

Educated and Encumbered: Student Debt Rising with Higher Education Funding Falling in Massachusetts

By Jeremy Thompson, Senior Policy Analyst¹

Higher education is an important factor in the success of our commonwealth. Expanding access to affordable high quality postsecondary education can provide more of our young people with the opportunity to choose their paths in life without being blocked by insurmountable financial obstacles. In the long run, that strengthens our overall state economy. Adequate state funding helps ensure that these benefits are broadly available to all who want to pursue higher education. Insufficient state funding, on the other hand, leaves students and their families with higher tuition and debt, and thus threatens to put higher education – and the opportunities it offers – beyond the reach of those who cannot afford it.

More than half of our state’s public high school graduates who attend college enroll in a public college or university in Massachusetts. Students attending public postsecondary institutions are significantly more likely than those attending private ones to live and work in Massachusetts after graduation, contributing to our communities and our economy over the long term.

Organized as a series of charts, this paper details major trends since Fiscal Year (FY) 2001 in state support for our public colleges and universities, and how those changes have led to sharply increasing costs for students and families, which they pay for with increasing amounts of debt. On several measures we compare Massachusetts to other states.

We show that:

- A well-educated workforce plays a crucial role in the economic strength of our state. Massachusetts has the **best educated workforce in the country** and the **highest median hourly wage**.
- Deep cuts in state support for public higher education have contributed to some of the **highest tuition and fees increases in the nation** from 2001 to 2016.
- Along with large cuts in state scholarship funding, these tuition and fee hikes have **doubled the share of postsecondary education costs borne by students and their families**, from about 30 percent to around 60 percent.
- Students and families have paid these costs by borrowing more. Among students graduating from public 4-year postsecondary schools, **average debt grew faster in Massachusetts than in all but one other state** from 2004 (the earliest year for which data are available for most states) to 2016.
- **Average debt among state university and UMass graduates now almost equals the average debt among graduates of the state’s private colleges and universities.**

Charts by Major Theme *(click on theme heading or chart title to go there)*

Higher Education is Vital to Our State's Economic Strength

- 1) States with more college-educated workers have stronger, higher-wage economies
- 2) It isn't only a bachelor's degree that boosts earnings
- 3) Graduates of public institutions are more likely to stay in Massachusetts after graduation

Massachusetts Has Cut Higher Education Funding Since FY 2001

- 4) Massachusetts has cut higher education spending 14 percent since FY 2001
- 5) Higher education spending *per student* has been cut even more—by 32 percent

Amid Drops in State Support, Sharp Increases in Tuition and Fees

- 6) State funding cuts played a major role in driving tuition & fee increases across all of our campuses
- 7) Cuts played a major role in driving tuition & fee increases of \$2,800 per student at community colleges
- 8) Cuts played a major role in driving tuition & fee increases of \$5,400 per student at state universities
- 9) Cuts played a major role in driving tuition & fee increases of \$5,600 per student at UMass campuses
- 10) Tuition and fees at MA public universities have grown 109 percent since 2001—after adjusting for inflation

Funding Cuts and Tuition & Fee Hikes: Students and Families Take on More Debt

- 11) Massachusetts has cut state scholarship funding by 32 percent since 2001
- 12) Overall, the student share of higher education costs has risen substantially
- 13) The share of graduates taking out loans has increased, as has their total level of debt
- 14) Per capita debt (including those students without loans) is up 122 percent
- 15) Massachusetts public university students used to graduate with some of the lowest student loan debt in the country
- 16) Massachusetts public university students now graduate with the 10th highest student loan debt in the country
- 17) Average debt of graduates from public universities in Massachusetts has grown faster than in all but one other state
- 18) Public university graduates' debt now almost equals that of private college and university graduates in Massachusetts
- 19) A greater share of Massachusetts public university graduates have debt than private college and university graduates

Massachusetts Has the Resources to Invest More in Public Higher Education

- 20) At first, Massachusetts appears to spend more than most states, per student, on higher education
- 21) Adjusted for cost of living, Massachusetts is close to the median in per student higher education spending
- 22) Massachusetts is below average in higher education spending per capita
- 23) As a share of our economy, Massachusetts spends less on higher education

TECHNICAL APPENDIX

All dollar amounts and percentage changes are adjusted for inflation unless otherwise noted.

Higher Education is Vital to Our State’s Economic Strength

1) States with more college-educated workers have stronger, higher-wage economies.

States with a greater share of college-educated workers tend to have stronger, higher-wage economies, as shown in the graph below. States whose workforces have the highest levels of educational attainment tend to have median hourly wages over \$20, whereas states whose workforces have the lowest levels of educational attainment have wages between \$15 and \$16 an hour. A few states with small populations, like Alaska, buck this trend, but it is remarkable how tightly clustered the rest of the states are around the upward trend line.

Strong Relationship Between Education and Wages in 2017



Source: Economic Policy Institute analysis of Current Population Survey data

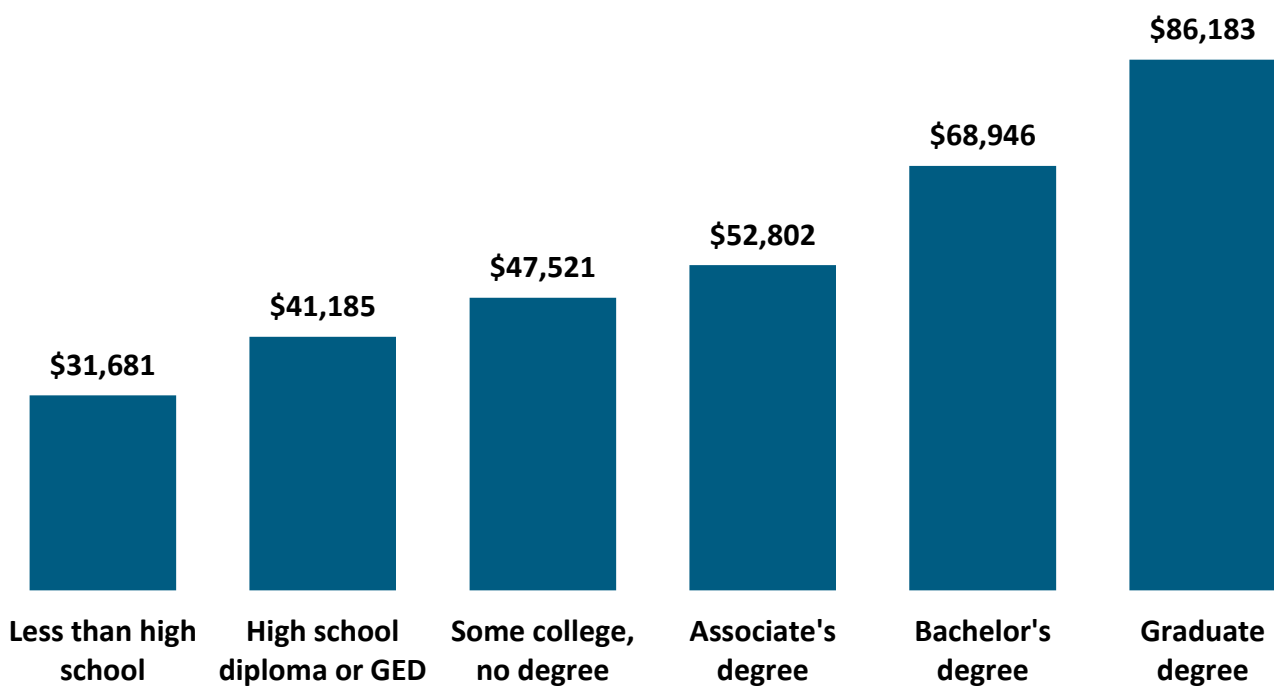
The importance of increasing the share of a state’s workforce with at least a bachelor’s degree is a relatively new phenomenon. Back in 1979, there was little clear relationship between postsecondary educational attainment and wages at the state level. Today, however, it’s very hard to get a job that pays family-sustaining wages with only a high school diploma. For more detail on these trends and an analysis of their causes, see MassBudget’s [“A Well-Educated Workforce is Key to State Prosperity.”](#)

2) It isn't only a bachelor's degree that boosts earnings.

While the graph above focuses on the connection between higher wages and the share of a workforce with a bachelor's degree or higher, other postsecondary credentials — such as two-year associate's degrees and certificates — also tend to lead to higher wages. Massachusetts workers with two-year associate's degrees, for instance, earn roughly \$12,000 more per year than those with just a high school diploma.²

Median Wage Income Increases with Educational Attainment Even For Those Without Bachelor's Degrees

Median wage income for MA full-time year-round workers, 25 and older, by educational attainment (2016 \$)



Source: MassBudget analysis of U.S. Census Bureau, 2012-2016 American Community Survey Public Use Microdata Sample. Full-time, year-round work is defined as 35 or more hours for 50 or more weeks.

And educational certificates have been found to [increase the earnings of workers without a college degree](#) by several thousand dollars annually. In 2015-16 Massachusetts community colleges awarded over 3,100 certificates requiring less than two years of study — nearly half of them in programs leading to work in the health professions. This is up nearly 50 percent over the roughly 2,100 less-than-two-year certificates awarded by the state's community colleges in the 2000-2001 academic year.³

3) Graduates of public institutions are more likely to stay in Massachusetts after graduation

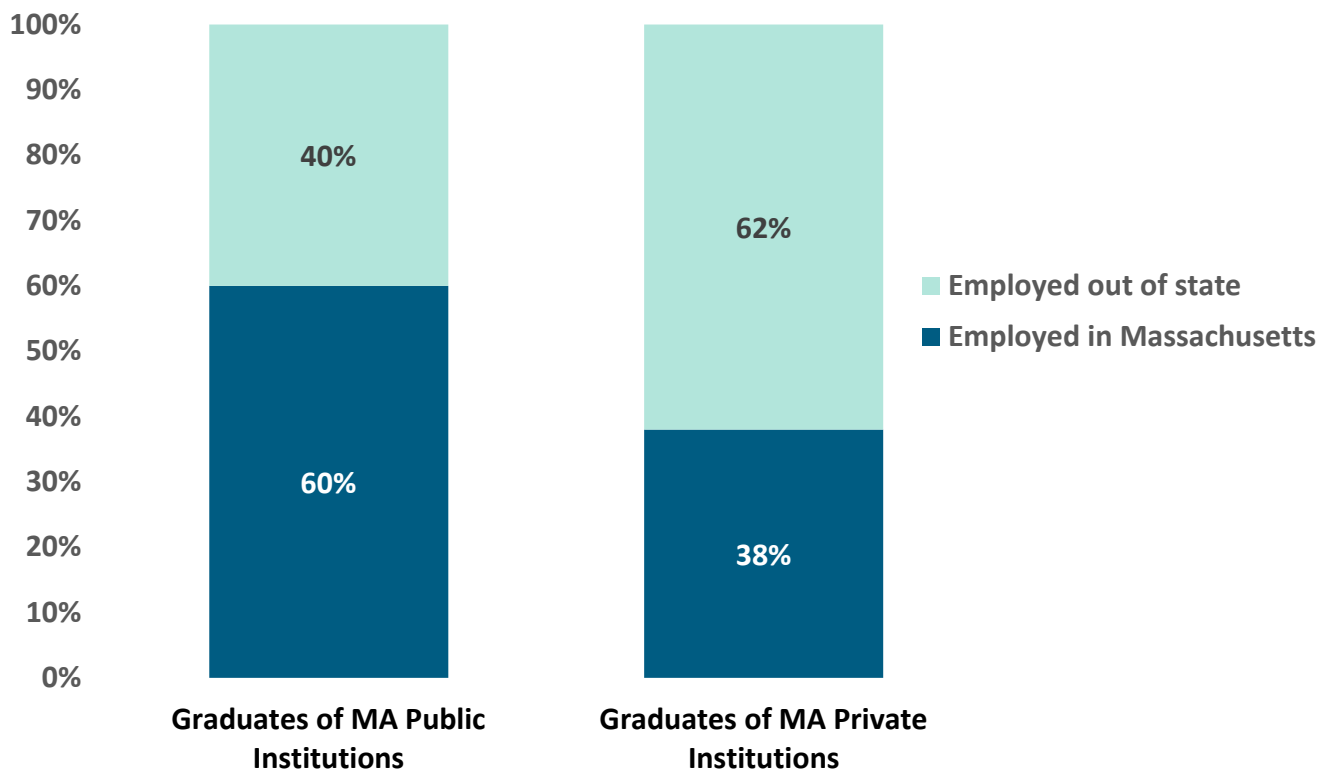
More than half of our state's public high school graduates who go on to college attend a public higher education campus in Massachusetts within 16 months of finishing high school. For the high school class of 2015, 26 percent went on to a Massachusetts community college, 12 percent went to a state

