



College Cost Primer

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The Postsecondary National Policy Institute (PNPI) provides current and prospective policymakers with a substantive and collegial foundation on which to build federal higher education policies that drive positive outcomes for students and their families.

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A Primer on College Cost

No start of an academic year goes by without renewed anxiety about the ever-increasing price of a college education. Although parents, students, and policymakers have voiced their concerns for years about colleges raising tuition and fees at rates far in excess of inflation, the global pandemic brought about by COVID-19 and the current media and policy focus on student loans has exacerbated those concerns.

For the 2023–24 school year, the average published tuition and fees for in-state undergraduates at public four-year colleges was \$11,260, up 2.5% from the 2022–23 school year. For private non-profit four-year colleges, the average published tuition and fees was \$41,540, up 4% from the previous year. And for public two-year colleges, the average published tuition and fees was \$3,990, up 2.6% from the previous year.¹ Over the last decade, published in-state tuition and fees decreased 3.5% at four-year public colleges, increased 4.5% at private non-profit four-year colleges, and declined 2.9% at public two-year colleges.²

As the price of college has changed, so has the number of students who need financial assistance. Between 2012–13 and 2022–23, the number of Pell Grant recipients has declined from nine million to six million.³ Additionally, the federal government’s investment in student aid through federal grants, loans, work-study, and tax credits and deductions, adjusted for inflation, has decreased by 37% from \$212.3 billion in 2012–13 to \$133.1 billion in 2022–23.⁴

The Price of College

When students and parents think about college, one of the first questions they ask is, “How much is it going to cost?” The answer to this seemingly simple question is, “It depends.” There is a sticker price (i.e., the published price) and then an actual price (i.e., the net price) that is often lower and not readily known to the public. This price is determined by taking into account individual student factors (e.g., family income) that may lead to a discounted price.

¹ See Table CP-1 in [College Board \(2023\)](#).

² See Table CP-3 in [College Board \(2023\)](#).

³ See Figure SA-17A in [College Board \(2023\)](#).

⁴ See Table SA-1 in [College Board \(2023\)](#).

Three-quarters of all students enrolled in higher education in the U.S. attend two- or four-year public colleges and universities. Historically, the federal government, states, and local communities have provided significant support to public colleges; this continues to be true today. Still, at nearly all of these institutions, students and their families are expected to assume some of the costs of delivering their education by paying tuition and fees. The share of total operating revenue that comes from tuition and fees at two-year public colleges was relatively flat for 15 years before declining between 2017 and 2021. The share at four-year public colleges and universities increased through 2015 but has been declining since with a steep drop in fiscal year 2020-2021, where federal Higher Education Emergency Relief Funds (HEERF) and returns on investment took on a higher share of revenue generation. Any increase in the tuition and fees share can add to the burden families carry when paying for postsecondary education and can lead to additional borrowing to pay for tuition, fees, and/or living expenses.

Tuition and Fees as Share of Operating Revenue⁵

	2007-08	2010-11	2016-17	2017-18	2018-19	2019-20	2020-21
Public							
All	17.6%	18.6%	20.3%	19.9%	19.9%	19.5%	16.3%
4-year	17.9%	19.1%	20.9%	20.5%	20.6%	20.3%	16.7%
2-year	16.1%	16.0%	16.5%	15.9%	15.6%	14.4%	12.8%
Non-Profit							
All	36.4%	29.0%	30.5%	30.5%	32.4%	33.7%	19.0%
4-year	36.3%	28.9%	30.3%	30.4%	32.2%	33.5%	18.9%
2-year	60.8%	70.7%	79.4%	79.5%	79.5%	74.4%	72.4%
For-Profit							
All	-	88.9%	91.4%	93.5%	91.0%	93.0%	93.2%
4-year	-	89.8%	91.8%	94.5%	91.2%	94.0%	94.0%
2-year	-	86.0%	89.8%	89.0%	90.1%	88.8%	89.7%

Source: Digest of Education Statistics, Tables 333.10, 333.40, & 333.55

The tuition and fees share for the smaller group of students attending private colleges and universities—both non-profit (often referred to as independent colleges) and for-profit (often referred to as proprietary colleges)—is significantly higher. At four-year private non-profit colleges and universities, tuition and fees accounted for 30.5% of operating revenue in 2019-20, though this share fell considerably in fiscal year 2020-21 due to the COVID-19 pandemic and federal HEERF investments. At four-year private for-profit colleges and universities, tuition and fees accounted for 94% of operating revenue in 2020-21.⁶

The differences in needs for revenue translate directly into the tuition and fees charged to students and are paid through a variety of means. These means include parental and student earnings and savings, financial aid including federal, state, and institutional grants, and student loans.

