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School District Funding in Virginia

Computing the Effects of Changes to the Standards of Quality Funding Formula

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Virginia's distinctive school funding formula is made up of multiple funding streams. Each program's funding is determined based on the minimum cost of meeting program and staffing requirements, or as specified in state guidelines. Responsibility for meeting these funding obligations is split between the state and individual localities based on each district's ability to pay. In the 2017 school year, the state formula resulted in slightly progressive cost-adjusted funding across districts in terms of students' poverty status, meaning students living in poverty are, on average, enrolled in school districts with slightly higher per student spending. Students of color were also enrolled in districts with slightly higher cost-adjusted funding per student than white students, on average. In contrast, rural students were enrolled in districts with lower average per student funding, in cost-adjusted dollars. Changes to the existing formula generally produce modest effects on equity measures and often involve committing additional state resources. Distributing state sales tax revenue earmarked for education more progressively or computing the composite index using total population per capita prosperity measures could result in large changes in equity without increasing state funding.

Introduction

Although the structure of state school funding formulas can vary, these formulas largely determine the amount of public funding that finances public primary and secondary education in different local school districts (or "divisions" in Virginia) and how much comes from state, local, and, potentially, federal sources. The specifics of state formulas can result in a more equitable or less equitable distribution of public resources across districts in terms of students' family income, race or ethnicity, and whether they attend an urban or rural school. These disparities matter, as prior research has shown that it takes more resources to educate disadvantaged students (Duncombe and Yinger 2005), and rural schools can be more expensive to operate because of lower economies of scale.

This brief explores the development, structure, and equity produced by Virginia's school funding formula and how changes within the framework would affect equity measures. Understanding how the state's school funding formula works and how it would behave under different scenarios is important before considering or advocating for changes.

Background

Most state funding for public early childhood, primary, and secondary education in Virginia is provided as part of the state's Standards of Quality (SOQ). The SOQ and additional education provisions were adopted in the state constitution in 1971 to counter school segregation (Delja 2004). These provisions required local districts to operate free public schools and meet minimum standards for the first time. They also charged the state with determining the cost of meeting these standards and assigning the division of funding costs between the state and local districts (Delja 2004).[1]

Initially, these costs were calculated by taking the average teacher salary statewide, multiplying this by 57 full-time equivalent teachers per 1,000 enrolled students, and adding an average support cost per student statewide (JLARC 2002). The current funding scheme, which has changed little since the 1988–89 school year, accounts for more nuanced staffing standards, the cost of competing in higher-income localities, and prevailing teacher salaries and support costs. Under this system, the state department of education calculates the minimum amount of funding per student needed to feasibly meet the SOQ (e.g., required student-teacher ratios) in each district (Delja 2004). This amount is then multiplied by each district's enrollment and, after subtracting the local share of state sales tax revenue earmarked for education, the resulting cost for each district is divided between local and state funds based on the district's ability to pay (Delja 2004).

Shortly after implementing the new funding formula in the late 1980s, state policymakers and the Coalition for Equity in Educational Funding, a group of district superintendents and school boards largely from rural southern Virginia, wrestled over resource equity and discrepancies in district spending. At the time, the state faced large budget deficits, which made it more difficult to argue for additional funding.[2] In 1992, the coalition filed suit against the state in *Reid Scott v. Commonwealth of Virginia*, claiming that the state's school funding formula violated the Virginia Constitution, as students

in poorer, more rural districts received lower-quality public education compared with students living in wealthier, more urban districts (Delja 2004). But both the circuit court in 1992 and the state supreme court in 1994 on appeal ruled against the plaintiffs on the grounds that the state constitution did not require equitable or near-equitable funding per student across districts (Delja 2004), while leaving the door open for an adequacy lawsuit.[3] Despite rulings against the coalition, the *Scott* case spurred increased state education investments and bolstered the further adoption of state curriculum and learning standards (Delja 2004). No other major litigation on Virginia's school funding formula has taken place since the 1994 *Scott* decision.[4]

Since 2000, funding disparities between richer and poorer districts and those in more suburban and urban regions versus those in rural regions have persisted (Delja 2004; Jones, Donohue, and Shotwell 2009). The state's Joint Legislative Audit and Review Commission (JLARC) argued in a 2002 report that overall state funding should be increased and that the requirements and funding system set in the SOQ were inadequate to fund an adequate, high-quality education (JLARC 2002). Budget deficits, combined with Virginia's negative fiscal outlook during periods of economic distress, have put downward pressure on school funding, leading to formula changes that reduce the amount the state is responsible for funding. For example, changes to the formula for the 2004–06 budget introduced the deduction of certain federal revenues from the Basic Aid formula before the state and required local share of funding are determined. Following the 2008 recession, the legislature implemented further cuts in response to lower tax revenues and budget deficits, capping the number of support positions funded by the state, only partially accounting for inflation increases, increasing the assumed life span of buses, and eliminating selected district expenditures from calculations of the costs of providing public education (Duncombe and Cassidy 2016a). These reductions disproportionately affected poorer districts (Cole and Cassidy 2014). As the economic and fiscal outlook has brightened, some funding has been restored, but the funding increases are not as targeted at poorer districts as were earlier cuts (Duncombe and Cassidy 2016b).

Although Virginia has maintained the basic funding structure established in the late 1980s, additional requirements—such as support costs and specialized programs, including special education; remedial education; career and technical (vocational) education; gifted education; and textbook costs— have been added to the SOQ program. But the way these costs are determined, apportioned, and funded remain similar. The SOQ program continues to provide more than 80 percent of public school funds, while smaller categorical, incentive, and lottery funding streams supplement district's core SOQ funding. These funding streams make up most public primary and secondary school funding from the state and local levels. School construction costs historically received little state funding, with even this small amount eliminated after the 2010 school year (Jones, Donohue, and Shotwell 2009). Only a few public charter schools operate in the commonwealth,[5] and the state's private school tax credit scholarship for low-income households has low enrollment relative to programs in other states despite Virginia's relatively large population.[6]

Virginia education groups and advocates have maintained that the way the state funds its schools does not adequately account for the cost of providing a high-quality education for all students. In recent

years, almost all districts have spent more than is required by the state, with most far exceeding the minimum funding standards established in the SOQ and other state programs.[7] For example, nearly all districts employed more support staff positions than the state cap imposed in 2009–10 allowed to be funded in its first year of effect (Duncombe and Cassidy 2016a). Additionally, beyond specific cuts in response to economic downturns, educational groups argue that the way the commonwealth calculates prevailing costs as part of its biennial rebenchmarking process underestimates the actual amount of funding districts need.[8] Statewide, total local funding was $4 billion higher than local effort requirements for SOQ programs in 2016–17, more than twice what the state required.[9]

Funding gaps between high- and low-income Virginia districts persist. The state ranks among progressive states according to the Urban Institute's measure of school funding progressivity, which adjusts for variation in local costs using a comparable wage index, but the difference in per student funding between poorer and richer districts is small in absolute terms. The average poor student lives in a district that receives just $32 more in funding per student, in cost-adjusted dollars, than those where the average nonpoor student lives—a small percentage of the $10,579 in per student funding for the state as a whole.

When not adjusting for local cost differences, Virginia does less well. The state ranks poorly on funding progressivity using a different measure of equity when not adjusting for local prices, though it does better when accounting for these cost differences (Baker and Corcoran 2012). A more recent analysis ranked Virginia in the bottom half of states in terms of funding fairness across various measures (Baker, Farrie, and Sciarra 2018). Additionally, a report from the National Center for Education Statistics (NCES) found that the highest-poverty quarter of districts in Virginia received 8.3 percent less combined federal, state, and local funding per student in 2014–15 than the lowest-poverty quarter of districts in the state, one of the largest gaps nationally.[10] The Commonwealth Institute also calculated that Virginia ranks below average when adding together its various funding streams targeting low-income students and comparing this amount with poverty weights in other states (Duncombe and Cassidy 2016c). Finally, the state ranks low on measures of funding equity by race or ethnicity.[11]

Virginia faces several challenges. The state has a growing and diversifying school-age population, as Hispanic and immigrant students make up an increasing share (Driscoll and Salmon 2013). Consistent with prior research in other states and nationally, there is a positive association between student achievement and higher funding and fiscal capacity in Virginia.[12] But poorer students receive little targeted funding based on income, relative to other states, and tend to live in districts that receive slightly more or around the same amount of state funding per student as their higher-income peers, depending on the progressivity measure used. Additionally, at least one prior attempt to increase equity and funding for poorer districts by raising state funding has met challenges, with districts pulling back their local funding commitments (Driscoll and Salmon 2008).

The Structure of Virginia's Current School Funding Formula

The framework for Virginia's school funding formula has remained relatively constant since the late 1980s. The state department of education calculates the minimum funding needed for each district to feasibly meet the standards established by the SOQ and other programs. This minimum calculation is based on average costs in the state, along with staffing and other district requirements. The department also determines the split between state and required local funding for each district (Delja 2004).

More than 85 percent of the $6.6 billion in state funding distributed in fiscal year 2017 is disbursed through programs and funding streams that are part of the SOQ. Additional state funding comes from programs funded by the state lottery (9 percent in 2017)[13] or other funding streams, including incentive and categorical programs (about 3 percent each).[14] Incentive, categorical, and SOQ programs are typically funded by the state's general fund. Some incentive and lottery programs require local funding matches (similar to the local share of funding calculated as part of the SOQ), but categorical programs do not require matches.

For most funding streams, the state calculates a specific per student cost in each district, based on the average prevailing cost of salary or services in the state (including a "cost of competing adjustment" to staff salaries and fringe costs in districts with higher living costs or prevailing salaries), local characteristics such as total enrollment, enrollment composition (i.e., distribution across schools and grades, eligibility for free lunch, English language learners, and special education service need), and performance on state testing standards. This per student amount is then multiplied by the district's enrollment to determine the program or funding stream's funding. Finally, each funding stream or program's overall amount is divided between state funding and required local funding from the district using a composite index of local ability to pay. Districts are allowed to provide funding beyond what is required, and most districts do so.[15]

Benchmarking Costs

Every other year, Virginia benchmarks educational costs to adjust for changes in cost. This update determines statewide prevailing salaries for instructional and support staff, prevailing nonpersonnel support costs, and other factors. These benchmark changes subsequently affect SOQ, lottery, incentive, and categorical funding by determining the statewide prevailing salaries for instructional and support staff, prevailing nonpersonnel support costs, and other factors that determine funding amounts in different programs and streams. Benchmarking builds off the preceding years' education budget and adjusts for changes in overall and specialized categories of student enrollment, free lunch eligibility rates, district performance on state standards, staffing standards, salary adjustments, fringe benefit costs and rates, support costs, inflation, sales tax revenues for education, and the composite index of local ability to pay (Dickey 2017).

Determining the Share of Funding Required from Local Districts

For education funding that requires a local match or contribution, the state and local shares are determined using a biennially calculated local composite index of local ability to pay. This index accounts for each district's aggregate property wealth, adjusted gross income, and taxable retail sales per capita relative to the per capita figures for these metrics statewide.[16] The statewide split between state funding and required local funding is pegged at 45 percent, and the local share is capped at 80 percent for the SOQ and most other funding streams. But each locality is allowed to, and generally does, go beyond funding its minimal required share, and there is no upper limit on the local funds each district can provide (Delja 2004).

SOQ Funding

Most SOQ funding is distributed as Basic Aid, which accounts for the costs of general instruction, support services, transportation, facilities, and some fringe costs, including health care. Additional non–Basic Aid SOQ accounts are targeted for specific programs or students. Each district is required to fund the share of the costs of each program specified by its composite index of local ability to pay,[17] except in Basic Aid, where sales tax revenues are subtracted from the overall cost estimate before the determination of the state-local split.

To calculate Basic Aid funding, the state determines the minimum number of teachers and other instructional positions that are required to meet the minimum student-teacher ratios set forth in the SOQ.[18] To determine funding, these minimum staff numbers are multiplied by the average statewide prevailing wage for each position type. Some districts are assigned higher salary rates to account for greater competition.[19] The cost of support personnel is calculated separately and is based primarily on districts' overall enrollment: the number of funded positions per 1,000 students is multiplied by district enrollment and prevailing salary for each position type (including a cost of competing adjustment as needed) with the total number of support positions capped based on a ratio to instructional positions (Dickey 2013).[20] Similarly, nonpersonnel support costs are calculated by multiplying district enrollment by the state prevailing per student cost of providing these services.[21]

The total district personnel and support costs are added together and divided by unadjusted enrollment to determine the unadjusted per student amount of Basic Aid. After a few additional adjustments to the per student amount and removing applicable federal revenues for support costs,[22] the resulting adjusted per student amount of Basic Aid is multiplied by adjusted enrollment to determine each district's total cost of Basic Aid.[23] Finally, after subtracting the local share of revenue earmarked for education from state sales tax, which is apportioned to each district based on its share of the school-age population, the resulting cost for each district is divided between local and state funds based on the district's ability to pay (composite index) (Delja 2004).

Additional SOQ programs include prevention, improvement, and remediation funding streams for low-income students and those at risk of falling behind ($114 million, or 2 percent of state SOQ funds in 2017); special education for students with special needs or disabilities ($382 million, or 7 percent of

state SOQ funds in 2017); career and technical education (CTE, also known as vocational education) and gifted programs (each around 1 percent of 2017 state SOQ funding); line items for English as a second language (ESL) and textbooks, both of which have been partially or wholly funded via the lottery in some years; and additional fringe costs for instructional positions ($609 million, or 11 percent of state SOQ funds in 2017).

