


Trends in Higher Education Series

Trends in College Pricing **2016**



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Trends in Higher Education

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Highlights

In 2016-17, published tuition and fee prices rose slightly less than the year before. The rapid price growth observed during the Great Recession has abated, as typically happens when the economy recovers, but the rate of increase in tuition and fees continues to exceed inflation.

More notable, however, is the pattern of the net prices students actually pay. Large increases in grant aid and education tax credits cushioned the growth in published prices for a few years, and average net tuition and fee prices declined in the public and private nonprofit sectors in 2008-09 and 2009-10. But net prices have risen since then, as financial aid fails to keep pace with rising published prices. This increase is outpacing growth in incomes, fueling concerns about college affordability.

Trends in College Pricing 2016 reports on the prices charged by colleges and universities in 2016-17, how prices have changed over time, and how they vary within and across types of institutions, states, and regions. It also includes estimates of the net prices students and families pay after taking financial aid into consideration. Data on institutional revenues and expenditures and on changing enrollment patterns over time supplement the data on prices to provide a clearer picture of the circumstances of students and the institutions in which they study.

PUBLISHED TUITION AND FEES AND ROOM AND BOARD

Average published in-state tuition and fees in the public four-year sector increased by \$230 (2.4% before adjusting for inflation), from \$9,420 in 2015-16 to \$9,650 in 2016-17. Average total tuition and fee and room and board charges are \$20,090.

- Average published out-of-state tuition and fees at public four-year institutions rose by \$860 (3.6%), from \$24,070 in 2015-16 to \$24,930 in 2016-17. Average total charges are \$35,370.
- Average published tuition and fees at private nonprofit four-year institutions rose by \$1,150 (3.6%), from \$32,330 in 2015-16 to \$33,480 in 2016-17. Average total charges are \$45,370.
- Average published in-district tuition and fees at public two-year colleges increased by \$80 (2.3%), from \$3,440 in 2015-16 to \$3,520 in 2016-17.
- Estimated average tuition and fees for full-time students in the for-profit sector increased by \$340 (2.2%), from \$15,660 in 2015-16 to \$16,000 in 2016-17.
- More than 70% of full-time students receive grant aid to help them pay for college.

GROWTH IN COLLEGE PRICES

Between 2006-07 and 2016-17, published in-state tuition and fees at public four-year institutions increased at an average rate of 3.5% per year beyond inflation, compared to 3.9% between 1986-87 and 1996-97 and 4.2% between 1996-97 and 2006-07.

- The 3.5% per year rate of increase in tuition and fees in the public four-year sector corresponds to an average annual increase of \$280 in 2016 dollars, compared to \$150 per year from 1986-87 to 1996-97 and \$230 per year from 1996-97 to 2006-07.
- The inflation-adjusted increase in published prices was lower in 2016-17 than in 2015-16 in all sectors. It was lower than the averages over the past 10 years and over the past 30 years in the public two-year and four-year sectors and similar to historical averages in the private nonprofit sector.
- The 2.4% average annual rate of increase in published tuition and fees at private nonprofit four-year institutions over the most recent decade was a decline from 3.1% between 1986-87 and 1996-97 and 2.9% between 1996-97 and 2006-07.

VARIATION IN TUITION AND FEES

In 2016-17, while the median price for full-time students attending private nonprofit four-year institutions is \$35,020, 10% of full-time students attend institutions with prices below \$12,000 and 7% attend institutions charging \$51,000 or more.

- The average in-state tuition and fee price for full-time undergraduates at public master's universities is \$8,340, compared to \$10,510 at doctoral universities. The average published tuition and fee price for undergraduates at private nonprofit master's universities is \$28,890, compared to \$40,980 at doctoral universities.

DIFFERENCES ACROSS STATES

In nine states, average published in-state tuition and fees at public four-year institutions fell or increased by less than 5% in inflation-adjusted dollars between 2011-12 and 2016-17. In nine states, average tuition and fees at these institutions increased by more than 20% over these years.

- Published 2016-17 in-state tuition and fees at public four-year institutions range from \$5,060 in Wyoming to \$15,650 in New Hampshire.
- In-district tuition and fees at public two-year colleges range from \$1,430 in California to \$7,740 in Vermont.

WHAT STUDENTS ACTUALLY PAY

In 2016-17, the estimated average net tuition and fee price paid by full-time in-state students at public four-year institutions is \$3,770, \$860 (in 2016 dollars) higher than the net price a decade earlier and \$1,550 higher than the 2009-10 low of \$2,220.

- In 2016-17, the average net tuition and fees paid by full-time public two-year college students is \$920 less than in 2006-07 — but \$270 more than in 2011-12.

- After declining from \$14,900 (in 2016 dollars) in 2006-07 to \$12,770 in 2011-12, the average net tuition and fees paid by full-time students at private nonprofit four-year institutions rose to an estimated \$14,190 in 2016-17.
- In 2011-12, on average, institutional grant aid covered 16% (\$1,310) of the published tuition and fees for all full-time in-state students at public four-year institutions. Institutional discounts ranged from 12% for independent students and 13% for the highest income quartile of dependent students to 20% for the lowest-income students.
- In 2011-12, on average, institutional grant aid covered 39% (\$11,160) of the published tuition and fees for all full-time students at private nonprofit four-year institutions. Institutional discounts ranged from 24% for independent students and 33% for dependent students from the highest income quartile to 49% for those from the second income quartile.
- In 2011-12, the average published tuition and fee price facing students in the second income quartile who attended private nonprofit four-year institutions was 60% higher than the average price facing similar students in the for-profit sector. However, the net price they paid to institutions was 18% lower than the price paid by similar students in the for-profit sector.

PUBLIC FUNDING

In 2014-15, appropriations per FTE student were 8% lower in inflation-adjusted dollars than they were a decade earlier and 11% lower than they were 30 years earlier.

- The \$77.6 billion in total state and local appropriations for higher education in 2014-15 represented a 3% increase in inflation-adjusted dollars over a decade, but a decline of 9% from the peak of \$85.2 billion (in 2014 dollars) in 2007-08.
- A 16% (inflation-adjusted) decline in total appropriations and a 13% increase in enrollment contributed to the per-student funding decline between 2007-08 and 2011-12. Between 2011-12 and 2014-15, an 8% increase in appropriations and a 4% decline in enrollment led to a 13% increase in per-student funding.
- In 2014-15, appropriations per FTE public college student ranged from \$2,900 in New Hampshire to \$17,490 in Alaska.
- The portion of state and local resources going to support higher education, measured by funding per \$1,000 in personal income, declined steadily from \$7.37 in 1984-85 to \$5.28 in 2014-15.

INSTITUTIONAL FINANCES

The portion of per-student educational expenditures at public four-year colleges and universities that is a subsidy to students, rather than being covered by tuition revenues, declined by \$710 (in 2013 dollars) between 2003-04 and 2013-14, falling from 56% of the total to 44%.

- The average subsidy per full-time equivalent (FTE) student at public two-year colleges declined by \$460 (in 2013 dollars) between 2003-04 and 2013-14. In 2013-14, the per-student

subsidy in this sector was 76% of that in the public four-year sector.

- The average portion of per-student educational expenditures at private nonprofit master's universities that was a subsidy to students was 9% in 2013-14, compared to 46% at private doctoral universities and 34% at bachelor's colleges.
- Between 2003-04 and 2013-14, educational expenditures per FTE student at public four-year institutions increased by 16% in inflation-adjusted dollars, compared to 4% in the public two-year sector, 23% at private nonprofit doctoral universities, and 7% and 6%, respectively, in private master's and bachelor's institutions.
- Between 1993 and 2013, the percentage of employees who were faculty members rose from 36% to 38% in public institutions, from 33% to 39% in the private nonprofit sector, and from 47% to 60% in for-profit institutions.
- In 2013-14, the 10% of students enrolled in the 55 private nonprofit colleges and universities with the highest endowments per student benefited from endowments averaging \$776,000 per full-time equivalent (FTE) student, but only 16 of these institutions had endowments this high.

ENROLLMENT PATTERNS

Although total postsecondary enrollment was 4% lower in 2014 than in 2010, it was 15% higher than in 2005 and 44% higher than in 1995.

- The share of undergraduate students enrolled in public two-year colleges fell from 44% in 2010 to 42% in 2014.
- Public two-year colleges accounted for 50% or more of undergraduate enrollment in the public sector in eight states in 2014, but for less than 25% in seven states.
- The percentage of first-time public four-year college students who were residents of the states in which they were enrolled declined from 83% in fall 2004 to 79% in fall 2014.


COLLEGE AFFORDABILITY

Average published tuition and fees for in-state students attending public four-year colleges rose by \$6,500 (in 2015 dollars) between 1985-86 and 2015-16 — 55% of the increase in income (\$11,915) of the middle 20% of families and 9% of the increase in income (\$76,041) of the highest income quintile.

- In 2015, average incomes for all groups except for the 20% of families with the lowest incomes equaled or exceeded the incomes of their 2005 counterparts, after adjusting for inflation.
- In 2015, the \$111,270 median family income for families headed by a four-year college graduate was more than twice the median for families headed by a high school graduate.
- Tuition and fees constitute 39% of the total budget for in-state students living on campus at public four-year colleges and universities and 21% of the budget for public two-year college students who pay for off-campus housing.


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Introduction

Perceptions of the price of going to college depend largely on published or “sticker” prices. Despite the federally mandated creation of net price calculators, the ongoing simplification of the financial aid application process, and the large role of financial assistance available to help students pay for college, increases in published prices continue to capture most headlines.

Trends in College Pricing 2016, along with its companion publication, *Trends in Student Aid 2016*, provides detailed information about both published prices and net prices, and about college students’ living expenses in addition to tuition and fees. *Trends in College Pricing* also provides information on enrollment patterns, institutional revenues and expenditures, and family income over time in the United States.

Events associated with the Great Recession increased the role of financial aid in helping students and families pay for college. Increases in tuition and fees from 2008-09 to 2011-12 were unusually large relative to general inflation. But increases in aid — particularly federal grants and tax credits — actually led to declines in average net prices over these years. However, the story has shifted considerably since that time, with increases in aid covering about two-thirds of the increase in tuition and fees between 2011-12 and 2016-17 for the average private nonprofit college student and much less for those enrolled in the public sector. Students also have to come up with the resources to cover increases in living expenses. Despite some recovery in incomes over these years, income inequality has increased and average incomes have grown slowly or not at all across the income spectrum (Figure 19A).

Trends in College Pricing 2016 includes data that can provide insight into the forces underlying increases in the prices students pay for college, including changes in state funding levels and in enrollments, the composition of institutional expenditures and revenues, the distribution of endowment resources across institutions, and tuition discounting patterns.

The gap between published and net prices is large. The average full-time student at a private nonprofit four-year college receives more than \$19,000 a year in grant aid from all sources and federal tax credits and deductions. Aid averages more than \$5,800 for public four-year students and more than \$4,000 for public two-year students. While published prices paint an exaggerated picture of the financial barriers students face in pursuing postsecondary education, these barriers are growing as net prices rise.

PUBLISHED PRICES FOR ONE YEAR OF FULL-TIME STUDY

The prices reported in *Trends in College Pricing* are for one year of full-time study. Many students enroll part time, and prorating these prices does not always give an accurate picture of the published prices that students face, much less of the net prices

generated by the grant assistance and tax benefits they receive. But even for full-time students, one-year prices at “two-year” and “four-year” institutions may not be adequate indicators of the cost to students of pursuing postsecondary certificates and degrees. Among students who began their studies full time at a four-year institution in 2008, about 40% had completed a bachelor’s degree at their first institution after four years and about 60% had completed a degree after six years (NCES, *Digest of Education Statistics 2015*, Table 326.10). In other words, among students who earned bachelor’s degrees within six years, one-third took more than four years to do so. Not all of these students paid more than four years of full-time tuition — they may have taken time off or enrolled part time for at least a semester. But for many of those who took longer than four years to earn their degrees, tuition and fees (before accounting for grant aid) were likely to be considerably more than four times the one-year price.

Taking more than two years to earn an associate degree or more than four years to earn a bachelor’s degree has financial implications beyond tuition and fee expenses. Forgone earnings from reduced participation in the labor force constitute the largest portion of the cost of college for most students. The more quickly students earn their degrees, the more time they have to earn college-level wages and reap the financial benefits of postsecondary education. Bachelor’s degree recipients between ages 25 and 34 had median earnings 69% (\$18,876) higher than those with high school diplomas in 2015 (U.S. Census Bureau, 2015 Income Data, Table PINC-03).

PAST AND FUTURE

As Figure 4 illustrates, the rate of growth of published tuition and fees is not accelerating over time. In both the public and private nonprofit four-year sectors, inflation-adjusted prices increased at a slower rate between 2006-07 and 2016-17 than in either of the previous two decades (Figure 4). In the public sector, both the dollar and percentage increases between 2011-12 and 2016-17 were smaller than over the previous five years (Table 2A). But Figure 5 shows how these price increases have accumulated over time. After adjusting for inflation, the average published tuition and fee price in the public four-year sector is 3.1 times its level 30 years ago. In the public two-year and private nonprofit four-year sectors, the prices are about 2.4 and 2.3 times their 1986-87 levels, respectively.

For public institutions, declining state revenues per student are a major factor behind rising prices. State funding for higher education is cyclical, but there is also a long-term downward trend in this subsidy to postsecondary students (Figures 14A and 14B). In 2014-15, appropriations per full-time equivalent (FTE) student were 8% lower in inflation-adjusted dollars than they were a decade earlier and 11% lower than they were 30 years earlier.

PUBLISHED AND NET PRICES

We estimate that in 2016-17, the average in-state net tuition and fee price at public four-year institutions is about \$3,770, compared with a published price of \$9,650. But between 2011-12 and 2016-17, increases in grant aid for full-time students in this sector covered only about 19% of the \$830 (in 2016 dollars) increase in published tuition and fees. Average aid increases covered almost two-thirds of the \$3,780 increase in published tuition and fees at private nonprofit four-year colleges and universities. For public two-year college students, the \$350 increase in tuition and fees over five years was met by an increase of less than \$100 in average grant aid.

Averages across sectors conceal considerable variation among students. Federal grant aid goes almost exclusively to low- and moderate-income students and, as Figures 12 and 13 reveal, institutional discounts are generally larger for lower-income students. The distribution of net prices is more critical for college access than the overall average since, as Figure 19 shows, there are sharp differences in financial capacity among families.

TUITION AND FEES VERSUS TOTAL CHARGES

In addition to tuition and fees, we report room and board charges for residential students, living costs for commuter students, and other components of student budgets. Whether students live on campus or off campus, they must pay for housing and food, buy books and supplies, and cover transportation and other basic living costs. Many of these expenses are not really part of the cost of attending college, but are expenses people face whether or not they are in school. The largest real college cost many students face is forgone earnings. It is very difficult to succeed in college while working full time. However, the cost of students' time is difficult to measure, and we make no attempt to do so in this report. Because students tend to think of living expenses as part of the cost of going to college, and because they must come up with the funds to cover these outlays, it is useful to use these expenses as a proxy for forgone earnings. The cost of living poses a significant hurdle for many students. Even those who receive grant aid sufficient to cover tuition and fee charges may struggle to meet living expenses. It is not so much the prices charged by institutions, but the very real costs that students incur by devoting their time to school and forgoing the income needed to support themselves and their families while in school that create the burden for these students.

COLLEGE AFFORDABILITY

College affordability is about more than just college prices. It is about economic inequality, income levels for the majority of families and individuals, the prices of other goods and services, savings rates, and personal preferences and priorities. Affordability also depends on the financial return to a college education, since accessible borrowing allows students to pay

part of the cost of their education out of future earnings. A major question that begs for more attention is the appropriate division of responsibility for financing postsecondary education between society as a whole, as represented by taxpayers, and the individual students who enroll.

In addition to the varied circumstances facing students from different backgrounds and of different ages, there is considerable variation in prices across sectors, states, and regions, as well as among institutions within these categories. National average prices tell a very incomplete story. College students in the United States have a wide variety of educational institutions from which to choose, with many different price tags and with different levels of financial aid. One of the issues many students face is how to make sense of all the options and complex pricing structures.

INTERPRETING THE DATA

Measuring Tuition

A growing number of institutions charge different prices for different years of study and/or for different academic majors. In other words, many students on a campus may face published prices quite different from those reported by institutions in the College Board's Annual Survey of Colleges. Even more fundamental, the lines between sectors are increasingly blurry as more two-year colleges offer some four-year degrees. For these reasons, the average published prices for each sector that *Trends in College Pricing 2016* reports are not precise measures.

Trends in College Pricing 2016 presents detailed pricing data for public two-year and four-year colleges and private nonprofit four-year institutions. Although we provide an estimate of the average charges at for-profit institutions, because of the relatively small sample of those institutions from which we are able to collect data and the complex pricing structures prevalent in this sector, it is important to interpret that information with caution.

Price Changes

While the information reported here provides a best approximation of trends in college charges over time, we caution readers about placing too much reliance on either precise dollar amounts or annual percentage changes. Each year we revise the average prices calculated the previous year to account for revised data we receive from institutions. Details relating to our methodology and to other technical issues and data reliability can be found at the end of the report in Notes and Sources.

The tables supporting all of the graphs in the Trends publications, PDF versions of the publications, PowerPoint files containing individual slides for all of the graphs, and other detailed data on student aid and college pricing are available at trends.collegeboard.org. Please feel free to cite or reproduce the data in Trends for noncommercial purposes with proper attribution.

Published Charges by Sector, 2016-17

The average published tuition and fee price for in-state students enrolled full time at public four-year colleges and universities is \$9,650 in 2016-17, \$230 (2.4% before adjusting for inflation) higher than it was in 2015-16.

TABLE 1A Average Published Charges (Enrollment-Weighted) for Full-Time Undergraduates by Sector, 2016-17

	Public Two-Year In-District	Public Four-Year In-State	Public Four-Year Out-of-State	Private Nonprofit Four-Year	For-Profit
Tuition and Fees					
2016-17	\$3,520	\$9,650	\$24,930	\$33,480	\$16,000
2015-16	\$3,440	\$9,420	\$24,070	\$32,330	\$15,660
\$ Change	\$80	\$230	\$860	\$1,150	\$340
% Change	2.3%	2.4%	3.6%	3.6%	2.2%
Room and Board					
2016-17	\$8,060	\$10,440	\$10,440	\$11,890	—
2015-16	\$7,930	\$10,150	\$10,150	\$11,540	—
\$ Change	\$130	\$290	\$290	\$350	—
% Change	1.6%	2.9%	2.9%	3.0%	—
Tuition and Fees and Room and Board					
2016-17	\$11,580	\$20,090	\$35,370	\$45,370	—
2015-16	\$11,370	\$19,570	\$34,220	\$43,870	—
\$ Change	\$210	\$520	\$1,150	\$1,500	—
% Change	1.8%	2.7%	3.4%	3.4%	—

— Sample is too small to provide reliable information.

NOTES: Prices in Table 1A are not adjusted for inflation. Prices reported for 2015-16 have been revised and may differ from those reported in *Trends in College Pricing 2015*. Public two-year room and board charges are based on commuter housing and food costs. Tuition and fee figures for the for-profit sector should be interpreted with caution because of the relatively small sample.