university, and 15 percent went to a UMass campus. For more detail and for prior years, see “[High School Graduates Attending College or University](#)” at the Kids Count Data Center.

Further, graduates of our public campuses are more likely to live and work in Massachusetts after graduation, contributing to our communities and our economy over the longer term. Specifically, according to the most comprehensive longitudinal study tracking the paths of American college students post-graduation, 60 percent of graduates of Massachusetts public colleges in 2008 were working in Massachusetts four years later. Only 38 percent of private graduates in 2008 remained in-state in 2012 (see graph below).

Public Grads More Likely to Stay and Contribute to Massachusetts Economy

State of employment in 2012 for class of 2008 Massachusetts college graduates



Source: National Center for Education Statistics, Baccalaureate & Beyond Longitudinal Survey

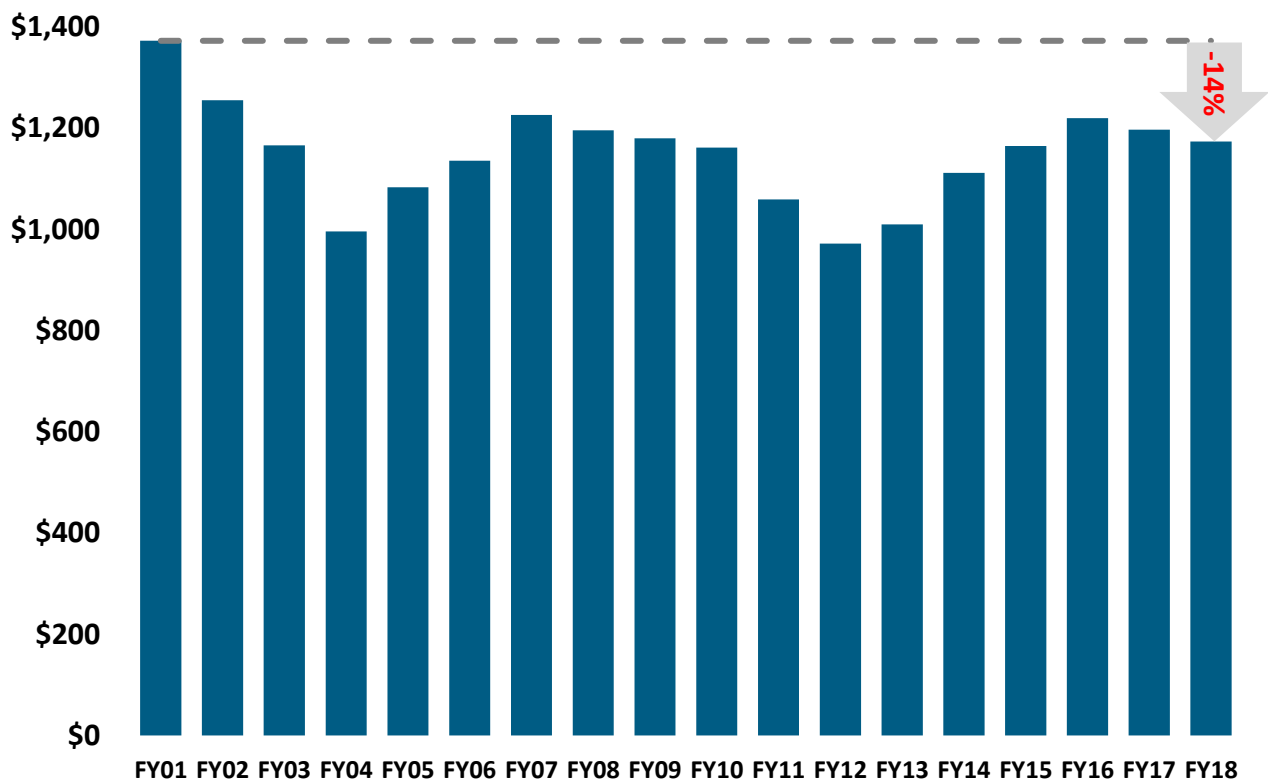
Massachusetts Has Cut Higher Education Funding Since FY 2001

4) Massachusetts has cut higher education spending 14 percent since FY 2001.

Massachusetts has cut spending on public higher education by 14 percent since FY 2001, as shown in the graph below. State funding cuts were largely caused by budgetary pressure felt by all state programs since the early 2000s. Between 1998 and 2002, the state phased in a series of cuts to the state income tax, which has led to a loss of over \$3 billion annually (for more detail, read [Income Tax Cuts and the Budget Deficit in Massachusetts](#)). As a result, many state programs have been cut over the past 17 years, including local aid, early education, public health, and public higher education.

MA Has Cut Higher Education Funding by 14 Percent Since FY 2001

State spending on higher education, FY 2001-2018 (millions of 2018\$)



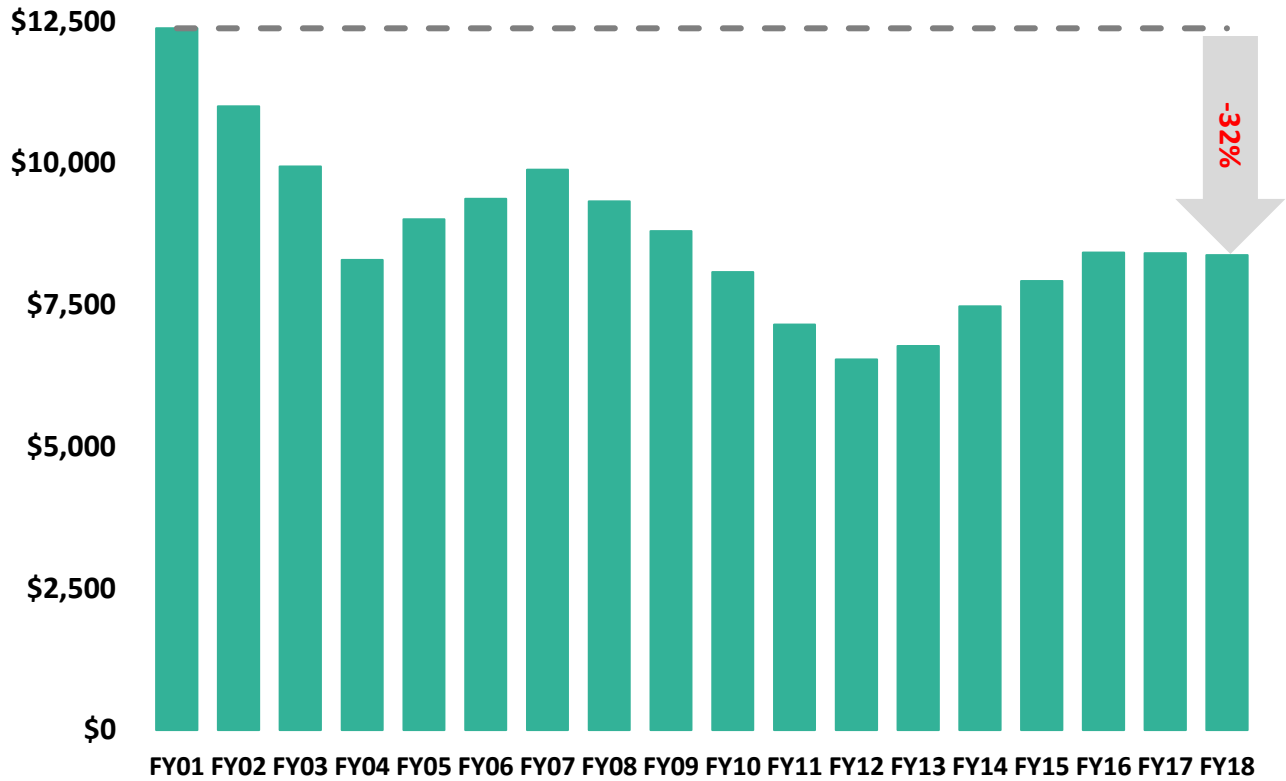
Note: FY 2007 total is adjusted downwards to account for the fact that significant funding during this year was for capital investments that supported activity during other fiscal years.

5) Higher education spending per student has been cut even more – by 32 percent.

Even as total state funding declined, enrollment increased, meaning that *per student* funding decreased by even more. Adjusting state spending by the number of resident students enrolled in each of our campuses, as detailed in the graph below, shows a cut of 32 percent since FY 2001 (compared with 14 percent when just looking at total funding).

Per Student, MA Has Cut Higher Ed Funding by 32 Percent Since FY 2001

State spending on higher education per resident student, FY 2001-2018 (2018\$)



Note: FY 2007 total is adjusted downwards to account for the fact that significant funding during this year was for capital investments that supported activity during other fiscal years.

