



ISSUE BRIEF #1:

Who Pays for Higher Education? Changing Patterns in Cost, Price, and Subsidies

To understand why tuitions are increasing at institutions of higher education, policymakers need to look at the relationships between and among cost, price and subsidy. This brief explains how to understand those relationships, what the trend data show at a national level, places to go for more information, and questions to ask.

- *Cost* is what an institution spends per student;
- *Price* is the proportion of costs covered by tuition; and
- *Subsidy* is the difference between cost and price, or the proportion of costs paid for from institutional sources such as state appropriations, gifts and endowments.

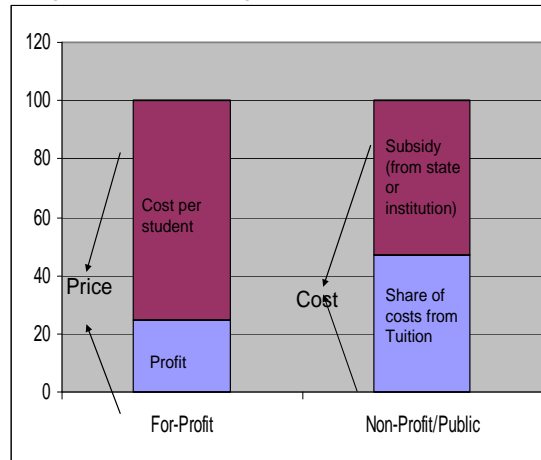
In public and private nonprofit institutions, revenues from student tuition and fees have historically covered only a portion of an institution's operating funds to educate each student. The difference between what is spent (institutional cost) and the amount of cost covered by tuition revenue (price) is made up from a general subsidy paid by the institution.

The cost/price/subsidy relationship is the major financial difference between public/non-profit and profit-making institutions. If profit is the goal, an institution charges more than it costs to provide a service or deliver a product, and the difference is profit. In a public or nonprofit institution, price is less than cost.

Policy makers can get a good sense of cost/price/subsidy relationships by looking at average cost measures per student, and focusing on core operating functions excluding research and service.

- **Cost** is the institutional average spent to educate each student – measured as “full costs” per FTE, including both direct instructional spending, plus student services costs, and the education-related share of spending on academic and institutional support, and operations and maintenance.
- **Price** is the proportion of costs covered by tuition, based on net tuition revenue divided by the number of FTE students.
- **Subsidy** is the difference between cost per FTE student and net tuition revenue per student.

Price/Cost differences between for-profit and public or non-profit institutions*

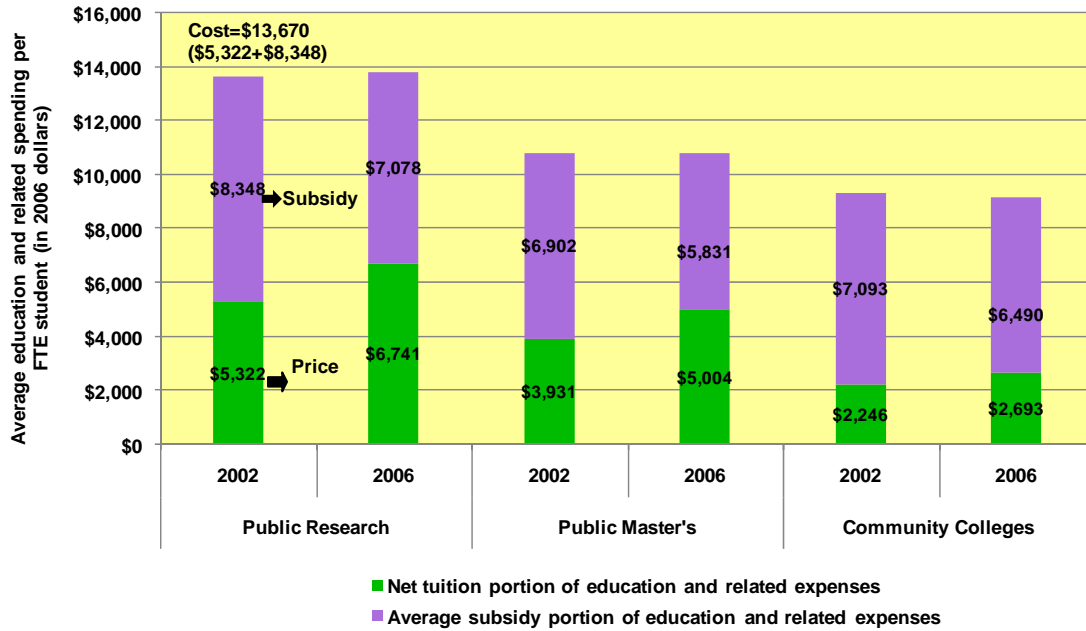


*For-profit costs hypothetical; national data are not available. Public/non-profit based on average subsidy relationships for public research universities.

Trends show that the portion of costs being covered by tuition revenues is going up faster than overall spending– most rapidly in percentage terms among public institutions. The portion of costs covered by revenues from tuition, however, remains a much larger amount in private nonprofit institutions than in public institutions.

In public higher education, prices are increasing, costs are remaining fairly steady, and subsidies are declining. The figure below demonstrates the cost/subsidy trends in public-sector institutions between 2002 and 2006, measured as national average cost/per FTE student in 2006 inflation-adjusted terms. During that time, prices increased faster than costs, while subsidies declined. For the most part, tuition increases were caused by cost *shifting*, rather than by cost *increases*, as the student share of costs increased relative to declines in state subsidies. (There are major state and regional differences in those patterns: for more information see <http://www.deltacostproject.org>.)