⁵ For-profit institutions report total revenues in the Digest of Education Statistics, rather than operating revenues.

⁶ For-profit institutions typically report revenues from Pell Grants in tuition and fees, which is not the case for public or private non-profit institutions.

The differences between institutional types are dramatic, with the average private non-profit tuition and fees totaling more than four times that charged by public colleges. Within each type of institution, the differences between the tuition and fees charged by race/ethnicity are more modest:

- Hispanic or Latino and American Indian/Alaska Native students pay 33% and 47% less in tuition and fees, respectively, than the average undergraduate at public four-year colleges and universities. Asian students pay 25% more than the average.
- Native Hawaiian/Pacific Islander and American Indian or Alaskan Native students pay 91% and 60% less, respectively, in tuition and fees than the average undergraduate at private non-profit four-year colleges and universities. Asian students pay 32% more than the average.
- Black students pay 9% less in tuition and fees than the average undergraduate at private for-profit colleges and universities. Asian students pay 32% more than the average.

Price of Attendance by Control of Institution and Race/Ethnicity of Student⁷

	All Undergrads	Public 4-Year	Public 2-Year	Private Non-profit 4-Year	Private For-profit
Total	\$22,316	\$22,914	\$11,258	\$42,908	\$21,130
White	\$23,051	\$23,564	\$11,062	\$42,493	\$20,098
Black or African American	\$19,659	\$21,865	\$10,898	\$35,258	\$19,705
Hispanic or Latino	\$18,958	\$19,968	\$11,531	\$37,783	\$22,508
Asian	\$30,795	\$27,678	\$12,658	\$59,058	\$28,779
American Indian or Alaska Native	\$17,370	\$17,883	\$10,886	\$31,472	\$25,887
Native Hawaiian/other Pacific Islander	\$18,960	\$24,219	\$11,749	\$24,659	\$22,060
More than one race	\$23,518	\$22,723	\$11,121	\$48,301	\$20,136

Source: NPSAS:20. Table ID: [uwxapi](#)

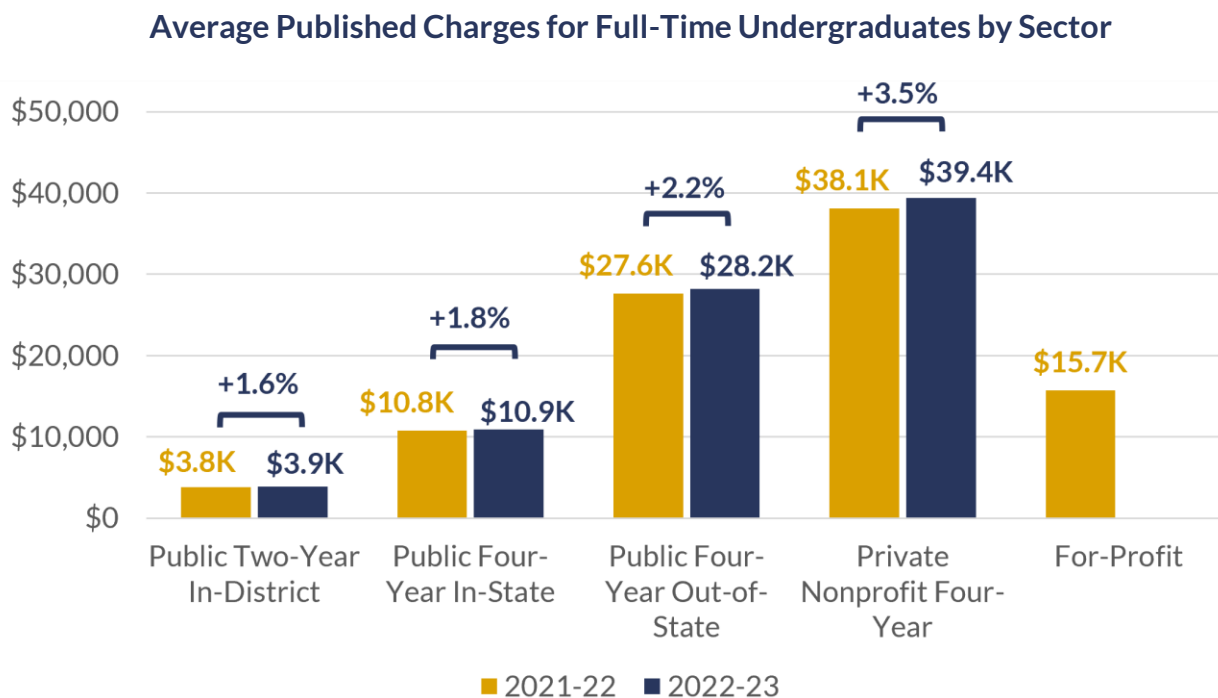
⁷ Price of attendance includes tuition and fees plus all non-tuition and fees-related costs (such as books, supplies, room, board, transportation, and personal expenses). This is equivalent to the more common metric “cost of attendance.”