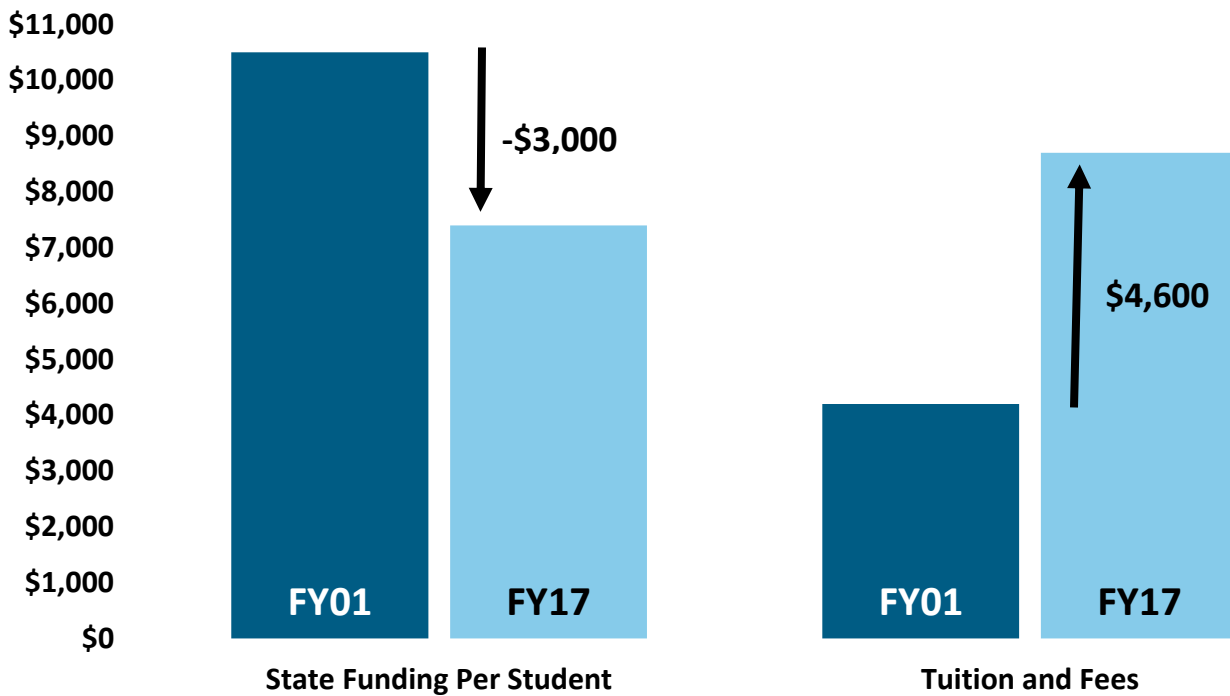
Amid Drops in State Support, Sharp Increases in Tuition and Fees

6) State funding cuts played a major role in driving tuition & fee increases across all of our campuses.

State funding cuts have contributed to sharp increases in tuition and fees, as shown in the graph below. As campuses received less operating support from the state, they increased tuition and fees as one strategy for raising sufficient revenue. Combining all public institutions together, the state cut funding by about \$3,000 per student since FY 2001 and tuition and fees have increased by about \$4,600 per student. These numbers suggest that state funding cuts were responsible for a large share of tuition and fee increases.

As State Higher Education Funding Has Gone Down, Tuition and Fees Have Gone Up

Per-student state appropriations to public college and university campuses, and in-state tuition and fees, adjusted for inflation (2018\$).



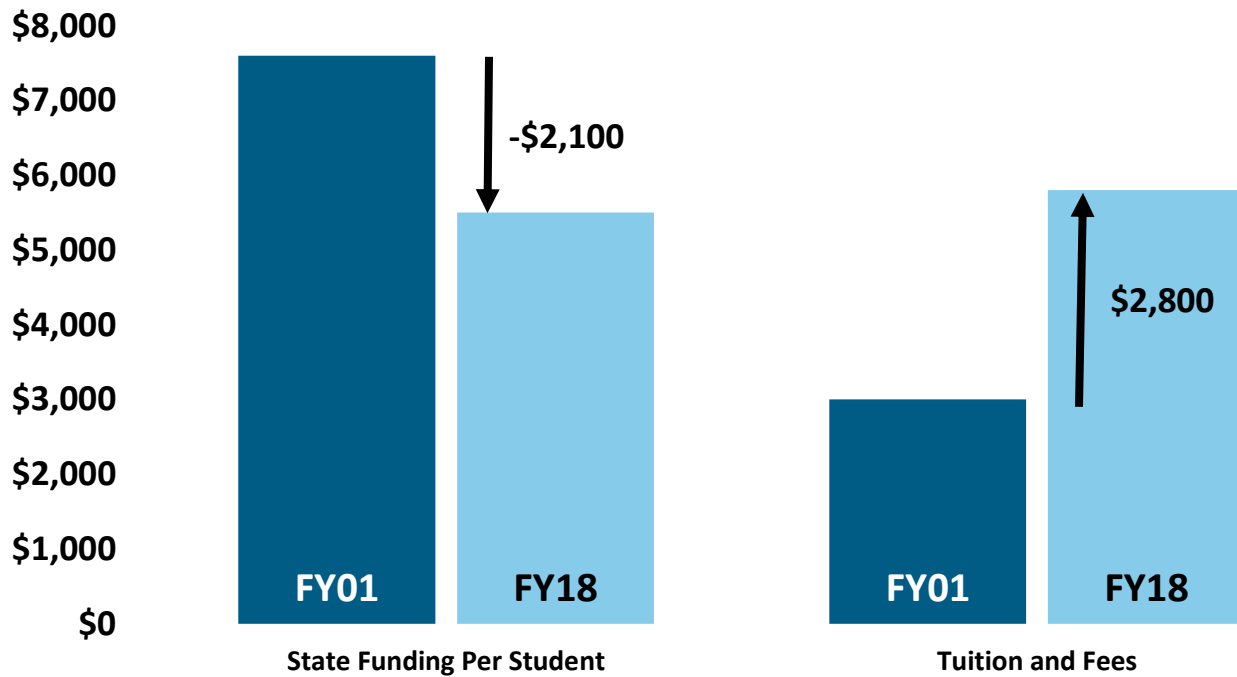
Note: School-based financial aid not funded by state appropriations is netted out of tuition and fees.

7) Cuts played a major role in driving tuition & fee increases of \$2,800 per student at community colleges.

Across our 15 community colleges, state funding is down \$2,100 per student since FY 2001 while tuition and fees are up \$2,800 per student.

As State Funding to Community Colleges Has Gone Down, Tuition and Fees Have Gone Up

Per-student state appropriations to community college campuses, and tuition and fees, adjusted for inflation (2018\$).



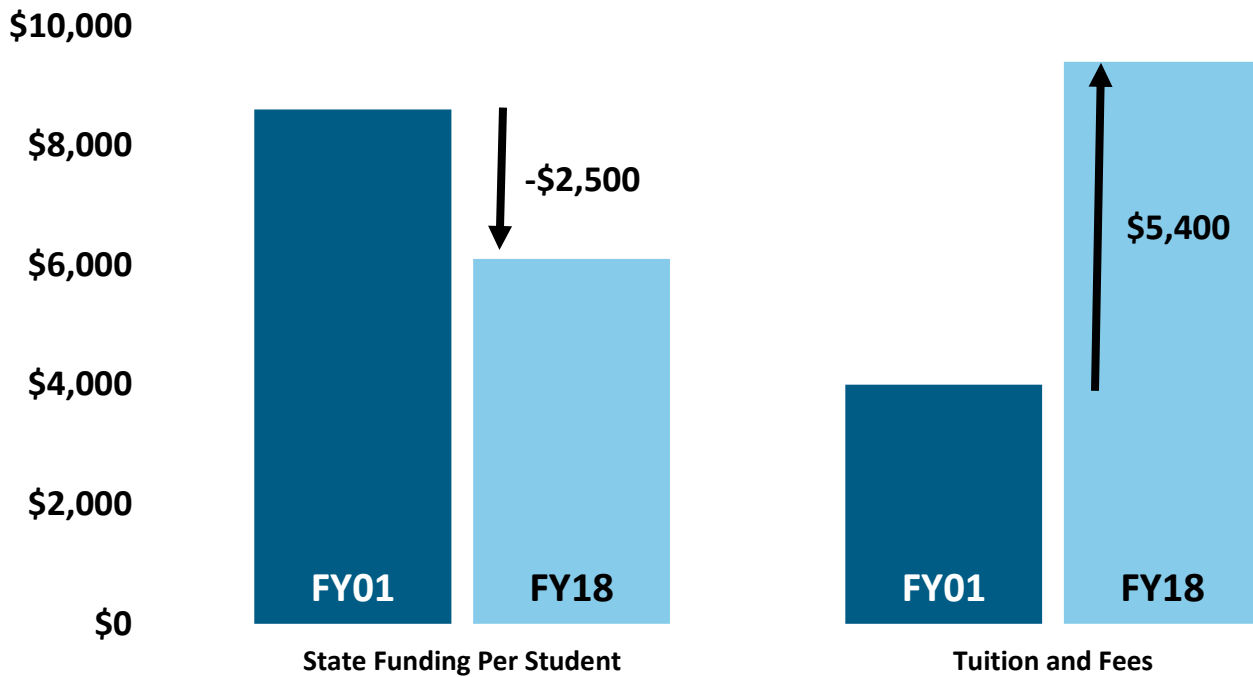
Note: School-based financial aid not funded by state appropriations is netted out of tuition and fees.

8) Cuts played a major role in driving tuition & fee increases of \$5,400 per student at state universities.

At our nine state universities, state support is down \$2,500 per student and tuition and fees are up \$5,400 per student.

As State Funding to State Universities Has Gone Down, Tuition and Fees Have Gone Up

Per-student state appropriations to state university campuses, and in-state tuition and fees, adjusted for inflation (2018\$).



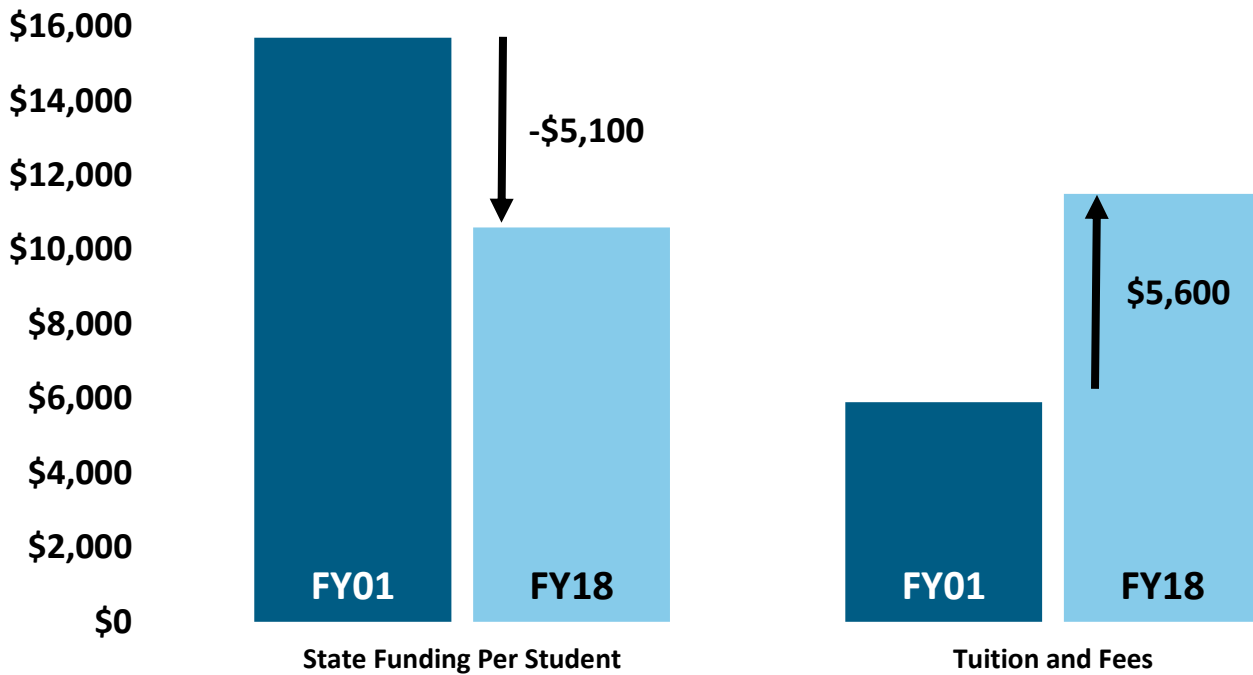
Note: School-based financial aid not funded by state appropriations is netted out of tuition and fees.

