

Extracts in key issue areas from “Trends in College Spending, 1999 – 2009”

Growing Haves/Have-Nots

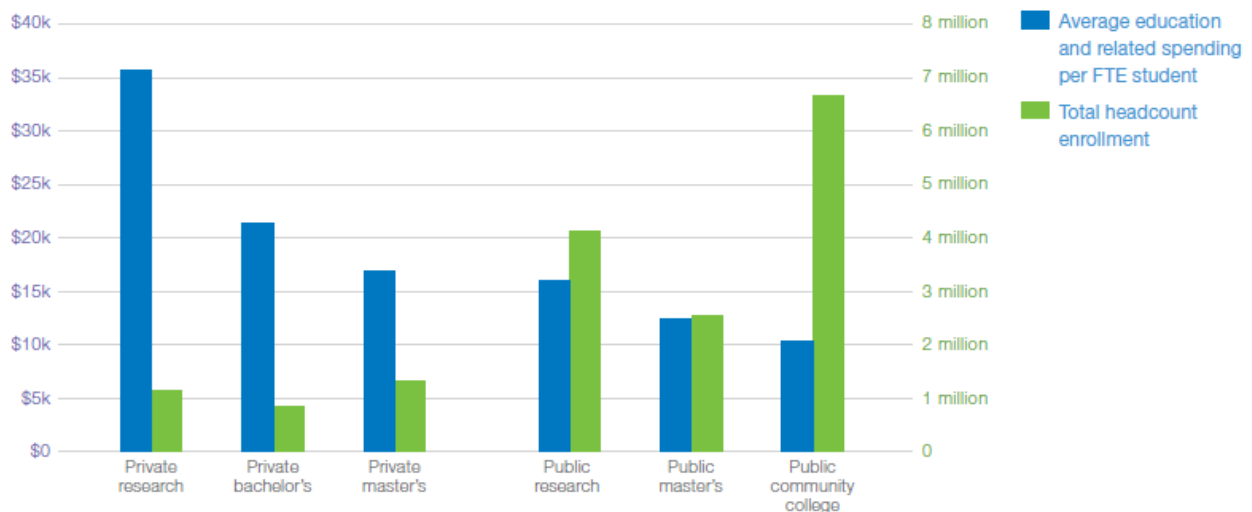
Over the past decade, higher education in the United States has grown increasingly stratified. This bifurcation, however, reaches far beyond access or prestige; institutions are significantly stratified by spending.

In 2009, community colleges educated over 6.5 million students—the single biggest sector nationwide, serving over a third of all students - yet spent about \$10,000 per FTE student annually, an amount less than any other type of college or university. Public research and masters’ institutions combine to educate another third of students, and while they spend more than community colleges, they remain at a competitive disadvantage relative to non-profit private institutions. Private research institutions in particular have set the spending bar so high it will be almost impossible for public institutions to compete with them on the basis of resources and reputation. With continuing state budget difficulties a distinct possibility, this problem will likely worsen in the coming years.

Figure 1

Institutions enrolling the most students spend the least on their education

Enrollment versus spending per student, AY2009 (in 2009 dollars)



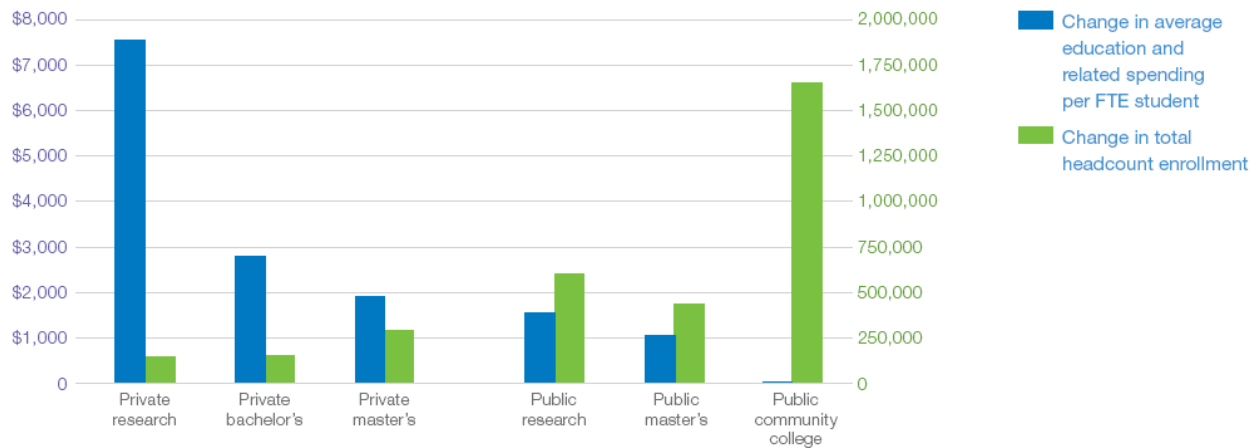
Source: Delta Cost Project IPEDS Database, 1987-2009; spending data from the 11-year matched set; enrollment data from the unmatched set.

