School District Funding in Nebraska

Computing the Effects of Changes to the TEEOSA Formula

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The state of Nebraska provides funds to local school districts through a funding formula that has changed little since 1990. The formula's core components calculate estimated resources and estimated needs for each district, with the state funding any difference. In this brief, we describe how the formula works and calculate how it distributes funding across districts that differ in their mix of student poverty rates, student race or ethnicity, and school urbanicity. We then draw on an interactive calculator tool to estimate how changes to the funding formula would affect funding for different kinds of school districts and at what cost to the state. A key finding is that changes in funding parameters often do not translate into substantial changes in relative funding for different students, along the lines of students' poverty status, race or ethnicity, or school urbanicity.

Background

School Finance Reform and District Reorganization

In 1990, Nebraska adopted its current funding formula with Legislative Bill 1059, the Tax Equity and Educational Opportunities Support Act (TEEOSA). TEEOSA was designed to alleviate inadequate funding from the state and reduce reliance on property taxes for local funding. In the years leading up to

TEEOSA's passage, state sources supplied between 22 and 25 percent of school revenue from state and local sources.[1] Local revenue for schools was sourced mostly through property taxes.

The legislature recognized a need to reform the school finance system, which led to the introduction of reform bills in several legislative sessions. One bill established the 1988 Nebraska School Financing Review Commission to review the state's school funding system. The commission consisted of representatives from the legislature, public schools, and higher education, as well as the governor and the commissioner of education.[2] Before the commission began working, the legislature received the results of a comprehensive tax study of the state, known as the Syracuse Report (Wasylenko and Yinger 1988), which called for an increase in state taxes, reform to the school funding formula, and school consolidation or reorganization.[3] The commission referenced the Syracuse Report in its final report, *Funding Nebraska's Schools*, in 1990, and many of the Syracuse Report's recommendations were incorporated into the commission's report.

One of the other factors that led to TEEOSA was a 1990 lawsuit, *Gould v. Orr*, filed against the state by a family residing in Saunders County, Nebraska. The plaintiffs alleged that the existing funding formula "resulted in substantial disparity among districts, with the distribution from [the funding formula] being insufficient to offset the local tax revenue differentials caused by local wealth disparities."[4] Although the court did not decide on the lawsuit until 1993, the lawsuit may have pressured the Nebraska legislature to act on recommendations to change the formula. Other external pressure came from farmers and property owners, who expressed concern about their high property taxes.[5]

TEEOSA's primary sponsor, Senator Ron Withem, introduced another bill to reorganize the school districts. Legislative Bill 259 proposed that school districts offer all grades, which led elementary school districts to merge with K–12 school districts or high school districts. At the time, the concern was that these elementary school districts were paying lower property taxes than districts with high schools.[6] Before the bill was introduced, during the 1989–90 school year, there were 278 K–12 school districts, 538 elementary school districts, and 22 high school districts.[7] By 2006–07, all elementary school–only and high school–only districts were consolidated with other districts, reducing the number of school districts from 845 to 271.[8]

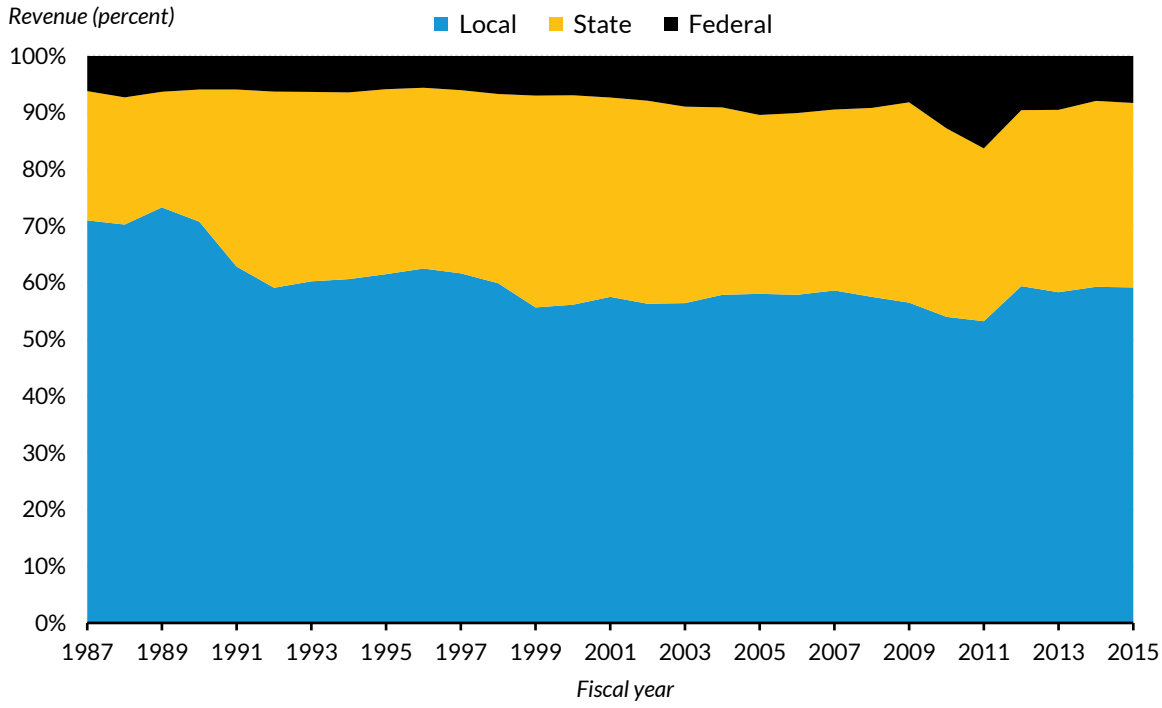
The Current Climate

Although there have been tweaks, the 1990 state funding formula is essentially the same one Nebraska uses today. Changes to the formula have emerged largely because of budget constraints. Facing diminished state revenue after the 2008 recession, the legislature passed Legislative Bill 235, which made formula changes that reduced state funding by about $189 million in 2011–12 and $222 million in 2012–13 (Bergquist et al. 2018). According to a recent analysis, state aid, as a share of the economy, declined 8 percent between 1992–93 and 2017–18 (Bergquist et al. 2018). Although one of the objectives of the Nebraska School Financing Review Commission was for the state to fund 45 percent of the school system, the state has never funded more than 37 percent.[9] Since 1990, the share of revenue

from the state has remained somewhat constant, hovering between 30 and 37 percent (with the lowest share during the disbursement of funding from the American Recovery and Reinvestment Act).[10]

FIGURE 1

Nebraska Public Education Revenue from 1987 to 2015, by Local, State, and Federal Sources



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Source: Urban Institute analysis of data from the National Center for Education Statistics Common Core of Data.

In 2014–15, 59 percent of Nebraska's school revenue was from local sources, 32 percent was from state sources, and the remaining 8 percent was from federal sources. Among all states, the shares of revenue coming from state sources were lowest in Illinois (25 percent), South Dakota (30 percent), and Nebraska (32 percent).[11] The shares of revenue coming from property taxes were highest in Illinois (59 percent), New Hampshire (58 percent), Connecticut (53 percent), and Nebraska (53 percent).[12]

Many of the challenges that led to the funding formula change are still present in Nebraska's school finance conversation. With property owners pushing for lower property taxes and multiple legislators pushing for reform or a commission, the state may find itself in a similar position as it was before. During the last legislative session (2018), lawmakers introduced several major tax proposals to reduce property taxes[13] by reducing school costs, increasing other revenue sources, relying on economic growth, or using a combination of the three.[14] During that same time, the Yes to Property Tax Relief Committee was petitioning to put a tax proposal on the November 2018 ballot.[15] This proposal was similar to one proposed in the legislature, but shortly after the end of the legislative session, the initiative stopped collecting signatures for the petition, possibly reducing pressure for reform during the next legislative session.[16]

The Public Education System and Student Demographics

In 2017–18, Nebraska's public education system consisted of 244 school districts. Of these, there were four distinct classes, based on Nebraska's school district classification laws. Although these classifications are not used in the funding formula, they provide useful context (NDE 2017b):

- 18 Class 2 school districts of 1,000 or fewer residents
- 224 Class 3 school districts of 1,001 to 99,999 residents
- 1 Class 4 school district of 100,000 to 199,999 residents (Lincoln Public Schools)
- 1 Class 5 school district of 200,000 or more residents (Omaha Public Schools)

Within these school districts are 1,000 public schools, serving 320,000 students from prekindergarten through 12th grade (NDE 2017c). Sixty-seven percent of Nebraska students are white, 19 percent are Hispanic, 7 percent are black, 4 percent are two or more races, 3 percent are Asian, and 1 percent are Native American. Forty-five percent of students qualify for free and reduced-price lunch.[17]

Current Funding Formula

The total funding to districts from both state and local sources is $3 billion, nearly $1 billion of which is from state aid. In 2017–18, equalization aid accounted for 85 percent of total state aid and is the most complex portion of the total state aid calculation, which is the final step of the state aid formula (table 1). Most state aid distributed by the TEEOSA formula is equalization aid, but only a quarter of school districts receive equalization aid.