SOURCE: College Board, Annual Survey of Colleges.

Enrollment-weighted tuition and fees weight the price charged by each institution by the number of full-time undergraduate students enrolled in fall 2014. Public four-year in-state charges are weighted by total fall 2014 full-time undergraduate enrollment in each institution, including both in-state students and out-of-state students. Out-of-state tuition and fees are computed by adding the average in-state price to the out-of-state premium weighted by the number of full-time out-of-state undergraduate students enrolled at each institution. Room and board charges are weighted by the number of undergraduate students residing on campus for four-year institutions and by the number of commuter students for public two-year institutions.

- Because average published tuition and fees rose more for out-of-state students than for in-state students in 2016-17, the out-of-state premium increased by 4.3%, from \$14,650 to \$15,280.
- In 2016-17, the average published tuition and fee price of \$33,480 at private nonprofit four-year institutions is \$8,550 (34%) higher than the average public four-year out-of-state price. Average published charges, including tuition and fees and room and board, are \$10,000 (28%) higher in the private sector.
- In 2016-17, the average published tuition and fee price of \$3,520 at public two-year colleges is 36% of the average in-state public four-year price.
- The estimated \$16,000 average tuition and fee price for full-time students enrolled in for-profit institutions in 2016-17 is about 4.5 times as high as the average price at public two-year colleges and 1.7 times as high as the average in-state price at public four-year institutions.

ALSO IMPORTANT:

- More than 70% of undergraduate students enrolled full time in 2011-12 received grants that reduced the actual price of college (NCES, NPSAS, 2012). In addition, many states and institutions grant tuition waivers to groups such as veterans, teachers, or dependents of employees. See Figures 9, 10, and 11 for estimates of net prices and *Trends in Student Aid 2016* for details about student aid.
- About one out of six full-time public two-year students are in California, which has the lowest tuition and fee price in that sector. Excluding California raises the average published price of public two-year colleges from \$3,520 to \$3,910.
- The total price of a college education depends on how long a student is enrolled before completing a degree. Many students spend more than four years earning a bachelor's degree. Average time to degree is longer in public than in private nonprofit institutions.
- In fall 2014, 62% of students at public two-year colleges were enrolled part time, as were 19% of undergraduates at public four-year, 17% at private nonprofit four-year, and 29% at for-profit institutions. (NCES, IPEDS fall enrollment data, 2014; calculations by the authors)

Published Charges by Carnegie Classification, 2016-17

In 2016-17, average published tuition and fee prices for full-time in-state students in the public four-year sector range from \$7,110 at bachelor's colleges and \$8,340 at master's universities to \$10,510 at public doctoral universities.

TABLE 1B Average Published Charges (Enrollment-Weighted) for Full-Time Undergraduates by Carnegie Classification, 2016-17

	Public Four-Year In-State			Private Nonprofit Four-Year		
	Doctoral	Master's	Bachelor's	Doctoral	Master's	Bachelor's
Tuition and Fees						
2016-17	\$10,510	\$8,340	\$7,110	\$40,980	\$28,890	\$32,400
2015-16	\$10,250	\$8,140	\$6,990	\$39,490	\$27,970	\$31,310
\$ Change	\$260	\$200	\$120	\$1,490	\$920	\$1,090
% Change	2.5%	2.5%	1.7%	3.8%	3.3%	3.5%
Room and Board						
2016-17	\$10,840	\$9,680	\$9,990	\$13,580	\$11,220	\$11,040
2015-16	\$10,540	\$9,390	\$9,690	\$13,200	\$10,900	\$10,680
\$ Change	\$300	\$290	\$300	\$380	\$320	\$360
% Change	2.8%	3.1%	3.1%	2.9%	2.9%	3.4%
Tuition and Fees and Room and Board						
2016-17	\$21,350	\$18,020	\$17,100	\$54,560	\$40,110	\$43,440
2015-16	\$20,790	\$17,530	\$16,680	\$52,690	\$38,870	\$41,990
\$ Change	\$560	\$490	\$420	\$1,870	\$1,240	\$1,450
% Change	2.7%	2.8%	2.5%	3.5%	3.2%	3.5%
Percentage Distribution of Full-Time Undergraduates Within Sector						
Fall 2014	61%	32%	6%	31%	38%	26%

NOTES: Prices in Table 1B are not adjusted for inflation. Prices reported for 2015-16 have been revised and may differ from those reported in *Trends in College Pricing 2015*. Special-focus institutions are not included in Table 1B. These institutions enroll less than 1% of all full-time undergraduate students in the public four-year sector and about 5% of all full-time undergraduate students in the private nonprofit four-year sector. Carnegie classification is as of 2015. See Notes and Sources on p. 34 for definitions of Carnegie classification.

SOURCE: College Board, Annual Survey of Colleges.

Enrollment-weighted tuition and fees weight the price charged by each institution by the number of full-time undergraduate students enrolled in fall 2014. Public four-year in-state charges are weighted by total fall 2014 full-time undergraduate enrollment in each institution, including both in-state students and out-of-state students. Room and board charges are weighted by the number of undergraduate students residing on campus.

– The average published tuition and fee price for full-time undergraduates at private nonprofit master's universities is 70% of the price at private nonprofit doctoral universities — \$28,890 versus \$40,980.

– Average room and board charges at private nonprofit institutions range from \$11,040 at bachelor's colleges to \$13,580 at doctoral universities.

ALSO IMPORTANT:

– Within each sector, the average institutional grant aid is higher at higher-price institutions. As a result, the differences in published prices across types of institutions in each sector are greater than the differences in net prices. For example, in 2013-14, public doctoral universities awarded an average of \$3,330 per first-time full-time undergraduate student in institutional grant aid, compared to \$1,680 at public master's universities, and \$1,390 at public bachelor's colleges. (*Trends in Student Aid 2016*, Figure 23)

– In the private nonprofit sector, institutional grant aid in 2013-14 averaged \$16,120 per first-time full-time undergraduate student at doctoral universities, \$13,400 at master's universities, and \$13,840 at bachelor's colleges. (*Trends in Student Aid 2016*, Figure 23)

– In the public four-year sector, published in-state tuition and fees at doctoral, master's, and bachelor's institutions increased by 16% to 27% over the four years from 2008-09 to 2012-13 and by less than 6% over the next four years. (*Trends in College Pricing*, 2008 through 2016, Table 1B; calculations by the authors)

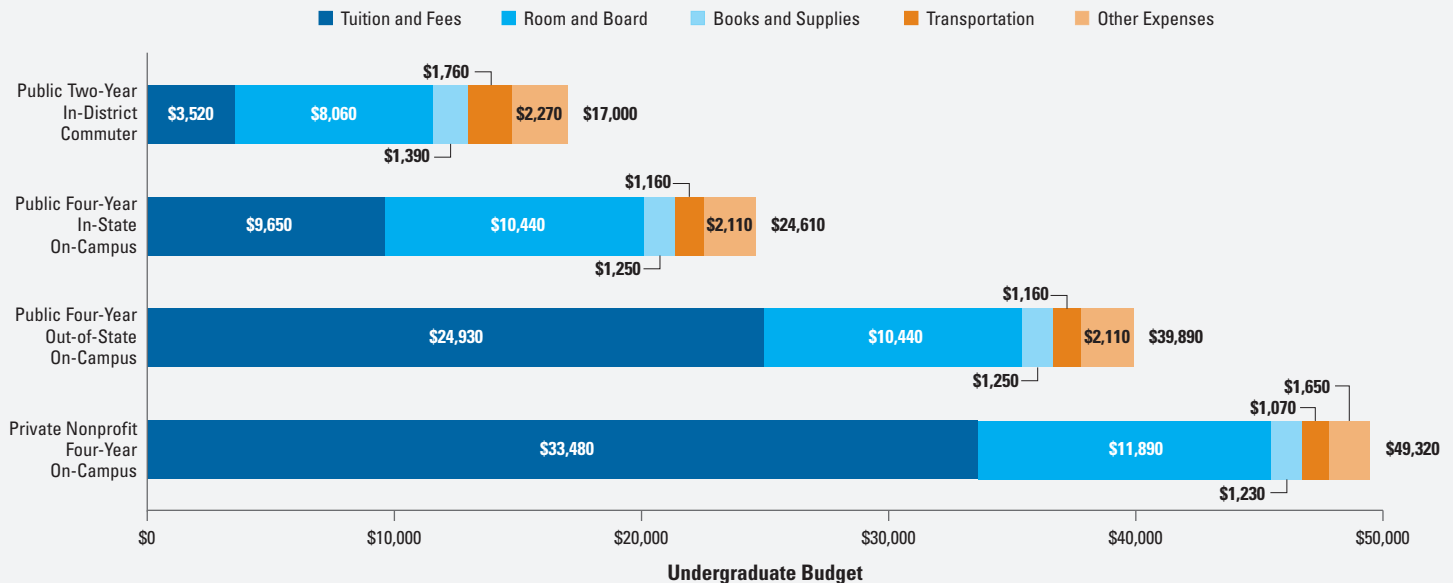
– In the private nonprofit four-year sector, published tuition and fees at doctoral, master's, and bachelor's institutions increased by 9% to 15% over the four years from 2008-09 to 2012-13 and by 6% to 12% over the next four years. (*Trends in College Pricing*, 2008 through 2016, Table 1B; calculations by the authors)



Student Budgets, 2016-17

Tuition and fees constitute 39% of the total budget for in-state students living on campus at public four-year institutions and 21% of the budget for public two-year college students who pay for off-campus housing.

FIGURE 1 Average Estimated Full-Time Undergraduate Budgets (Enrollment-Weighted) by Sector, 2016-17



NOTES: Expense categories are based on institutional budgets for students as reported by colleges and universities in the College Board's Annual Survey of Colleges. Figures for tuition and fees and room and board mirror those reported in Table 1A. Other expense categories are the average amounts allotted in determining the total cost of attendance and do not necessarily reflect actual student expenditures.

SOURCE: College Board, Annual Survey of Colleges.

- Student budgets are constructed by institutional financial aid offices. These budgets form the basis for determining the total cost of attendance, which can affect the amount of financial aid for which students are eligible.
- Room and board and other components of student budgets vary less across sectors than tuition and fees. As a result, while the average in-state published tuition and fee price at public four-year institutions is 2.7 times as high as the price at public two-year colleges, the total student budget is only 1.4 times as high.
- The average in-state published tuition and fee price at public four-year institutions is 29% of the average at private nonprofit four-year institutions, but the average student budget is 50% as high.

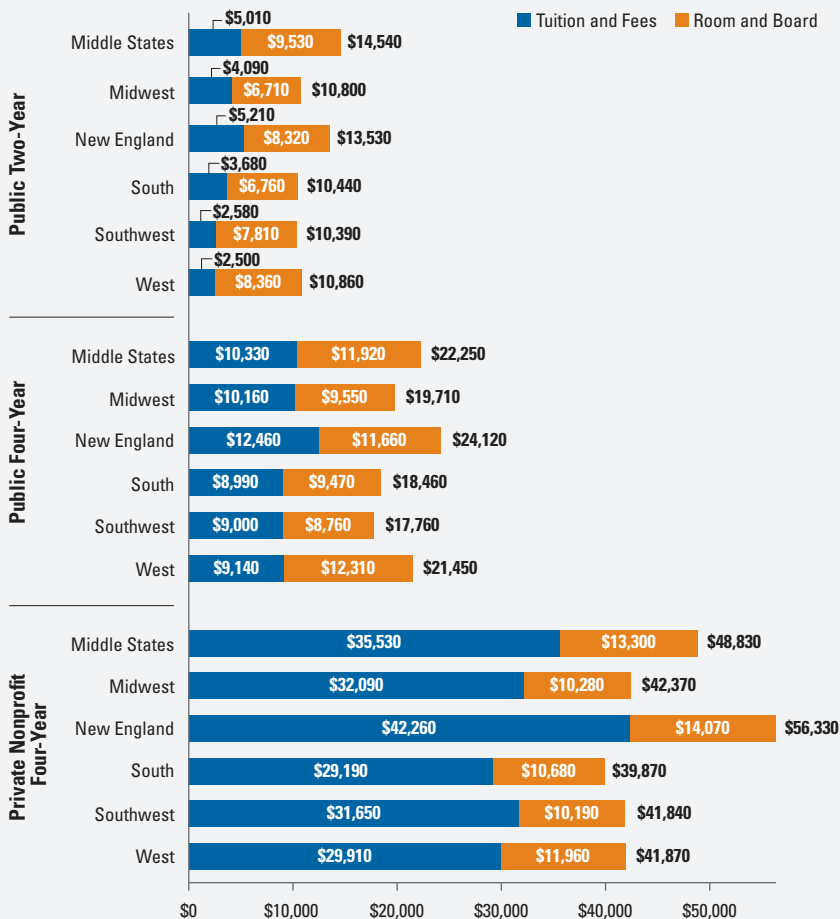
ALSO IMPORTANT:

- According to the National Association of College Stores, the average price of a new textbook increased from \$57 in 2007 to \$82 in 2014. The gap between new and used book prices has increased over time, with the latter rising from \$49 to \$59 over these years. (<http://www.nacs.org/research/industrystatistics/higheredfactsfigures.aspx>)
- Most forms of financial aid, including federal and state grants and federal loans, can cover any expenses included in student budgets, not just tuition and fees. However, federal education tax credits and deductions cover books, supplies, and equipment required for attendance, but not room and board.
- Housing, food, and other living expenses are not actually costs of attending college since people must pay for these things whether or not they are in college. However, a very significant cost of going to college is forgone earnings from time devoted to school instead of to the labor market. Without adequate earnings, many students struggle to meet daily expenses, and non-tuition components of student budgets can easily interfere with student success.

Regional Variation in Charges

In 2016-17, average published tuition and fees for in-state students at public four-year colleges and universities range from \$8,990 in the South to \$12,460 in New England.

FIGURE 2 Average Tuition and Fees and Room and Board (Enrollment-Weighted) by Sector and College Board Region, 2016-17



– In 2016-17, average published tuition and fees for full-time in-district students at public two-year colleges range from \$2,500 in the West to \$5,210 in New England.

– In 2016-17, the dollar gap between average tuition and fees at public four-year and public two-year institutions was largest in New England (\$7,250) and smallest in the South (\$5,310).

– Average room and board charges at public four-year institutions range from \$8,760 in the Southwest to \$12,310 in the West. Room and board as a percentage of total charges ranges from 48% in the Midwest and New England to 57% in the West.

– Increases in average tuition and fees at public four-year institutions from 2006-07 to 2016-17 ranged from 24% (\$1,970 in 2016 dollars) in the Midwest to 66% (\$3,640) in the West. Despite this large increase, the average price in the West in 2016-17 is \$3,320 (27%) lower than the price in New England, where the price rose 37% over the decade.

– The largest percentage increase in average tuition and fees at public two-year colleges between 2006-07 and 2016-17 was 61% in the West, which has the lowest published tuition and fees in 2016-17.

Ten-Year Dollar Change and Ten-Year Percentage Change in Inflation-Adjusted Tuition and Fees, 2006-07 to 2016-17

Region	Public Two-Year In-District		Public Four-Year In-State		Private Nonprofit Four-Year	
	Ten-Year \$ Change	Ten-Year % Change	Ten-Year \$ Change	Ten-Year % Change	Ten-Year \$ Change	Ten-Year % Change
Middle States	\$900	22%	\$2,220	27%	\$7,750	28%
Midwest	\$730	22%	\$1,970	24%	\$7,400	30%
New England	\$1,270	32%	\$3,400	37%	\$8,640	26%
South	\$1,130	44%	\$3,400	61%	\$6,200	27%
Southwest	\$580	29%	\$2,450	37%	\$9,980	46%
West	\$950	61%	\$3,640	66%	\$4,140	16%

NOTES: Public two-year room and board charges are based on commuter housing and food costs. States and territories included in the regions are as follows: Middle States: DC, DE, MD, NJ, NY, PA, and PR; Midwest: IA, IL, IN, KS, MI, MN, MO, NE, ND, OH, SD, WI, and WV; New England: CT, MA, ME, NH, RI, and VT; South: AL, FL, GA, KY, LA, MS, NC, SC, TN, and VA; Southwest: AR, NM, OK, and TX; West: AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA, and WY.

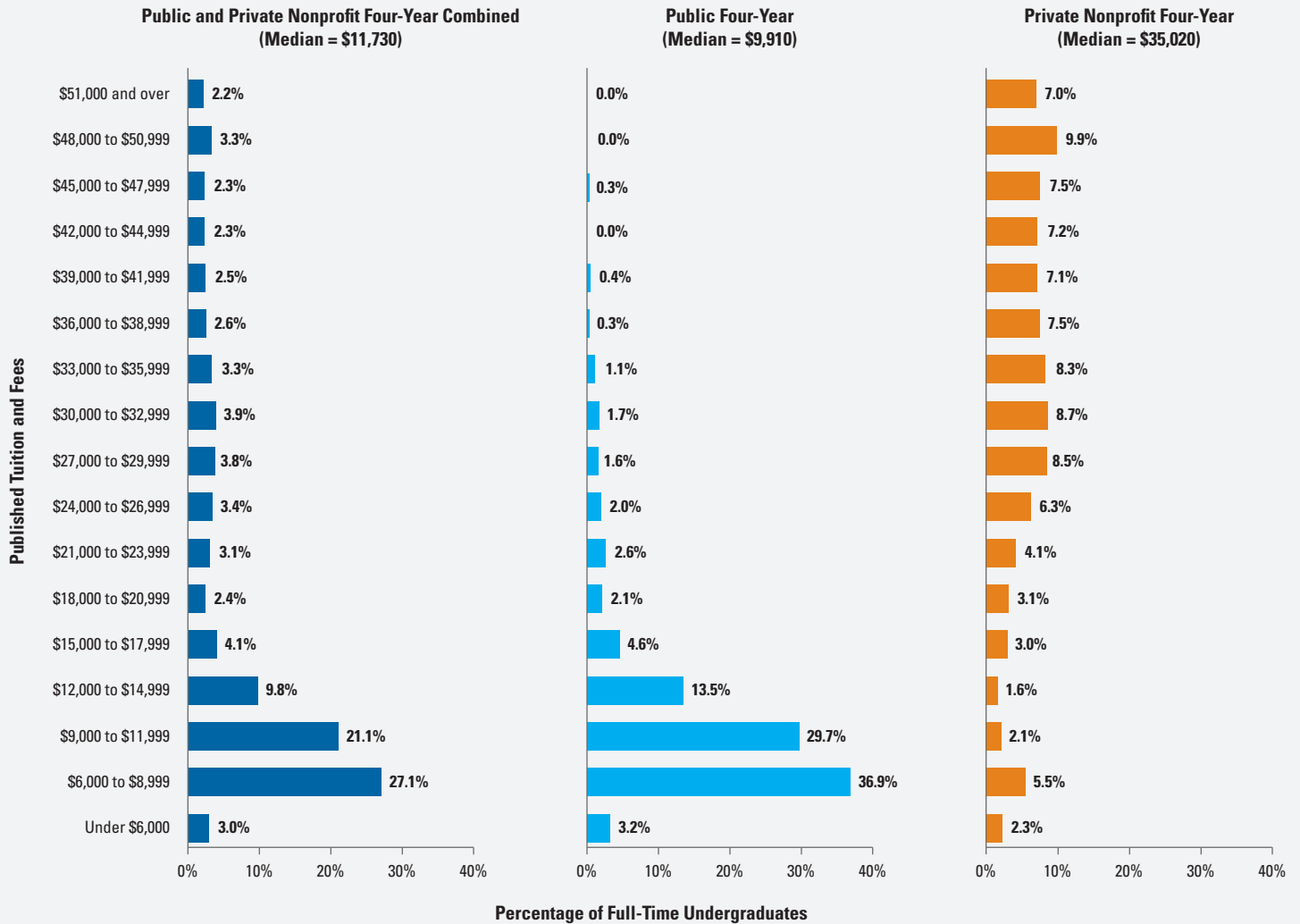
SOURCE: College Board, Annual Survey of Colleges.