Looking at shifts in spending and enrollments from 1999 to 2009 reveals an even starker picture of the disparities between public and private non-profit institutions (see Figure 2). As private institutions have significantly increased their spending per student, they have added relatively few new students over the decade. Public institutions have been serving, by far, the greatest proportion of new students in higher education without similar increases in funding per student. Community colleges, in particular, have shouldered most of the increase in higher education enrollments over the period, expanding over 1.6 million students. While acknowledging some cyclical changes in the intervening years, they now have no more money to spend to educate each student than they did ten years ago.

Figure 2

New money versus new students—enrollment growth is concentrated in public institutions, which have had less access to new resources

Ten-year change in enrollment versus 10 year change in spending per FTE student, AY1999-2009 (in 2009 dollars)



Source: Delta Cost Project IPEDS Database, 1987-2009; spending data from the 11-year matched set; enrollment data from the unmatched set.

Economic uncertainty coupled with increasing public needs and demand for higher education make the growing spending disparity between public and private colleges and universities particularly salient. Even within the public sector, disparities are quite large. Nationwide public appropriations for higher education never completely rebounded from the 2001 recession, and the 2008 recession is proving to be more serious and longer lasting. At the same time, enrollments in community colleges are skyrocketing. These institutions serve the majority of students who require additional academic supports and financial aid to succeed, yet they are experiencing the deepest budget cuts, on spending levels already well below others in higher education.

Tuition/Spending/Subsidies: Why Are Prices Going Up?

Over the last thirty years, tuition in all types of colleges – public and private, two-year and four-year – has increased at rates far above inflation, per capita personal income, and most major commodities. In particular, since 2001, public institutions have experienced a dramatic rise in tuition, caused by sharp declines in state appropriations following the 2001 recession and the failure of appropriations to return to pre-recession levels. But are tuition increases making up for all of the loss in appropriations in the public sector? What explains tuition increases in the private sector? Finally, what is the relationship between tuition and education spending?

SIDEBAR:
While tuitions in the public sector rose at a higher percentage rate than those in the private sector, the actual dollar increases for public colleges and universities were much lower. For example, the sticker price for public research universities rose 56 percent between 1999 and 2009, amounting to an average increase of \$2,486. During the same time period, tuition at private research universities “only” rose 32 percent, but this equaled an average increase of \$7,380. A similar pattern holds for public and private master’s institutions.

Metrics developed by the Delta Cost project compare changes from year to year in average spending per student, tuition and state, local and private revenues. For the majority of institutions, increases in

tuition do not translate into increases in spending. In fact, at most public institutions, tuition increases attempt to compensate for lost revenues from state and local budget reductions, but actual tuition increases are less than half of the actual reduction in state and local appropriations.

Looking at public research institutions, for example, average tuition revenue increased by \$369 per student between 2008 and 2009, but the loss in state and local appropriations per student was \$751, slightly more than twice the amount generated in increased tuition revenues. Despite that, institutions were able to increase educational and related¹ spending per student by \$92. To realize greater spending in the face of revenue losses, public institutions were clearly taking measures to reduce spending, as well as, finding new revenue sources.

Among public community colleges, revenues from state and local appropriations declined an average of \$488 per student between 2008 and 2009, whereas tuition increases generated new net tuition revenues of only \$113 per student. Spending declined overall by -\$254/student – again, showing evidence of cost cutting, but in a sector without other revenue sources to cushion against cuts.

