



Spending and Results: What Does the Money Buy?

**A Delta Data Update
2000–2010**

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A Delta Data Update, 2000–2010

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This is one in a series of data briefs developed by the Delta Cost Project at AIR using data from the *IPEDS Analytics: Delta Cost Project Database 1987–2010*, which was released on August 14, 2012, by the U.S. Department of Education, National Center for Education Statistics. The intent of these briefs is to update key tables and figures from *Trends in College Spending: Where does the money come from? Where does it go? What does it buy?*¹

This data brief focuses on institutional spending and outcomes between 2000 and 2010, with particular attention paid to changes between 2009 and 2010. The brief looks at two degree-related measures:

- Degree and completion ratios that compare the number of degrees or completions (total awards) to student enrollment
- The cost per the total number of degrees or completions awarded, which looks at education and related (E&R) costs (spending focused solely on the educational mission of colleges and universities) through the lens of student outcomes rather than enrollments

The ratio showing aggregate degree productivity is a comprehensive measure that compares the overall production of degrees to enrollments. Unlike cohort graduation rates that include only full-time, first-time students, this measure captures the outcomes of all students at all levels, including postbaccalaureate, part-time, and transfer students. The outcome and cost measures are single year “snapshots,” and, as such, E&R spending per degree or completion may obscure the costs related to students who attend one institution but graduate from another. This measure also does not account for the production costs of different types of degrees and does not reflect the quality of education. Nevertheless, trends within institutional groups should be less affected by these differences, and changes over time indicate whether production costs are going up or down.

All of the Delta financial measures are shown in 2010 constant dollars. Tables presenting full-time equivalent (FTE) enrollment (the basis for the degree and completion ratios) and the total number of completions are included in the supplemental table section of this update.

Primary Findings on Spending and Results, 2000–2010

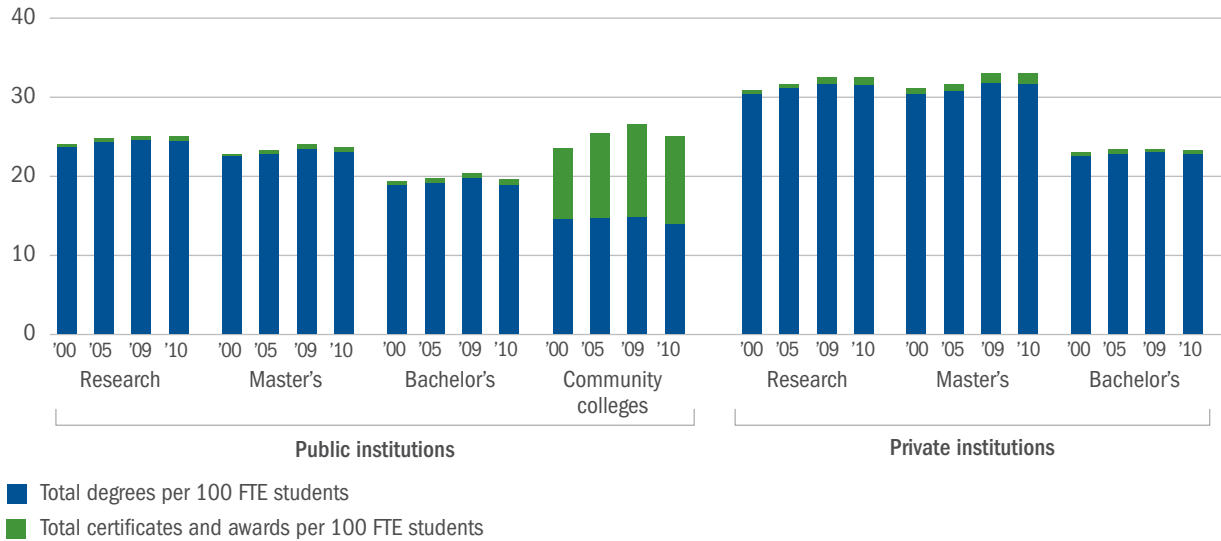
Figure 1 looks at degree and certificate productivity between 2000 and 2010.

- **All types of institutions awarded more degrees in 2010, but degree productivity was flat or declining.** The average degree and certificate productivity failed to improve in 2010. Most types of institutions either held steady or showed slight declines; however, public bachelor’s and community colleges showed large single-year declines, averaging 1 degree per 100 FTE students.
- In addition to degrees, community colleges award many certificates, but the relative rate of certificate production declined similar to that of degrees. When degrees and certificates are combined, community college outcomes decreased by almost 2 completions per 100 FTE, the largest decline among all types of institutions in 2010.

