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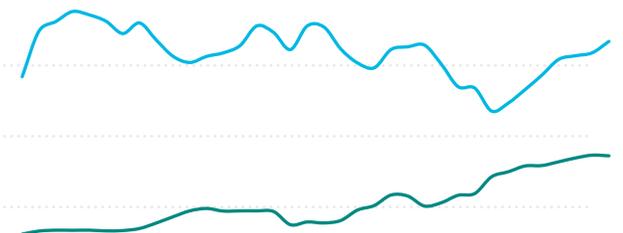
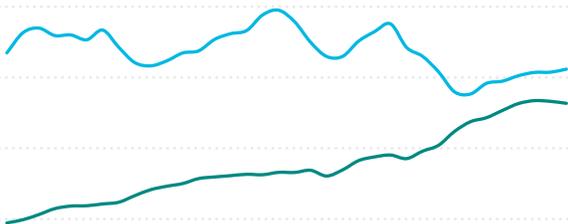
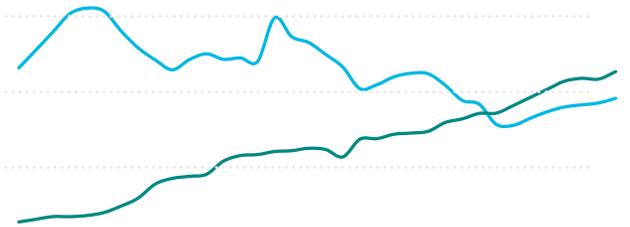
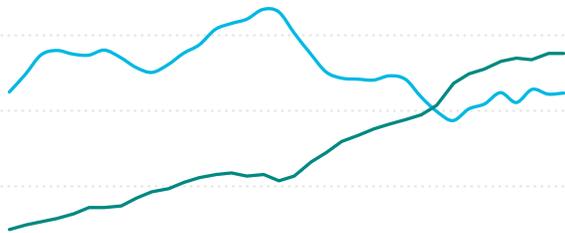
STATE HIGHER EDUCATION FINANCE

2019

ISSUE BRIEF:

REGIONAL DIFFERENCES IN HIGHER EDUCATION FINANCE

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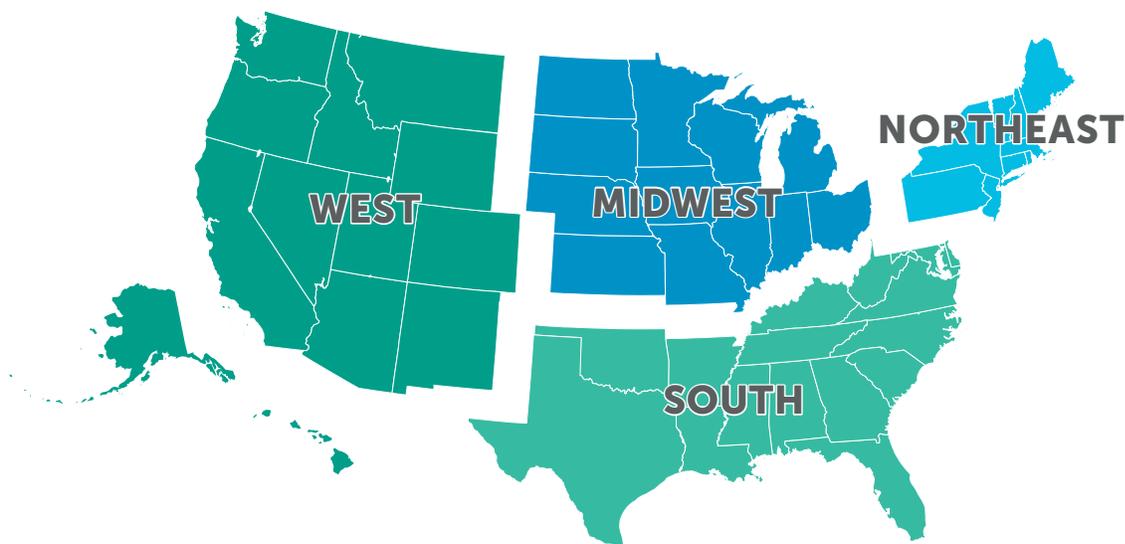
INTRODUCTION

The systems, structures, and funding of public higher education vary tremendously across the United States. While there are some exceptions, each region shares trends in the levels and distribution of its revenue sources for public higher education.