The story is somewhat different in the private sector. Education and related spending in private research universities increased considerably more than increases in tuition revenue (\$907 in spending per student compared to \$293 in tuition revenue per student), suggesting that reserves still allow for increased spending despite losses in endowments and gifts. This was not the case, however, for students in private master’s and bachelor’s institutions where tuition revenue increases were larger than spending increases.

2008 – 2009: One-year change in revenues per student from tuition/state appropriations compared to changes in spending			
Sector	One-year change in net tuition revenue per student	One-year change in state and local appropriations per student	One-year change in education and related spending per student
Public Research	+\$369	-\$751	+\$92
Public Masters’	+\$225	-\$590	+\$26
Public Community Colleges	+\$113	-\$488	-\$254
Private Research	+\$293	NA	+\$907
Private Masters’	+\$536	NA	+\$352
Private Bachelors’	+\$381	NA	+\$298

There is much public discussion and concern over rising tuitions but much less attention to the intricate relationships among tuition and revenue sources – particularly state and local appropriations in the public sector – and spending. Understanding these relationships and making them transparent will inform policy makers’ decisions and educate the general public about what their tuition dollars are covering.

¹ Education and related spending includes spending on instruction, student services and a portion of general support and maintenance costs associated with these functions.

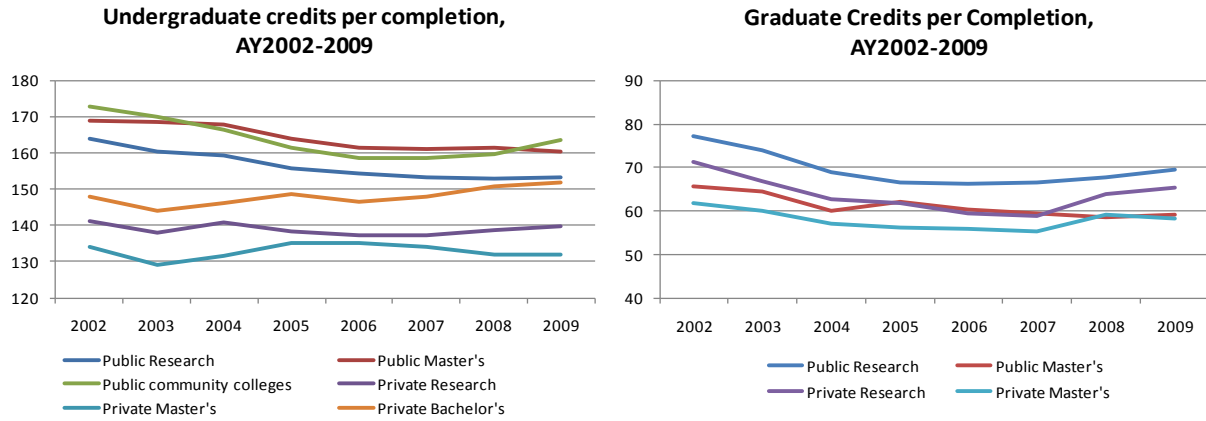
Promising signs of increases in instructional productivity

The Delta Project’s new “Trends in College Spending 1999 – 2009” presents metrics about spending across public and private nonprofit higher education and how spending relates to performance such as spending per student and spending per degree. This year’s report shows slight but promising increases in several indicators of performance, including:

- Increases in degrees and other completions per 100 FTE students enrolled: Aggregate degree productivity is measured by comparing overall production of degrees against enrollments. It is not a measure of student cohort graduation rates, but a gross measure showing how enrollments are converted into degrees or certificates. All types of institutions saw increases in degree and certificate productivity between 1999 and 2009, with the greatest gains in public and private masters’ institutions. Community colleges also saw gains in completions, in this case, primarily in a great increase in certificates rather than in more degrees.

		Total Degrees per 100 FTE students	Total Certificates and Awards per 100 FTE students
Public Research	1999	23.6	0.3
	2009	24.4	0.5
Public Master's	1999	22.3	0.3
	2009	23.3	0.6
Community Colleges	1999	14.7	8.0
	2009	15.0	10.6
Private Research	1999	30.5	0.4
	2009	31.5	0.9
Private Master's	1999	29.7	0.8
	2009	31.7	1.3
Private Bachelor's	1999	22.1	0.6
	2009	22.9	0.4

- Public institutions increased instructional productivity through reductions in credit hours per completion. Data on credit hour production are newly available beginning in 2002; our analysis of undergraduate credit hours per degree/credential show reductions in average credits/completion of between eight and ten credit hours over this period –translating into a ‘savings’ of nearly a half a semester’s worth of credits. Instructional productivity also increased at the graduate level for both public and private institutions. While the trends suggest credits are being used more efficiently, this metric does not necessarily mean that the average number of credits per *graduate* is also declining. From these data, we do not know if the gains are occurring because of declines in attrition, or reductions in ‘excess’ credits beyond those required for the degree.



