SHEEO

STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

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STATE HIGHER EDUCATION FINANCE

ISSUE BRIEF:

POST-RECESSION TRENDS IN HIGHER EDUCATION REVENUES

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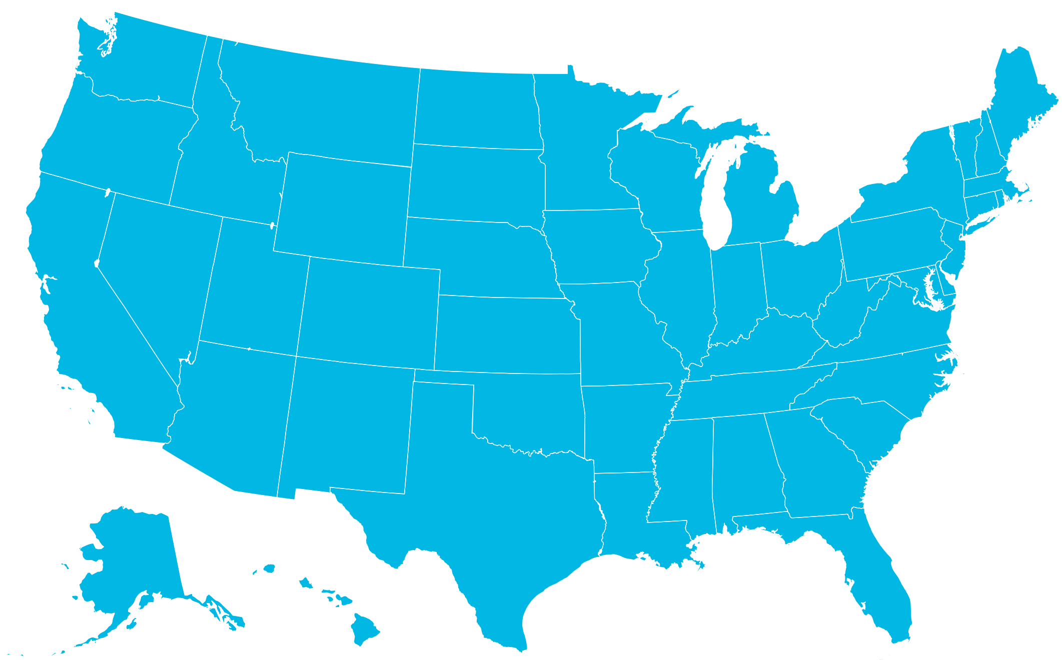


INTRODUCTION

Trends in the primary SHEF metrics tend to move in predictable ways through stages of the business cycle. During economic downturns, education appropriations decline while tuition revenue and full-time equivalent (FTE) enrollment increase. As the economy recovers, education appropriations tend to rebound while tuition revenue and FTE enrollment stabilize. This "balance wheel" relationship[1] came under stress due to the duration and severity of the Great Recession. Following a short recession in the early 2000s and only three years of economic recovery, the Great Recession had a lasting impact on higher education revenues. Declines in education appropriations per student were steeper and longer in duration than previous recessions. Most states did not begin to recover reductions in education appropriations until about five years after the start of the recession, and since then, the recovery has been slow and uneven. Eleven years out from the start of the Great Recession in fiscal year 2008 (December 2007), only seven states that faced appropriation declines during the recession have exceeded their pre-recession levels of education appropriations per student.

This issue brief compares changes in education appropriations between pre-recession high points and fiscal 2019.Additional SHEF metrics, including net FTE enrollment, net tuition revenue, state public financial aid, and total education revenue, are included in the analysis to provide a broader context. This issue brief follows a more extensive analysis released last year.[2]

The national pre-recession high point for education appropriations was fiscal 2008, but some states had already experienced the effects of the recession on higher education appropriations in fiscal 2008. In those states, we hold 2007 as their pre-recession high point. Similarly, while over half of states reached an all-time low point in fiscal 2012, 23 saw additional declines in education appropriations per FTE in fiscal 2013.[3] We compare change since each state's low point, which may be in either year.