Sticker Price

Sticker price is the published price. This is a non-discounted price and does not take into account what a student or family will actually be expected to pay out of pocket after accounting for grant and scholarship aid.

Over the last several decades, sticker prices have risen sharply and have well outstripped increases in wages and the rate of inflation. In the 1980s and 1990s, the highest rate of increase in the sticker price for tuition and fees occurred among private non-profit four-year colleges and universities.⁸ In the most recent decade, private non-profit four-year institutions held the lead with their published tuition and fees rising 5%, compared to a decline of 4% at public four-year institutions and 6% for public two-year institutions.⁹

The following figure shows the average published charges (sticker price) by type of institution for the 2022–23 and 2023–24 school years, as well as the percentage changes from the prior year.

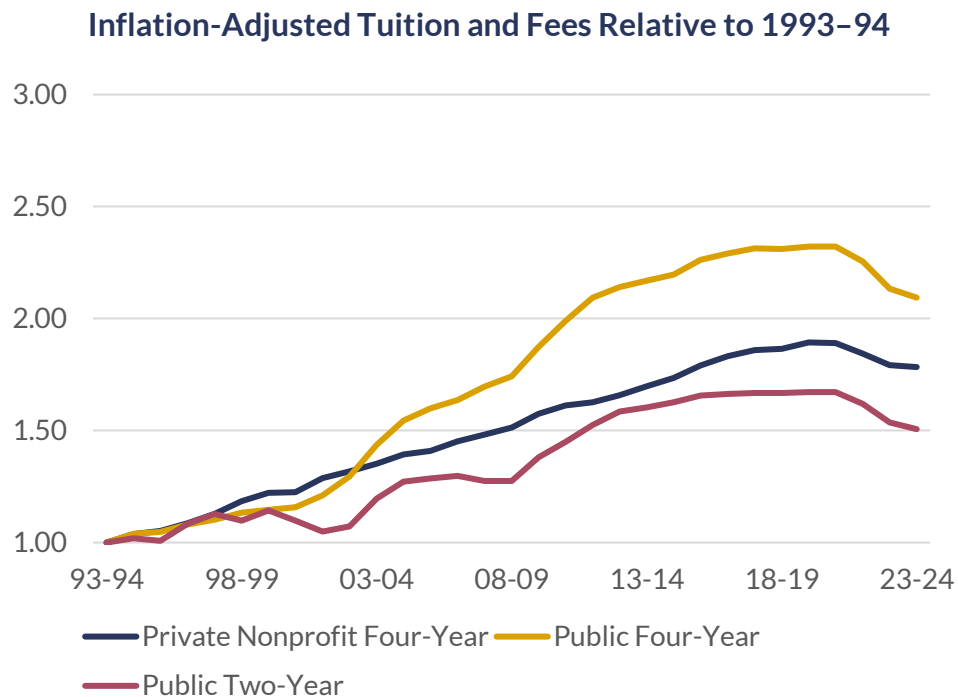


Source: College Board Trends in College Pricing (2023), Table CP-1

⁸ See [GAO \(2014\)](#).

⁹ See Figure CP-4 in [College Board \(2023\)](#).

While the trend lines shown in the following chart demonstrate a rather smooth, upward increase in college tuition, it is also useful to look at patterns in year-to-year increases in college tuition and fees. By doing so, we see a far more erratic pattern of small annual percentage increases sometimes followed by sharp double-digit percentage increases.