Prevention, improvement, and remediation; special education; CTE; and ESL funding are provided based on the number of students in categories eligible for these services (or participating in the programs), along with program staffing standards and instructor costs.[24] But gifted education is funded at the cost of providing one full-time instructional position per 1,000 students in the district's overall enrollment, meaning that it is not adjusted based on eligibility or participation. Similarly, textbooks are funded at a flat per student rate based on the statewide average or prevailing cost of textbooks in previous years. Fringe benefit costs, such as retirement, Social Security, and group life insurance contributions for instructional positions, are funded as the state share of the cost of the district's employer contributions in these programs.[25]

Lottery revenues provide funding for programs and accounts previously financed out of the general fund and provide split or total funding for selected SOQ accounts in some years (Dickey 2013). Several lottery-funded programs target low-income, at-risk, or other special needs students, and most have a required local match. At-risk funding targets low-income students and is calculated as a percentage add-on to the district Basic Aid amount, ranging from 1 to 13 percent for each student estimated to be eligible for federal free lunch. The per student percentage add-on is based on the share of students eligible for free lunch in the past three years, with a higher percentage for districts with higher shares of low-income students.

K–3 Primary Class Size Reduction Program payments are distributed to districts to help fund reductions in class sizes in early primary grades based on the marginal cost of these reductions with lower student-teacher ratios and maximum class sizes required for districts with higher shares of free lunch–eligible students.[26] The Virginia Preschool Initiative uses lottery funds to provide preschool services to at-risk 4-year-old children not served by Head Start. The program allocates $6,125 for each 4-year-old estimated to be low income and not served by Head Start based on the share of students eligible for free lunch.[27] Lottery revenues also fund other programs, which in 2017 included tuition reimbursement for districts with certain special education students attending regional special education schools in other districts, split funding for regular special education and textbooks,[28] foster care, reading and math programs, school breakfast, foster care, additional CTE funds, alternative education, graduation and GED initiatives, teacher training and mentorship, and supplemental unrestricted funds.[29]

Equity under the Current Formula

In fiscal year 2017, Virginia spent $6.57 billion on school funding (45 percent of total state and local funding), and districts contributed an additional $8.02 billion.[30] The average cost-adjusted per student

funding from the state and districts combined was $10,579.[31] To better understand how Virginia's at-risk and other provisions relate to funding for different students, we analyze the fiscal year 2016–17 state funding formula and 2016–17 school year funding for SOQ, incentive, categorical, lottery, and other programs using an equity measure developed by the Urban Institute (Chingos and Blagg 2017). This measure looks at school funding progressivity in each state by calculating estimates of average spending, in cost-adjusted dollars, on poor students (students from families below the federal poverty level) relative to nonpoor students. We adapt this measure to look at two additional measures of equity: funding for students of color relative to white students and funding for students in rural schools relative to students in urban schools.

We use district-level data because the state funding formula typically allocates dollars to districts, not to schools. We do not capture any differences in spending across schools within districts (and across students within schools). For example, poor students may benefit from programs or targeted revenue streams not available to nonpoor students. Conversely, nonpoor students may attend schools with more highly paid teachers or enroll in courses that are more expensive to provide than the schools poor students are enrolled in within the same district.

To calculate the average distribution of funding for poor and nonpoor students, we use district-level poverty data from the US Census Bureau's Small Area Income and Poverty Estimates to estimate the share of children ages 5 to 17 who are from low-income families in each district.[32] We merge these data with district-level state and local funding levels from the Virginia Department of Education (VDOE), adjusted for local costs.[33] We calculate a weighted average of each district's per student funding using the number of poor children in each district as the weight.[34] Then, we calculate the same weighted average using the number of nonpoor children in each district. The average poor student lives in a district that receives $32 or 0.3 percent more in per student funding, in cost-adjusted dollars, than the average nonpoor student. Poor children live in districts that receive $10,607 in per student funding, and nonpoor children live in districts that receive $10,575 in per student funding.

SCHOOL DISTRICT FUNDING IN VIRGINIA

BOX 1
Calculating Equity Measures

This simplified example best explains our equity measure calculation. In this example, the state has only two districts, A and B, each with 100 students.

District A	District B
$10,000 per student	$13,000 per student
10 poor, 90 nonpoor students	30 poor, 70 nonpoor students

District B is located in an area where there are higher wages because of increased living costs, so they will likely need to spend more on teacher and staff salaries (a key driver of cost in education). We use the Comparable Wage Index to adjust the per student amount down to account for this difference.

District A	District B
$10,000 per student	$13,000 per student
$10,000 per student, cost-adjusted	$12,000 per student, cost-adjusted
10 poor, 90 nonpoor students	30 poor, 70 nonpoor students

Next, we compute a weighted average funding level for poor and nonpoor students.

Poor: $\dfrac{(10 \text{ students from A} \times \$10,000) + (30 \text{ students from B} \times \$12,000)}{10 \text{ students from A} + 30 \text{ students from B}}$ = **$11,500 per student**

Nonpoor: $\dfrac{(90 \text{ students from A} \times \$10,000) + (70 \text{ students from B} \times \$12,000)}{90 \text{ students from A} + 70 \text{ students from B}}$ = **$10,875 per student**

The difference between these two average per student amounts constitutes our measure of equity.

$11,500 per poor student – $10,875 per nonpoor student = **$625**

Thus, in our simplified example, we estimate that the average poor student lives in a district that receives $625 more per student than the average nonpoor student.

To calculate the equity measure for students of color and white students, we use district-level race and ethnicity data from the Common Core of Data to calculate the number of students of color and white students. We calculate the equity measure for these two groups the same way we compute it for poor and nonpoor students, weighting by student enrollment in each district and again adjusting for variation in local costs. The average student of color in Virginia attends a district that receives $16 or 0.2 percent more in per student funding, in cost-adjusted dollars, than the average white student. The average student of color attends a district that receives $10,588 in per student funding, and the average white student attends a district that receives $10,571 in per student funding.

To calculate the equity measure for students attending schools in rural areas and students attending schools in urban areas, we use school-level data from the Common Core of Data on student enrollment in schools in either a rural or urban area.[35] The rest of our calculations follow the same

process we used to calculate the equity measure for poor and nonpoor students. We merge data with VDOE finance data and calculate weighted averages of districts' per student funding for students attending rural schools and students in urban schools. The average student attending a rural school receives $329 or 3.1 percent less in per student funding, in cost-adjusted dollars, than students attending an urban school. Students attending rural schools receive an average of $10,354 in per student funding, and students attending urban schools receive an average of $10,683 in per student funding.

Cost-Adjusted District Funding Average Student Receives in Virginia

Average funding per student
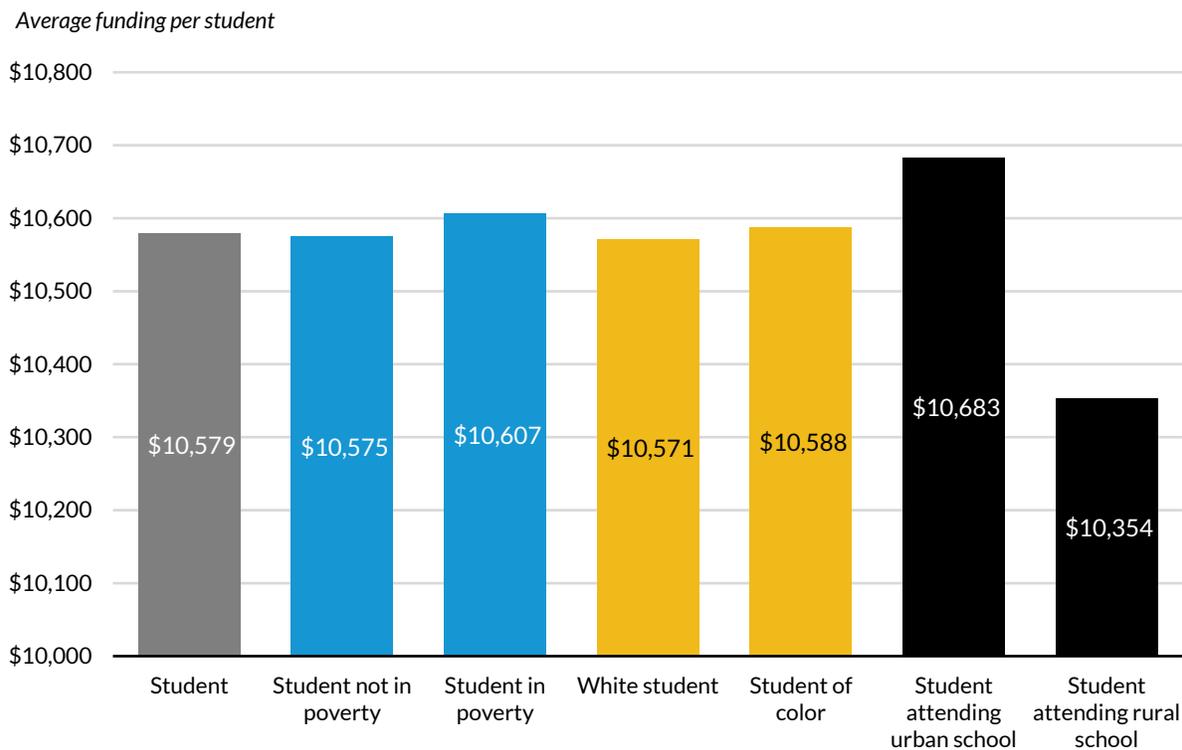
URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
Note: Cost adjustments made using NCES Comparable Wage Index.

Hypothetical Changes to Virginia's School Funding Formula and Potential Outcomes

Before pushing for changes, it is necessary to understand the potential effects of amending Virginia's school funding formula on the total cost of education, the share financed by the state and local districts, and equity for different groups.[36] Altering different parameters in the formula could increase or

decrease overall costs, raise or lower the share financed by the state versus local districts, and be more equitable or less equitable in terms of students' race or ethnicity, family income, and enrollment in an urban or rural school. Virginia could consider how different measures of prosperity and population are weighted when calculating each district's composite index, whether to cap the required local share and at what level, whether the local share of the state's poor school-age children should be accounted for in sales tax revenue distributions, whether to fund cost of competing adjusted salaries in selected districts, and the size of various funding streams targeting low-income, special education, and other at-risk students.

A key assumption in these calculations is that local districts would not alter the funding they provide in response to changes in state funding except to meet local effort and matching requirements. All districts provided more local funding than required in 2017, and almost all districts have done so in previous years. Thus, we assume that districts would supply additional funds only when the required local funding exceeds what they are currently providing.[37]

BOX 2

Changing the Formula

This brief highlights only some of the potential changes that could be introduced into the current funding formula. You can implement changes yourself by navigating to our interactive, *"Directing Dollars to School Districts: Computing the Effects of Changes to State Funding Formulas."*[a]
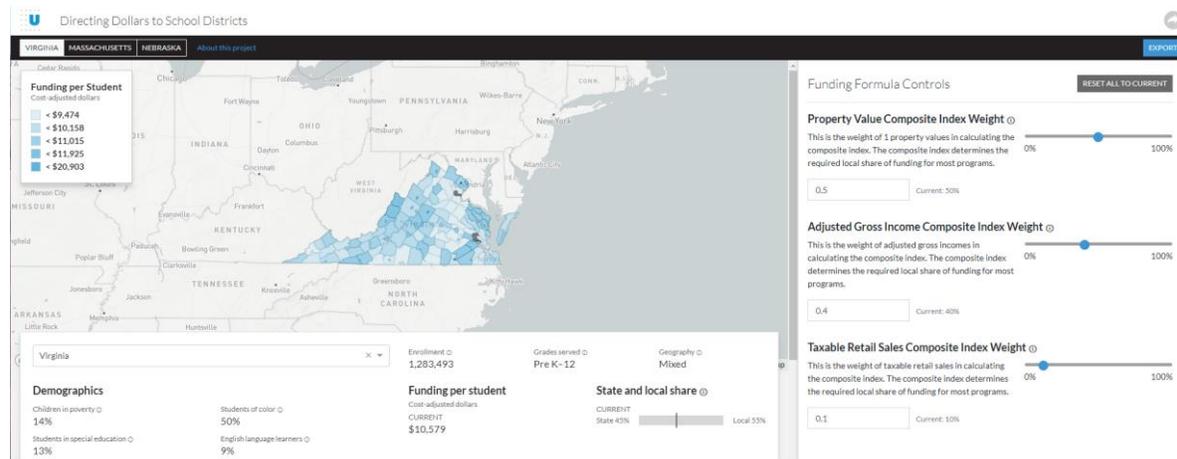
This interactive allows you to implement multiple changes for Virginia and see the resulting distribution of dollars.[b] In addition to Virginia, this interactive will provide the opportunity to look at formula changes for Massachusetts, Nebraska, and Texas.

[a] Kristin Blagg, Matthew Chingos, Victoria Lee, Cary Lou, Stipica Mudrazija, and Victoria Rosenboom, "Directing Dollars to School Districts: Computing the Effects of Changes to State Funding Formulas," Urban Institute, October 31, 2018, https://edfunding.urban.org/.
[b] Results in the interactive and this brief may differ slightly because of small differences in rounding calculations.

How Would Changing the Composite Index
## of Local Ability to Pay Affect Funding Measures?