As with most SHEF analyses, these data are presented in inflation-adjusted constant dollars and on a per full-time equivalent (FTE) student basis. It is important to acknowledge that a state may have technically restored funding cuts made during the Great Recession but may not have been able to keep up with changes in inflation and enrollment and will thus remain below pre-recession levels once these adjustments are made.

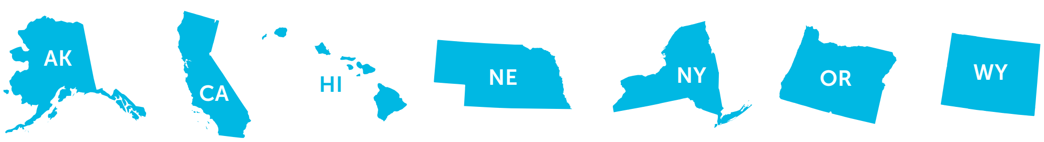
1. For more information on the balance wheel relationship, please see Hovey, H. A. (1999). *State spending for higher education in the next decade: The battle to sustain current support.* National Center for Public Policy and Higher Education; and Delaney, J. A., & Doyle, W. R. (2011). State spending on higher education: Testing the balance wheel over time. *Journal of Education Finance*, 343-368.
2. https://shef.sheeo.org/wp-content/uploads/2020/04/SHEEO_SHEF_FY18_IB_Recovery_Great_Recession.pdf
3. Washington, D.C. is excluded from this analysis due to limited data availability in prior years (SHEEO did not collect SHEF data for Washington, D.C., during the Great Recession).

EDUCATION APPROPRIATIONS

Education appropriations measure state and local support available for public higher education operating expenses and exclude research, hospitals, and medical education. *Table 1* shows that education appropriations per student were 8.7 percent lower nationally in 2019 than during the pre-recession high. In 2012, education appropriations per FTE reached an all-time low in the SHEF dataset (which extends back to 1980). Following this low point, education appropriations increased 20 percent nationally by 2019. Even though education appropriations have not reached pre-recession levels, the average institution receives nearly $1,400 per student more than it did in 2012.

> More than a decade after the start of the Great Recession, the average public institution still receives nearly $800 less in education appropriations per student.

States vary greatly in the level of recovery in education appropriations per FTE. In 2019, only seven states had recovered from the Great Recession and had education appropriations exceeding pre-recession high amounts: **Alaska, California, Hawaii, Nebraska, New York, Oregon, and Wyoming.**[4] These increases, measured from each state's pre-recession high point, ranged from 2.1 percent in Nebraska to 16.9 percent in Hawaii.



Of the 41 states that have yet to recover from Great Recession reductions in education appropriations, New Mexico is the closest to recovery (0.7 percent), while Arizona has the greatest gap (41 percent). In constant dollar terms, institutions in Arizona received more than $3,600 less per student in education appropriations in 2019 than they did in 2008.

Among the 10 states with the largest reduction in education appropriations between pre-recession high points and 2019, seven (Alabama, Delaware, Kentucky, Louisiana, Mississippi, Oklahoma, and West Virginia) are in the South.[5] Each of these states remains at least 27 percent below pre-recession education appropriations funding levels.

While most states have recovered since reaching their respective low points in education appropriations per student (in 2012 or 2013), 10 states have even fewer education appropriations per FTE than they did during the height of the Great Recession. These declines range from 0.7 percent in Wisconsin to 19.2 percent in Oklahoma. Conversely, five states (California, Florida, Hawaii, New Hampshire, and Oregon) have increased education appropriations per student by more than 50 percent from post-recession low points. Even with the large increases in Florida and New Hampshire, these states remain 8.3 percent and 27.3 percent below pre-recession levels, respectively.

4. Illinois and North Dakota had no decline in state education appropriations per FTE during the Great Recession. In Illinois, this is entirely due to the state's efforts to backfill their historically underfunded pension system.