Note: Graduate data exclude first professional credits and completions.
 Source: Delta Cost Project IPEDS database, 1987-2009, 11-year matched set.

Credit Hours per Completion, AY 2002-2009

	Undergraduate			Graduate		
	2002	2009	2002-2009 Change	2002	2009	2002-2009 Change
Public research	164	153	-10	77	70	-8
Public master's	169	160	-9	66	59	-7
Public community colleges	173	164	-9	---	---	---
Private research	141	140	-1	71	65	-6
Private master's	134	132	-2	62	58	-3
Private bachelor's	148	152	4	---	---	---

Note: Graduate data excludes first professional; data were winsorized to adjust for outliers.

Source: Delta Cost Project IPEDS Database, 1987-2009; 11-year matched set.

Policy implications

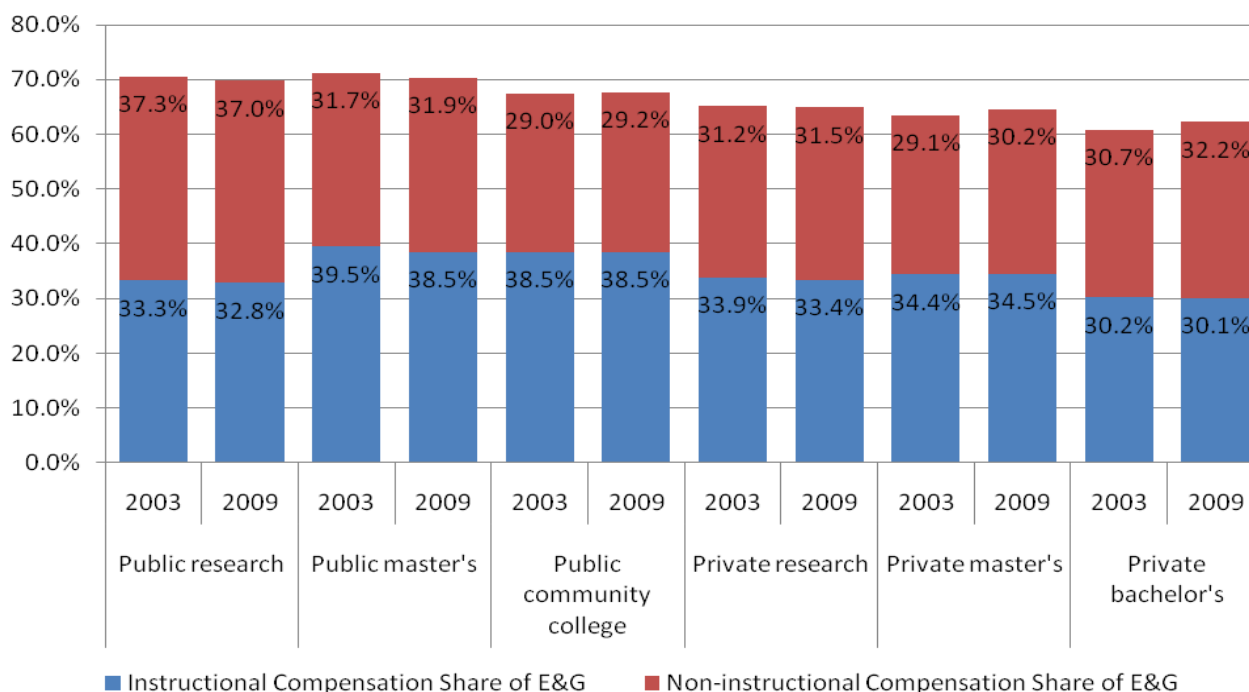
Improvements in instructional efficiency and the translation of credit hours to degree and certificate completions are good news for higher education and for public policy makers. Many policy makers have set a goal to significantly increase the proportion of the population with some type of a high value certificate or degree within this decade. This will require improvements in educational performance at every level of the educational pipeline, from high school graduation to college completion, averaging 4 percent per year. The gains in degree/certificate completion reported here are closer to 1 percent per year, and by themselves are not enough to meet the attainment goals, but they are obviously a step in the right direction.

