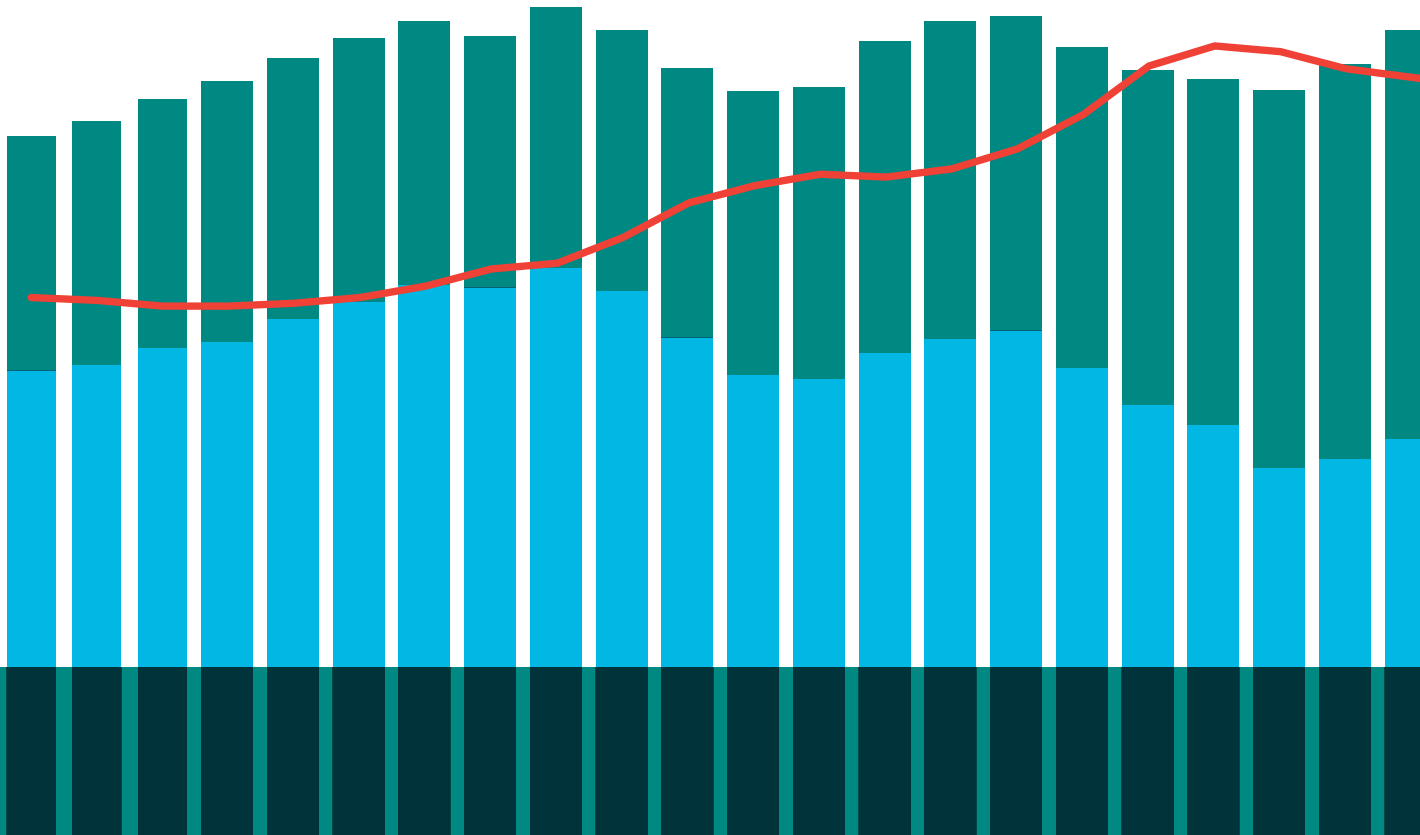
SHEEO

STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

SHEF: FY 2018

STATE HIGHER EDUCATION FINANCE



The State Higher Education Executive Officers Association (SHEEO) is the national association of the chief executives of statewide governing, policy, and coordinating boards of postsecondary education. Founded in 1954, SHEEO serves its members as an advocate for state policy leadership, a liaison between states and the federal government, and a vehicle for learning from and collaborating with peers. SHEEO also serves as a manager of multistate teams to initiate new programs and as a source of information and analysis on educational and public policy issues. Together with its members, SHEEO advances public policies and academic practices that enable Americans to attain education beyond high school and achieve success in the 21st century economy.

An electronic version of this report, State Higher Education Finance (SHEF) FY 2018, and numerous supplementary tables containing extensive state-level data, are available at www.sheeo.org. These may be freely used with appropriate attribution and citation. In addition, core data and derived variables used in the SHEF study for fiscal years 1980 through 2018 are available on the SHEEO website, along with interactive data visualizations via Tableau.

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ACKNOWLEDGEMENTS

We are pleased to present the sixteenth annual SHEEO State Higher Education Finance (SHEF) study of state support for higher education. For the fifth consecutive year, we continue to make improvements to the look, feel, and presentation of the SHEF report and through additional features on the SHEF webpage (www.sheeo.org/shef). We hope these changes provide additional utility as SHEF becomes a resource used year-round by staff at our member agencies, policymakers, researchers, and the media who report on higher education issues. Of course, SHEF's underlying data provide the real strength of this project, and no changes were made to the data or their basic presentation in the report. SHEEO developed the SHEF study building directly on a 25-year effort by Kent Halstead, an analyst and scholar of state policy for higher education, and the SHEF data set now extends from 1980 to 2018.

The 2018 SHEF report was authored by:

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The report would not have been possible without additional support, particularly from:

- Gloria Auer, Caitlin Dennis, Annahita Jimmerson, and Jiah Kim at SHEEO
- Libbey Castle and Emily Sandberg at Vox Global
- Andy Sherman at Can of Creative
- Dr. James Palmer at Illinois State University

Last but certainly not least, SHEEO is deeply indebted to the staff of state higher education agencies who annually provide the state-level data essential for the preparation of this report. Without their diligence and commitment, this project would not be possible.

Robert E. Anderson
President
State Higher Education Executive Officers Association

Glen D. Johnson
Chancellor, Oklahoma State System of Higher Education
Chair, SHEEO Executive Committee

CHANGES ARE COMING!

SHEEO recently received a three-year grant from the Bill & Melinda Gates Foundation to refine and improve the SHEF report. We will be creating a new interactive website with easy to use data visualizations and more ways to view and understand the data. We are also working on a new data collection structure to collect some some highly requested new data elements.

Our top priority is to ensure that the improvements we make to SHEF are useful to the field while maintaining the integrity of the report and its underlying data. We have created an advisory group of content and technical experts to provide feedback during these changes. We are very grateful for their commitment:

Content Experts

- Sandy Baum, Urban Institute
- Alli Bell, Three Arrows Up Consulting
- Jennifer Delaney, University of Illinois
- Thomas Harnisch, American Association of State Colleges and Universities
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As always, we welcome your suggestions as we work to improve the utility of the SHEF report. Please contact Sophia Laderman (sladerman@sheeo.org) to share any comments or ideas.

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EXECUTIVE SUMMARY

ABOUT THE REPORT

The State Higher Education Finance (SHEF) report is produced annually by the State Higher Education Executive Officers Association (SHEEO) to broaden understanding of the context and consequences of multiple public policy decisions in each state. These decisions contribute to public higher education funding levels and funding distributions across states and nationally.

Although the price of college has been rising for students and families, so has the potential economic benefit of earning a postsecondary credential or degree. Greater attention to both the costs and benefits of higher education influences the environment in which political leaders, policymakers, and educators make decisions.

No single report can provide definitive answers to the broad and fundamental questions of state higher education finance policy, but the SHEF report supplies important context and trend analysis to help inform policy decisions. SHEF provides the earliest possible review of state and local support, tuition revenue, and enrollment trends for the most recently completed fiscal year.[1] This year's report focuses on FY 2018, which for most states ran from July 1, 2017, through June 30, 2018.

THE REPORT INCLUDES:

- An explanation of the measures and methods used in the SHEF metrics for analysis;
- A description of the revenue sources and uses for higher education;
- An analysis of national trends in enrollment and revenue;
- Comparisons of the SHEF metrics across states and over time;
- Indicators of state tax capacity, tax effort, and relative allocations for higher education; and
- A series of case studies that add important context and interpretation of the data presented in the report.

Additional information is available on our website, including data downloads, interactive visualization tools, and technical documentation.

1. Years referenced in the body of this publication refer to state fiscal years (FY), which commonly start July 1 and run through June 30 of the following calendar year. For example, FY 2018 includes July 2017 through June 2018. All enrollments are full-time equivalent for the corresponding academic year (including summer term). National averages are calculated using the sum of all of the states. For example, the national average per FTE expenditure is calculated as the total of all states' expenditures divided by the total of all states' FTEs.

2018: TEN YEARS OUT FROM THE GREAT RECESSION

Last year's SHEF report—which focused on state funding data from FY 2017—affirmed that the majority of states increasingly rely on tuition dollars, rather than state and local appropriations, to fund their public systems of higher education. That narrative holds true in this year's report, which reflects a similar overall picture of the state higher education funding landscape of FY 2017. In fact, FY 2018 saw the smallest ever changes in net tuition revenue and total educational revenue per student.

FISCAL YEAR 2018 SAW THE SMALLEST CHANGES EVER IN PER STUDENT REVENUES FOR HIGHER EDUCATION

Minimal year-over-year change notwithstanding, this year's report marks an important milestone in the SHEF data set: the completion of a ten-year analysis of state higher education funding data since the Great Recession. When viewed holistically, the report offers a comprehensive look at how states navigated a complex funding environment and attempted to restore funding to higher education as they recovered from a significant economic downturn. The FY 2018 SHEF report finds that ten years after the start of the Great Recession, state funding for higher education has only halfway recovered, while the growing reliance on net tuition as a revenue source—the student share—remains at a near high.

A case study on the analysis of state-by-state recovery from the Great Recession can be found in this report on page 30. This case study assesses the extent to which states relied on tuition revenue to restore funding reductions. Other case studies in this year's report analyze funding challenges in Illinois and state cost and budget drivers.

REPORT HIGHLIGHTS

To develop the FY 2018 SHEF report, SHEEO calculated state and local support for higher education, educational appropriations, net tuition revenue, total educational revenue, and full-time equivalent enrollment (FTE). See page 10 for more information about the SHEF methodology. Key takeaways from each primary measure of the SHEF report follow below.

1. **State and Local Support:** Following five straight years of growth in state support, there was nearly no national change in state and local per-student support for higher education after adjusting for inflation between FY 2017 and FY 2018. State and local support totaled $96.1 billion this year.
2. **Educational Appropriations:** At the national level, appropriations per FTE remained flat in 2018, increasing by just 0.2 percent after adjusting for inflation. This means that, nationally, higher education funding has kept pace with changes in enrollment and inflation over the last year. After more than $2,000 in per-student funding reductions during the Great Recession, per-student educational appropriations in 2018 were $7,853, roughly $1,000 below their pre-recession level. **Ten years out from the start of the Great Recession, per-student higher education appropriations in the U.S. have only halfway recovered.**

Immediately following a five-year period of annual increases greater than 2 percent, FY 2018 marks the smallest increase ever in state and local higher education funding. This indicates that state appropriations may be stabilizing—albeit at a much lower level—after the Great Recession. However, the *Grapevine* survey, which often tracks closely to SHEF, indicates another potential increase in FY 2019.[2]

While appropriations remained flat nationally, there was considerable variation across the states. Twenty-two states saw declines in per-student appropriations in FY 2018. States have also differed greatly in their recovery since the height of the Great Recession. Only nine states have met pre-recession funding levels, and another 11 have seen no recovery at all (their current funding is below the low point of the Great Recession).

3. **State Financial Aid:** Alongside these declines, state financial aid for students at public institutions—which many states protected during the economic downturn—has increased for four straight years. FY 2018 saw an 8.7 percent increase in state aid, the largest since the Great Recession, as per-FTE state aid reached an all-time high of $752 and now represents 9.6 percent of all appropriations.

4. **Net Tuition Revenue:** Tuition revenue, which has risen in all but two of the last 25 years, also remained flat in 2018. **For the first time since the Great Recession, net tuition revenue per-FTE increases did not significantly exceed the rate of inflation.** This may be due, in part, to factors such as lower international FTE enrollment, smaller tuition rate increases, and increases in state public financial aid.

5. **Total Educational Revenue:** In 2018, educational revenue per student (the sum of educational appropriations and net tuition revenue) was higher than ever before. However, like with educational appropriations and net tuition revenue, this year's report reflects the least change in total educational revenue than in any year since the SHEF data set began in 1980. This story is not true in all states—see the *Interstate Comparisons* section on page 23 and recovery case study on page 30 for more details.

6. **Full-Time Equivalent Enrollment (FTE):** FTE **declined in 35 states and Washington, D.C.**, between 2017 and 2018. Due largely to the recovering economy, FY 2018 enrollment is 6 percent below the Great Recession enrollment high in 2011. However, the annual rate of enrollment decline in most states has slowed in each year since 2015. Nationally, 2018 saw just a 0.3 percent decrease in FTE enrollment from 2017. Enrollment remains 7.1 percent above what it was before the Great Recession in 2008.

Explore these trends, and more, on a state-by-state level using our interactive Tableau dashboards.

2. See https://education.illinoisstate.edu/grapevine

MEASURES, METHODS, AND ANALYTICAL TOOLS

PRIMARY SHEF MEASURES

To assemble the annual SHEF report, SHEEO calculates the following measures:

1. **State and Local Support**, consisting of state tax appropriations, local tax support, additional non-tax funds like lottery revenue that support higher education, and funds appropriated to other state entities for specific higher education expenditures or benefits (e.g., employee fringe benefits). State and local support for 2009-2012 also includes federal American Reinvestment and Recovery Act (ARRA) funds provided to stabilize revenue during the Great Recession.

2. **Educational Appropriations**, the part of state and local support available for public higher education operating expenses. They are defined to exclude spending for research, agriculture-related programs, and medical education, as well as support for independent institutions or students attending them. Since funding for medical education and other major non-instructional purposes varies substantially across states, excluding these funding components helps to improve the comparability of state-level data on a per student basis.

3. **Net Tuition Revenue**, the total amount of tuition and fees minus state financial aid, institutional tuition waivers or discounts, and medical student tuition and fees. This includes revenue from in-state and out-of-state students as well as undergraduate and graduate students. While net tuition revenue reflects the share of instructional support received from students and their families, it does not consider many factors that contribute to a student's net price and does not directly measure tuition rate increases.[3]

4. **Total Educational Revenue**, the sum of educational appropriations and net tuition revenue. In some states, a portion of tuition revenue is used to fund capital debt service and similar non-operational activities. These sums are excluded from the total educational revenue, which measures the amount of revenue available to public institutions to support instruction.

5. **Full-Time Equivalent Enrollment (FTE)**, a measure of enrollment equal to one student enrolled full time for one academic year, calculated from the aggregate number of enrolled credit hours (including summer session). SHEF excludes non-credit, non-degree, and medical school enrollments. The use of FTE reduces multiple types of enrollment to a single measure capable of comparing changes in total enrollment across states and sectors and providing a straightforward method for analyzing revenue on a per student basis.

3. SHEF's net tuition revenue does not measure "net price," but measures the revenue that institutions receive from tuition. It is a straightforward measure of the proportion of public institution instructional costs borne by students and families. SHEF does not deduct federal grant assistance (primarily from Pell Grants) from gross tuition revenue, since these are non-state funds that substitute, at least in part, for costs borne by students. Measures of net price for the student need to include non-tuition costs and all forms of aid.

ADJUSTMENTS FOR COMPARABILITY

SHEF's analytic methods are designed to make basic data about higher education finance as comparable as possible across states and over time. Toward that end, financial indicators are provided on a per student basis (using FTE enrollment as the denominator), and the raw data provided by states is modified using three adjustments:

1. **Cost of Living Index (COLI)** accounts for cost of living differences among the states;
2. **Enrollment Mix Index (EMI)** adjusts for differences in the mix of enrollments across institutions with different costs across the states (e.g., at community colleges or more expensive research institutions); and
3. **Higher Education Cost Adjustment (HECA)** adjusts for inflation over time.

Technical documentation on the SHEF website describes these adjustments in more detail.

DATA USES AND CAUTIONS

The SHEF report seeks to provide reliable data and methods to examine state funding for higher education. **While making finance data cleaner, consistent, and more comparable, SHEF's analytic methods also add complexity.** Readers should be cognizant of inherent limitations.

1. **Comparing institutions and states is a difficult task.** States vary in climate, energy costs, housing costs, population densities, growth rates, areas of poverty, resource bases, and the mix of industries driving their local economies. Some have a relatively homogeneous, well-educated population, while others have large numbers of traditionally-underserved populations. Additionally, the extent and rate at which these factors are changing vary across states.
2. **State higher education systems differ.** Differences in the number and size of institutions, the proportion of students attending independent institutions, and varying combinations of institutional types add complexity to the data. Across states, tuition rates and the availability of financial aid vary, which may affect revenues and enrollment patterns.
3. **In addition to these differences, technical factors can distort interstate comparisons.** For example, states differ in how they finance employee retirement. Some pay all retirement costs to employee accounts when the benefits are earned, while others defer part of the costs until the benefits are paid. Some pay benefit costs through a state agency, while others pay from institutional budgets. Many studies of state finance try to account for such factors, but no study, including this one, can assure flawless comparisons.

Many readers may look to interstate financial analysis and comparisons to determine "appropriate" or "sufficient" funding for higher education, but these decisions should be made in the context of a state's objectives and circumstances. State leaders, educators, and others must work together to determine the amount and allocation of funds required to reach state goals.

SOURCES AND USES OF REVENUE

In considering a state's investment in higher education, SHEF includes all state and local revenue sources, including those from taxes, lottery receipts, mineral and resource extraction revenue, and state-funded endowments. SHEF also identifies the primary purposes, or uses, for which these public revenues are provided, including general institutional operating expenses, student financial assistance, support for centrally funded research, medical education, and extension programs.

Support for higher education represents the third largest major budget area of state spending from state and local tax sources, behind K-12 and Medicaid appropriations. In fiscal year 2018, 9.7 percent of state general funds were allocated to higher education, down from 12.9 percent in 1995.[4,5] It is generally understood that state funding for higher education acts as the "balance wheel" during economic downturns with funding reductions typically greater than reductions in other budget areas.[6] In part, this is because higher education funding reductions can be offset (in whole or part) with money from tuition increases.

This section provides data and analysis of the sources of state and local government support for higher education, focusing on the most recent five-year trend (2013-2018), during which most state budgets largely recovered from the Great Recession. This section also provides an overview of the significant uses of state support for higher education.

The funding amounts shown here are not adjusted for inflation or enrollment. Later sections of the report will show the impact of these two factors on state and local funding for higher education.

SOURCES

Table 1 presents state and local support in current unadjusted dollars for fiscal years 2013 through 2018. It shows evidence of the continued recovery of state and local funding sources for higher education since the Great Recession. In unadjusted terms, state funding grew 2 percent in the last year, from $86.5 to $88.2 billion in 2018. Together, state and local government support grew 20.3 percent from 2013, reaching an all-time high of $99 billion in 2018.