9) Cuts played a major role in driving tuition & fee increases of \$5,600 per student at UMass campuses.

And across our four undergraduate UMass campuses, state support is down \$5,100 per student, with tuition and fees up by \$5,600 per student.

As State Funding to UMass Has Gone Down, Tuition and Fees Have Gone Up

Per-student state appropriations to University of Massachusetts campuses, and in-state tuition and fees, adjusted for inflation (2018\$).



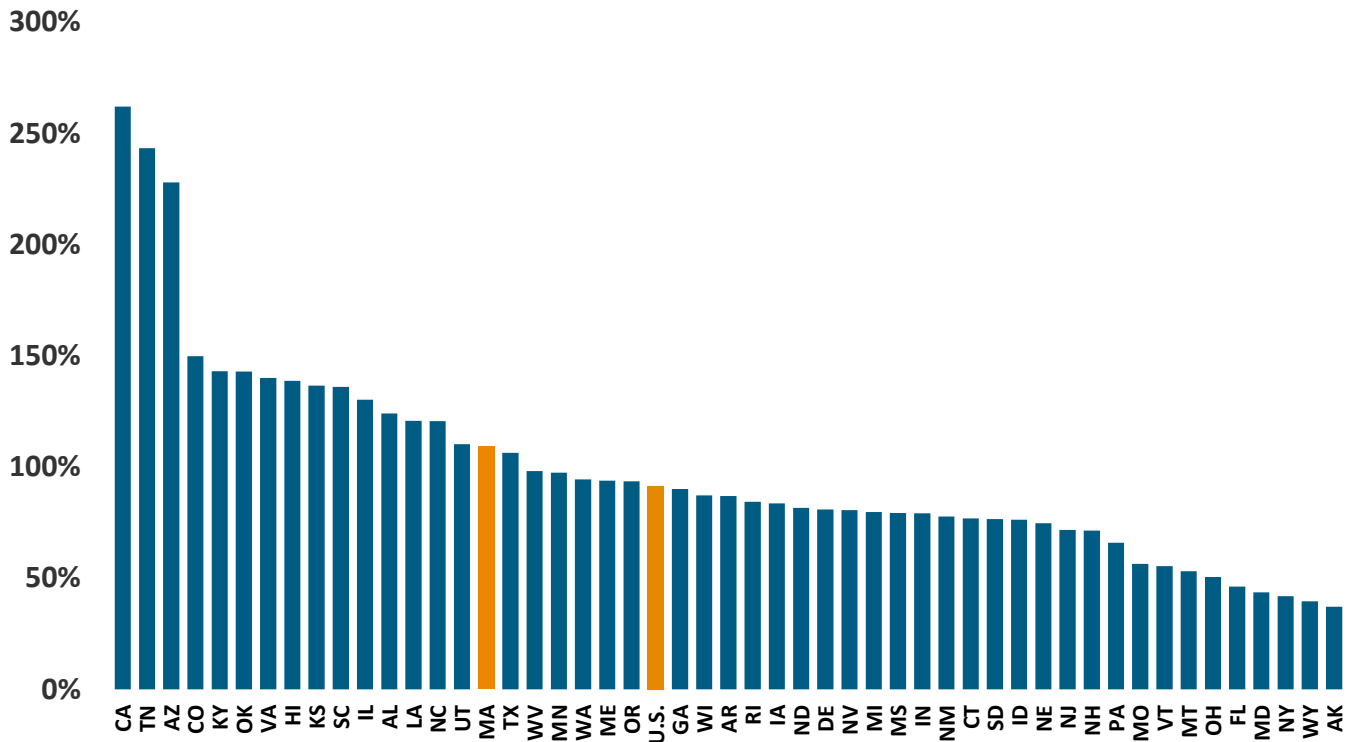
Note: School-based financial aid not funded by state appropriations is netted out of tuition and fees.

10) Tuition and fees at MA public universities have grown 109 percent since 2001 – after adjusting for inflation.

Average tuition and fees at public four-year institutions in Massachusetts more than doubled from 2000-2001 to 2015-2016 after adjusting for inflation – a rate of increase exceeding two-thirds of all states.

From 2001 to 2016, Tuition and Fees at MA 4-Year Public Institutions More Than Doubled

Change in in-state tuition and fees at public 4-year institutions, 2001-2016 (2016 \$)



Source: The Institute for College Access, college-insight.org

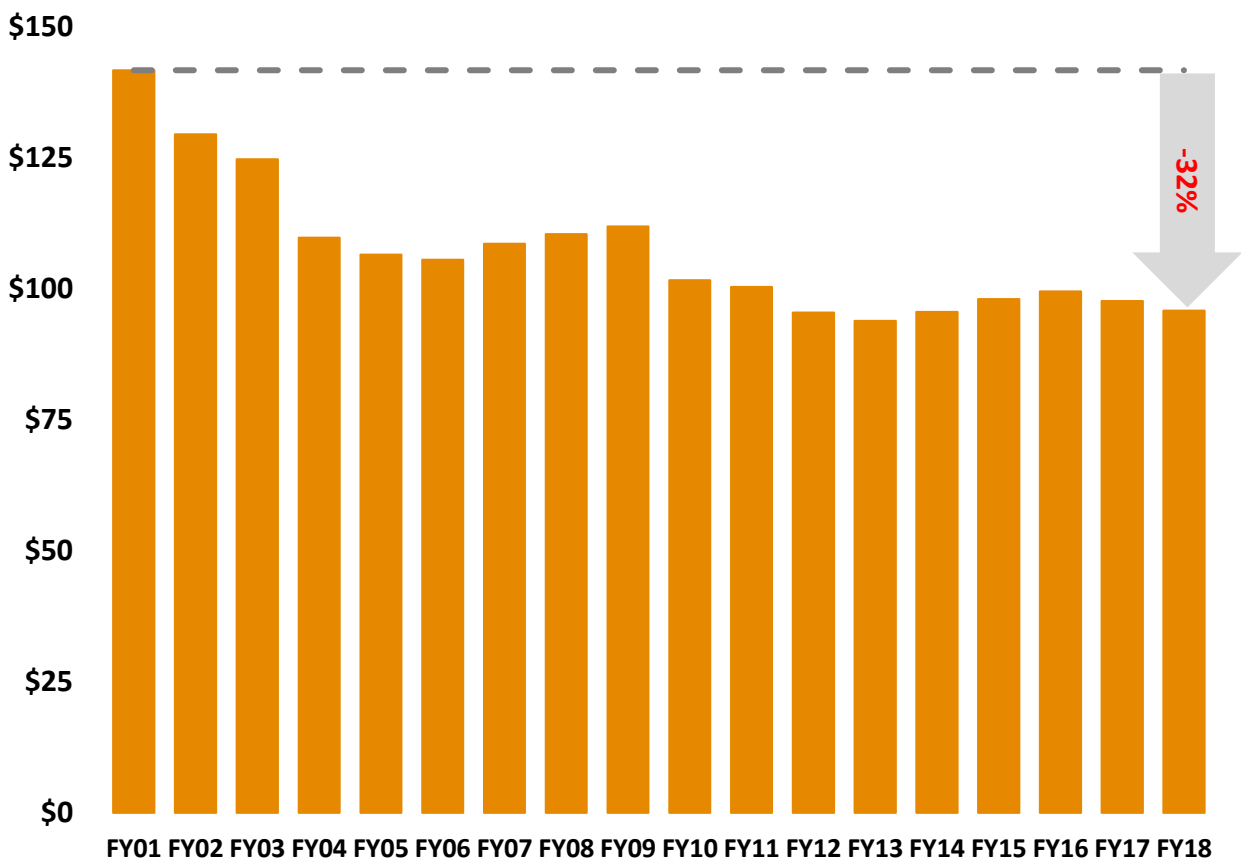
Funding Cuts and Tuition & Fee Hikes: Students and Families Take on More Debt

11) Massachusetts has cut state scholarship funding by 32 percent since 2001.

Most of the roughly \$1 billion we spend annually on public higher education goes directly to the different community college, state university, and UMass campuses to help support their general operating budgets, but the state also supports scholarship programs for targeted student populations. Overall, we have cut these state scholarships by 32 percent since FY 2001, as shown in the graph below. (While the trend is similar, it's purely a coincidence that per student funding and scholarship funding were both cut by 32 percent over this timeframe).

Massachusetts Has Cut Scholarship Funding 32 Percent Since FY 2001

State spending on Scholarship Program, FY 2001-2018 (millions of 2018\$s)



