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HIGHLIGHTS

- Inflation-adjusted per-pupil spending increased 42 percent between 1989 and 2007.
- Interstate variation in state revenues grew after the recession of 2001.
- Following the recession of 2001, high-spending states experienced vigorous growth in per-pupil spending, while lower-spending states experienced far slower growth.
- The current economic downturn could exacerbate interstate disparities in education revenues.

Spending Is Up, and So Are Interstate Disparities in States' K-12 Education Revenues

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State funding for primary and secondary education has risen in all states over the past two decades. But differences in per-pupil revenues across states have grown in recent years. During the economic expansion of the 1990s, when state revenues grew rapidly, interstate variation in state education revenues per pupil decreased. Since the recession of 2001, however, inflation-adjusted growth slowed and interstate variation in state revenues has widened. This paper examines the increase in interstate variation following the 2001 recession and considers the implications of the current economic downturn for state education budgets.

Data on enrollment, revenues, and expenditures are from the National Center for Education Statistics (NCES) Common Core of Data.² All dollar values are adjusted for inflation using the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (BLS CPI-U) (Current Series).³ Years refer to school years ending in the year specified, unless otherwise noted.

Trends in Primary and Secondary Education Funding

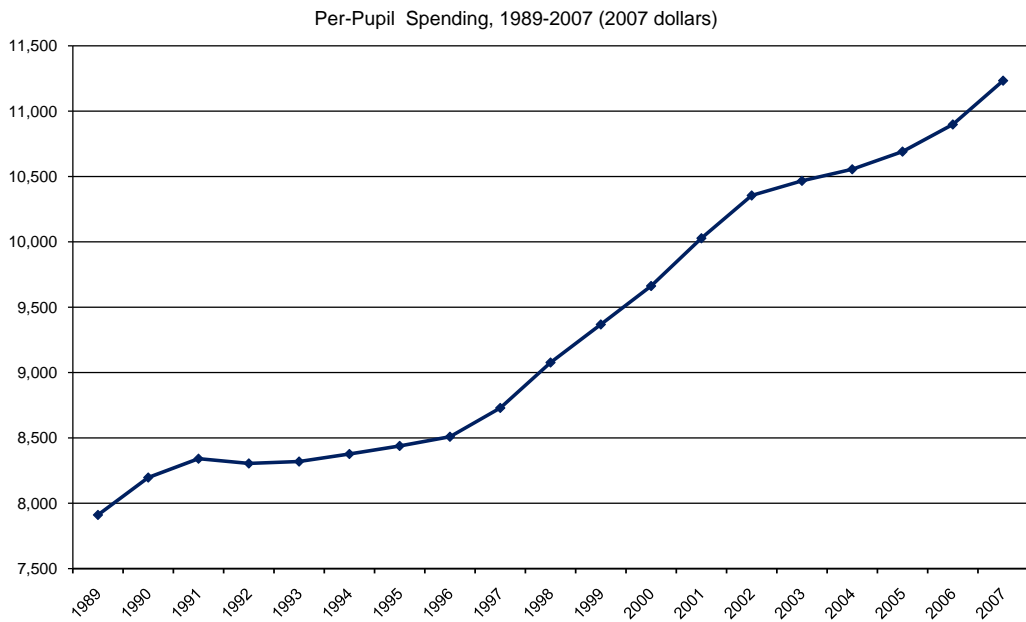
Education spending in the U.S. has risen over the past two decades. Even when adjusted for inflation, per-pupil spending increased 42 percent between 1989 and 2007, from \$7,911 to \$11,233 per pupil (in 2007 dollars). Rather than a constant rate of increase, Figure 1 shows a pattern of steep increases, alternating with periods of moderate growth in the wake of the recessions of the early 1990s and 2001.

Figure 2 shows how changes in revenues from federal, state, and local sources contributed to the growth in education spending, and how the three revenue streams differed in their growth patterns. State revenues, which represent almost half of the funding for primary and secondary education, slumped (in inflation-adjusted terms) after the early-1990s and 2001 recessions, but each time posted a strong recovery.

