It also captures student demographic and enrollment data for a nationally representative sample of all undergraduate students, regardless of enrollment type, who are enrolled in Title IV eligible programs during the relevant school year. Student data are collected through Web-based self-administered surveys and computer assisted telephone interviews.

Because NPSAS data are based on probability samples, estimates are formed using the appropriate estimation weights provided with each survey's data. Because each of these samples follows a probability procedure based on random selection, they represent only one of a large number of samples that could have been drawn. Since each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as a 95 percent confidence interval (e.g., plus or minus 2.5 percentage points). This is the interval that would contain the actual population value for 95 percent of the samples we could have drawn. Unless otherwise noted, all estimates cited in this report from NPSAS have 95 percent confidence intervals of within +/- 8 percentage points for percentage estimates, and within +/- 8 percent of the estimate itself for other numerical estimates.

NASSGAP

To provide state-by-state analysis of grant aid in appendix II, the NASSGAP survey was used to show changes in the ratio of need-based to non-need based aid for each state. The NASSGAP survey is administered to states every year through an online instrument to collect data on state-funded student financial aid programs administered during the previous school year. NASSGAP reports that the data are collected over a period of approximately 5 months. During this period, NASSGAP follows up with any non-respondent state officials to ensure that data are received from each state. In occasional instances where state officials do not respond, NASSGAP creates expenditure estimates. Once the survey is closed, the data are then checked for accuracy and consistency. We downloaded the survey data directly from the NASSGAP website since its online database is continually updated as errors and inconsistencies are detected.

For this analysis we used data from school years 2003-2004 and 2011-2012. This time period was chosen to provide the most recently available data at the time of our analysis and to ensure data were consistent across time periods, as the instrument was redesigned for the 2003-2004 collection cycle and earlier data may not be directly comparable. Since data from each state are entered by a different representative, this dataset has potential for reporting errors and inconsistency among states. One such inconsistency is that not all states provided a breakout of aid between graduate and undergraduate students, requiring NASSGAP to estimate these data for some states. We therefore elected to present combined graduate and undergraduate data in our state-by-state analysis of grant aid in appendix II to avoid potential inaccuracies. With these exceptions, limited use of the data was deemed appropriate for purposes of our analysis.

Literature Review

To examine what is known about state higher education policies affecting affordability, we conducted a literature search to identify relevant academic studies. We searched various databases, including the Education Resources Information Center (ERIC), ProQuest Education

Journals, ProQuest Research Library, and EconLit, as well as specific websites of the higher education organizations we interviewed. We selected academic studies published in the last 3 years (2011 onward) to obtain the most recent research on relevant programs and policies. We also included only studies that were based on original research and that discussed the relationship between college affordability and higher education policies led by states and publicly-funded colleges. We typically did not include dissertations or conference presentations. Of the 145 studies our literature search returned, 25 met our initial criteria for review. We then assessed the quality of these studies by evaluating the methods used in the research, as well as any limitations, and verified this assessment through a secondary review. Ultimately, we determined that 23 studies were sufficiently reliable for use in our study. We reviewed the findings of these studies and presented the points most relevant to our report, as appropriate.

Interviews of Experts and Organizations

To obtain a range of perspectives on all three of our research objectives, we conducted semi-structured interviews with a non-probability sample of 25 experts and organizations. We selected these experts and organizations based on their recognition in the higher education field, relevance of published work, and professional affiliations with groups applicable to our study. Specifically, we selected experts and organizations that met at least one of the following criteria: 1) published recent and relevant empirical work or data analysis of higher education finance issues, 2) are leaders of active higher education or state policy associations, 3) are implementers or sponsors of policies or experiments related to college affordability, or 4) were recommended by Education. In addition to these primary criteria, we also considered whether the experts or organizations were recommended by other parties, represented a unique perspective on the topic, or served as a Congressional witness at hearings on college affordability in recent years. We prioritized experts and organizations that met multiple criteria.[1] Of this group, 19 were organizations involved in higher education issues, including those that that represent public colleges, states, or students, and others that sponsor or conduct research on higher education finances. We also met with six academic researchers who recently published studies relevant to

[1]There were two organizations we interviewed that only met one secondary criterion because they represented students, a group that was not represented by other organizations and experts we interviewed.

our research objectives. The perspectives of these experts and organizations cannot be generalized to represent the views of all stakeholders involved in college affordability issues; however, they offer perspectives from diverse and wide-reaching areas of the higher education community.