State tax appropriations remained the largest source of funds, totaling $83.9 billion (84.7 percent of all state support). Additional sources of 2018 revenue included the following:

1. Twenty-nine states reported local tax appropriations, which accounted for 12.4 percent of their total support and 10.9 percent of total support in all states. Local support, which typically funds community and technical colleges, increased 2.7 percent from $10.5 to $10.8 billion in the last year.

2. Non-tax appropriations, mostly from state lotteries, continued to grow and exceeded $3.5 billion (3.6 percent of all funds) in 2018.

4. Sigritz, B. (2018). *State expenditure report: Examining fiscal 2016-2018 state spending.* Washington, DC: National Association of State Budget Officers (NASBO). Retrieved from https://www.nasbo.org/mainsite/reports-data/state-expenditure-report

5. Unlike the SHEF data, NASBO expenditures exclude employer contribution to pensions and health benefits.

6. Delaney, J., & Doyle, W. (2011). State spending on higher education: Testing the balance wheel over time. *Journal of Education Finance*, 36(4). Retrieved from http://www.jstor.org/stable/23018116

3. State-funded endowment earnings accounted for another 0.6 percent, and non-appropriated support, often from oil and mineral extraction fees or royalties, accounted for 0.1 percent of the total funding provided by state and local governments.

4. Overall, the different sources of higher education funding have changed slightly in their distribution over time. Tax appropriations accounted for 89.1 percent of all funds in 2000 and 84.7 percent in 2018. Non-tax support increased from 1.4 percent to 3.6 percent in that time frame, while local tax appropriations increased from 8.9 percent to 10.9 percent.

USES

General operating expenses at public institutions increased 23 percent from 2013, and in 2018, they accounted for $77.7 billion, or 78.4 percent of the total state and local government funding for higher education. Additional uses included the following:

1. $10.3 billion (10.4 percent) went to special purpose appropriations for research, agricultural extension programs, and medical education. These appropriations grew 5.2 percent from 2013, more slowly than general operating expenses.

2. $10.6 billion (10.7 percent) was allocated to state-funded student financial aid programs. Over three-quarters of this aid went to students attending public institutions within a state. Since 2013, one of the worst years of the Great Recession, public student aid has increased by 24.8 percent, aid to students attending independent institutions has increased 4.3 percent, and aid to out-of-state students decreased 12.7 percent.

3. Funding for operations at independent institutions has increased 22.5 percent to $215 million since 2013, while funding for non-credit and continuing education programs has decreased 12.2 percent to $275 million. Together, these funds account for only 0.5 percent of state and local support for higher education.

4. With some exceptions, the distribution of higher education funds for the above uses has remained steady over time. There was an increase in the proportion of funding allocated to public student aid (3.6 percent to 8.3 percent). The largest decrease was in research, agricultural extension programs, and medical education, which decreased from 15.6 percent of all funds in 2000 to 10.4 percent in 2018.

TABLE 1

STATE AND LOCAL SUPPORT: DISTRIBUTION OF SOURCES AND USES, U.S., FY 2013-2018 (CURRENT DOLLARS, IN MILLIONS)

SOURCE	2013	2014	2015	2016	2017	2018	2018 % DISTRIBUTION
STATE SUPPORT							
ARRA FUNDS							
TAX APPROPRIATIONS	$69,376	$73,534	$77,416	$79,189	$82,438	$83,878	84.7%
ALL NON-TAX SUPPORT	$2,932	$3,031	$3,137	$3,261	$3,344	$3,537	3.6%
NON-APPROPRIATED SUPPORT	$92	$93	$121	$117	$123	$128	0.1%
STATE FUNDED ENDOWMENT EARNINGS	$498	$530	$483	$582	$541	$547	0.6%
OTHER[1]	$277	$323	$214	$189	$199	$220	0.2%
FUNDS NOT AVAILABLE FOR USE[2]	$72	$81	$71	$54	$158	$77	0.1%
STATE SUPPORT TOTAL	$73,103	$77,431	$81,299	$83,284	$86,487	$88,232	89.1%
LOCAL TAX APPROPRIATIONS	$9,197	$9,322	$8,973	$9,838	$10,502	$10,789	10.9%
TOTAL	**$82,300**	**$86,753**	**$90,272**	**$93,122**	**$96,989**	**$99,022**	**100.0%**
USES							
GENERAL PUBLIC OPERATIONS	$63,124	$67,261	$70,461	$73,041	$76,470	$77,614	78.4%
RESEARCH - AGRICULTURE - MEDICAL (RAM)	$9,794	$10,057	$10,002	$10,098	$10,236	$10,300	10.4%
PUBLIC STUDENT AID[3]	$6,585	$6,599	$6,922	$7,184	$7,399	$8,219	8.3%
INDEPENDENT STUDENT AID[4]	$2,270	$2,296	$2,326	$2,290	$2,319	$2,366	2.4%
OUT-OF-STATE STUDENT AID	$38	$37	$37	$34	$34	$33	0.0%
INDEPENDENT INSTITUTIONS	$176	$188	$208	$195	$215	$215	0.2%
NON-CREDIT AND CONTINUING EDUCATION	$313	$314	$317	$280	$317	$275	0.3%
TOTAL	**$82,300**	**$86,753**	**$90,272**	**$93,122**	**$96,989**	**$99,022**	**100.0%**

Percentages may not equal 100 due to rounding.

NOTES:
1. "Other" includes multiyear appropriations from previous years and funds not classified in one of the other source categories.
2. "Funds Not Available for Use" includes appropriations that were returned to the state, and portions of multiyear appropriations to be spread over other years.
3. "Public Student Aid" is state appropriated student financial aid for public institution tuition and fees. Includes aid appropriated outside the recognized state student aid program(s). Some respondents could not separate tuition aid from aid for living expenses.
4. "Independent Student Aid" is state appropriated student financial aid for students attending independent institutions in the state.

SOURCE: State Higher Education Executive Officers Association

NATIONAL TRENDS IN ENROLLMENT AND REVENUE

From this section on, the SHEF report highlights public national trends in higher education enrollment and the relationship between these trends and available revenues (and other components of financing). These national trends are composites of 50 unique and varied state trends, which are shown in the following section.

It is important to note that the U.S. totals are not averages of state averages. For example, "U.S. total educational appropriations per FTE" is the sum of all educational appropriations divided by the sum of all net FTE across the 50 states. It is not the average of each of the 50 states' individual per FTE calculations. For this reason, trends in the most populous states more strongly impact the national metrics than trends in the smallest states.

Table 2 presents a 25-year look at the SHEF Higher Education Finance Indicators and shows the impact of inflation and enrollment over time on higher education support for **public institutions**. This is a starting point for understanding the national story of public higher education funding from state and local sources, tuition revenue from students and families, and enrollment over time. The years 1993, 2008, 2013, 2017, and 2018 are shown, allowing for 25-year, 10-year, 5-year, and 1-year comparisons. While the first section of the table shows unadjusted current dollars, section two shows the impact of inflation by presenting the data in constant 2018 terms, and the third section presents the impact of both inflation and enrollment growth over time on these measures.

Over the last 25 years, total state and local support for public higher education grew 127.5 percent in unadjusted terms, from $42.3 billion in 1993 to $96.1 billion in 2018. After adjusting for inflation, state and local funding in 1993 was $80.7 billion, meaning that in constant dollars, funding increased 19.1 percent over the last 25 years. Incorporating changes in FTE enrollment, state and local funding decreased 4.2 percent since 1993. When making these comparisons, it is important to note that 25 years ago, the U.S. was at the height of the early 1990s economic recession and support for public higher education had decreased an inflation-adjusted 7 percent over the previous three years.[7]

General operations at public institutions of higher education are funded from both state and local support and tuition revenue. The SHEF report tracks net tuition revenue over time and shows that in unadjusted terms, net tuition revenue has increased 372.8 percent over the last 25 years. In constant dollars, net tuition revenue has grown 147.6 percent since 1993. The growth in net tuition revenue over the last 25 years is partially due to a 33.4 percent increase in full-time equivalent enrollment (FTE) between 1993 and 2018. Put simply, there are significantly more students paying tuition charges. Tuition revenue has also increased due to rising tuition rates and changes in enrollment mix (e.g., more non-resident students or more graduate students paying higher rates).[8] After accounting for FTE enrollment, net tuition revenue has still increased 85.6 percent since 1993.

7. See Case Study - Impact of Recessions on page 24 of the FY 15 SHEF report for more information.
8. College Board. (2018). *Trends in college pricing.* Retrieved from https://trends.collegeboard.org/sites/default/files/2018-trends-in-college-pricing.pdf

The last section of *Table 2* summarizes the combined impact of both inflation and enrollment on higher education funding. Since 1993, student FTE enrollment has increased from 8.2 million to 10.9 million FTE, while educational appropriations per FTE have declined 4.2 percent, meaning that although the U.S. was in a recession in 1993, state and local funding has not kept up with inflation and enrollment growth since that period. During that same time, net tuition revenue per FTE has increased 85.6 percent in constant dollars.

Taken together, the sum of educational appropriations and net tuition revenue per FTE has increased 22.8 percent since 1993 and 6.4 percent since 2008. In other words, net tuition revenue has more than made up for the declines in state and local funding per student since the Great Recession. However, this pattern of tuition revenue making up for lost state support is not reflected in many of the states.

The Interactive SHEF State Wave Charts highlight some states in which total educational revenue has dropped significantly since the Great Recession, like Florida, Louisiana, Missouri, Nevada, and Texas.

TABLE 2

IMPACT OF INFLATION AND ENROLLMENT ON HIGHER EDUCATION FINANCE, U.S., FY 1993-2018

	1993	2008	2013	2017	2018	1-YEAR % CHANGE	5-YEAR % CHANGE	10-YEAR % CHANGE	25-YEAR % CHANGE
CURRENT *UNADJUSTED* DOLLARS (MILLIONS)									
ARRA FUNDS									
STATE[1]	$38,822	$77,649	$70,307	$83,603	$85,343	2.1%	21.4%	9.9%	119.8%
LOCAL	$3,443	$8,084	$9,197	$10,502	$10,789	2.7%	17.3%	33.5%	213.4%
[A] STATE AND LOCAL SUPPORT FOR PUBLIC HIGHER EDUCATION	$42,264	$85,733	$79,504	$94,105	$96,132	2.2%	20.9%	12.1%	127.5%
[B] RESEARCH - AGRICULTURE - MEDICAL (RAM)	$7,078	$10,948	$9,794	$10,236	$10,300	0.6%	5.2%	-5.9%	45.5%
[C] EDUCATIONAL APPROPRIATIONS [A-B]	$35,186	$74,785	$69,709	$83,869	$85,832	2.3%	23.1%	14.8%	143.9%
[D] NET TUITION	$15,692	$41,401	$62,955	$72,583	$74,186	2.2%	17.8%	79.2%	372.8%
[E] TUITION AND FEES USED FOR DEBT SERVICE[2]		$435	$751	$727	$820	12.8%	9.2%	88.5%	
TOTAL EDUCATIONAL REVENUE [C+D-E]	**$50,878**	**$115,750**	**$131,913**	**$155,725**	**$159,197**	**2.2%**	**20.7%**	**37.5%**	**212.9%**
CONSTANT *ADJUSTED* DOLLARS (MILLIONS)									
ARRA FUNDS									
STATE	$74,123	$93,754	$77,743	$85,573	$85,343	-0.3%	9.8%	-9.0%	15.1%
LOCAL	$6,573	$9,761	$10,170	$10,750	$10,789	0.4%	6.1%	10.5%	64.1%
[A] STATE AND LOCAL SUPPORT FOR PUBLIC HIGHER EDUCATION	$80,696	$103,515	$87,913	$96,322	$96,132	-0.2%	9.3%	-7.1%	19.1%
[B] RESEARCH - AGRICULTURE - MEDICAL (RAM)	$13,514	$13,219	$10,830	$10,477	$10,300	-1.7%	-4.9%	-22.1%	-23.8%
[C] EDUCATIONAL APPROPRIATIONS [A-B]	$67,182	$90,295	$77,083	$85,845	$85,832	0.0%	11.4%	-4.9%	27.8%
[D] NET TUITION	$29,961	$49,988	$69,613	$74,293	$74,186	-0.1%	6.6%	48.4%	147.6%
[E] TUITION AND FEES USED FOR DEBT SERVICE[2]		$525	$830	$744	$820	10.2%	-1.2%	56.1%	
TOTAL EDUCATIONAL	**$97,143**	**$139,758**	**$145,865**	**$159,394**	**$159,197**	**-0.1%**	**9.1%**	**13.9%**	**63.9%**
CONSTANT *ADJUSTED* DOLLARS (PER FTE)									
FULL-TIME EQUIVALENT ENROLLMENT (FTE)[3]	8,192,597	10,205,097	11,302,579	10,948,541	10,929,357	-0.2%	-3.3%	7.1%	33.4%
EDUCATIONAL APPROPRIATIONS PER FTE	$8,200	$8,848	$6,820	$7,841	$7,853	0.2%	15.2%	-11.2%	-4.2%
NET TUITION PER FTE	$3,657	$4,898	$6,159	$6,786	$6,788	0.0%	10.2%	38.6%	85.6%
TOTAL EDUCATIONAL REVENUE PER FTE	**$11,857**	**$13,695**	**$12,906**	**$14,558**	**$14,566**	**0.1%**	**12.9%**	**6.4%**	**22.8%**

NOTES: 1. State Support excludes independent and out-of-state aid, independent operating, and non-credit funds.

2. Tuition and fees used for debt service were not reported in 1993.

3. FTE enrollment excludes medical school enrollments.

SOURCE: State Higher Education Executive Officers Association

PRIMARY SHEF METRICS

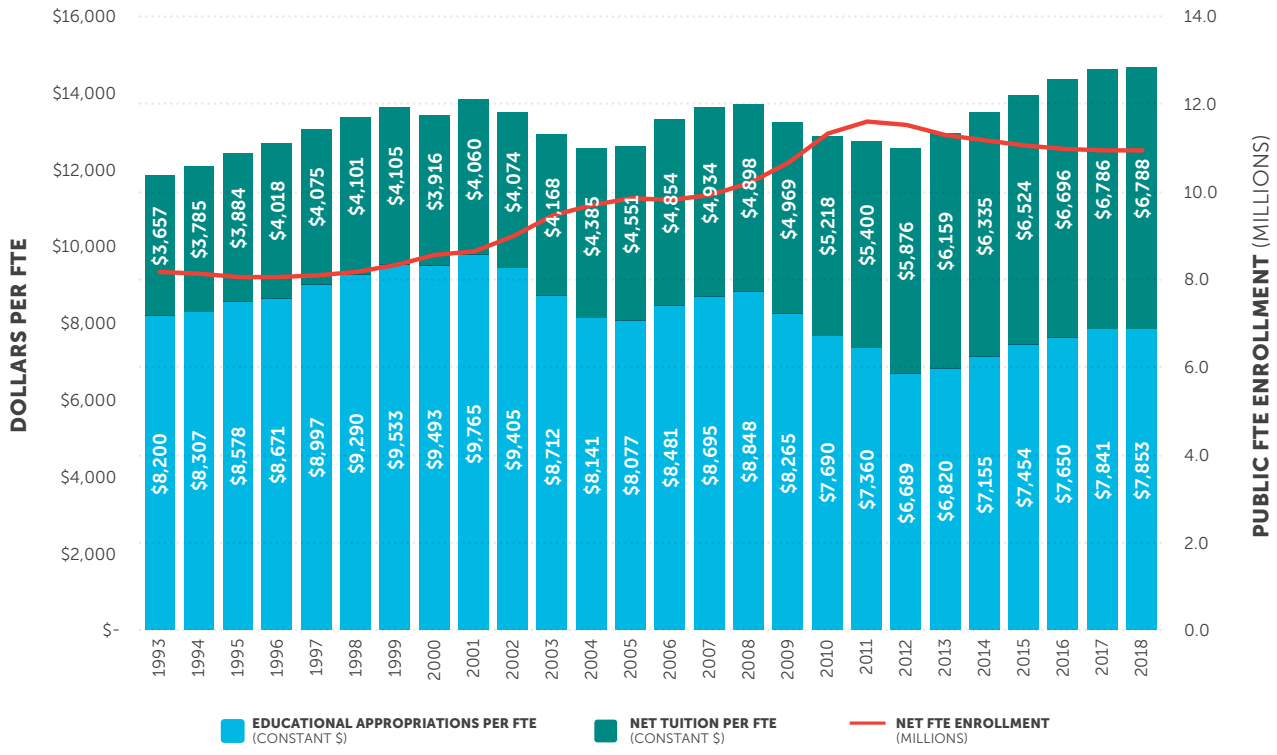
Figures 1 through *3* further explore the relationship between net tuition per FTE and educational appropriations per FTE. They also illustrate year-to-year trends over time.

The historical data in *Figure 1* (the Wave Chart) demonstrate the relationship between higher education enrollment and revenue, particularly the impact of the economic cycle on these measures over the last 25 years. *Figure 1* provides a 25-year look at each of the four SHEF metrics.

1. Full-time equivalent enrollment (FTE)—the **red trend line** in the Wave Chart
2. Educational appropriations per FTE—the **blue bars** in the Wave Chart
3. Net tuition revenue per FTE—the **green bars** in the Wave Chart
4. Total educational revenue per FTE—the total of the **blue** and **green** bars in the Wave Chart

FIGURE 1

PUBLIC FTE ENROLLMENT AND EDUCATIONAL APPROPRIATIONS PER FTE, U.S., FY 1993-2018



NOTES: 1. Net tuition revenue used for capital debt service is included in the above figures.
2. Constant 2018 dollars adjusted by SHEEO Higher Education Cost Adjustment (HECA).

SOURCE: State Higher Education Executive Officers Association

1. FULL-TIME EQUIVALENT ENROLLMENT (FTE)

In 2018, there were 10.9 million full-time equivalent (FTE) enrolled students. The rate of enrollment change usually varies from year to year and state to state in response to the economy and job market as well as underlying demographic factors. During the Great Recession, enrollment growth was even more pronounced than during prior downturns, as FTE increased from 10.2 million in 2008 to an all-time high of 11.6 million in 2011.

Nationally, enrollment has decreased in each year since the Great Recession. This is due, at least in part, to the recovering economy. Following these declines, 2018 enrollment is 5.9 percent below 2011 levels. However, enrollment decline has slowed over the last two years, decreasing only 0.3 percent in 2017 and 0.2 percent in 2018. Overall, FTE enrollment remains 7.1 percent above what it was before the Great Recession and 33.4 percent (2.7 million) higher than 25 years ago.

2. EDUCATIONAL APPROPRIATIONS

In constant dollars per student, educational appropriations remain below historic levels. *Figure 1* shows the relationship between economic downturns and educational appropriations. Appropriations grew steadily in the 1990s and reached an inflation adjusted, per FTE high of $9,765 in 2001. An economic recession in the early 2000s led to four years of declines (2002, 2003, 2004, and 2005).[9] As the economy recovered, educational appropriations increased for two years in 2006 and 2007, reaching $8,848 in 2008.