TABLE 1

How the TEEOSA Formula Determines Total State Aid

Equalization aid (85%)	+ Additional components	= Total state aid
	Net option funding (10%) Income tax rebate (4%) Other state aid components (1%)	

Source: Nebraska Department of Education (NDE), "Tax Equity and Educational Opportunities Support Act (TEEOSA) Certification of 2017/18 State Aid" (Lincoln: NDE, 2017).

The TEEOSA formula determines whether and how much equalization aid a district will receive by calculating the district's expected need for a year and subtracting a calculation of the district's resources (table 2).

TABLE 2

How the TEEOSA Formula Determines Equalization Aid

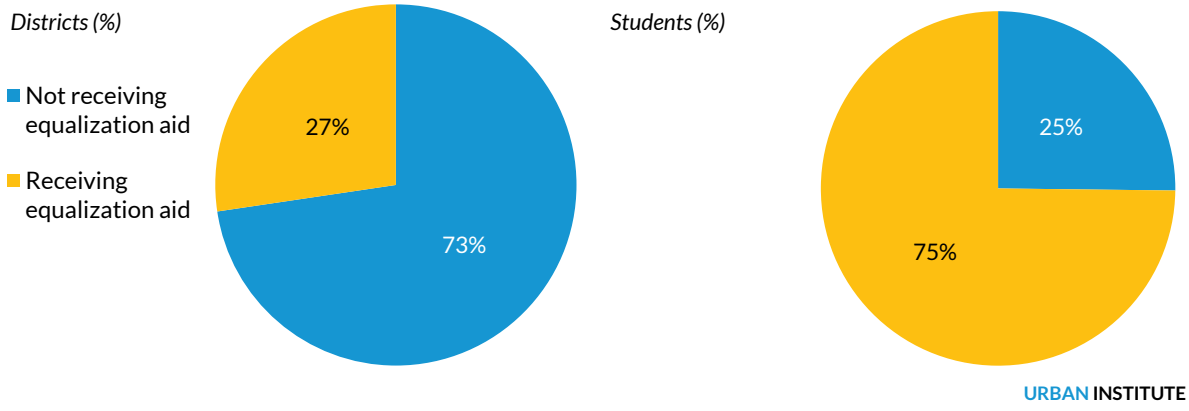
Calculated needs	– Calculated resources	= Equalization aid
Basic funding (83%)	Local effort rate (79%)	
Special receipts allowance (6%)	Other actual receipts (16%)	
Poverty allowance (4%)	Net option funding (3%)	
LEP allowance (2%)	Other resources components (2%)	
Transportation allowance (2%)		
System averaging adjustment (1%)		
Other needs components (1%)		
Needs stabilization (1%)		

Source: Nebraska Department of Education (NDE), "Tax Equity and Educational Opportunities Support Act (TEEOSA) Certification of 2017/18 State Aid" (Lincoln: NDE, 2017).
Notes: LEP = limited English proficient. Other needs components include focus school and program allowance, summer school allowance, elementary site allowance, distance education and telecommunications allowance, two-year new school adjustment, student growth adjustment, student growth adjustment correction, community achievement plan adjustment, poverty correction, LEP correction, and nonqualifying LEP. Other resource components include allocated income tax funds and community achievement plan aid.

In 2017–18, 67 school districts (roughly a quarter of all school districts) received equalization aid. Districts receive equalization aid if they have calculated needs greater than the district's calculated resources. But students in these districts make up 75 percent of all students in the state (figure 2). Equalization aid made up the difference between needs and resources for these 67 districts. Among the 178 districts that did not receive equalization aid, their resources met or exceeded their needs. Although these districts did not receive equalization aid, they did receive TEEOSA state aid through other components, such as an income tax rebate and net option funding.

FIGURE 2

Share of Districts and Students, by District Receipt of Equalization Aid



Source: Urban Institute analysis of Nebraska Department of Education school finance data.

Needs

The needs calculation is made up of 18 components (during the 2017–18 school year). The largest components are basic funding (83 percent of total need), the special receipts allowance (6 percent), and the poverty allowance (4 percent), among other needs components shown in table 2. Altogether, these components account for about 98 percent of the total needs calculation. In the needs calculation, the order of calculating components is important. Before basic funding can be calculated, some of the allowances, including the poverty allowance and the limited English proficiency allowance, must be calculated first. Following the basic funding calculation, the system averaging adjustment and other adjustments are calculated. The last component to be calculated is needs stabilization.

The ***special receipts allowance*** makes up the second-largest component of the needs calculation. The receipts for "special education, state ward, and accelerated or differentiated curriculum program" reported two school years ago (2015–16) are added up to calculate the special receipts allowance for each district for the 2017–18 school year.[18]

The ***poverty allowance*** is the lesser of the maximum poverty allowance submitted by the district or the poverty adjustment calculation. Each district submits a "poverty plan" for its spending on programs for students in poverty and designates a maximum amount of state funds they can spend.[19] The poverty adjustment calculation is determined using a concentrated poverty formula. In this formula, the statewide average GFOE per student (about $10,654) is multiplied by graduated percentages, which causes the poverty allowance to grow exponentially for higher concentrations of low-income students.[20] For example, in two school districts with 1,000 students, a district with 30 percent low-income students would receive five times the poverty aid under this calculation as a district with 15 percent low-income students.[21]

The ***limited English proficiency allowance*** is calculated using a method similar to the one used to calculate the poverty allowance (without a concentrated weighting formula). Districts designate a maximum amount of state funds they can spend on English language learners (ELLs) each year in a limited English proficiency (LEP) plan.[22] The allowance is the lesser of this maximum allowance or a calculation based on a standard weight per English language learner (about $2,600 per ELL).[23]

The ***transportation allowance*** is also determined by taking the lesser of two calculations. The first calculation takes the difference between prior-prior-year spending on total regular pupil transportation and transportation funds paid to another district. The second calculation multiplies the route miles reported for the same prior school year (2015–16) by a reimbursement rate four times the state mileage reimbursement rate ($0.54 a mile for 2017–18).[24] The resulting amount is then added to in-lieu-of-transportation costs.[25]

Basic funding is determined by creating a comparison group of other school districts using the number of students in each district.[26] These comparison groups are unique for each school district, as they are composed of 10 larger districts and 10 smaller districts based on enrollment. If a school district does not have 10 smaller or 10 larger districts, the comparison groups for these districts will be smaller.[27] For example, the smallest and largest districts have only 10 districts in their comparison

group, the next smallest and next largest have only 11 districts, and so on until each district has 20 districts in its comparison group. These comparison groups are used to construct estimates of each district's operating expenditures.

Before creating the estimates, the general fund operating expenditures (GFOE) are adjusted to account for a school district's poverty allowance, limited English proficiency allowance, transportation allowance, and other allowances not described here. These allowances are subtracted from the GFOE to calculate the adjusted GFOE (e.g., if the poverty allowance for a school district increases $10,000, the district's adjusted general fund operating expenditures will decrease that same amount).

To estimate basic funding, there are two similar calculations: one for the 204 "small" districts with fewer than 900 students and one for the 41 "large" districts with 900 students or more. For small districts, the basic funding is determined using the average of the prior-prior-year (school year two years prior) adjusted GFOE of districts in the comparison group and the district itself, excluding districts that have the two highest and two lowest of these expenditures.[28] A similar process is followed for districts with 900 students or more, except that these calculations are made per student rather than using the district total. For these large districts, basic funding is determined using the average of the adjusted GFOE per student for each district in the comparison group and the district itself, excluding the two highest and two lowest of these expenditures per student.[29] Then, this average GFOE per student is multiplied by the district's number of students to get the basic funding for that district.

System averaging adjustment occurs after the basic funding has been determined. If a large district has a lower basic funding per student than the average for all large districts, an adjustment is made to increase the district's basic funding. This adjustment is 90 percent of the difference between the district's basic funding per student and the average basic funding per student of large school districts, multiplied by the number of students in the district. As noted before, this component, along with other adjustments, depends on the basic funding calculation. Thus, changes to basic funding necessarily change the adjustment calculations.