Source: College Board Trends in College Pricing (2023), Figure CP-3

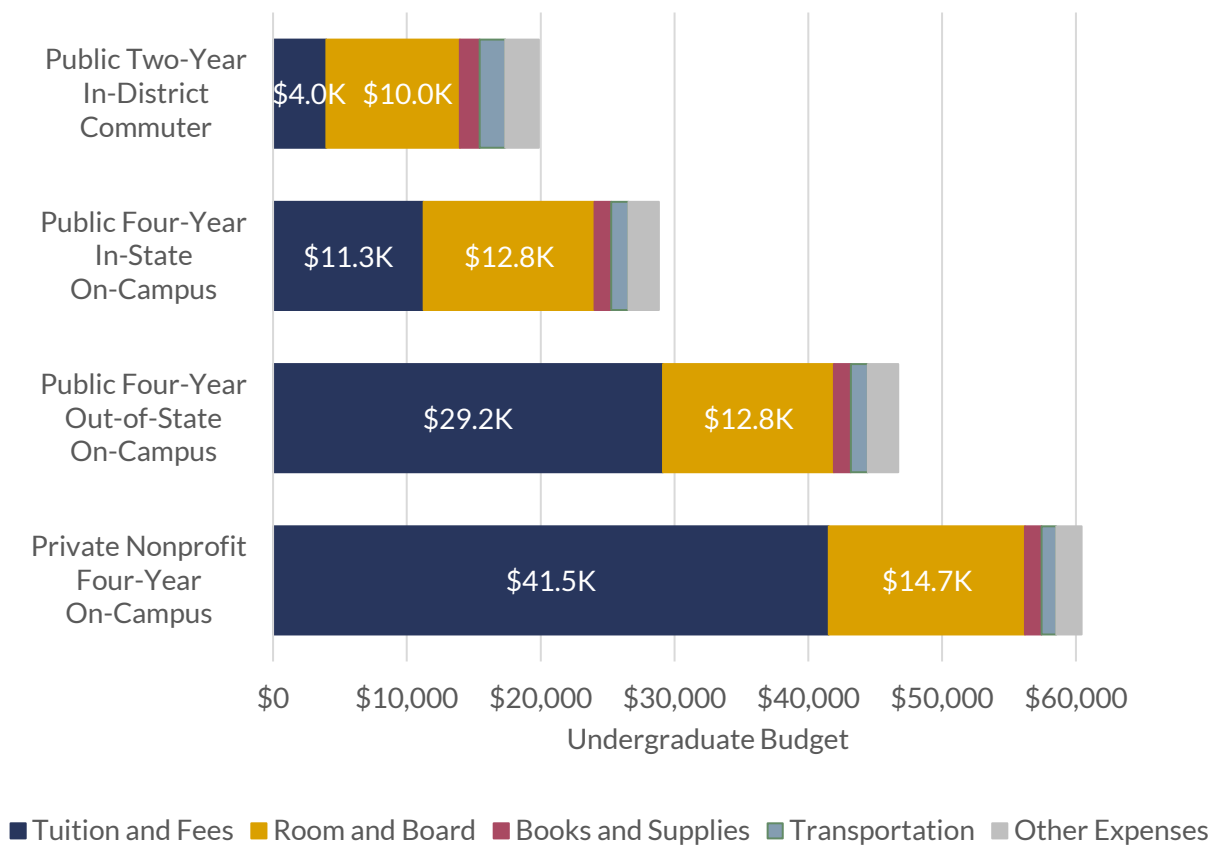
In addition, over the last few decades, a small subset of institutions froze or decreased tuition for a year or more. Unfortunately, these freezes were often followed by large increases in tuition and fees to make up for previous dips in revenue. This rather erratic pattern of the rate of increase in published tuition and fee rates has made financial planning for students and their families exceedingly difficult, as there is no clear pattern for predicting how much or how little tuition will go up in any given year.

Although the media most often reports on the sticker price at the most expensive colleges and universities in the nation, typically those in the top 5% of tuition, as recorded by the [College Affordability and Transparency Center](#), keep in mind that most undergraduates are not enrolled in the highest-priced institutions. For the 2019–20 academic year, 56.4% of full-time in-state undergraduates enrolled in public four-year colleges with a published price of less than \$10,000 for tuition and fees.¹⁰

¹⁰ NPSAS:20, Table ID: [etszxcg](#).