5. As defined by the U.S. Census Bureau.

TABLE 1

PERCENT CHANGE PER FTE IN EDUCATION APPROPRIATIONS, FINANCIAL AID, TUITION REVENUE, AND TOTAL REVENUE SINCE THE GREAT RECESSION (CONSTANT DOLLARS)

	EDUCATION APPROPRIATIONS PER FTE		ADDITIONAL METRICS (CHANGE SINCE PRE-RECESSION HIGH)			
	CHANGE SINCE PRE-RECESSION HIGH (2007/2008)	CHANGE SINCE RECESSION LOW (2012/2013)	NET FTE ENROLLMENT	STATE PUBLIC FINANCIAL AID PER FTE	NET TUITION REVENUE PER FTE	TOTAL EDUCATION REVENUE PER FTE
ALABAMA	-35.8%	4.7%	8.8%	141.9%	84.9%	11.5%
ALASKA	5.4%	8.4%	-10.7%	1976.0%	18.3%	8.4%
ARIZONA	-41.0%	-6.2%	25.6%	-35.5%	68.8%	-1.9%
ARKANSAS	-13.6%	-5.3%	6.1%	136.2%	42.6%	4.9%
CALIFORNIA	12.4%	52.4%	8.4%	171.5%	24.3%	14.7%
COLORADO	-2.9%	43.6%	11.6%	21.1%	66.4%	36.6%
CONNECTICUT	-21.6%	15.1%	8.7%	-42.2%	68.1%	12.2%
DELAWARE	-30.6%	-5.3%	16.4%	-18.4%	43.0%	13.9%
FLORIDA	-8.3%	50.3%	16.6%	17.6%	21.2%	-2.0%
GEORGIA	-12.5%	24.2%	19.3%	9.3%	98.9%	8.6%
HAWAII	16.9%	57.4%	-0.6%	90.1%	44.1%	22.8%
IDAHO	-17.9%	40.7%	23.8%	10.5%	46.5%	-5.4%
ILLINOIS	29.6%	20.5%	-13.4%	4.4%	49.8%	34.4%
INDIANA	-14.9%	4.1%	10.2%	44.3%	22.3%	3.6%
IOWA	-23.9%	8.7%	7.5%	-22.6%	35.6%	4.8%
KANSAS	-16.4%	4.1%	3.4%	-14.4%	35.6%	4.1%
KENTUCKY	-28.1%	-5.5%	-0.3%	16.0%	26.8%	-7.9%
LOUISIANA	-39.0%	-4.2%	-0.7%	102.4%	80.7%	-10.9%
MAINE	-2.9%	14.3%	-4.5%	2.9%	2.1%	-0.5%
MARYLAND	-1.5%	21.7%	15.8%	-38.1%	11.9%	4.6%
MASSACHUSETTS	-10.7%	23.8%	8.1%	4.0%	2.6%	-5.4%
MICHIGAN	-16.1%	24.7%	-4.7%	-96.1%	51.9%	19.3%
MINNESOTA	-10.5%	32.1%	-5.9%	30.5%	41.2%	12.1%
MISSISSIPPI	-33.5%	-7.6%	10.2%	5.2%	37.9%	-7.1%
MISSOURI	-25.5%	4.1%	11.7%	223.2%	3.2%	-14.1%
MONTANA	-2.7%	15.7%	2.3%	-74.9%	19.0%	8.0%
NEBRASKA	2.1%	19.3%	2.7%	64.3%	57.4%	17.5%
NEVADA	-27.6%	9.5%	15.8%	14.2%	52.7%	-10.3%
NEW HAMPSHIRE	-27.3%	50.7%	10.2%	-100.0%	9.7%	-1.2%
NEW JERSEY	-26.7%	2.5%	14.0%	43.0%	34.1%	0.3%
NEW MEXICO	-0.7%	32.8%	-6.1%	-20.7%	36.8%	6.0%
NEW YORK	9.1%	24.2%	2.0%	36.4%	37.2%	17.5%
NORTH CAROLINA	-14.5%	9.8%	10.2%	-2.9%	42.6%	-1.3%
NORTH DAKOTA	17.1%	1.0%	-3.6%	298.7%	19.1%	18.1%
OHIO	-13.5%	16.3%	6.6%	-42.7%	15.8%	2.4%
OKLAHOMA	-35.5%	-19.2%	-1.8%	9.9%	70.7%	-2.0%
OREGON	5.7%	58.5%	6.4%	52.0%	58.3%	30.4%
PENNSYLVANIA	-36.7%	4.3%	2.6%	-35.8%	42.6%	7.5%
RHODE ISLAND	-18.4%	21.6%	4.4%	46.7%	2.3%	-7.0%
SOUTH CAROLINA	-20.8%	29.5%	8.4%	-0.4%	66.5%	17.9%
SOUTH DAKOTA	-13.0%	16.2%	10.9%	132.2%	41.8%	14.3%
TENNESSEE	-12.0%	31.9%	7.0%	24.8%	42.0%	4.9%
TEXAS	-19.0%	5.4%	32.5%	182.8%	11.3%	-8.6%
UTAH	-13.5%	29.1%	24.0%	32.7%	34.1%	2.4%
VERMONT	-17.1%	-2.0%	5.6%	3.8%	17.2%	8.1%
VIRGINIA	-19.9%	21.8%	11.7%	41.3%	61.8%	16.7%
WASHINGTON	-8.5%	42.7%	6.3%	27.9%	57.1%	11.1%
WEST VIRGINIA	-29.6%	-9.9%	-9.4%	18.8%	39.6%	-0.6%
WISCONSIN	-19.8%	-0.7%	-4.4%	1.5%	34.7%	0.5%
WYOMING	3.9%	18.0%	-1.7%	91.9%	25.0%	6.9%
U.S.	**-8.7%**	**20.0%**	**7.0%**	**34.1%**	**39.2%**	**8.2%**

