

File Updates

Delta Cost Project IPEDS Database, 1987-2009

INTRODUCTION

This document contains a summary of the changes incorporated into the Delta Cost Project IPEDS database 1987-2009 (released on August 23, 2011). The changes described include those made since the 1987-2008 file was released (on July 9, 2010). The 1987-2009 data file was used for the Delta Project's *Trends in College Spending, 1999-2009* report (published September 14, 2011).

CHANGES TO THE 1987-2009 DATA FILE

1. New Variables

Variable	Label	Notes
FTE12mn	12-month full-time equivalent enrollment	Calculated by National Center for Education Statistics from credit data. Consistent data are only available for 2004+, so this variable is not the basis for Delta trend analyses.
federal07_net_pell	Revenue from federal grants and contracts, less Pell grants	Excludes Pell grants if they were reported as federal grants rather than a pass through to net tuition.
federal10_net_pell	Revenue from federal appropriations, grants and contracts, less Pell grants	Excludes Pell grants if they were reported as federal grants rather than a pass through to net tuition.
Other04	Other non-operating revenues	Existing IPEDS variable not previously included in the Delta Database.
rschpub01	Expenditures for research and public service	Reporting category used by for-profit institutions, so this was created for all institutions.
acadinststud01	Expenditures for academic and institutional support and student services	Reporting category used by for-profit institutions, so this was created for all institutions.
acadinstsupp01	Expenditures for academic and institutional support	For for-profit institutions, the student services share was estimated (using proxy shares) and removed so that E&R could be estimated for these institutions.
postmastFPcert	Number of post-master's and first professional certificates granted	Result of a change in reporting in 2009.
total_full_time_postbacc	Total number of full-time postbaccalaurate students	Result of a change in reporting in 2009.
total_part_time_postbacc	Total number of part-time postbaccalaurate students	Result of a change in reporting in 2009.
total_postbacc	Total number of postbaccalaurate students	Result of a change in reporting in 2009.

- Renamed Variables

New Variable	Old Variable
priv_invest_endow	aff_priv_invest_endow

2. Revised Variables:

- Inflation Variables

Variables	CPI_index
	CPI_Scalar_2009
	HEPI_Scalar_2009
	HECA_Scalar_2009
Revision	The CPI index was recalculated as a fiscal year (July-June) index which better reflects the IPEDS financial reporting period. The scalar variables were recalculated to inflate dollars to \$2009 rather than \$2008 and were renamed to reflect this change.

- Matched Set Variables

Variables	matched_n_87_09_23
	matched_n_99_09_11
	matched_n_04_09_6
Revision	<p>The matched set variables were advanced a year to reflect an additional year of data. The 11-year panel represents the 1999-2009 period analyzed in the <i>Trends in College Spending, 1999-2009</i>. The number of institutions in the matched set will vary depending on whether Carnegie_sector_2000 or Carnegie_sector_2005 is used for analysis, as some institutions changed categories in the Carnegie 2000 and Carnegie 2005 classifications.</p> <p>The matched set variables only includes institutions in the U.S. and DC (institutions located in territories are not included). Some institutions with complete data were removed from the matched set because they contained extreme outliers.</p>

- Revenue Variables

Variables	other05
Revision	This variable now includes “other non-operating revenue” (other04).

Variables	auxother_rev
Revision	This now include revenue from “educational sales and services” (edactivity03). Under GASB reporting standards for 2002-2008, educational sales and services were already included in “other” revenue (other03); in all other years and forms it was reported separately. (auxother_rev also reflects changes to other05 noted above).

Variables	stable_operating_rev
	tot_rev_wo_auxother_sum
	tot_rev_w_auxother_sum
Revision	These variables now use federal10_net_pell rather than federal10. (“stable_operating_rev” and “tot_rev_w_auxother_sum” also reflects changes to “auxother_rev” noted above.)