Identification of Approaches for Incentivizing States

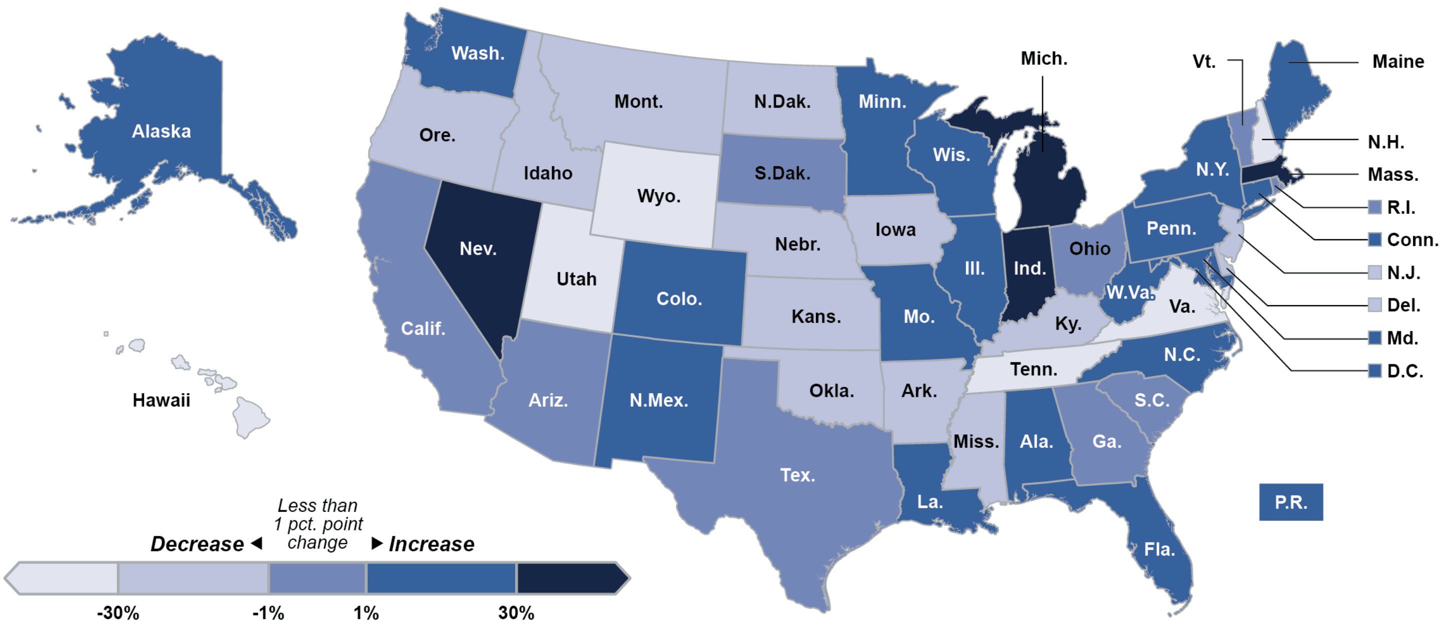
For our third objective, we examined how the federal government collaborates with states on affordability issues and potential approaches to incentivize states to improve college affordability. First, we reviewed information on Education's higher education programs, literature on higher education funding, and interviewed Education officials, academic experts, and organizations to understand the current relationship between the federal government and states on higher education issues. We also reviewed Education's *FY 2013 Annual Performance Report and FY2015 Annual Performance Plan* and fiscal year 2015 budget documents to identify the agency's goals and proposals related to college affordability. We then examined which general mechanisms are available to the federal government to incentivize states by reviewing a widely recognized public administration framework used in prior GAO analyses: *The Tools of Government: A Guide to the New Governance*.[2] Based on this analysis and our review of proposed education programs, perspectives from experts and organizations, and relevant GAO work on these topics, we identified the approaches that were most applicable to our research objective and their potential advantages and implementation considerations.

[2] Lester Salamon, ed., *The Tools of Government: A Guide to the New Governance* (New York: Oxford University Press, 2002).

