District Size Affects Estimates of Equity in K–12 Funding, but Better Measures Might Be on the Way: Methodology

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I use data from the 2013–14 Local Education Agency (School District) Finance Survey (F-33), part of the National Center for Education Statistics' Common Core of Data. I replicate the progressivity analysis from our report *Do Poor Kids Get Their Fair Share of School Funding?*[1] looking at total district-level revenues weighted by the share of students in poverty, as estimated by the Small Area Income and Poverty Estimates program.

I repeat this progressivity analysis using the same funding and poverty data aggregated to the county level. I weight per pupil funding and poverty rate measures by the number of students enrolled in each district. In cases where a school district straddles more than one county, I weight by school-level enrollment to allocate per pupil funding and poverty rates from that district into the two county measures.

To estimate how regression-based progressivity measures are affected by county-level aggregation, I use an approach similar to the approach employed in the report *Is School Funding Fair?*[2] I use a regression model to predict the relationship between district revenue and the share of students in poverty, controlling for the district's density and enrollment size. I generate a ratio of prediction of funding for a district with 30 percent poverty (and state mean density and enrollment size) relative to 0 percent poverty. I repeat this analysis using the same data aggregated to the county level, with the same weighting procedures listed above.

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[1] Matthew M. Chingos and Kristin Blagg, "Do Poor Kids Get Their Fair Share of School Funding?" (Washington, DC: Urban Institute, 2017).

[2] Bruce Baker, Danielle Farrie, Monete Johnson, Theresa Luhm, and David G. Sciarra, *Is School Funding Fair?*, 6th ed. (New Brunswick, NJ: Rutgers Graduate School of Education, (2017), https://drive.google.com/file/d/0BxtYmwryVI00VDhjRGlDOUh3VE0/view.