

the condition of education 2008



INDICATOR 36

Variations in Instruction Expenditures per Student

The indicator and corresponding tables are taken directly from *The Condition of Education 2008*. Therefore, the page numbers may not be sequential.

Additional information about the survey data and supplementary notes can be found in the full report. For a copy of *The Condition of Education 2008*, visit the NCES website (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008031>) or contact ED PUBs at 1-877-4ED-PUBS.

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Finance

Variations in Instruction Expenditures per Student

Between 1997–98 and 2004–05, differences between states accounted for a greater percentage of the variation in instruction expenditures per student among unified public school districts than did differences within states.

A number of methods can be used to measure the variation in the amount school districts spend per student on instruction. This indicator uses the *Theil coefficient* because it provides a national measure of differences in instruction expenditures per student that can be decomposed into separate components to measure school district-level variations both between and within states. In this indicator, a coefficient of zero indicates that there is no variation in the instruction expenditures per student in unified public school districts for kindergarten through grade 12, and the Theil coefficient, which has a maximum possible value of 1.0, increases as the amount of variation present increases.

Across U.S. districts, the total variation, after controlling for geographic cost differences,¹ in instruction expenditures per student increased between the 1997–98 and 2004–05 school years (see supplemental table 36-1). The between-state variation also increased during that

time, but the within-state component remained largely unchanged. In the 1997–98 school year, 57 percent of the variation in instruction expenditures per student was due to the between-state differences and 43 percent was due to within-state differences. As the between-state component of the variation increased from 1997–98 to 2004–05 and the within-state component remained largely unchanged, the percentage of the total variation due to the between-state component increased to 66 percent in 2004–05 and that due to the within-state component decreased to 34 percent.

Changes in the variation in instruction expenditures per student over time may also reflect differences across school districts in the amount of services or goods purchased, such as the number of classroom teachers hired. These changes may, in part, reflect various state litigation, school finance reform efforts, and changes in the composition of student enrollment.

¹ Instruction expenditures in this indicator have been adjusted for geographic cost differences using the Comparable Wage Index (CWI). In *indicator 35*, expenditures were not presented by geographic area so no such adjustment was required. Rather, in *indicator 35*, the Consumer Price Index (CPI) was used to adjust for the effects of inflation. The CWI is available from 1997–98 to 2004–05. See *supplemental note 11* for more information.

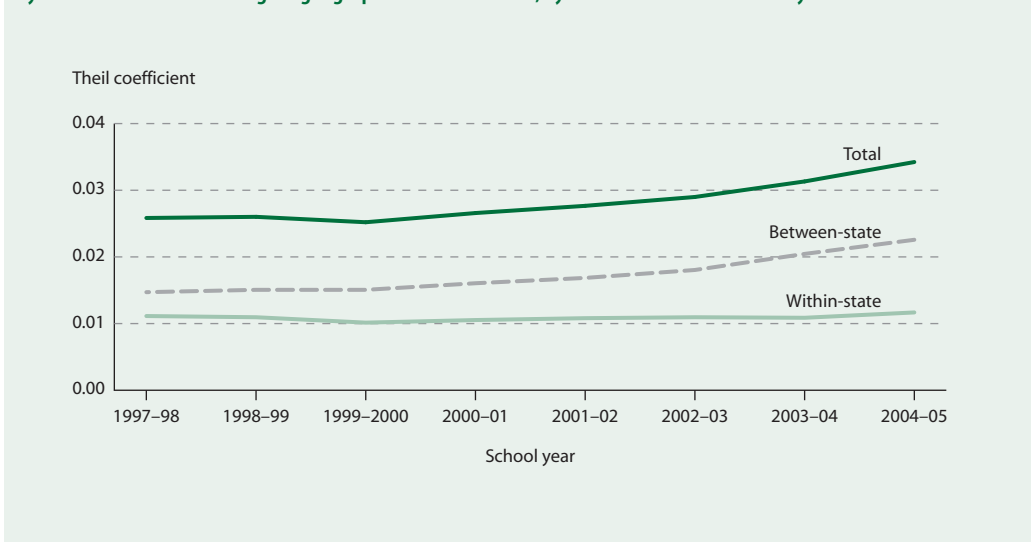
NOTE: For more information about the *Theil coefficient*, see *supplemental table 36-1* and *supplemental note 11*. Public elementary and secondary unified districts are those districts that serve both elementary and secondary grades. In 2004–05, approximately 91 percent of all public elementary and secondary school students were enrolled in unified school districts.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Common Core of Data (CCD), “NCES Longitudinal School District Fiscal-Nonfiscal (FNF) File, Fiscal Years 1990 to 2002”; “School District Finance Survey (Form F-33),” 2002–03 to 2004–05; and NCES Comparable Wage Index Files, “School District CWI.”