Virginia calculates a composite index of local ability to pay every two years as part of its biennial budget process. This figure determines the share of funding in the SOQ and other programs that each district is required to finance. The composite index is pegged to 45 percent statewide. On average, districts must provide 45 percent of the funding for applicable programs, although the level for specific districts varies based on each district's relative prosperity (a weighted average of per capita true property values, adjusted gross income, and taxable retail sales). Property values are weighted the most in this calculation, accounting for 50 percent of the average, followed by adjusted gross income (40 percent), and taxable sales (10 percent). This overall per capita metric is calculated as a weighted average of both per student (weighted two-thirds) and per total state population (weighted one-third) measures of prosperity relative to the state average. Finally, the share that any single district is required to pay is capped at 80 percent. The estimated effects of changes to these parameters assume districts would not adjust their local financial support unless SOQ and other programs' effort and match requirements surpassed current local funding.

Adjusting the components of the composite index calculation could substantially affect equity. Because these three values reflect different kinds of district wealth—property wealth, income, and commercial—shifts in these components could result in nonuniform shifts in funding. If we were to use only property values in this calculation,[38] we calculate that the average student of color would live in a district that receives $67 more in funding per student than the average white student—compared with $16 more under the current formula. But the existing gap between urban and rural students would widen, from $329 in the baseline to $528 under this scenario. Relative to baseline, districts where poor students live would see slightly higher funding compared with districts with nonpoor students, with the difference in per student funding increasing from $32 to $42. This adjustment would leave the overall funding split between state and local sources relatively unchanged, while total school funding, in actual dollars, and average per student funding, in cost-adjusted dollars, would increase slightly (appendix table A.1).

FIGURE 2
Cost-Adjusted District Funding Average Student Receives in Virginia

Calculating the composite index using only property values, relative to the current formula
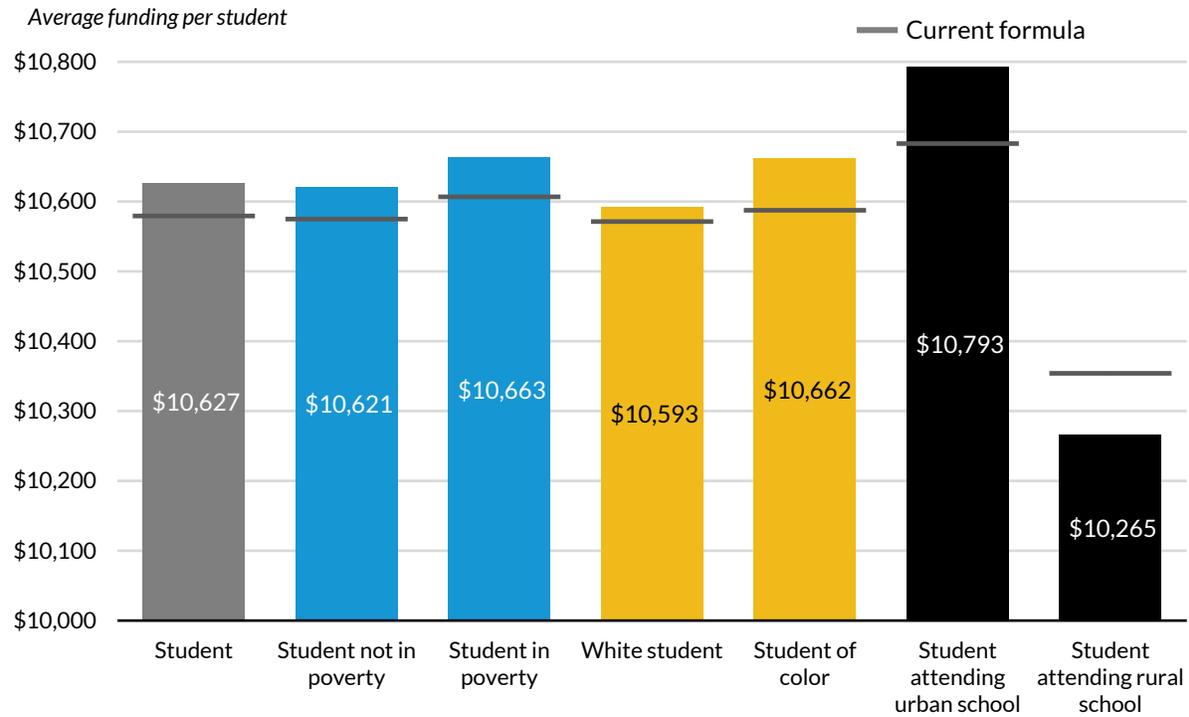
Average funding per student

URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
**Note:** Cost adjustments made using NCES Comparable Wage Index.

If the state used only a district's adjusted gross income when calculating state-local funding splits, it would provide $141 more in cost-adjusted dollars in districts where the average poor student lives relative to the average nonpoor student (from a current baseline of $32). The gap in funding between students in urban and rural schools would narrow, with rural students granted $126 less in cost-adjusted funding per student, on average, instead of the current difference of $329. But the difference in funding between students of color and white students would reverse, with cost-adjusted funding per student $17 higher, instead of the current $16 lower, in districts where the average white student resides versus the average student of color. Total and cost-adjusted per student school funding would fall slightly, and the split between state and local funding would remain essentially unchanged (appendix table A.1).

FIGURE 3
Cost-Adjusted District Funding Average Student Receives in Virginia

Calculating the composite index using only adjusted gross incomes, relative to the current formula
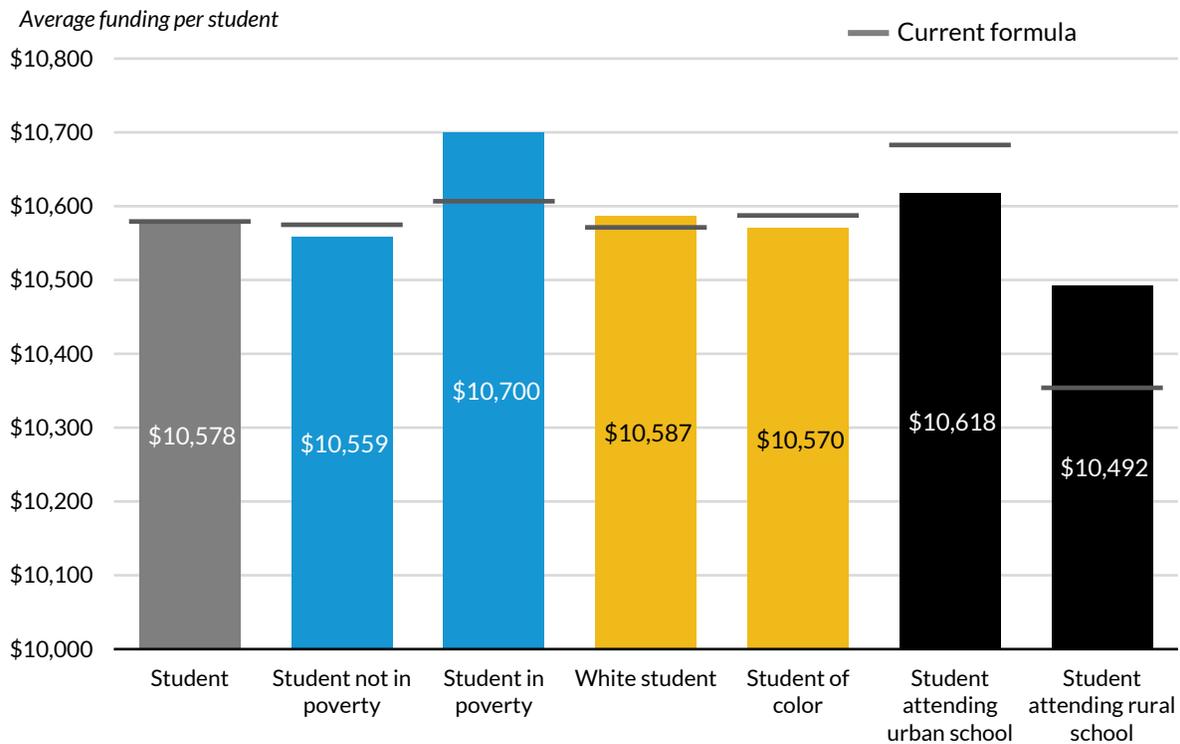
Average funding per student

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Small Area Income and Poverty Estimates.
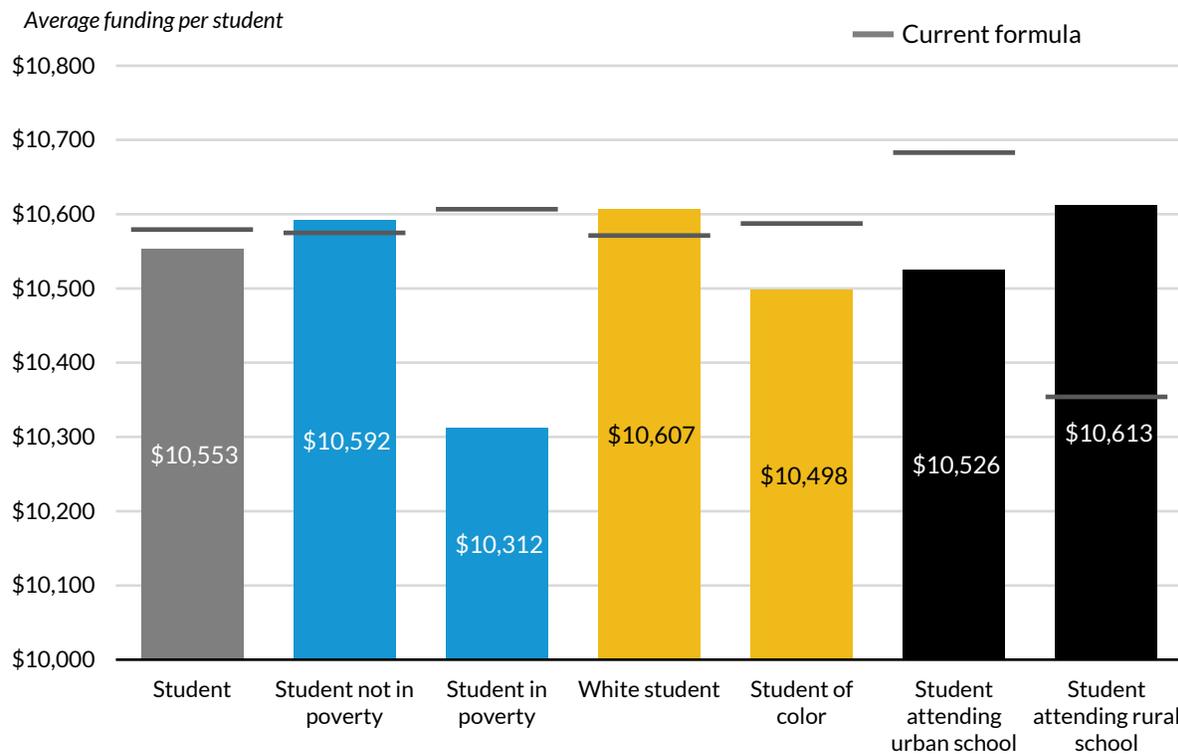**Note:** Cost adjustments made using NCES Comparable Wage Index.

Calculating the composite index using only taxable retail sales (i.e., business tax base) as a measure of prosperity would lead to the most dramatic changes. Rural-urban district funding discrepancies would flip: average funding for rural students would be $87 higher relative to urban students, rather than $329 lower. This change would also produce a significant funding disparity between white students and students of color. The difference in cost-adjusted funding per student between districts where the average student of color and the average white student live would flip from $16 more to $109 less. Additionally, poor students would fare worse, on average, under this scenario than currently, with the difference in funding for districts where they live versus nonpoor students' districts, reversing from $32 more to $280 less. Total school funding would also increase slightly in actual dollars. A small decrease in state funding is offset by a slightly larger but still minor increase in funding from local districts, as higher local effort and matching requirements would overtake some districts' current funding (appendix table A.1).

FIGURE 4

Cost-Adjusted District Funding Average Student Receives in Virginia

Calculating the composite index using only taxable retail sales, relative to the current formula

Average funding per student

Current formula

Values shown on bars:
- Student: $10,553
- Student not in poverty: $10,592
- Student in poverty: $10,312
- White student: $10,607
- Student of color: $10,498
- Student attending urban school: $10,526
- Student attending rural school: $10,613

URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
Note: Cost adjustments made using NCES Comparable Wage Index.