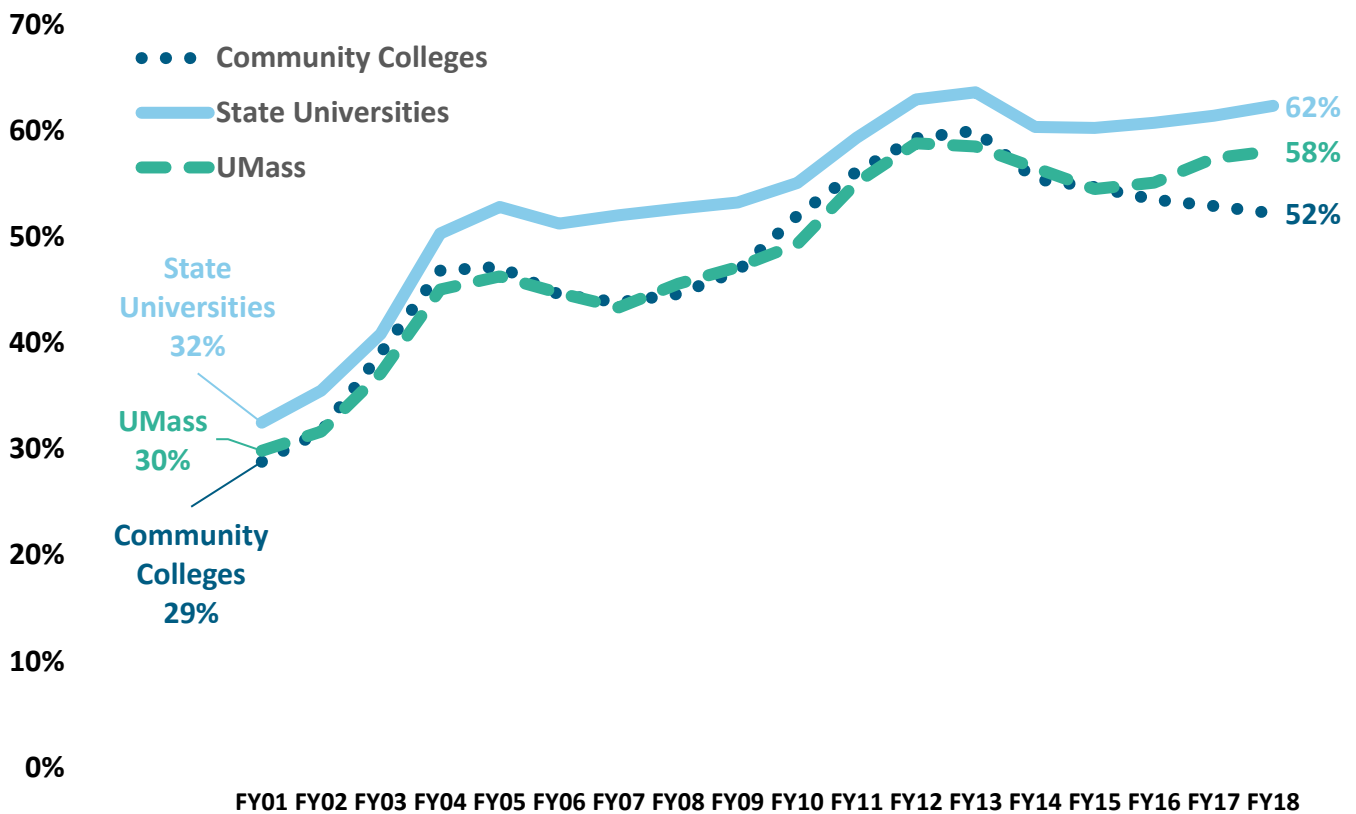
The largest portion of state scholarship funding goes to the need-based [MASSGrant](#) program for low-income college students. According to a [report of the Higher Education Finance Commission](#) in 2014, MASSGrant funding covers a much lower share of student costs than it once did: in 1988 MASSGrant covered 80 percent of a qualifying student’s tuition and fees, whereas it only covered nine percent in 2013. Reduced MASSGrant funding has been partially offset by increased campus-based scholarships (or “institutional aid”), which are funded in part by higher tuition and fees paid by all students.

12) Overall, the student share of higher education costs has risen substantially.

This trend of reduced state support leading to increased tuition and fees means that students themselves now pay for a larger portion of the college costs. As shown in the graph below, back in FY 2001 students and their families paid for less than one-third of higher education costs, whereas now they pay over half. For a four-year degree at the state universities and UMass, students' share of costs has nearly doubled.

Students' Share of Higher Education Costs Has Risen Dramatically

In-state tuition & fees as a percentage of education revenue (in-state tuition & fees + state appropriations)

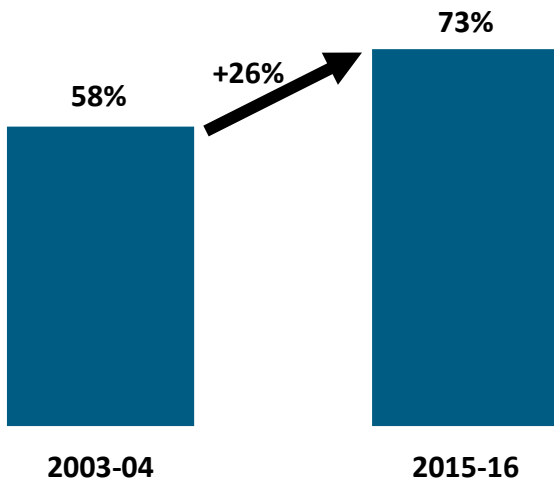


13) The share of graduates taking out loans has increased, as has their total level of debt.

More and more students are taking out loans to help finance a public university education in Massachusetts, and the amounts they borrow are growing each year. The share of graduates of public universities in Massachusetts who have student loans increased from 58 percent in the 2003-4 academic year to 73 percent in 2015-16. Among borrowers, average student loan debt increased 77 percent, after accounting for inflation.

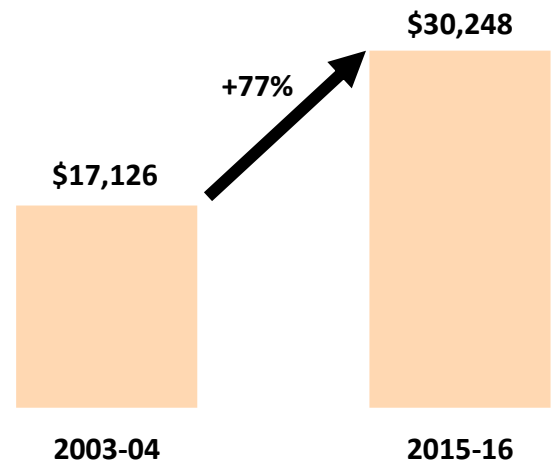
More Students Are Taking out Loans...

Share of grads of public 4-year colleges in MA with debt



...and Student Debt Has Increased

Average student debt for grads of public 4-year colleges in MA who took out loans, adjusted for inflation (2016 \$)



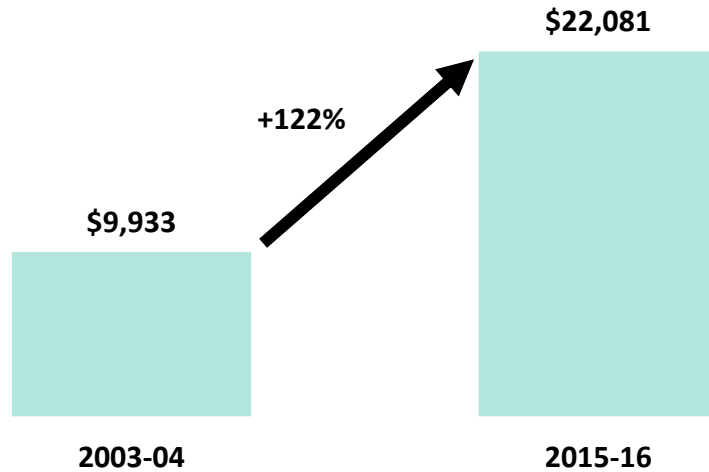
Source: The Institute for College Access, college-insight.org

14) Per capita debt (including those students without loans) is up 122 percent.

Considering these two trends together, we find that across all Massachusetts public university students (including those who graduate without debt), the average graduate finished their degree with over \$22,000 in outstanding student loans. That’s an increase of 122 percent from 2004 to 2016, after adjusting for inflation.

Per Capita Student Debt Has More Than Doubled

Average student debt for all grads of public 4-year colleges in MA, including those with no loans, adjusted for inflation (2016 \$)



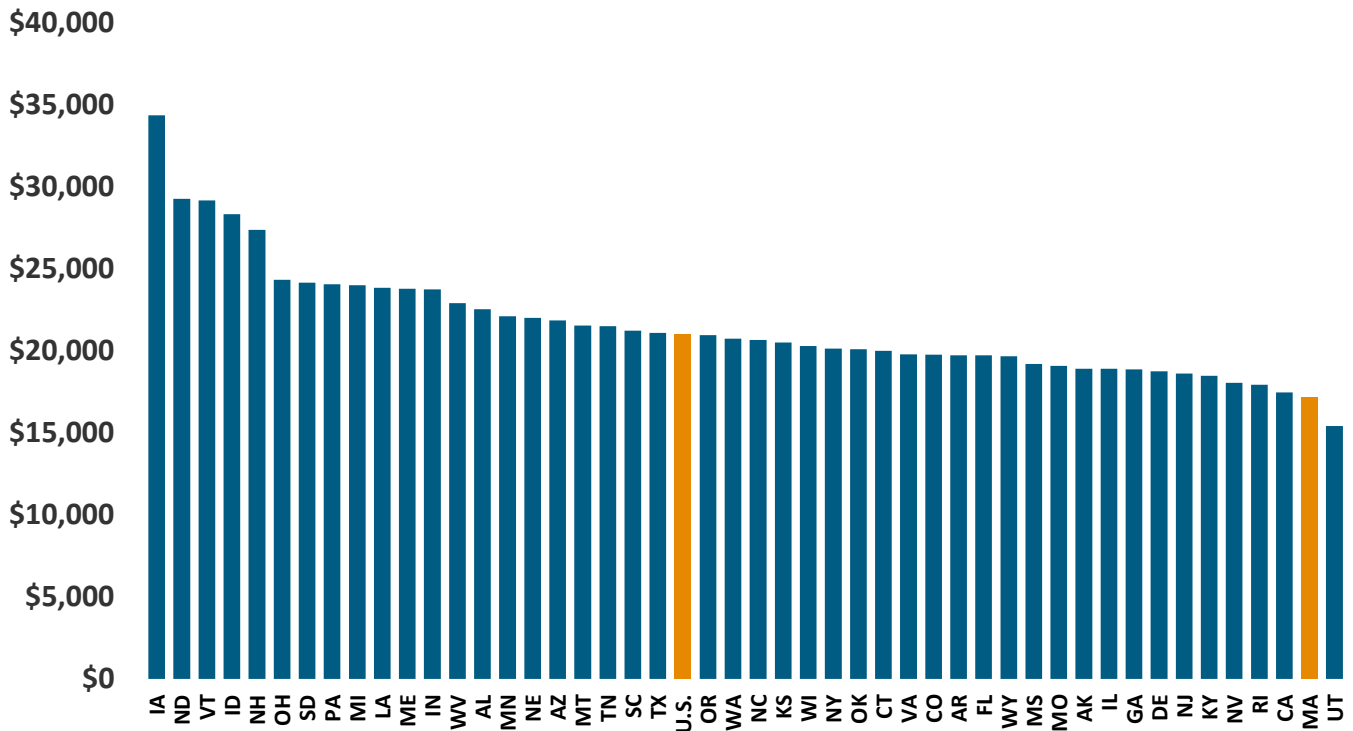
Source: The Institute for College Access, college-insight.org

15) Massachusetts public university students used to graduate with some of the lowest student loan debt in the country.

Not long ago, Massachusetts could brag of graduating students from its public 4-year postsecondary institutions with some of the lowest debt in the country – an average of just over \$17,000 (adjusted for inflation to 2016 dollars).

In 2004, MA Public University Students Graduated With Some of the Lowest Student Loan Debt in the U.S.