During the Great Recession, educational appropriations dropped 24.4 percent from 2008 levels for four straight years to $6,689 in 2012, despite an influx of federal funds from the American Recovery and Reinvestment Act. The unprecedented decline was primarily due to accelerating enrollment growth and a lack of proportional funding increases. Reversing this downward trend, appropriations then increased for five straight years: 2 percent in 2013, 4.9 percent in 2014, 4.2 percent in 2015, 2.6 percent in 2016, and 2.5 percent in 2017. In the last year, appropriations per FTE remained largely flat after inflation, with a 0.2 percent increase to $7,853 per student in 2018.

Despite the steady increases over the last few years, in 2018, states appropriated almost $2,000 less per student than they did in 2001, and $1,000 less than before the Great Recession. This means that **ten years after the start of the Great Recession, state funding for higher education has only halfway recovered**.

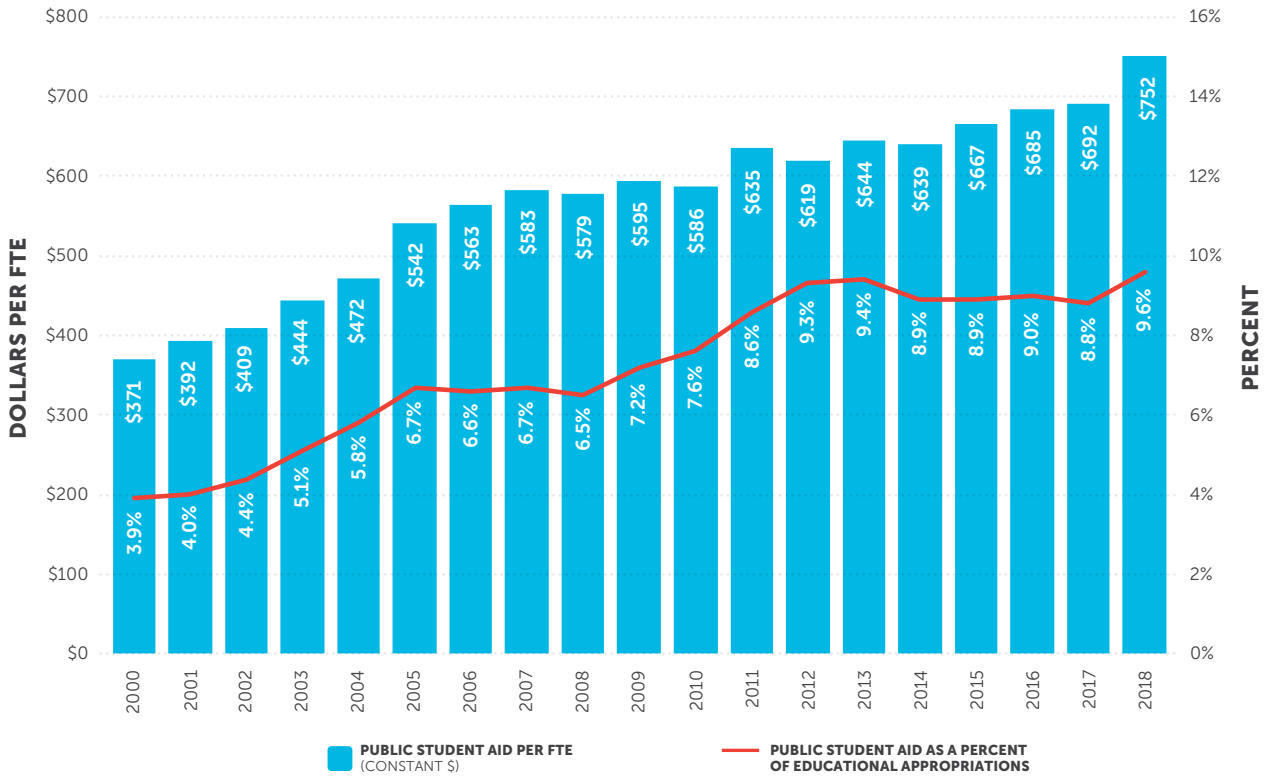
9. National Bureau of Economic Research. (2008). *The NBER's recession dating procedure.* Retrieved from http://www.nber.org/cycles/jan08bcdc_memo.html

STATE PUBLIC FINANCIAL AID

- *Figure 2* shows the change in appropriations for state funding for financial aid for students at public institutions over time. Unlike the rest of educational appropriations, state public aid has increased consistently over time. In the last year alone, state public aid increased 8.7 percent per FTE.
- On a constant dollar basis, aid has increased 102.9 percent since 2000 and 30 percent since the pre-recession high point in 2008, reaching a high of $752 per FTE in 2018. State public aid as a percent of all educational appropriations has risen from 3.9 to 9.6 percent since SHEEO began to collect this data in 2000.
- *Figure 2* shows that states largely protect financial aid during economic downturns. During the worst years of the Great Recession, from 2008-2012, aid increased 7.1 percent while appropriations dropped 24.4 percent. As a result, aid as a percent of appropriations increased from 6.5 to 9.3 percent.

FIGURE 2

PUBLIC STUDENT AID PER FTE AND AS A PERCENT OF EDUCATIONAL APPROPRIATIONS IN THE U.S., FY 2000-2018



NOTES: 1. Public student aid is state appropriated student financial aid for public institution tuition and fees.

2. Three states were excluded from this chart. Nevada is revising their public student aid data and will be included in the future. New Hampshire does not have a public student aid program. Nebraska could not separate aid for tuition and fees from aid for other expenses.

3. Constant 2018 dollars adjusted by SHEEO Higher Education Cost Adjustment (HECA).

SOURCE: State Higher Education Executive Officers Association

3. NET TUITION REVENUE

The substantial shift of responsibility for financing public higher education toward net tuition revenue (from around 25 percent to nearly 50 percent of total educational revenues) since 1990 is a significant change for U.S. higher education. On a per student, inflation-adjusted basis, net tuition revenue remained essentially flat between 2017 and 2018. However, since before the Great Recession in 2008, net tuition revenue per student has increased 38.6 percent—and it has increased 85.6 percent, in constant dollars, over the last 25 years.

This year's increase in net tuition revenue per student was the smallest increase ever since the start of the SHEF data set in 1980.

This may be due to a variety of factors including: stabilizing tuition rates,[10] decreases in out-of-state or international enrollments, and changes in the proportion of students attending more expensive institutions.

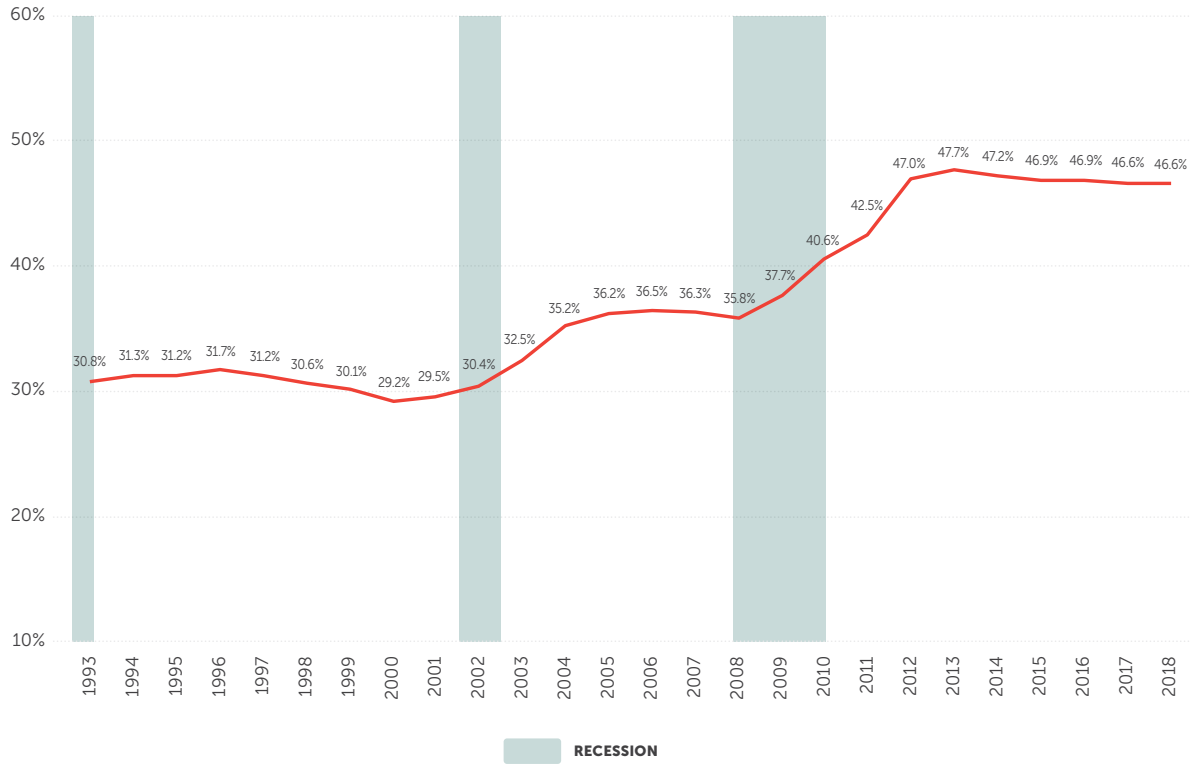
STUDENT SHARE

- *Figure 3* provides a 25-year look at the growing reliance on net tuition as a revenue source—the student share. The measure of student share shows the proportion of total educational revenue that comes from tuition dollars. Net tuition revenue excludes state and institutional financial aid but does not exclude federal financial aid or loans.
- *Figure 3* shows that as appropriations decreased, student share grew rapidly during the Great Recession, increasing from 35.8 percent in 2008 to an all-time high of 47.7 percent in 2013. Since that high point, the share from net tuition declined slightly, returning to 46.6 percent in 2018.
- The student share increases most rapidly during periods of economic recession, shifting more of the cost of higher education to students and families (see *Figure 3*). When the economy stabilizes, a new level is established. Because of this trend, student share will likely pass 50 percent during the next recession.
- The U.S. student share is drawn down by states with the highest FTE enrollment, all of which have below average student shares. **In 2018, 32 states had an above average student share, and tuition comprised more than 50 percent of total revenue in 27 states.**

10. College Board. (2018). *Trends in college pricing*. Retrieved from https://trends.collegeboard.org/sites/default/files/2018-trends-in-college-pricing.pdf

FIGURE 3

NET TUITION AS A PERCENT OF PUBLIC HIGHER EDUCATION TOTAL EDUCATIONAL REVENUE, U.S., FY 1993-2018



NOTE: Net tuition revenue used for capital debt service is included in net tuition revenue, but excluded from total educational revenue in calculating the above figures.

SOURCE: State Higher Education Executive Officers Association

4. TOTAL EDUCATIONAL REVENUE

Total educational revenue combines the two primary sources of funding for public higher education—educational appropriations and net tuition. The total resources available on a per student basis have historically changed during times of economic uncertainty. After dropping significantly during the Great Recession, total educational revenue recovered in 2015 thanks to significant increases in net tuition revenue and a slight recovery in educational appropriations.

In 2018, total educational revenue per student is higher than ever before, at $14,566 per student. This means that, **nationally, increases in net tuition revenue have more than offset reductions in state and local funding per student.** However, there is wide variation across the country, and state funding reductions have not been offset with tuition revenue in all states. Even in states with record educational revenues, not all institutions have been able to increase tuition revenues to make up for decreases in educational appropriations.

Overall, 2018 saw the least change in total educational revenue than any year since the SHEF data set began in 1980. However, this does not necessarily signify stability in funding for higher education. Instead, it shows that decreases in some states nearly exactly offset increases in others. The next section of the report, *Interstate Comparisons*, further highlights these differences.

INTERSTATE COMPARISONS

The SHEF report is a collection of 50 very different states, and the national trends reported in the previous section mask substantial variation across the nation. This section examines interstate differences more closely by illustrating state trends across the SHEF metrics of higher education financing. Our case study on differences in state recoveries since the Great Recession (see page 30) further illuminates the vast differences in higher education funding across states.

Many factors affect the relative positions of states in their levels of funding for higher education.[11] Although no analysis can account for all of these factors, SHEF makes two adjustments to reflect differences in cost of living and enrollment levels at various institution types across the states.[12] These adjustments tend to draw states closer to the national average; for example, states with a high cost of living also often support higher education at above average levels, and the cost of living index reduces the extent of their above average revenue per student. The size and direction of these adjustments vary across states:

- In states with a high cost of living, dollars per FTE are adjusted downward (e.g., Massachusetts). In states where the cost of living is below the national average, they are adjusted upward (e.g., Arkansas).
- If the proportion of enrollment in higher-cost institutions is above average, dollars per FTE are adjusted downward. In states with a relatively inexpensive enrollment mix, dollars are adjusted upward (e.g., Nevada).
- Dollars per FTE are adjusted upward the most in states with an inexpensive enrollment mix and low cost of living (e.g., Wyoming). The reverse is true for states with a more expensive enrollment mix and a higher cost of living (e.g., Hawai'i). In some states, the two factors cancel out each other (e.g., Florida).

This section illustrates the variability across states and over time concerning higher education enrollment growth, total state and local appropriations, the amount and proportion of tuition-derived revenue, and total revenue available for public educational programs. The states are shown relative to one another to provide context for the national picture shown earlier in the report. These data are presented for the last five years and since before the Great Recession.

The SHEF data are adjusted by a higher education specific cost adjustment, HECA. To view the data adjusted by CPI, visit **our website**.

11. See Case Study – The Importance of State Context on page 41 of the FY 17 SHEF report for more information.
12. For more information on these adjustments, see the data adjustment section of our https://sheeo.org/SHEF_FY18_Technical_Paper

1. FULL-TIME EQUIVALENT ENROLLMENT (FTE)

Figure 4 and the accompanying data in *Table 3* show changes in full-time equivalent (FTE) enrollment in public higher education by state.

- FTE enrollment steadily increased at public institutions in all but six years between 1980 and 2011. Enrollment peaked at 11.6 million in FY 2011 and has since decreased each year, dropping to 10.9 million in 2017 and 2018. While FTE is currently at its lowest point since 2009, the rate of decline has slowed in recent years, and FTE decreased by only 0.3 and 0.2 percent in 2017 and 2018.
- **In the last year, enrollment declined in 35 states between 2017 and 2018.** Declines ranged from 0.1 percent in Nebraska to 5.9 percent in New Mexico. FTE increases in the other 15 states ranged from 0.2 percent in Rhode Island to 2 percent in Utah.
- Since 2013, 43 states and Washington, D.C., have seen enrollment declines ranging from 0.1 percent in South Dakota to over 17 percent in Alaska and New Mexico. Seven states show enrollment increases since 2013. These increases range from 1.4 percent in Utah to 7.5 percent in Arizona (*Figure 4*).

The impact of the Great Recession can be seen in these patterns. In most states, FTE enrollment rapidly increased during the Great Recession (2008 to 2012) and has gone down in the past five years, a sign of a relatively strong economy. However, enrollment in 38 states remains above pre-recession levels (*Table 3*).[13]

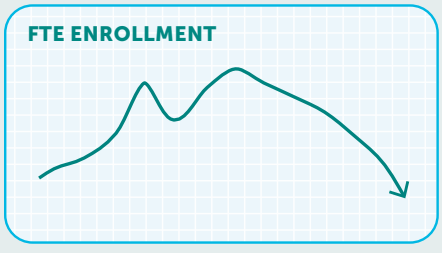
NM

STATE SPOTLIGHT: NEW MEXICO

For the last few years, New Mexico has faced some of the largest declines in net FTE enrollment. Between 2016 and 2018, enrollment declined by almost 10,000 FTE students (10.3 percent). In the last year, enrollment decreased 4.2 percent at 2-year institutions and 7.4 percent at 4-year institutions.

The per-FTE metrics we share in this section are impacted by the enrollment declines in New Mexico and other states. The result is that educational appropriations and total educational revenue in New Mexico appear to have increased, while gross educational appropriations actually declined slightly between 2017 and 2018.

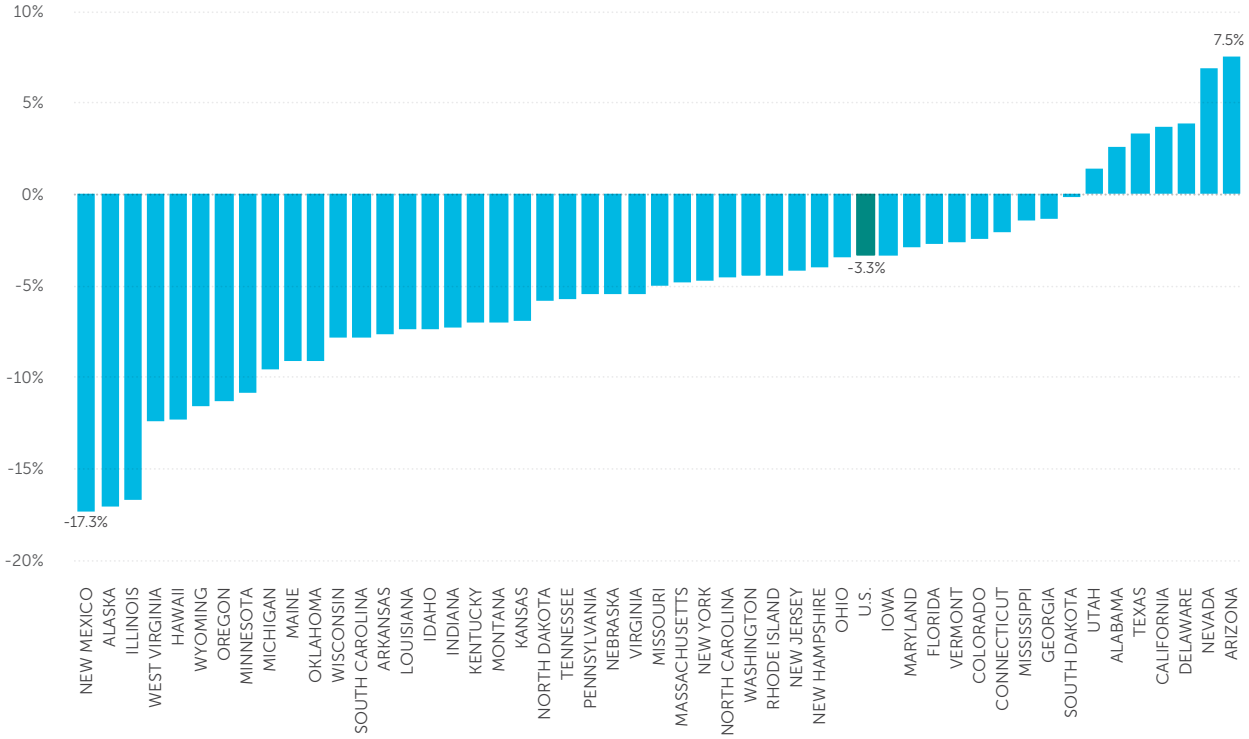
The enrollment decline in New Mexico is expected to continue through 2019 due, partially, to rising tuition and decreasing unemployment rates, which are correlated with lower postsecondary enrollment.[14,15]



13. Figures showing the change in FTE and other metrics since before the Great Recession are available on the SHEEO website.
14. Dyer, J. (2018). UNM sees steep freshman falloff. *Albuquerque Journal.* Retrieved from https://www.abqjournal.com/1235701/unm-sees-steep-freshman-falloff-176-drop-ndash-a-total-of-566-students-ndash-creates-97m-shortfall.html
15. Bureau of Labor Statistics, 2016 and 2018.