Instead of changing these prosperity measures' weights, the state could modify the relative importance of per student versus total population per capita measures when calculating the composite index, giving more weight or less weight to the actual student population being funded. Increasing the per student weight tends to slightly increase overall funding while decreasing progressivity, increasing the funding gap between students in urban and rural schools, and having a negligible effect on differences in funding by race and ethnicity. Lowering the weight affects these outcomes moderately in the opposite direction. At one extreme, using only a per student or per enrollee measure would only slightly alter funding allocations: increasing total funding by $50 million in actual dollars, affecting racial and ethnic funding differences little, and broadening urban-rural gaps slightly. It would flip the additional funding per student, in cost-adjusted dollars, for districts where the average poor student lives versus those where nonpoor student tends to live from $32 more currently to $47 less with this change.
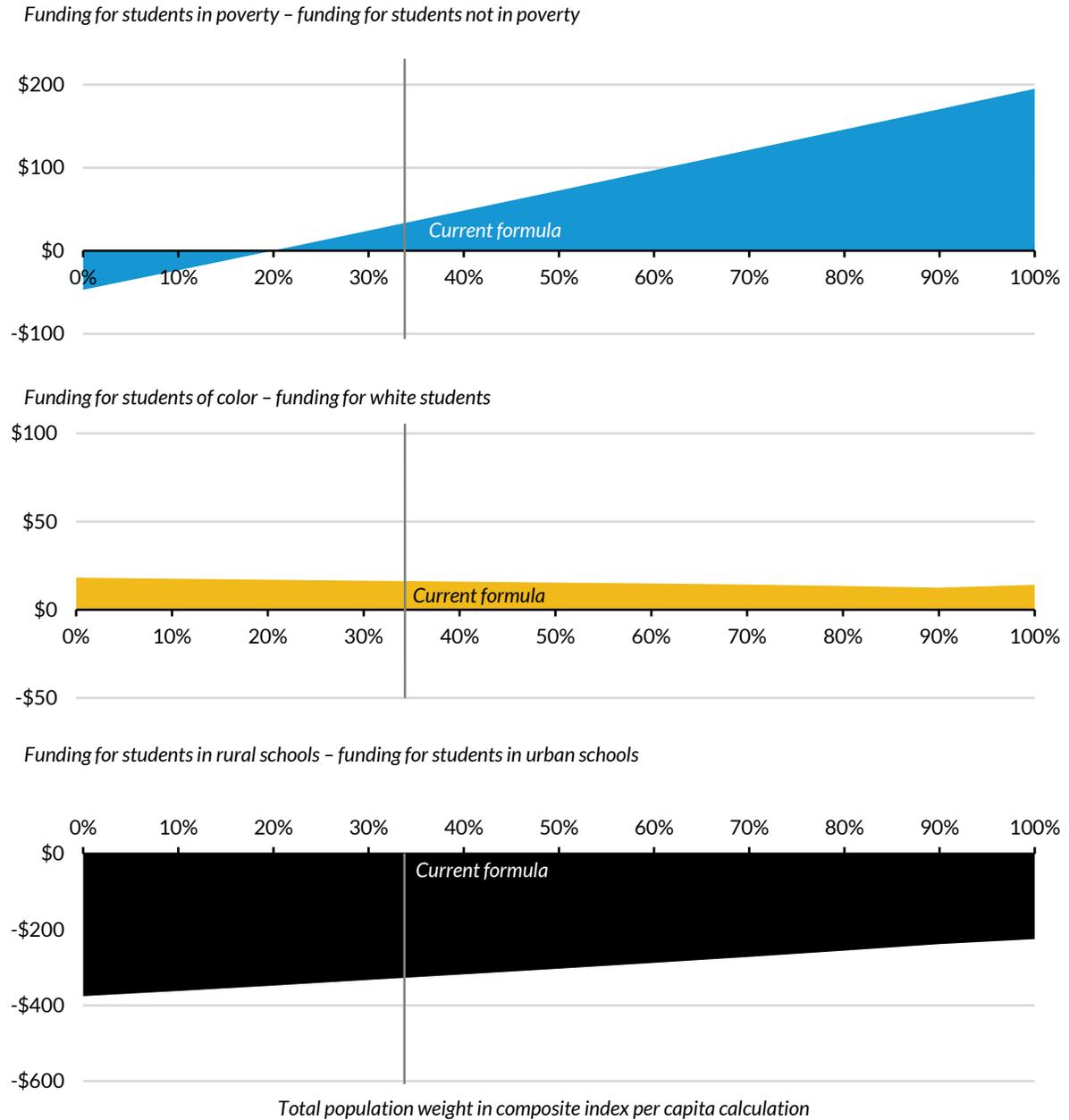
At the other extreme, using only total per capita measures of prosperity in determining each district's state-local funding split when calculating the composite index would have moderate effects,

including a decrease in total funding by $100 million in actual dollars (appendix table A.1). This change would also narrow the difference in average per student funding between students in urban and rural schools from $329 to $225 and increase the additional funds per student in districts where poor students tend to live relative to those where nonpoor students usually live by more than 500 percent (from $32 to $195). As with using exclusively per student measures, calculating the composite index with only total population per capita measures would have little effect on funding differences by race or ethnicity.

FIGURE 5

Cost-Adjusted Difference in District Funding, by Student Characteristics in Virginia

Changes in district funding difference, by total population weight in composite index per capita calculation

Funding for students in poverty – funding for students not in poverty

Funding for students of color – funding for white students

Funding for students in rural schools – funding for students in urban schools

Total population weight in composite index per capita calculation

URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
Note: Cost adjustments made using NCES Comparable Wage Index.

Finally, changing the 80 percent cap for an individual district's required share of funding would affect total school funding and the share of funding coming from the state, as well as equity measures. At one end of the spectrum, lowering the cap on a district's required share of funding from 80 percent to 50 percent in the composite index calculation would increase the state's share of total school funding (pegged at 55 percent when calculating local effort and matching requirements and at 45 percent of actual total funding in the baseline). In this scenario, overall district funding would fall to 53 percent of total school funding and increase state funding by around $420 million in actual dollars, which would boost total school funding by the same amount to $15 billion in actual dollars, or $10,848 per student in cost-adjusted dollars.[39]
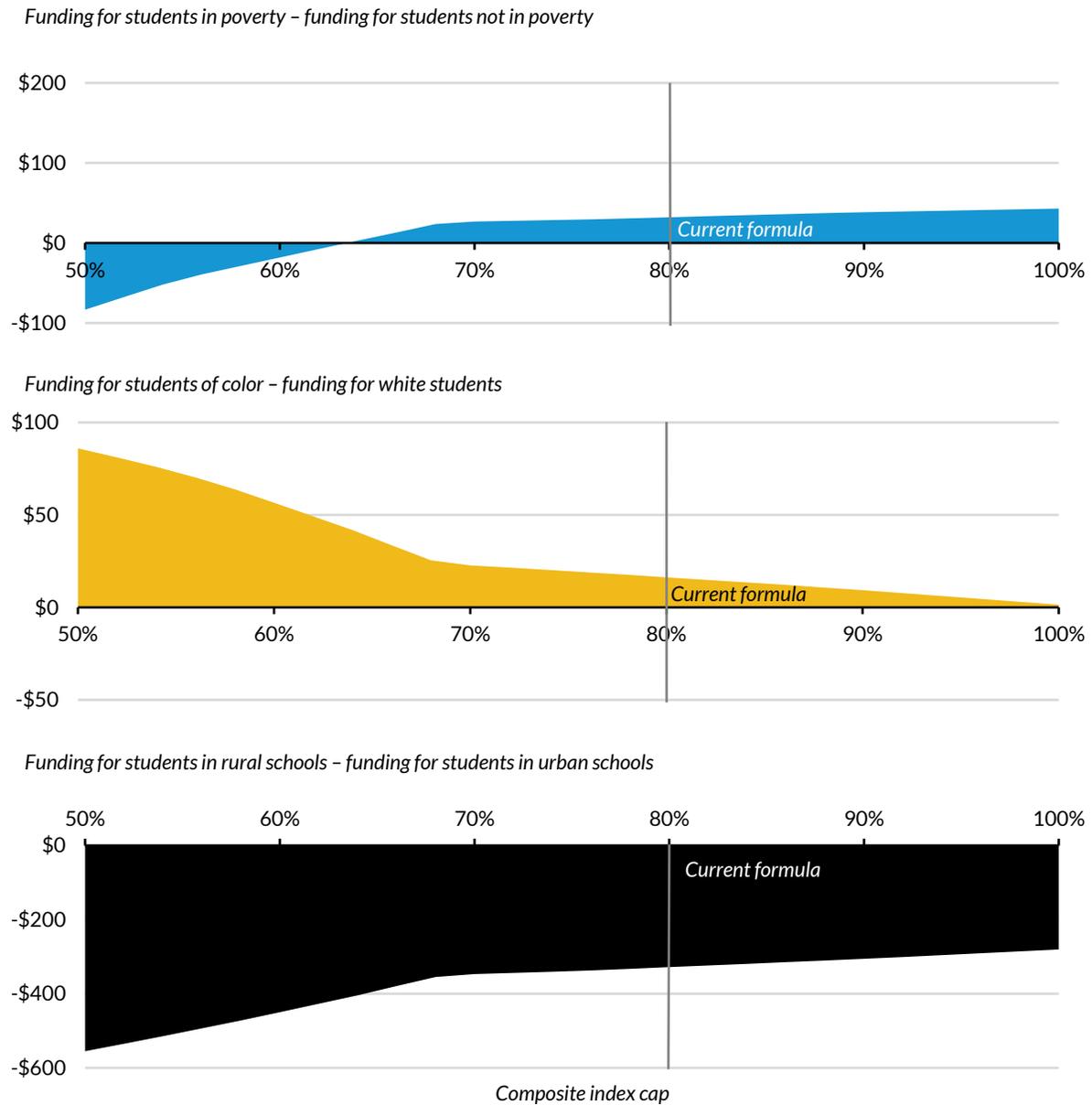
But by lowering the cap for local contributions, the adjusted formula would direct most of these additional state funds to the wealthy urban districts that are required to provide a higher share of school funding in the existing formula. This would more than eliminate the supplemental funds going to districts that tend to have more poor students, reversing the difference in average per student funding, in cost-adjusted dollars, between districts where the average poor student lives and those where the average nonpoor student lives from $32 more to $83 less. Similarly, urban-rural equity would decrease, with the gap in funding increasing from $329 per student, on average, to $555. Conversely, this change would increase the difference in funding between districts where students of color usually live and those where white students tend to reside. The average student of color would live in a district that receives $86 more in funding per student than the average white student under this scenario, compared to $16 more currently. When lowering the cap more gradually from 80 percent, there is a kink in the equity measure outcomes at 70 percent because of the cap increasing the state's responsibility for funding in Fairfax, a prosperous district with the highest total school funding in actual dollars ($2.67 billion) starting just under this point.

At the other end of the spectrum, removing the cap on the local share of school funding for individual districts tends to affect outcomes in the opposite direction as lowering the cap, but the changes are muted, as fewer districts and students would be affected (appendix table A.1). Changes in overall funding and the aggregate state and local split would be modest, while the funding gaps between urban and rural districts would contract by around $50 per student. The difference between funding that the average poor student's district receives and the amount for the average nonpoor student's district would increase from $32 to $43, and the difference in cost-adjusted funding per student between the average student of color and white student's districts would decrease from $16 to $1.

FIGURE 6
Cost-Adjusted Difference in District Funding, by Student Characteristics in Virginia

Changes in the district funding difference, by level of composite index cap

Funding for students in poverty – funding for students not in poverty

Funding for students of color – funding for white students

Funding for students in rural schools – funding for students in urban schools

Composite index cap

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
Note: Cost adjustments made using NCES Comparable Wage Index.

How Would Changes to Basic Aid Affect Various Funding Measures?

The state could also consider how changes to its Basic Aid formula—the primary SOQ funding component and single largest funding stream overall—would affect equity measures and the total amount and state and local shares of school funding. Many inputs to the Basic Aid calculation are set in legislation or regulations, with amounts precalculated by the Virginia Department of Education. These factors include the number of instructional and support positions and their compensation rates, fringe rates and the employer health care premium amount for benefits, reimbursement rates and replacement costs for transportation, and per student funded amounts based on prevailing costs for other support expenses. But the state could change two parameters within this framework: how it distributes sales tax revenue earmarked for education and whether to fund higher salaries for selected districts—mostly in or close to the DC metropolitan area—as cost of competing adjustments (COCA).

Distributing sales tax revenues based on the number of poor students living in each district rather than the total school-age population, as in the current formula, would increase funding progressivity: more dollars would go toward less prosperous districts that are required to contribute a lower share of funding, and fewer dollars would go toward more prosperous districts required to foot a higher share of funding. Although this change would not affect the total amount of Basic Aid calculated for each district, providing less combined state sales tax revenues and other state funding to wealthier districts (thus requiring them to cover a higher share of the program's funding) leads to lower state funding in these more prosperous districts overall. But per our assumptions, this change does not lead these districts to provide additional local funding, as they already tend to provide more local funding than is required as part of Basic Aid and other SOQ and state programs and would still largely do so. This scenario leads to more state funding (when considering sales tax revenue and other state funds combined) going toward less prosperous districts, but the combined effect of this increase and the decrease in state funds going toward more prosperous districts would lead to a modest net decrease of $60 million in overall state funding. Total school funding, including both state and local sources, would fall slightly from $14.60 billion to $14.54 billion in actual dollars, and funding per student would dip slightly from $10,579 to $10,555 in cost-adjusted dollars.

The difference in cost-adjusted funding per student between the district where the average poor student lives and where the average nonpoor student lives would rise substantially from $32 to $215. This change would also increase the additional funding for districts where students of color reside relative to those where white students tend to live. Under this scenario, the average student of color would live in a district that receives $59 more in cost-adjusted funding per student than the average white student, compared with $16 currently. Additionally, the difference in average per student funding between those in urban versus rural schools would fall from $329 to $252.