Similarities in each region may be due to shared history, demographics, politics, or culture. For example, states in the Northeast are generally smaller and have a higher concentration of independent (private) institutions. Many institutions in these states have higher tuition revenues on a per-student basis because they can charge higher tuition rates and remain competitive, but also because they may pull in more out-of-state students due to their proximity to so many other states.

Regional similarities and shared trends could also be the result of policy diffusion across neighboring states. For example, following the implementation of the popular Georgia HOPE Scholarship, many states in the South adopted similar broad-based merit programs over the last two decades. Many of these states use non-tax lottery dollars to fund these scholarships and allocate a higher than average proportion of total funding for public higher education to financial aid.

This issue brief explores trends over time across the four U.S. Census Bureau regions: the Midwest, Northeast, South, and Western states.



REGIONAL DIFFERENCES BY METRIC

This issue brief compares each region’s enrollment and financial metrics in fiscal 2019 and over time. *Table 2* shows fiscal 2019 numbers for each metric discussed, and *Figure 3* shows two calculated metrics by region in fiscal 2019: education appropriations per FTE and net tuition revenue per FTE. In addition, each region has unique trends in how the levels and distribution of enrollment, state funding, and tuition revenue have changed over time. Comparisons over time focus on the last 35 years (*Figures 1 and 2*) and on changes since the start of the Great Recession (*Table 3*).

Data in this section are adjusted to facilitate regional comparisons using modified versions of the state-level Enrollment Mix Index (EMI) and Cost of Living Index (COLI). The adjustments were recalculated as an FTE enrollment weighted average of the states in each region. In regions with a higher average cost of living and/or enrollment mix, financial metrics will be adjusted down. In regions with a lower cost of living or enrollment mix, financial metrics will be adjusted up. The precise adjustments applied to each region are listed in *Table 1*. Visit the [SHEF website¹](#) for additional detail on the calculations behind these adjustments.

TABLE 1

REGIONAL COST OF LIVING (COLI) AND ENROLLMENT MIX (EMI) ADJUSTMENTS

	COLI	EMI	COMBINED ADJUSTMENT
MIDWEST	0.9160	1.0173	0.9318
NORTHEAST	1.1973	0.9877	1.1826
SOUTH	0.9309	1.0148	0.9447
WEST	1.1984	0.9741	1.1674
U.S.	1.0000	1.0000	1.0000

NOTES: 1. The adjusted Cost of Living Index (COLI) and Enrollment Mix Index (EMI) are the state-level indices, reweighted based on a state’s portion of regional FTE enrollment.

SOURCE: State Higher Education Executive Officers Association

ENROLLMENT

Full-time equivalent (FTE) enrollment is a measure of student enrollment which converts student credit hours to full-time academic year students. FTE excludes medical students. *Table 2* shows that **the South has by far the highest FTE enrollment of any region in the country**. With 4.29 million FTE, enrollment in the South is 50.3 percent more than in the West (the region with the second highest FTE enrollment). The West has 2.85 million FTE; the Midwest has 2.29 million FTE; and the Northeast is the smallest with 1.51 million FTE (less than the state of California).