NOTES: 1. For each state, these figures compare the pre-recession high point (2007 or 2008) or Great Recession low (2012 or 2013) to 2019.

2. Constant dollars adjusted by the Higher Education Cost Adjustment (HECA).

* Education appropriations per FTE did not decline in Illinois or North Dakota during the Great Recession

SOURCE: State Higher Education Executive Officers Association

ADDITIONAL SHEF METRICS

Changes in education appropriations have clear impacts on other higher education revenues as institutions seek alternative revenue sources to make up for lost state funding. The most common strategy is to partially or fully offset appropriation reductions with increases in tuition revenue. This section reviews changes in the primary SHEF metrics between the 2007/2008 high point in education appropriations per student and 2019.

NET FTE ENROLLMENT

Full-time equivalent (FTE) enrollment converts student credit hours to full-time academic year students. FTE excludes medical students. FTE enrollment increased rapidly during the worst years of the Great Recession when many states had double digit unemployment rates,[6] and topped out at more than 11 million in 2011. Since this high point, national levels of FTE enrollment have declined slightly in every year. **In 2019, FTE enrollment in the U.S. was 7.0 percent higher than prior to the recession.**

Thirty-six states had increases in net FTE enrollment during the time period between 2007/2008 and 2019. Half of these states had FTE enrollment increases of 10 percent or more. Most of these increases were in the South (Delaware, Florida, Georgia, Maryland, Mississippi, North Carolina, Texas, and Virginia) and the West (Arizona, Colorado, Idaho, Nevada, and Utah).

Fourteen states had lower FTE enrollment in 2019 than prior to the Great Recession. These percent decreases ranged from 0.3 percent in Kentucky to 13.4 percent in Illinois. Only Alaska and Illinois had net enrollment decreases of 10 percent or more since their pre-recession high point in education appropriations.

STATE PUBLIC FINANCIAL AID

State public financial aid is any state appropriated student financial aid for public institutions, excluding loans. These funds are included in education appropriations.