By contrast, local revenues — which typically account for a slightly smaller share than state revenues — increased more or less steadily over the entire period, with the exception of a dip in

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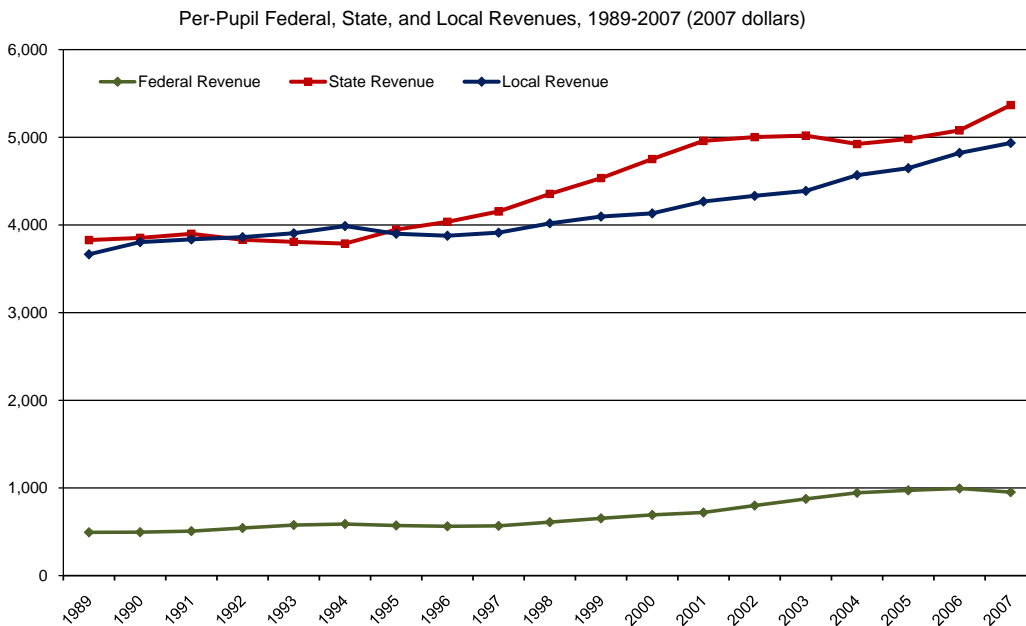
Figure 1. Spending Growth Slowed Temporarily After the Recessions of the Early 1990s and 2001



Source: NCES Common Core of Data, adjusted using BLS CPI-U (Current Series).

the mid 1990s. The federal government provides a much smaller share of primary and secondary education funding, but that share grew from six percent in 1989 to eight percent in 2007. Like local revenues, real federal revenues per pupil increased fairly steadily over the period – including the years following the recessions of the early 1990s and 2001.

Figure 2. State Revenues Slumped After the Recessions of the Early 1990s and 2001



Source: NCES Common Core of Data, adjusted using BLS CPI-U (Current Series).

Interstate Variation in State Revenues

National trends in education revenues mask substantial differences across states. Per-pupil revenues vary widely, with some states outspending others by a factor of two or more. This may not be surprising, since states differ in terms of fiscal capacity, the priority they place on education funding, and the cost of living. States also differ in terms of the pace at which they increase (or cut) per-pupil revenues, with the result that the degree of interstate variation in education funding is not static.

To quantify the degree of interstate variation, we calculated the standard deviation — which measures the average distance of each state's per-pupil state revenues from the mean — for each year from 1989 to 2007. Then, in order to be able to compare variability across multiple years, we calculated the coefficient of variation, which expresses the standard deviation as a percentage of the mean. The higher the coefficient, the more variable state per-pupil revenues relative to the mean.

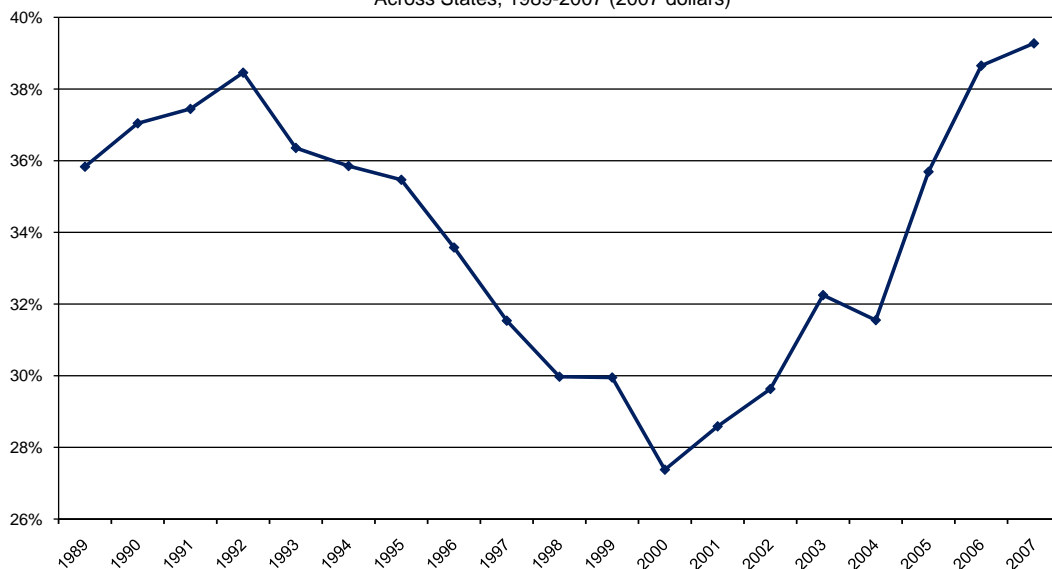
Figure 3 shows that the coefficient of variation fell throughout most of the 1990s, which means that education revenues were becoming more equal across states. But after 2000, the trend reversed, and by 2006 variation surpassed its 1992 peak. In other words, *variation in state revenues per pupil fell during the economic expansion of the 1990s but grew after the 2001 recession.*