¹ See http://deltacostproject.org/resources/pdf/Trends2011_Final_090711.pdf.

- Growing enrollments, rather than a slowdown in the number of degrees and certificates, hampered degree productivity increases. Completions increased by 3 to 4 percent across all types of public four-year institutions and by 9 percent at community colleges—generally marking the largest single-year increases since 2005. But enrollments often grew faster, particularly at public bachelor’s and community colleges, where FTE enrollment rose by 6 and 12 percent, respectively, in one year.
- Despite making little progress in 2010, most types of institutions showed improvement in productivity outcomes by the end of the decade, adding 1–2 more completions per 100 FTE since 2000; public and private bachelor’s institutions were the exception. At community colleges, this boost came wholly from certificates rather than degrees.
- Private research and master’s institutions consistently demonstrated the highest degree productivity (averaging close to 32 degrees per FTE student). Community colleges averaged the lowest degree productivity rates, but when certificates are included their relative outcomes, they were comparable to public research universities in 2010.

Figure 1
Degree productivity was flat or declining in all types of institutions in 2010.
 Total degrees and completions per 100 FTE students, AY 2000–2010



Source: IPEDS Analytics: Delta Cost Project Database 1987–2010, 11-year matched set.

Figure 2 shows the spending per degree and completion between 2000 and 2010.

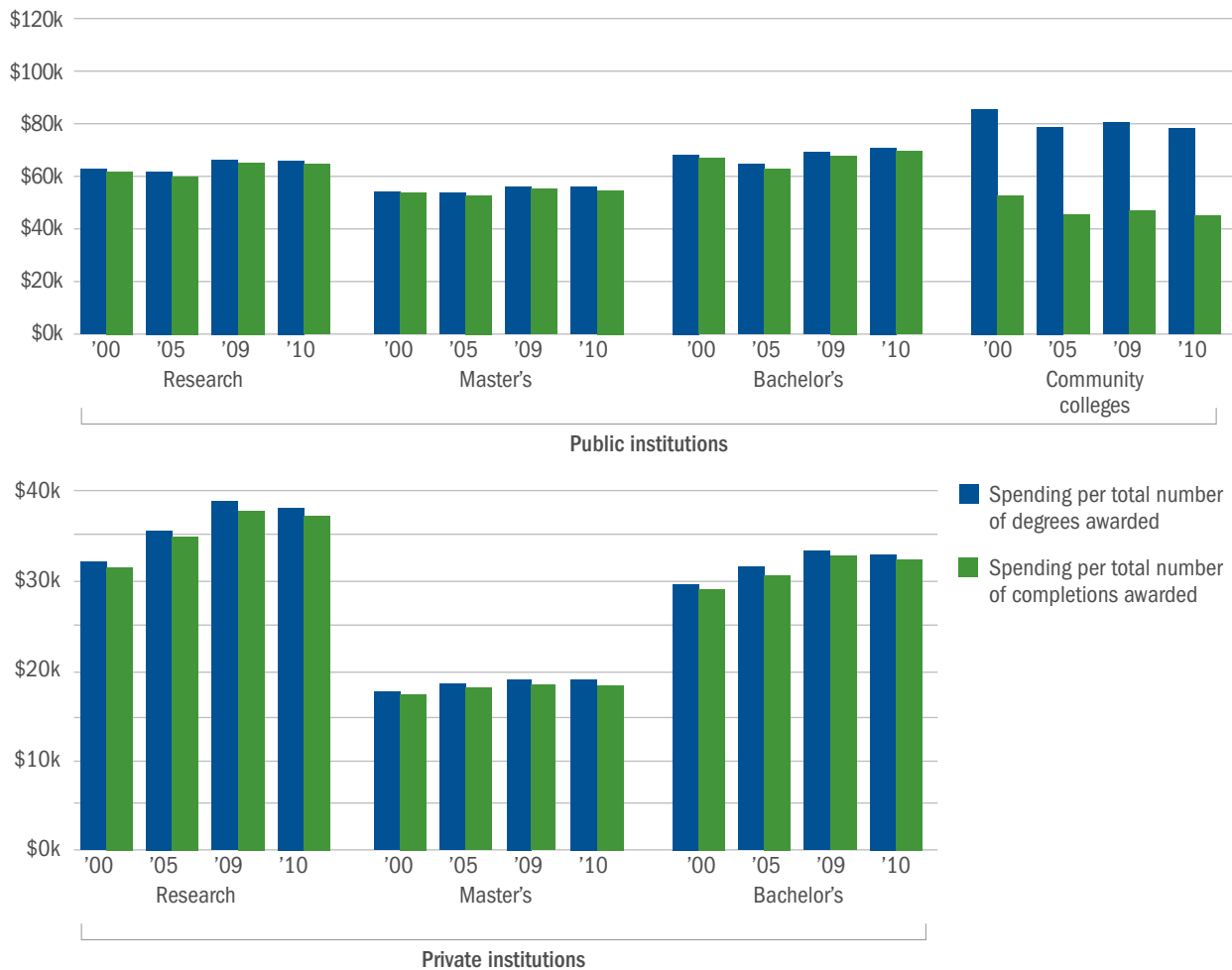
- **The cost per total number of degrees and completions awarded declined in 2010 except at public bachelor’s institutions; since 2000, only community colleges are spending less per degree or completion.** E&R spending per degree and per completion declined between 1 and 2 percent from 2009 to 2010 at most types of public four-year colleges and universities, though it increased at public bachelor’s colleges. The largest one-year change was in community colleges, where average spending per completion declined by 4 percent.