Variation in Tuition and Fees, 2016-17

In 2016-17, while the median price for full-time students attending private nonprofit four-year institutions is \$35,020, 10% of full-time students attend institutions with prices below \$12,000 and 7% attend institutions charging \$51,000 or more.

FIGURE 3 Distribution of Full-Time Undergraduates at Four-Year Institutions by Published Tuition and Fees, 2016-17



NOTES: For out-of-state students enrolled in public four-year institutions, the nonresident premium has been added to in-state tuition and fees. Some out-of-state students benefit from reciprocity agreements, which allow students from neighboring states to pay less than the full out-of-state price. The distribution of students across institutions is based on the latest available enrollment data, which are for fall 2014. Percentages may not sum to 100 because of rounding.

SOURCE: College Board, Annual Survey of Colleges.

- In 2016-17, among all full-time public four-year college undergraduates, including both in-state and out-of-state students, 37% are enrolled in institutions with published tuition and fee levels between \$6,000 and \$8,999, 3% are in institutions with lower prices, and 17% face published prices of \$15,000 or more.
- Figure 3 includes both in-state and out-of-state students attending public four-year institutions and the associated published prices.

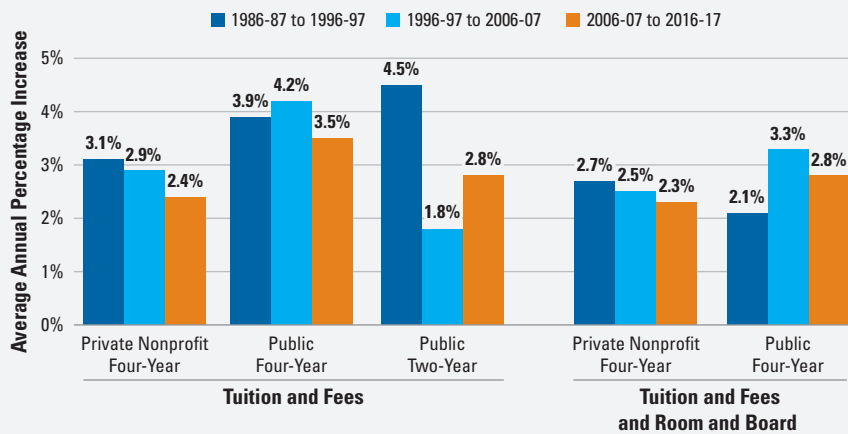
About 80% of those facing charges of \$15,000 or more are enrolled outside their states of residence.

- Half of the full-time students enrolled at public and private nonprofit four-year colleges and universities in 2016-17 face published tuition and fee prices above \$11,730; prices are below this level for the other 50% of students.

Published Charges over Time

Between 2006-07 and 2016-17, published in-state tuition and fees at public four-year institutions increased at an average rate of 3.5% per year beyond inflation, compared with average annual increases of 3.9% and 4.2% over the two prior decades.

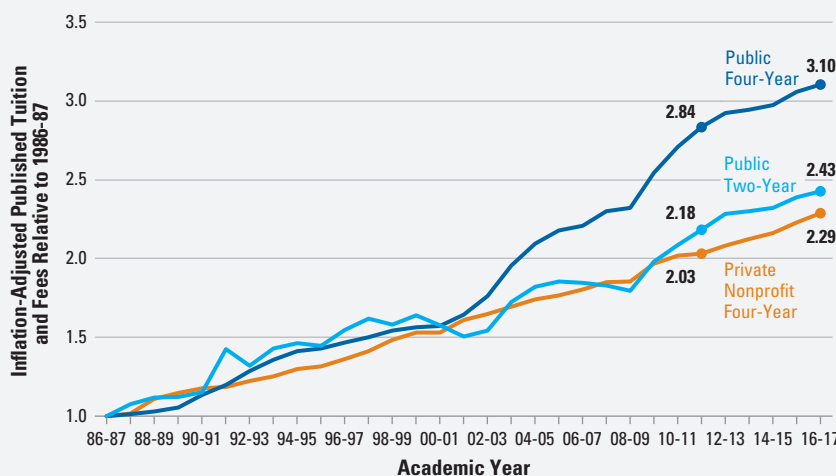
FIGURE 4 Average Annual Percentage Increase in Inflation-Adjusted Published Prices by Decade, 1986-87 to 2016-17



NOTES: Each bar in Figure 4 shows the average annual rate of growth of published prices in inflation-adjusted dollars over a 10-year period. For example, from 2006-07 to 2016-17, average published tuition and fees at private nonprofit four-year colleges rose by an average of 2.4% per year beyond increases in the Consumer Price Index. Average tuition and fee prices reflect in-district charges for public two-year institutions and in-state charges for public four-year institutions.

SOURCES: College Board, Annual Survey of Colleges; NCES, Integrated Postsecondary Education Data System (IPEDS).

FIGURE 5 Inflation-Adjusted Published Tuition and Fees Relative to 1986-87, 1986-87 to 2016-17 (1986-87 = 1.0)



NOTES: Figure 5 shows published tuition and fees by sector, adjusted for inflation, relative to 1986-87 published prices. For example, a value of 3.10 indicates that the tuition and fee price in the public four-year sector in 2016-17 is 3.1 times as high as it was in 1986-87, after adjusting for increases in the Consumer Price Index. Average tuition and fee prices reflect in-district charges for public two-year institutions and in-state charges for public four-year institutions.

SOURCES: College Board, Annual Survey of Colleges; NCES, IPEDS.

- The 3.5% per year average rate of increase in published tuition and fees in the public four-year sector between 2006-07 and 2016-17 corresponds to an average annual increase of \$280 in 2016 dollars, compared with \$150 per year between 1986-87 and 1996-97 and \$230 per year between 1996-97 and 2006-07. (online Table 2; calculations by the authors)
- The average annual rate of increase in published tuition and fees at private nonprofit four-year institutions declined from 3.1% between 1986-87 and 1996-97 to 2.9% over the next decade and to 2.4% between 2006-07 and 2016-17. The average dollar increase rose from \$530 per year to \$650 and to \$710 over these decades. (online Table 2; calculations by the authors)
- Room and board charges consistently rise more slowly than tuition and fees, although the gap in growth rates has narrowed over time.
- The rates of increase in published tuition and fees were similar across all three sectors of nonprofit higher education between 1986-87 and 2000-01. However, from 2001-02 through 2011-12, the growth rate of prices at public four-year institutions exceeded that in other sectors.

ALSO IMPORTANT:

- Median family income in the United States rose at an average rate of 0.5% per year between 1986 and 1996 and 0.8% per year between 1996 and 2006. Median family income grew at an average rate of 0.4% per year from 2005 to 2015 (after adjusting for inflation) despite declines each year from 2008 to 2012. (U.S. Census Bureau, 2015 Income Data, Table F-6; calculations by the authors)

Published Charges over Time

Between 2011-12 and 2016-17, published tuition and fee prices rose by 9% in the public four-year sector, by 11% at public two-year colleges, and by 13% at private nonprofit four-year institutions, after adjusting for inflation.

TABLE 2A Average Tuition and Fees and Room and Board in 2016 Dollars, 1976-77 to 2016-17, Selected Years

	Tuition and Fees in 2016 Dollars						Tuition and Fees and Room and Board in 2016 Dollars			
	Private Nonprofit Four-Year	Five-Year % Change	Public Four-Year	Five-Year % Change	Public Two-Year	Five-Year % Change	Private Nonprofit Four-Year	Five-Year % Change	Public Four-Year	Five-Year % Change
1976-77	\$10,680		\$2,600		\$1,190		\$16,760		\$8,160	
1981-82	\$10,810	1%	\$2,390	-8%	\$1,140	-4%	\$16,630	-1%	\$7,540	-8%
1986-87	\$14,630	35%	\$3,110	30%	\$1,450	27%	\$21,650	30%	\$8,900	18%
1991-92	\$17,340	19%	\$3,720	20%	\$2,070	43%	\$25,070	16%	\$9,630	8%
1996-97	\$19,920	15%	\$4,560	23%	\$2,250	9%	\$28,140	12%	\$10,950	14%
2001-02	\$23,560	18%	\$5,110	12%	\$2,180	-3%	\$32,340	15%	\$12,250	12%
2006-07	\$26,380	12%	\$6,860	34%	\$2,680	23%	\$36,060	12%	\$15,180	24%
2011-12	\$29,700	13%	\$8,820	29%	\$3,170	18%	\$40,450	12%	\$18,270	20%
2016-17	\$33,480	13%	\$9,650	9%	\$3,520	11%	\$45,370	12%	\$20,090	10%

TABLE 2B Average Tuition and Fees and Room and Board in 2016 Dollars, 2006-07 to 2016-17

	Tuition and Fees in 2016 Dollars						Tuition and Fees and Room and Board in 2016 Dollars			
	Private Nonprofit Four-Year	One-Year % Change	Public Four-Year	One-Year % Change	Public Two-Year	One-Year % Change	Private Nonprofit Four-Year	One-Year % Change	Public Four-Year	One-Year % Change
2006-07	\$26,380		\$6,860		\$2,680		\$36,060		\$15,180	
2007-08	\$27,060	2.6%	\$7,150	4.2%	\$2,650	-1.1%	\$36,960	2.5%	\$15,660	3.2%
2008-09	\$27,150	0.3%	\$7,220	1.0%	\$2,610	-1.5%	\$36,980	0.1%	\$15,720	0.4%
2009-10	\$28,760	5.9%	\$7,900	9.4%	\$2,870	10.0%	\$39,190	6.0%	\$17,020	8.3%
2010-11	\$29,550	2.7%	\$8,420	6.6%	\$3,030	5.6%	\$40,250	2.7%	\$17,860	4.9%
2011-12	\$29,700	0.5%	\$8,820	4.8%	\$3,170	4.6%	\$40,450	0.5%	\$18,270	2.3%
2012-13	\$30,450	2.5%	\$9,080	2.9%	\$3,310	4.4%	\$41,430	2.4%	\$18,710	2.4%
2013-14	\$31,040	1.9%	\$9,150	0.8%	\$3,340	0.9%	\$42,190	1.8%	\$18,940	1.2%
2014-15	\$31,600	1.8%	\$9,240	1.0%	\$3,370	0.9%	\$42,870	1.6%	\$19,120	1.0%
2015-16	\$32,600	3.2%	\$9,500	2.8%	\$3,460	2.7%	\$44,240	3.2%	\$19,730	3.2%
2016-17	\$33,480	2.7%	\$9,650	1.6%	\$3,520	1.7%	\$45,370	2.5%	\$20,090	1.8%

NOTE: Average tuition and fee prices reflect in-district charges for public two-year institutions and in-state charges for public four-year institutions.

SOURCES: College Board, Annual Survey of Colleges; NCES, IPEDS data.

- The price increases in the public sectors over the most recent five years build on larger increases over the preceding five years.
- In all three sectors, the largest one-year increases in inflation-adjusted tuition and fees over the last 10 years were in 2009-10.
- Average tuition and fees at public two-year colleges declined in inflation-adjusted dollars in 2007-08 and 2008-09. The average published price rose by less than 1% in 2013-14 and 2014-15 in this sector. Prices increased by less than 1% in 2013-14 in the public four-year sector and in 2008-09 and 2011-12 at private nonprofit four-year institutions.
- In 2016-17, the rate of increase in published prices was lower than the year before in all sectors and lower than both the 10-year and 30-year averages for the public two-year and four-year sectors. It was similar to historical averages in the private nonprofit sector.

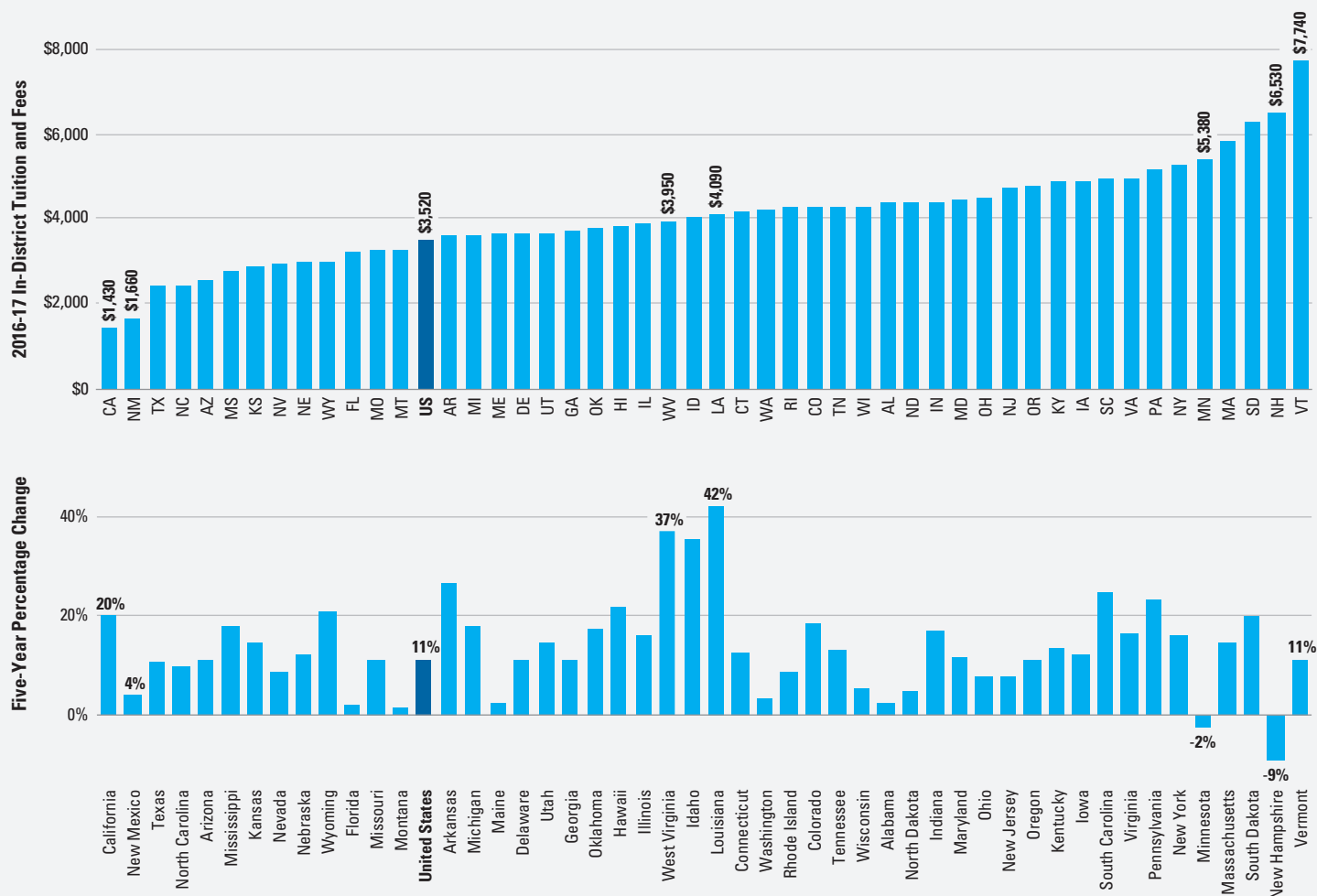
ALSO IMPORTANT:

- The increases in the net prices that students actually pay, after taking grant aid and tax benefits into consideration, have been smaller over the long term than increases in published prices. See Figures 9, 10, and 11 for details on net prices over time.
- The price increases reported in Tables 1A and 1B are higher than those in Table 2B because they are not adjusted for inflation. For example, the 2016-17 increase for public four-year institutions was 2.4% in current dollars, but accounting for the change in the Consumer Price Index reduces the change to 1.6%.

Tuition and Fees by State: Public Two-Year

In 2016-17, average published tuition and fee prices for in-district students at public two-year institutions range from \$1,430 in California and \$1,660 in New Mexico to \$6,530 in New Hampshire and \$7,740 in Vermont.

FIGURE 6 Average 2016-17 In-District Tuition and Fees at Public Two-Year Institutions by State and Five-Year Percentage Change in Inflation-Adjusted Tuition and Fees



NOTE: Alaska is not included in Figure 6 because it does not have a separate community college system.

SOURCE: College Board, Annual Survey of Colleges.

- In eight states, average tuition and fees at public two-year colleges either fell or rose by less than 5% in inflation-adjusted dollars between 2011-12 and 2016-17. In New Hampshire, which has the second highest average price in the country, the average tuition and fees declined by 9% in real terms over these five years, but remained more than \$3,000 above the national average.
- In eight states, average tuition and fees at public two-year colleges rose by more than 20% in inflation-adjusted dollars between 2011-12 and 2016-17. Despite a 21% price increase in Wyoming, compared to the national average increase of 11%, that state's price was \$530 below the national average.