FIGURE 4

PUBLIC HIGHER EDUCATION FULL-TIME EQUIVALENT (FTE) ENROLLMENT: PERCENT CHANGE, FY 2013-2018



NOTE: Full-time equivalent enrollment equates student credit hours to full-time, academic year students, but excludes medical students

SOURCE: State Higher Education Executive Officers Association

TABLE 3

PUBLIC HIGHER EDUCATION FULL-TIME EQUIVALENT (FTE) ENROLLMENT

	FY 2008 (PRE-RECESSION)	FY 2013	FY 2017	FY 2018	1-YEAR % CHANGE	5-YEAR % CHANGE	CHANGE SINCE RECESSION
ALABAMA	187,086	197,110	198,619	202,189	1.8%	2.6%	8.1%
ALASKA	18,703	21,131	18,452	17,515	-5.1%	-17.1%	-6.4%
ARIZONA	233,255	270,644	286,335	290,816	1.6%	7.5%	24.7%
ARKANSAS	105,247	124,157	114,976	114,664	-0.3%	-7.6%	8.9%
CALIFORNIA	1,507,467	1,501,945	1,536,241	1,556,971	1.3%	3.7%	3.3%
COLORADO	164,638	188,405	182,212	183,875	0.9%	-2.4%	11.7%
CONNECTICUT	77,088	87,810	90,404	86,008	-4.9%	-2.1%	11.6%
DELAWARE	31,619	34,715	35,554	36,073	1.5%	0.0%	14.1%
FLORIDA	540,784	619,179	597,293	602,675	0.9%	-2.7%	11.4%
GEORGIA	310,759	354,989	347,479	350,448	0.9%	-1.3%	12.8%
HAWAII	35,469	41,094	36,827	36,030	-2.2%	-12.3%	1.6%
IDAHO	43,968	57,837	53,116	53,570	0.9%	-7.4%	21.8%
ILLINOIS	358,679	373,403	326,452	311,101	-4.7%	-16.7%	-13.3%
INDIANA	222,837	238,011	222,151	220,665	-0.7%	-7.3%	-1.0%
IOWA	115,011	129,669	126,555	125,333	-1.0%	-3.3%	9.0%
KANSAS	121,743	134,175	126,156	124,958	-0.9%	-6.9%	2.6%
KENTUCKY	142,382	155,586	147,167	144,747	-1.6%	-7.0%	1.7%
LOUISIANA	165,255	174,552	160,057	161,670	1.0%	-7.4%	-2.2%
MAINE	35,533	37,342	34,287	33,945	-1.0%	-9.1%	-4.5%
MARYLAND	207,255	238,814	232,963	231,777	-0.5%	-2.9%	11.8%
MASSACHUSETTS	148,288	171,974	165,736	163,673	-1.2%	-4.8%	10.4%
MICHIGAN	395,019	411,770	378,495	372,155	-1.7%	-9.6%	-5.8%
MINNESOTA	196,014	210,332	189,951	187,705	-1.2%	-10.8%	-4.2%
MISSISSIPPI	117,532	132,114	130,623	130,279	-0.3%	-1.4%	10.8%
MISSOURI	164,160	196,659	195,255	186,862	-4.3%	-5.0%	13.8%
MONTANA	35,556	40,169	38,076	37,371	-1.9%	-7.0%	5.1%
NEBRASKA	75,451	81,175	76,899	76,790	-0.1%	-5.4%	1.8%
NEVADA	63,324	65,917	69,104	70,450	1.9%	6.9%	11.3%
NEW HAMPSHIRE	32,982	39,224	38,156	37,643	-1.3%	-4.0%	14.1%
NEW JERSEY	238,040	276,052	266,194	264,441	-0.7%	-4.2%	11.1%
NEW MEXICO	85,203	101,239	89,020	83,747	-5.9%	-17.3%	-1.7%
NEW YORK	526,538	571,693	549,948	545,107	-0.9%	-4.7%	3.5%
NORTH CAROLINA	357,601	410,622	389,604	392,138	0.7%	-4.5%	9.7%
NORTH DAKOTA	34,955	37,122	35,728	34,963	-2.1%	-5.8%	0.0%
OHIO	375,932	400,796	390,840	387,109	-1.0%	-3.4%	3.0%
OKLAHOMA	131,191	144,138	133,682	131,083	-1.9%	-9.1%	-0.1%
OREGON	129,626	160,939	144,148	142,723	-1.0%	-11.3%	10.1%
PENNSYLVANIA	343,043	364,468	348,838	344,704	-1.2%	-5.4%	0.5%
RHODE ISLAND	30,120	31,699	30,246	30,316	0.2%	-4.4%	0.7%
SOUTH CAROLINA	149,541	178,240	167,414	164,402	-1.8%	-7.8%	9.9%
SOUTH DAKOTA	29,595	32,945	32,295	32,899	1.9%	-0.1%	11.2%
TENNESSEE	173,706	196,097	185,513	184,976	-0.3%	-5.7%	6.5%
TEXAS	804,918	1,019,173	1,034,453	1,052,885	1.8%	3.3%	30.8%
UTAH	103,320	123,851	123,075	125,550	2.0%	1.4%	21.5%
VERMONT	19,875	21,259	20,782	20,713	-0.3%	-2.6%	4.2%
VIRGINIA	281,940	320,481	305,307	303,300	-0.7%	-5.4%	7.6%
WASHINGTON	221,264	248,273	239,481	237,289	-0.9%	-4.4%	7.2%
WEST VIRGINIA	73,525	78,458	69,939	68,746	-1.7%	-12.4%	-6.5%
WISCONSIN	219,006	229,463	213,143	211,610	-0.7%	-7.8%	-3.4%
WYOMING	23,054	25,669	23,300	22,699	-2.6%	-11.6%	-1.5%
U.S.	**10,205,097**	**11,302,579**	**10,948,541**	**10,929,357**	**-0.2%**	**-3.3%**	**7.1%**
DISTRICT OF COLUMBIA	N/A	3,945	3,239	2,933	-9.4%	-25.7%	N/A

NOTES: 1. Full-time equivalent enrollment equates student credit hours to full-time, academic year students, but excludes medical students.
2. The U.S. calculation does not include the District of Columbia.

SOURCE: State Higher Education Executive Officers Association

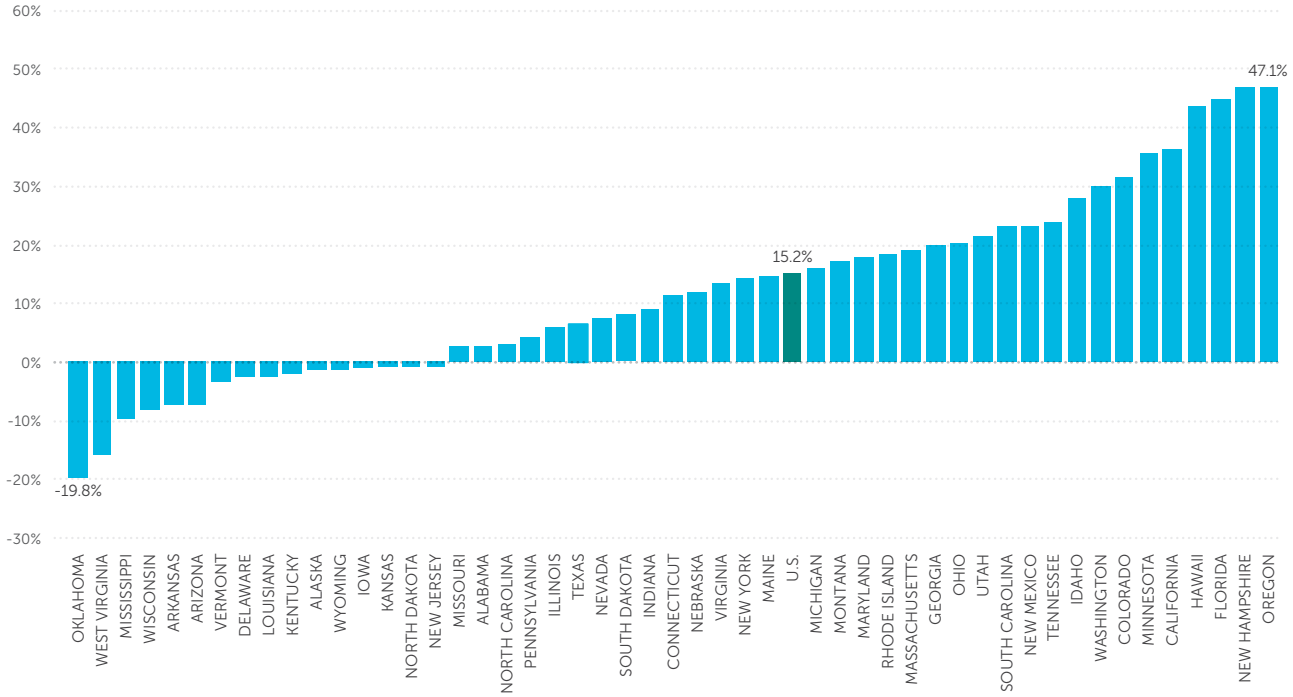
2. EDUCATIONAL APPROPRIATIONS

Figure 5 and the accompanying data in *Table 4* show the percent change by state in higher educational appropriations per FTE student over the past five years. **When reviewing these tables, it is important to note that, for many states, five years ago (2013) was the historic low point of the Great Recession for educational appropriations.**

- At the national level and after adjusting for inflation, there was almost no change in educational appropriations per FTE between 2017 and 2018. However, this figure masks considerable variation across the states. **Twenty-two states saw declines in educational appropriations in the last year**, with per-FTE decreases ranging from .05 percent ($3) in Montana to 14.2 percent ($1,364) in North Dakota. Increases ranged from .01 percent ($1) in Maine to 8.6 percent ($562) in Florida. Florida's appropriation increase is concentrated in additional funding for state financial aid.
- Overall, per student appropriations in many states were stable over the last year. The year-over-year change in educational appropriations per FTE was less than 1 percent in 14 states, indicating that a number of states were able to keep up with changes in inflation and enrollment.
- The majority of states have seen increases in appropriations since 2013. Of the 34 states with per-FTE increases, the highest are in Oregon, New Hampshire, and Florida (*Figure 5*). The largest decreases are in Oklahoma, West Virginia, and Mississippi. Nationally, appropriations are 15.2 percent above their 2013 level.
- States vary widely in their recovery since the Great Recession. Nine states have reached or surpassed their pre-recession high point in 2008, and 17 states remain at least 20 percent below their pre-recession per student educational appropriations. *For more detail on how states have recovered since the Great Recession, see* page 30.

FIGURE 5

PUBLIC HIGHER EDUCATION EDUCATIONAL APPROPRIATIONS PER FTE: PERCENT CHANGE, FY 2013-2018



NOTES:
1. Educational appropriations are a measure of state and local support available for public higher education operating expenses including ARRA funds, and exclude appropriations for independent institutions, financial aid for students attending independent institutions, research, hospitals, and medical education.
2. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time.

SOURCE: State Higher Education Executive Officers Association

STATE SPOTLIGHT: ILLINOIS

Higher education finance data for Illinois continue to be outliers in the 2018 SHEF report, with educational appropriations nearly twice the U.S. average on a per student basis in 2018 and 30 percent above 2008 levels.

*The significant increase in SHEF educational appropriations over the last decade is driven **entirely** by the state's efforts to address its historically underfunded state retirement pension system. The proportion of total funding spent on the state pension system has increased from 13.6 percent in 2008 to 46.4 percent in 2018.*

Adding further complexity to Illinois's SHEF data in 2016 and 2017, the state did not pass a budget and therefore had no funding for higher education. The SHEF appropriations shown in these years are actually funds released in 2018 that partially restored 2016 and 2017 funds.

Click here to read more and for additional data.

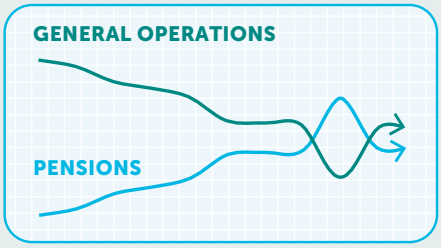


TABLE 4

EDUCATIONAL APPROPRIATIONS PER FTE (CONSTANT ADJUSTED 2018 DOLLARS)

	FY 2008 (PRE-RECESSION)	FY 2013	FY 2017	FY 2018	INDEX TO U.S. AVERAGE	1-YEAR % CHANGE	5-YEAR % CHANGE	CHANGE SINCE RECESSION
ALABAMA	$10,772	$6,606	$6,894	$6,788	0.86	-1.5%	2.8%	-37.0%
ALASKA	$15,076	$15,362	$15,003	$15,151	1.93	1.0%	-1.4%	0.5%
ARIZONA	$8,493	$5,416	$5,087	$5,025	0.64	-1.2%	-7.2%	-40.8%
ARKANSAS	$9,389	$8,489	$8,086	$7,873	1.00	-2.6%	-7.3%	-16.1%
CALIFORNIA	$7,876	$6,281	$8,355	$8,553	1.09	2.4%	36.2%	8.6%
COLORADO	$4,724	$3,193	$4,216	$4,198	0.53	-0.4%	31.5%	-11.1%
CONNECTICUT	$10,703	$7,288	$8,641	$8,123	1.03	-6.0%	11.5%	-24.1%
DELAWARE	$6,662	$4,966	$4,976	$4,841	0.62	-2.7%	-2.5%	-27.3%
FLORIDA	$8,556	$4,910	$6,547	$7,109	0.90	8.6%	44.8%	-16.9%
GEORGIA	$10,607	$7,631	$8,841	$9,166	1.17	3.7%	20.1%	-13.6%
HAWAII	$11,774	$8,747	$11,664	$12,560	1.60	7.7%	43.6%	6.7%
IDAHO	$12,142	$7,699	$9,794	$9,857	1.25	0.6%	28.0%	-18.8%
ILLINOIS	$11,261	$13,785	$15,869	$14,605	1.86	-8.0%	6.0%	29.7%
INDIANA	$7,070	$6,230	$6,922	$6,785	0.86	-2.0%	8.9%	-4.0%
IOWA	$7,993	$6,059	$6,187	$5,992	0.76	-3.2%	-1.1%	-25.0%
KANSAS	$8,354	$6,943	$6,788	$6,885	0.88	1.4%	-0.8%	-17.6%
KENTUCKY	$10,068	$7,666	$7,512	$7,514	0.96	0.0%	-2.0%	-25.4%
LOUISIANA	$9,748	$6,024	$5,512	$5,876	0.75	6.6%	-2.5%	-39.7%
MAINE	$7,946	$6,752	$7,749	$7,750	0.99	0.0%	14.8%	-2.5%
MARYLAND	$7,684	$6,291	$7,404	$7,426	0.95	0.3%	18.0%	-3.4%
MASSACHUSETTS	$8,675	$6,349	$7,540	$7,556	0.96	0.2%	19.0%	-12.9%
MICHIGAN	$7,903	$5,833	$6,714	$6,773	0.86	0.9%	16.1%	-14.3%
MINNESOTA	$8,437	$5,714	$7,306	$7,758	0.99	6.2%	35.8%	-8.1%
MISSISSIPPI	$9,889	$7,365	$7,572	$6,655	0.85	-12.1%	-9.6%	-32.7%
MISSOURI	$9,367	$6,778	$6,857	$6,958	0.89	1.5%	2.7%	-25.7%
MONTANA	$6,413	$5,391	$6,324	$6,321	0.80	-0.1%	17.2%	-1.4%
NEBRASKA	$9,212	$8,660	$9,951	$9,699	1.23	-2.5%	12.0%	5.3%
NEVADA	$11,179	$7,519	$7,681	$8,094	1.03	5.4%	7.6%	-27.6%
NEW HAMPSHIRE	$3,918	$1,909	$2,772	$2,806	0.36	1.2%	47.0%	-28.4%
NEW JERSEY	$8,680	$6,375	$6,529	$6,339	0.81	-2.9%	-0.6%	-27.0%
NEW MEXICO	$11,740	$8,775	$10,496	$10,816	1.38	3.0%	23.3%	-7.9%
NEW YORK	$8,295	$7,601	$8,430	$8,697	1.11	3.2%	14.4%	4.8%
NORTH CAROLINA	$12,496	$10,108	$10,415	$10,429	1.33	0.1%	3.2%	-16.5%
NORTH DAKOTA	$7,180	$8,323	$9,637	$8,273	1.05	-14.2%	-0.6%	15.2%
OHIO	$7,020	$5,286	$6,389	$6,361	0.81	-0.4%	20.3%	-9.4%
OKLAHOMA	$10,001	$7,988	$6,689	$6,407	0.82	-4.2%	-19.8%	-35.9%
OREGON	$6,232	$4,240	$6,057	$6,237	0.79	3.0%	47.1%	0.1%
PENNSYLVANIA	$6,629	$4,124	$4,280	$4,296	0.55	0.4%	4.2%	-35.2%
RHODE ISLAND	$6,879	$5,110	$5,880	$6,061	0.77	3.1%	18.6%	-11.9%
SOUTH CAROLINA	$7,917	$4,914	$5,910	$6,053	0.77	2.4%	23.2%	-23.5%
SOUTH DAKOTA	$7,317	$5,903	$6,808	$6,378	0.81	-6.3%	8.0%	-12.8%
TENNESSEE	$10,212	$7,082	$8,402	$8,774	1.12	4.4%	23.9%	-14.1%
TEXAS	$9,419	$7,235	$8,024	$7,707	0.98	-3.9%	6.5%	-18.2%
UTAH	$8,651	$5,960	$7,233	$7,250	0.92	0.2%	21.6%	-16.2%
VERMONT	$3,423	$2,946	$2,787	$2,846	0.36	2.1%	-3.4%	-16.9%
VIRGINIA	$6,664	$4,771	$5,643	$5,420	0.69	-4.0%	13.6%	-18.7%
WASHINGTON	$8,034	$5,355	$7,009	$6,966	0.89	-0.6%	30.1%	-13.3%
WEST VIRGINIA	$7,108	$5,610	$4,865	$4,723	0.60	-2.9%	-15.8%	-33.6%
WISCONSIN	$8,271	$7,002	$6,335	$6,435	0.82	1.6%	-8.1%	-22.2%
WYOMING	$17,855	$18,245	$18,451	$18,001	2.29	-2.4%	-1.3%	0.8%
U.S.	**$8,848**	**$6,820**	**$7,841**	**$7,853**	**1.00**	**0.2%**	**15.2%**	**-11.2%**
DISTRICT OF COLUMBIA	N/A	$12,922	$9,986	$11,092	1.41	11.1%	-14.2%	N/A

NOTES:
1. Educational appropriations are a measure of state and local support available for public higher education operating expenses including ARRA funds, and exclude appropriations for independent institutions, financial aid for students attending independent institutions, research, hospitals, and medical education.
2. The U.S. calculation does not include the District of Columbia.
3. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time. The District of Columbia is not adjusted for COLI or EMI.

