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**College in the 21st Century Economy**

A college education has become increasingly important in the United States. By 2020, analysts predict that 45% of all jobs in the U.S. economy will require a college degree. Yet, at current completion rates, the U.S. will face a shortfall of 5 million college-educated workers by 2020. For many of those who wish to pursue a college degree, increasing costs and inadequate financial aid present significant barriers—especially for the poorest Americans.

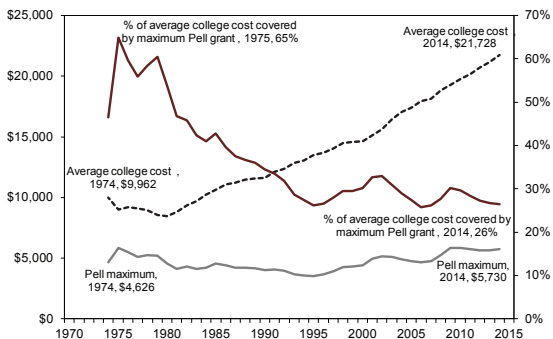
**Increasing Sticker Price**

Since 1980, the cost of college attendance has risen by 70% at community colleges, 160% at four-year public universities, and 170% at four-year private universities, when adjusted for inflation. Meanwhile, national median household income has not kept pace. Despite these trends, the benefits of a college degree still far outweigh the costs, with college graduates earning, on average, \$800,000 more than high school graduates by retirement age.

**Share of Tuition Covered by Federal Funding Has Declined**

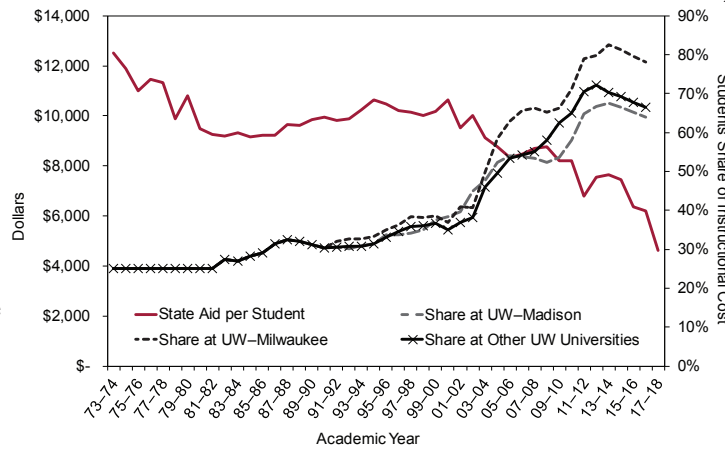
As the price of college has risen, need-based federal Pell grant college education funding to low- and middle-income Americans has covered a shrinking share of college costs (Fig. 1). In 1980, the average Pell grant covered three-fourths of the cost of attendance at a public four-year college. Today, the proportion has dropped to one-third. While federal funding has covered an increasingly smaller share of sticker price, rates of federal funding have been relatively stable between 1967 and 2012.

**Figure 1. The purchasing power of the Pell Grant decreased while college costs increased between 1974 and 2012.**



Source: Pell Institute for the Study of Opportunity in Higher Education.

**Figure 2. As the state share of the per-student cost of college has decreased, students have taken on a greater share of the cost: Evidence from Wisconsin.**



Source: Adapted from Goldrick-Rab, *Paying The Price*.

**States Are Funding Smaller Share of Instructional Costs**

Public colleges receive the majority of their revenue from two sources: state subsidies and tuition fees. A generation ago, public universities received nearly 75% of their total operating budget from state funding; now it covers, on average, half. Since 2008, state funding has declined by 18% on average, or \$1,598 per student. Today states invest \$5 for every \$1,000 of personal income in higher education, the same share invested in 1966. Evidence suggests 79% of increased tuition at public research universities results from state divestment, while 9% relates to increasing instructional costs, and 12% relates to increased administration, support spending, and construction. At public master's and bachelor's universities, state divestment is responsible for 78% of rising tuition, while 11% of increases are related to increased instructional costs and 11% are related to increased

administration, support spending, and construction. At UW-Madison, undergraduate resident tuition rose 141% between 2002 and 2012. In 2015-2016, state funding made up 16% of the UW System's operating budget. Today, for every \$2 invested by the state in the UW System, students invest roughly \$3.