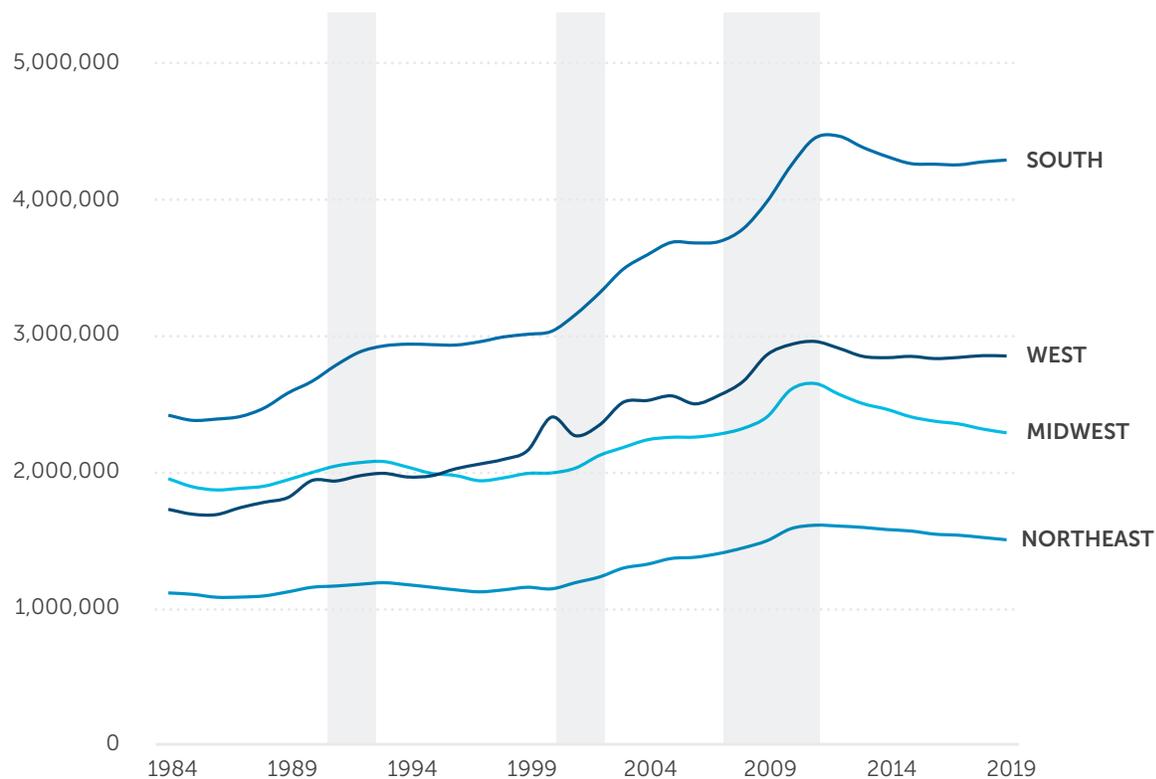
When comparing SHEF finance metrics across regions, it is important to keep in mind that the largest states in each region dominate the regional averages. This is most apparent in the West, where California makes up 54.6 percent of all FTE enrollment. No other region has a single state representing such a large portion of regional enrollment. The states comprising the highest proportion of enrollment in each remaining region are Ohio in the Midwest (17.1 percent), New York in the Northeast (35.6 percent), and Texas in the South (24.9 percent).

1. <https://shef.sheeo.org/>

Figure 1 shows that enrollment has steadily increased in all regions over the last 35 years (1984-2019). However, since the economic recovery began after the Great Recession, there has been sustained enrollment growth in the South alongside declines in all other regions. Despite these recent declines, **the Midwest is the only region below pre-recession levels of enrollment**. Since the start of the recession, enrollment has (Table 3):

- Decreased 1.4 percent in the Midwest,
- Increased 7.1 percent in the Northeast,
- Increased 13.3 percent in the South, and
- Increased 6.9 percent in the West.

FIGURE 1
STUDENT FTE ENROLLMENT BY REGION, FY 1984-2019



NOTE: 1. Full-time equivalent enrollment converts student credit hours to full-time, academic year students, but excludes medical students.

SOURCE: State Higher Education Executive Officers Association

EDUCATION APPROPRIATIONS

Education appropriations are state and local support available for public higher education operating expenses, including financial aid but excluding research, agriculture, and medical support (RAM). After adjusting for differences in the cost of living and enrollment mix across regions, *Table 2* and *Figure 3* show that education appropriations per FTE ranged from \$7,253 in the Northeast (88 percent of the U.S. average) to \$8,347 in the West (1.02 times the U.S. average).