SOURCE: State Higher Education Executive Officers Association

CASE STUDY PREVIEW:
TEN YEARS OUT – STATE RECOVERY FROM THE GREAT RECESSION

Recent SHEF reports have focused on the national impact of the Great Recession from 2008 to 2012 and the period of slow recovery that followed. Of course, these national trends data mask significant variation among the 50 states.

Some states demonstrated recession conditions until very recently, while nationally, recovery began in 2013. Some states are still well below pre-recession levels of state funding while a handful have recovered. Most states have increased tuition revenues to more than make up for cuts in state funding for higher education, but some still have less total revenue than before the Great Recession.

This case study provides an analysis of how well states have recovered from the Great Recession. We consider the depth of cuts in state funding, recovery of total educational revenues and the sources of that recovery, and changes in state financial aid. Highlights include:

- *The states in which higher education was hit the hardest by the Great Recession, each with a 40 percent or greater cut to state appropriations per student, were Arizona, Florida, Idaho, New Hampshire, Oregon, Pennsylvania, and South Carolina.*
- *Only Illinois and North Dakota saw no decline in state educational appropriations per FTE during the Great Recession.*
- *Public institutions in 15 states have less total revenue available for general operations now than ten years ago.*
- *Almost half of states recovered total revenues by increasing net tuition revenue per FTE by at least 25 percent.*
- *In the majority of states, state funding has only partially recovered since the Great Recession.*
- *Only five states that faced a decline during the recession (Alaska, California, Hawai'i, New York, and Wyoming) recovered their total revenues at least in part by increasing state educational appropriations per FTE to prior levels.*
- *Most states protected student financial aid during the Great Recession, and 27 states have increased per-student state public aid since 2008.*

Click here to read the full case study.

3. NET TUITION REVENUE

Figure 6 shows net tuition revenue as a percentage of total educational revenue for public higher education by state for 2018. The accompanying data in *Table 5* show the constant dollar values of net tuition revenue per FTE by state.

- Net tuition revenue per FTE in the U.S. was essentially flat between 2017 and 2018 after accounting for inflation. In fact, 2018 saw the smallest increase on record in net tuition revenue per student (0.03 percent). Tuition revenue increased in just over half of all states and Washington, D.C. The largest increase was in Wyoming (19.3 percent), with a year-over-year tuition revenue increase of $616 per FTE.
- Twenty-two states saw declines in tuition revenue per FTE in the last year, the largest of which were 15.5 percent in Florida ($510 per FTE) and 8 percent in Louisiana ($464 per FTE). Decreases in constant dollar net tuition revenue per FTE should not be construed as being driven entirely by changes in tuition rates. Changes may occur due to increases in state financial aid, more students attending institutions with lower tuition and fees, and fewer out-of-state or international enrollments.
- All but five states (Florida, Idaho, Missouri, New Hampshire, and Ohio) have increased tuition revenue per FTE in the last five years. Washington D.C., had the largest five-year increase (45.9 percent, or $688 per FTE) between 2013 and 2018. Arkansas, Connecticut, South Carolina, Oklahoma, and Wyoming had tuition revenue increases above 30 percent in the last five years.
- Since 2008, net tuition revenue per FTE has increased beyond inflation in every state and has increased by more than 50 percent in 14 states. Some states have had substantial tuition increases but still have some of the lowest per FTE tuition revenue in the country. For example, Georgia has had the largest increase since the Great Recession (96 percent) yet still receives fewer tuition dollars per FTE than 41 other states (*Table 5*).
- *Figure 6* shows that states vary widely in net tuition as a percent of total revenue (the student share), from 17.5 percent in Wyoming to 87 percent in Vermont. Since 2008, the student share has increased in all states, yet the relative positions in *Figure 6* have largely stayed constant; states do not generally move from below average to above average.
- Thirty-two states are above the national average student share of 46.4 percent. Twenty-seven states are above a 50 percent student share. **This means that public higher education is more dependent on tuition revenue than educational appropriations in over half of all states.**

STATE SPOTLIGHT: FLORIDA

Florida's 15.5 percent decrease in net tuition revenue per FTE enrollment in the last year is mainly due to a substantial increase in public student aid through the Bright Futures merit scholarship.[16] On a per student basis, public student aid almost doubled, from $564 in 2017 to $1,022 in 2018.

These increases, which are expected to continue in 2019, restore Florida's state financial aid programs to levels seen before the Great Recession.

The SHEF data include state funded financial aid in educational appropriations and subtract those dollars from net tuition revenue.

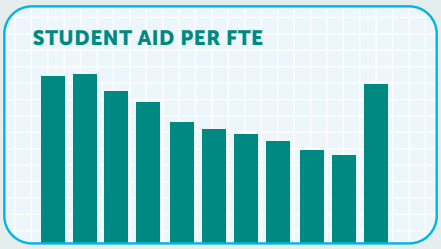
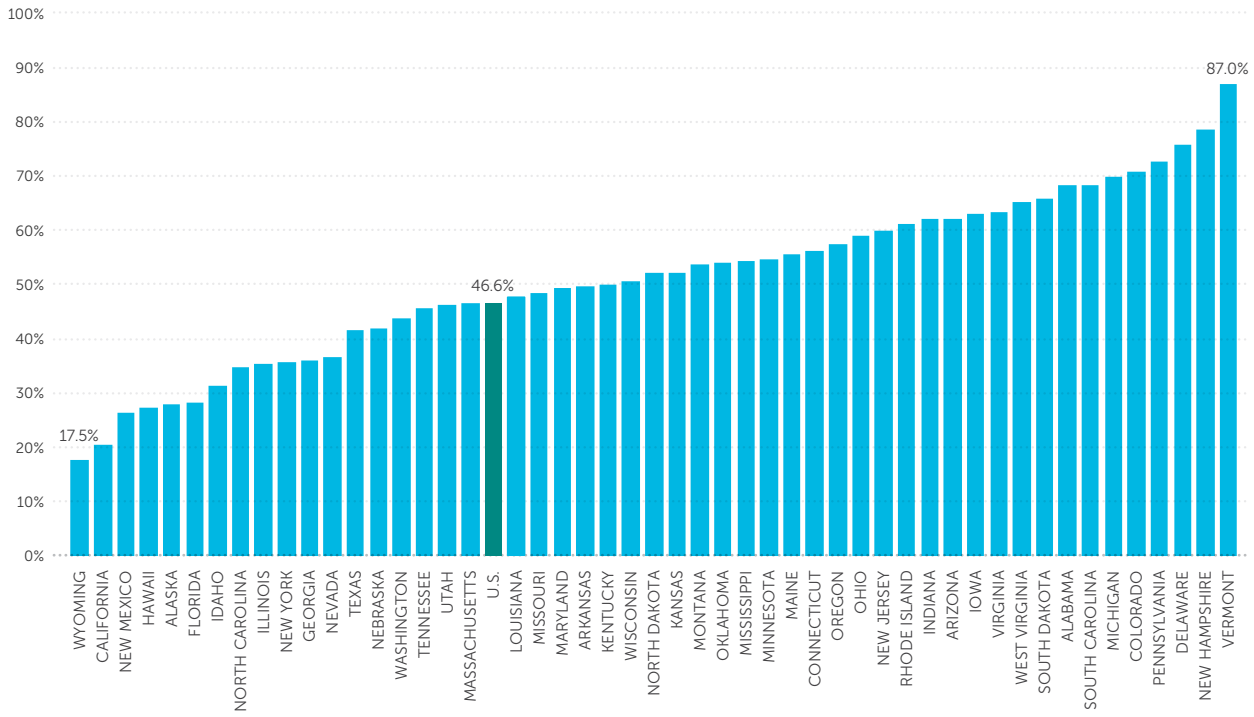


FIGURE 6

NET TUITION AS A PERCENT OF TOTAL EDUCATIONAL REVENUE, FY 2018



NOTES:
1. Net tuition revenue is calculated by taking the gross amount of tuition and fees, less state and institutional financial aid, tuition waivers or discounts, and medical student tuition and fees. Net tuition revenue used for capital debt service is included in the net tuition revenue figures above.
2. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time.

SOURCE: State Higher Education Executive Officers Association

16. Florida Office of Economic and Demographic Research (2018). *Education estimating conference on student financial aid.* Retrieved from http://edr.state.fl.us/Content/conferences/financialaid/ConferenceResults.pdf

TABLE 5

PUBLIC HIGHER EDUCATION NET TUITION REVENUE PER FTE (CONSTANT ADJUSTED 2018 DOLLARS)

	FY 2008 (PRE-RECESSION)	FY 2013	FY 2017	FY 2018	INDEX TO U.S. AVERAGE	1-YEAR % CHANGE	5-YEAR % CHANGE	CHANGE SINCE RECESSION
ALABAMA	$7,329	$11,703	$13,566	$12,873	1.90	-5.1%	10.0%	75.7%
ALASKA	$5,051	$5,307	$5,668	$5,837	0.86	3.0%	10.0%	15.6%
ARIZONA	$4,655	$6,263	$7,855	$7,747	1.14	-1.4%	23.7%	66.4%
ARKANSAS	$4,805	$5,014	$6,749	$6,808	1.00	0.9%	35.8%	41.7%
CALIFORNIA	$1,267	$2,057	$2,224	$2,195	0.32	-1.3%	6.7%	73.2%
COLORADO	$6,260	$8,316	$9,797	$10,224	1.51	4.4%	22.9%	63.3%
CONNECTICUT	$6,956	$7,592	$9,817	$10,416	1.53	6.1%	37.2%	49.8%
DELAWARE	$10,266	$13,694	$13,983	$14,555	2.14	4.1%	6.3%	41.8%
FLORIDA	$2,315	$3,372	$3,303	$2,792	0.41	-15.5%	-17.2%	20.6%
GEORGIA	$2,635	$4,864	$5,354	$5,173	0.76	-3.4%	6.3%	96.3%
HAWAII	$3,271	$4,420	$4,883	$4,752	0.70	-2.7%	7.5%	45.3%
IDAHO	$2,922	$4,623	$4,788	$4,463	0.66	-6.8%	-3.5%	52.8%
ILLINOIS	$4,938	$6,533	$7,552	$7,777	1.15	3.0%	19.0%	57.5%
INDIANA	$7,587	$10,228	$10,859	$10,745	1.58	-1.0%	5.1%	41.6%
IOWA	$7,453	$9,067	$9,969	$10,162	1.50	1.9%	12.1%	36.4%
KANSAS	$5,429	$6,653	$7,596	$7,522	1.11	-1.0%	13.1%	38.6%
KENTUCKY	$5,871	$6,901	$7,595	$7,482	1.10	-1.5%	8.4%	27.4%
LOUISIANA	$2,892	$4,686	$5,805	$5,341	0.79	-8.0%	14.0%	84.7%
MAINE	$7,916	$9,290	$9,290	$9,718	1.43	4.6%	4.6%	22.8%
MARYLAND	$6,267	$6,905	$7,125	$7,246	1.07	1.7%	4.9%	15.6%
MASSACHUSETTS	$5,858	$5,445	$5,791	$6,558	0.97	13.2%	20.4%	11.9%
MICHIGAN	$10,511	$13,373	$15,337	$15,735	2.32	2.6%	17.7%	49.7%
MINNESOTA	$6,579	$9,204	$9,300	$9,348	1.38	0.5%	1.6%	42.1%
MISSISSIPPI	$5,798	$6,849	$7,723	$7,890	1.16	2.2%	15.2%	36.1%
MISSOURI	$6,445	$6,830	$6,234	$6,523	0.96	4.6%	-4.5%	1.2%
MONTANA	$6,304	$6,748	$7,247	$7,348	1.08	1.4%	8.9%	16.6%
NEBRASKA	$4,905	$6,233	$6,894	$6,953	1.02	0.9%	11.6%	41.8%
NEVADA	$3,255	$4,334	$4,731	$4,644	0.68	-1.8%	7.2%	42.7%
NEW HAMPSHIRE	$9,386	$10,741	$10,324	$10,268	1.51	-0.5%	-4.4%	9.4%
NEW JERSEY	$7,334	$8,398	$9,852	$9,470	1.39	-3.9%	12.8%	29.1%
NEW MEXICO	$2,560	$3,475	$3,546	$3,862	0.57	8.9%	11.1%	50.9%
NEW YORK	$3,560	$4,223	$4,853	$4,834	0.71	-0.4%	14.5%	35.8%
NORTH CAROLINA	$3,745	$4,602	$5,536	$5,515	0.81	-0.4%	19.8%	47.3%
NORTH DAKOTA	$7,654	$8,188	$8,852	$8,998	1.33	1.6%	9.9%	17.6%
OHIO	$8,138	$9,300	$9,093	$9,113	1.34	0.2%	-2.0%	12.0%
OKLAHOMA	$4,606	$5,715	$7,187	$7,531	1.11	4.8%	31.8%	63.5%
OREGON	$5,514	$6,992	$8,186	$8,375	1.23	2.3%	19.8%	51.9%
PENNSYLVANIA	$8,815	$10,306	$11,438	$11,432	1.68	-0.1%	10.9%	29.7%
RHODE ISLAND	$7,578	$8,909	$8,926	$9,559	1.41	7.1%	7.3%	26.1%
SOUTH CAROLINA	$6,811	$8,252	$9,910	$11,168	1.64	12.7%	35.3%	64.0%
SOUTH DAKOTA	$6,960	$9,657	$10,378	$10,114	1.49	-2.5%	4.7%	45.3%
TENNESSEE	$4,854	$6,389	$7,148	$7,133	1.05	-0.2%	11.6%	46.9%
TEXAS	$4,890	$4,968	$5,501	$5,480	0.81	-0.4%	10.3%	12.1%
UTAH	$4,354	$5,559	$6,207	$6,236	0.92	0.5%	12.2%	43.2%
VERMONT	$13,219	$14,235	$15,041	$14,907	2.19	-0.9%	4.7%	12.8%
VIRGINIA	$6,054	$7,906	$9,030	$9,241	1.36	2.3%	16.9%	52.7%
WASHINGTON	$3,423	$5,344	$5,287	$5,437	0.80	2.8%	1.7%	58.8%
WEST VIRGINIA	$5,252	$5,942	$7,322	$7,468	1.10	2.0%	25.7%	42.2%
WISCONSIN	$4,887	$6,093	$6,581	$6,558	0.97	-0.3%	7.6%	34.2%
WYOMING	$3,132	$2,885	$3,186	$3,801	0.56	19.3%	31.8%	21.4%
U.S.	**$4,898**	**$6,159**	**$6,786**	**$6,788**	**1.00**	**0.0%**	**10.2%**	**38.6%**
DISTRICT OF COLUMBIA	N/A	$7,535	$10,309	$10,997	1.62	6.7%	45.9%	N/A

NOTES:
1. Net tuition revenue is calculated by taking the gross amount of tuition and fees, less state and institutional financial aid, tuition waivers or discounts, and medical student tuition and fees. Net tuition revenue used for capital debt service is included in the net tuition revenue figures above.
2. The U.S. calculation does not include the District of Columbia.
3. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time. The District of Columbia is not adjusted for COLI or EMI.

SOURCE: State Higher Education Executive Officers Association

4. TOTAL EDUCATIONAL REVENUE

Figure 7 (and the accompanying data in *Table 6*) shows the percent change by state in total educational revenue per FTE in public higher education over the last five years. Total educational revenue is the sum of resources from the two primary revenue sources for public higher education institutions, educational appropriations and tuition.[17]

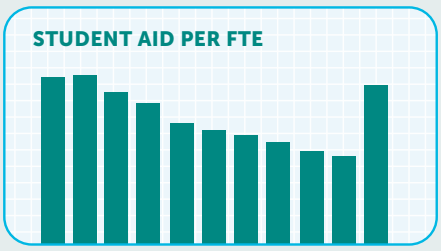
- *Table 6* shows that on a constant dollar basis, total educational revenue per FTE increased just 0.1 percent nationally from 2017 to 2018 and is now the highest we have seen going back to 1980.
- Twenty-nine states saw increases, ranging from 0.1 percent in Pennsylvania to 7.4 percent in South Carolina. The largest increase was 8.8 percent in Washington, D.C. Only two states had decreases in total revenue per FTE larger than 5 percent: North Dakota (6.6 percent) and Illinois (5 percent).
- After adjusting for inflation, changes to total educational revenue per FTE over the last year were less than 1 percent in 21 states.
- *Figure 7* shows that, nationally, total revenue per FTE increased 12.9 percent between 2013 and 2018, and Missouri and Wisconsin were the only states with five-year decreases (0.9 and 0.8 percent, respectively). The largest increases since 2013 were in Hawai'i and South Carolina (31.5 percent and 30.7 percent).
- However, 16 states are still below their pre-recession levels in total educational revenue. Of those states, Louisiana, Missouri, and Nevada are still at least 10 percent below their pre-recession total educational revenue. The case study on page 30 explores the range of revenue recovery across states since the Great Recession.

STATE SPOTLIGHT: MISSOURI

Like most states, Missouri saw sharp declines in total educational revenue per FTE during the Great Recession. However, Missouri is the only state in which total revenue has continued to decline since the height of the Great Recession in 2012.

The reasons for this are twofold. First, educational appropriations in Missouri are at a near low, about $2,400 below what they were ten years ago. Second, for over a decade, Missouri has restricted tuition rate increases to the rate of inflation,[18] and net tuition revenues per FTE have increased only 1.2 percent since the Great Recession.