**Low-Income Students Pay the Highest Price for College Relative to Family Income**

Tuition increases disproportionately affect low-income students. Between 2007 and

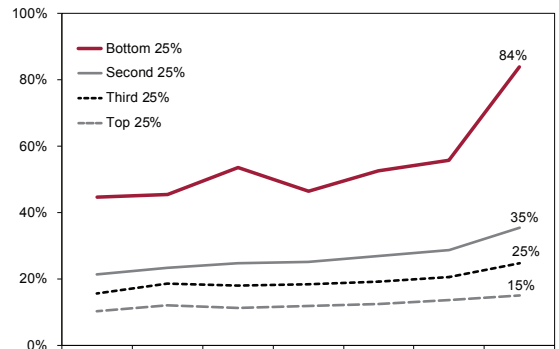
2011, students from the poorest 25% of families, making at most \$31,000 per year, saw their net price as a percentage of annual income increase from 29% to 40%. Families earning between \$31,000 and \$69,000 saw an increase from 21% to 22% over the same period, while families earning between \$69,000 and \$111,000 saw their share increase from 16% to 18% over the same period. The average net price of college as a percentage of family income is five times greater for families in the bottom 20% of the income distribution

compared to those in the top 20% (Fig. 3). One decade ago, 4% of low-income students at state schools graduated with more than \$15,000 in debt. Today the rate has increased tenfold.

**High Costs Can Lead to Other Challenges**

Tuition is not the only cost consideration when it comes to college completion. Other parts of

**Figure 3. The average net price of college has increased as a share of average family income, particularly for low-income households.**



Source: Adapted from Mortenson, *Indicators of Higher Education Equity in The United States: 45 Year Trend Report*.

the cost of attendance, including living costs, transportation, books and supplies, and personal expenses make up between 50% and 80% of sticker price. As a result, low-income students can be faced with making difficult financial choices. For example, tight finances among low-income students can lead them to sacrifice food and housing in order to stay in school. Estimates from the Free Application for Federal Student Aid (FAFSA) indicate that some 58,000 U.S. college students are homeless. An estimated 30% of Pell recipients at UW System Institutions are food insecure.

## Unmet Need Remains High at Community Colleges

For low-income students, grant aid can be a major factor in dropping out or receiving a degree. One study found that undergraduates at community colleges with an EFC (see Key Terms inset) of \$0 who received \$7,500 or more in grant aid were three times as likely to graduate compared to their peers who received between \$1,001 and \$2,500 (50% vs. 17%). Despite the fact that low-income student success increases with more financial aid, some studies suggest the majority of low-income student's needs are unmet. In 2007–2008, an estimated 98% of independent community college students enrolled full time with income below \$30,000 had unmet financial need.

### Significant Portion of State and Institutional Financial Aid Is Non-Need Based

Since 1996, the rate of non-need based state and institutional financial aid has grown significantly. In 2012–2013, one-fourth of all state grants, or \$2.3 billion dollars, were non-need based grants. In many states, 50% of state dollars distributed are non-need based. Of the \$9 billion in yearly institutional grants that colleges distribute nationally, less than half are need based. Some 70% of public universities provide merit grants to students without financial need. Additionally, nearly 30% of all non-need based institutional and state aid distributed goes to students from families making over \$100,000.

### Federal Financial Aid

The federal financial aid system was established to make college affordable for families with financial need. Currently it provides \$240 billion dollars in aid via grants, loans, tax credits, and work-study support. The Pell grant is the largest component of this program, providing \$6,000 per year on average to the poorest college students. In 2015–2016, 33% of undergraduates or 7.6 million students received a Pell grant. In 2015–2016, the work study program accounted for less than 1% of all student financial aid. Of participants, 23% were from families earning less than \$30,000 and 20% belonged to families earning more than \$100,000. Similarly, 25% of federal education tax credits went to families making less than \$25,000, and 25% went to families making between \$100,000 and \$800,000.

## Policy Ideas

### Increasing Institutional Spending per Student

Many recent college access and affordability initiatives have advocated for sticker price reductions. However, research suggests that increasing spending per student may be more effective than decreasing sticker price. For example, a recent study found that “a 10% increase in institutional spending per student... led to a 3% increase in enrollment and even larger percentage increases in degree completion one to three years later. In contrast... sticker price [reductions] have no measurable effect on enrollment or attainment.” This suggests improving college enrollment and completion may be better accomplished by increasing public investments in higher education rather than simply by decreasing sticker prices. The CUNY ASAP program currently stands as a model for such an approach.

### Overhauling and Expanding the Federal Work-Study Program

One-fifth of work-study recipients come from families making more than \$100,000 per year, while only 23% of recipients come from families making less than \$30,000 per year. Refocusing the program to support Pell grant recipients may be one potential option for better targeting the lowest-income students. Currently, only 5% of UW System undergraduate and graduate students received a federal work-study award, representing 1% of financial aid.

### Increasing Funding for Pell Grants

Increasing Pell grant funding may have implications for reducing the student debt burden of many middle- and low-income students.