It is also important to keep in mind that tuition and fees are only part of the total cost of attendance. Other expenses include books and supplies, room and board, health insurance, and transportation. At a public four-year institution, students can expect these kinds of expenses to add an additional \$15,000 on top of tuition and fees. See the next graphic for the average estimated undergraduate budgets for the 2023–24 school year, broken down by sector.

Average Estimated Full-Time Undergraduate Budgets (Enrollment Weighted by Sector)¹¹



Source: College Board Trends in College Pricing (2023), Figure CP-1

¹¹ Student budget includes tuition and fees plus all non-tuition and fees-related costs (such as books, supplies, room, board, transportation, and personal expenses). This is equivalent to the more common metric “cost of attendance.”

Net Price

As discussed earlier, the published/sticker price is not the price many students and their families actually pay. Net price is the price a student or family pays after subtracting the amount of grant and scholarship aid they receive from the published price of attendance. In 2022–23, six million undergraduates received a federal Pell Grant, and 1.8 million undergraduates received a Federal Supplemental Educational Opportunity Grant.¹² Although student loans may be a significant part of a student’s financial aid package, because the loans must eventually be repaid out of pocket (unlike a grant or scholarship), student loans are not subtracted from the sticker price when calculating the net price.

Focusing on net price, rather than the sticker or published price, has become very popular among policymakers and college and financial aid administrators in recent years. Surveys indicate that many students and parents, especially lower-income, first-generation college students, overestimate the amount they will be required to pay out of pocket for college and underestimate the amount of financial aid for which they are eligible. This misperception deters some students from even applying for school out of a belief that there is no way they could ever afford to go to college.

Need-Based Aid vs. Merit-Based Aid

Most federal student aid, like Pell Grants, along with much state and institutional aid, is awarded based on financial need. To receive this aid, students complete a Free Application for Federal Student Financial Assistance (FAFSA) and at some institutions a supplemental form such as the CSS Profile, which is used by over 100 colleges and universities. The information reported on the FAFSA (and any supplemental form the state or institution relies on) determines a student’s relative need for aid.

Many institution, state, and private financial aid programs combine merit and need or award solely based on merit. Merit in this context can be prior academic performance, athletic abilities, or other special talents.

Research on financial aid awarded based on merit shows some concerning results. For example, one study showed that within three to five years of introducing a merit aid program, the top tiers of private colleges saw the share of Pell Grant recipients fall by 6 percentage points. At bottom-tier schools, the proportion of Pell Grant recipients initially rose but ultimately dropped by 2 percentage points within 10 years of the creation of such a program.

The study also found that the introduction of a merit aid program led to a reduction in the representation of black students at top-tier schools.

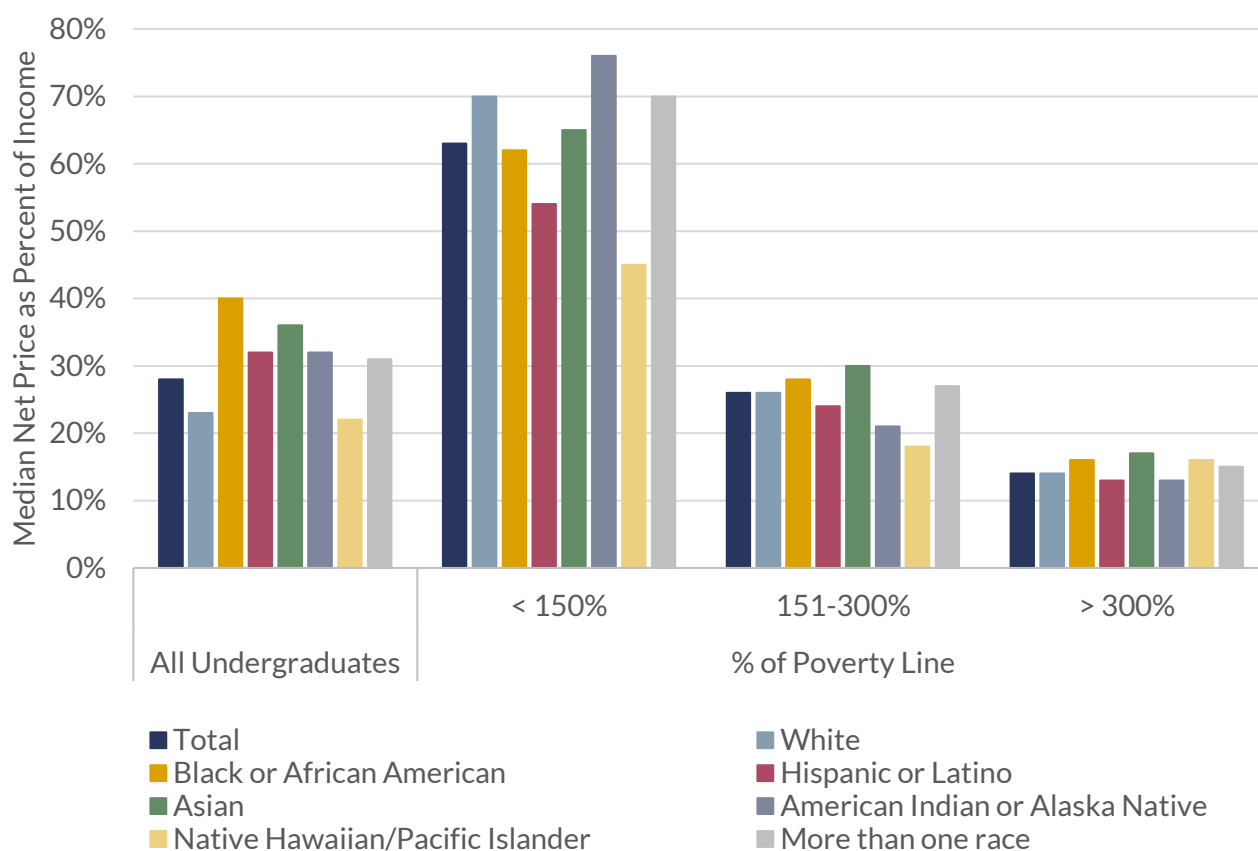
Differences in state higher education policy play a significant role. Two states, Georgia and New Hampshire, award student financial aid entirely based on merit, while seven states, including Hawaii and Rhode Island, award aid solely based on need.