Needs stabilization is the last step of the needs calculation and occurs after the other 17 components have been completed. Needs stabilization determines an upper and lower bound for each school district. If a district's need is less than 100 percent of its need from the previous year, its need for the current year is increased to be equal to its need from last year (sometimes known as a "hold harmless"). Similarly, if a district's need is greater than 112 percent of its need from the previous year, its need is reduced to 112 percent of its need from last year. Districts that are expected to have high student growth do not receive this adjustment and are allowed to have their needs increase above 112 percent as calculated.[30]

Resources

Compared with the needs calculation, the resources calculation is simple, involving only five components. We describe two of these components, which account for 95 percent of the resource

calculation: yield from local effort rate (79 percent of total resources) and other receipts (16 percent) (table 2).

Yield from local effort rate is an estimate of how much funding a district could be expected to raise through property taxes. Each district's property valuation for the year is multiplied by a local effort rate of $1.0203 per $100.[31] The districts are not required to tax at this rate, but this is the rate used to calculate available resources. Additionally, school districts are not allowed to levy more than $1.05 per $100 valuation without approval from district residents to override the levy limit (Patent 2015). To provide context on actual levy rates, we analyzed levy and valuation data from the Nebraska Department of Education.[32] School districts levied between $0.3338 and $1.5645 per $100, and the average (unweighted) levy was $0.8811.[33] This average is largely because of districts whose estimated resources exceed their estimated needs. Although about 24 percent of districts receiving equalization aid had total levies below the TEEOSA formula's local effort rate of $1.0203, 84 percent of districts that do not receive equalization aid have total levies below the local effort rate.[34]

Other actual receipts include several actual receipts noted in school districts' annual financial reports. These receipts include the public power district sales tax, fines and license fees, motor vehicle receipts, and receipts for accelerated or differentiated curriculum programs.[35]

Equity Measures

Most states distribute additional funding to districts with many low-income students or to rural districts, but the specifics of each provision vary by state.[36] To better understand how these provisions and others relate to funding for different subgroups of students in Nebraska, we analyze the 2017–18 TEEOSA funding formula using an equity measure developed by the Urban Institute (Chingos and Blagg 2017). This measure looks at school funding progressivity by calculating estimates of average spending on poor students (those 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 urban school districts relative to rural school districts.

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

Nonpoor: $\frac{\text{(90 students from A x \$10,000) + (70 students from B x \$12,000)}}{\text{90 students from A + 70 students from B}}$ = **$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 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 (SAIPE) to estimate the share of children ages 5 to 17 who are from low-income families in each district.[37] We merge these data with district-level state and local funding levels from the Nebraska Department of Education.[38] We calculate a weighted average of each district's per student funding, using the number of poor children in each district as the weight.[39] 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 $597 more in per student funding than the average nonpoor student. The average poor child lives in a district that receives $12,338 in per student funding, and the average nonpoor child lives in a district that receives $11,741 in per student funding.

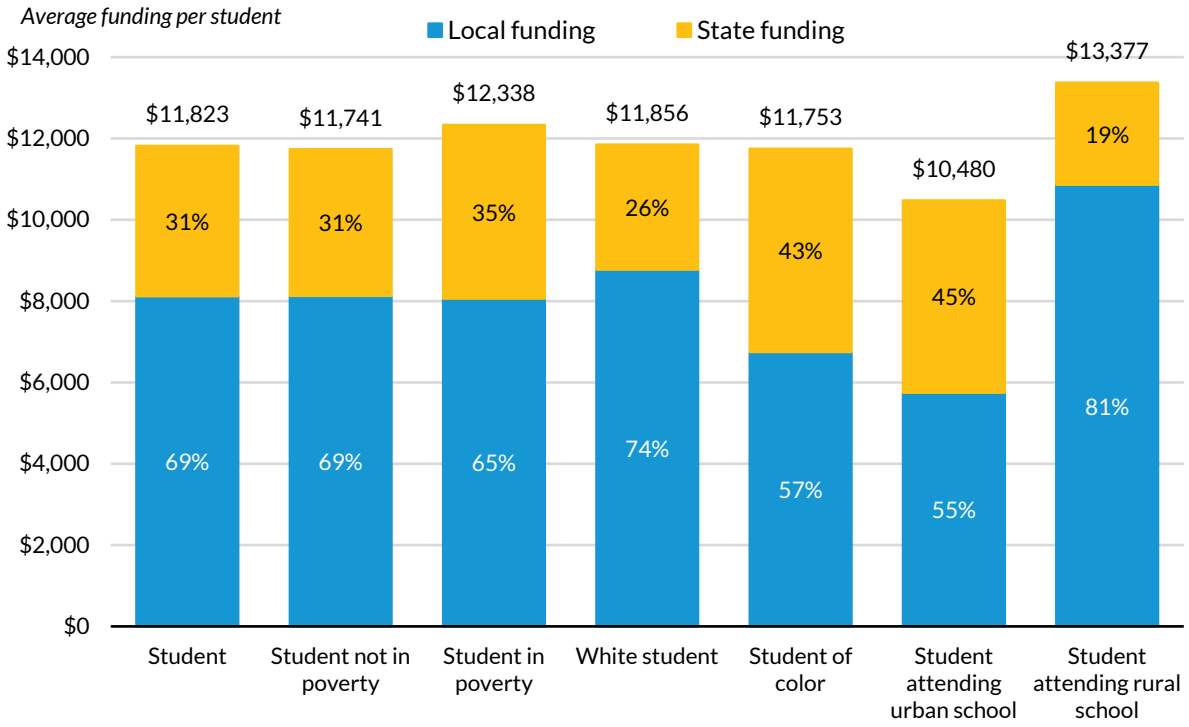
We use district-level data because the state funding formula typically allocates dollars to districts, not to individual schools. This means we do not capture any differences in spending across schools within districts (and students within schools). For example, poor students may benefit from programs 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 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 in each district. We calculate the equity measure for these two groups in the same way we computed the measure for poor and nonpoor students, developing weighted average funding for students of color and white students. The average student of color in Nebraska attends a district that receives $103 less in per student funding than the average white student. Students of color attend districts that receive an average of $11,753 in per student funding, and white students attend districts that receive an average of $11,853 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 located in either a rural or urban area.[40] The rest of our calculations follow the same process we followed to calculate the equity measure for poor and nonpoor students. We merge data with Nebraska Department of Education 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 enrolled in a district receiving $2,897 more in per student funding than students attending an urban school. Students attending rural schools are enrolled in districts with an average of $13,377 in per student funding, and students attending urban schools are enrolled in districts with an average of $10,480 in per student funding. Notably, local funding makes up a larger portion of funding (81 percent) for students in rural schools compared with students in urban schools (55 percent). Considering state funding alone, students in urban schools attend districts that receive $2,217 more than districts students in rural schools attend.

FIGURE 3

Cost-Adjusted District Funding Average Student Receives in Nebraska



Source: Urban Institute analysis of Nebraska Department of Education school finance data, 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.

Given the vast differences in funding for rural students and urban students because of economies of scale, we were interested in how funding for different groups within mostly urban and mostly rural school districts differ. For this analysis, we looked at differences in funding for students in poverty, students not in poverty, students of color, and white students, within rural and urban school districts. Similar differences in funding for students in poverty and students not in poverty occur at the state level and when we look at urban districts and rural districts separately. In rural districts, students in poverty attend districts that receive $332 more than the districts attended by students not in poverty. In urban districts, that difference is larger, with students in poverty receiving $948 more than students not in poverty (appendix figure A.1).

But when we analyze differences in funding for students of color compared with white students in urban and rural districts, the funding patterns change. In rural districts, students of color attend districts that receive $723 less than the districts white students attend. In urban districts, this difference changes directions and doubles, with students of color receiving $1,446 more than white students.