ALSO IMPORTANT:

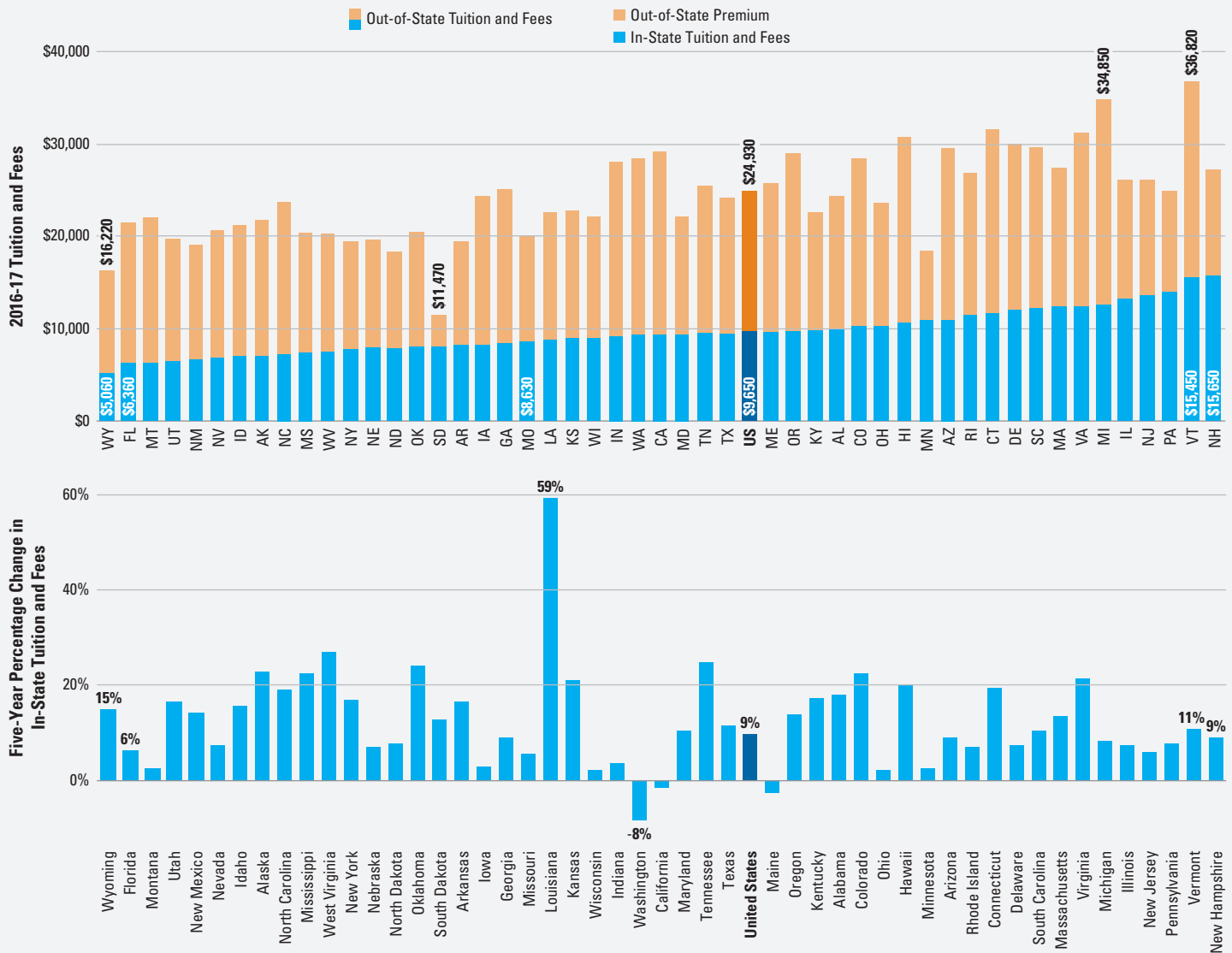
- California enrolled about one-sixth of the nation's full-time public two-year students in fall 2014.
- State initiatives to make community college tuition free for some students are not evident in the data reported in Figure 6. For example, the Tennessee Promise program fills the gap between community college tuition and fees and Pell Grants and other grant aid for recent high school graduates who meet certain requirements. This program provides aid to students, rather than eliminating the tuition price.



Tuition and Fees by State: Public Four-Year

In 2016-17, average published tuition and fee prices for in-state students at public four-year institutions range from \$5,060 in Wyoming and \$6,360 in Florida to \$15,450 in Vermont and \$15,650 in New Hampshire.

FIGURE 7 Average 2016-17 In-State and Out-of-State Tuition and Fees at Public Four-Year Institutions by State and Five-Year Percentage Change in Inflation-Adjusted In-State Tuition and Fees



SOURCE: College Board, Annual Survey of Colleges.

– In 2016-17, the highest average published out-of-state tuition and fees at public four-year institutions are in Michigan (\$34,850) and Vermont (\$36,820). The lowest prices are \$11,470 in South Dakota and \$16,220 in Wyoming.

– In nine states, average published in-state tuition and fees at public four-year institutions fell or increased by less than 5% in inflation-adjusted dollars between 2011-12 and 2016-17. In six of those states, the 2016-17 prices for in-state students are below the national average but, in three states, the prices are above the national average.

– In nine states, average in-state tuition and fees at public four-year institutions increased by more than 20% in inflation-adjusted dollars between 2011-12 and 2016-17. The 2016-17 in-state prices are above the national average in only two of those states.

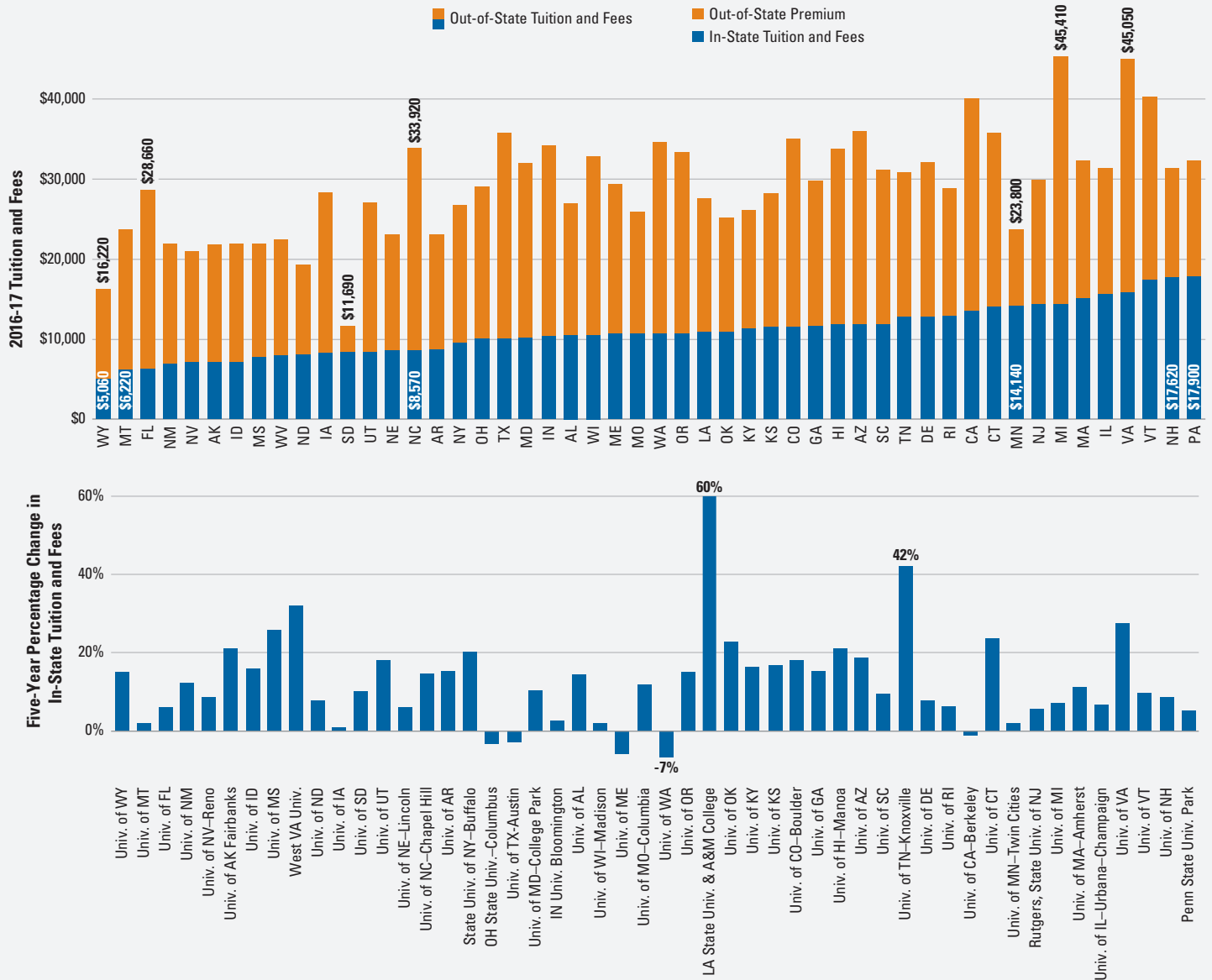
ALSO IMPORTANT:

– Because of reciprocity agreements, not all out-of-state students pay the prices reported here, even before taking financial aid into consideration. For details, see http://www.nasfaa.org/State_Regional_Tuition_Exchanges.

Tuition and Fees by State: Flagship Universities

In 2016-17, published tuition and fees for full-time first-year in-state students at flagship universities range from \$5,060 at the University of Wyoming and \$6,220 at the University of Montana to \$17,620 at the University of New Hampshire and \$17,900 at Penn State, University Park.

FIGURE 8 2016-17 Tuition and Fees at Flagship Universities and Five-Year Percentage Change in Inflation-Adjusted Tuition and Fees



SOURCE: College Board, Annual Survey of Colleges.

- Flagship public universities in five states had lower tuition and fees (after adjusting for inflation) in 2016-17 than in 2011-12. The steepest price decline was 7% at the University of Washington. The largest five-year increases were 60% at Louisiana State University and 42% at the University of Tennessee, Knoxville.
- In 2016-17, published tuition and fees for out-of-state students at flagship public universities range from \$11,690 at the University of South Dakota and \$16,220 at the University of Wyoming to \$45,050 at the University of Virginia and \$45,410 at the University of Michigan.

- In Florida, Montana, North Carolina, and Texas, the out-of-state price is more than three and a half times as high as the in-state price. In Minnesota, New Hampshire, Pennsylvania, and South Dakota, the published 2016-17 out-of-state tuition and fee price is less than twice the in-state price.

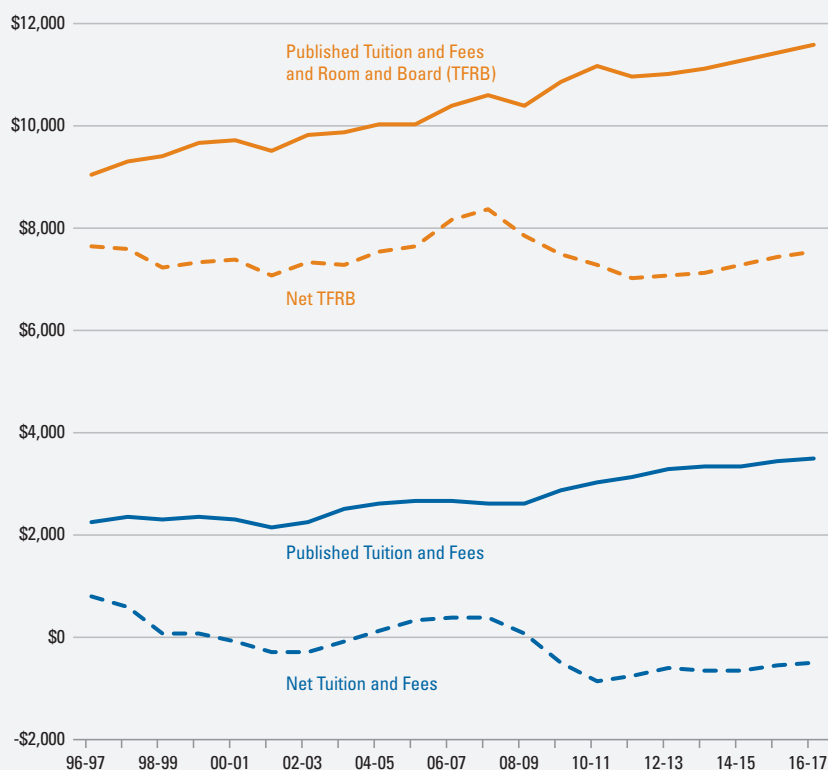
ALSO IMPORTANT:

- At six state flagship universities, 2016-17 in-state tuition was the same as or lower than the 2015-16 price, even before adjusting for inflation. The largest one-year increase was 10% in Louisiana.

Average Net Price: Public Two-Year

In 2016-17, the average net tuition and fee price paid by full-time public two-year college students is \$920 (in 2016 dollars) less than in 2006-07 — but \$270 more than in 2011-12.

FIGURE 9 Average Published and Net Prices in 2016 Dollars, Full-Time In-District Undergraduate Students at Public Two-Year Institutions, 1996-97 to 2016-17



NOTES: Estimates of net price exclude military/veterans aid, which awards relatively large amounts to a small number of students. Because information on grant aid and education tax benefits for 2016-17 is not yet available, the net price for 2016-17 is estimated based on 2015-16 financial aid data. Room and board in this sector refers to housing and food costs for commuter students since few community colleges provide on-campus housing.

SOURCES: College Board, Annual Survey of Colleges; *Trends in Student Aid 2016*.

- In 2016-17, full-time students at public two-year colleges receive an average of about \$4,020 in grant aid and federal education tax credits and deductions — \$500 more than required to cover tuition and fees. They can use these funds for books and supplies or living expenses.
- Between 2006-07 and 2016-17, the average published tuition and fees at public two-year colleges increased by \$840 (31%) after adjusting for inflation. Average combined grant aid and tax benefits increased by \$1,760 over the decade.
- In 2016-17, on average after grant aid, full-time students at public two-year colleges must cover about \$7,560 in books and supplies and living expenses.

ALSO IMPORTANT:

- The national average published tuition and fee price of \$3,520 for full-time students at public two-year colleges in 2016-17 rises to \$3,910 if California is excluded. The average net price is also higher if California, with the lowest tuition and fees and about one-sixth of the nation’s public two-year full-time college students, is not included in the estimate.

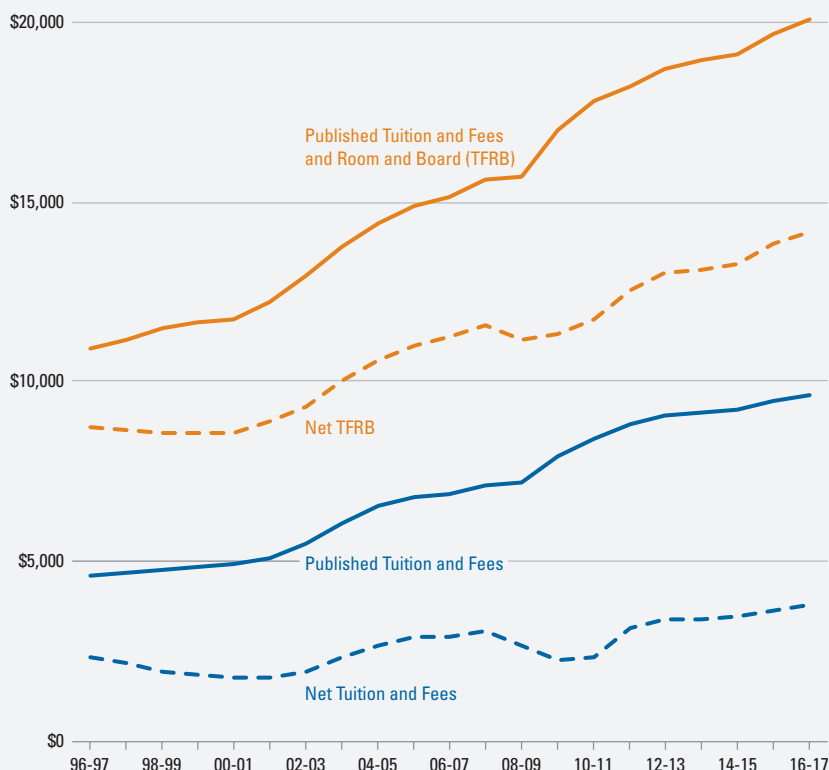
Average Published and Net Prices and Average Grant Aid in 2016 Dollars, Full-Time In-District Undergraduate Students at Public Two-Year Institutions, 1996-97 to 2016-17, Selected Years

	96-97	01-02	06-07	08-09	10-11	12-13	14-15	16-17
Published Tuition and Fees	\$2,250	\$2,180	\$2,680	\$2,610	\$3,030	\$3,310	\$3,370	\$3,520
Published Tuition and Fees and Room and Board (TFRB)	\$9,070	\$9,540	\$10,420	\$10,390	\$11,180	\$11,020	\$11,300	\$11,580
Net Tuition and Fees	\$830	-\$260	\$420	\$90	-\$860	-\$610	-\$620	-\$500
Net TFRB	\$7,650	\$7,100	\$8,160	\$7,870	\$7,290	\$7,100	\$7,310	\$7,560
Grant Aid and Tax Benefits per Student	\$1,420	\$2,440	\$2,260	\$2,520	\$3,890	\$3,920	\$3,990	\$4,020

Average Net Price: Public Four-Year

In 2016-17, the estimated average net tuition and fee price paid by full-time in-state students at public four-year institutions is \$3,770, \$860 (in 2016 dollars) higher than the net price a decade earlier and \$1,550 higher than the 2009-10 low of \$2,220.

FIGURE 10 Average Published and Net Prices in 2016 Dollars, Full-Time In-State Undergraduate Students at Public Four-Year Institutions, 1996-97 to 2016-17



NOTES: Estimates of net price exclude military/veterans aid, which awards relatively large amounts to a small number of students. Because information on grant aid and education tax benefits for 2016-17 is not yet available, the net price for 2016-17 is estimated based on 2015-16 financial aid data.

SOURCES: College Board, Annual Survey of Colleges; *Trends in Student Aid 2016*.

- In 2016-17, the average full-time in-state public four-year college student receives an estimated \$5,880 in grant aid and federal tax benefits, covering 61% of the \$9,650 published tuition and fee price.
- Average published tuition and fees for in-state students at public four-year colleges and universities increased by \$2,790 (in 2016 dollars) between 2006-07 and 2016-17. The \$1,930 increase in average grant aid from all sources and federal education tax credits and deductions covered 69% of this price increase.
- Average published tuition and fees grew by only 9% in inflation-adjusted dollars between 2011-12 and 2016-17, after rising by 29% over the preceding five years. However, because of the dramatic increase in federal student aid between 2007-08 and 2010-11 and the subsequent leveling off, average net tuition and fees increased by about 22% from 2011-12 to 2016-17, compared with 7% over the preceding five years.
- In 2016-17, the average full-time in-state student at a public four-year institution faces an average of \$14,210 in charges for tuition and fees and room and board combined, net of grant aid and tax benefits.

ALSO IMPORTANT:

- Average net prices conceal considerable differences among students both within institutions and across institutions within the sector.