State Revenue Trends Across High- and Low-Spending States

The increase in variation since 2000 may have been caused by increases in the revenues of states at the high end of the

Figure 3. Variation in State Revenues Grew After the 2001 Recession

Coefficient of Variation (Ratio of Standard Deviation to the Mean) in Per-Pupil State Revenues Across States, 1989-2007 (2007 dollars)



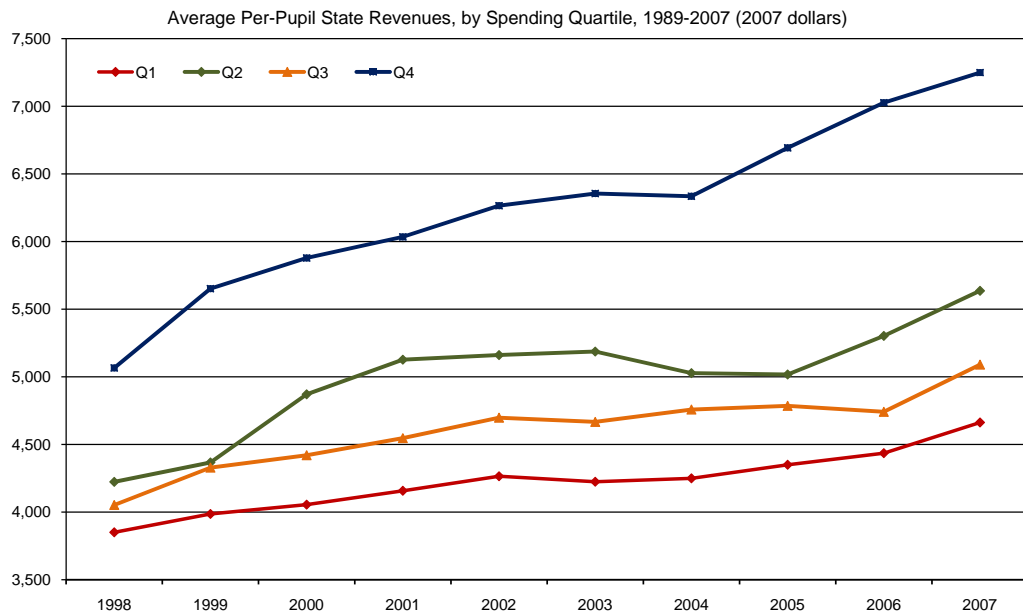
Source: NCES Common Core of Data, adjusted using BLS CPI-U (Current Series).

distribution, or decreases in states at the low end, or some combination of both. To understand how this state variation came to be, we divided states into four groups (“spending quartiles”) based on their average *total* per-pupil spending for the three-year period 1998-2000, when variation in state revenues was at its minimum after the economic expansion of the middle and late 1990s. The state groupings are shown in Table 1 (see next page). States in the high- and medium-high-spending groups were more likely to be in the Northeast or Midwest and tended to be wealthier, with lower child poverty rates. Medium-low and low-spending states were more likely to be in the South and West and were less wealthy, with higher rates of children living in poverty.

Figure 4 reveals *growing disparities in real state revenues per pupil* over the past decade, particularly between the high-spending group and the other three. In 2000, when variation was at its trough (see Figure 3), the gap between average per-pupil spending for high- and low-spending states was about \$1,825. Interstate variation increased, however, after the recession of 2001, fueled by strong growth in the high-spending group, which stalled only briefly in 2003 and 2004 and began a vigorous recovery in 2005. Although the lower three groups followed varied patterns – stalling earlier and recovering later (medium-low), double-dipping (medium-high), or recovering very gradually (low) – they all posted far slower growth than the high-spending group following the recession of 2001, and the difference between the high- and low-spending groups swelled to about \$2,585 per pupil by 2007.