Adjusting Parameters

Nebraska's funding structure is slightly progressive, as the average student in poverty lives in a district that receives more combined state and local funding than their average peer not in poverty. Because of the economies of scale to run small schools in sparsely populated areas, students attending rural schools receive more state and local funding than their peers attending urban schools. To better understand how the current formula works and how it influences the distribution of dollars to students, we created a model of the state funding formula that allows us to adjust some of the formula parameters. We adjust the following components, many of which include multiple parameters:

- Basic funding
- Poverty allowance
- Limited English proficiency allowance
- Yield from local effort rate

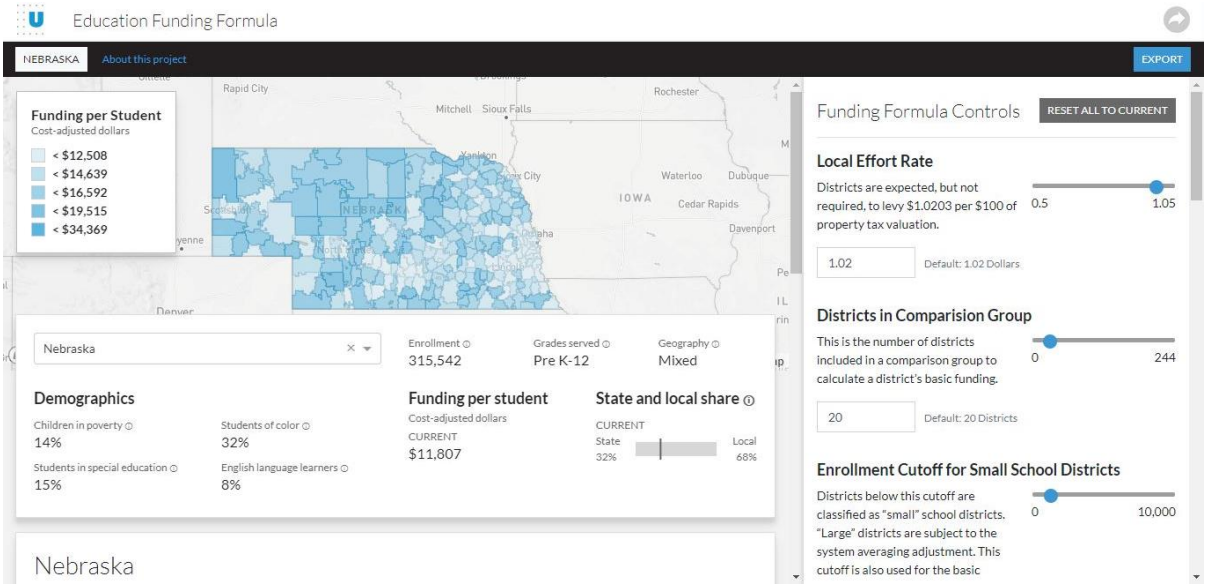
We make at least three assumptions to model this formula. First, we ignore the needs stabilization component, which limits how much a district's calculation of need can change based on the prior-prior-year need calculation. Policymakers considering drastic changes to the formula would not want to allow the formula to then adjust need based on a calculation from the previous funding formula. In our simulator, this is the equivalent of turning off the needs stabilization component, which reduces the number of school districts receiving equalization aid from 67 to 64, reduces total state aid by $4 million, and decreases average funding per student by about $16.

Second, we assume everything else in the formula will remain the same, except for the components being described. This allows us to isolate a component's effect on state funding. Third, because of data limitations, we could not model how a school district would respond to changes in the formula. Because we cannot simulate how a school district would respond, we assume that the local funding stays the same and that actual property tax rates stay the same. Although the TEEOSA formula assumes that districts are raising a certain amount through property taxes, this is not a requirement to receive state funding. Districts often levy less than the TEEOSA formula's local effort rate of $1.0203. In the models below, we assume the local revenue stays the same in each school district. In reality, districts may raise or lower levies in response to changes in the formula.

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 Nebraska and see the resulting distribution of dollars. In addition to Nebraska, this interactive provides the opportunity to look at formula changes for Massachusetts, Texas, and Virginia.

[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 30, 2018, https://edfunding.urban.org/.

Basic Funding

As we described earlier, the largest portion of a district's needs calculation is the basic funding component, which is developed using the average general operating expenditures for that district and up to 20 similar school districts. To understand how this comparison group affects the calculation, we turn the needs stabilization component off and adjust the comparison group size in intervals of two from 0 to 244 and examine the effect on total state funding, the number of school districts receiving equalization aid, and our equity measures.

When the comparison group size is 0, districts' adjusted general fund operating expenditures are the sole basis for their basic funding calculation, with no adjustment for other similarly sized districts' operating expenditures. Under this adjustment, the overall total state aid decreases by about $200,000 (a 0.02 percent decrease), the number of school districts receiving equalization aid decreases from 64 to

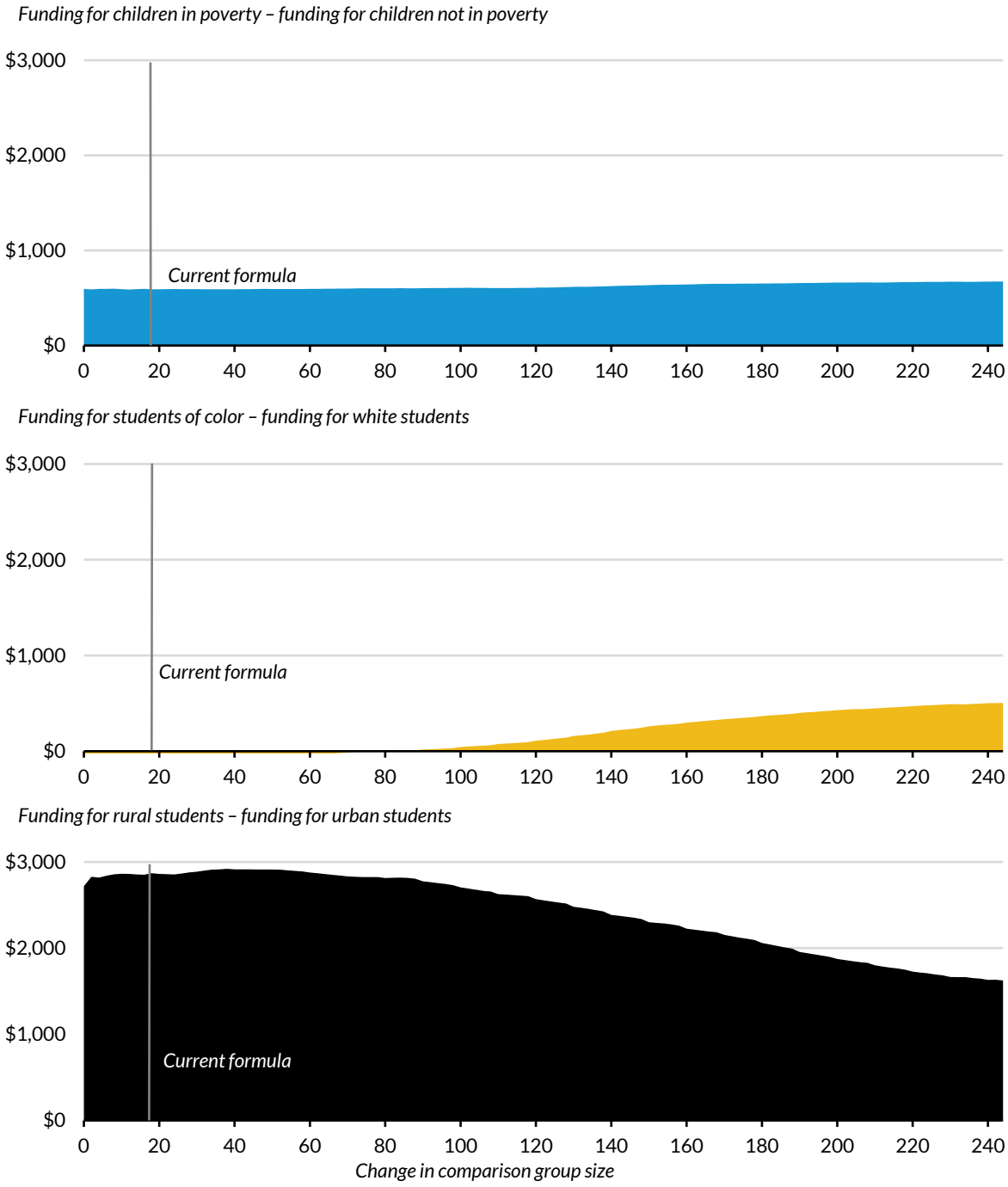
56, and average funding per student decreases by $4. At the other end of the spectrum, when the comparison group size is 244, essentially all school districts are in one comparison group. Under this adjustment, the overall state aid increases by $576 million (a 58 percent increase), the number of school districts receiving equalization aid increases to 87, and average funding per student increases by about $2,136.

Changes in this parameter have little effect on the difference in funding for poor students compared with nonpoor students, with the difference ranging from $598 to $659. Increases in the comparison group size increase the difference in funding for students of color compared with white students by up to $468, whereas decreases may decrease the difference to negative $111 (with white students attending school districts that receive more funding than students of color). Finally, the difference in funding between students attending rural schools versus students attending urban schools drastically decreases. This makes sense given that the basic funding calculation relies on these comparison groups of similarly sized schools to estimate how much a small school district might need versus a large school district and should account for issues in economies of scale in rural small school districts. The differences in funding for students in rural schools compared with students in urban schools ranges from $1,652 to $2,922, depending on the comparison group size.

FIGURE 4

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

Changes in district funding difference, by change in comparison group size



URBAN INSTITUTE

Source: Urban Institute analysis of Nebraska 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.