FIGURE 7

Cost-Adjusted District Funding Average Student Receives in Virginia

Allocating sales tax revenue based on share of poor students, relative to the current formula
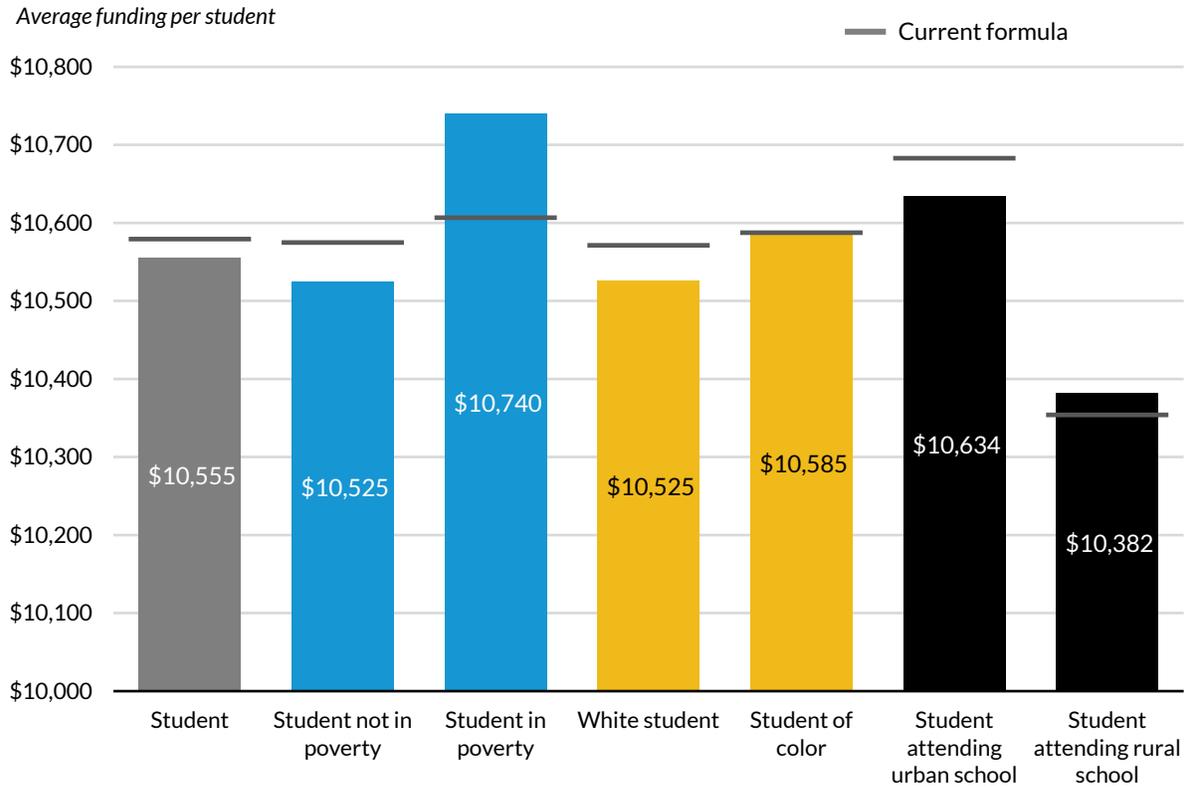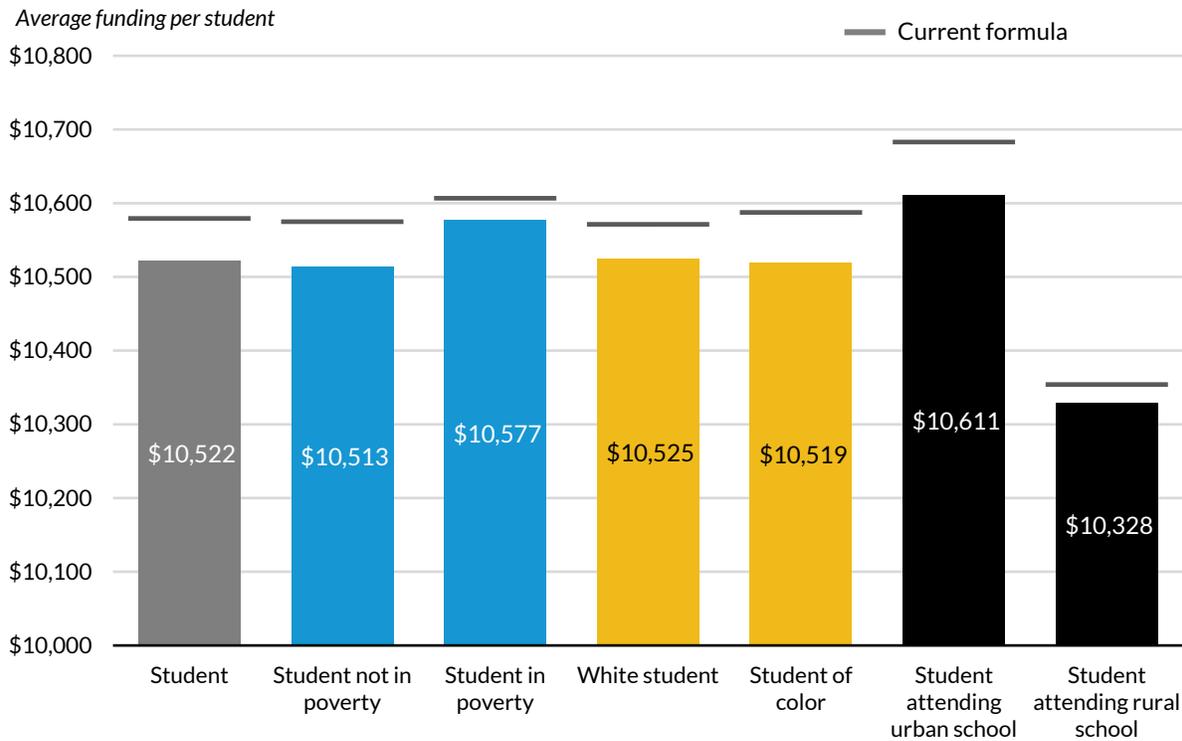
Average funding per student

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
Note: Cost adjustments made using NCES Comparable Wage Index.

Removing the supplemental salary funding for COCA districts would also modestly lower total school funding by decreasing overall state funding (appendix table A.1). These reductions would fall only on COCA districts, which tend to be more prosperous, with decreases primarily affecting Basic Aid but also affecting other SOQ and non-SOQ programs whose funding is based, in part, on instructional personnel rates. The impact on equity would be more muted than the sales tax revenue change, with the additional per student funding for districts where poor and nonpoor students tend to live increasing by around $30, on average, and the urban-rural district funding gap falling, on average, by around $45 in cost-adjusted dollars. This change would also flip the difference in average funding between districts where students of color and where white students tend to live from $16 more to $6 less in cost-adjusted per student funding.

FIGURE 8
Cost-Adjusted District Funding Average Student Receives in Virginia

Eliminating the cost of competing adjustment, relative to the current formula

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
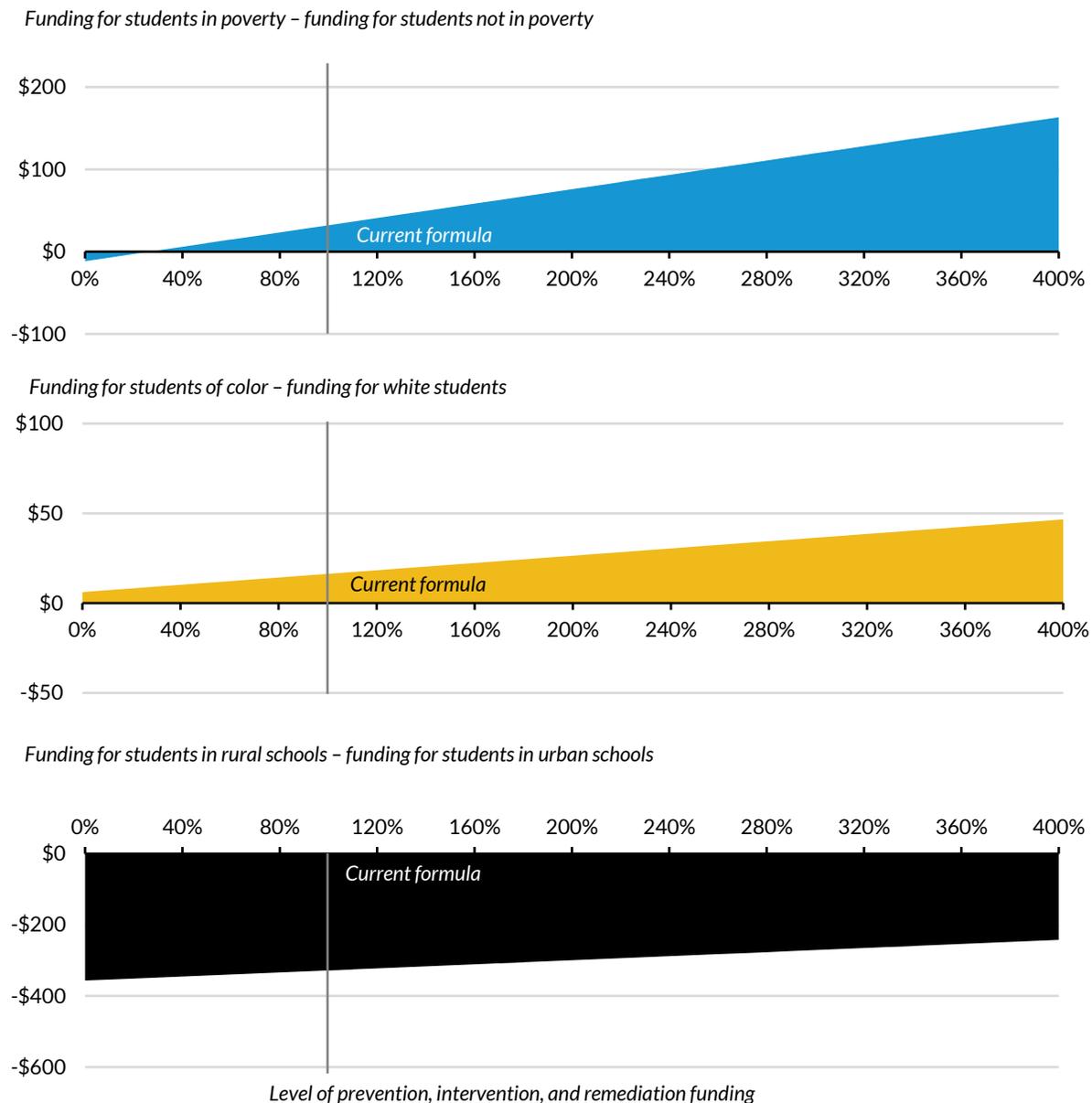Note: Cost adjustments made using NCES Comparable Wage Index.

How Would Changes to Funding Streams Targeting Disadvantaged and At-Risk Students Affect Various Funding Measures?

Virginia's school funding formula provides separate funding streams and programs targeting students whose families are low income, who receive special education, and who are otherwise at risk of falling behind or dropping out. Decreasing these funding streams tends to decrease equity, state costs, and total funding, while increasing these streams increases equity, state costs, and total funding. The one exception is special education funding, which increases urban-rural and nonpoor-poor student funding equity but decreases racial and ethnic equity.[40]

The prevention, intervention, and remediation program provides funding to districts for one additional hour of instruction for each at-risk student, which is proxied by calculating the share eligible for free lunch in the district, on average, over the past three years. This funding includes a sliding scale for class size, based on the district's performance on the state's standards of learning over the prior three years. Eliminating the program would decrease costs and negatively affect equity across the

board, while doubling, tripling, or quadrupling districts' funding would increase equity and costs (appendix table A.1).

Cost-Adjusted Difference in District Funding, by Student Characteristics in Virginia

Changes in district funding difference, by level of prevention, intervention, and remediation funding

Funding for students in poverty – funding for students not in poverty

Funding for students of color – funding for white students

Funding for students in rural schools – funding for students in urban schools

Level of prevention, intervention, and remediation funding

URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
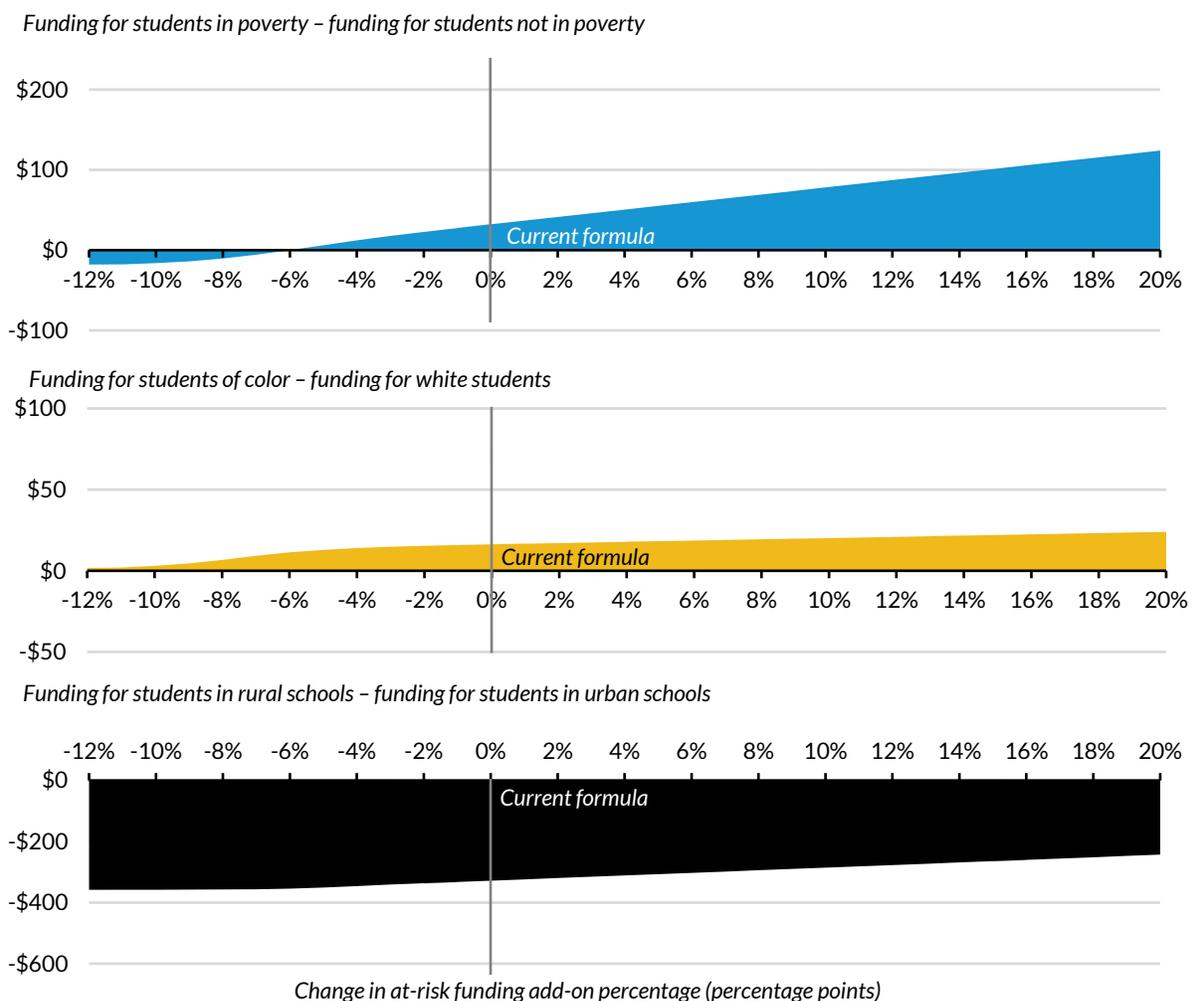**Note:** Cost adjustments made using NCES Comparable Wage Index.