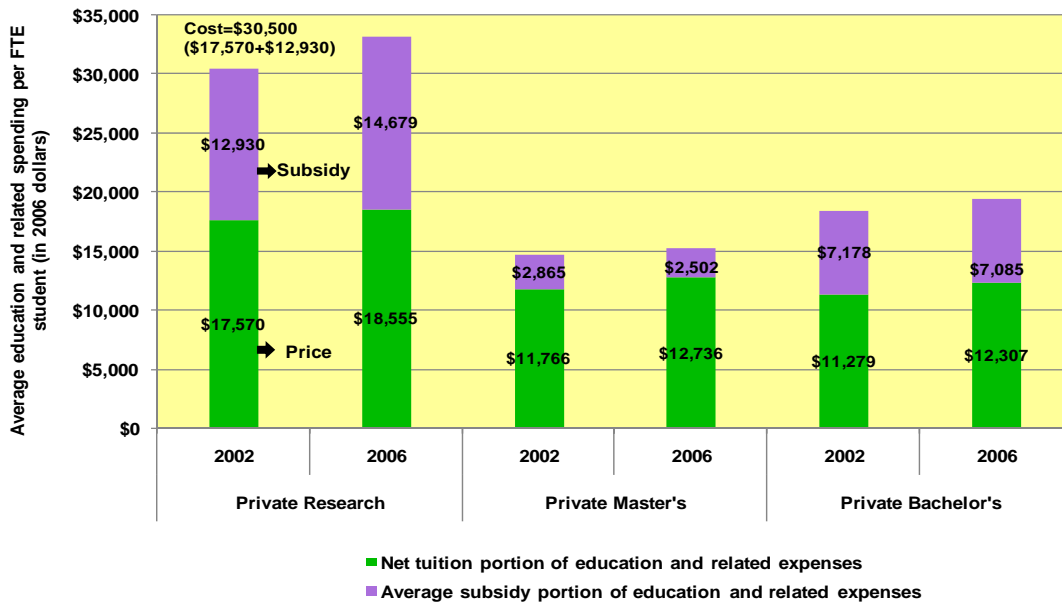
National Average Costs and Subsidies per FTE Student at Public Institutions, 2002 and 2006



Source: Delta Cost Project IPEDS Database, 20-year matched set

Similar to the public sector, prices are increasing faster than costs at most private institutions; and the proportion of costs paid from institutional subsidies is declining. In private research institutions, however, revenues from subsidies are growing – whereas they are shrinking in all other institutional sectors.

National Average Costs and Subsidies per FTE Student at Private Institutions, 2002 and 2006



Source: Delta Cost Project IPEDS Database, 20-year matched set

The statistics in this report focus on operating expenditures only – or spending by the institution (not by students), to pay for educational costs. Capital outlay costs are excluded, as are institutional spending for research and service.

The figures are also averages, and thus mask differences in costs and subsidies, including use of tuition revenues, within institutions. Cross-subsidization is endemic in higher education. For instance, revenues generated from undergraduate students who enroll in low-cost disciplines such as humanities and social sciences, help pay for high-cost disciplines – fine arts, agriculture, business, and engineering, for example. Similarly, lower division classes are less expensive than upper division classes (largely because lower division classes are larger). Since lower division students typically pay the same tuitions and fees as upper division students, the “excess” revenue from their tuitions helps underwrite the higher costs of upper division education. In most institutions, graduate education – with the exception of professional schools – is subsidized in part by revenues generated at the undergraduate level.

With the increased use of tuition discounting and direct institutional aid to students, a new form of cross-subsidization is taking place. Students paying full price for their educations are increasingly helping defray the costs of those receiving discounts and/or institutional grants.

The table below shows how students’ share of costs changed between 2002 and 2006, contrasting the proportion of costs carried by students who paid the full “sticker” price, to those who obtained some form of institutional aid. The data show that tuition from students who pay full price covers, on average, substantially more of the costs of their education – on average 28 percentage points more among private institutions – than the tuitions of students receiving a discount. The gap between sticker and discounted price is also growing among public institutions, most rapidly in research universities.

Change in student share of education and related costs, 2002 – 2006

Sector	2002			2006		
	Sticker Price Share ¹	Discounted Price Share ²	Avg. % of first-time students receiving aid ³	Sticker Price Share	Discounted Price Share	Avg. % of first-time students receiving aid
Public Research	49%	41%	34%	62%	51%	40%
Public Masters	42%	37%	26%	53%	47%	30%
Community Colleges	27%	25%	16%	33%	31%	15%
Private Research	96%	72%	65%	94%	70%	68%
Private Masters	109%	83%	79%	114%	85%	82%
Private Bachelor’s	95%	66%	76%	101%	68%	79%

Source: Delta Cost Project IPEDS database, 20-year matched set.

¹ “Sticker price share” = the proportion of education and related costs paid from students paying the full sticker price.

² “Discounted price share” = the proportion of education and related costs paid after discounting for institutional grant aid.

³ “Average % of first-time students receiving aid” = the proportion of first-time full-time undergraduates who received institutional grant aid.

Policymakers wanting to reduce growth in tuition in higher education need to pay attention to changing cost/price/subsidy structures, along with trends in tuition and financial aid. Unless subsidies increase and/or costs decrease, tuitions will continue to rise. To understand the role of student tuitions in paying for higher education, policymakers should ask the following questions of institutional leaders.

- What is the average operating cost to educate a student in a particular institution? What proportion of that cost is paid from tuition revenue? by state subsidies? with endowment funds? from other institutional sources?
- What proportion of undergraduate students pay “full” price? What about graduate and professional students? Which students receive institutional discounts or grants? How are such awards determined?
- What trends are evident in per-student subsidies coming from state or institutional resources? What are the prospects for the future – from growth in state revenues, or from institutional sources such as endowments?
- What institutional efforts are being made to control increases in costs and tuitions?