Trends in Labor Costs

Higher education is a labor-intensive enterprise, and as such, spending on employee compensation—salaries and benefits—is a major driver of costs. Labor costs are thus a natural place to look when attempting to understand spending patterns and changes in higher education.

Compensation accounts for between 60% and 70% of all spending. Spending on *instructional compensation* – faculty staff and benefits – ranges between 30% and 40% of compensation-related spending.

Percentage of Education and General Spending For Employee Compensation -2003-2009



Between 2000 and 2008, all types of institutions have shifted toward greater dependence on teaching by part-time faculty or graduate assistants. Professional and technical staff (such as accountants, human resources staff, and student service personnel) is the second largest group of employees in all types of institutions; professional jobs are somewhat more prevalent among public institutions.

Spending on employee compensation has increased slightly, largely because of increased spending on employee benefits. Benefits increases are particularly steep in the public sector.

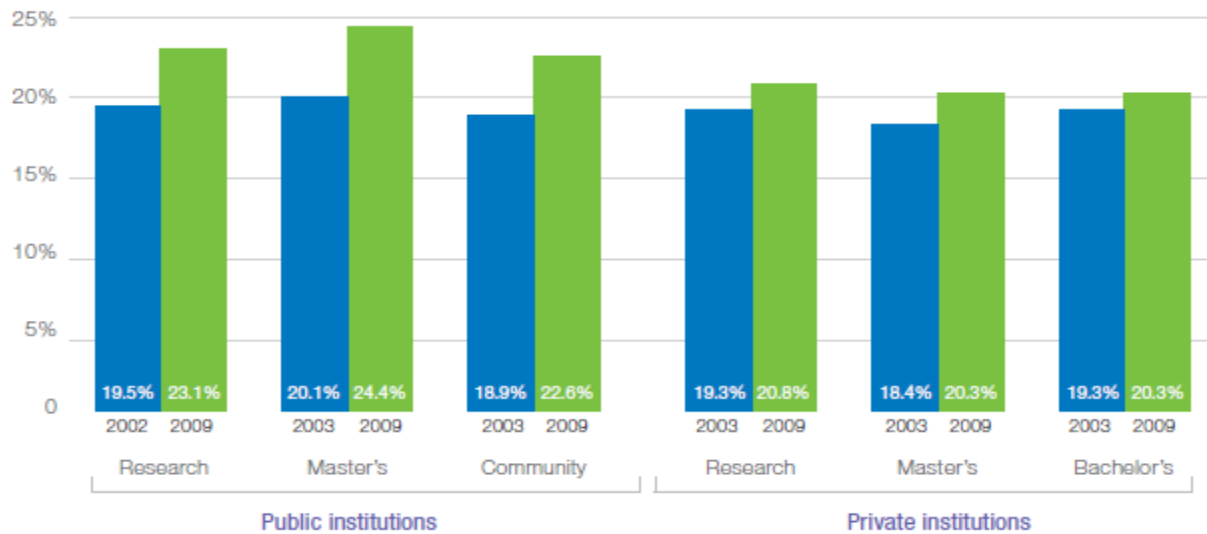
Increases in spending on compensation in public institutions have largely been driven by rising benefit costs. Benefit costs per full-time public employee increased by about 5 percent per year, a rate that is two to three times the growth at private institutions, and far outpaced growth in the average salary per employee at public institutions. By 2009, benefit costs were approaching 25 percent of compensation costs, up from less than 20 percent in 2002. In private institutions, benefits cost shares have increased by far less.