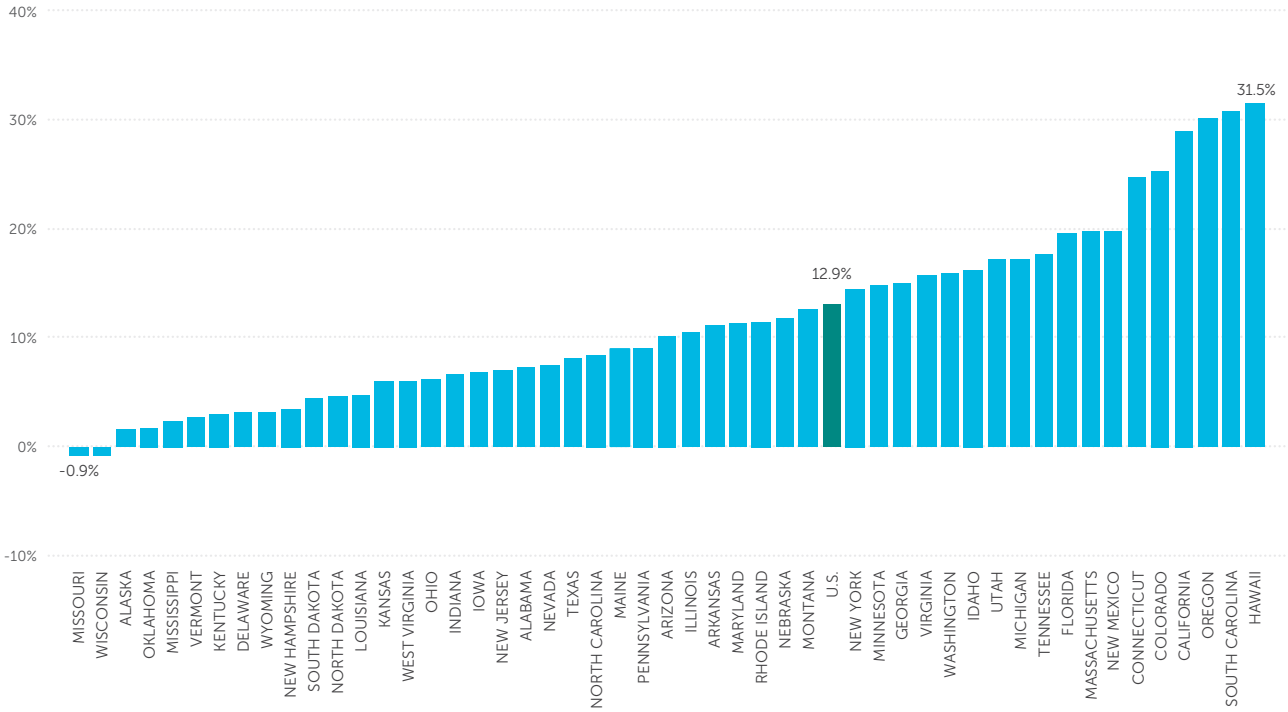
In addition, the 2018 funding cut in Missouri is more severe than it appears. Roughly $35 million (or 3.8 percent of appropriations) were not released until the last day of fiscal 2018, and institutions were never able to access those funds.[19]



17. Tuition used for debt service is excluded from total educational revenue.
18. Mo. Rev. Stat. §173.1003
19. Missouri Department of Higher Education

FIGURE 7

TOTAL EDUCATIONAL REVENUE PER FTE: PERCENT CHANGE, FY 2013-2018



NOTES:
1. Total Educational Revenue is the sum of educational appropriations and net tuition, excluding net tuition revenue used for capital debt service.
2. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time.

SOURCE: State Higher Education Executive Officers Association

TABLE 6

TOTAL EDUCATIONAL REVENUE PER FTE (CONSTANT ADJUSTED 2018 DOLLARS)

	FY 2008 (PRE-RECESSION)	FY 2013	FY 2017	FY 2018	INDEX TO U.S. AVERAGE	1-YEAR % CHANGE	5-YEAR % CHANGE	CHANGE SINCE RECESSION
ALABAMA	$17,507	$17,533	$19,503	$18,812	1.29	-3.5%	7.3%	7.5%
ALASKA	$20,127	$20,668	$20,672	$20,988	1.44	1.5%	1.5%	4.3%
ARIZONA	$12,787	$11,334	$12,644	$12,483	0.86	-1.3%	10.1%	-2.4%
ARKANSAS	$13,445	$12,339	$13,956	$13,712	0.94	-1.7%	11.1%	2.0%
CALIFORNIA	$9,144	$8,338	$10,579	$10,748	0.74	1.6%	28.9%	17.5%
COLORADO	$10,984	$11,509	$14,013	$14,422	0.99	2.9%	25.3%	31.3%
CONNECTICUT	$17,659	$14,880	$18,458	$18,539	1.27	0.4%	24.6%	5.0%
DELAWARE	$16,881	$18,624	$18,769	$19,193	1.32	2.3%	3.1%	13.7%
FLORIDA	$10,872	$8,282	$9,849	$9,901	0.68	0.5%	19.5%	-8.9%
GEORGIA	$13,219	$12,476	$14,187	$14,336	0.98	1.1%	14.9%	8.5%
HAWAII	$15,045	$13,168	$16,548	$17,313	1.19	4.6%	31.5%	15.1%
IDAHO	$15,064	$12,322	$14,581	$14,320	0.98	-1.8%	16.2%	-4.9%
ILLINOIS	$16,029	$19,899	$23,140	$21,979	1.51	-5.0%	10.4%	37.1%
INDIANA	$14,620	$16,263	$17,590	$17,328	1.19	-1.5%	6.6%	18.5%
IOWA	$15,446	$15,126	$16,156	$16,154	1.11	0.0%	6.8%	4.6%
KANSAS	$13,783	$13,597	$14,383	$14,407	0.99	0.2%	6.0%	4.5%
KENTUCKY	$15,938	$14,566	$15,106	$14,995	1.03	-0.7%	2.9%	-5.9%
LOUISIANA	$12,640	$10,710	$11,317	$11,216	0.77	-0.9%	4.7%	-11.3%
MAINE	$15,862	$16,042	$17,038	$17,468	1.20	2.5%	8.9%	10.1%
MARYLAND	$13,951	$13,196	$14,529	$14,672	1.01	1.0%	11.2%	5.2%
MASSACHUSETTS	$14,533	$11,793	$13,331	$14,114	0.97	5.9%	19.7%	-2.9%
MICHIGAN	$18,414	$19,206	$22,051	$22,508	1.54	2.1%	17.2%	22.2%
MINNESOTA	$15,016	$14,917	$16,606	$17,105	1.17	3.0%	14.7%	13.9%
MISSISSIPPI	$15,687	$14,214	$15,295	$14,546	1.00	-4.9%	2.3%	-7.3%
MISSOURI	$15,813	$13,608	$13,091	$13,481	0.93	3.0%	-0.9%	-14.7%
MONTANA	$12,717	$12,139	$13,571	$13,669	0.94	0.7%	12.6%	7.5%
NEBRASKA	$14,117	$14,893	$16,845	$16,652	1.14	-1.1%	11.8%	18.0%
NEVADA	$14,433	$11,853	$12,411	$12,738	0.87	2.6%	7.5%	-11.7%
NEW HAMPSHIRE	$13,304	$12,650	$13,096	$13,074	0.90	-0.2%	3.4%	-1.7%
NEW JERSEY	$16,014	$14,773	$16,381	$15,808	1.08	-3.5%	7.0%	-1.3%
NEW MEXICO	$14,300	$12,250	$14,043	$14,678	1.01	4.5%	19.8%	2.6%
NEW YORK	$11,855	$11,824	$13,283	$13,531	0.93	1.9%	14.4%	14.1%
NORTH CAROLINA	$16,241	$14,710	$15,951	$15,944	1.09	0.0%	8.4%	-1.8%
NORTH DAKOTA	$14,834	$16,511	$18,489	$17,271	1.19	-6.6%	4.6%	16.4%
OHIO	$15,158	$14,586	$15,482	$15,473	1.06	-0.1%	6.1%	2.1%
OKLAHOMA	$14,607	$13,703	$13,876	$13,938	0.96	0.5%	1.7%	-4.6%
OREGON	$11,746	$11,232	$14,243	$14,612	1.00	2.6%	30.1%	24.4%
PENNSYLVANIA	$15,444	$14,430	$15,719	$15,728	1.08	0.1%	9.0%	1.8%
RHODE ISLAND	$14,457	$14,019	$14,806	$15,619	1.07	5.5%	11.4%	8.0%
SOUTH CAROLINA	$14,152	$12,488	$15,191	$16,318	1.12	7.4%	30.7%	15.3%
SOUTH DAKOTA	$13,615	$14,711	$15,983	$15,359	1.05	-3.9%	4.4%	12.8%
TENNESSEE	$14,893	$13,294	$15,336	$15,635	1.07	2.0%	17.6%	5.0%
TEXAS	$14,305	$12,203	$13,524	$13,187	0.91	-2.5%	8.1%	-7.8%
UTAH	$13,005	$11,519	$13,440	$13,486	0.93	0.3%	17.1%	3.7%
VERMONT	$16,308	$16,696	$17,185	$17,142	1.18	-0.2%	2.7%	5.1%
VIRGINIA	$12,701	$12,596	$14,593	$14,577	1.00	-0.1%	15.7%	14.8%
WASHINGTON	$11,457	$10,699	$12,296	$12,403	0.85	0.9%	15.9%	8.3%
WEST VIRGINIA	$11,621	$10,797	$11,458	$11,449	0.79	-0.1%	6.0%	-1.5%
WISCONSIN	$13,158	$13,095	$12,916	$12,993	0.89	0.6%	-0.8%	-1.3%
WYOMING	$20,987	$21,106	$21,596	$21,762	1.49	0.8%	3.1%	3.7%
U.S.	**$13,695**	**$12,906**	**$14,558**	**$14,566**	**1.00**	**0.1%**	**12.9%**	**6.4%**
DISTRICT OF COLUMBIA	N/A	$20,457	$20,296	$22,089	1.52	8.8%	8.0%	N/A

NOTES:
1. Total educational revenue is the sum of educational appropriations and net tuition excluding net tuition revenue used for capital debt service.
2. The U.S. calculation does not include the District of Columbia.
3. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time. The District of Columbia is not adjusted for COLI or EMI.

SOURCE: State Higher Education Executive Officers Association

Figures 8 and *9* compare states to the national average for 2018 on two metrics: educational appropriations per FTE and total educational revenue per FTE. These figures show the difference, in dollars, between the national average and each state. States on the bottom of the figures have the lowest funding, while those at the top have the highest funding on the given metric. For the total per student dollar amounts of educational appropriations and total educational revenue in each state, see *Tables 4* and *6*.

Figure 8 indicates the vast differences between states. In 2018, 16 states had higher educational appropriations than the U.S. average. Nine of those states are more than $1,000 above the U.S. average. Wyoming is over $10,000 above the U.S. average and has the highest educational appropriations per FTE. Although it is not included in this chart, Washington, D.C., is $3,239 above the U.S. average in educational appropriations per FTE.

Thirty-four states are below the U.S. average, and 23 are more than $1,000 lower. The two states with the lowest educational appropriations per FTE, New Hampshire and Vermont, are each more than $5,000 below the national average. Note that the U.S. average is not an average of each state, but rather an average of total educational appropriations divided by total FTE.

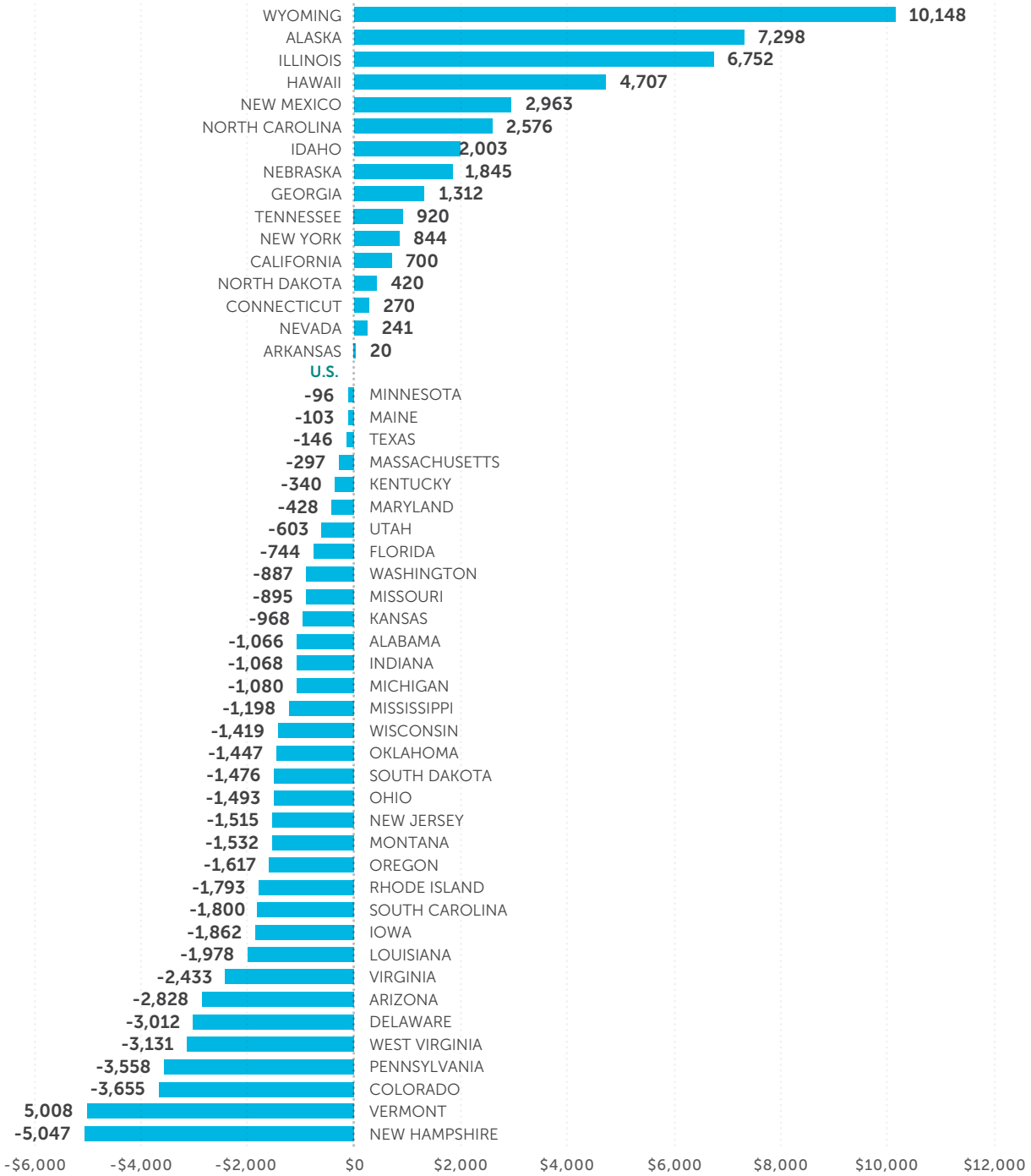
Figure 9 compares states to the national average on 2018 total educational revenue per FTE. The 28 states above the U.S. average range from $11 above the U.S. in Virginia to $7,942 in Michigan. Illinois and Wyoming are also more than $7,000 above the national average. See page 28 for more context about funding for higher education in Illinois. Washington, D.C., is $7,523 above the U.S. average.

The 22 states below the national average range from $21 in Mississippi to $4,665 in Florida. Thirteen of these states are more than $1,000 below the U.S. in total educational revenue.

In making comparisons across the states, it becomes apparent that some states are in a very similar position to the U.S. average on both metrics. Montana, which is 37th in each chart, is a great example of this. On the other hand, some states have far below average educational appropriations yet far above average total educational revenue, or vice versa. For example, Delaware is 45th in appropriations and 5th in total revenue due to higher than average net tuition revenue, and California has relatively high appropriations (12th) and one of the lowest total revenues (49th) due to very low tuition revenue per FTE.

FIGURE 8

EDUCATIONAL APPROPRIATIONS PER FTE (ADJUSTED) - DIFFERENCE FROM U.S. AVERAGE, FY 2018

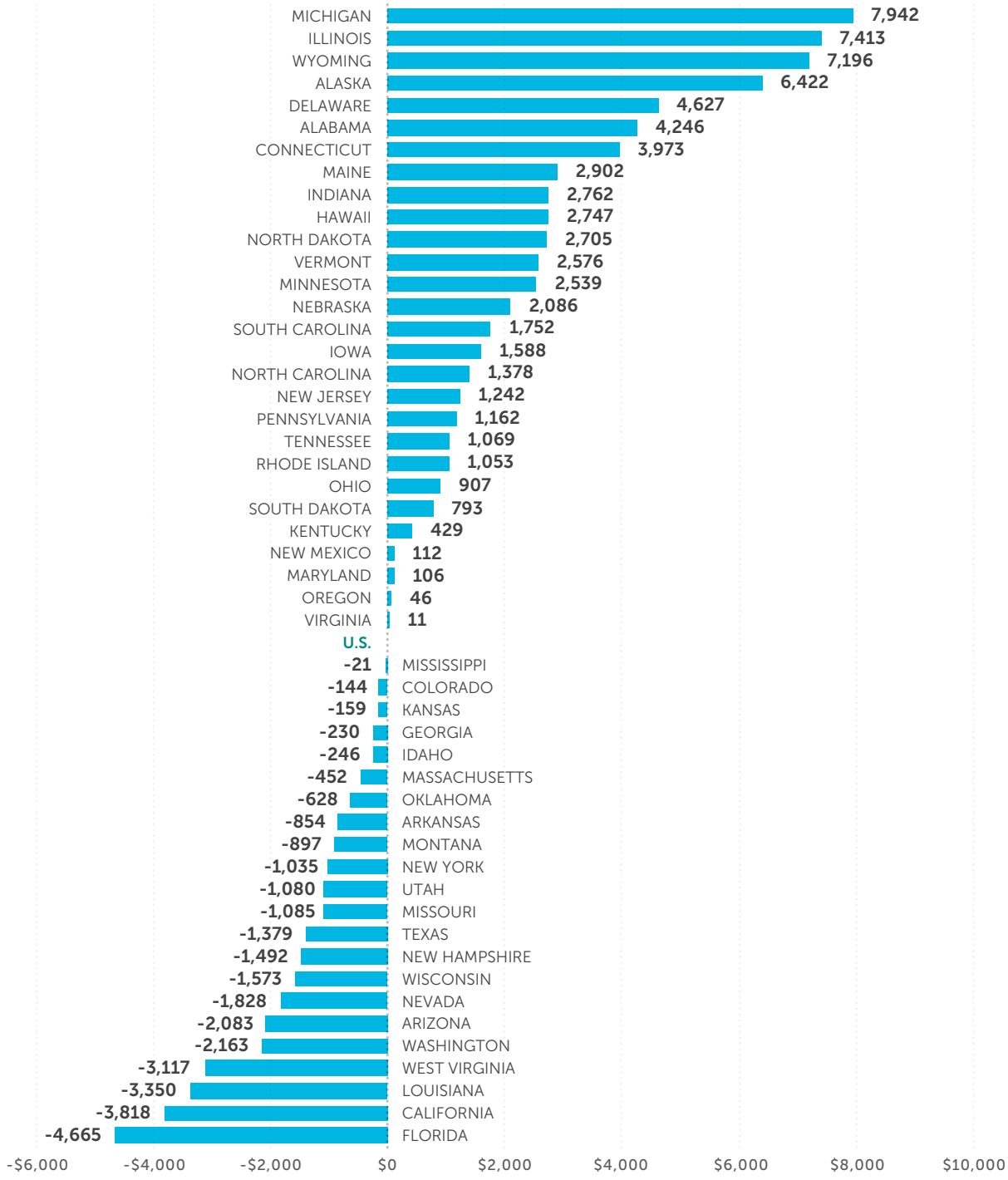


NOTES:
1. Educational appropriations are a measure of state and local support available for public higher education operating expenses including ARRA funds, and exclude appropriations for independent institutions, financial aid for students attending independent institutions, research, hospitals, and medical education.
2. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time.