- **Expenditure Variables**

Variables	studserv01
Revision	Student services spending was estimated for for-profit institutions for years 2000-2009 (they did not report this as a separate category after 1996), so that education and related spending (eandr) could be estimated.

Variables	other01
Revision	For GASB institutions, this variable now includes “other non-operating” expenditures (othernon01). See mapping file.

Variables	eandg01
Revision	For FASB institutions 1997+, corrected calculated so it equals eandg01_sum.

Variables	eandg01_w_auxother_sum
	auxother_cost
Revision	These variables now include “other non-operating” expenditures (othernon01) that were added to “other01” as noted above.

- **Staffing Variables**

Variables	ftall1-ftall8
	ptall1-ptall8
Revision	Imputations for these staffing variables were recalculated.

3. **Deleted Variables:**

Variable	Label	Notes
priv_invest_endow	Revenue from private gifts, grants, and contracts; investment returns, and endowment earnings.	This priv_invest_endow variable currently in the database also includes gifts from affiliated entities. The original “aff_priv_invest_endow” variable was renamed as “priv_invest_endow” and the original version of this variable (without affiliated entities) was deleted.
Tot_rev_wo_auxoth_sum_old	Total revenue (without affiliated entities,	This was an old revenue variable that did not include

	auxiliary, hospital, independent operations, and other sources)	affiliated entities.
Tot_rev_w_auxoth_sum_old	Total revenue (with auxiliary, hospital, independent operations, and other sources; excluding affiliated entities)	This was an old revenue variable that did not include affiliated entities.

Groupings

For-profit data are now “grouped” in the 1987-2009 data file according to their parent/child reporting flags. A few additional not-for-profit institutions were also grouped.

Imputations

The Delta IPEDS Database 1987-2009 involves two different imputation procedures: The general dataset imputations, which remain unchanged from the prior 1987-2008 database, and the FASB imputations. ***In a change from the 1987-2008 data file, the current database only includes FASB imputations for a limited number of years (1997-2003). The FASB imputations were removed for 2004+.***

1. **Dataset imputations** – Limited imputation procedures have been employed for all variables, as needed, in the Delta dataset since its inception. The main imputation procedure is conservative in that imputations are made only when a single year of data is missing (i.e. data for both the prior and successive years are available).
2. **FASB imputations** – A second imputation procedure was developed (beginning with the 1987-2007 dataset) to improve the comparability between Common Form, FASB, and GASB expenditure data: data were imputed for FASB-reporting institutions (primarily private, non-profit institutions) when institutionally reported data was unavailable. Expenditure data for GASB-reporting institutions (i.e. public institutions) were not affected, nor were any other non-expenditures variables for both FASB and GASB institutions.

The FASB imputations were employed to improve comparability between different financial reporting standards and forms: namely the differences in expenditure reporting standards between the Common Form (1987-1997), the FASB form for private, non-profit institutions (1997+) and the GASB form for public institutions (2002+), as well as the changes made within the FASB reporting standards over the 1997-2009 period. Beginning in 2008 a new “aligned form” was introduced which allowed public institutions to report expenditure in a format similar to FASB institutions; no “FASB imputations” were necessary (nor was any historic data available) to make the data comparable to the other reporting formats.

In the current 1987-2009 database:

- FASB imputations are limited to the 1997-2003 period.
- FASB imputations for 2004+ that were included in previous datasets have been removed; adjustments to the expenditure estimates now use IPEDS reported data only.

- Review of the data revealed that imputations for 2004+ were providing little additional benefit as the FASB expenditure reporting format stabilized over time, and more institutions were reporting the component expenditure data.
- Removal of the FASB imputations did not significantly change overall spending estimates and trends, and thus the time and expense of constructing these imputations was no longer considered worthwhile.