Over the last 35 years, education appropriations per FTE have declined in all regions but the West. These declines range from just 0.4 percent (\$35) in the Midwest to 12.2 percent (\$1,011) in the Northeast. Similarly, **the West is the only region that has fully recovered in per-FTE education appropriations since the pre-recession high point.**

Since the start of the recession, education appropriations per FTE:

- Decreased 6.6 percent in the Midwest,
- Decreased 10.3 percent in the Northeast,
- Decreased 17 percent in the South, and
- **Increased** 1.6 percent in the West.

TUITION REVENUE

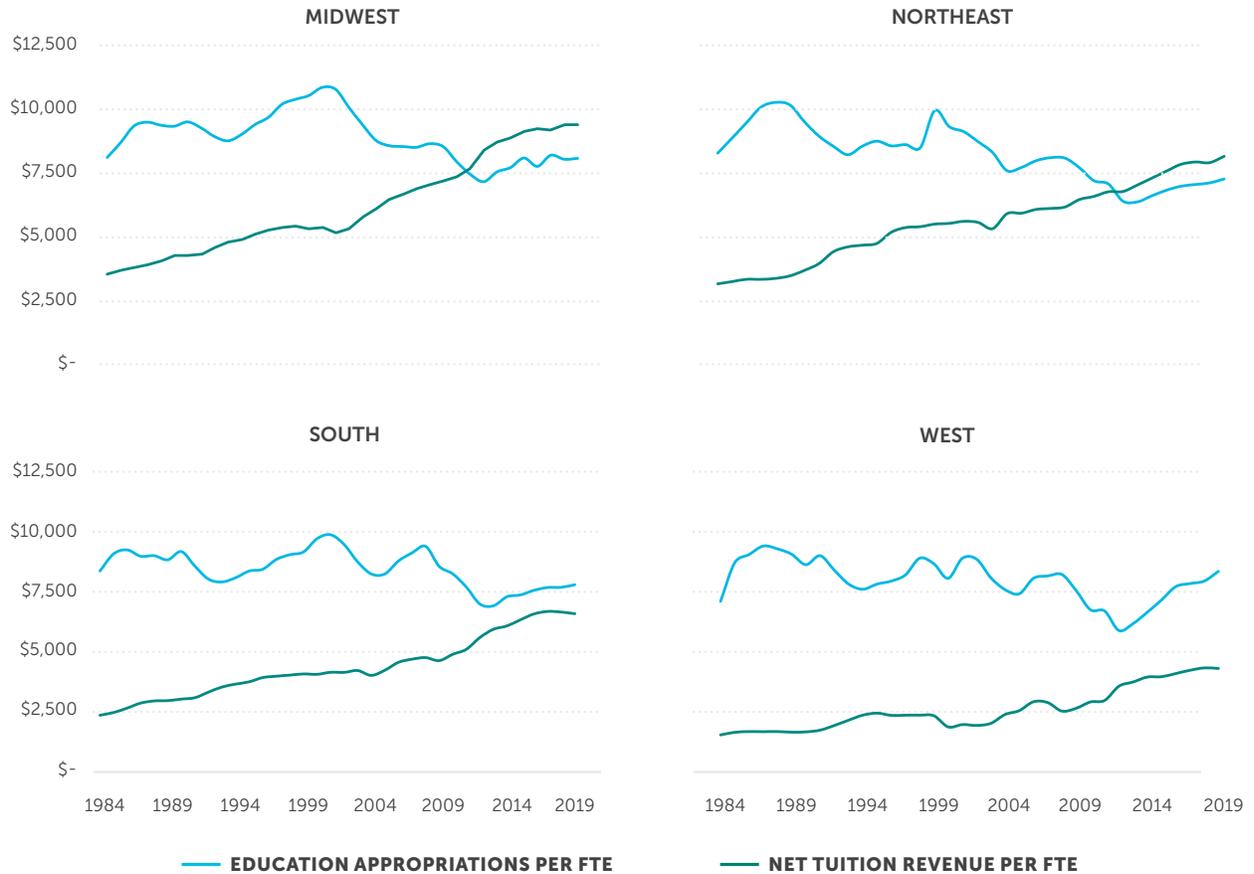
Net tuition revenue is the total amount of tuition and fees received at public institutions, minus state and institutional financial aid and tuition from medical schools. While net tuition revenue does capture differences in tuition rates, it is also impacted by differences in the ratios of in-state to out-of-state students and undergraduates to graduates, and by fee revenues at public institutions. *Table 2* and *Figure 3* show that net tuition revenue per FTE ranged from \$4,309 in the West (62 percent of the U.S. average) to \$9,384 in the Midwest (1.36 times the U.S. average).