Changes in spending on employee compensation 2002 to 2008

Average annual percent change

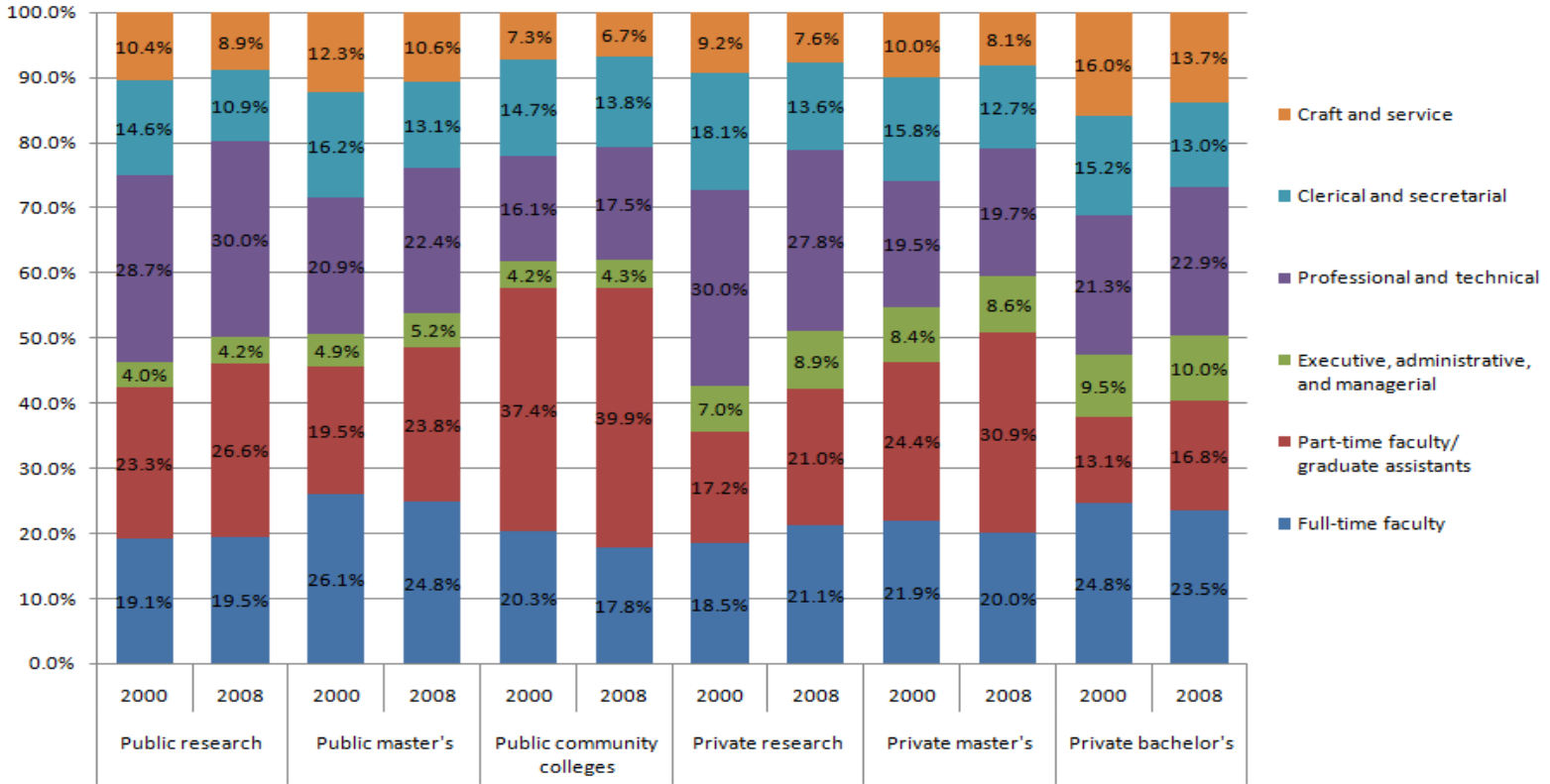
	2002-2008			
	Salary outlay per employee	Benefit cost per full-time employee	Compensation per employee	Compensation per FTE student
Public institutions				
Research	0.9%	5.2%	1.7%	1.6%
Master's	-0.6%	4.6%	0.4%	0.6%
Community colleges	0.7%	5.2%	1.5%	1.1%
Private institutions				
Research	-0.3%	1.6%	0.0%	1.7%
Master's	-0.8%	2.4%	-0.5%	0.6%
Bachelor's	-0.5%	1.3%	-0.2%	0.7%

Benefit share of total compensation costs, AY 2002-2009



Source: Delta Cost Project IPEDS Database, 1987-2008; 11-year matched set.

Distribution of Employees by Type of Job, AY 2000-2008



Source: Delta Cost Project IPEDS database, 1987-2009; 11-year matched set.

The full report is available on-line at <http://www.deltacostproject.org>