SOURCE: State Higher Education Executive Officers Association

FIGURE 9

TOTAL EDUCATIONAL REVENUE PER FTE (ADJUSTED) - DIFFERENCE FROM U.S. AVERAGE, FY 2018



NOTES:
1. Total Educational Revenue is the sum of educational appropriations and net tuition, excluding net tuition revenue used for capital debt service.
2. Adjustment factors to arrive at constant dollar figures include Cost of Living Index (COLI), Enrollment Mix Index (EMI), and Higher Education Cost Adjustment (HECA). The COLI is not a measure of inflation over time.

SOURCE: State Higher Education Executive Officers Association

STATE REVENUE, TAXES, AND EFFORT TO FUND HIGHER EDUCATION

Within each state, policies and decisions about the financing of higher education are made in the context of multiple external factors, including current and projected economic conditions, state tax structures, competing budgetary priorities across the state, cultural and ideological shifts in the state population, and political and higher education characteristics of the state.

Within these contexts, state policymakers must make challenging decisions about necessary taxation levels and spending priorities for different public services and investments. Because each state has a unique tax structure and tax base, there is no universally agreed upon measure for assessing state effort to fund higher education. This section uses publicly available data to estimate state tax capacity and tax effort and compares three indicators of state effort to fund higher education: state support per capita, state support per thousand dollars of personal income, and state support of higher education as a percentage of total state revenues. It is intended to provide contextual and comparative information for policymakers and researchers as they evaluate public policy decisions for higher education.

Unless specifically noted, the data presented in this section are in nominal terms and are not adjusted for inflation. In all cases, the most recent available data are presented. In some cases (such as tax revenue), this means a two-year lag from 2018.

1. STATE TAX CAPACITY AND REVENUE

State revenues are determined by two factors: the total resources available in a state that can potentially be taxed (i.e., tax capacity) and the rate at which state revenue policies tax these resources in support of public services. No perfect measure of tax capacity exists, but the total taxable resources measure developed by the United States Treasury Department is used to allocate federal funding to states and is generally considered a better measure than gross state product or state personal income.[20] According to the Treasury Department, total taxable resources (TTR) is "a comprehensive measure of all the income flows a state could potentially tax."[21] Using U.S. Census Bureau data for actual tax revenue collected, an effective tax rate can be calculated. Differences in effective tax rates reflect varying state contexts and tax policy decisions. States with high costs of living typically need more revenue per capita to support equivalent public services, while states with natural resource wealth may be able to support public services with lower effective tax rates. Many additional factors, such as population density and climate, can also affect the need for and cost of public services.

Table 7 shows TTR per capita, tax revenue, and state support for higher education for fiscal year 2016, the most recent year tax data are available. TTR per capita ranged from $86,490 in Connecticut to $41,401 in Mississippi. Three states (Delaware, Connecticut, and New York) have more than two times Mississippi's TTR.

20. U.S. Department of the Treasury. (2002). *Treasury methodology for estimating total taxable resources (TTR).* Retrieved from https://www.treasury.gov/resource-center/economic-policy/Documents/nmpubsum.pdf

21. Ibid.

Column two in *Table 7* shows U.S. Census Bureau data for the actual tax revenue (ATR) per capita each state collected in fiscal year 2016. ATR per capita ranged from $3,206 in Alabama to $8,957 in New York. Twenty-one states had an ATR below $4,000 per capita.

The effective tax rate is calculated by dividing actual tax revenue from state and local sources by the total taxable resources in a state (ATR/TTR) and will not align with state tax rates. The effective tax rate varied from a high of 10.7 percent in New York to a low of 5.5 percent in Alaska. Thirty-seven states were within 1 percentage point of the U.S. average.

Tax revenues and lottery profits varied widely, primarily due to differences in population size, from $240 billion in California to $2.8 billion in Alaska. California alone accounted for 15 percent of the U.S. total revenue, and the top seven states on this metric (California, Florida, Illinois, New Jersey, New York, Pennsylvania, and Texas) accounted for half of all tax revenues and lottery profits in the United States.

SHEF higher education support (which includes both state and local funding) in fiscal 2016 ranged from $16 billion in California to $92 million in Vermont, while the percent allocated to higher education ranged from 14 percent of all tax revenues and lottery profits in Wyoming to 1.9 percent in New Hampshire (*Table 7*).

TABLE 7

STATE AND LOCAL GOVERNMENT REVENUES AND FUNDING EFFORT FOR HIGHER EDUCATION, FY 2016 AND FY 2017

	FISCAL 2016						FISCAL 2017	
STATE	ACTUAL TAX REVENUES (ATR) PER CAPITA	TOTAL TAXABLE RESOURCES (TTR) PER CAPITA	EFFECTIVE TAX RATE (ATR/TTR)	TAX REVENUES AND LOTTERY PROFITS (THOUSANDS)	HIGHER EDUCATION SUPPORT (THOUSANDS)	ALLOCATION TO HIGHER EDUCATION	HIGHER EDUCATION SUPPORT PER CAPITA	HIGHER EDUCATION SUPPORT PER $1,000 OF PERSONAL INCOME
ALABAMA	$3,206	$46,579	6.9%	$15,584,922	$1,487,340	9.5%	$320	$7.84
ALASKA	$3,812	$69,856	5.5%	$2,827,027	$378,017	13.4%	$478	$8.35
ARIZONA	$3,582	$48,432	7.4%	$24,949,400	$1,668,782	6.7%	$246	$5.81
ARKANSAS	$3,958	$46,884	8.4%	$11,911,742	$1,022,811	8.6%	$336	$8.18
CALIFORNIA	$6,077	$72,172	8.4%	$240,394,636	$15,980,066	6.6%	$422	$7.06
COLORADO	$4,621	$64,447	7.2%	$25,700,030	$933,405	3.6%	$168	$3.07
CONNECTICUT	$7,220	$86,490	8.3%	$26,244,445	$1,218,286	4.6%	$321	$4.47
DELAWARE	$4,757	$83,237	5.7%	$4,745,205	$230,006	4.8%	$244	$4.91
FLORIDA	$3,478	$54,002	6.4%	$73,547,399	$4,367,745	5.9%	$216	$4.53
GEORGIA	$3,660	$55,199	6.6%	$38,841,268	$3,044,262	7.8%	$308	$6.97
HAWAII	$6,467	$62,575	10.3%	$9,239,417	$603,948	6.5%	$468	$8.86
IDAHO	$3,514	$47,083	7.5%	$5,952,444	$446,249	7.5%	$284	$6.79
ILLINOIS	$5,654	$68,543	8.2%	$73,269,350	$4,147,446	5.7%	$429	$7.91
INDIANA	$3,872	$57,341	6.8%	$25,971,345	$1,739,630	6.7%	$262	$5.80
IOWA	$4,884	$64,806	7.5%	$15,379,371	$923,675	6.0%	$292	$6.20
KANSAS	$4,498	$60,872	7.4%	$13,155,912	$985,823	7.5%	$343	$7.07
KENTUCKY	$3,823	$48,443	7.9%	$17,211,107	$1,200,720	7.0%	$268	$6.61
LOUISIANA	$3,888	$54,224	7.2%	$18,396,664	$1,179,535	6.4%	$231	$5.30
MAINE	$5,206	$50,292	10.4%	$6,982,137	$285,491	4.1%	$224	$4.83
MARYLAND	$6,027	$74,094	8.1%	$37,336,945	$2,242,040	6.0%	$390	$6.40
MASSACHUSETTS	$6,469	$82,433	7.8%	$45,131,597	$1,493,700	3.3%	$225	$3.33
MICHIGAN	$4,082	$54,130	7.5%	$41,439,112	$2,358,214	5.7%	$242	$5.24
MINNESOTA	$6,090	$66,389	9.2%	$33,794,814	$1,532,825	4.5%	$277	$5.09
MISSISSIPPI	$3,613	$41,401	8.7%	$10,785,451	$1,093,552	10.1%	$359	$9.79
MISSOURI	$3,682	$54,456	6.8%	$22,732,094	$1,181,903	5.2%	$190	$4.22
MONTANA	$3,827	$50,739	7.5%	$3,987,343	$256,892	6.4%	$248	$5.46
NEBRASKA	$5,087	$67,677	7.5%	$9,747,368	$904,583	9.3%	$478	$9.41
NEVADA	$4,277	$58,110	7.4%	$12,571,202	$538,609	4.3%	$190	$4.13
NEW HAMPSHIRE	$4,818	$71,385	6.7%	$6,510,722	$124,079	1.9%	$93	$1.56
NEW JERSEY	$6,709	$77,631	8.6%	$61,224,873	$2,272,314	3.7%	$254	$3.93
NEW MEXICO	$3,891	$48,048	8.1%	$8,160,737	$1,036,751	12.7%	$472	$11.85
NEW YORK	$8,957	$83,463	10.7%	$180,969,069	$6,409,481	3.5%	$332	$5.14
NORTH CAROLINA	$3,919	$54,644	7.2%	$40,440,717	$4,071,612	10.1%	$412	$9.32
NORTH DAKOTA	$6,630	$75,707	8.8%	$5,019,586	$405,724	8.1%	$556	$10.63
OHIO	$4,473	$57,913	7.7%	$53,109,516	$2,417,284	4.6%	$213	$4.56
OKLAHOMA	$3,458	$51,005	6.8%	$13,625,866	$970,529	7.1%	$231	$5.20
OREGON	$4,508	$60,475	7.5%	$18,992,927	$1,009,649	5.3%	$252	$5.23
PENNSYLVANIA	$5,058	$63,478	8.0%	$65,802,034	$1,764,030	2.7%	$142	$2.66
RHODE ISLAND	$5,562	$64,393	8.6%	$6,252,028	$179,843	2.9%	$178	$3.37
SOUTH CAROLINA	$3,435	$47,744	7.2%	$17,436,554	$1,094,044	6.3%	$232	$5.58
SOUTH DAKOTA	$3,938	$63,259	6.2%	$3,510,432	$218,329	6.2%	$274	$5.62
TENNESSEE	$3,322	$53,644	6.2%	$22,483,806	$1,639,925	7.3%	$258	$5.67
TEXAS	$4,020	$61,093	6.6%	$113,568,895	$8,969,798	7.9%	$327	$6.90
UTAH	$3,743	$55,250	6.8%	$11,395,728	$933,252	8.2%	$316	$7.26
VERMONT	$5,904	$57,913	10.2%	$3,706,601	$91,722	2.5%	$149	$2.86
VIRGINIA	$4,560	$66,458	6.9%	$38,960,766	$1,884,306	4.8%	$245	$4.44
WASHINGTON	$5,050	$73,315	6.9%	$36,946,261	$1,770,882	4.8%	$254	$4.38
WEST VIRGINIA	$3,917	$45,553	8.6%	$7,658,557	$486,265	6.3%	$267	$6.93
WISCONSIN	$4,782	$60,316	7.9%	$27,765,590	$1,471,163	5.3%	$254	$5.20
WYOMING	$5,545	$74,541	7.4%	$3,245,102	$455,705	14.0%	$714	$12.44
U.S.	**$4,933**	**$63,123**	**7.8%**	**$1,614,616,112**	**$93,122,241**	**5.8%**	**$298**	**$5.79**

NOTES:
1. Actual tax revenues are state and local tax revenue per capita.
2. Higher education support is state and local tax and non-tax support for general operating expenses of public and independent higher education, including special purpose appropriations for research-agricultural-medical.

SOURCES: State Higher Education Executive Officers Association

Actual tax revenues from U.S. Census Bureau 2016 Annual Surveys of State and Local Government Finances. Total taxable resources per capita from the U.S. Treasury Department. Population and personal income data from the U.S. Department of Commerce, Bureau of Economic Analysis, Regional Income Division. State and local tax revenues data from U.S. Census Bureau; lottery profits data are from North American Association of State and Provincial Lotteries.

2. STATE EFFORT TO FUND HIGHER EDUCATION

Table 7 and *Figures 10-12* show state-level data for each indicator of state effort to fund higher education: higher education support per capita, higher education support per $1,000 of personal income, and percent of higher education revenues allocated to higher education.

Higher education support per capita: The measure of higher education support per capita normalizes state funding for a state's population. It assesses effort because states with larger populations generally should have greater fiscal capacity and, therefore, may be able to direct more resources toward higher education.

Higher education support per $1,000 of personal income: Higher education support per $1,000 of personal income is considered a measure of a state's ability to pay for higher education.[22] It helps us understand the scale of support for higher education in relation to a state's available tax base since most states rely on income and sales or consumption taxes for much of their revenue.[23]

Percent of state revenues allocated to higher education: The most direct assessment of state funding effort relative to state revenue compares available state funds from taxable revenues and lottery profits relative to the amount of these funds appropriated to or spent on higher education.

These comparative statistics reflect interstate differences in state economies, population characteristics and density, postsecondary enrollment rates, the relative size of the public and independent higher education sectors, student mobility, and numerous other factors. Poorer states may lag the national average in per capita support but exceed the national average in support per $1,000 of personal income.

22. Tandberg, D. A., & Laderman, S. A. (2018). *Evaluating state funding effort for higher education* (Policy Brief). Midwestern Higher Education Compact. Retrieved from https://sheeo.org/mhec-policy-brief-evaluating-state-funding-effort-for-higher-education

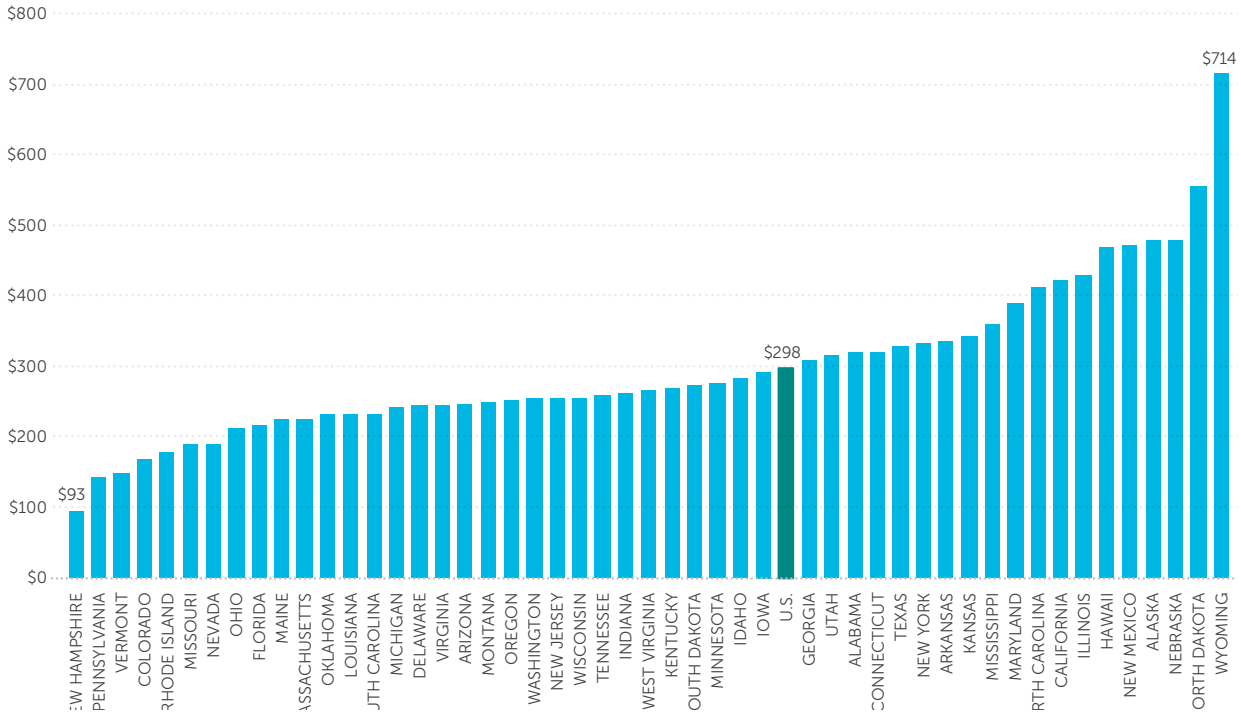
23. Trostel, P.A., & Ronca, J.M. (2009). A simple unifying measure of state support for postsecondary education. *Research in Higher Education*, 50 (3), 215-247. Retrieved from https://www.researchgate.net/publication/225423677_A_Simple_Unifying_Measure_of_State_Support_for_Postsecondary_Education

Using data from the U.S. Census Bureau, *Figure 10* shows the distribution of states in higher education support per capita. The U.S. average, marked in green, was $298.

- Nineteen states were above the U.S. average in per capita support.
- The highest per capita support was $714 in Wyoming. Wyoming has over $150 more than North Dakota, the state with the second highest per capita support ($556). In part, this is due to Wyoming's low population.
- Only one state had per capita support under $100—New Hampshire, at $93. The second lowest was $142 in Pennsylvania.

FIGURE 10

HIGHER EDUCATION SUPPORT PER CAPITA BY STATE, FY 2017



NOTE: Higher education support is state and local tax and non-tax support for public and independent higher education, including special purpose appropriations for research-agricultural-medical.

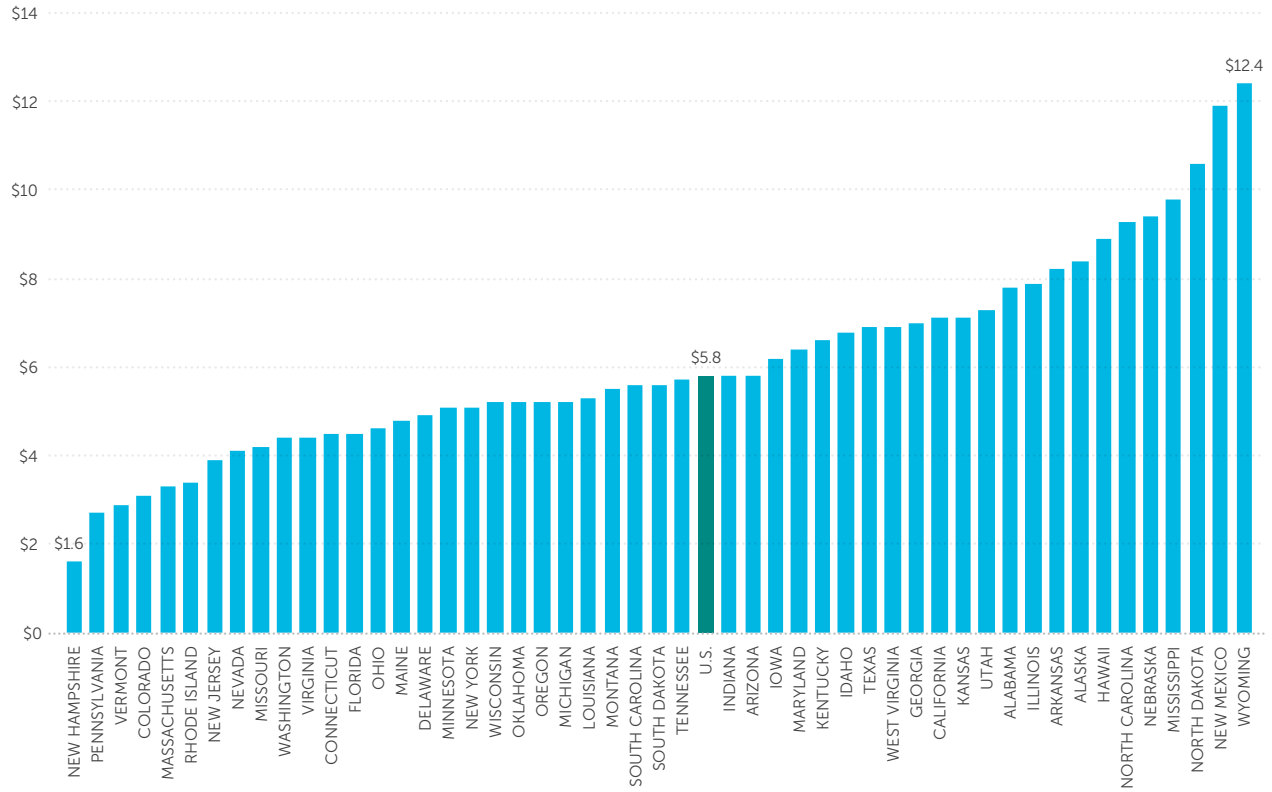
SOURCES: State Higher Education Executive Officers Association, with data from the U.S Census Bureau.