The at-risk program provides additional funding per at-risk student, with the amount determined as the amount of Basic Aid per student in the district multiplied by a percentage add-on from 1 to 13 percent. The add-on percentage for each district is based on the average share of students eligible for free lunch over the past three years, with higher shares for more needy districts. Lowering the add-on percentage to 1 percent for all districts would decrease costs and negatively affect equity across the board,[41] while increasing the percentage by 5 points, 10 points, or more for each district would increase equity and costs (appendix table A.1).

Cost-Adjusted Difference in District Funding, by Student Characteristics in Virginia

Changes in district funding difference, by change in at-risk funding add-on percentage

Funding for students in poverty – funding for students not in poverty

Funding for students of color – funding for white students

Funding for students in rural schools – funding for students in urban schools

Change in at-risk funding add-on percentage (percentage points)

URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
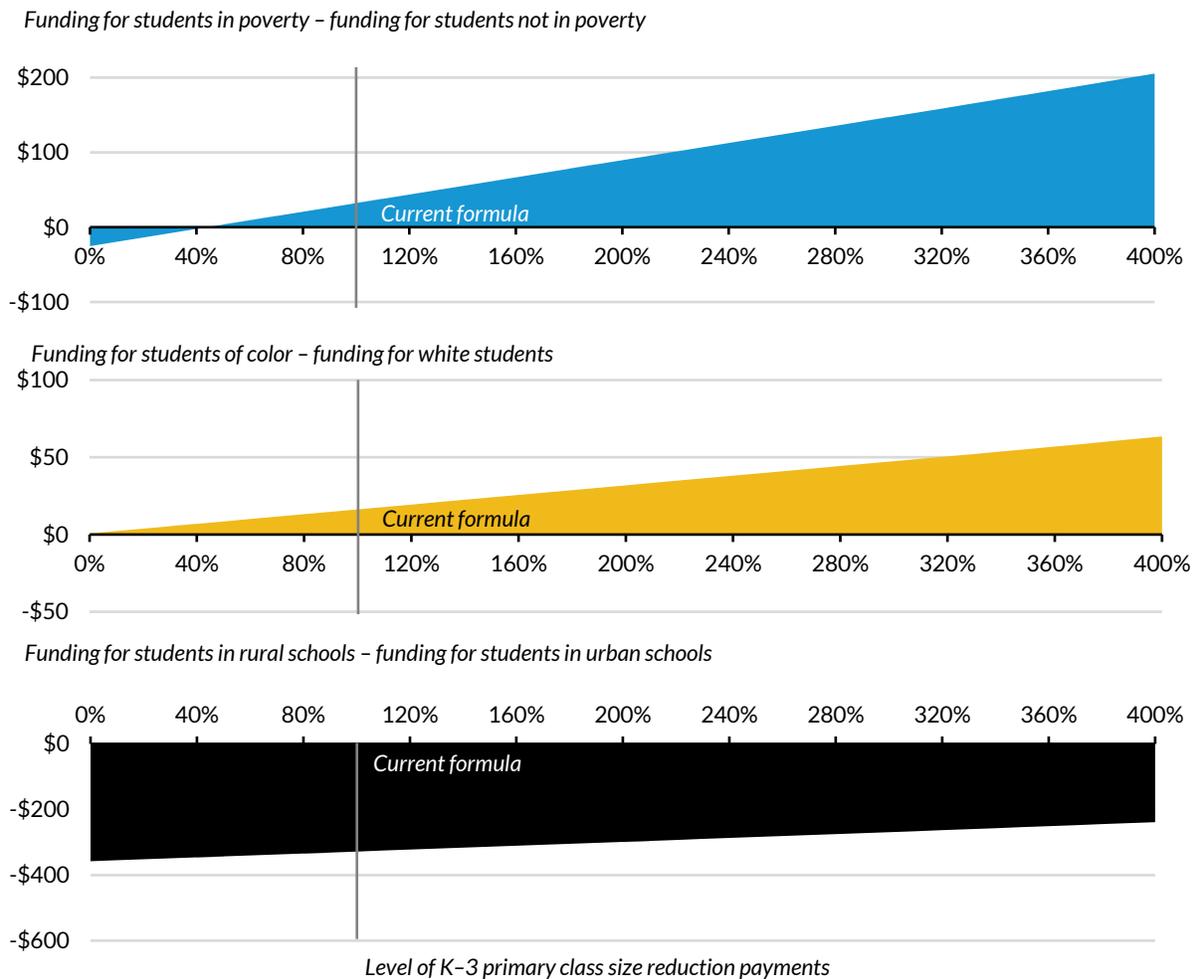**Notes:** Cost adjustments made using NCES Comparable Wage Index. The add-on percentage for each local district has a floor of 1 percent (minimum set in statute). If the proposed offset would result in a locality having an add-on percentage lower than 1 percent, the add-on percentage is set to the 1 percent minimum.

The K–3 Primary Class Size Reduction Program provides funds to districts, based on their actual or average state costs, as an incentive to lower class sizes below thresholds based on the average share eligible for free lunch over the past three years. Eliminating the program would decrease costs but negatively affect equity across the board, while doubling, tripling, or quadrupling funding would increase equity and costs (appendix table A.1).

Cost-Adjusted Difference in District Funding, by Student Characteristics in Virginia
Changes in district funding difference, by level of K–3 primary class size reduction payments

Funding for students in poverty – funding for students not in poverty

Funding for students of color – funding for white students

Funding for students in rural schools – funding for students in urban schools

Level of K–3 primary class size reduction payments

URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
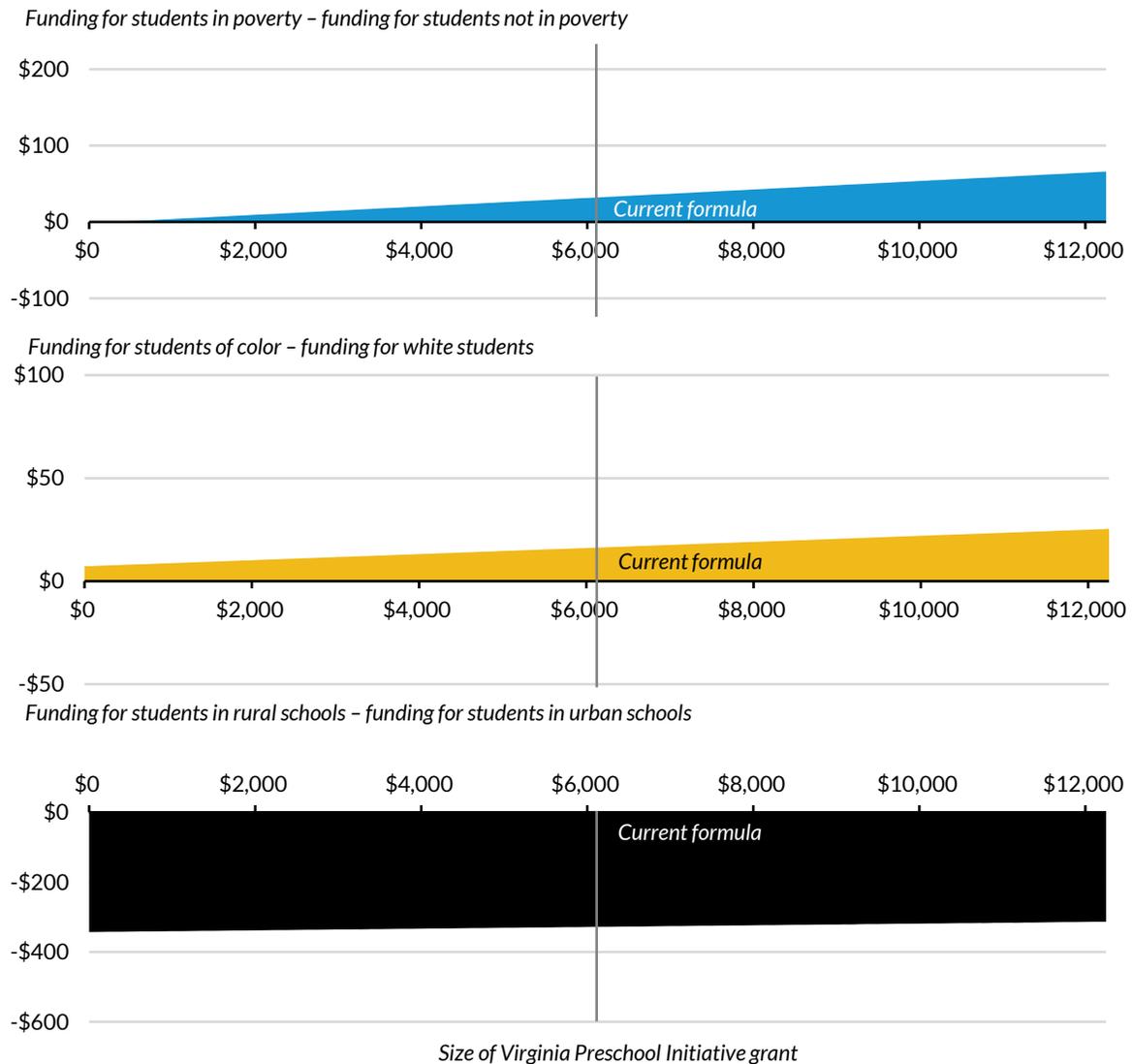**Note:** Cost adjustments made using NCES Comparable Wage Index.

The Virginia Preschool Initiative provides districts' schools and community-based organizations funding to provide early education to at-risk (i.e., low-income) 4-year-old children not currently served by Head Start. The number of at-risk students is estimated by multiplying the projected number of 4-

year-olds by the share of students eligible for free lunch in the districts over the prior three years. A grant of $6,125 for full-day programs and $3,062 for half-day programs is provided for each at-risk 4-year-old not served by Head Start in the district, with funding split between the state and locality based on the composite index. Increasing this grant would increase costs and positively affect equity across the board, while decreasing the amount would decrease equity and lower costs (appendix table A.1).

Cost-Adjusted Difference in District Funding, by Student Characteristics in Virginia

Changes in district funding difference, by size of Virginia Preschool Initiative grant

Funding for students in poverty – funding for students not in poverty

Funding for students of color – funding for white students

Funding for students in rural schools – funding for students in urban schools

Size of Virginia Preschool Initiative grant

URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.

Notes: Cost adjustments made using NCES Comparable Wage Index. This is the grant amount for full-day programs. For half-day programs, local districts receive funding equal to half the amount for full-day programs.

The state's special education program provides funds to districts to fulfill the state's program requirements and serve students with special needs. Eliminating the program would decrease costs and negatively affect equity, except in terms of race or ethnicity, where the difference in funding between the average student of color's and white student's district would shrink. Conversely, increasing special education funding would increase costs and equity, except in terms of race or ethnicity, as the additional funding per student in the average student of color's versus white student's district would fall (appendix table A.1).

Scenarios that change the composite index generally have small effects on total state funding, except for lowering the maximum cap for individual districts to 50 percent, which increases total funding by more than $400 million. Changes to the composite index that tend to increase funding progressivity and equity in terms of urban-rural status tend to lower or reverse the additional funding students of color's districts receive. The proposed adjustments to Basic Aid reduce overall school funding modestly but increase equity. Like changes to the composite index, eliminating supplemental salary funding for COCA districts affects racial and ethnic equity in the opposite direction as its impacts on progressivity and equity by urban or rural status; but distributing sales tax revenue by the share of poor students living in each district increases funding progressivity, supplemental funding for students of color, and funding equity for rural students.