Average Published and Net Prices and Total Grant Aid per Student in 2016 Dollars, Full-Time In-State Undergraduate Students at Public Four-Year Institutions, 1996-97 to 2016-17, Selected Years

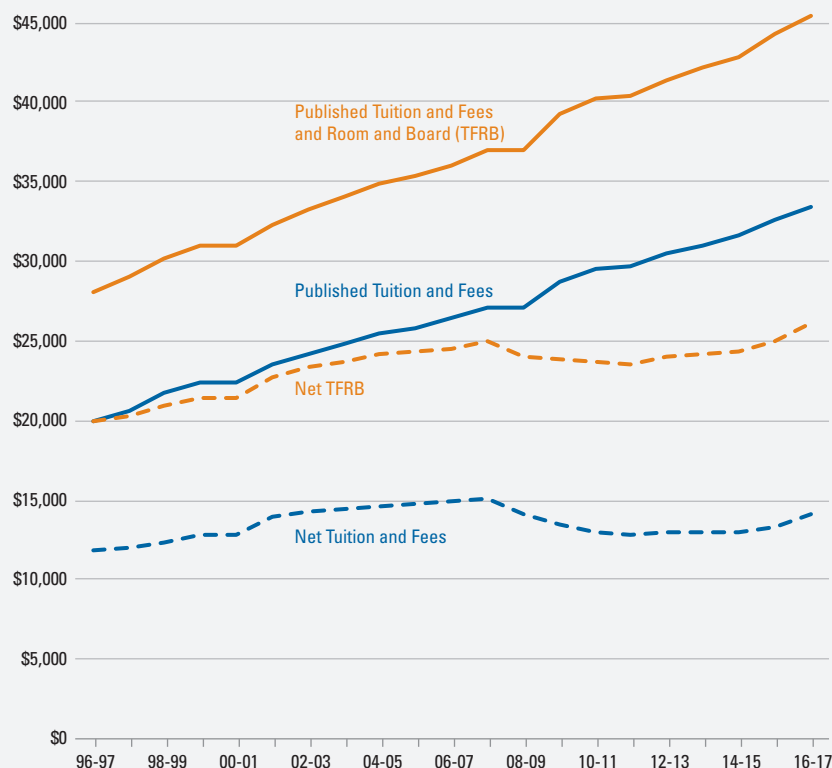
	96-97	01-02	06-07	08-09	10-11	12-13	14-15	16-17
Published Tuition and Fees	\$4,560	\$5,110	\$6,860	\$7,220	\$8,420	\$9,080	\$9,240	\$9,650
Published Tuition and Fees and Room and Board (TFRB)	\$10,950	\$12,250	\$15,180	\$15,720	\$17,860	\$18,710	\$19,120	\$20,090
Net Tuition and Fees	\$2,340	\$1,740	\$2,910	\$2,650	\$2,290	\$3,410	\$3,430	\$3,770
Net TFRB	\$8,730	\$8,880	\$11,230	\$11,150	\$11,730	\$13,040	\$13,310	\$14,210
Grant Aid and Tax Benefits per Student	\$2,220	\$3,370	\$3,950	\$4,570	\$6,130	\$5,670	\$5,810	\$5,880



Average Net Price: Private Nonprofit Four-Year

After declining from \$14,900 (in 2016 dollars) in 2006-07 to \$12,770 in 2011-12, the average net tuition and fee price paid by full-time students at private nonprofit four-year institutions rose to an estimated \$14,190 in 2016-17.

FIGURE 11 Average Published and Net Prices in 2016 Dollars, Full-Time Undergraduate Students at Private Nonprofit Four-Year Institutions, 1996-97 to 2016-17



NOTES: Estimates of net price exclude military/veterans aid, which awards relatively large amounts to a small number of students. Because information on grant aid and education tax benefits for 2016-17 is not yet available, the net price for 2016-17 is estimated based on 2015-16 financial aid data.

SOURCES: College Board, Annual Survey of Colleges; *Trends in Student Aid 2016*.

- The average net tuition and fee price at private nonprofit four-year institutions is lower in 2016-17 than it was in 2006-07 because the increase in average grant aid and tax benefits was larger than the increase in published prices.
- Between 2011-12 and 2016-17, average published tuition and fees at private nonprofit institutions rose by \$3,780. The \$2,360 increase in grant and tax benefits per student covered 62% of that increase.
- Financial aid explains the gap between published and net tuition and fees. Average grant aid from all sources and federal education tax benefits covered 41% to 44% of published tuition and fees at private four-year institutions from 1996-97 through 2006-07. That percentage was between 57% and 59% from 2011-12 to 2016-17.
- The average net tuition and fees and room and board price is \$26,080 in 2016-17, an increase of 6% (\$1,500 in 2016 dollars) over the last decade.

ALSO IMPORTANT:

- Over 70% of the \$19,290 in aid per student that lowers net prices for full-time students in the private nonprofit sector comes from colleges and universities in the form of discounts from their published prices.
- In 2011-12, 67% of full-time students at private nonprofit four-year institutions received grant aid from their institutions. Thirty-six percent received federal grant aid and 24% received state grant aid. (NPSAS 2012)

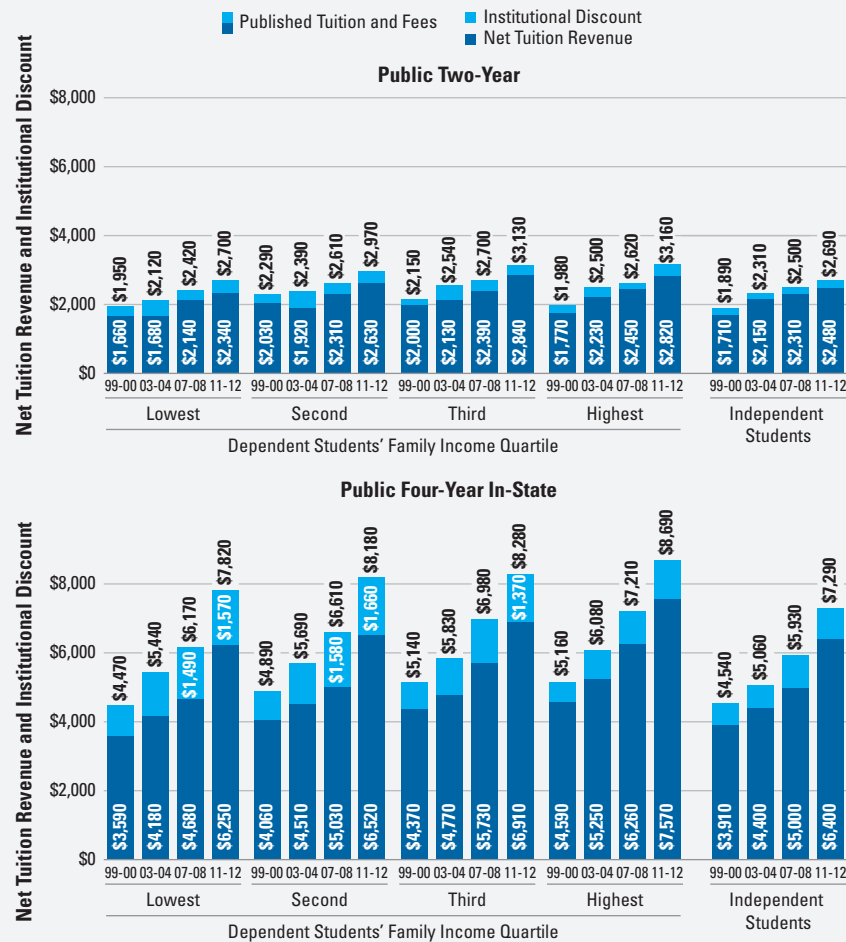
Average Published and Net Prices and Total Grant Aid per Student in 2016 Dollars, Full-Time Undergraduate Students at Private Nonprofit Four-Year Institutions, 1996-97 to 2016-17, Selected Years

	96-97	01-02	06-07	08-09	10-11	12-13	14-15	16-17
Published Tuition and Fees	\$19,920	\$23,560	\$26,380	\$27,150	\$29,550	\$30,450	\$31,600	\$33,480
Published Tuition and Fees and Room and Board (TFRB)	\$28,140	\$32,340	\$36,060	\$36,980	\$40,250	\$41,430	\$42,870	\$45,370
Net Tuition and Fees	\$11,800	\$13,910	\$14,900	\$14,210	\$12,920	\$13,000	\$13,050	\$14,190
Net TFRB	\$20,020	\$22,690	\$24,580	\$24,040	\$23,620	\$23,980	\$24,320	\$26,080
Grant Aid and Tax Benefits per Student	\$8,120	\$9,650	\$11,480	\$12,940	\$16,630	\$17,450	\$18,550	\$19,290

Institutional Tuition Discount by Family Income: Public Institutions

In 2011-12, on average, institutional grant aid covered 20% (about \$1,600) of the published tuition and fees for full-time in-state dependent students from the lower half of the income distribution enrolled in public four-year institutions.

FIGURE 12 Published Tuition and Fees, Institutional Discount, and Net Tuition Revenue at Public Institutions in 2011 Dollars, by Dependency Status and Family Income, 1999-00, 2003-04, 2007-08, and 2011-12



NOTES: Family income quartiles are based on all dependent undergraduate students across all sectors in 2011-12. In 2011 dollars, income categories are: lowest: less than \$30,000; second: \$30,000 to \$64,999; third: \$65,000 to \$105,999; highest: \$106,000 or higher. Institutional discount includes institutional grant aid and tuition and fee waivers. Includes full-time undergraduate students who were U.S. citizens or permanent residents.

SOURCE: NCES, National Postsecondary Student Aid Study, 2000, 2004, 2008, and 2012.

- In 2011-12, on average, institutional grant aid covered 16% (\$1,310) of the published tuition and fees for all full-time in-state students at public four-year institutions.
- Between 1999-00 and 2011-12, the average published tuition and fee prices at the public four-year colleges attended by the lowest-income dependent students increased by \$3,350, from \$4,470 (in 2011 dollars) to \$7,820. The average net tuition these students paid — with a combination of their own resources and federal and state grant aid — increased by \$2,660, from \$3,590 to \$6,250.
- In 2011-12, the average institutional discount rate for full-time students at public two-year institutions was 10% (\$280) of the published tuition and fees. Institutional discount rates at public two-year institutions were 8% (\$210) for independent students, 13% (\$360) for the lowest-income dependent students, and 9% (\$290) to 11% (\$340) for all other groups of dependent students.

ALSO IMPORTANT:

- The net tuition revenues — the net tuition paid to institutions — are higher than the total net prices students and families actually pay. Federal and state grant aid and tax benefits, as well as aid from employers and other private sources, help students pay the net institutional prices.
- In 2011-12, less than 10% of independent and of lowest-income dependent students at public four-year institutions were enrolled outside their state of residence, but 19% of those from the highest income quartile were enrolled out-of-state.
- Out-of-state students at public four-year institutions face higher tuition charges than state residents. They also receive larger discounts. In 2011-12, out-of-state dependent students from the highest family income quartile faced average published tuition and fees of \$21,200, compared with \$8,700 for in-state students. They received average institutional discounts of \$3,200 (15%), compared with \$1,100 (13%) for similar in-state students.

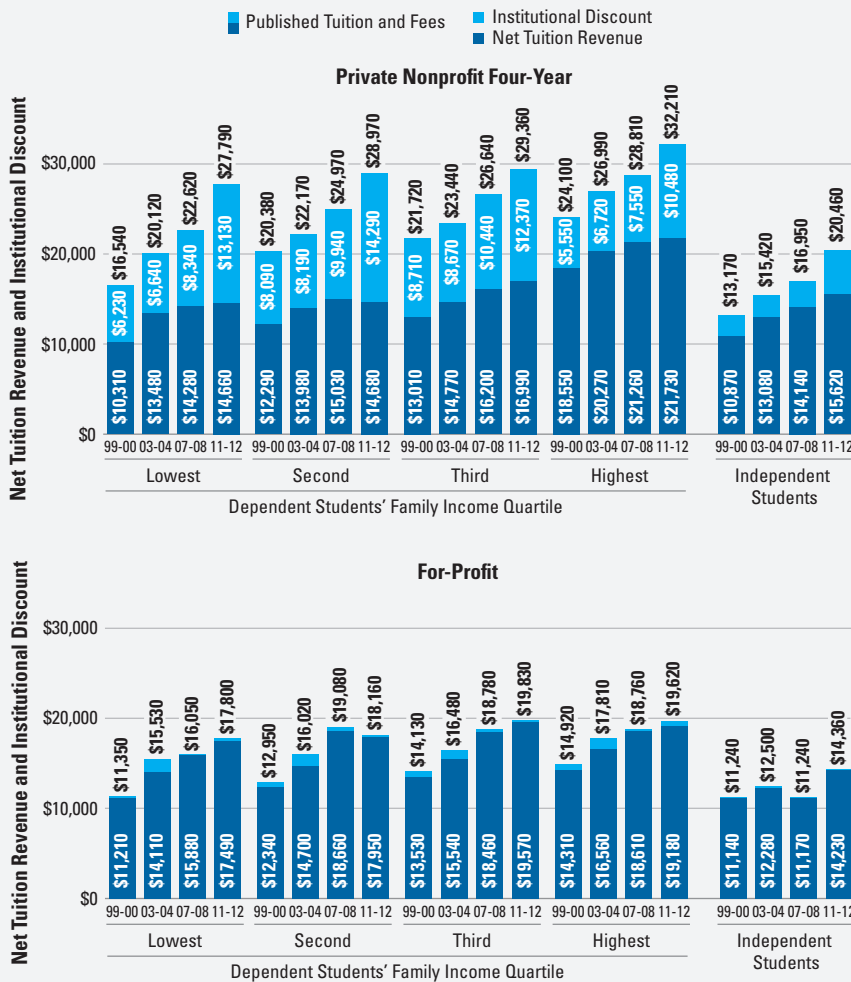
Institutional Discount Rate at Public Institutions by Dependency Status and Family Income

	Public Four-Year						Public Two-Year					
	Dependent Students' Family Income Quartile						Dependent Students' Family Income Quartile					
	Lowest	Second	Third	Highest	Independent	All	Lowest	Second	Third	Highest	Independent	All
1999-00	20%	17%	15%	11%	14%	15%	15%	11%	7%	11%	10%	10%
2003-04	23%	21%	18%	14%	13%	17%	21%	20%	16%	11%	7%	13%
2007-08	24%	24%	18%	13%	16%	18%	12%	11%	11%	6%	8%	10%
2011-12	20%	20%	17%	13%	12%	16%	13%	11%	9%	11%	8%	10%

Institutional Tuition Discount by Family Income: Private Institutions

In 2011-12, on average, institutional grant aid covered almost half of the published tuition and fees for full-time dependent students from the lower half of the income distribution enrolled in private nonprofit four-year colleges and universities.

FIGURE 13 Published Tuition and Fees, Institutional Discount, and Net Tuition Revenue at Private Institutions in 2011 Dollars, by Dependency Status and Family Income, 1999-00, 2003-04, 2007-08, and 2011-12



- In 2011-12, on average, institutional grant aid covered 39% (\$11,160) of the published tuition and fees for all full-time students at private nonprofit four-year institutions.
- Between 1999-00 and 2011-12, published tuition and fees, institutional discounts, and net tuition paid to institutions all rose most rapidly for low-income dependent students. The rise in published prices may be explained either by relatively large tuition increases at the institutions enrolling lower-income students and/or by more lower-income students enrolling at higher-price private colleges.
- For-profit institutions give very small discounts to students, so the net tuition revenue they collect is only slightly lower than the published price.
- In 2011-12, the average published tuition and fee price facing students in the second income quartile enrolled in private nonprofit four-year colleges and universities was 60% higher than the average price facing similar students in the for-profit sector. However, the net tuition they paid to institutions was 18% lower than the price paid by similar students in the for-profit sector.

ALSO IMPORTANT:

- The net tuition revenues — the net tuition paid to institutions — are higher than the total net prices students and families actually pay. Federal and state grant aid and tax benefits, as well as aid from employers and other private sources, help students pay the net institutional prices.
- Between 1999-00 and 2011-12, federal grant aid per full-time equivalent undergraduate student more than doubled. Federal education tax credits also increased significantly over these years. These federal subsidies covered part of the increases in institutional net tuition prices facing students in all postsecondary sectors. (*Trends in Student Aid 2016*)

NOTES: Family income quartiles are based on all dependent undergraduate students across all sectors. In 2011 dollars, income categories are: lowest: less than \$30,000; second: \$30,000 to \$64,999; third: \$65,000 to \$105,999; highest: \$106,000 or higher. Institutional discount includes institutional grant aid and tuition and fee waivers. Includes full-time undergraduate students who were U.S. citizens or permanent residents. Data for the for-profit sector have high standard errors and should be interpreted with caution.

SOURCE: NCES, National Postsecondary Student Aid Study, 2000, 2004, 2008, and 2012.

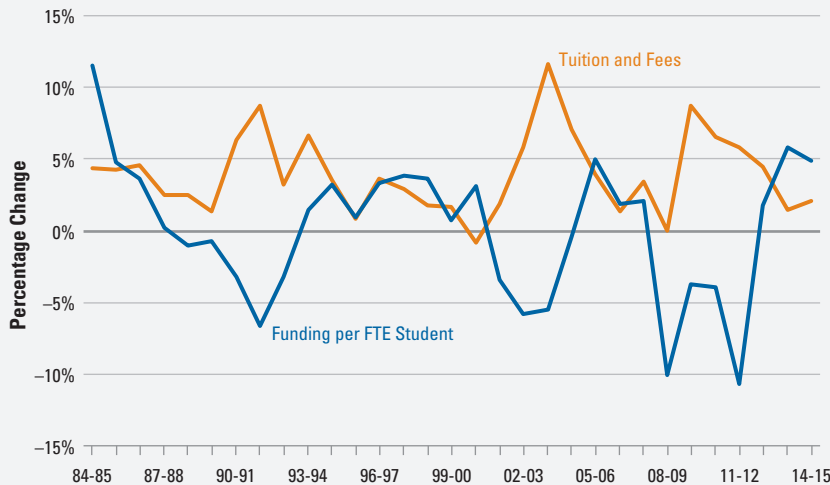
Institutional Discount Rate at Private Institutions by Dependency Status and Family Income

	Private Nonprofit Four-Year						For-Profit					
	Dependent Students' Family Income Quartile					All	Dependent Students' Family Income Quartile					All
	Lowest	Second	Third	Highest	Independent		Lowest	Second	Third	Highest	Independent	
1999-00	38%	40%	40%	23%	17%	31%	1%	5%	4%	4%	1%	2%
2003-04	33%	37%	37%	25%	15%	30%	9%	8%	6%	7%	2%	4%
2007-08	37%	40%	39%	26%	17%	32%	1%	2%	2%	1%	1%	1%
2011-12	47%	49%	42%	33%	24%	39%	2%	1%	1%	2%	1%	1%

Institutional Revenues: State and Local Funding

State and local funding for higher education and tuition increases at public colleges and universities are cyclical. Declines in per-student funding are typically followed by large price increases.

FIGURE 14A Annual Percentage Change in Inflation-Adjusted Per-Student State and Local Funding for Higher Education and in Tuition and Fees at Public Institutions, 1984-85 to 2014-15

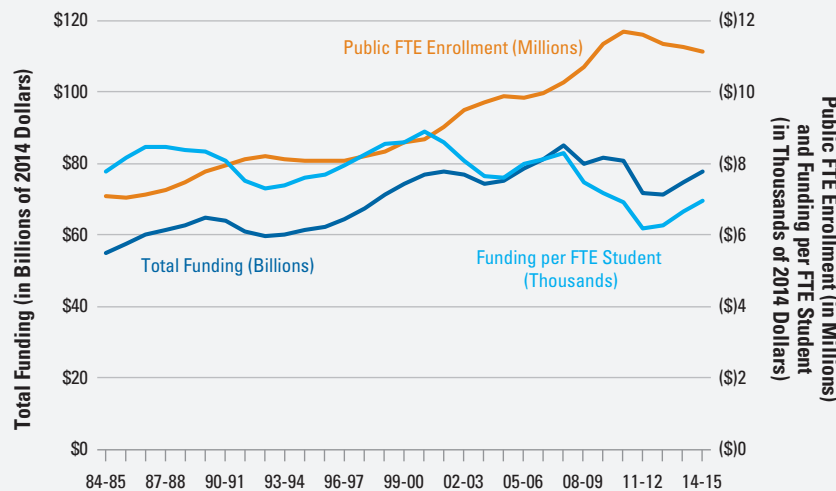


- State and local appropriations per full-time equivalent (FTE) student fell by 26% in inflation-adjusted dollars between 2007-08 and 2011-12. Average tuition and fees at public institutions rose by 28% between 2008-09 and 2012-13. As the economy has recovered, state and local per-student appropriations have risen and tuition increases have slowed considerably.

