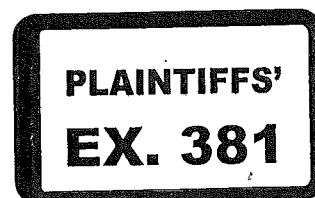


Reply to Eric Hanushek's Graph of State Spending Changes & State NAEP Changes  
Bruce D. Baker

May 23, 2012

*If we choose to set aside concerns regarding the veracity of the analysis:*

1. Eric Hanushek seems to be asserting that given the funding increase that occurred in Kansas, Kansas achieved less gain than would be expected in state average NAEP scores. It would appear from the figure that Kansas is in fact, right near the mean (just below the trendline) for the group of states with supposedly similar increases in real expenditure (per pupil?). That is, it is highly doubtful that Kansas is either statistically significantly lower than the mean, or lower than the mean (trendline) to any policy relevant, meaningful extent. In other words, Kansas got from its relatively average investment roughly what was expected from an investment of that magnitude – relatively average NAEP gain.
2. Further, this analysis speaks only to state average performance change in Kansas resulting from state total increased investment. While it would be nice to see Kansas showing a substantial state average NAEP gain coupled with its relatively average increase in spending, that's largely beside the point in the present case. As I understand it, plaintiffs concerns in this case are not about state average funding or state average outcomes, but rather about the plight of children in high need districts who continue to perform poorly on numerous outcome measures and continue to attend districts where funding falls well short of funding mandated and promised in remedy legislation following *Montoy v. Kansas*. This newly submitted analysis has little or nothing to do with plaintiffs concerns, or with respect to expected outcomes of remedy legislation.
3. Note also that this graph indicates that Kansas increase in funding was relatively average, a substantively different characterization than that provided by Florence Neymotin in the article referenced by Michael Podgursky.
4. Eric Hanushek's argument in his original report is effectively that there exists no predictable, no systematic relationship between investment of money into schools and gains in student outcomes. This analysis provided by Eric Hanushek relies on the assertion that we can compare the effectiveness of states' investments in schools by looking at how those states outcomes compare with respect to states making similar investments. This analysis relies on acceptance that there is an average return – represented by the upward sloping trendline – expected from state aggregate investment. That is, increased funding is expected to yield a linear return in NAEP scores. This albeit oversimplified representation seems in direct conflict with the core of Eric Hanushek's original testimony.
5. Further, accepting this analysis as meaningful, Eric Hanushek has also negated entirely his claims of failed school finance reforms and inefficient investment of education funding in New Jersey.



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As it turns out in this new figure, New Jersey's NAEP gains far exceed NAEP gains of states that made similar investments in state aggregate spending. Yet a central thesis of Eric Hanushek's original report and his book with Alfred Lindseth is that New Jersey is perhaps the perfect example of why school finance reforms and judicial intervention yield no benefits to children. Does this graph represent a retraction of Eric Hanushek's prior testimony regarding New Jersey?

*However, I have a few concerns regarding the veracity of this analysis:*

1. First, the information here is very sketchy. I interpret this graph as representing the inflation adjusted change in *per pupil spending*? (as opposed to total spending). Certainly, one would want to do this analysis with per pupil spending, if one wanted to do it at all. I'm unsure whether the figure is current operating expenditures, total expenditures, or just state and local funds. That aside, per pupil spending rises for at least two simple mathematical reasons. First, per pupil spending can rise because spending rises faster than pupils. That is, the state actually increased spending. Second, per pupil spending can rise simply because enrollments have declined, and because spending has not been downward adjusted to accommodate that decline. Two examples of low outcome-change, high spending change outliers in this graph – Vermont and Wyoming – are states where spending per pupil rose at least partly if not significantly as a function of enrollment decline in the 2000s.<sup>1</sup> Enrollment decline in Vermont between 2000 and 2009 ranked 3<sup>rd</sup>. Vermont and Wyoming are also the lowest total student population states with numerous small and shrinking local public schools and districts. Being so small, per pupil spending is particularly sensitive to enrollment change. New York also experienced statewide enrollment decline (primarily upstate), but saw most of its spending increases in affluent suburban downstate school districts (partly in response to tax relief subsidies disproportionately favoring affluent districts).
2. Above and beyond failing to recognize that there exist varied reasons for why per pupil spending appears to change over time, this analysis ignores a multitude of factors outside of spending that may also have changed in these states. Specifically, how have student population characteristics changed? How has the distribution of children across districts, across wealthier or poorer neighborhoods, across districts with more or fewer resources, across rural, urban and suburban settings changed? Each of these factors may influence substantially the position of any state with respect to the trendline.
3. This graph assumes that outcome changes occur concurrent with or at least entirely within the same time window as funding changes. That is, this graph assumes that if a state experienced a significant increase in resources from 2007 to 2009, that outcomes would have increased from 2000 to 2009. One might not expect to reap the benefits of these increases until sometime after the window of measurement here. Further, if a state slowly but steadily increased resources throughout the period, outcomes would have slowly and steadily increased on a year by year basis with those spending increases. But the reality is that if, for example, major investments were made in early childhood education or lower grades class size reduction, one might have to

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<sup>1</sup> [www.nces.ed.gov/ccd/bat](http://www.nces.ed.gov/ccd/bat)

wait a number of years before any of the beneficiaries of these investments even reach a tested grade level.