The growth and prevalence of merit-based aid may also impact low-income students’ perceptions of the federal aid system, leading them to believe, for example, that their grades are not good enough to qualify.

¹² See Figure SA-7 in [College Board \(2023\)](#).

A different way to look at the question of the burden posed by the cost of college is to consider the net price after grants are subtracted as a percent of a family’s income. Across all institutional types, income levels, and races/ethnicities of students, 28% of a student’s and their family’s income would be needed to meet college costs. It is important to remember that, often, students borrow some or all of these costs under the federal student loan programs. For those from low-income backgrounds—i.e., those whose families have a total income below 150% of the federal poverty guideline—the expected share of income is 63%. Among students from families with income levels between 151% and 300% of the federal poverty guideline, the expected share of income to meet remaining net price is 26%, and for those from families with incomes over 301% of the poverty guideline, the share is 14%. There is considerable variation by race/ethnicity for students below 150% of the federal poverty guideline, with Hispanic or Latino and Native Hawaiian/Pacific Islander students paying much less than their peers relative to their income. This variation levels out as incomes increase.

Net Price After Grants as a Percent of Income, by Poverty Level and Race/Ethnicity



Source: NPSAS:20. Table ID: [mvpwri](#).

Federal Responses to Increases in the Price of College

Setting college tuition and fees is the responsibility of individual colleges and universities, but because the federal government provides substantial financial aid to assist students in paying for college, there has been discussion about the role the federal government should or could play in addressing college costs. During the last full reauthorization of the Higher Education Act, the Higher Education Opportunity Act of 2008 (HEOA), Congress included several provisions related to the price of college.

Net Price Calculators

In recent years, increasing attention has been given to helping families better understand the net price of college through tools such as a net price calculator. Every college and university receiving Title IV federal financial aid is now required to have a net price calculator on its website that students and families can use to estimate the net cost of attending their school. Schools have the option of using a net price calculator designed by the U.S. Department of Education or designing their own, provided they meet the minimum requirements of the statute.

Since these net price calculators vary in design (from the very simple to the very detailed and complex), it can be difficult to know how useful they are to students and families while making decisions about college. A study from the University of Pittsburgh found that net price calculators' estimates of federal and state aid do correlate highly with actual federal aid received, but that institutional aid estimates were much less accurate. According to this research, while these calculators can provide a ballpark estimate of expenses for low-income families, the variation in the actual cost is substantial.¹³ An analysis from the University of Pennsylvania found that, among 80 institutions with high Pell-eligible student enrollment, 12% did not meet minimum federal requirements for displaying net price calculators online. The researchers also found that a quarter of institutions provided more than one calculator and a third of institutions did not prominently display the federally defined net price.¹⁴

¹³ See [Anthony, Page, & Seldin \(2015\)](#).