Appendix II: Trends in State Grant Aid to Students and Sources of Revenue for Public Colleges

The map below illustrates how states have shifted toward awarding either more need-based grant aid or less by depicting the percentage-point change in need-based aid between school years 2003-2004 and 2011-2012. Among the states with the largest percentage-point increase in need-based aid were Massachusetts, Nevada, and Michigan while those with the largest decrease were Wyoming, Utah, and New Hampshire.

Figure 7: State-by-State Shifts in Need-Based Aid, from School Years 2003-2004 through 2011-2012



Source: GAO analysis of National Association of State Student Grant and Aid Programs (NASSGAP) data. | GAO-15-151

Note: Figures include grant aid that states provide to both graduate and undergraduate students.

To provide more context on trends in revenue for public colleges over time, the following table shows total public college revenue as well as revenue from each source from fiscal year 2003 through 2012.

Table 3: Public College Revenue by Source in 2012 Constant Dollars from Fiscal Years 2003 through 2012

(Dollars in Billions)

Fiscal year	Tuition	Local	State	Federal	Other	Total
2003	42.5	16.9	80.0	39.1	74.7	253.1
2004	47.4	17.4	77.7	41.2	78.3	262.0
2005	50.6	16.8	77.0	41.8	82.1	268.4
2006	52.4	16.8	78.9	40.6	82.5	271.1
2007	54.4	17.5	82.6	40.2	90.7	285.5
2008	56.6	17.8	85.8	40.8	78.2	279.2
2009	60.8	18.7	81.8	43.9	76.6	281.7
2010	68.0	18.3	77.6	54.6	87.5	306.1
2011	72.9	18.5	77.1	58.5	93.2	320.3
2012	76.3	21.0	70.6	55.0	82.1	305.0

Source: GAO analysis of Integrated Postsecondary Education Data System (IPEDS) finance component data. | GAO-15-151

Notes: "Tuition" includes revenues from all tuition and fees assessed against students, net of refunds and discounts and allowances, for educational purposes. "Local" sources refer to funds provided and grants made by local government. "State" sources refer to funds received by colleges directly from a state legislature or through grants and contracts from state government agencies. "Federal" sources include appropriations for meeting current operating expenses, grants, contracts, and federal grant aid to students such as Pell Grants. "Other" sources include private gifts, grants and contracts; sales and services of educational activities; auxiliary enterprises; hospital revenues.

Appendix III: Bibliography

Baldassare, Mark, Dean Bonner, Sonja Petek, and Jui Shrestha.”Californians and Higher Education. PPIC Statewide Survey.” (San Francisco, Calif.: Public Policy Institute of California, 2011).

Baum, Sandy, Kathleen Little, Jennifer Ma, and Anne Sturtevant. “Simplifying Student Aid: What It Would Mean for States.” (New York, New York: College Board Advocacy and Policy Center, 2012).

Chatman, Steve. “Wealth, Cost, and the Undergraduate Student Experience at Large Public Research Universities.” (Berkeley, Calif: Center for Studies in Higher Education, University of California at Berkeley, 2011).

Domina, Thurston. “Does Merit Aid Program Design Matter? A Cross-Cohort Analysis.” Research in Higher Education, vol. 55, no. 1 (2014):1–26.

Dougherty, Kevin J., Rebecca S. Natow, and Blanca E. Vega. “Popular but Unstable: Explaining Why State Performance Funding Systems in the US Often Do Not Persist.” Teachers College Record, vol. 114, no. 3 (2012): 1-41.

Fethke, Gary.”A Low-Subsidy Problem in Public Higher Education.” Economics of Education Review, vol. 30, no. 4 (2011): 617–626.

Goldrick-Rab, Sara and Nancy Kendall. “Redefining College Affordability: Securing America’s Future with a Free Two Year College Option.” (Madison, Wisconsin: The Education Optimists, 2014).

Hemelt, Steven W. and Dave E. Marcotte. “The Impact of Tuition Increases on Enrollment at Public Colleges and Universities.” Educational Evaluation and Policy Analysis, vol. 33, no. 4 (2011): 435–457.

Hillman, Nicholas W., David A. Tandberg, and Alisa Hicklin-Fryar. “Evaluating the Impacts of ‘New’ Performance Funding in Higher Education.” Forthcoming.

Jacobs, Christine, and Sarah Whitfield. “Beyond Need and Merit: Strengthening State Grant Programs.” (Washington, D.C.: Brookings Institution, 2012).

Jones, Jessika. “College Costs and Family Income: The Affordability Issue at UC and CSU.” (Sacramento, Calif.: California Postsecondary Education Commission, Report 11-02, 2011).