Background: Prior to 1997, all institutions reported information to IPEDS using the Common Form, which included operations and maintenance (O&M) as a separate functional expenditure category and did not include data on interest expenditures. When the separate reporting formats were introduced in 1997, GASB institutions continued to report O&M as a separate expenditure category and also began reporting interest as an expenditure category. However, FASB institutions began following different standards which embed these interest and O&M expenses within the functional expenditure categories (i.e. instruction, research, etc.).

Between 1997 and 2001, FASB institutions did not report interest or O&M as stand-alone expenditure categories in IPEDS. Thus, among FASB institutions, expenditure data within the functional categories was significantly higher during this period than in the prior and subsequent years when the interest and O&M had not been included, or could be removed. Beginning in 2002, FASB institutions could separately report the interest and O&M components within each functional expenditure category; thus, these interest and O&M components could be “backed out” of the functional expense category totals and re-aggregated into stand-alone O&M and interest expense categories. However, some institutions did not report any interest and/or O&M data, or only reported partial data over the 2002-2008 period - meaning they may not have reported interest and/or O&M every year, or they may have reported data in some, but not all, of the functional expense categories.

FASB imputation procedure: The general procedure we originally followed to make the data more comparable for the entire reporting period, included imputing interest and O&M data (separately) for *all* FASB institutions for 1997-2001; and then also imputing data for those institutions that did not report data (or reported partial data) for 2002+. However, in the 1987-2009 dataset we only included imputations through 2003; in 2004-2009 we used only reported data to back out interest and O&M. The estimated or reported values for interest and O&M were subtracted from the reported total values in the functional expenditure categories to create new estimates of spending in the functional expense categories, net of interest and O&M (i.e. $\text{instruction01} = \text{total instruction} - [\text{O\&M attributed to instruction} + \text{interest attributed to instruction}]$). (Note: in 1987-2009 Delta dataset, the original expenditure data reported by institutions, with the interest and O&M still embedded, is available for 1997-2009 and denoted with the suffix “_fasb”, i.e. $\text{instruction01_fasb}$).

Specifically, the imputation procedure employed the following methodology: Using data from 2002-2008, 1) the reported interest and O&M in each functional expense category were computed (separately) as a share of total expenditures; 2) for each institution, an institutional median share was also determined for interest and O&M (separately) for each expense category across the 2002-2008 period; the institutional median was used in years when there was no reported share. 3) For those institutions with no reported data for a particular expense category over the 2002-2008 period, a “peer group median share” was constructed using the median share from a set of institutions with the same Carnegie

designation and similar FTE and core expenditures (instruction, student services, academic support, and institutional support).

The shares for interest and O&M (either institutional shares, institutional median shares, or peer group median shares) were then applied to the total expenditures for all years, 1997-2003; imputed values were assigned where interest and O&M data were missing. The sum of the interest and O&M data for each functional category were then scaled to ensure they summed to the control totals for interest and O&M. Next, the O&M and interest data (both reported and imputed) were backed out of the functional expense category totals for all years, 1997-2009, to generate the new values for the functional expenditure categories (note: O&M was not backed out of auxiliaries, hospitals, independent, and other operations to maintain comparability with GASB reporting). Finally, for the 1997-2003 period the O&M totals were recalculated in each year as the sum of the actual and imputed O&M components that had been backed out from the functional expenditure categories.

Trends in College Spending Online (TCS Online)

Data for 2004-2009 is included in our online data system TCS Online (www.tcs-online.org), which shows both U.S. averages and institutional-level data. The 1987-2009 master data file serves as the base file for TCS Online. The U.S. tables are drawn from the same data file used in the Trends report (using the 11-year matched set, and all original grouped institutions).

Because TCS online shows data for a more limited number of years, we are able to present additional “ungrouped” institution-level data in the TCS institution tables. These new ungroupings are possible because some institutions no longer report as parents/children during the 2004-2009 period shown in TCS. However, these institutions remain in their original “groups” in the master data base (because of parent/child reporting at some point over the 1987-2009 period); the newly ungrouped institutions shown in TCS are not available in the Delta IPEDS database.