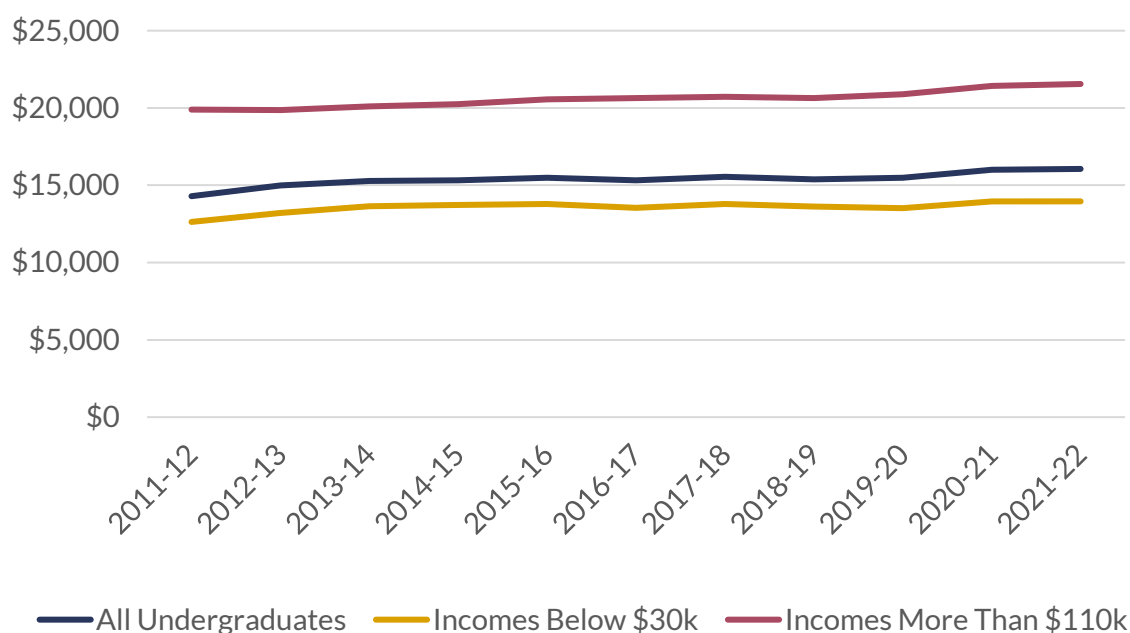
¹⁴ See [Perna, Wright-Kim, & Jiang \(2019\)](#).

Average Net Price

In addition to offering the net price calculator, the Department of Education reports on its [College Navigator](#) website the average net price for beginning full-time undergraduate students, disaggregated by income levels, for all institutions eligible for Title IV federal financial aid. This data can provide helpful insights into trends in the net price being paid by students and families in the period since 2011–12. These data points suggest that the median net price for students awarded Title IV federal aid has risen less dramatically than the sticker price. For students from families with incomes less than \$30,000, for example, the median net price rose by \$1,329, or a rate of 0.9% per year. Among students from families with incomes over \$110,000, the median net price at these institutions rose by \$1,653 or a rate of 0.7% per year.¹⁵

Federal, state, and institutional grants have helped stabilize net price as the sticker price has continued to rise. In 2020–21, the share of full-time, first-time undergraduates awarded federal, state, local, or institutional grant aid was 85.5%, with the average grant amount totaling \$7,293. By contrast, just five years earlier—in 2015–16—the share of full-time, first-time undergraduates awarded federal, state, local, or institutional aid was 82.6%, with the average grant amount totaling \$7,263. That represents a 2.9 percentage point increase in the rate of these students receiving such aid and an increase of 0.4% in the average amount of aid received.¹⁶ Notably, the share of full-time, first-time undergraduates receiving Pell Grants dropped slightly (from 36.2% to 32%),¹⁷ while the average Pell Grant awarded increased by 1.9% from \$4,509 to \$4,595 between 2015–16 and 2021–22.¹⁸

Median Net Price by Income Level



Source: Author's calculations of the College Scorecard

Note: Only includes first-time, full-time students receiving Title IV funds.

¹⁵ Author's analysis of data from the College Scorecard. Stata code available upon request.

¹⁶ See the Digest of Education Statistics, [Table 331.20](#).