Increasing the funding streams that target disadvantaged and at-risk students also leads to higher school spending, primarily via increased state funding. Expanding these funding streams also increases equity across the board, except for boosting special education funding, which improves progressivity and urban-rural equity while decreasing or reversing supplemental funds for students of color. But the payoff in funding progressivity and equity for each dollar invested in these programs varies. Among these targeted funding streams, increasing the Virginia Preschool Initiative grant amount and districts' funding for K–3 Primary Class Size Reduction Program payments is the most efficient way to boost funding progressivity and supplemental funding for students of color. Both changes would increase the difference in funding per student, in cost-adjusted dollars, between the district where the average poor student lives and where the average nonpoor student lives by $46 to $49 per $100 million in additional funds versus around $13 per $100 million in additional special education funding and $32 to $40 per $100 million added for other targeted funding streams. These programs would increase the additional cost-adjusted per student funding in the districts where the average student of color versus the average white student lives by $12 to $13 per $100 million in additional funds invested compared with other programs that range from increasing this difference by $9 to decreasing it by $6 per $100 million invested. Increasing districts' percentage add-on for the at-risk program leads to the largest per dollar payoff in narrowing the difference in per student funding between urban and rural schools. Every $100 million invested would close this gap by $31 to $36 per student compared with $19 to $26 per student for increases in other targeted funding streams (appendix table A.1).

FIGURE 13

Cost-Adjusted Difference in District Funding, by Student Characteristics in Virginia

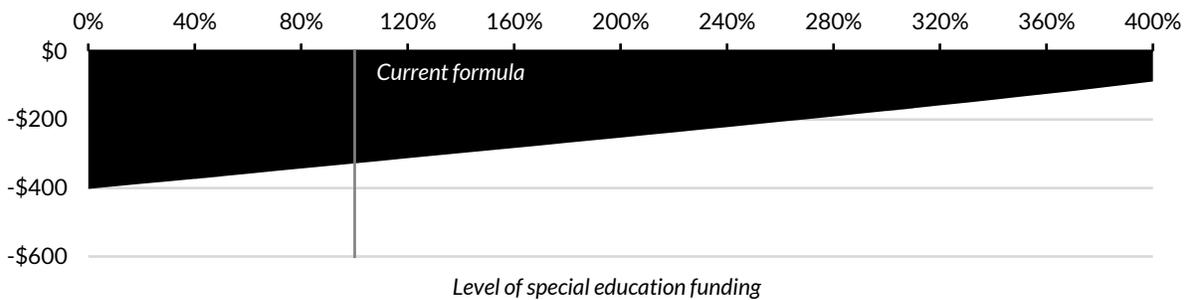*Changes in district funding difference, by level of special education funding*

Funding for students in poverty – funding for students not in poverty
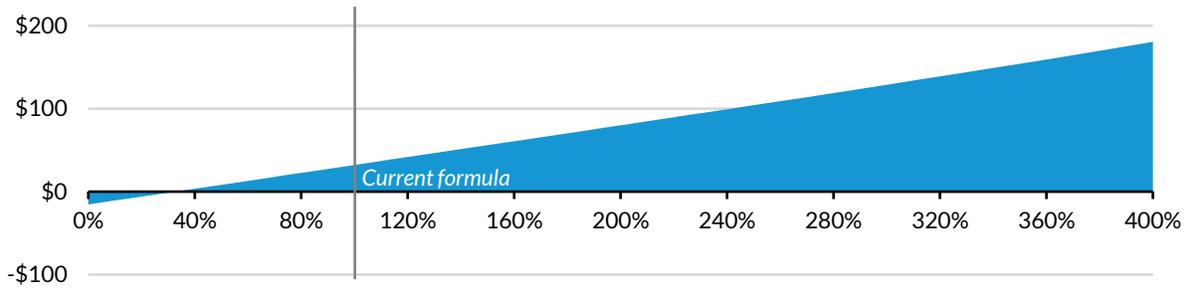
Funding for students of color – funding for white students

Funding for students in rural schools – funding for students in urban schools

Level of special education funding
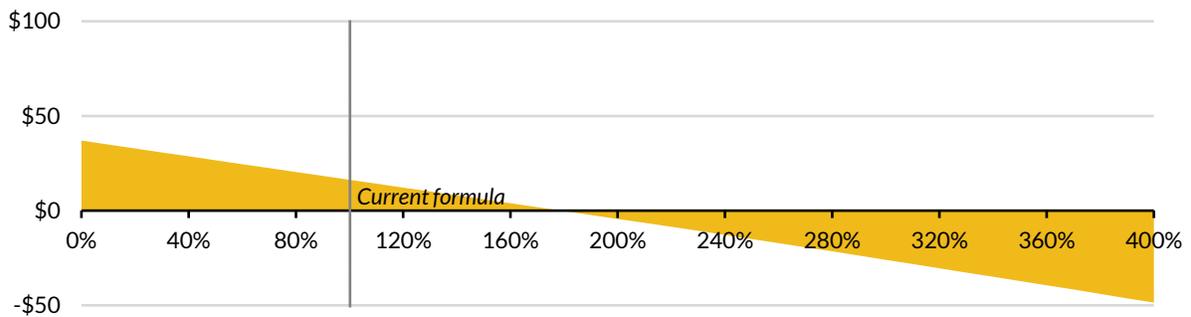
URBAN INSTITUTE

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
Note: Cost adjustments made using NCES Comparable Wage Index.

Future Developments

In the coming years, Virginia will face opportunities and challenges providing public funding for schools. Cost savings from a bipartisan compromise to expand Medicaid and take up federal funds to provide coverage have been redirected toward education, with more than $500 million in new general funds for K–12 school and $131 million earmarked for a 3 percent increase in staff salaries and a few additional positions.[42] The state also restored the supplemental lottery funds going to districts to provide aid beyond general costs back to prerecession levels and made smaller investments in aid targeting low-income, at-risk, and other disadvantaged students (Duncombe and Cassidy 2018). Additionally, some legislators have proposed raising the maximum add-on percentage for the at-risk program beyond fiscal year 2020 increase to 14 percent that was adopted in the state's recently enacted budget.[43]

But the legacy of the Great Recession and the specter of the next economic downturn still hang over school funding in Virginia. Capital spending has remained low relative to prerecession years,[44] and funding school construction to replace infrastructure has become an issue.[45] How the state will respond to the next recession and whether it will make steep cuts is an open question.

Virginia is also grappling with other challenges. Legislators recently recommended increased funding for mental health and school resource officers to deal with security concerns and school safety.[46] Finally, school funding will have to respond to increasing enrollments and a school-age population that is diversifying to include more Hispanics and more immigrants (Driscoll and Salmon 2013). The geographic distribution of students of color tends to be somewhat different in Virginia, where they tend to be concentrated in urban and often wealthier districts, compared with many other states, where they are more likely to live in poorer districts. This means that changes that lead to more funding equity in terms of students' family income or poverty status and urban and rural districts can lead to less equity in terms of race or ethnicity, and vice versa.

Appendix: Detailed Outcomes of Various State Funding Formula Proposal Scenarios

School Funding and Equity Measures under Different Scenarios

School funding outcomes under current and proposed scenarios

| | | | | | Difference in Average Funding | | |
Scenario	Total school funding (billions)	State share	Local share	Average cost-adjusted funding per student	Per poor student vs. per nonpoor student	Per student of color vs. per white student	Per rural student vs. per urban student
Current	$14.60	45.0%	55.0%	$10,579	$32	$16	-$329
Changes to composite index							
Use only property value in composite index	$14.66	45.2%	54.8%	$10,627	$42	$69	-$528
Use only adjusted gross income in composite index	$14.57	44.9%	55.1%	$10,578	$141	-$17	-$126
Use only taxable retail sales in composite index	$14.64	44.7%	55.3%	$10,553	-$280	-$109	$87
Use only per student measures in composite index	$14.65	45.2%	54.8%	$10,608	-$47	$18	-$376
Use only total population per capita measures in composite index	$14.50	44.7%	55.3%	$10,532	$195	$14	-$225
Cap composite index at 50 percent	$15.02	46.6%	53.4%	$10,848	-$83	$86	-$555
Remove cap on composite index	$14.53	44.8%	55.2%	$10,539	$43	$1	-$281
Changes to Basic Aid							
Distribute sales tax by share of poor students	$14.54	44.8%	55.2%	$10,555	$215	$59	-$252
Eliminate cost of competing adjustment salary supplement	$14.51	44.7%	55.3%	$10,522	$64	-$6	-$283
Changes to funding streams targeting disadvantaged and at-risk students							
Eliminate prevention, intervention, and remediation funding	$14.48	44.6%	55.4%	$10,491	-$12	$6	-$357
200% prevention, intervention, and remediation funding	$14.71	45.5%	54.5%	$10,668	$76	$26	-$300
300% prevention, intervention, and remediation funding	$14.83	45.9%	54.1%	$10,756	$120	$37	-$271
400% prevention, intervention, and remediation funding	$14.94	46.3%	53.7%	$10,844	$163	$47	-$242
Reduce at-risk Basic Aid add-on to 1 percent for all districts	$14.51	44.7%	55.3%	$10,513	-$18	$2	-$358
Decrease at-risk Basic Aid add-on by 5 percentage points	$14.54	44.8%	55.2%	$10,532	$6	$13	-$351
Increase at-risk Basic Aid add-on by 5 percentage points	$14.67	45.3%	54.7%	$10,634	$55	$18	-$307

Scenario	Total school funding (billions)	State share	Local share	Average cost-adjusted funding per student	Difference in Average Funding		
					Per poor student vs. per nonpoor student	Per student of color vs. per white student	Per rural student vs. per urban student
Increase at-risk Basic Aid add-on by 10 percentage points	$14.74	45.6%	54.4%	$10,689	$78	$20	-$286
Increase at-risk Basic Aid add-on by 15 percentage points	$14.81	45.8%	54.2%	$10,744	$101	$22	-$264
Increase at-risk Basic Aid add-on by 20 percentage points	$14.88	46.1%	53.9%	$10,798	$124	$24	-$243
Eliminate K–3 primary class size reduction payments	$14.47	44.6%	55.4%	$10,483	-$25	$1	-$358
200% K–3 primary class size reduction payments	$14.72	45.5%	54.5%	$10,676	$90	$32	-$299
300% K–3 primary class size reduction payments	$14.85	45.9%	54.1%	$10,773	$147	$47	-$269
400% K–3 primary class size reduction payments	$14.97	46.4%	53.6%	$10,870	$205	$64	-$239
Eliminate Virginia Preschool Initiative grant	$14.53	44.8%	55.2%	$10,525	-$2	$7	-$343
Double Virginia Preschool Initiative grant	$14.67	45.3%	54.7%	$10,634	$66	$25	-$313
Eliminate special education funding	$14.22	43.6%	56.4%	$10,292	-$15	$37	-$403
200% special education funding	$14.98	46.4%	53.6%	$10,868	$80	-$4	-$253
300% special education funding	$15.37	47.8%	52.2%	$11,157	$129	-$26	-$175
400% special education funding	$15.75	49.0%	51.0%	$11,449	$181	-$49	-$89

Source: Urban Institute analysis of Virginia Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.

Note: Cost adjustments made using NCES Comparable Wage Index.

Notes

1   Va. Const. art. VIII, § 2, (1971), https://law.lis.virginia.gov/constitution/article8/section2.

2   VDOE (Virginia Department of Education), "Superintendent's Annual Report 2016–2017," VDOE, accessed October 10, 2018, http://www.doe.virginia.gov/statistics_reports/supts_annual_report/2016-17/index.shtml, tables 14A–14E.

3   Derek Black, "All Signs Point Toward a Constitutional Problem in Virginia's Education System," Education Law Prof Blog, October 25, 2018, https://lawprofessors.typepad.com/education_law/2018/10/all-signs-point-toward-a-constitutional-problem-in-virginias-education-system.html.

4   Center for Educational Equity at Teachers College, "Virginia," SchoolFunding.Info, accessed October 10, 2018, http://schoolfunding.info/litigation-map/virginia/#1485218475123-0593cf17-dca3.

5   VDOE, "Virginia's Public Charter Schools," VDOE, accessed October 10, 2018, http://www.doe.virginia.gov/instruction/charter_schools/charter_schools.shtml; "Virginia," National Alliance for Public Charter Schools, accessed October 10, 2018, https://www.publiccharters.org/our-work/charter-law-database/states/virginia.

6   "America's School Choice Programs Ranked by Participation, 2016 Edition," EdChoice blog, January 27, 2016, https://www.edchoice.org/blog/americas-school-choice-programs-ranked-by-participation-2016-edition/.

7   VDOE, "Direct Aid and State Payments," VDOE, accessed October 10, 2018, http://www.doe.virginia.gov/school_finance/budget/index.shtml. See "Required Local Effort and Required Local Match" reports for various years.

8   William A. Owings and Leslie S. Kaplan, "Funding Public Education in Virginia," Virginia Association for Supervision and Curriculum Development, accessed October 10, 2018, http://ww2.odu.edu/~wowings/funding_public_education_in_virginia.ppt.

9   The Commonwealth Institute, "Statewide Public Schools in Virginia," The Commonwealth Institute for Fiscal Analysis, September 2018, http://www.thecommonwealthinstitute.org/wp-content/uploads/2018/10/PUBLIC-SCHOOLS-IN-VIRGINIA-130.pdf.

10 Andrew Warren and Chris Duncombe, "In Funding High-Poverty Schools, Virginia Gets a Failing Grade," *The Half Sheet* (blog), The Commonwealth Institute, August 28, 2018, http://thehalfsheet.org/post/177487398498/in-funding-high-poverty-schools-virginia-gets-a.

11 Ivy Morgan and Ary Amerikaner, "An Analysis of School Funding Equity across the US and within Each State," The Education Trust, February 27, 2018, https://edtrust.org/resource/funding-gaps-2018/.

12 Yvonne A. Holloman, "The Impact of the Virginia K–3 Primary Class Size Reduction Program on Student Achievement in Reading," (PhD diss., Virginia Polytechnic Institute and State University, 2017).