Poverty Allowance

To better examine how changes to the poverty allowance calculation could affect funding, we first turn off the maximum poverty allowance component of the formula (in addition to turning off the needs stabilization component). This is a cap on what a district can receive, as is designated by the district's poverty plan. Thus, if changes to other components of the estimated poverty allowance formula actually occurred, the district could respond by changing its poverty allowance plan, thus affecting its maximum poverty allowance.

To look at how parameter changes affect the funding distribution, we test adjustments to the base weight in the current poverty allowance formula, which we refer to as the "concentrated poverty allowance formula." Then, we look at the results for a simpler formula, which allocates more funding based solely on the number of low-income students in a school district.

CONCENTRATED POVERTY ALLOWANCE FORMULA

The current base weight in the concentrated poverty allowance formula is 0.0375. To test the effect of this weight, we changed the base weight in intervals of 0.0025, starting with 0 and going up to 0.25 (figure 5).

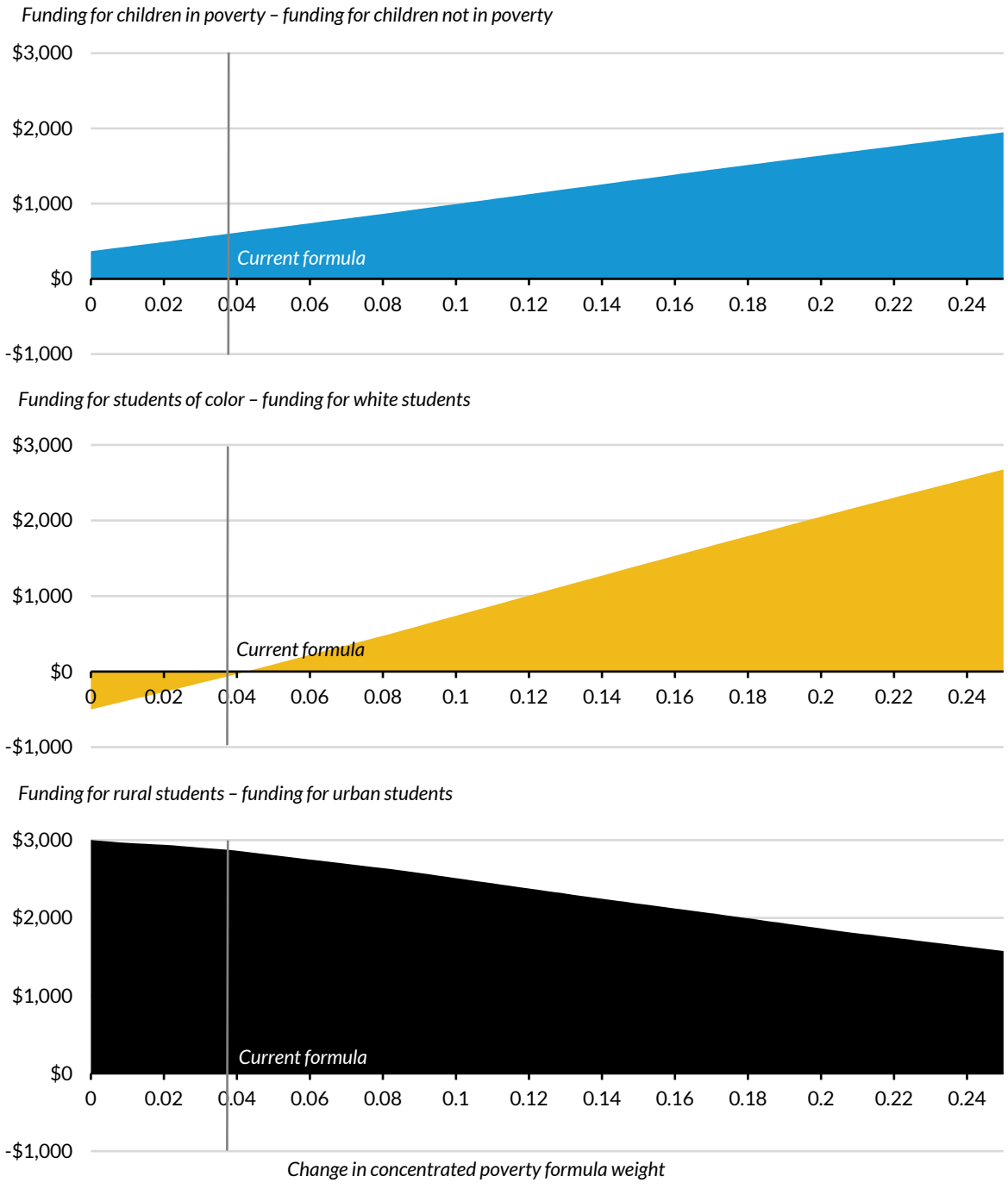
When the base weight is 0, none of the school districts receive any poverty allowance. Zeroing out this parameter decreases total state aid by $26 million (a 3 percent decrease), changes the total number of districts receiving equalization aid to 65, and decreases the average funding per student by $100. When the base weight is 0.05, which is slightly higher than the current base weight, total state aid increases by $18 million (a 2 percent increase), the same 65 districts receive equalization aid, and the average funding per student increases by $66. Finally, when we adjust the base weight more drastically to 0.25, the total state aid increases by more than $369 million (a 37 percent increase), 66 districts receive equalization aid, and the average funding per student increases by $1,372. But these changes in overall funding mask differential effects at the district level. When the poverty allowance base weight increases, most school districts receive lower TEEOSA state aid because of the interactions between the poverty allowance component and other components in the formula.[41]

As we might expect, increasing the base weight and turning off the maximum poverty allowance increases the funding that goes to students in poverty relative to students not in poverty. Decreasing the base weight decreases this difference. To double the difference in funding between students in poverty and students not in poverty from $600 to $1,200, the weight would need to increase more than threefold, from 0.0375 to 0.1325. Increases in the poverty base weight also increase funding going to students of color relative to white students. Under the current funding formula, students of color attend districts that receive about $100 less than districts white students attend. To reduce this difference to 0, the weight would have to increase to 0.0425. To reverse this difference and triple it (such that students of color receive $300 more than white students), the weight in this formula would have to increase to 0.0625. Increases in the base weight lead to decreases in the difference in funding going to students in rural schools versus students in urban schools.

FIGURE 5

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

Changes in district funding difference, by change in concentrated poverty formula weight



URBAN INSTITUTE

Source: Urban Institute analysis of Nebraska 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.

SIMPLIFIED POVERTY ALLOWANCE FORMULA

We test a simpler version of the poverty allowance formula, which gives a standard weight for each additional student in poverty, rather than increasing the weight for larger shares of students in poverty in a school. We keep the needs stabilization component and the maximum poverty allowance set off and increase the weight used in this simpler formula from 0 to 0.75 in intervals of 0.01 (figure 6).