Average student loan debt of graduates from public 4-year colleges and universities, 2004 (2016 \$)



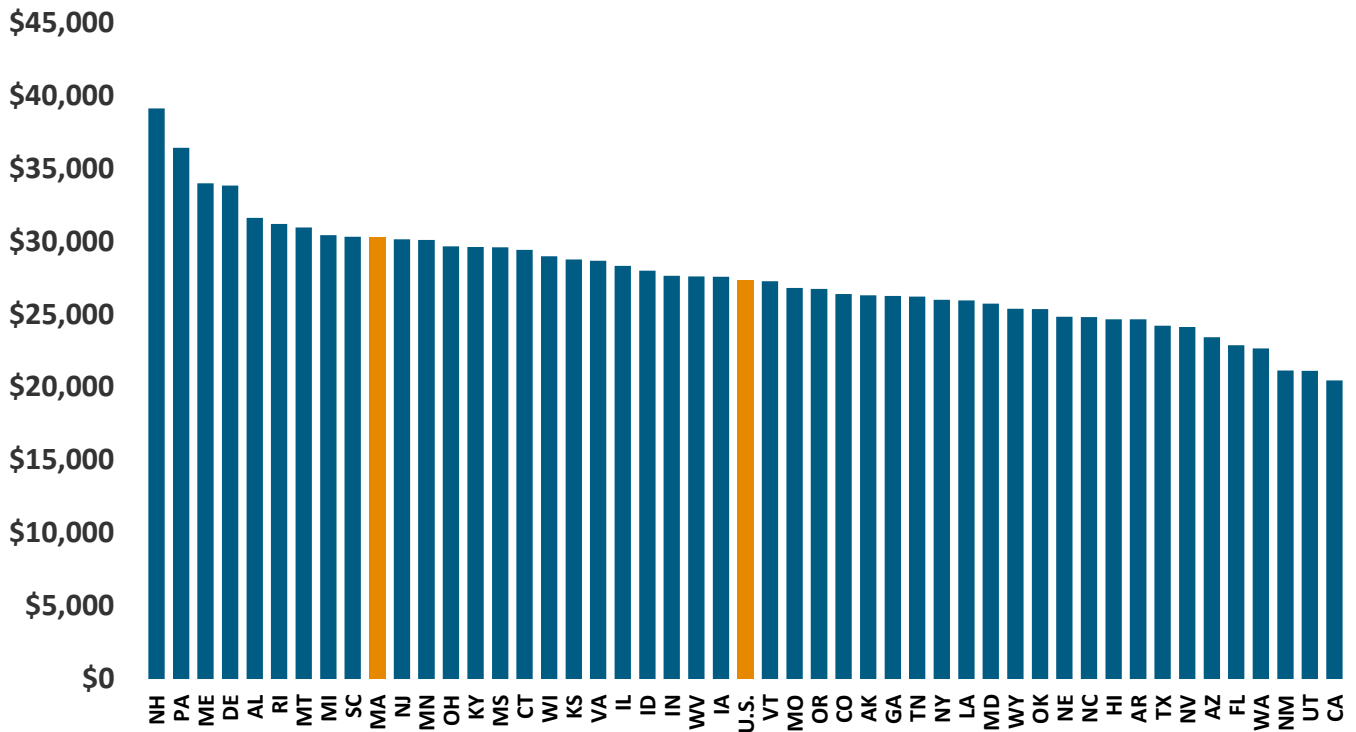
Source: The Institute for College Access, college-insight.org. Due to reporting issues, Hawaii, Maryland, and New Mexico are omitted.

16) Massachusetts public university students now graduate with the 10th highest student loan debt in the country.

Now, students are graduating from our state universities and UMass with the 10th-highest debt in the country – an average of just over \$30,000.

In 2016, MA Public University Students Graduated With the 10th-Highest Average Student Loan Debt in the U.S.

Average student loan debt of graduates from public 4-year colleges and universities, 2016 (2016 \$)



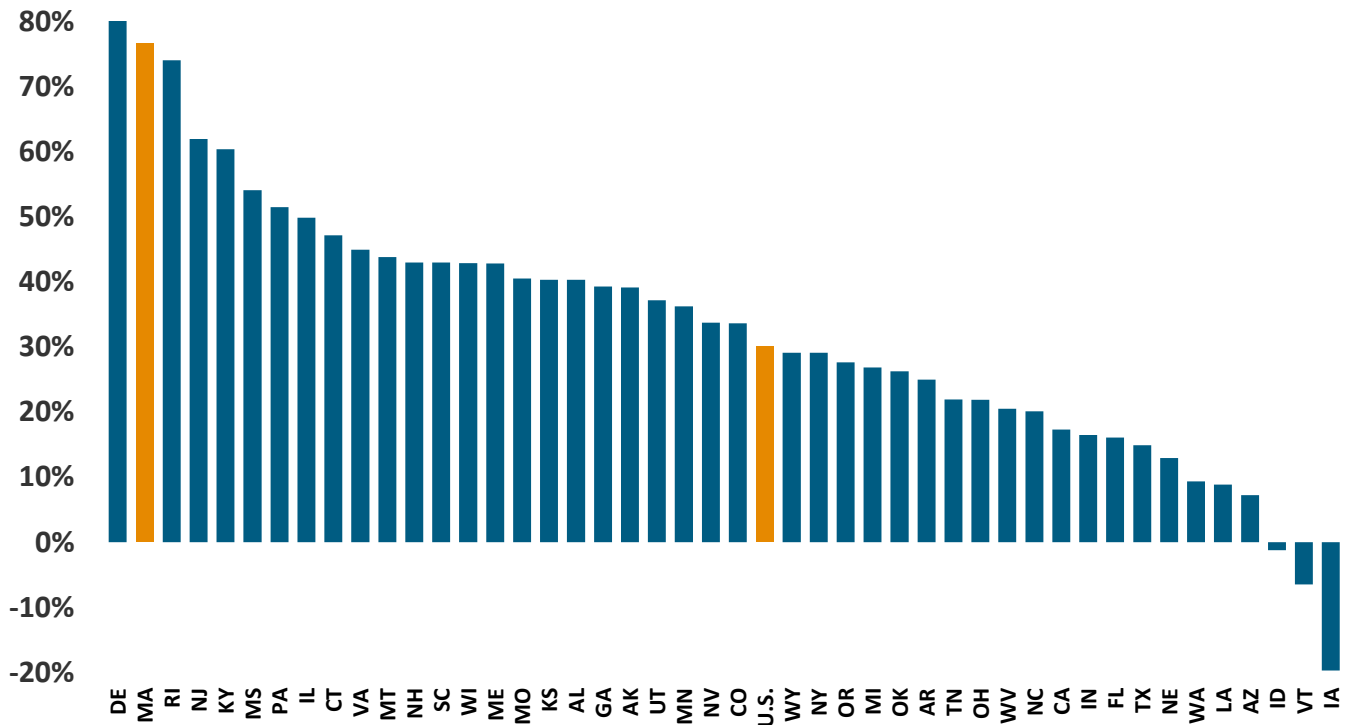
Source: The Institute for College Access, college-insight.org. Due to reporting issues, North Dakota and South Dakota are omitted.

17) Average debt of graduates from public universities in Massachusetts has grown faster than in all but one other state.

In going from graduating its public university students with some of the lowest student loan debt burdens to saddling them with the 10th-highest, Massachusetts saw the average debt of its university graduates grow faster from 2004 to 2016 than in all but one other state.

From 2004 to 2016, Average Student Loan Debt of Graduates From MA 4-year Public Institutions Grew 77% – Faster Than All But One Other State

Change in average student loan debt of graduates from public 4-year institutions, 2004-2016 (2016 \$)



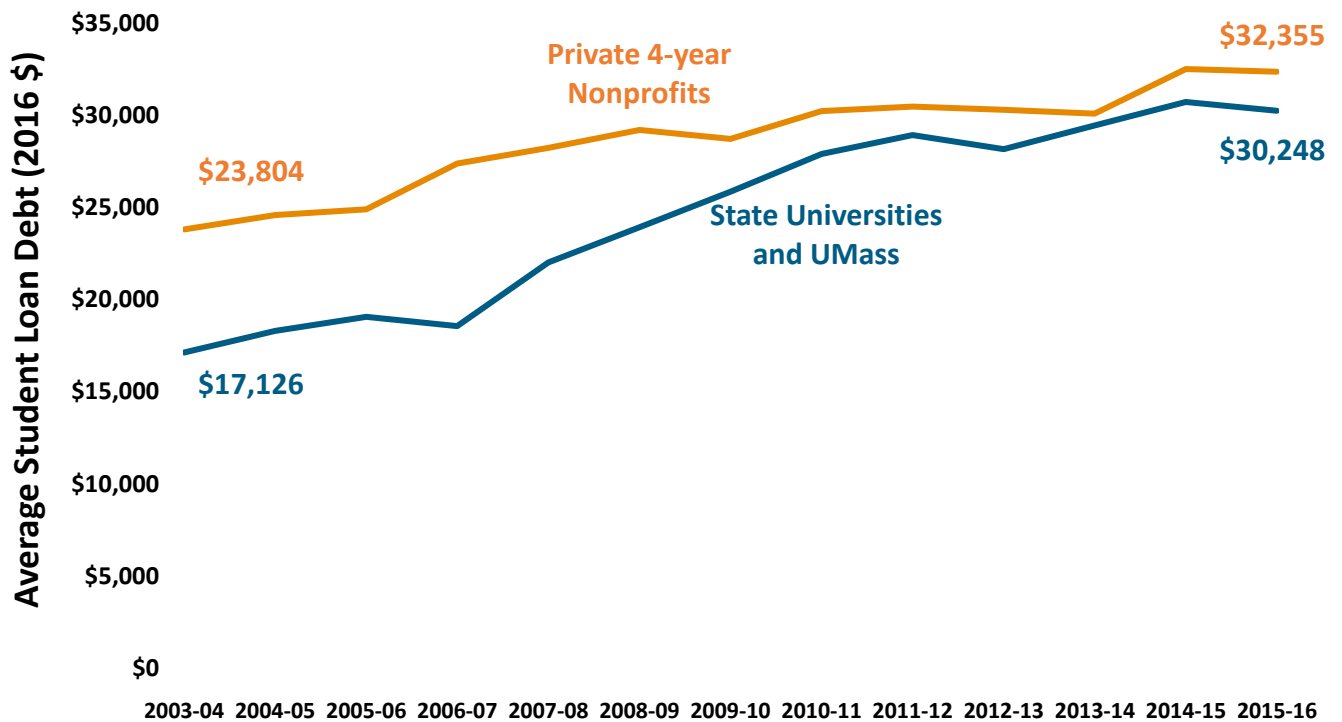
Source: The Institute for College Access, college-insight.org. Due to reporting issues, Hawaii, Maryland, New Mexico, North Dakota and South Dakota are omitted.

18) Public university graduates' debt now almost equals that of private college and university graduates in Massachusetts.

As we have seen, the chain reaction of funding cuts and tuition and fee hikes have led to large increases in the overall student debt burden for public university graduates in Massachusetts. As a consequence, the average debt of those who complete a bachelor’s degree from public institutions has almost reached that of graduates from private institutions. In 2004 (the earliest year available) the average debt of public university graduates in Massachusetts was 28 percent lower than that of graduates from the state’s private colleges and universities. By 2016 (the most recent year available) the difference had shrunk to 7 percent.