13 In some years, the general assembly may fund some programs out of the lottery or split fund programs.

14 VDOE "Superintendent's Annual Report 2016–2017," tables 14A–14E; Together, incentive and categorical programs and other state funding make up 3 percent of overall state funding for prekindergarten–12 education. Incentive programs are voluntary but must be offered and meet program requirements (Dickey 2013). The largest component of incentive program funds is for technology provided through the state department of education and Virginia Public School Authority's sale of Literary Fund bond sales. Other minor items include funding for the special Governor's School, small-school enrollment loss, early reading and math instructional specialists, breakfast programs, school security equipment, and special education programs. Categorical funds are mostly mandated by state or federal laws and regulations, target specific groups, and do not have a local match (Dickey 2013). These funds include dollars for special education for students served out of school, adult education, the state's online education platform, school lunch programs, and an American Indian Treaty Commitment. Supplemental education programs are directed to specific districts or regional or individual recipients for specific program uses specified in legislation and are not available to all districts (Dickey 2013). These consist of several small, specialized programs and grants. See "Budget Bill–HB1500 (Chapter 836, Item

139),” Virginia Legislative Information System, accessed November 2, 2018, https://budget.lis.virginia.gov/item/2017/1/HB1500/Chapter/1/139/.

[15] VDOE, “Direct Aid and State Payments.”

[16] The formula takes a weighted average of these three per capita measures of economic capacity, with property value accounting for 50 percent of the average, income accounting for 40 percent, and retail sales accounting for 10 percent. It also accounts for the district's age profile by including two components: one that uses overall population in the per capita economic measures and accounts for one-third of the final index and one that uses per enrollment economic measures and accounts for two-thirds of the index.

[17] The exception is the smaller amount for Remedial Summer School, which does not require a local match.

[18] “Budget Bill–HB1500 (Chapter 836, Item 139),” Virginia Legislative Information System, accessed November 2, 2018, https://budget.lis.virginia.gov/item/2017/1/HB1500/Chapter/1/139/. The minimum number of instructional positions at each grade level and of each type (e.g., teacher, aide) that the district needs to meet SOQ staffing requirements are determined separately. Minimum staffing requirements are specified as student-teacher ratios at the district level, which vary by grade band, at the school level for middle schools and high schools, and at the class level via maximum overall class sizes that vary by grade level.

[19] Districts that receive cost of competing adjustment rates are generally more affluent and located near Washington, DC.

[20] Support positions include assistant superintendents and administrative, technical, clerical, operations, and maintenance support; support technology; instructional support; and attendance and health positions. Fringe benefit costs and health care costs are part of Basic Aid for support personnel versus only health care costs for instructional positions.

[21] Nonpersonnel support costs include funding allocations for such items as instructional support and technology, substitutes, improvements, facilities, administration and communications, insurance, transportation, and various support offices. Instructional support includes instructional classrooms and instructional support funds. Administration also includes funds for attendance and health. Facilities includes facilities, utilities, and other operations and maintenance. Insurance includes unemployment insurance, workers' compensation, disability insurance, and other insurance. Transportation support includes capital and operational funding and is determined based on the district's size and the number of regular students, handicapped students, and handicapped students with special arrangements, while accounting for public transit use and bus replacement costs (Dickey and Logwood 2001). Support offices include the principal's office, superintendent, school board, and school nurse (salary only).

[22] Additional per pupil amounts for instructional technology and elementary resource teachers, including competing adjustments, are added on after the unadjusted Basic Aid per pupil amount is calculated.

[23] Adjusted average daily membership counts participants in half-day kindergarten 85 percent toward enrollment, rather than counting them 100 percent toward enrollment as in unadjusted average daily membership.

[24] Prevention, improvement, and remediation funds target students at risk of falling behind, measured via a proxy of the share of enrolled students eligible for federal free lunch over the previous three years. The funds provided to each district are calculated as the amount needed to provide one additional hour of instruction each day for students that are at risk and may require these services, with the student-to-teacher ratio determined for this instruction varying from 10:1 to 18:1 depending on the district's performance on state English and math standards over the prior three years. Special education funding for students with disabilities attending regular schools is based on the estimated number of instructional and support staff needed to meet the special education standards in each of the district's schools (“Federal Funding: IDEA Part B,” Virginia Department of Education, accessed November 2, 2018, http://www.doe.virginia.gov/special_ed/grants_funding/index.shtml). This amount is based on the number of children requiring services and their level of need reported by schools each year in a December data collection, as well as staffing and other program standards (“8VAC20-81-40 Special Education Staffing Requirements,” Virginia Legislative Information System, accessed November 2, 2018, https://law.lis.virginia.gov/admincode/title8/agency20/chapter81/section40/). Career and technical education (also known as vocational education) funding in each district is based on student enrollment in these courses and staffing standards (“8VAC20-120-30 State/Federal Financial Assistance,” Virginia Legislative Information

System, accessed November 2, 2018, https://law.lis.virginia.gov/admincode/title8/agency20/chapter120/section30/ and "Budget Bill–HB1500 (Chapter 836, Item 139)," Virginia Legislative Information System, accessed November 2, 2018, https://budget.lis.virginia.gov/item/2017/1/HB1500/Chapter/1/139/). ESL funding covers the costs of 17 instructional teachers per 1,000 ESL students at the applicable funded salary rate, including any cost of competing adjustments.

[25] "Budget Bill–HB1500 (Chapter 836, Item 139)," Virginia Legislative Information System, accessed November 2, 2018, https://budget.lis.virginia.gov/item/2017/1/HB1500/Chapter/1/139/. This amount is calculated as a fringe rate except for the funded health care premium, which is a flat per position amount.

[26] "Budget Bill–HB1500 (Chapter 836, Item 139)," Virginia Legislative Information System.

[27] This amount is for the cost of full-day programs, half of the $6,125 is allocated for half-day programs, and the local share is capped at 50 percent.

[28] VDOE, "How Special Education Programs are Funded in Virginia's Schools," VDOE, accessed October 10, 2018, http://www.doe.virginia.gov/special_ed/grants_funding/how_speced_funded.pdf.

[29] "Budget Bill–HB1500 (Chapter 836, Item 139)," Virginia Legislative Information System.

[30] Total state and local funding figures for the fiscal year 2017 baseline are drawn from VDOE "Superintendent's Annual Report 2016–2017," table 15.

[31] Per student funding figures are calculated as total state and local funding divided by total enrollment as reported in the National Center for Education Statistics (NCES) Common Core of Data. Per student funding is calculated in this way to maintain consistency and allow for comparability with the equity measures, which are also calculated using NCES enrollment figures. To improve comparability across districts, we also adjust per student funding figures for local costs by accounting for differences in the salaries of college graduates between areas using the NCES Comparable Wage Index.

[32] We exclude districts that do not have poverty rates available in the Small Area Income and Poverty Estimates, such as districts that have only charter schools.

[33] To improve comparability, we adjust for local costs by accounting for differences in the salaries of college graduates between areas using the National Center for Education Statistics (NCES) Comparable Wage Index.

[34] Before calculating the weighted averages, we adjust each district's funding to reflect differences in the costs they face. To make this adjustment, we use a measure of the salaries of college graduates who are not teachers in the district's labor market (Comparable Wage Index data).

[35] We define *rural* as a school classified as "rural" or "town" in the NCES's locale code, while *urban* is a school defined as "urban" or "suburban." About 25 percent of students in Virginia are classified as rural.

[36] State funding under different scenarios is calculated as total state funding in the current baseline plus any change in state funding that occurs based on changing parameters in our funding formula model, which is based on the state's budget calculation tools and does not comprise all streams and programs funded by the state. See VDOE, "Direct Aid Payment Calculation Templates: Budget Calculation Tools," VDOE, accessed October 10, 2018, http://www.doe.virginia.gov/school_finance/budget/calc_tools/index.shtml, "Final FY 2017 Direct Aid Payments (June 2017)."

[37] As local funding exceeds current requirements in all districts, it seems unlikely that districts would respond to a reduction in state funding by lowering their contributions, but they could increase local funding. Additionally, at least one study (Driscoll and Salmon 2008) indicates that some districts have lowered their local funding efforts in response to *increased* state funding in the past. These latter two responses are assumed to not occur in these calculations. If these assumptions did not hold, these responses could affect the funding and equity outcomes because of the outlined changes.

[38] That is, weight property value 100 percent and adjusted gross income and taxable sales both 0 percent in the composite index calculation.

[39] Local funds are assumed to remain constant and not to decrease in response to higher state funds and lower matching requirements, which are not binding in the baseline.

[40] By "increasing equity," we mean that the disadvantaged group (i.e., poor, nonwhite, or rural) receives an increase in funding per student relative to the advantaged group (i.e., nonpoor, white, or urban) relative to the current formula.

[41] The minimum add-on percentage for a district is set in statute at 1 percent.

[42] Amanda Litvinov, "Virginia Educators Cheer Budget That Expands Medicaid, Boosts School Funding and Educator Pay," *Education Votes* (blog), National Education Association, June 9, 2018, https://educationvotes.nea.org/2018/06/09/virginia-educators-cheer-budget-that-expands-medicaid-boosts-school-funding-and-educator-pay/.

[43] Justin Mattingly, "Delegates Introduce Budget Amendments to Help Schools with Students from Low-Income Families," *Richmond Times-Dispatch*, January 23, 2018, https://www.richmond.com/news/virginia/government-politics/general-assembly/delegates-introduce-budget-amendments-to-help-schools-with-students-from/article_3da943c5-8b58-5a5e-ad52-92c232cbcfd0.html.

[44] Chris Duncombe, "Capital Spending on Virginia's K–12 Schools Way Down," *The Half Sheet* (blog), The Commonwealth Institute, August 13, 2018, http://thehalfsheet.org/post/176957955098/capital-spending-on-virginias-k-12-schools-way.

[45] Amy Friedenberger, "Sen. Bill Stanley Proposes Modernizing Schools without Raising Taxes," *Roanoke Times*, August 16, 2018, https://www.roanoke.com/news/local/sen-bill-stanley-proposes-modernizing-schools-without-raising-taxes/article_8482a555-5827-529d-aa7f-d2fca89a0d83.html.

[46] Justin Mattingly, "Virginia Lawmakers Recommend Increasing Funding for Mental Health, School Resource Officers," *Richmond Times-Dispatch*, September 11, 2018, https://www.richmond.com/news/virginia/virginia-lawmakers-recommend-increasing-funding-for-mental-health-school-resource/article_e0fc9e53-a3f0-59b0-9b78-f50973980f89.html.

References

Baker, Bruce D., and Sean P. Corcoran. 2012. *The Stealth Inequities of School Funding: How State and Local School Finance Systems Perpetuate Inequitable Student Spending.* Washington, DC: Center for American Progress.

Baker, Bruce D., Danielle Farrie, and David Sciarra. 2018. *Is School Funding Fair? A National Report Card,* 7th ed. Newark, NJ: Education Law Center.

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

Cole, Mitchell, and Michael Cassidy. 2014. "Unsettling Divide: Education Cuts Hit High-Poverty School Divisions Hardest." Richmond, VA: The Commonwealth Institute.

Delja, Ashley McDonald. 2004. "Across Four Aprils: School Finance Litigation in Virginia." *Brigham Young University Education and Law Journal* 2004 (2): 191–247.

Dickey, Kent C. 2013. "Overview of K–12 Education Funding in Virginia (Direct Aid to Public Education Budget)." Richmond: Virginia Department of Education.

———. 2017. "Report on Rebenchmarking of the Direct Aid to Public Education Budget for the 2018–2020 Biennium." Presentation to the Board of Education, Richmond, VA, September 28.

Dickey, Kent, and Brian Logwood. 2001. "Virginia." In *Public School Finance Programs of the US and Canada, 1998–99,* edited by Catherine C. Sielke, John Dayton, C. Thomas Holmes, and Anne L. Jefferson. Washington, DC: US Department of Education, National Center for Education Statistics.

Driscoll, Lisa G., and Richard G. Salmon. 2008. "How Increased State Equalization Aid Resulted in Greater Disparities: An Unexpected Consequence for the Commonwealth of Virginia." *Journal of Education Finance* 33 (3): 238–61.

———. 2013. "Challenges Confronting Public Elementary and Secondary Education in the Commonwealth of Virginia." *Journal of Education Finance* 38 (3): 230–54.

Duncombe, Chris, and Michael Cassidy. 2016a. "Virginia's Eroding Standards of Quality: How the State Slashed Support for Virginia's Schools since the Recession." Richmond, VA: The Commonwealth Institute.

———. 2016b. "Taking the Best Step Forward in Supporting Schools: An Analysis of 2016–2018 Budget Proposals in PreK–12 Funding." Richmond, VA: The Commonwealth Institute.

———. 2016c. "Weighing Support for Virginia's Students." Richmond, VA: The Commonwealth Institute.

———. 2018. "State K–12 Funding in Virginia: Incremental Progress and Opportunity for Long-Term Solutions." Richmond, VA: The Commonwealth Institute.

Duncombe, William, and John Yinger. 2005. "How Much More Does a Disadvantaged Student Cost?" *Economics of Education Review* 24 (5): 513–32.

JLARC (Joint Legislative Audit and Review Commission of the Virginia General Assembly). 2002. *Review of Elementary and Secondary School Funding.* Richmond, VA: JLARC.

Jones, Robley S., Carol M. Donohue, and Linda J. Shotwell. 2009. *Funding K–12 Education in the Commonwealth: School Finance 101.* Richmond: Virginia Education Association.

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