Past trends suggest that the current economic downturn could further exacerbate interstate disparities in education revenues. Real state revenues per pupil in the three lower-spending groups

Figure 4. Revenues in High-Spending States Grew Rapidly After the 2001 Recession



Source: NCES Common Core of Data, adjusted using BLS CPI-U (Current Series).
 Note: State quartiles are based on real per-pupil total spending averages for 1998-2000.

Table 1. Classification Based on Average Per-Pupil Spending, 1998-2000 (2007 dollars)

Spending Quartile	State	Average Per-Pupil Spending, 1998-2000 (2007 dollars)
Q4 High (13 states)	New Jersey	13,715
	Connecticut	13,039
	New York	12,850
	Alaska	11,883
	Michigan	11,058
	Pennsylvania	10,933
	Wisconsin	10,905
	Rhode Island	10,779
	Massachusetts	10,704
	Delaware	10,618
	Maryland	10,320
	Vermont	10,216
	Minnesota	10,128
Q3 Medium-High (12 states)	Indiana	10,084
	Illinois	9,896
	Maine	9,697
	Wyoming	9,586
	Oregon	9,484
	Washington	9,268
	Ohio	9,182
	Virginia	9,150
	West Virginia	9,092
	Nevada	8,945
	Colorado	8,922
	Nebraska	8,873
Q2 Medium-Low (12 states)	New Hampshire	8,826
	Georgia	8,807
	Hawaii	8,804
	Texas	8,771
	Iowa	8,733
	South Carolina	8,522
	Florida	8,518
	North Carolina	8,475
	California	8,405
	Missouri	8,370
	Kansas	8,246
	Montana	8,103
Q1 Low (13 states)	New Mexico	7,881
	Arizona	7,876
	South Dakota	7,722
	Louisiana	7,604
	North Dakota	7,509
	Alabama	7,482
	Tennessee	7,390
	Kentucky	7,390
	Idaho	7,183
	Oklahoma	7,104
	Arkansas	6,837
	Mississippi	6,790
	Utah	6,305

Sources: Rockefeller Institute analysis of NCES Common Core of Data and BLS CPI-U (Current Series).

of states recovered more slowly following the 2001 recession than they did in high-spending states (Figure 4). If state revenues in lower-spending states again see a slow recovery after the current downturn, the gap between their education funding and that in high-spending states could increase.

Conclusion

States vary tremendously in their funding of education, and that variation has been increasing since the 2001 recession. If past patterns hold, the current economic downturn could exacerbate interstate disparities in education revenues.

In general, lower-spending states — which tend to have higher child poverty rates and thus higher levels of educational need — are devoting relatively fewer resources to education. In the current economic downturn, student need could worsen along with resource disparities. Thus, in tough economic times there is a growing mismatch between funding levels and student need.

In our federal system, there is no simple mechanism to remedy these interstate disparities.⁴ Each state decides for itself what resources to devote to education, considering its fiscal capacity and its choices about how much to rely on local funding.

There are ways, however, to make the relationship between funding and need more transparent to policymakers. Some states and large districts have developed systems that reflect the differential costs of educating students with different needs. These systems assign each student a “base weight” of 1.0 and additional weights based on factors such as poverty and proficiency in English.

Of course, political forces sometimes stymie efforts to distribute funding on the basis of student need. But providing policymakers with funding information on the basis of weighted pupils rather than (or alongside) simple per-pupil or aggregate figures could help them better understand the relationship between their funding decisions and educational need. Then they could make an informed choice as to whether to distribute funding using a traditional population-based formula or using a formula that is weighted to reflect student need.

References

- 1 The authors wish to thank Donald Boyd and Robert B. Ward for their valuable suggestions regarding inflation adjustments and analyzing variation across states, and Suho Bae and Heather Trela for their work on earlier drafts.
- 2 National Center for Education Statistics (NCES) Common Core of Data, <http://nces.ed.gov/ccd/bat/>.
- 3 Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (BLS CPI-U) (Current Series), <http://www.bls.gov/cpi/data.htm>.
- 4 For an extensive discussion of interstate disparities and recommendations for how they might be addressed by changes in federal education aid, see Goodwin Liu, "Interstate Inequality and the Federal Role in School Finance," in *Holding NCLB Accountable: Achieving Accountability, Equity, & School Reform*, ed. Gail L. Sunderman (Thousand Oaks, CA: Corwin Press, 2008): 103-120.

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The mission of the Rockefeller Institute's Fiscal Studies program is to provide high-quality, practical, independent research about state and local programs and finances. The Program conducts research on trends affecting all 50 states and serves as a national resource for public officials, the media, public affairs experts, researchers, and others. You can contact Allison Armour-Garb at armoura@rockinst.org; Lucy Dadayan at dadayanl@rockinst.org; and Thomas Gais at gaist@rockinst.org.