As the issue brief on changing trends in financial aid shows,[7] since the Great Recession, states have largely prioritized financial aid programs for students attending public institutions. Funding for state public financial aid per student increased in 36 states and has more than doubled in nine states between the pre-recession high point and 2019. The strongest instances of states prioritizing student financial aid can be seen in the six states that had above average declines in per-student appropriations, yet managed to more than double state public financial aid per FTE. Those states were Alabama, Arkansas, Louisiana, Missouri, South Dakota, and Texas.

However, since the pre-recession high point in education appropriations, state funding for public financial aid declined in 14 states. Michigan and Montana had the largest decreases (96.1 and 74.9 percent, respectively), while New Hampshire eliminated all financial aid funding in 2011.

6. U.S. Bureau of Labor Statistics. (2012). *BSL spotlight on statistics: The recession of 2207-2009.* https://www.bls.gov/spotlight/2012/recession/data_lau_1976.htm.

7. https://shef.sheeo.org/wp-content/uploads/2020/04/SHEEO_SHEF_FY19_IB_Financial_Aid.pdf

NET TUITION REVENUE

Net tuition revenue is the total amount of tuition and fees, minus state and institutional financial aid and medical tuition and fees. Net tuition is affected by changes in tuition rates as well as proportional differences in out-of-state, international, and graduate student enrollment.

> **Net tuition revenue per FTE has increased in every state** since the pre-recession high point in appropriations and has increased 39.2 percent nationally.

On a per-student basis, net tuition revenue has increased by at least 50 percent in 14 states. Georgia had the greatest change, with tuition revenue nearly doubling between 2007 and 2019.

Among the 10 states with the smallest percent increases in net tuition revenue, half were from the Northeast. Additionally, the six states (Maine, Massachusetts, Missouri, New Hampshire, Rhode Island, and Texas) with the lowest increases in net tuition revenue also had reductions in education appropriations and total education revenue.

TOTAL EDUCATION REVENUES

Total education revenues refer to the sum of education appropriations and net tuition, excluding net tuition revenue used for capital debt service.

Total education revenue has yet to reach pre-recession levels in 16 states. Maine and West Virginia are within one percent of pre-recession levels of total education revenue per FTE, while Louisiana, Missouri, and Nevada lag pre-recession levels by at least 10 percent. The effect of reductions in education appropriations per student can be seen in these 16 states, which include seven of 10 states with the largest reductions in education appropriations. In Arizona, Louisiana, and Oklahoma, net tuition revenue increases that ranked in the top five were not enough to offset the reductions in education appropriations.

Four states (Arkansas, Delaware, Vermont, and Wisconsin) have met or exceeded pre-recession levels of total education revenue by relying solely on increases in net tuition revenue. In 2019, education appropriations in these states remained below their funding levels during the worst years of the recession. Twenty-one states relied on a combination of increases in both education appropriations and net tuition revenue to meet or exceed pre-recession total education revenues.

CONCLUSION

The global spread of COVID-19 (the coronavirus) in February and March of 2020 has led to increased volatility in the equity markets and growing uncertainty about how the virus will impact the national and state economies. There is concern among federal government officials and ratings analysts that the virus will cause a temporary economic slowdown.[8] If this slowdown does occur, it will happen at a time when education appropriations per student in 41 states have yet to rebound from reductions made during the last recession. Moreover, every state has become more reliant on net tuition revenue to fund educational operations at public institutions since the Great Recession. This trend of relying on students to provide a greater portion of revenue suggests difficult times may be on the horizon for public institutions, as students have become more price sensitive and concerned about the amount of debt they accumulate.

8. Hilsenrath, J. & Davidson, K. (2020, March 16). U.S. braces for sharp economic downturn as coronavirus bears down. *Wall Street Journal*. https://www.wsj.com/articles/u-s-braces-for-sharp-economic-downturn-as-coronavirus-bears-down-11584386207

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