Figure 2 shows that since 1984, net tuition revenue per FTE has increased substantially in all regions after adjusting for inflation. Those increases ranged from 157.2 percent in the Northeast (which started with the second highest tuition after the Midwest) to 178.5 percent in the West (which had the lowest tuition in 1984). Since 1984, tuition has increased in every region in almost every year. Growth in tuition revenue accelerated during and following the tech bust in the early 2000s and has only recently begun to level off.

Since the pre-recession high point, net tuition revenue per FTE has increased in all regions:

- 33.1 percent in the Midwest,
- 33.3 percent in the Northeast,
- 38.3 percent in the South, and
- 69.9 percent in the West.

FIGURE 2
PUBLIC HIGHER EDUCATION REVENUES BY REGION, FY 1984-2019
(CONSTANT ADJUSTED DOLLARS)



- NOTES:**
1. Education appropriations are a measure of state and local support available for public higher education operating expenses, excluding appropriations for research, hospitals, and medical education.
 2. 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.
 3. Data are adjusted for inflation by the Higher Education Cost Adjustment (HECA) and by using weighted regional averages of the Cost of Living Index (COLI) and Enrollment Mix Index (EMI).

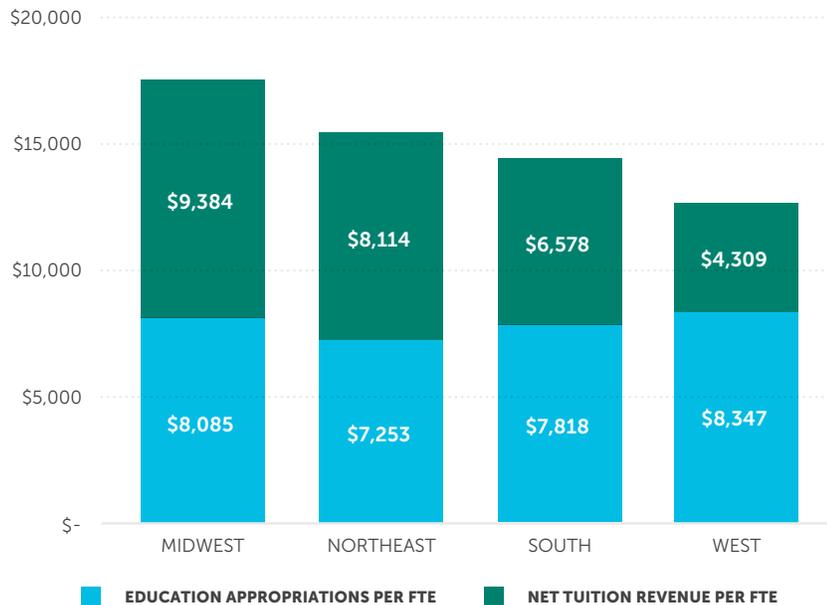
SOURCE: State Higher Education Executive Officers Association

TOTAL EDUCATION REVENUE

The total height of the bars in *Figure 3* is a rough representation of total revenue available to public institutions. It is visually apparent in this figure that after adjusting for cost of living and enrollment mix differences, the Midwest has the highest total revenues, while the West has the lowest. *Table 2* lists the actual total education revenues per FTE by region, which differ slightly due to the exclusion of tuition revenue used for debt service. With \$17,363 per FTE in total education revenues, public institutions in the Midwest have, on average, 37.5 percent more total revenues available than the West, whereas public institutions have, on average, only \$12,625 in total education revenue per FTE.