Public University Graduates' Debt Now Almost Equals That of Private University Graduates in Massachusetts

Average student loan debt for graduates of public and private non-profit 4-year colleges & universities in MA (2016\$)



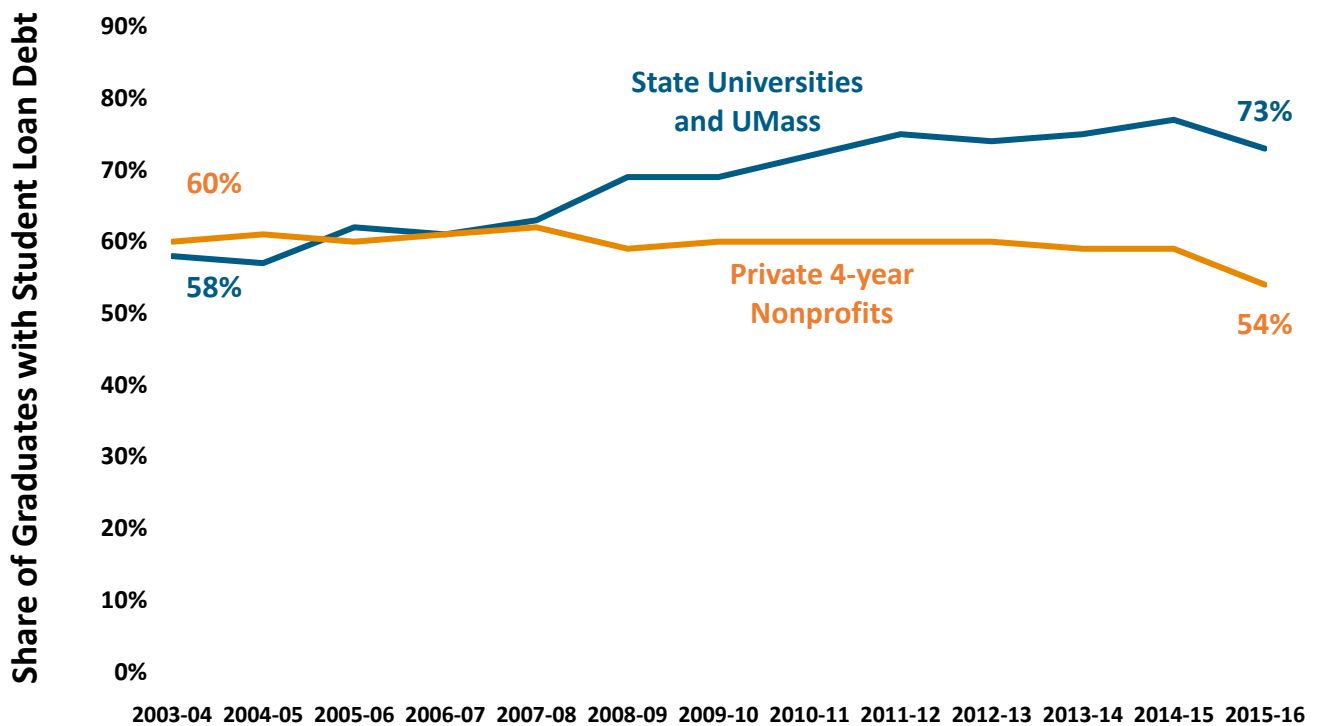
Source: The Institute for College Access, college-insight.org

19) A greater share of Massachusetts public university graduates have debt than private college and university graduates.

Similarly, about equal shares of graduates from public and private institutions had student debt upon completing their undergraduate studies in 2004. By 2016, the share with debt had gone down for graduates of private institutions (from 60 percent to 54 percent), while increasing significantly for graduates of public institutions (from 58 percent to 73 percent).

Public University Students in Massachusetts Are More Likely to Graduate With Debt Than Private College and University Students

Share of graduates with student loan debt, public and private non-profit 4-year colleges & universities in MA



Source: The Institute for College Access, college-insight.org

Massachusetts Has the Resources to Invest More in Public Higher Education

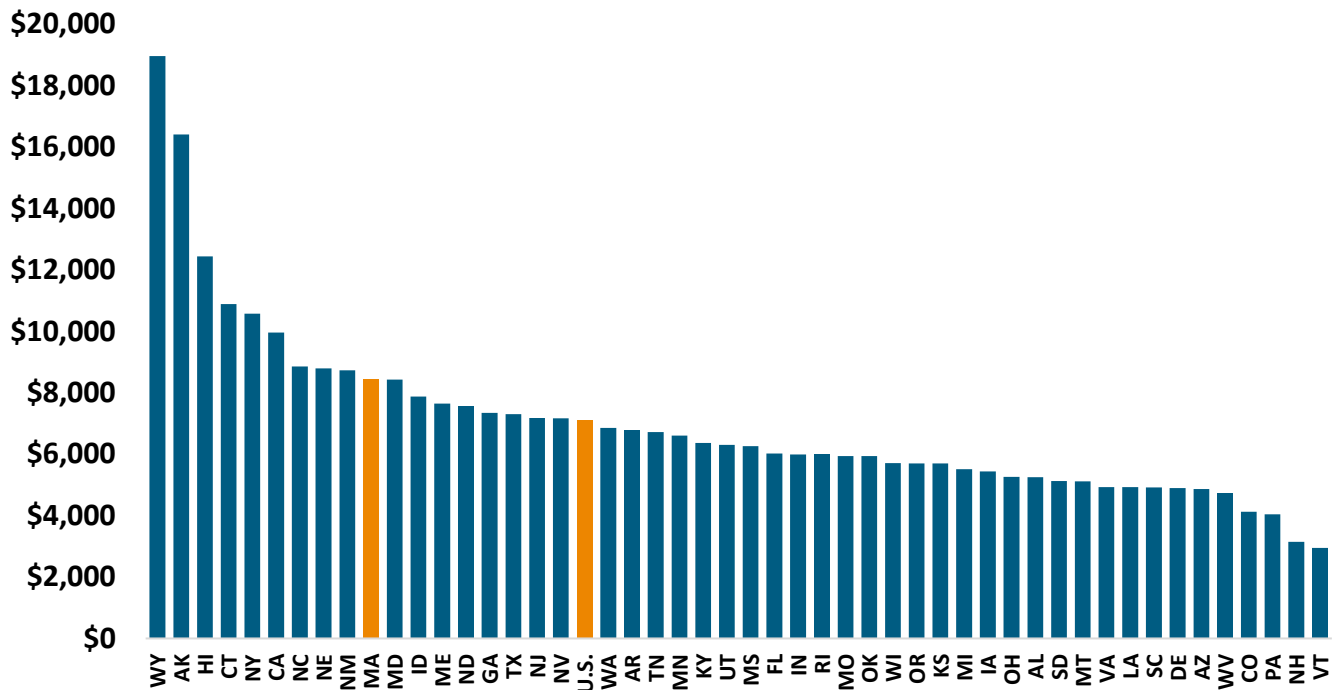
Because states vary in so many different ways – e.g., relative income levels, student enrollment at different types of public colleges and universities, cost of living, state population – it’s hard to compare higher education spending across all 50 states using one single measure. Therefore, we end this paper with a few interstate comparisons.

20) At first, Massachusetts appears to spend more than most states, per student, on higher education.

When we divide total state appropriations for public higher education by enrollment and account for the mix of enrollment across different types of public colleges and universities (from community colleges to teaching schools to the flagship research university), Massachusetts ranks 10th nationwide, and comes in 19 percent above the national average.

Unadjusted for Cost of Living, Massachusetts Ranks 10th in Higher Education Spending Per Student

State higher education spending per student, adjusted for enrollment mix but not cost of living, FY 2016



Source: State Higher Education Executive Officers Association data
 SHEEO spending totals include estimates of fringe benefit costs and are net of special-purpose, research, and medical appropriations.

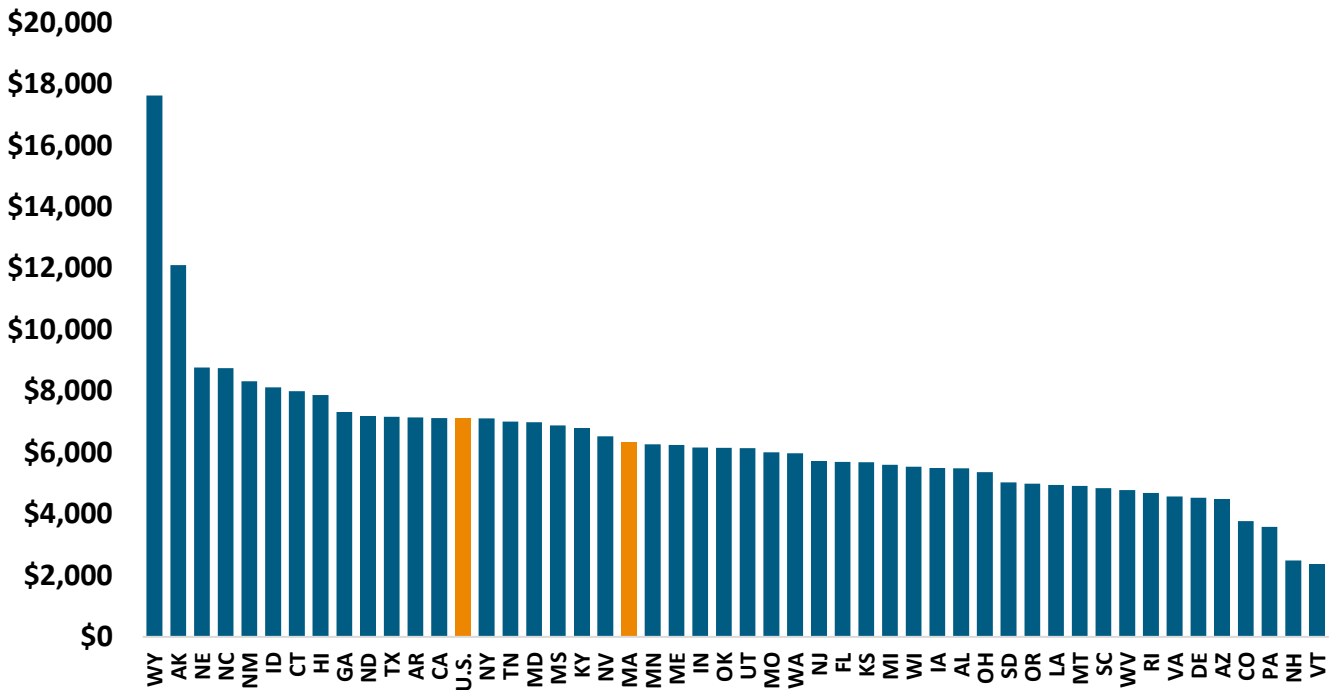
As the next chart shows, however, the high cost of living in Massachusetts places real limits on how far each dollar of higher education spending can go here relative to the rest of the country.

21) Adjusted for cost of living, Massachusetts is close to the median in per student higher education spending.

When we adjust for cost of living, Massachusetts drops to 20th in state higher education spending per student – 11 percent below the U.S. average.