### Providing Transparent Actual Prices

Requiring all universities to give a multi-year estimate of actual and net prices may help students and families develop realistic funding plans.

An additional option would be for the U.S. Department of Education, instead of individual colleges, to calculate living costs for students.

### Providing Tuition-Free Two-Year College

The much-debated “Free Two-Year College Option (F2CO)” aims to ensure all Americans have access to two years of paid college while participating in a work-study program.

#### Key Terms:

##### Cost of Attendance (COA):

The “sticker price” listed by the college for one year of education, including tuition, fees, books, supplies, transportation, and living costs.

##### Expected Family Contribution (EFC):

The federal government's measure of a family's financial ability to pay for college, determined using the Free Application for Federal Student Aid (FAFSA), including income, assets, family size, and the number of children in college. The EFC determines eligibility for Pell Grants and other financial aid.

##### Net Price:

The difference between the COA and all grants and scholarships equals the bottom line cost of college for the student. It's the price that must be paid using income, savings, and loans.

## Postsecondary Credentials Are Increasingly Necessary in the Modern U.S. Economy

The U.S. economy has changed such that a high school diploma no longer regularly leads to a manufacturing job with family-supporting earnings. Many economists say the job market has “hollowed out,” with abundant high-paying jobs for those with advanced degrees and low-wage jobs for those with limited education, but diminishing jobs for those without education or training beyond high school. At the same time, income and wealth inequality have increased in the United States, making education and skills increasingly important to economic well-being. The concurrent trends of decreasing government support for higher education and increasing tuition present significant barriers to youth from disadvantaged families. Various approaches to making college more affordable have been proposed, including reducing tuition costs (or sticker prices) and even making college (or at least two-year college) free. At the same time, recent research suggests that increasing public funding to institutions of higher learning to support low-income students may be more effective and efficient than reducing tuition costs.