Since before the Great Recession, total revenues per FTE have increased in all regions to a varying degree. The South has only seen an average 1.3 percent increase in total revenue, compared to 8.4 percent in the Northeast, 10.9 percent in the Midwest, and 17.8 percent in the West (*Table 3*).

FIGURE 3
EDUCATION APPROPRIATIONS AND NET TUITION REVENUE PER FTE BY REGION, FY 2019 (ADJUSTED)



- NOTES:**
1. Education appropriations are a measure of state and local support available for public higher education operating expenses, excluding appropriations for research, hospitals, and medical education.
 2. 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.
 3. Data are adjusted using a modified Cost of Living Index (COLI) and Enrollment Mix Index (EMI), each weighted based on a state's portion of regional FTE enrollment.

SOURCE: State Higher Education Executive Officers Association

STATE PUBLIC FINANCIAL AID

State public financial aid refers to any state appropriated student financial aid for public institutions, excluding loans. These funds, which range from \$471 per FTE in the Midwest to \$918 per FTE in the South, are included in education appropriations (*Table 2*). Both the Northeast and West regions have per-FTE state public financial aid figures very close to the U.S. average. The West gives \$5 less per FTE in financial aid, while the Northeast gives \$1 more than the U.S. average.

Table 2 also shows state public financial aid as a percent of all education appropriations. This measures how much state and local funding is appropriated to help students offset the cost of gross tuition and fees in comparison to funds appropriated directly to institutions. In the Midwest, state aid makes up only 5.8 percent of appropriations. On the high end, the Northeast and the South allocate more than 11 percent of all state and local funding through financial aid to students at public institutions.

Since before the recession, state public financial aid declined in the Midwest (8.2 percent) but grew in all other regions (12.6 percent in the Northeast, 20.8 percent in the South, and 120.2 percent in the West). Similarly, state aid as a percent of education appropriations decreased 0.1 percentage point in the Midwest and increased in all other regions. Those increases ranged from 2.3 percentage points in the Northeast to 5.2 percentage points in the West.

STUDENT SHARE

The student share is a measure of the proportion of total education revenues at public institutions coming from net tuition revenue. *Table 2* shows that student share ranges from 34.1 percent in the West to 54 percent in the Midwest. Student share in the South (46.1 percent) is very close to the U.S. average (46 percent), and the Northeast is closest in range to the Midwest, with a 52.8 percent student share. **This means that in the Midwest and Northeast regions of the U.S., student tuition dollars provide a larger share of total revenue at public institutions than state and local sources combined.**

Student share is affected by both education appropriations (state and local funding) and net tuition revenue. The West has such a low student share because it has slightly higher than average education appropriations and much lower than average net tuition revenue. On the other end of the spectrum, the Midwest has slightly lower than average education appropriations and much higher than average tuition revenue, giving it a student share almost 20 points above the West.

Student share varies considerably within each region:

- 34.3 percent (Illinois) to 66.3 percent (Michigan) in the Midwest,
- 35.1 percent (New York) to 86.9 percent (Vermont) in the Northeast,
- 26.5 percent (Florida) to 76.1 percent (Delaware) in the South, and
- 17.6 percent (Wyoming) to 69.4 percent (Colorado) in the West.

Table 3 shows that **the student share has increased in every region since the pre-recession high point in education appropriations**. Percentage point increases in the student share range from 9.0 in the Midwest to 12.3 in the South.

TABLE 2
SHEF METRICS BY REGION, FY 2019 (ADJUSTED)

	NET FTE ENROLLMENT	EDUCATION APPROPRIATIONS PER FTE	STATE PUBLIC FINANCIAL AID PER FTE	STATE AID AS A PERCENT OF EDUCATION APPROPRIATIONS	NET TUITION REVENUE PER FTE	TOTAL EDUCATION REVENUE PER FTE	STUDENT SHARE
MIDWEST	2,288,684	\$8,085	\$471	5.8%	\$9,384	\$17,363	54.0%
NORTHEAST	1,510,706	\$7,253	\$809	11.2%	\$8,114	\$15,359	52.8%
SOUTH	4,285,580	\$7,818	\$918	11.7%	\$6,578	\$14,266	46.1%
WEST	2,849,919	\$8,347	\$803	9.6%	\$4,309	\$12,625	34.1%
U.S.	10,934,890	\$8,196	\$808	9.9%	\$6,902	\$15,018	46.0%