¹⁷ According to the Integrated Postsecondary Education Data System's [Trend Generator](#).

¹⁸ [Pell End-of-Year Reports \(2023\), Table 1](#). Adjusted to 2021-22 constant dollars using the Consumer Price Index.

Tuition Lists

The Higher Education Opportunity Act of 2008 includes an annual requirement for the U.S. Secretary of Education to make public a list for each of the various sectors of higher education (four-year, two-year, less than two-year, public, private non-profit, and private for-profit) of the top 5% of schools in each of the following categories: highest tuition and fees, highest net price, highest increase in tuition and fees, and highest increase in net price. These lists also include the 10% of schools with the lowest tuition and fees and those with the lowest net price.

The first annual reporting of these lists was released July 1, 2011, and subsequent reports may be found at the Department's [College Affordability and Transparency Center](#) website. Schools with the highest increases are required to file reports with the Secretary of Education detailing reasons for the increase in costs and their plans to contain them.

College Cost Drivers

In recent decades, a number of drivers of college costs have been postulated. Some are related to the cost of delivering an education while others have to do with who is paying those costs and the price being paid.

These possible drivers include:

- Decreased state appropriations in an increasingly competitive and crowded state budget, e.g., K-12 education, Medicaid, infrastructure (increased price paid by students and families).
- Labor costs and structures, e.g., salaries and benefits, tenure (cost of delivery).
- Low levels of institutional efficiency, e.g., high maintenance cost facilities that are used for a small number of hours each day (cost of delivery).
- The types of programs offered (cost of delivery).
- Development and addition of new programs (cost of delivery).
- Resistance to eliminating existing programs (cost of delivery).
- Athletic programs (cost of ancillary services).
- Student demand for expensive services and amenities, e.g., new dorms, computer services, gyms, student centers, parking (cost of ancillary services).

Other factors impact what students and families ultimately pay to complete a degree program. These student-centered cost factors include increased time to graduation, the need for remediation, and the difficulty or inability to transfer credits from one institution to another.

Although there is much speculation as to what is driving up the cost of college and what to do about it, little research has been conducted demonstrating what would or would not be effective in reducing the cost of providing a college education. Research on this topic is complicated by the complex and varied cost structures of individual colleges and universities across the United States (e.g., public versus private non-profit versus private for-profit, or Tier I research institutions versus local community colleges). It is further complicated by a lack of transparency, frequent changes to accounting standards, and lack of common reporting of college expenditures and revenues across institutional categories over time.

Historically, state and institutional initiatives to reduce the cost of college are generally focused on improved cost efficiencies (e.g., consolidation of administrative functions, reduction in energy costs, and reduction in salary growth and benefit costs) and improved student learning productivity (e.g., increase in student retention and on-time graduation rates, reduction in excess degree credits, increase in number of credits accepted for transfer, and increase in acceptance of prior learning and credit-by-exam).

Initiatives focused on efficiency include moves to state performance-based funding, which links state-allocated higher education funding to outcomes (i.e., retention and graduation rates). As of FY 2020, 41 states had adopted performance-based funding policies at some point, with 32 states having one currently enacted.¹⁹ These policies are highly varied, with some states allocating only a small share of their funding based on performance outcomes while others link 90% or more of their funding to student success measures.²⁰ To date, there is little evidence that performance-based funding leads to improved student outcomes. Apart from this lack of evidence, researchers are concerned that it can drive unintended consequences such as weakened academic standards and tightened admissions policies.

It is important to note that when efforts to reduce the cost of college are successful, such cost reductions may or may not result in reducing the student share of cost: Colleges may shift cost savings in one area to increased spending elsewhere in the institution. Finally, even if strategies prove to be effective for reducing the cost of college, colleges and universities have much to do to turn the tide of public sentiment on the issues of college cost and price.

Of note is a [recent study](#) that suggests public attitudes on one aspect of college costs and price are shifting. In 2010, over 60% of those surveyed expressed the view that parents and students should bear most of the responsibility for funding college costs. By 2019, however, that view had changed substantially, with the government being expected to absorb more of the cost. Indeed, less than 40% of those surveyed held the view that parents and students should bear the responsibility for funding college costs. The researchers followed up with those surveyed and learned that the public is now more supportive of government responsibility than ever before.

¹⁹ See Ortagus et al. (2022).

²⁰ See [Whitford \(2020\)](#).

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