- Archibald, Robert, and David Feldman. 2011. "Why Does College Cost So Much?"; Oxford University Press. Available at: <https://global.oup.com/academic/product/why-does-college-cost-so-much-9780199744503?cc=us&lang=en&#>
- Baum, Sandy, Bell, D'Wayne, Ma, Jennifer, and Matea Pender. 2015. *Trends in Student Aid 2015*; College Board. Available at: <http://trends.collegeboard.org/sites/default/files/trends-student-aid-web-final-508-2.pdf>
- Baum, Sandy, Ma, Jennifer, Pender, Matea, and Meredith Welch. 2016. *Trends in Student Aid 2016*; College Board. Available at: <https://trends.collegeboard.org/student-aid/figures-tables/undergraduate-enrollment-and-percentage-receiving-pell-grants-over-time>
- Bengali, Leila and Mary Daly. 2014. "Is It Still Worth Going to College?"; Federal Reserve Bank of San Francisco. Available at: <http://www.frbsf.org/economic-research/publications/economic-letter/2014/may/is-college-worth-it-education-tuition-wages/>
- Broton, Katharine, Eisenberg, Daniel, and Sara Goldrick-Rab. 2015. *Hungry to Learn: Addressing Food & Housing Insecurity Among Undergraduates*; Wisconsin HOPE Lab. Available at: [http://wihopelab.com/publications/Wisconsin\\_hope\\_lab\\_hungry\\_to\\_learn.pdf](http://wihopelab.com/publications/Wisconsin_hope_lab_hungry_to_learn.pdf)
- Bruecker, Ellie, Campbell, Colleen, Cochrane, Debbie, and Ivy Love. 2017. *Aiding Success: The Role of Federal and State Financial Aid in Supporting California Community College Students*; The Association of Community College Trustees in collaboration with The Institute for College Access & Success. Available at: [http://www.acct.org/files/Publications/2017/ACCT\\_TICAS\\_CCCCO\\_Aiding\\_Students\\_2017.pdf](http://www.acct.org/files/Publications/2017/ACCT_TICAS_CCCCO_Aiding_Students_2017.pdf)
- Carnevale, Anthony, Smith, Nicole, and Jeff Strohl. 2014. *Recovery: Job Growth and Education Requirements through 2020*; Georgetown University. Available at: [https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.ES\\_Web.pdf](https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.ES_Web.pdf)
- Choitz, Vickie, and Patrick Reimherr. 2013. *Mind the Gap: High Unmet Financial Need Threatens Persistence and Completion for Low-Income Community College Students*; Center for Postsecondary and Economic Success. Available at: <http://www.clasp.org/resources-and-publications/files/CLASP-Unmet-Need-Brief-041213-final-ab-2.pdf>
- Fuller, Andrea and Josh Mitchell. 2016. *Poorest Students Feel the Bite of Rising College Costs*; The Wall Street Journal. Available at: <https://www.wsj.com/articles/poorest-students-feel-the-bite-of-rising-college-costs-1455907459>
- Goldrick-Rab, Sara, and Nancy Kendall. 2014. *Redefining College Affordability: Securing America's Future with a Free Two Year College Option*; Lumina Foundation. Available at: [https://www.luminafoundation.org/files/publications/ideas\\_summit/Redefining\\_College\\_Affordability.pdf](https://www.luminafoundation.org/files/publications/ideas_summit/Redefining_College_Affordability.pdf)
- Goldrick-Rab, Sara. 2016. "Paying the Price: College Costs, Financial Aid, and the Betrayal of the American Dream"; The University of Chicago Press. Available at: <http://press.uchicago.edu/ucp/books/book/chicago/P/bo24663096.html>
- Hillman, Nick. 2017. *State Funding Trends for the UW System*; University of Wisconsin-Madison. Available at: <http://website.education.wisc.edu/nwhillman/index.php/2017/02/09/state-funding-trends-for-the-uw-system/>
- Hiltonsmith, Robert. 2015. *Pulling Up the Higher-Ed Ladder: Myth and Reality in the Crisis of College Affordability*; Demos. Available at: <http://www.demos.org/publication/pulling-higher-ed-ladder-myth-and-reality-crisis-college-affordability>
- Leachman, Michael, Masterson, Kathleen, and Michael Mitchell. 2016. *Funding Down, Tuition Up: State Cuts to Higher Education Threaten Quality and Affordability at Public Colleges*; Center on Budget and Policy Priorities. Available at: <http://www.cbpp.org/research/state-budget-and-tax/funding-down-tuition-up>
- Lucca, David, Nadauld, Taylor, and Karen Shen. 2017. "Credit Supply and the Rise in College Tuition: Evidence from the Expansion in Federal Student Aid Programs"; Federal Reserve Bank of New York. Available at: [https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr733.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr733.pdf)
- Pope, Emily. 2013. "University of Wisconsin Tuition"; Wisconsin Legislative Fiscal Bureau. Available at: <http://www.mbo.wisc.edu/biennial/bienn1315/2013-Information-Paper-34.pdf>
- Radwin, David and Christina Chang Wei. 2015. "What Is the Price of College? Total, Net, and Out-of-Pocket Prices by Type of Institution in 2011-12"; U.S. Department of Education. Available at: <https://nces.ed.gov/pubs2015/2015165.pdf>
- Scott-Clayton, Judith. 2017. *As Cuomo proposal rekindles free college movement, new research provides ammunition for skeptics*; The Brookings Institute. Available at: <https://www.brookings.edu/research/as-cuomo-proposal-rekindles-free-college-movement-new-research-provides-ammunition-for-skeptics/>
- The University of Wisconsin System. 2015. "2015-2016 Operating Budget and Fee Schedules"; The University of Wisconsin System. Available at: [https://www.wisconsin.edu/budget-planning/download/budget\\_documents/annual\\_budget\\_documents/2015-16-Annual-Budget-and-Fee-Schedule---Revised-July-8.pdf](https://www.wisconsin.edu/budget-planning/download/budget_documents/annual_budget_documents/2015-16-Annual-Budget-and-Fee-Schedule---Revised-July-8.pdf)
- The University of Wisconsin System. 2016. *Student Financial Aid: 2014-2015 Update*; The University of Wisconsin System. Available at: [https://www.wisconsin.edu/education-reports-statistics/download/educational\\_statistics/informational\\_memoranda/Student-Financial-Aid.-2014-15.pdf](https://www.wisconsin.edu/education-reports-statistics/download/educational_statistics/informational_memoranda/Student-Financial-Aid.-2014-15.pdf)
- Wisconsin HOPE Lab. 2016. *What We're Learning: Food and Housing Insecurity among College Students*; Wisconsin HOPE Lab. Available at: [http://wihopelab.com/publications/Wisconsin\\_HOPE\\_Lab\\_Data%20Brief%2016-01\\_Undergraduate\\_Housing%20and\\_Food\\_Insecurity.pdf](http://wihopelab.com/publications/Wisconsin_HOPE_Lab_Data%20Brief%2016-01_Undergraduate_Housing%20and_Food_Insecurity.pdf)
- Wisconsin HOPE Lab. 2016. *What We're Learning: Prevalence of and Responses to Financial Stress Among Undergraduates: A data Update from the Wisconsin HOPE Lab*; Wisconsin HOPE Lab. Available at: <http://wihopelab.com/publications/Wisconsin-HOPE-Lab-Data-Brief%2016-04-Financial-Stress-Among-Undergraduates.pdf>