Adjusted for Cost of Living, Massachusetts Ranks 20th in Higher Education Spending Per Student

State higher education spending per student, adjusted for enrollment mix and cost of living, FY 2016



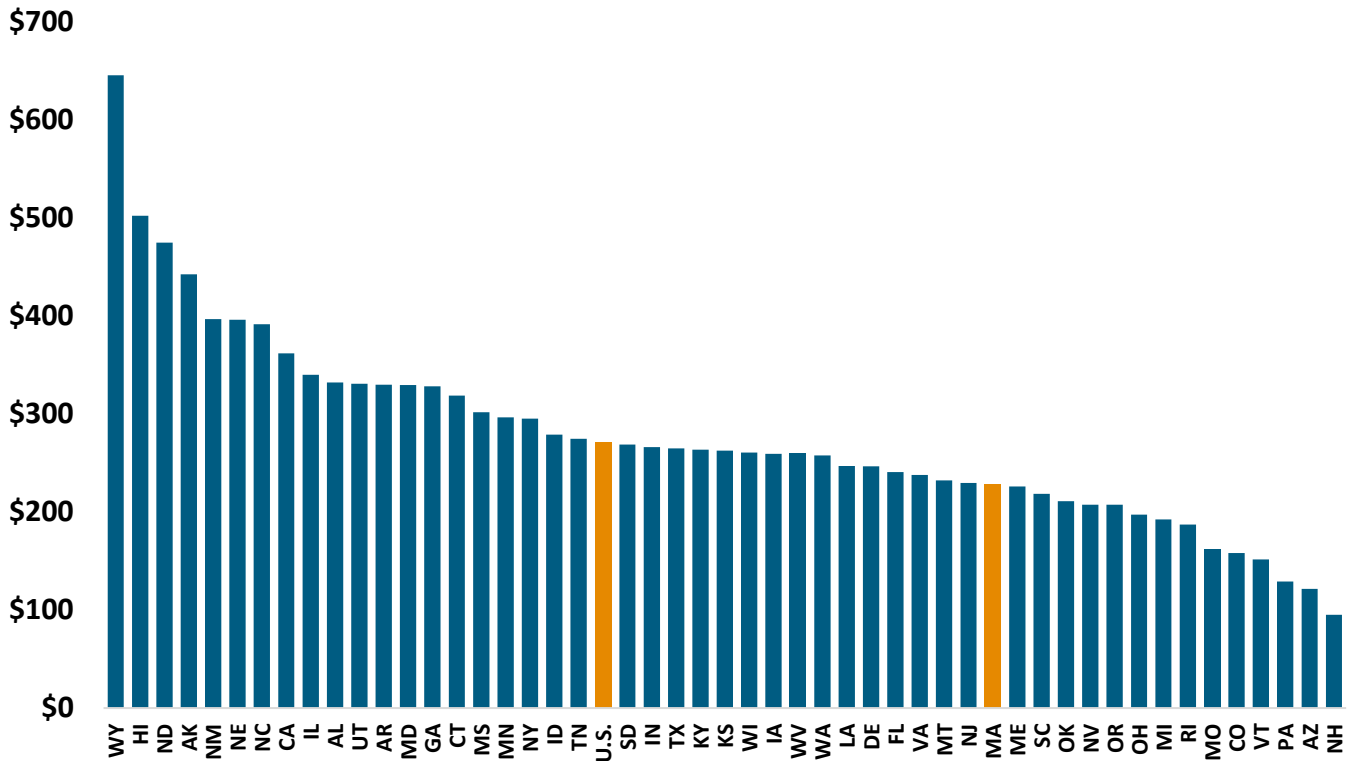
Source: State Higher Education Executive Officers Association data
 SHEEO spending totals include estimates of fringe benefit costs and are net of special-purpose, research, and medical appropriations.

22) Massachusetts is below average in higher education spending per capita.

When looking at higher education spending adjusted for the total state population, Massachusetts ranks 36th in the country – 16 percent below the U.S. average. Our per capita ranking is lower than our per student ranking in large part because a smaller share of college students in Massachusetts attend public institutions relative to private institutions.

Massachusetts Ranks 36th in Higher Education Support per Capita

State and local higher education support per state resident, FY 2018



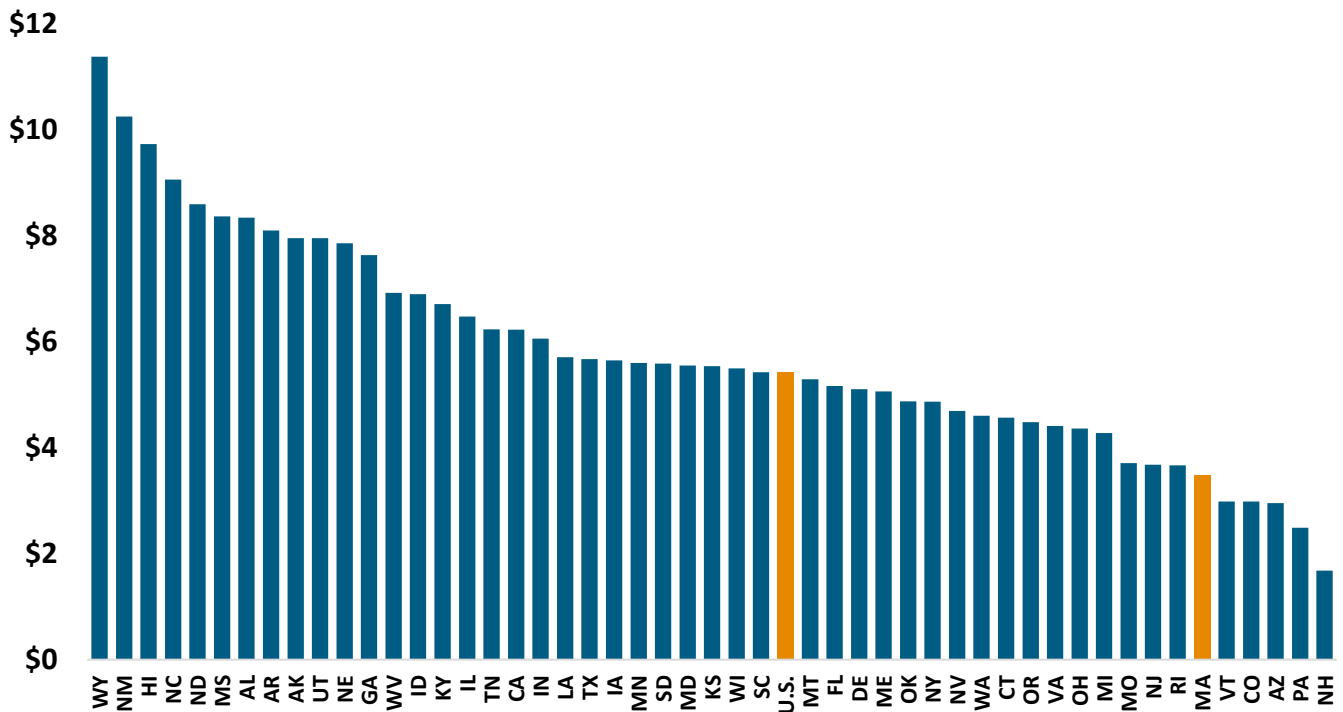
Source: Grapevine, the Center for the Study of Education Policy at Illinois State University; and the State Higher Education Executive Officers Association data.

23) As a share of our economy, Massachusetts spends less on higher education.

Perhaps most important, we find that Massachusetts spends less on public higher education as a share of our aggregate wealth than almost every other state. Currently, we rank 45th in higher education support per \$1,000 of personal income. We rank low both because we have cut total higher education spending over the past 17 years and because we are one of the highest-income states in the country. This wealth is a resource that affords us more freedom than most other states to make choices about how we invest in our students and the potential they hold for the future success of Massachusetts.

Massachusetts Ranks 45th in Higher Education Support per \$1,000 of Personal Income

State and local higher education support per \$1,000 of personal income, FY 2018



Source: Grapevine, the Center for the Study of Education Policy at Illinois State University; and the State Higher Education Executive Officers Association data.

TECHNICAL APPENDIX

Chart 2. Data in this chart are from the National Center for Education Statistics' Baccalaureate & Beyond survey, which tracks a cohort of college graduates every eight years. The most recent cohort is the class of 2008, and the chart shows where those students were working in 2012.

Chart 3. These totals also do not capture some fringe benefits costs that are funded through separate pension and health care accounts for all state employees combined. State spending on pensions for higher education employees hired after 1996 is very low and likely hasn't increased much, if at all, over this timeframe. Most state spending on public employee pensions in recent years is for employees hired before 1996, since their required payroll deductions were lower (for more detail, see [Demystifying the State Pension System](#)). State spending on health care costs for higher education employees, by contrast, likely did increase over this timeframe as health care costs increased nationwide.

Note: Since FY 2001, several different policies have dictated when specific campuses must send certain categories of tuition revenue back to the state. When revenue must be sent to the state, it is not available for campus operations and has the same effect as reduced state funding to the campuses. To provide more accurate comparisons of state support to campuses over time, MassBudget deducts tuition revenue sent back to the state from the direct appropriations to each campus type. For details on the policies at a given campus, select that campus in [MassBudget's Budget Browser section for Higher Education](#) and read the NOTES section.

Charts 5 through 8. Tuition and fee data in charts 5 through 8 are adjusted to net out institutional scholarships. These scholarships are funded through private donations and surplus tuition and fee revenue in order to help certain groups of students meet the cost of attending school. Much of this aid goes to help low-income students, in particular. Institutional aid has increased somewhat over this timeframe, especially at UMass, and without this added student support tuition and fees would likely have increased even more.

Chart 5. Tuition alone has actually remained relatively level, but campuses have raised student costs by dramatically increasing mandatory fees. For FY 2018, for instance, tuition for a full-time resident student at Salem State University was only \$910, but mandatory fees cost \$9,368. Since 2016, UMass has combined tuition and mandatory fees into one tuition amount. In order to capture the true student cost of attending any of our different public campuses, we combine tuition and fees throughout this paper.

Chart 8. A small portion of state appropriations to the UMass account in the state budget funds operations at UMass Medical School, but the vast majority of this state appropriation goes to fund the four undergraduate campuses, which are the focus of the analysis above.

Charts 20 and 21. In making adjustments for charts 21 and 22, we follow the methodology designed by the State Higher Education Executive Officers Association's [State Higher Education Finance project](#) and detailed in [this technical paper](#). In addition to the cost of living adjustment, SHEEO recommends adjusting for "enrollment mix" in order to capture the fact that each level of higher education has different associated costs, with undergraduate courses costing less to provide than graduate courses and education at a community college costing less than that at a research university. Since state higher education systems have different relative proportions of students served at each of these levels, adjusting for enrollment mix can help facilitate more useful cross-state spending comparisons. In the case of Massachusetts, our enrollment mix is very close to the national average, so this adjustment makes little difference in our national ranking, whereas, by contrast, the cost of living adjustment moves us from near the top to towards the middle.

¹ This paper updates work published in December 2016 by Luc Shuster in “[In 16 Charts: Higher Education Funding in Massachusetts](#).” It also contains several new analyses.

² Among full-time, year-round workers 25 years and older. MassBudget analysis of U.S. Census Bureau, 2012-2016 American Community Survey Public Use Microdata Sample.

³ MassBudget analysis of 2000-2001 and 2015-2016 completion data by program and award level at Massachusetts community colleges, from U.S. Department of Education, Integrated Postsecondary Education Data System.