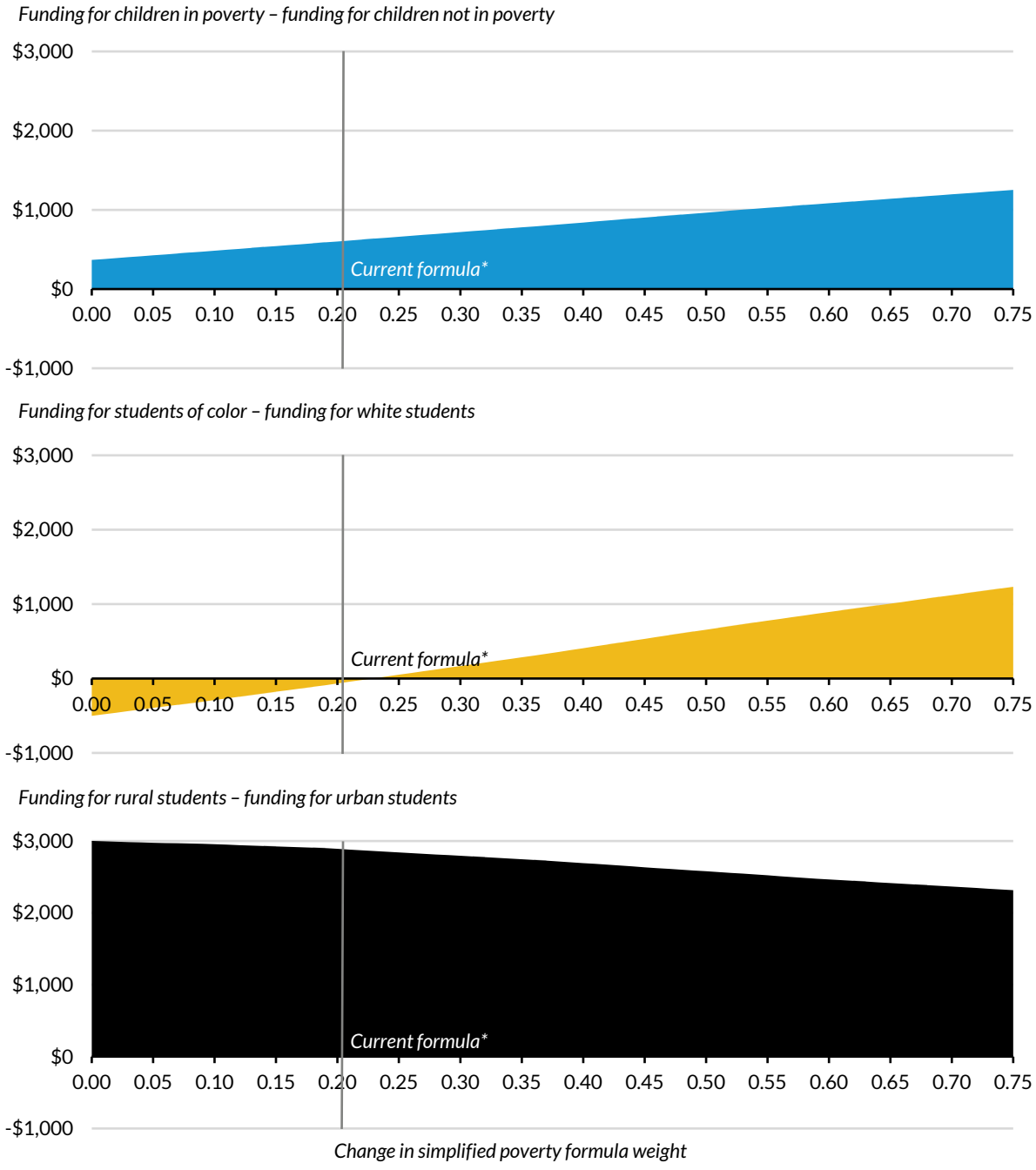
The weight that results in equity measures closest to the original poverty allowance formula is about 0.20. This does not mean that each district would receive the same amount of funding but that, on average, students in different equity groups would receive similar funding. When the base weight is 0.20, total state aid decreases by a little less than $4 million (a 0.3 percent decrease), 65 districts receive equalization aid, and the average funding per student decreases by $11. When we adjust the base weight more drastically to 0.75, the total state aid increases by more than $153 million (a 15 percent increase), 67 districts receive equalization aid, and the average funding per student increases by $572. Similar to the poverty allowance, changes in overall funding mask differential effects at the district level. Not all school districts receive more TEEOSA state aid because of the interactions between LEP and other components of the formula.

When looking at the equity measures, as we would expect, increasing the base weight increases the difference in funding that goes to students in poverty versus students not in poverty. To double the difference between students in poverty and students not in poverty from $600 to $1,200, this simplified weight would need to increase from 0.20 to 0.70. Increases in the base weight also increase the difference in funding going to students of color compared with white students. Under the current funding formula, students of color attend districts that receive about $100 less than districts white students attend. To reduce this difference to 0, the weight in this simplified formula would have to increase to 0.22. To reverse this difference and triple it (such that students of color receive $300 more than white students), the weight would have to increase to 0.35. Increases in the base weight also lead to decreases in the difference in funding going to students in rural schools versus students in urban schools.

FIGURE 6

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

Changes in district funding difference, by change in simplified poverty formula weight



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Source: Urban Institute analysis of Nebraska 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.

*Approximation to current formula, rather than actual weight in current formula.

Limited English Proficiency Allowance

Using the original formula without the needs stabilization, we can also calculate how changes to the base weight of the estimated limited English proficiency (LEP) allowance affect school funding distributions. As noted in our explanation of basic funding, any changes to the LEP allowance will affect the basic funding calculation, which causes other changes throughout the formula. Changes to the LEP allowance do not have the same impact on all school districts throughout the state, with the effect on state aid varying in magnitude and direction. Here, we change the base weight in intervals of 0.01, starting with 0 and going up to 1.00 (figure 7). The actual weight in the formula is 0.25.

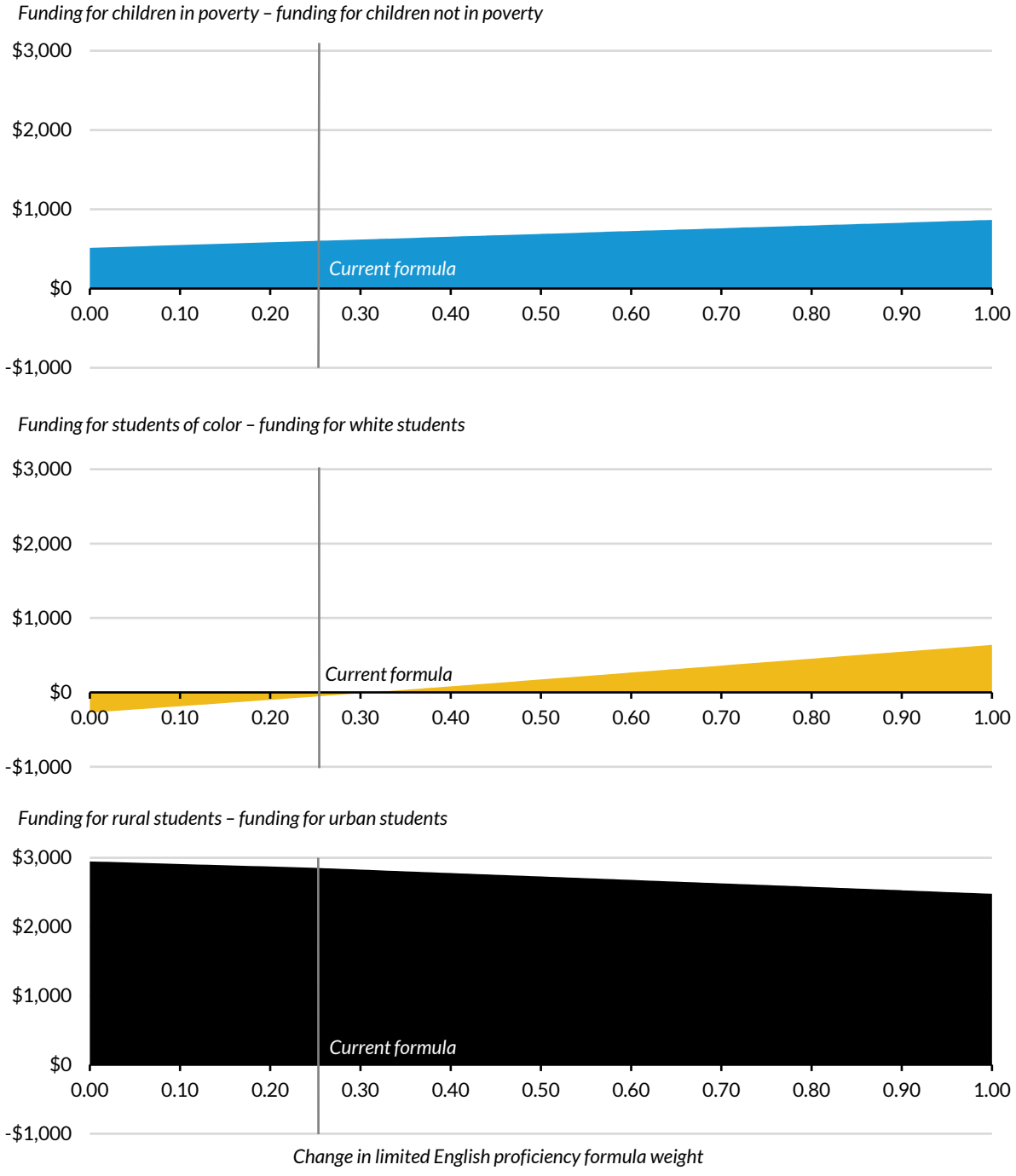
When the weight is 0, none of the school districts receive an LEP allowance. Changing this parameter decreases the total state aid by $17 million (a 2 percent decrease), changes the total number of districts receiving equalization aid to 65, and decreases the average funding per student by $65. When the weight is 0.30, which is slightly higher than the current base weight, total state aid increases by a little less than $6 million (a 1 percent increase), 65 districts receive equalization aid, and the average funding per student increases by $21. Finally, when we adjust the weight more drastically to 1.00, the total state aid increases by more than $98 million (a 10 percent increase), 65 districts receive equalization aid, and the average funding per student increases by $368.