- Changes in per-student appropriations are the result of the interaction of changes in total funding levels and enrollment patterns. A 16% (inflation-adjusted) decline in total state and local funding and a 13% increase in enrollment contributed to the sharp per-student funding decline between 2007-08 and 2011-12. Between 2011-12 and 2014-15, an 8% increase in appropriations combined with a 4% decline in enrollment generated a 13% increase in per-student funding.

- Despite this partial recovery, in 2014-15, appropriations per FTE student were 8% lower in inflation-adjusted dollars than they were a decade earlier, and 11% lower than they were 30 years earlier.

FIGURE 14B Total and Per-Student State and Local Funding for Higher Education in 2014 Dollars and Public FTE Enrollment, 1984-85 to 2014-15



ALSO IMPORTANT:

- Local funding, which is directed toward community colleges, rose from 8% of total state and local appropriations in 1984-85 to 10% in 1994-95, to 11% in 2004-05, and to 12% in 2014-15.

- In 2014-15, local funding represented less than 1% of the total educational appropriations in 23 states, but more than half of the total in Arizona and more than a quarter of the total in Kansas and Oregon.

- Between 2004-05 and 2014-15, total inflation-adjusted per-student state and local funding for higher education declined by 39% in Pennsylvania and by 30% or more in another five states, but increased by 52% in North Dakota and by smaller amounts in 11 other states.

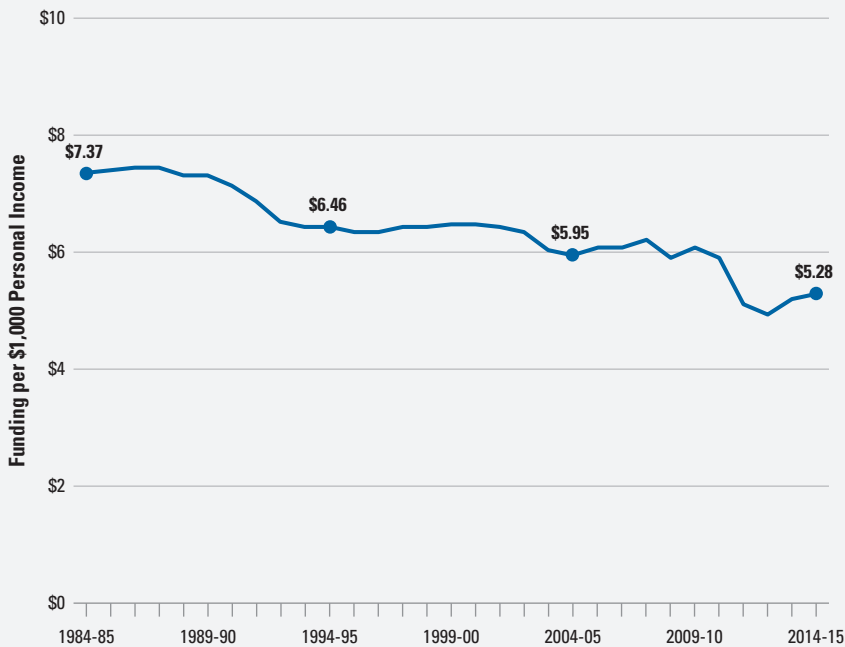
NOTES: Enrollment figures are fall FTE enrollments for public two-year and four-year institutions excluding medical students. Tuition and fees reflect an FTE enrollment-weighted average of two-year and four-year prices. Funding is for both two-year and four-year institutions and includes tax revenues and other state and local funds for higher education, but excludes funding for capital expenditures. Funding data are from the State Higher Education Executive Officers Association (SHEEO). Data on state appropriations in previous years' *Trends in College Pricing* were based on the Grapevine data from Illinois State University. For differences between data from these two sources, please see Notes and Sources online.

SOURCES: College Board, Annual Survey of Colleges; NCES, *Digest of Education Statistics 2016*, Table 307.10; SHEEO, State Higher Education Finance (SHEF) reports; calculations by the authors.

Institutional Revenues: State and Local Funding

The portion of state and local resources going to support higher education, measured by funding per \$1,000 in personal income, declined from \$7.37 in 1984-85 to \$6.46 in 1994-95, to \$5.95 in 2004-05, and to \$5.28 in 2014-15.

FIGURE 15A Average State and Local Funding for Higher Education per \$1,000 in Personal Income, 1984-85 to 2014-15

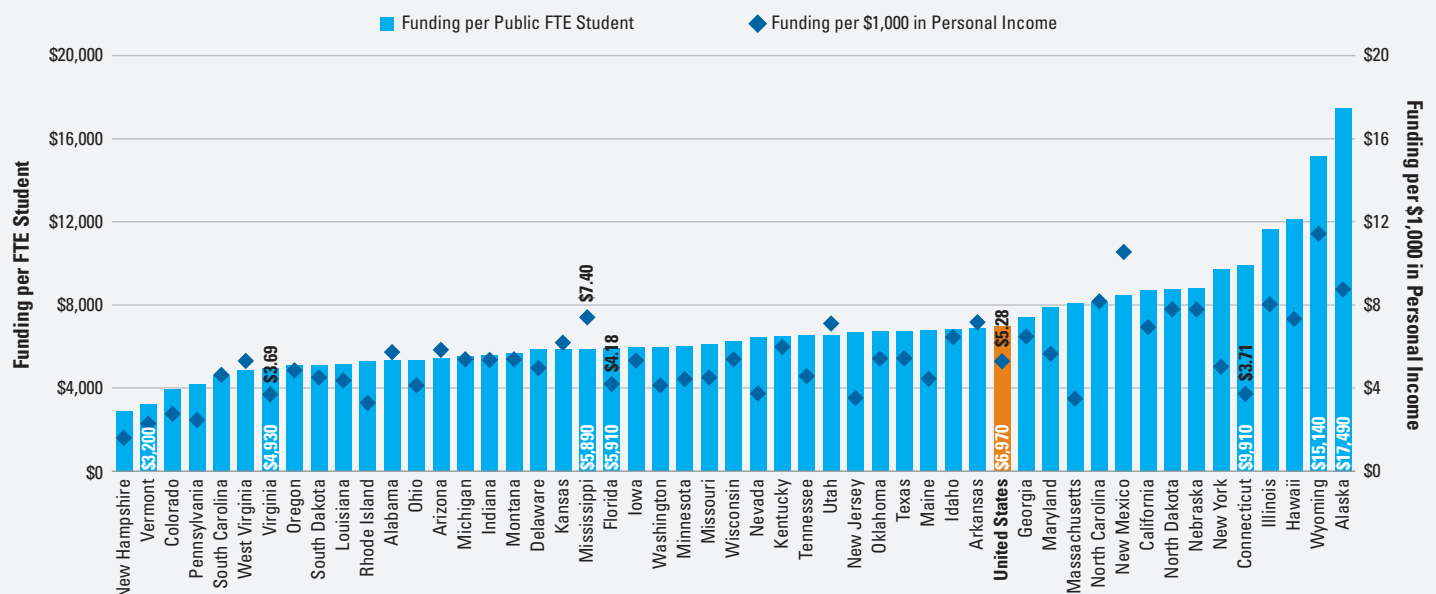


- In 2014-15, state and local funding per full-time equivalent (FTE) student at public colleges and universities ranged from \$2,900 in New Hampshire and \$3,200 in Vermont to \$15,140 in Wyoming and \$17,490 in Alaska.
- A given level of funding per \$1,000 in personal income yields higher per-student support in states with higher levels of personal income (and also in states with lower enrollment rates). For example:
 - Both Virginia and Connecticut provided about \$3.70 per \$1,000 in personal income, but Virginia's \$4,930 in fiscal support per FTE student was considerably smaller than Connecticut's \$9,910.
 - Florida and Mississippi each provided about \$5,900 in funding per student, but Florida contributed \$4.18 per \$1,000 in personal income, compared to \$7.40 for Mississippi.

ALSO IMPORTANT:

- In 2012, 10% of state and local spending was devoted to higher education and 22% was devoted to elementary and secondary education. (The Urban Institute State and Local Finance Initiative)

FIGURE 15B State and Local Funding for Higher Education per Student and per \$1,000 in Personal Income by State, 2014-15



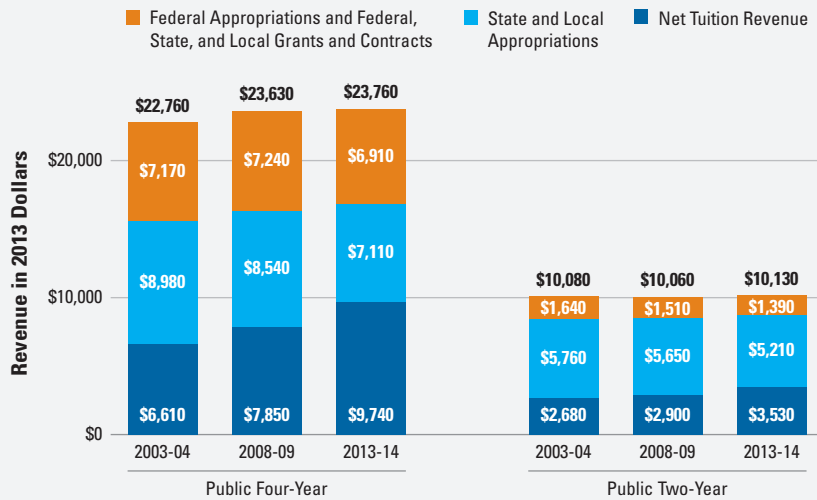
NOTES: Funding data are from SHEEO. Data on state appropriations in previous years' *Trends in College Pricing* were based on the Grapevine data from Illinois State University. For differences between data from these two sources, please see Notes and Sources online.

SOURCES: SHEEO, SHEF reports; Bureau of Economic Analysis, Annual State Personal Income 2014; calculations by the authors.

Institutional Revenues: Public Institutions

Net tuition revenues per full-time equivalent (FTE) student at public four-year colleges and universities grew from \$6,610 (in 2013 dollars) in 2003-04 to \$9,740 in 2013-14, increasing from 29% to 41% of total revenues from tuition and federal, state, and local sources.

FIGURE 16 Institutional Revenues per Full-Time Equivalent (FTE) Student in 2013 Dollars at Public Institutions, 2003-04, 2008-09, and 2013-14



- Over the decade, revenue per FTE student from state and local appropriations at public four-year institutions declined by 21%, from \$8,980 (in 2013 dollars) to \$7,110. Revenues from tuition increased by 47% from \$6,610 per FTE student to \$9,740.
- Net tuition revenues per FTE student at public two-year colleges grew from \$2,680 (in 2013 dollars) in 2003-04 to \$3,530 in 2013-14, increasing from 27% to 35% of total revenues from tuition and federal, state, and local sources. Revenues from state and local appropriations declined from 57% to 51% of the total.
- In 2013-14, average total per-student revenues at public two-year colleges from the combination of tuition and federal, state, and local governments was 43% of the revenue from these sources at public four-year colleges and universities.

Percentage of Institutional Revenues from Various Sources

	Public Four-Year			Public Two-Year		
	Net Tuition Revenue	State and Local Appropriations	Federal Appropriations and Federal, State, and Local Grants and Contracts	Net Tuition Revenue	State and Local Appropriations	Federal Appropriations and Federal, State, and Local Grants and Contracts
2003-04	29%	39%	32%	27%	57%	16%
2008-09	33%	36%	31%	29%	56%	15%
2013-14	41%	30%	29%	35%	51%	14%

NOTES: Net tuition revenue is the amount of revenue an institution takes in from tuition and fees, net of all institutional grant aid provided to students. Some of this revenue comes in the form of financial aid from federal and state governments and other sources. Institutional averages are weighted by 12-month FTE enrollments.

SOURCES: NCES, IPEDS finance data, 2004, 2009, and 2014; calculations by the authors.

ALSO IMPORTANT:

- Revenues from auxiliary enterprises such as residence and dining facilities, hospitals, and independent operations, not included in Figure 16, are usually dedicated to running those operations.
- Private nonprofit institutions do not rely on state and local appropriations, but many of them rely on a combination of private giving and investment income to supplement tuition revenues.
- Revenues from private gifts, investment returns, and endowment income fluctuate markedly from year to year. These sources amounted to more than the income from other sources combined at private doctoral universities in 2006-07, but generated losses slightly greater than the total revenues from other sources in 2008-09.

Institutional Revenues and Expenditures

The portion of per-student educational expenditures at public four-year colleges and universities that is a subsidy to students, rather than being covered by tuition revenues, declined by \$710 (in 2013 dollars) between 2003-04 and 2013-14, falling from 56% of the total to 44%.

FIGURE 17A Net Tuition Revenues, Subsidies, and Education and Related Expenditures per Full-Time Equivalent (FTE) Student in 2013 Dollars at Public Institutions, 2003-04, 2008-09, and 2013-14

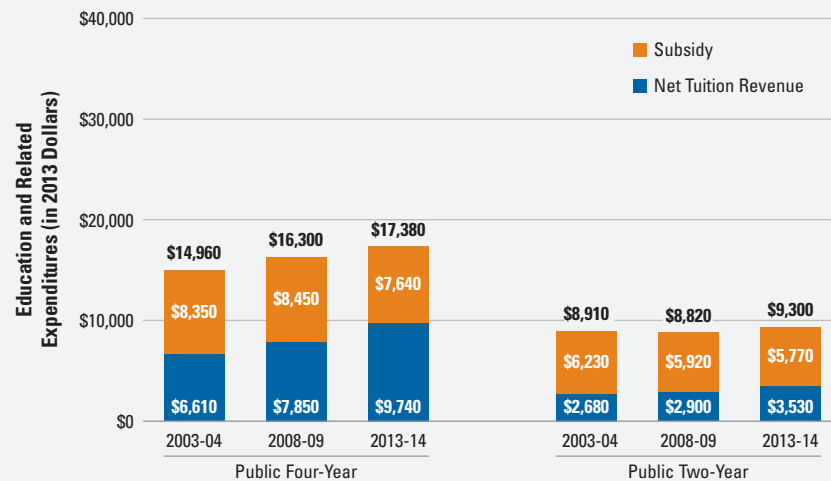
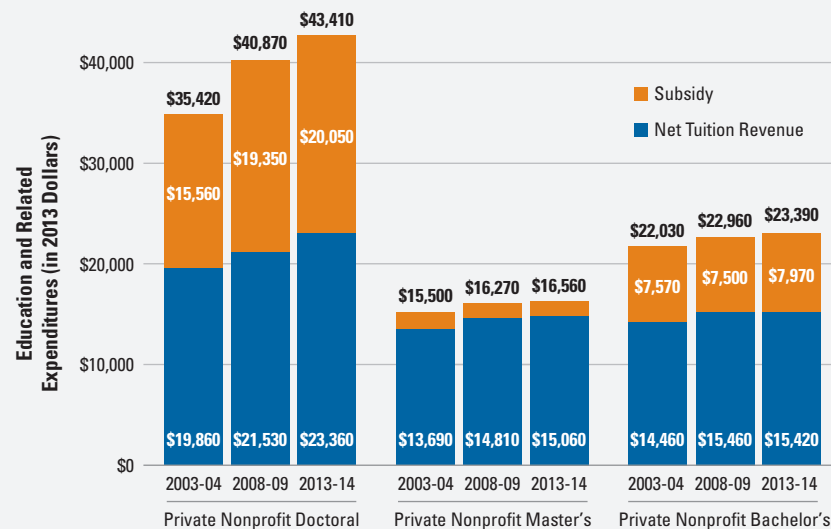


FIGURE 17B Net Tuition Revenues, Subsidies, and Education and Related Expenditures per Full-Time Equivalent (FTE) Student in 2013 Dollars at Private Nonprofit Institutions, 2003-04, 2008-09, and 2013-14



NOTES: Net tuition revenue is the amount of revenue an institution takes in from tuition and fees, net of all institutional grant aid provided to students. Some of this revenue comes in the form of financial aid from federal and state governments and other sources. Education and related expenditures include spending on instruction, student services, and the education share of spending on central academic and administrative support, as well as operations and maintenance. Expenditures for both undergraduate and graduate students are included in these estimates. Institutional averages are weighted by 12-month FTE enrollments.

SOURCES: NCES, IPEDS 2014 finance data; calculations by the authors.

- The average subsidy per full-time equivalent (FTE) student at public two-year colleges declined by \$460 (in 2013 dollars) between 2003-04 and 2013-14, falling from 70% to 62% of total educational expenditures. In 2013-14, the per-student subsidy in this sector was 76% of the average subsidy in the public four-year sector.
- Between 2003-04 and 2013-14, educational expenditures per FTE student at public four-year institutions — which include doctoral, master’s, and bachelor’s institutions — increased by 16% in inflation-adjusted dollars. The increase over the decade in the public two-year sector was 4%.
- The average portion of per-student educational expenditures at private nonprofit master’s universities that was a subsidy to students, rather than being covered by tuition revenues, was 9% in 2013-14, compared with 46% at private nonprofit doctoral universities and 34% at private nonprofit bachelor’s colleges. Master’s universities are the only type of private nonprofit four-year institution in which the subsidy share is declining.
- Between 2003-04 and 2013-14, average educational expenditures per FTE student at private nonprofit doctoral universities increased by 23% in inflation-adjusted dollars. The increases over the decade in private nonprofit master’s and bachelor’s institutions were 7% and 6%, respectively.

ALSO IMPORTANT:

- Doctoral and master’s universities enroll both undergraduate and graduate students while bachelor’s institutions enroll almost exclusively undergraduate students. Because average expenditures for graduate students are generally higher than average expenditures for undergraduate students, per-student revenues and expenditures at different types of institutions are not strictly comparable.
- In addition to the amounts included in “education and related expenditures,” institutional budgets include expenditures for other purposes such as research, public service, and auxiliary enterprises.