Figure 11 uses data from the Bureau of Economic Analysis to show the state distribution in higher education support per $1,000 of personal income. The U.S. average was $5.8.

- The state with the highest support per income was Wyoming, with $12.4 of every $1,000 in personal income going toward higher education.
- Following Wyoming, two other states had support above $10: New Mexico at $11.9 and North Dakota at $10.6.
- Including the three states above, 23 states were higher than the U.S. average.
- The states with the lowest support were all under $3 of higher education support per $1,000 in personal income. Those states were New Hampshire ($1.6), Pennsylvania ($2.7), and Vermont ($2.9).

FIGURE 11

HIGHER EDUCATION SUPPORT PER $1,000 OF PERSONAL INCOME BY STATE, FY 2017



NOTE: Higher education support is state and local tax and non-tax support for public and independent higher education, including special purpose appropriations for research-agricultural-medical.

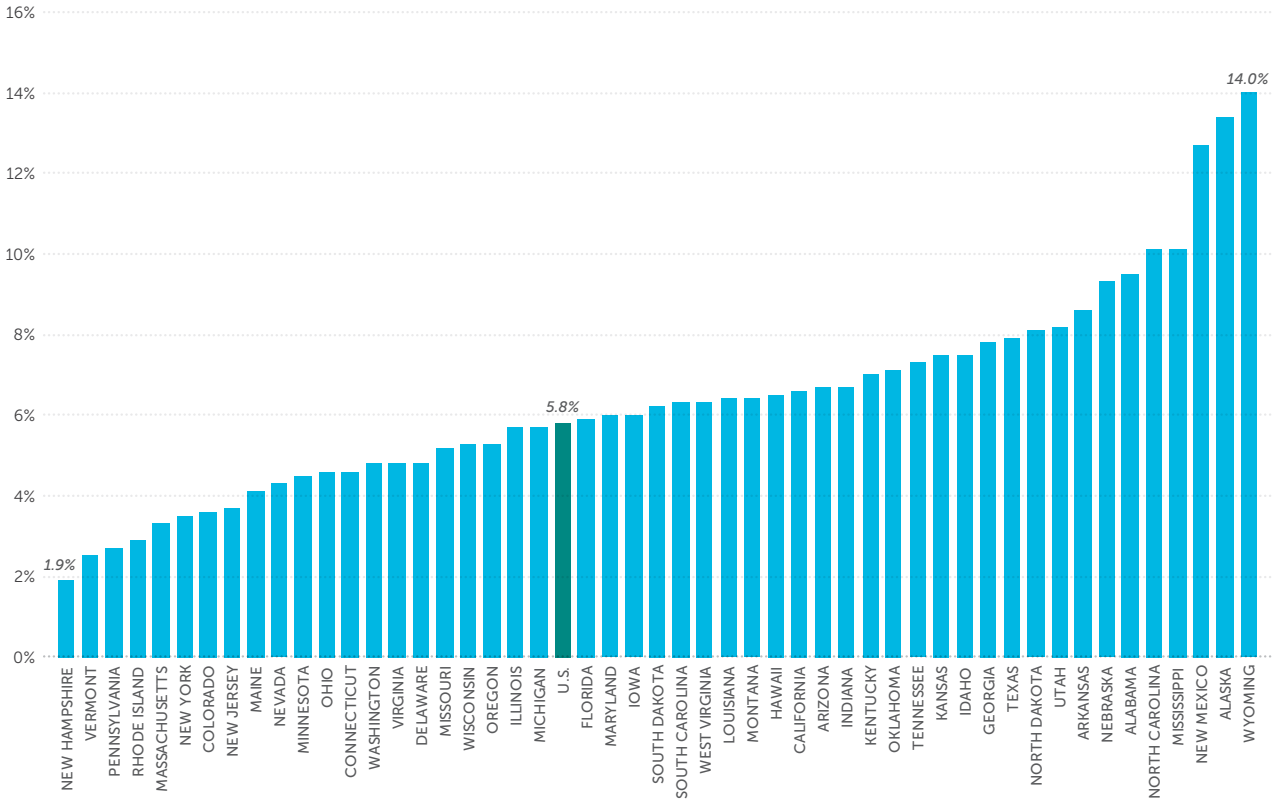
SOURCES: State Higher Education Executive Officers Association, with data from the Bureau of Economic Analysis.

Figure 12 combines tax revenue data with total lottery profits and shows the percent of those revenues in each state that are allocated to higher education. The U.S. average was 5.8 percent.

- Twenty-nine states were above the U.S. average in revenue allocation to higher education.
- Twenty states were within 1 percent of the U.S. average.
- Only five states allocated more than 10 percent of tax revenue and lottery profits to higher education: Wyoming (14 percent), Alaska (13.4 percent), New Mexico (12.7 percent), Mississippi (10.1 percent), and North Carolina (10.1 percent).
- The bottom four states allocated less than 3 percent of their total tax revenues to higher education. Those states were New Hampshire at 1.9 percent, Vermont at 2.5 percent, Pennsylvania at 2.7 percent, and Rhode Island at 2.9 percent.

FIGURE 12

PERCENT OF TAX REVENUES ALLOCATED TO HIGHER EDUCATION BY STATE, FY 2016



NOTE: Higher education support is state and local tax and non-tax support for public and independent higher education, including special purpose appropriations for research-agricultural-medical.

SOURCES: State Higher Education Executive Officers Association, with data from the U.S. Census Bureau and North American Association of State and Provencial Lotteries.

Table 8 shows the percent change in total taxable resources per capita and actual tax revenue per capita between 2008 and 2016. To make comparisons over time, the 2008 amounts represented in *Table 8* have been converted into constant 2016 dollars using the Consumer Price Index (CPI). Nationally, total taxable resources have increased 6.2 percent in inflation adjusted dollars. **This indicates that, at the aggregate level, state tax capacity has rebounded from the Great Recession**; however, there is wide variation among states, and 10 states had total taxable resources in 2016 below 2008 levels.

Turning to available tax revenue per capita, half of all states have lower revenue per capita in 2016 than they did in 2008 even though, nationally, tax revenue increased by 1.5 percent. The slower recovery in actual tax revenue (1.5 percent nationally) compared to total taxable resources (6.2 percent nationally) suggests states are operating in a complex budgetary environment. See the Budget Drivers case study on page 49 for additional context.

Table 8 also shows the change for each indicator of state effort to fund higher education between 2008 and 2016 in inflation adjusted dollars. The national average for each indicator was negative, which means that, **regardless of the measure, state effort to fund higher education has not recovered to pre-recession levels**.

- Looking at the portion of actual tax revenue allocated to higher education, seven states (Alaska, Connecticut, Florida, Indiana, Montana, North Dakota, and Wyoming) allocated a greater portion in 2016 than in 2008. Conversely, the portion of actual tax revenues allocated to higher education declined by at least 3 percent in two states (Alabama and South Carolina).
- Higher education support per capita was higher in eight states (Alaska, Connecticut, Maryland, Montana, Nebraska, New York, North Dakota, and Wyoming) in 2016 than in 2008. State support per capita was at least 30 percent lower in 2016 when compared to 2008 in four states (Alabama, Louisiana, Nevada, and Pennsylvania).
- Finally, state support per $1,000 of personal income increased in only two states (North Dakota and Wyoming) between 2008 and 2016. Conversely, three times that many states (Alabama, Arizona, Louisiana, Pennsylvania, South Carolina, and Wisconsin) had declines in higher education support per $1,000 of more than 30 percent between 2008 and 2016.

TABLE 8

PERCENT CHANGE IN STATE AND LOCAL GOVERNMENT REVENUES AND FUNDING EFFORT FOR HIGHER EDUCATION, FY 2008-2016 (CONSTANT 2016 DOLLARS)

	ACTUAL TAX REVENUES (ATR) PER CAPITA	TOTAL TAXABLE RESOURCES (TTR) PER CAPITA	ALLOCATION TO HIGHER ED[1]	HIGHER EDUCATION SUPPORT PER CAPITA	HIGHER EDUCATION SUPPORT PER $1,000 OF PERSONAL INCOME
ALABAMA	-4.2%	1.3%	-4.4%	-34.6%	-36.5%
ALASKA	-75.8%	-23.8%	10.3%	4.3%	-6.9%
ARIZONA	-9.2%	0.0%	-1.9%	-28.7%	-31.9%
ARKANSAS	8.2%	6.5%	-1.0%	-2.1%	-9.6%
CALIFORNIA	7.2%	10.8%	-0.7%	-2.4%	-16.7%
COLORADO	4.2%	2.2%	-0.4%	-6.0%	-12.4%
CONNECTICUT	-1.8%	-5.2%	0.2%	3.2%	-4.8%
DELAWARE	0.7%	4.5%	-1.2%	-21.5%	-25.7%
FLORIDA	-21.6%	-1.4%	0.0%	-21.4%	-23.8%
GEORGIA	-5.3%	8.5%	-0.7%	-13.2%	-20.2%
HAWAII	10.9%	1.6%	-1.7%	-11.9%	-17.1%
IDAHO	-2.5%	1.4%	-1.0%	-14.0%	-21.3%
ILLINOIS	12.6%	9.7%	-1.0%	-3.8%	-11.7%
INDIANA	-3.3%	8.7%	0.1%	-1.5%	-11.6%
IOWA	13.7%	13.6%	-1.9%	-14.0%	-20.1%
KANSAS	-5.0%	2.5%	-1.0%	-15.8%	-19.8%
KENTUCKY	3.9%	5.8%	-2.3%	-22.0%	-28.3%
LOUISIANA	-13.5%	-5.7%	-2.6%	-38.5%	-39.2%
MAINE	3.9%	6.3%	-0.4%	-6.3%	-14.3%
MARYLAND	10.6%	5.8%	-0.6%	1.2%	-5.8%
MASSACHUSETTS	11.7%	12.9%	-0.5%	-4.6%	-16.3%
MICHIGAN	-2.7%	15.7%	-1.1%	-18.0%	-28.4%
MINNESOTA	15.6%	8.5%	-1.7%	-16.6%	-23.1%
MISSISSIPPI	3.4%	-0.7%	-1.8%	-11.8%	-14.8%
MISSOURI	-1.0%	3.6%	-0.5%	-10.2%	-13.8%
MONTANA	-3.6%	3.9%	0.6%	7.0%	-3.6%
NEBRASKA	8.3%	14.8%	-0.2%	5.6%	-3.5%
NEVADA	-5.2%	-5.4%	-1.6%	-30.6%	-29.8%
NEW HAMPSHIRE	15.1%	12.0%	-0.7%	-17.2%	-28.9%
NEW JERSEY	-3.1%	0.8%	-0.4%	-12.8%	-17.7%
NEW MEXICO	-10.5%	-7.8%	-1.6%	-20.3%	-22.6%
NEW YORK	13.1%	17.1%	-0.3%	3.0%	-8.1%
NORTH CAROLINA	-2.1%	1.7%	-1.9%	-17.3%	-22.4%
NORTH DAKOTA	20.2%	20.7%	0.1%	21.7%	8.1%
OHIO	-0.9%	12.0%	-0.6%	-11.3%	-20.4%
OKLAHOMA	-8.2%	-4.0%	-2.0%	-28.7%	-28.4%
OREGON	22.1%	3.8%	-1.1%	-1.3%	-11.7%
PENNSYLVANIA	5.4%	9.1%	-1.5%	-32.5%	-40.2%
RHODE ISLAND	7.9%	8.3%	-0.8%	-16.0%	-22.8%
SOUTH CAROLINA	5.4%	6.1%	-3.2%	-29.7%	-35.5%
SOUTH DAKOTA	13.7%	6.2%	-1.4%	-8.1%	-15.4%
TENNESSEE	-2.1%	11.6%	-1.2%	-15.8%	-24.9%
TEXAS	1.5%	-1.0%	-0.6%	-5.4%	-9.3%
UTAH	-2.3%	8.1%	-0.5%	-7.7%	-18.9%
VERMONT	12.0%	9.0%	-0.6%	-9.7%	-21.3%
VIRGINIA	-2.5%	1.5%	-0.9%	-17.7%	-22.7%
WASHINGTON	4.0%	9.1%	-1.4%	-19.0%	-28.3%
WEST VIRGINIA	-0.8%	2.4%	-1.7%	-23.6%	-26.8%
WISCONSIN	-0.9%	11.6%	-1.5%	-22.6%	-30.4%
WYOMING	-28.2%	-25.8%	5.2%	13.8%	15.3%
U.S.	**1.5%**	**6.2%**	**-0.8%**	**-11.5%**	**-19.0%**

NOTES:

1. Allocation to Higher Education is the percentage point change in state revenue allocated to higher education from FY 2008 to 2016.
2. Data in this chart are adjusted to constant 2016 dollars using the Consumer Price Index.

SOURCES: State Higher Education Executive Officers Association

Actual tax revenue from U.S. Census Bureau 2016 Annual Surveys of State/Local Government Finances. Total taxable resources per capita from U.S. Treasury Dept. Population and personal income from U.S. Dept of Commerce, Bureau of Economic Analysis, Regional Income Division. State and local tax revenues from U.S. Census Bureau. Lottery profits from North American Association of State and Provincial Lotteries.

CASE STUDY:
STATE BUDGET DRIVERS

The Great Recession took a tremendous toll on state economies, and the ensuing recovery over the last decade has been slow and uneven across states. Employment and major sources of tax revenue have been slow to recover and taken much longer to reach pre-recession levels when compared to previous economic recoveries.

This slow revenue growth combined with increased demand for public services, such as Medicaid expansion, have placed added stress on state budgets that in many instances were facing structural deficits before 2007. State tax structures have been slow to evolve with the modern economy, and the tax bases in many states have narrowed in recent decades.

Moreover, an aging population accelerates this tax base erosion and may have an adverse effect on the solvency of state pension plans. When considered together, the trends of slow revenue growth and increased competition for limited tax revenue have great consequences for state spending on higher education.

Higher education is commonly known as the balance wheel of state budgets. During periods of economic contraction, states reduce higher education spending at greater rates than other budget categories in order to meet balanced budget requirements.

Since institutions of higher education have an alternative revenue source in the form of tuition, they are able to offset reductions in state funding. Then, as tax revenue recovers, states tend to return funding to higher education at greater rates.

However, as the SHEF report highlights, higher education spending has struggled to recover to pre-recession levels. This case study explores some of the revenue and expenditure drivers that have led to this slow recovery.

Click here to read the full case study.

CONCLUSION

The 2018 SHEF report provides a ten-year look at higher education funding and enrollment from 2008, the high point of state and local per student funding before the Great Recession. The impact of the Great Recession on higher education funding was unprecedented. Compared to past recessions, enrollment increased more dramatically, and, even with federal stimulus funds, per student funding declined precipitously to a low of $6,689 in 2012. Since then, educational appropriations per student increased steadily through 2017 to $7,841 and were essentially flat in 2018, increasing just 0.2 percent to $7,853. With these increases, per student funding from government sources is about halfway recovered from the reductions seen during the Great Recession.

FTE enrollment also showed a similar leveling off in 2018, declining 0.2 percent from 2017 to 10.9 million, but still 7.1 percent above pre-recession levels. As expected during periods of economic growth, this was the seventh straight year of enrollment declines.

In 2018, net tuition revenue per student was flat nationally at $6,788 (no increase over 2017). States' reliance on tuition was flat as well, and the student share was 46.6 percent in both 2017 and 2018. Before the Great Recession in 2008, net tuition revenue was $4,898 and the student share was 35.8 percent. Due to the increased reliance on tuition, total educational revenue per student (derived from appropriations and tuition) is now 6.4 percent above 2008 pre-recession levels.

These national data are a composite of 50 very different states. Some states have restored funding reductions per student that were seen during the Great Recession, while others have recovered strictly through increased reliance on tuition revenue. Yet another group remains well below total revenue levels in 2008. It is, therefore, challenging to make broad conclusions from these data about the status of higher education funding in the United States. The lack of change in per student educational appropriations and net tuition revenue represents some stabilization in revenue sources for higher education and may foreshadow another economic downturn. However, initial appropriations data for 2019 (which do not account for inflation or changes in FTE enrollment) show a 3.8 percent increase in state support for higher education,[24] indicating a likely increase in educational appropriations in the next year.

The leveling off of both net tuition revenue per FTE and the reliance on tuition may point to concerted efforts in the states to address college affordability. State financial aid is now $752 per student, up from $579 before the Great Recession. As a percentage of appropriations, state financial aid increased from 6.5 percent in 2008 to 9.6 percent in 2018. As state funding has recovered, the need to increase tuition to provide operational funding for public institutions has also lessened in many states. With growing pressure to minimize tuition rate increases, it remains unclear whether states will be able to address and protect student affordability during the next economic downturn.

24. Illinois State University (2019) *Grapevine*, accessed from https://education.illinoisstate.edu/grapevine

Amidst these changes, over 40 states have adopted ambitious attainment goals tied to expected workforce needs.[25] These goals can only be met by better serving those who have typically been underserved—first generation, low income, adult, and minority students. Serving these students well will require additional supports and services to help them succeed.[26] When resources are again constrained during the next economic downturn, states will need to have tough conversations and make decisions to prioritize funding programs and institutions that most directly serve these underserved students. It is critical for states to continue to push for increased attainment through the ups and downs of the economic cycle.

The SHEF report is produced annually by the State Higher Education Executive Officers Association to broaden understanding of the context and consequences of multiple public policy decisions in each state. These decisions contribute to public higher education funding levels and funding distributions across states and nationally.

25. Lumina Foundation. (2019). *A stronger nation.* Retrieved from http://strongernation.luminafoundation.org/report/2019/#nation

26. Carlson, A., Laderman, S., Pearson, D., and Whitfield, C., (2016). *Adult promise program: A pilot design template for states.* Retrieved from https://sheeoorg.wpengine.com/wp-content/uploads/2019/02/Adult-Promise-Design-Template.pdf

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