FOR MORE INFORMATION:
 Supplemental Notes 3, 11
 Supplemental Table 36-1
 NCES 2000-020
 NCES 2006-321
 Murray, Evans, and Schwab
 1998



VARIATIONS IN EXPENDITURES: Variation in instruction expenditures per student in unified public elementary and secondary school districts controlling for geographic cost differences, by source of variation: School years 1997–98 to 2004–05



Variations in Instruction Expenditures per Student

Table 36-1. Variation and percentage distribution of variation in instruction expenditures per student in unified public elementary and secondary school districts, by source of variation for unadjusted estimates and for estimates adjusted for geographic cost differences: 1989–90 to 2004–05

School year	Theil coefficient ¹			Percentage distribution		
	Total	Between-state component	Within-state component	Total	Between-state component	Within-state component
Not adjusted for geographic cost differences						
1989–90	0.0448	0.0322	0.0125	100.0	72.0	28.0
1990–91	0.0469	0.0346	0.0123	100.0	73.8	26.2
1991–92	0.0434	0.0320	0.0115	100.0	73.6	26.4
1992–93	0.0437	0.0324	0.0113	100.0	74.2	25.8
1993–94	0.0405	0.0301	0.0104	100.0	74.3	25.7
1994–95	0.0389	0.0288	0.0100	100.0	74.2	25.8
1995–96	0.0373	0.0279	0.0094	100.0	74.8	25.2
1996–97	0.0349	0.0257	0.0092	100.0	73.7	26.3
1997–98	0.0332	0.0246	0.0086	100.0	74.0	26.0
1998–99	0.0335	0.0249	0.0087	100.0	74.2	25.8
1999–2000	0.0337	0.0253	0.0085	100.0	74.9	25.1
2000–01	0.0370	0.0280	0.0090	100.0	75.7	24.3
2001–02	0.0373	0.0283	0.0089	100.0	76.1	23.9
2002–03	0.0391	0.0303	0.0088	100.0	77.6	22.4
2003–04	0.0420	0.0327	0.0093	100.0	77.9	22.1
2004–05	0.0455	0.0358	0.0097	100.0	78.7	21.3
Adjusted for geographic cost differences²						
1997–98	0.0258	0.0147	0.0111	100.0	56.9	43.1
1998–99	0.0260	0.0151	0.0110	100.0	57.9	42.1
1999–2000	0.0252	0.0151	0.0101	100.0	59.8	40.2
2000–01	0.0266	0.0161	0.0105	100.0	60.4	39.6
2001–02	0.0277	0.0168	0.0108	100.0	60.9	39.1
2002–03	0.0290	0.0180	0.0110	100.0	62.2	37.8
2003–04	0.0313	0.0204	0.0109	100.0	65.3	34.7
2004–05	0.0342	0.0226	0.0117	100.0	65.9	34.1

¹The *Theil coefficient* measures variation for groups within a set (i.e., states within the country) and indicates relative variation and any differences that may exist among them. It can be decomposed into components measuring between-state and within-state variation in expenditures per student. It has a minimum value of zero and increasing values indicate increases in the variation, with a maximum value of 1.0. See *supplemental note 11* for more information.

²The NCES Comparable Wage Index (CWI) was used to adjust for geographic cost differences for 1997–98, the first year that it is available, through 2004–05. For more details on the CWI, see *supplemental note 11*.

NOTE: Detail may not sum to totals because of rounding. Public elementary and secondary unified districts are those districts that serve both elementary and secondary grades. In 2004–05, approximately 91 percent of all public elementary and secondary school students were enrolled in unified school districts.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Common Core of Data (CCD), "NCES Longitudinal School District Fiscal-Nonfiscal (FNF) File, Fiscal Years 1990 to 2002"; "School District Finance Survey (Form F-33)," 2002–03 to 2004–05; and NCES Comparable Wage Index Files, "School District CWI."