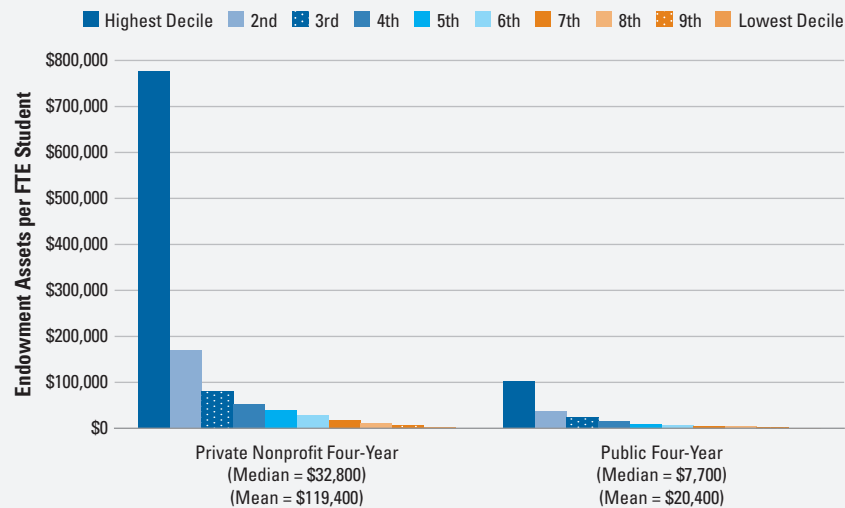
Education and Related Expenditures Not Covered by Net Tuition Revenues

	Public		Private Nonprofit		
	Four-Year	Two-Year	Doctoral	Master's	Bachelor's
2003-04	56%	70%	44%	12%	34%
2008-09	52%	67%	47%	9%	33%
2013-14	44%	62%	46%	9%	34%

Endowments

In 2013-14, the 10% of students enrolled in the 55 private nonprofit institutions with the highest endowments per student benefited from endowments averaging \$776,000 per full-time equivalent (FTE) student, but only 16 of these institutions had endowments this high.

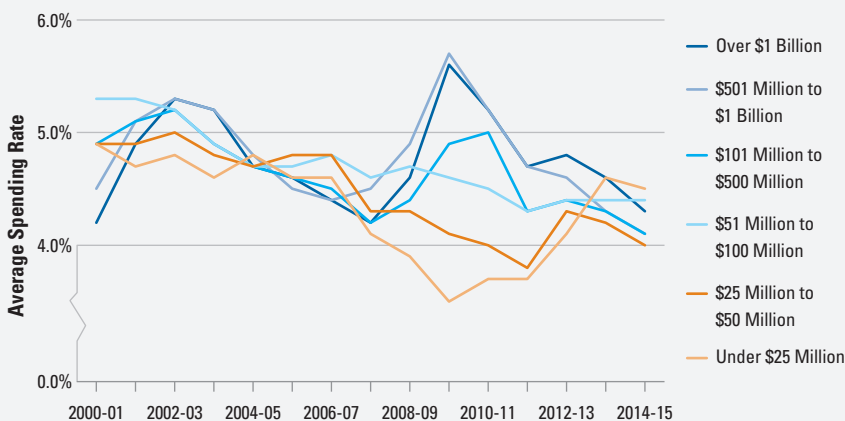
FIGURE 18A Endowment Assets per Full-Time Equivalent (FTE) Student at Four-Year Colleges and Universities, 2013-14



NOTES: The value of endowment assets is as of the end of FY14 and is based on data for 516 public and 1,034 private nonprofit four-year institutions. The average endowment per student for each decile is calculated by ordering the institutions in the sector by assets per student and dividing the students in the sector into deciles. Total assets in institutions enrolling 10% of students in the sector are divided by the number of students in those institutions.

SOURCES: NCES, IPEDS 2014 finance data; calculations by the authors.

FIGURE 18B Average Reported Spending Rates for College and University Endowments by Endowment Size, 2000-01 to 2014-15



Endowment Size	2000-01	2002-03	2004-05	2006-07	2008-09	2010-11	2012-13	2014-15
Under \$25 Million	4.9%	4.8%	4.8%	4.6%	3.9%	3.7%	4.1%	4.5%
\$25 Million to \$50 Million	4.9%	5.0%	4.7%	4.8%	4.3%	4.0%	4.3%	4.0%
\$51 Million to \$100 Million	5.3%	5.2%	4.7%	4.8%	4.7%	4.5%	4.4%	4.4%
\$101 Million to \$500 Million	4.9%	5.2%	4.7%	4.5%	4.4%	5.0%	4.4%	4.1%
\$501 Million to \$1 Billion	4.5%	5.3%	4.8%	4.4%	4.9%	5.2%	4.6%	4.1%
Over \$1 Billion	4.2%	5.3%	4.7%	4.4%	4.6%	5.2%	4.8%	4.3%

- There is a wide range of institutional wealth even within the top decile of private colleges and universities. In 2013-14, average endowment per FTE student at the top four institutions was \$1.9 million, compared to \$588,000 for the other institutions in the top 10%. Assuming a 4% annual spending rate, this yields annual budget supplements of about \$76,000 and \$24,000 per FTE student, respectively.
- Average endowment per FTE student for the private nonprofit colleges and universities in which the second 10% of students are enrolled is \$169,000, yielding about \$6,800 in budget supplement per student per year.
- Average endowment per FTE student for the public four-year institutions enrolling the 10% of students in the highest endowment decile was \$102,000 in 2013-14, compared with \$37,000 for the second decile. These endowments yield about \$4,100 and \$1,500 in budget supplements per student per year, respectively.
- In 2009-10, institutions with endowments exceeding \$100 million increased their spending rates sharply, while those with small endowments lowered their spending rates.
- Since 2011-12, average spending rates have converged and are similar across institutions with different endowment levels.

ALSO IMPORTANT:

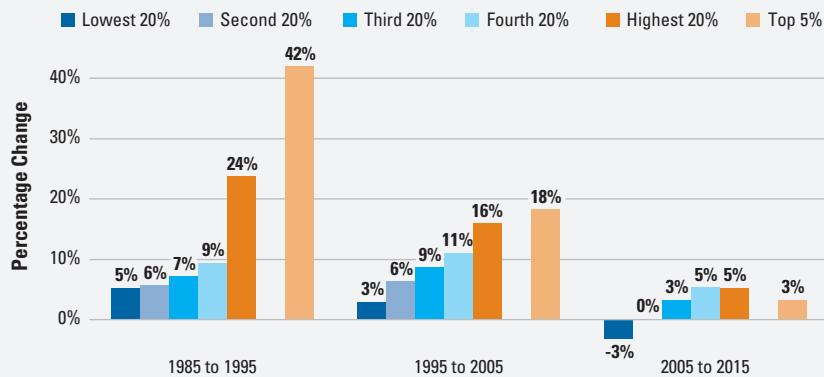
- In both the private nonprofit and the public sectors, the five colleges and universities with the largest endowments held about 25% of all of the endowment assets in the entire sector in 2013-14.
- By law, the principal of some endowment funds must be preserved in perpetuity; restricted endowment funds can only be used to support purposes specified by the donor. Institutions have more flexibility over the use of unrestricted endowment funds.

SOURCE: National Association of College and University Business Officers (NACUBO), 2016 NACUBO-Commonfund Study of Endowments.

Family Income

In 2015, average incomes for all groups except the 20% of families with the lowest incomes equaled or exceeded the incomes of their 2005 counterparts, after adjusting for inflation.

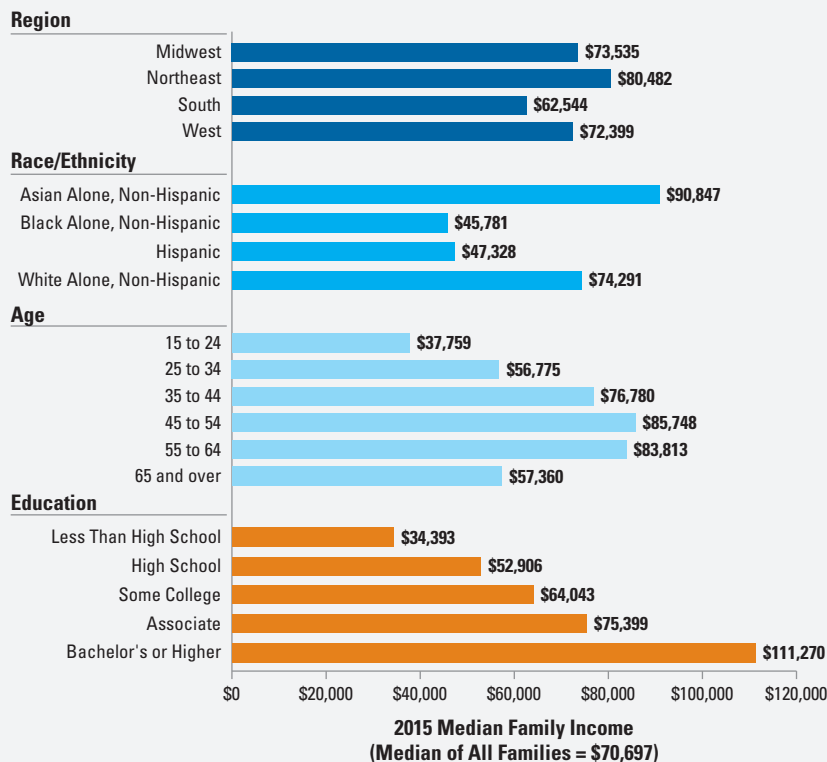
FIGURE 19A Percentage Change in Inflation-Adjusted Mean Family Income by Quintile, 1985 to 1995, 1995 to 2005, and 2005 to 2015



	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Top 5%
\$ Change 1985 to 2015	\$831	\$4,755	\$11,915	\$23,541	\$76,041	\$163,807
% Change 1985 to 2015	5%	13%	20%	28%	51%	73%
2015 Income Bracket	\$30,311 or less	\$30,312 to \$55,376	\$55,377 to \$86,310	\$86,311 to \$133,525	\$133,526 or higher	\$239,188 or higher
2015 Mean Income	\$17,367	\$42,700	\$70,500	\$107,517	\$225,279	\$386,829

- Inequality in family incomes increased in each of the three decades from 1985 to 2015. Average income for the middle 20% of families (\$58,585) increased from 3.5 times the average income for the lowest 20% (\$16,536) in 1985 to 4.1 times as high in 2015. Average income for the highest 20% of families (\$149,239) increased from 2.5 times the average income for the middle 20% in 1985 to 3.2 times as high in 2015.
- In 2015, median family income for families headed by individuals ages 45 to 54 – the age bracket of most parents of traditional age college students – was 21% higher than the overall median (\$85,748 compared with \$70,697).
- In 2015, median incomes for black and Hispanic families were 62% and 64%, respectively, of the median for white families.
- In 2015, the \$111,270 median family income for families headed by a four-year college graduate was more than twice the median for families headed by a high school graduate.

FIGURE 19B Median Family Income by Selected Characteristics, 2015



ALSO IMPORTANT:

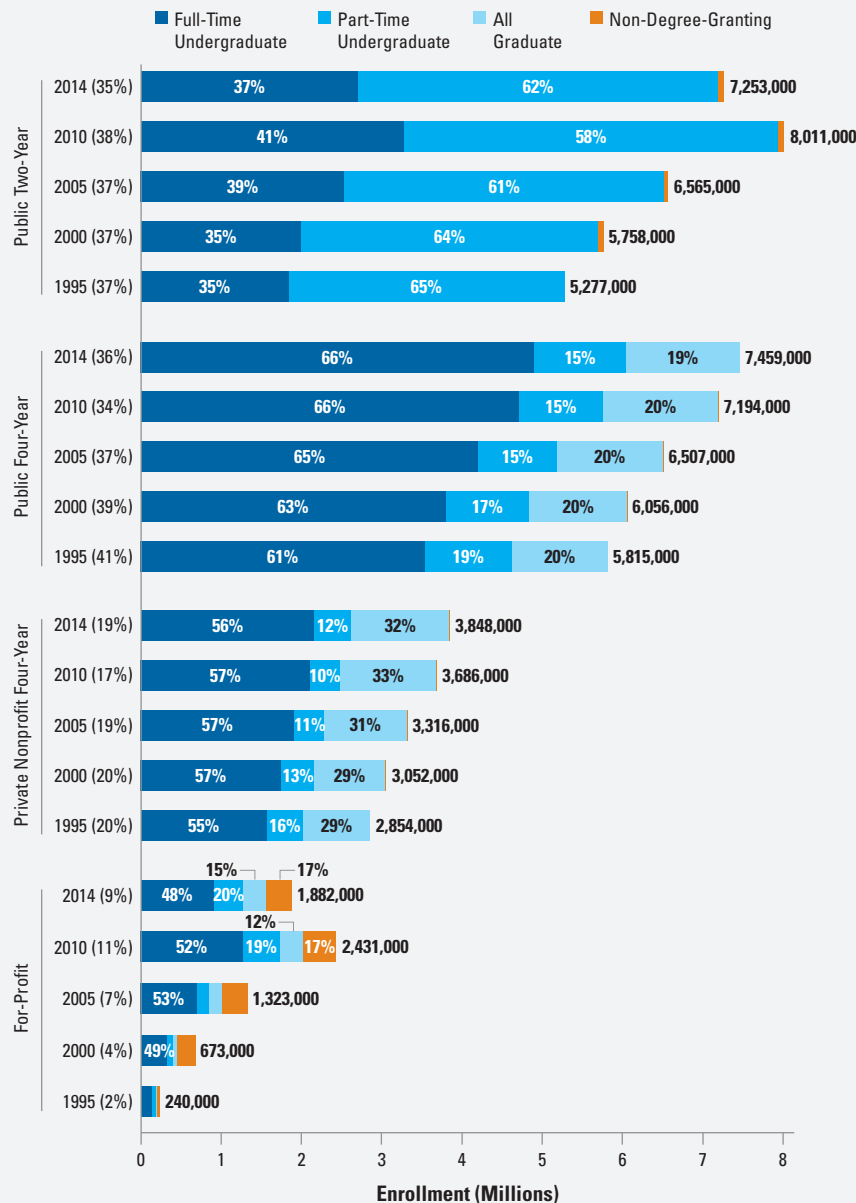
- The Census Bureau reported a sharp increase in income for the lowest 20% of families between 2014 and 2015, but the increase was not large enough to compensate for a 10% decline in average income for these families between 2005 and 2014. (U.S. Census Bureau, Table F-3)
- The share of all income going to the 20% of families with the lowest incomes has steadily declined, from 4.8% in 1985 to 4.4% in 1995, to 4.0% in 2005, and to 3.7% in 2015. The share of income going to the top 5% of families rose from 16.1% in 1985 to 20.0% in 1995 and to 21.1% in 2005, and was 20.9% in 2015. (U.S. Census Bureau, Table F-2)
- Average published tuition and fees for in-state students attending public four-year colleges rose by \$6,500 (in 2015 dollars) over this 30-year period – 55% of the increase in income (\$11,915) of the middle 20% of families and 9% of the increase in income (\$76,041) of the 20% of families in the highest income bracket. (*Trends in College Pricing 2016*, online Table 2; calculations by the authors)

SOURCES: U.S. Census Bureau, Current Population Survey, 2016 Annual Social and Economic Supplement, Table F-1, Table F-3, Table F-5, and FINC-01; calculations by the authors.

Enrollment Patterns over Time

Although total postsecondary enrollment was 4% lower in 2014 than in 2010, it was 15% higher than in 2005 and 44% higher than in 1995.

FIGURE 20 Postsecondary Fall Enrollment by Attendance Status and Level of Enrollment (with Percentage of All Students Enrolled in Each Sector), 1995 to 2014, Selected Years



NOTES: Percentages on the y-axis represent the enrollment in each sector as a percentage of total enrollment. Four-year institutions include only those where more than 50% of degrees/certificates awarded are bachelor's degrees or higher. Non-degree-granting institutions do not award associate, baccalaureate, or graduate degrees. Percentages may not sum to 100 because of rounding.

SOURCES: NCES, IPEDS enrollment data; calculations by the authors.

- The public two-year sector grew at a faster rate from 1995 to 2010 than the public and private nonprofit four-year sectors. However, the decline in enrollment between 2010 and 2014 led the share of all postsecondary students enrolled in public two-year colleges to fall from 38% to 35% and the share of undergraduates in this sector to fall from 44% to 42%.
- There were 1.3 million more full-time undergraduate students and 1.0 million more part-time undergraduate students in 2014 than in 2005.
- In 2014, the percentage of undergraduate students who were enrolled full time ranged from 38% in public two-year colleges to 71% in for-profit institutions, 81% in the public four-year sector, and 83% in the private nonprofit four-year sector.
- The percentage of postsecondary students who were graduate students was about 14% throughout the 1995 to 2014 period. In 2014, 15% of for-profit students, 19% of public four-year students, and 32% of private nonprofit four-year students were graduate students. Public two-year colleges enroll only undergraduates.

ALSO IMPORTANT:

- Figure 20 defines institutions where less than half of the degrees awarded are four-year degrees as two-year colleges. Categorizing all institutions granting any four-year degrees as four-year institutions, following the U.S. Department of Education's definition, would increase the percentage of all postsecondary students enrolled in public four-year institutions (from 36% to 40%) and decrease the percentage in public two-year institutions (from 35% to 31%).
- Students enrolled in non-degree-granting institutions may be eligible for federal student aid if they are working toward certificates at accredited institutions.
- All of the students reported in Figure 20 were enrolled in institutions that participate in federal student aid programs. In the late 2000s, about 600,000 to 800,000 students were enrolled in for-profit institutions that do not participate in these programs. (S. Cellini & C. Goldin, "Does Federal Student Aid Raise Tuition? New Evidence on For-Profit Colleges," *American Economic Journal: Economic Policy*, November 2014)

Public Enrollment by State

Total full-time equivalent enrollment in public colleges and universities in the United States increased by 13% between 2004 and 2014 — from 9.2 million to almost 10.5 million. However, changes across states ranged from a decline of 4% in Illinois to an increase of 24% in Georgia.