- NOTES:**
1. Full-time equivalent enrollment converts student credit hours to full-time, academic year students, but excludes medical students.
 2. Education appropriations are a measure of state and local support available for public higher education operating expenses, excluding appropriations for research, hospitals, and medical education.
 3. State public financial aid is any state appropriated student financial aid for public institutions, excluding loans. Some respondents could not separate tuition aid from aid for living expenses.
 4. 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.
 5. Total education revenue is the sum of education appropriations and net tuition, excluding net tuition revenue used for capital debt service.
 6. The student share is a measure of the proportion of total education revenue at public institutions coming from net tuition revenue.
 7. Data are adjusted using a modified Cost of Living Index (COLI) and Enrollment Mix Index (EMI), each weighted based on a state's portion of regional FTE enrollment.

SOURCE: State Higher Education Executive Officers Association

TABLE 3
CHANGE IN SHEF METRICS SINCE PRE-RECESSION BY REGION (CONSTANT DOLLARS)

	NET FTE ENROLLMENT	EDUCATION APPROPRIATIONS PER FTE	STATE PUBLIC FINANCIAL AID PER FTE	STATE AID AS A PERCENT OF EDUCATION APPROPRIATIONS	NET TUITION REVENUE PER FTE	TOTAL EDUCATION REVENUE PER FTE	STUDENT SHARE
MIDWEST	-1.4%	-6.6%	-8.2%	-0.1	33.1%	10.9%	9.0
NORTHEAST	7.1%	-10.3%	12.6%	2.3	33.3%	8.4%	9.9
SOUTH	13.3%	-17.0%	20.8%	3.7	38.3%	1.3%	12.3
WEST	6.9%	1.6%	120.2%	5.2	69.9%	17.8%	10.5
U.S.	7.0%	-8.7%	34.1%	3.1	39.2%	8.2%	10.2

- NOTES:**
1. Constant 2019 dollars adjusted by the Higher Education Cost Adjustment (HECA).
 2. The pre-recession high point in education appropriations per FTE was fiscal 2008 for the Midwest, South, and West regions. In the Northeast, 2007 was the pre-recession high point. All regions are compared to fiscal 2019.

SOURCE: State Higher Education Executive Officers Association

CONCLUSION

There is substantial variation in enrollment and revenues for public institutions of higher education in the United States. In some cases, as has been shared in this issue brief, these differences are clustered by region. For example, the Midwest and Northeast are broadly characterized by a higher student share and higher total education revenues.

In the Midwest, education appropriations are close to the U.S. average, but all other metrics differ. The Midwest has much lower state aid (58 percent of the U.S. average), higher tuition, higher total revenues, and a higher student share. The Midwest is also the only region with a decline in state public financial aid per FTE and a decline in FTE enrollment since the pre-recession high point.

The Northeast has low education appropriations, high tuition revenue, and a high student share, but matches the U.S. total closely in state public aid per FTE and total education revenue. Because of its low education appropriations and average financial aid, the Northeast allocates 1.3 percentage points more of its total appropriations to student financial aid.

The South and West are, in many ways, the most similar to the U.S. average (likely because they have the largest student populations and, therefore, the greatest pull on the weighted U.S. averages).

The South has a similarly high measure of state aid as a percent of education appropriations due to its slightly below average education appropriations and high student aid per FTE. Net tuition revenue in the South is also slightly below average, which means that the student share is almost exactly the same in the South as it is across the U.S. as a whole.

The West is characterized by generally average education appropriations and financial aid, paired with much lower tuition revenues than the other regions. This results in the lowest total education revenue and the lowest student share of any region.

While the SHEF report broadly discusses trends across the U.S. and adds context by naming the extent of variation across the states, this issue brief brings up an important consideration: Many differences in higher education revenues are seen across regions as well as individual states.

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