Mendoza, Pilar and Jesse P. Mendez. “The Oklahoma’s Promise Program: A National Model to Promote College Persistence.” Journal of College Student Retention: Research, Theory & Practice, vol. 14, no. 3 (2013): 397-421.

O’Brien, Colleen. “Expanding Access and Opportunity: The Washington State Achievers Scholarship.” (Washington, D.C.: Pell Institute for the Study of Opportunity in Higher Education, 2011).

Patel, Reshma, Lashawn Richburg-Hayes, Elijah de la Campa, and Timothy Rudd. “Performance-Based Scholarships: What Have we Learned? Interim Findings from the PBS Demonstration.” (New York, New York: MDRC, 2013).

Poliakoff, Michael, and Armand Alacbay. “Best Laid Plans: The Unfulfilled Promise of Public Higher Education in California.” (Washington, D.C.: American Council of Trustees and Alumni, 2012).

Rae, Brian. “2013 Alaska Performance Scholarship Outcomes Report.” (Juneau, Alaska: Alaska Commission on Postsecondary Education, 2013).

Sanford, Thomas and James M. Hunter.”Impact of Performance-funding on Retention and Graduation Rates.” Education Policy Analysis Archives, vol. 19, no. 33 (2011).

Scott-Clayton, Judith. “On Money and Motivation: A Quasi-Experimental Analysis of Financial Incentives for College Achievement.”The Journal of Human Resources, vol. 46, no. 3 (2011): 614-646.

Serna, Gabriel R. and Gretchen Harris. “Higher Education Expenditures and State Balanced Budget Requirements: Is There a Relationship?” Journal of Education Finance, vol. 39, no. 3 (2014): 175-202.

Tandberg, David A. and Nicholas W. Hillman. “State Higher Education Performance Funding: Data, Outcomes, and Policy Implications.” Journal of Education Finance, vol. 39, no. 3 (2014): 222-243.

Titus, Marvin A. and Brian Pusser. “ States’ Potential Enrollment of Adult Students: A Stochastic Frontier Analysis.” Research in Higher Education, vol. 52, no. 6 (2011):555–571.

Welbeck, Rashida, John Diamond, Alexander Mayer, and Lashawn Richburg-Hayes. “Piecing Together the College Affordability Puzzle: Student Characteristics and Patterns of (Un)Affordability.” (New York, New York: MDRC, 2014).

Zhang, Liang, Shouping Hu and Victor Sensenig. “The Effect of Florida’s Bright Futures Program on College Enrollment and Degree Production: An Aggregated-Level Analysis.” Research in Higher Education, vol. 54 (2013): 746–764.

Appendix IV: Related GAO Products

Federal Student Loans: Impact of Loan Limit Increases on College Prices Is Difficult to Discern. GAO-14-7. Washington, D.C.: February 18, 2014.

Community Colleges: New Federal Research Center May Enhance Current Understanding of Developmental Education. GAO-13-656. Washington, D.C.: September 10, 2013.

Higher Education: Improved Tax Information Could Help Families Pay for College. GAO-12-560. Washington, D.C.: May 18, 2012.

Postsecondary Education: Financial Trends in Public and Private Nonprofit Institutions. GAO-12-179. Washington, D.C.: January 26, 2012.

Federal Student Loans: Patterns in Tuition, Enrollment, and Federal Stafford Loan Borrowing Up to the 2007-08 Loan Limit Increase. GAO-11-470R. Washington, D.C.: May 25, 2011.

Postsecondary Education: Many States Collect Graduates' Employment Information, but Clearer Guidance on Student Privacy Requirements Is Needed. GAO-10-927. Washington, D.C.: September 27, 2010.

Recovery Act: Planned Efforts and Challenges in Evaluating Compliance with Maintenance of Effort and Similar Provisions. GAO-10-247. Washington, D.C.: November 30, 2009.

Federal Student Aid: Highlights of a Study Group on Simplifying the Free Application for Federal Student Aid. GAO-10-29. Washington, D.C.: Oct 29, 2009.

Higher Education: Tuition Continues to Rise, but Patterns Vary by Institution Type, Enrollment, and Educational Expenditures. GAO-08-245. Washington, D.C.: November 28, 2007.

Appendix V: GAO Contacts and Staff Acknowledgments

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