FIGURE 21A Percentage Change in Full-Time Equivalent (FTE) Enrollment in Public Institutions by State, Fall 2004 to Fall 2014

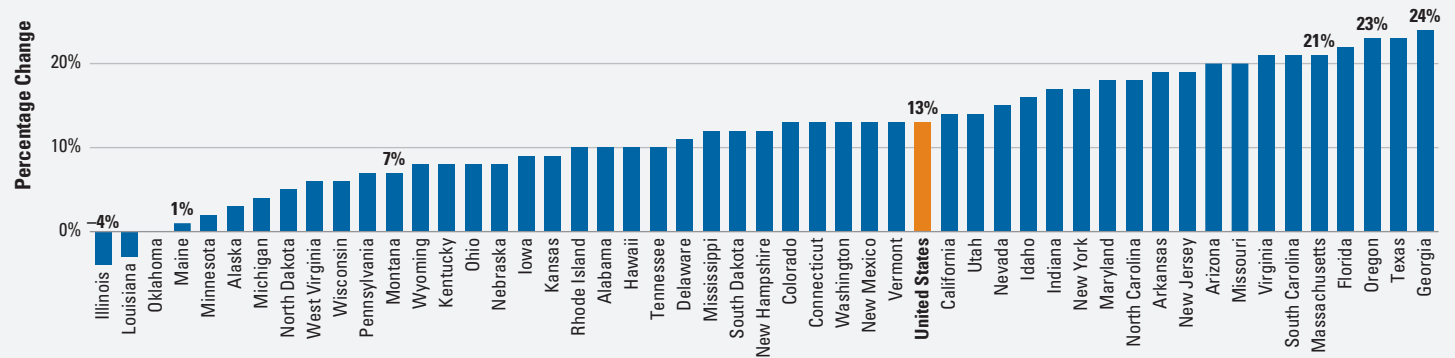
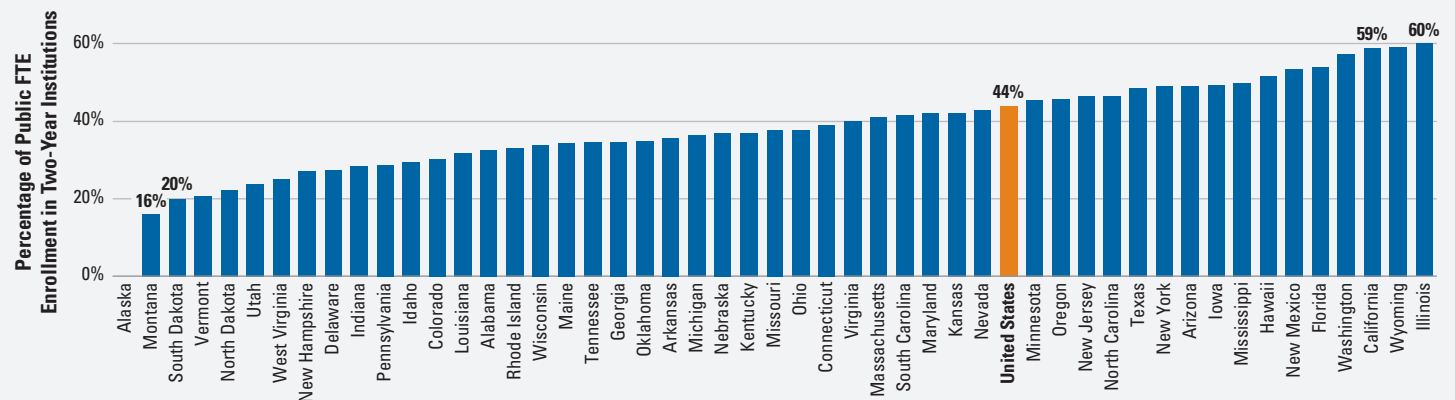


FIGURE 21B Percentage of All Public Full-Time Equivalent (FTE) Undergraduate Enrollment in Two-Year Institutions by State, Fall 2014



NOTES: Four-year institutions include only those where more than 50% of degrees/certificates awarded are bachelor's degrees or higher. All of the students who are not included in the percentages reported in Figure 21B are enrolled in public four-year colleges and universities.

SOURCES: NCES, IPEDS fall enrollment data, 2004 and 2014; calculations by the authors.

- California and Texas (which together enrolled 22% of the nation's public college students in both 2004 and 2014) accounted for 28% of the national increase in students over the decade.
- Between 2004 and 2014, rates of enrollment growth varied across states within each region of the country. In New England, public college enrollment growth ranged from 1% in Maine to 21% in Massachusetts. In the West, growth ranged from 7% in Montana to 23% in Oregon. In the South, the change in public enrollment ranged from a decline of 3% in Louisiana to a 24% increase in Georgia.
- Public two-year colleges, some of which offer a limited number of bachelor's degrees, accounted for 50% or more of undergraduate enrollment in the public sector in eight states in 2014, but in seven states, they were 25% of the total or less.
- Public two-year colleges play a large role in two western states — California and Wyoming — but Alaska does not have community colleges and, in Montana, only 16% of public college students were enrolled in two-year institutions in 2014.

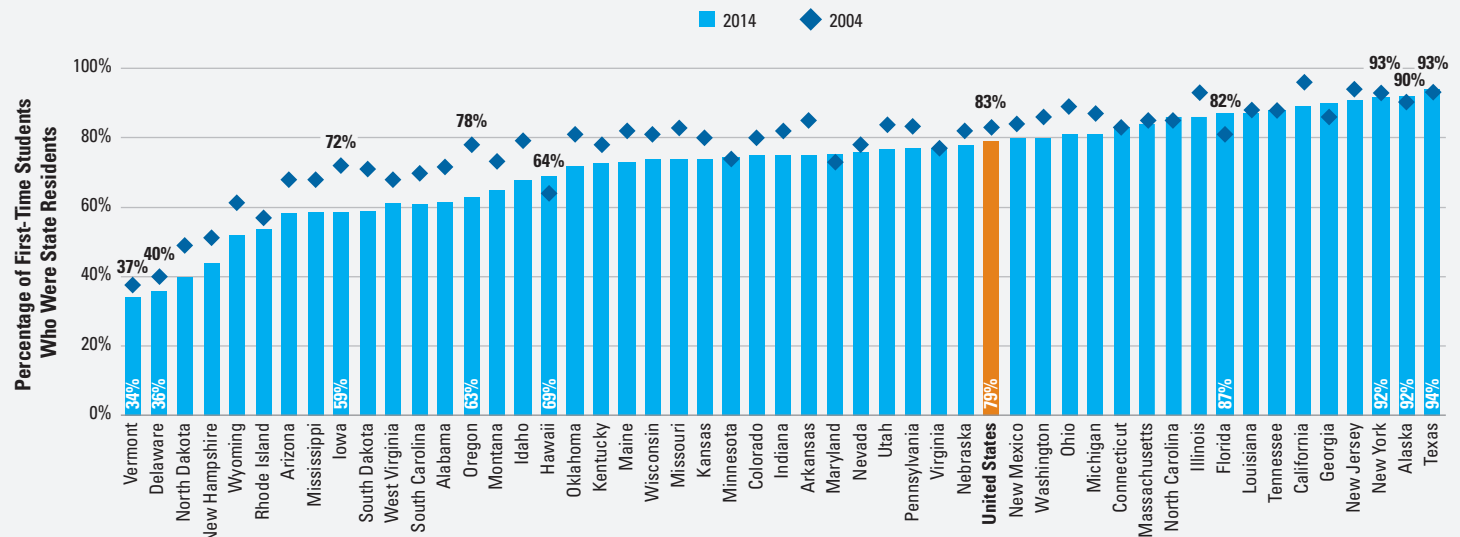
ALSO IMPORTANT:

- Figure 21B defines all degree-granting institutions where less than half of the degrees awarded are four-year degrees as two-year colleges. Categorizing all institutions granting any four-year degrees as four-year institutions would reduce the percentage of public undergraduate enrollments in two-year colleges from the 44% reported here to 39%.

Migration

The percentage of first-time public four-year college students who were residents of the states in which they were enrolled declined from 83% in fall 2004 to 79% in fall 2014.

FIGURE 22 Percentage of First-Time Students at Public Four-Year Institutions Who Were State Residents, Fall 2004 and Fall 2014



NOTE: Four-year institutions include only those institutions where more than 50% of degrees/certificates awarded are bachelor's degrees or higher.

SOURCES: NCES, IPEDS enrollment data; calculations by the authors.

- In fall 2014, the percentage of first-time students at public four-year institutions who were state residents ranged from 34% in Vermont and 36% in Delaware to 92% in Alaska and New York and 94% in Texas.
- Between 2004 and 2014, the percentage of students who were state residents declined the most in Oregon (from 78% to 63%) and Iowa (from 72% to 59%).
- In eight states, the percentage of first-time students at public four-year institutions who were state residents increased between fall 2004 and fall 2014. The largest increases were 5 percentage points in Florida (from 82% to 87%) and Hawaii (from 64% to 69%).

ALSO IMPORTANT:

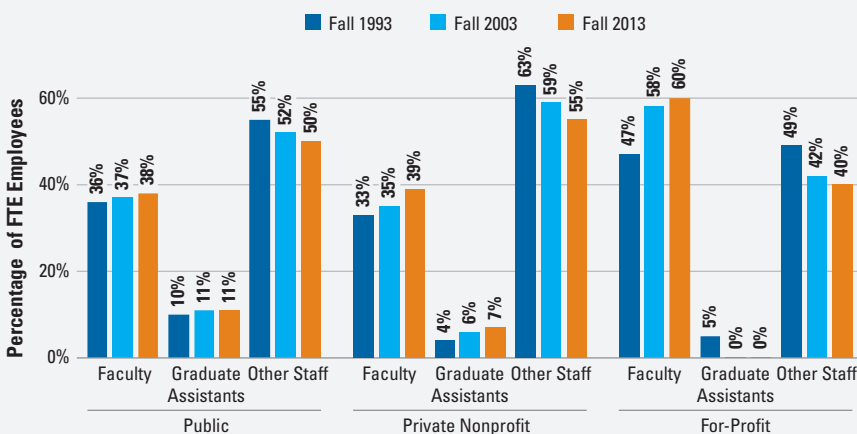
- Figure 22 shows the percentage of all students enrolled in public four-year institutions in the state who were state residents. An alternative measure is the percentage of students from the state enrolling in four-year colleges who attend in-state public institutions. For example, in 2014, only 31% of Illinois residents who enrolled in four-year colleges attended in-state public institutions. However, because not many out-of-state students come to Illinois, a large percentage of students enrolled in the state's public four-year institutions (86%) were state residents.
- Among first-year college students in all sectors, the percentage going to college outside of their home state in 2014 ranged from 10% in Utah and 11% in California to 45% in New Hampshire and 48% in Vermont.
- Because nonresidents pay higher tuition than in-state students, public institutions can increase their tuition revenues by enrolling more out-of-state students.



Faculty and Staff

The percentage of employees who are faculty members has increased and the percentage who are non-instructional staff has declined over time in all postsecondary sectors.

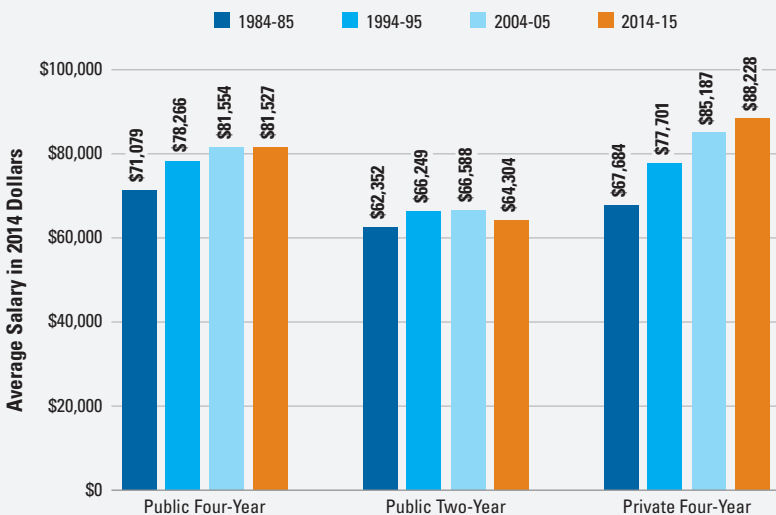
FIGURE 23A Primary Occupations of Full-Time Equivalent Faculty and Staff at Postsecondary Institutions, Fall 1993, Fall 2003, and Fall 2013



NOTES: Data for 1993 are for all institutions of higher education, while data for 2003 and 2013 are for degree-granting institutions. Percentages may not sum to 100 because of rounding.

SOURCE: NCES, *Digest of Education Statistics 2016*, Table 314.10.

FIGURE 23B Average Salary of Full-Time Instructional Faculty in 2014 Dollars, by Sector, 1984-85, 1994-95, 2004-05, and 2014-15



NOTES: Salaries are based on nine-month contracts. Data for 1984-85 and 1994-95 are for institutions of higher education, while later data are for degree-granting institutions.

SOURCE: NCES, *Digest of Education Statistics 2016*, Tables 316.10 and 316.20.

Average Salary of Full-Time Instructional Faculty by Institution Type, 2014-15

Public				Private Nonprofit			For-Profit
Doctoral	Master's	Bachelor's	Two-Year	Doctoral	Master's	Bachelor's	
\$87,174	\$71,467	\$63,020	\$64,304	\$103,587	\$70,912	\$70,023	\$48,948

- Between fall 1993 and fall 2013, the percentage of employees who were faculty members rose from 36% to 38% in public colleges and universities, from 33% to 39% in the private nonprofit sector, and from 47% to 60% in for-profit institutions.
- Faculty salaries in both public and private nonprofit institutions grew more rapidly in inflation-adjusted dollars between 1984-85 and 1994-95 than over the next two decades. The average faculty salary at public four-year institutions was about the same (in 2014 dollars) in 2014-15 as it was in 2004-05. It was \$2,284 (3%) lower at public two-year colleges and \$3,041 (4%) higher in the private nonprofit sector than it was a decade earlier.
- The average full-time faculty salary at public doctoral universities was 84% of the average at private nonprofit doctoral universities in 2014-15 (\$87,174 versus \$103,587). In contrast, average salaries were almost equal in public and private nonprofit master's universities.

ALSO IMPORTANT:

- Faculty salaries vary by sector. In 2014-15, the average salary for full professors at public doctoral universities was 81% of the average at private nonprofit doctoral universities. The average salary for assistant professors was 94% of the average in the private sector. At public master's universities, average salaries at all faculty ranks were similar to those in the private nonprofit sector. (NCES, *Digest of Education Statistics 2016*, Table 316.20)
- Faculty salaries also vary by field and rank. For example, in 2015-16, average salaries for new assistant professors ranged from \$57,000 in communications technologies and visual and performing arts to \$90,000 in legal professions and studies and to \$114,000 in business, management, and marketing. Average salaries for full professors ranged from \$80,000 in theology and religious vocations and \$87,000 in visual and performing arts to \$130,000 in business, management, and marketing and to \$146,000 in legal professions and studies. (2016 CUPA-HR Faculty in Higher Education Salary Survey)

Notes and Sources

THE ANNUAL SURVEY OF COLLEGES

Prices described in this report are based on data reported to the College Board by colleges and universities in the College Board's Annual Survey of Colleges. Data for 2016-17 are from an online questionnaire distributed in October 2015, with data collected and reviewed through early September 2016. Tuition and fee figures are based on charges to full-time first-year undergraduate students over the course of a nine-month academic year of 30 semester hours or 45 quarter hours.

ENROLLMENT-WEIGHTED AND UNWEIGHTED DATA

This report provides enrollment-weighted average prices. Charges reported by colleges with larger full-time enrollments are weighted more heavily than those of institutions with smaller enrollments.

Enrollment-weighted and unweighted averages describe different phenomena. The weighted averages may be more helpful to students and families in anticipating future education expenses. Some researchers, policy analysts, and academic administrators find unweighted averages useful in studying longitudinal trends and evaluating a particular institution's practices against a larger set. Thus, we compute both weighted and unweighted averages. Tables reporting unweighted tuition data can be found online at trends.collegeboard.org.

Weighted averages for each price are based on relevant populations:

- In-state tuition and fees are weighted by full-time undergraduate enrollment.
- Out-of-state tuition and fees are calculated by adding the nonresident premium, weighted by full-time out-of-state enrollment, to average in-state tuition and fees. Data are not available on out-of-state students receiving a waiver of the full tuition premium or a portion of it.
- Resident room and board charges are weighted by the number of undergraduates living in campus housing at each institution.
- Estimated other student budget components are weighted as follows:
 - Books and supplies are weighted by full-time undergraduate enrollment.
 - Resident transportation and other resident expenses are weighted by the number of undergraduates living in campus housing.
 - Commuter room and board, commuter transportation, and other commuter expenses are weighted by the number of commuting undergraduates at each institution.

REVISIONS OF BASE-YEAR VALUES

The prices for 2015-16 used in this analysis differ somewhat from the 2015-16 averages reported last year because of revised data submitted by institutions. Prices for all years through 2014-15 are weighted by same-year full-time enrollments. 2015-16 and 2016-17 prices are weighted by fall 2014 full-time undergraduate enrollments.

LONGITUDINAL DATA

In Tables 2A and 2B, tuition averages from years prior to 1987-88 are from the Integrated Postsecondary Education Data System (IPEDS). The two data sets, IPEDS and the College Board's Annual Survey of Colleges, track very closely, but IPEDS averages are weighted by full-time equivalent enrollments, while the Annual Survey of Colleges prices are weighted by full-time enrollments. In addition, IPEDS tuition and fee data may be based on 24 semester hours while the Annual Survey of Colleges data are based on 30 semester hours. Annual historical data are available online at trends.collegeboard.org.

NET PRICE CALCULATIONS

The calculations of average net price for full-time undergraduates in Figures 9, 10, and 11, as well as the calculations in online Table 7, are a best approximation and are based on the aggregate amounts of each type of aid reported in *Trends in Student Aid 2016* and on the allocation of each type of aid across institution types and between part-time and full-time students reported in 1993, 1996, 2000, 2004, 2008, and 2012 National Postsecondary Student Aid Study (NPSAS) data when such detailed information is not available in specific program data. Because financial aid data for 2016-17 are not yet available, amounts for that year are estimated based on past years. Total charges for public two-year students include an estimate of housing and food expenses for students not living with their parents, based on commuter room and board expenses reported by institutions when available and derived from public four-year room and board charges for earlier years in the analysis. The net price estimates reported here are not exactly comparable to those that appeared in 2015 because some figures have been updated.

INFLATION ADJUSTMENT

We use the Consumer Price Index for all urban consumers (CPI-U) to adjust for inflation. We use the CPI-U in July of the year in which the academic year begins. See www.bls.gov/data/ for changes in the CPI-U over time. Online Table A1 provides CPI data used to adjust for inflation.

CARNEGIE CLASSIFICATION 2015: BASIC CLASSIFICATION

"Doctoral universities" include institutions that award at least 20 research/scholarship doctoral degrees during the update year (excluding doctoral degrees that qualify recipients for entry into professional practice, such as the J.D., M.D., Pharm.D., DPT, etc.); "master's colleges and universities" include institutions that award at least 50 master's and fewer than 20 doctoral degrees during the update year; "bachelor's colleges" include institutions where bachelor's degrees represent at least 50% of all degrees but where fewer than 50 master's or 20 doctoral degrees were awarded during the update year. All of the categories above exclude "special focus institutions" and "tribal colleges."

Trends in College Pricing was authored by Jennifer Ma, policy research scientist at the College Board; Sandy Baum, senior fellow at the Urban Institute; Matea Pender, associate policy research scientist at the College Board; and Meredith Welch, policy research analyst at the College Board.

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Trends in College Pricing and its companion report, *Trends in Student Aid*, are supplemented by a website that makes detailed data available for reference and downloading. The PDF versions of these reports, along with PowerPoint slides of all the graphs, are available on the web: trends.collegeboard.org.

Hard copies may be requested by contacting trends@collegeboard.org.

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DEFINING TERMS

"Costs" refer to the expenditures associated with delivering instruction, including physical plant and salaries.

"Prices" are the expenses that students and parents face.

"Published price" is the price institutions charge for tuition and fees as well as room and board, in the case of students residing on campus. A full student expense budget also includes books, supplies, transportation, and other basic living costs.

"Net price" is what the student and/or family must cover after grant aid and savings from tax credits and deductions are subtracted.

"General subsidies" make it possible for institutions to charge less than the actual costs of instruction. State, federal, and local appropriations, as well as private philanthropy, reduce the prices faced by all students — whether or not they receive financial aid.



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