Increasing the base weight modestly increases the funding that goes to students in poverty relative to students not in poverty. Similarly, increases in the base weight also increase the funding going to students of color relative to white students. Under the current funding formula, the average student of color attends a district that receives about $100 less than a district attended by the average white student. To reduce this difference to 0 using the LEP allowance, the weight in this formula would have to increase to 0.31. To meaningfully reverse this difference, the LEP weight could be increased to 0.42, and to triple it to $300, the weight would need to increase to 0.64. Increases in the base weight also lead to decreases in the difference in funding going to students in rural schools versus students in urban schools.

FIGURE 7

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

Changes in district funding difference, by change in the limited English proficiency formula weight



URBAN INSTITUTE

Source: Urban Institute analysis of Nebraska 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.

Yield from Local Effort Rate

We also estimate how changes in the local effort rate, which is what the TEEOSA formula assumes the property tax rate to be, would affect total funding and measures of equity. In the current formula, the local effort rate is 1.0203 per $100 of property value. To estimate changes in this rate, we adjusted it in intervals of 0.01, starting at 0.50 and ending at the levy limit of 1.05 (figure 8).

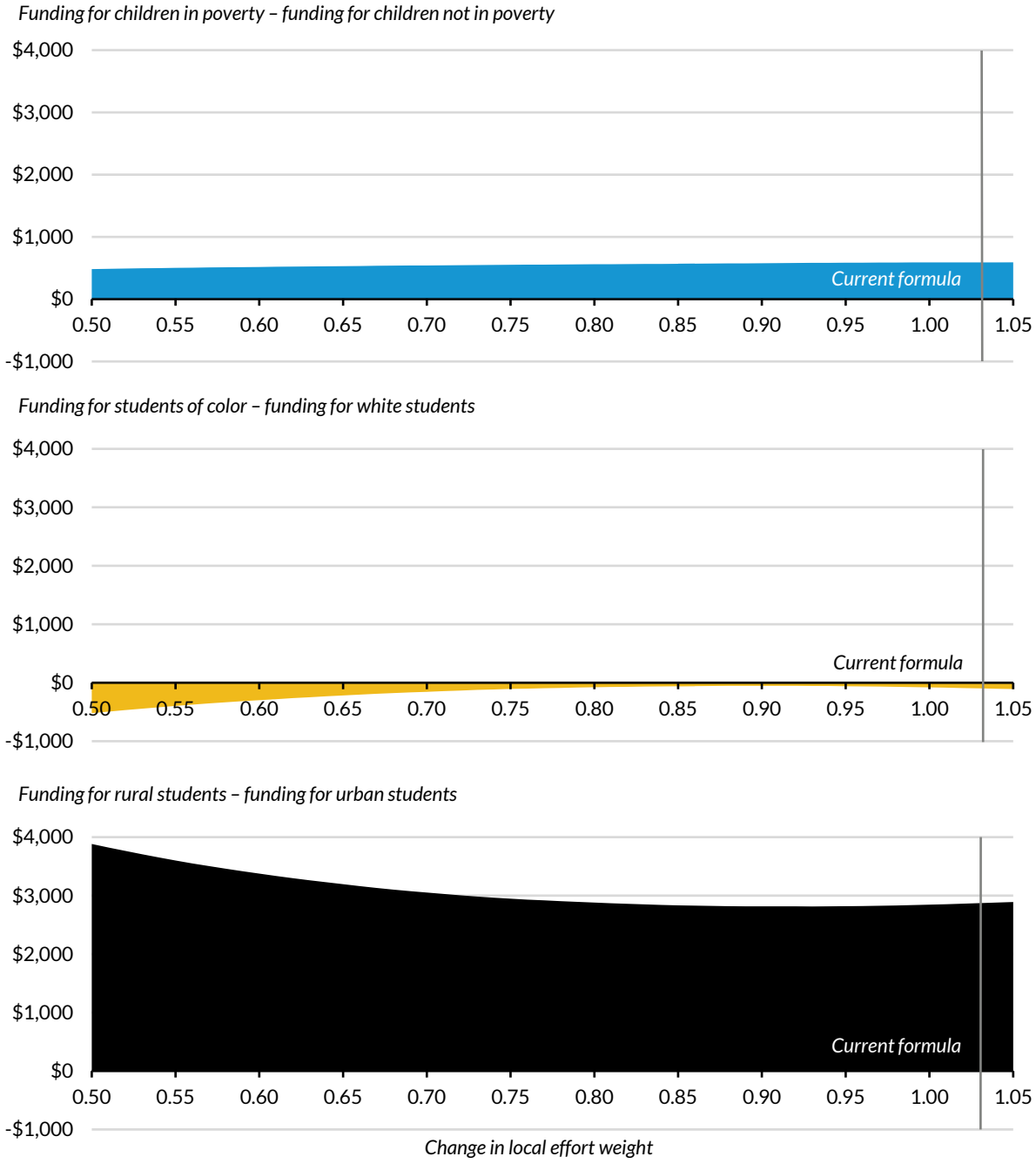
When the local effort rate is 0.50, school districts' estimated yields are essentially half of what they would be under the original formula. Because this makes up such a large portion of the resources calculation, the state would need to fund a larger portion of the needs calculation for districts. Changing this parameter increases the total state aid by $774 million (a 78 percent increase), drastically increases the total number of districts receiving equalization aid to 199, and decreases the average funding per student by $2,947. When the rate is 1.00, which is slightly lower than the current base weight, total state aid increases by about $22 million (a 2 percent increase), 69 districts receive equalization aid, and the average funding per student increases by $84. Finally, when we increase the rate to 1.05, at the levy limit, the total state aid decreases by $32 million (a 3 percent decrease), 63 districts receive equalization aid, and the average funding per student decreases by $121.

Decreasing the local effort rate slightly decreases funding that goes to students in poverty relative to students not in poverty and to white students relative to students of color. Decreases in the rate lead to modest increases in the difference in funding going to students in rural schools versus students in urban schools. Under the current formula, the average student enrolled in a rural school receives $2,800 more than the average student in an urban school. Decreasing the local effort rate to about 0.50 increases this difference to $3,800. Because most funding for rural students is currently from local sources, an increase in state funding would likely decrease local funding.

FIGURE 8

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

Changes in district funding difference, by change in local effort rate



URBAN INSTITUTE

Source: Urban Institute analysis of Nebraska 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.

Conclusion

In this brief, we reviewed how the TEEOSA funding formula works and examined how state and local funding varies for Nebraskan students by their poverty status, race or ethnicity, and school urbanicity. The results show that average per student funding is substantially larger in rural schools than in urban schools, a difference that may have to do with economies of scale for serving more disparate, often smaller, student populations. Poor students attend districts that receive moderately more funding compared with nonpoor students, while students of color attend districts that receive marginally less funding than the districts their white peers attend. Notably, in urban school districts, students of color attend districts that receive moderately more funding compared with white students, whereas the opposite is true in rural school districts. We also find that students enrolled in rural schools are in districts that receive a larger portion of their funding from local sources, compared with districts with students enrolled in urban schools.

We assessed how changing various parameters of the current TEEOSA formula affects total funding and funding equity across different students. Moderate changes in the comparison group size, either decreasing the size from 20 to 10 or increasing it from 20 to 40, have little impact on total funding, with average funding per student changing by at most $50, and on measures of funding equity. As one might expect, increasing the base weight in the poverty allowance formula leads to larger increases in funding for students in poverty, students of color, and students in urban schools, compared with their nonpoor, white peers in rural schools. For instance, roughly doubling the base weight in the concentrated poverty allowance formula from 0.0375 to 0.08 means that the average student receives $200 more in funding, with the average student in poverty receiving $468 more and the average student not in poverty receiving $59 more. But increasing the poverty allowance a district receives does not necessarily mean that district will receive more state aid. In most districts with low shares of low-income students, increases to their poverty allowance actually decreases the state aid they receive. Compared with weight adjustments for the poverty allowance calculation, adjusting the weight in the LEP allowance formula has a similar, yet weaker relationship with funding and equity measures.

Finally, adjusting the local effort rate has drastic effects on total funding, the number of school districts receiving equalization aid, and the difference in funding for students in rural schools compared with students in urban schools. Cutting the local effort rate in half increases the total state funding obligation by 78 percent and increases funding per student by $2,947, with a larger proportion of that new funding going to students in rural schools.