- Despite these recent declines, degree production costs at four-year institutions were still higher in 2010 compared with 5 and 10 years earlier. The largest cost increases were at private institutions, where the cost per completion rose by 18 percent at private research universities and 11 percent at bachelor's colleges over the decade. In public four-year institutions, production cost increases ranged from 2 to 4 percent.
- Only community colleges had lower average production costs by the end of the decade, with the average cost per completion declining by 14 percent since 2000. Community colleges have historically had the lowest cost per completion because short-term certificate programs are generally less costly than degree programs.
- Public and private master's institutions had the lowest costs per completion among four-year institutions in both sectors, averaging \$54,000 in 2010.

Figure 2

Costs per total number of degrees and completions declined in 2010 across most types of institutions, but only community colleges consistently decreased costs over the decade.

Average education and related spending per total number of degrees and completions awarded, AY 2000–2010 (in 2010 dollars)



Source: IPEDS Analytics: Delta Cost Project Database 1987–2010, 11-year matched set.

Supplemental Tables

Figure S1

FTE enrollment, AY 2000-2010

	2000	2005	2009	2010	10-year change	1-year change
Public research	2,996,782	3,346,624	3,561,280	3,669,834	22.5%	3.0%
Public master's	1,722,723	1,950,242	2,092,926	2,163,384	25.6%	3.4%
Public bachelor's	237,245	274,466	290,398	307,902	29.8%	6.0%
Public community colleges	2,843,154	3,496,802	3,801,306	4,251,990	49.6%	11.9%
Private research	837,277	924,412	977,558	1,003,533	19.9%	2.7%
Private master's	790,952	942,520	1,027,568	1,056,664	33.6%	2.8%
Private bachelor's	595,317	664,245	695,177	716,384	20.3%	3.1%

Source. IPEDS Analytics: Delta Cost Project Database 1987–2010, 11-year matched set.

Figure S2

Total number of completions (degrees, certificates, and other awards) by type of institution, AY 2000-2010

	2000	2005	2009	2010	10-year change	1-year change
Public research	729,102	839,580	905,512	934,673	28.2%	3.2%
Public master's	384,778	449,949	496,508	511,810	33.0%	3.1%
Public bachelor's	45,267	53,568	59,489	61,980	36.9%	4.2%
Public community colleges	555,554	753,055	837,509	911,497	64.1%	8.8%
Private research	257,544	291,038	316,023	322,584	25.3%	2.1%
Private master's	245,954	299,719	342,615	347,408	41.2%	1.4%
Private bachelor's	142,330	158,921	168,095	171,625	20.6%	2.1%

Source. IPEDS Analytics: Delta Cost Project Database 1987–2010, 11-year matched set.

About the Delta Cost Project

The Delta Cost Project at American Institutes for Research provides data and tools to help higher education administrators and policymakers improve college affordability by controlling institutional costs and increasing productivity. The work is animated by the belief that college costs can be contained without sacrificing access or educational quality through better use of data to inform strategic decision making. For more information about the Delta Cost Project, visit www.deltacostproject.org.

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