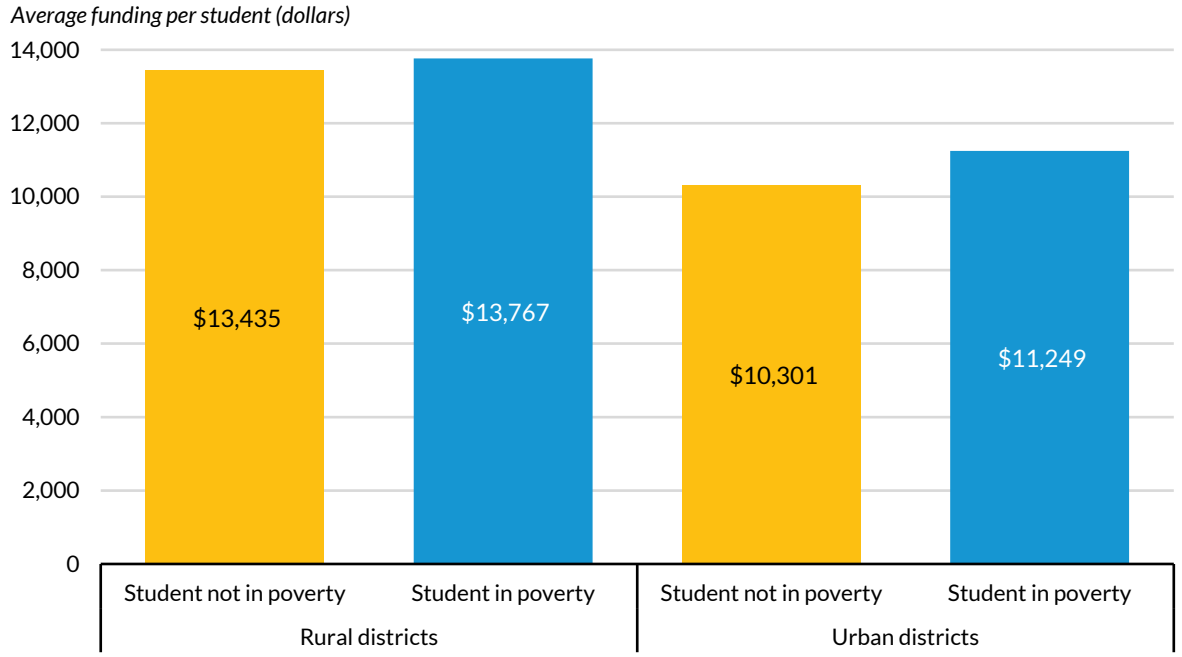
These results imply that current state aid varies for different groups of students in Nebraska. Changes in funding parameters, except for poverty allowance formula weights, often do not translate into substantial changes in the relative funding in these different groups of students. Except for changes to the local effort rate, most parameter changes also do not affect the number of school districts receiving equalization aid. Without information on the underlying funding needs of students and school-level expenditures, we do not know how these measures of equity relate to adequate funding levels.

Future data collection efforts on school-level expenditures will better capture how resources are being used, but there will continue to be debate on how to distribute limited resources equitably.

Appendix

FIGURE A.1

Cost-Adjusted District Funding Average Student Receives in Rural and Urban Districts



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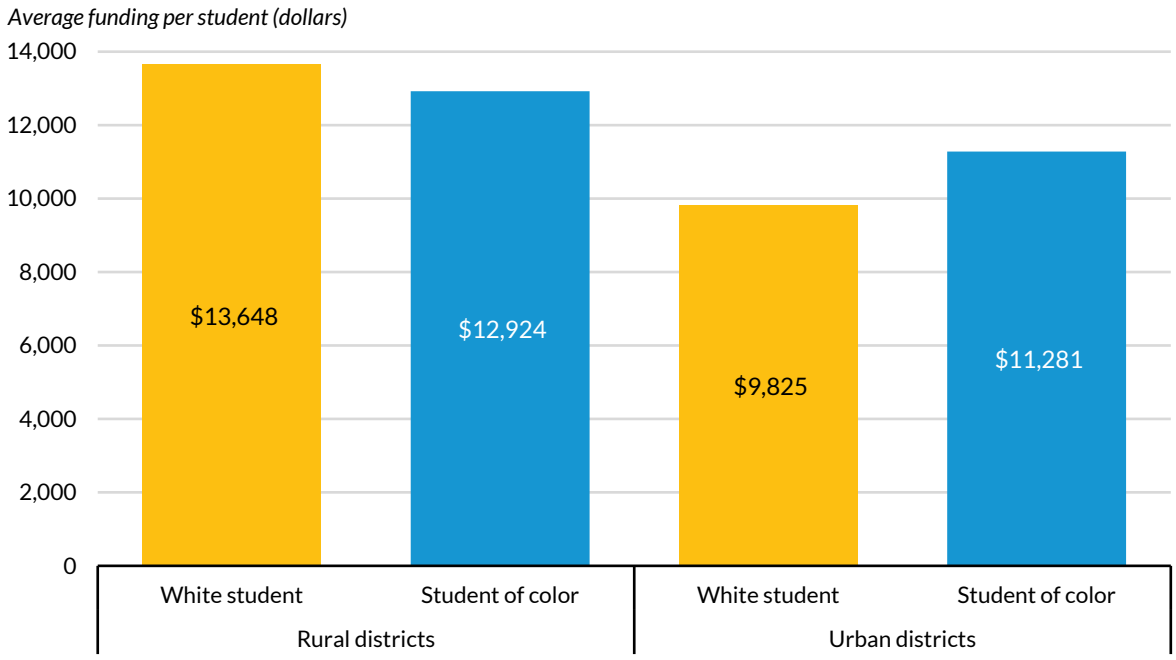
Source: Urban Institute analysis of Nebraska Department of Education school finance data, the National Center for Education Statistics (NCES) Common Core of Data, and Census Bureau Small Area Income and Poverty Estimates.
Note: Cost adjustments made using NCES Comparable Wage Index.

FIGURE A.2

Cost-Adjusted District Funding Average Student Receives in Rural and Urban Districts



URBAN INSTITUTE

Source: Urban Institute analysis of Nebraska Department of Education school finance data and the National Center for Education Statistics (NCES) Common Core of Data.
Notes: Cost adjustments made using NCES Comparable Wage Index.

Notes

1 According to Urban Institute analysis of National Center for Education Statistics (NCES) Common Core of Data district fiscal data from 1987 to 2015.

2 "The Commission Report," School Finance, accessed October 9, 2018, http://schoolfinance.ncsa.org/commission-report.

3 Although the Nebraska Department of Education commonly refers to this as "school reorganization," it refers to both schools and school districts, which may be one in the same in cases of consolidation.

4 Gould v. Orr, 506 N.W.2d (1993).

5 "The TEEOSA," School Finance, accessed October 9, 2018, http://schoolfinance.ncsa.org/teeosa.

6 "Affiliation and Common Levy," School Finance, accessed October 9, 2018, http://schoolfinance.ncsa.org/affiliation-and-common-levy#anchor3.

7 Cory Dean Worrell, "The History of Nebraska Public School Reorganization over the Past 30 Years and How This History Might Be Used to Predict Nebraska School Reorganization in the Future: A Mixed Methods Study," (PhD diss., University of Nebraska, 2015), https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1224&context=cehsedaddiss.

8 Worrell, "The History of Nebraska Public School Reorganization."

[9] "The Commission Report," School Finance.

[10] According to Urban Institute analysis of NCES Common Core of Data district fiscal data from 1987 to 2015.

[11] "Public School Revenue Sources," US Department of Education, Institute of Education Sciences, National Center for Education Statistics, accessed October 9, 2018, https://nces.ed.gov/programs/coe/indicator_cma.asp.

[12] "Public School Revenue Sources," US Department of Education.

[13] Martha Stoddard, "After Scolding from Speaker Scheer, Nebraska Legislators Try to Make a Property Tax Deal," *Omaha World-Herald*, April 7, 2018, https://www.omaha.com/news/legislature/after-scolding-from-speaker-scheer-nebraska-legislators-try-to-make/article_4ac87100-2665-5fb5-b703-6211841d0587.html.

[14] Martha Stoddard, "Nebraska Lawmakers Fail to Strike a Deal on Property Taxes," *Omaha World Herald*, April 9, 2018, https://www.omaha.com/news/legislature/nebraska-lawmakers-fail-to-strike-a-deal-on-property-taxes/article_0c829c8a-ffed-5380-985d-373bb6c3a9d8.html.

[15] Martha Stoddard, "Petition for $1.1 Billion in Property Tax Savings Is Nixed; Some Relieved, Others Call Move 'Stupid'," *Omaha World Herald*, April 28, 2018, https://www.omaha.com/news/nebraska/petition-for-billion-in-property-tax-savings-is-nixed-some/article_cdbf2a05-e690-5c60-91c2-8a5d5e8b94d7.html.

[16] Don Walton, "Property Tax Initiative Drive Abandoned," *Lincoln Journal Star*, April 27, 2018, https://journalstar.com/legislature/property-tax-initiative-drive-abandoned/article_e8e754f6-3a90-5b0b-9be6-82f9082a2494.html.

[17] These statistics come from an Urban Institute analysis of Nebraska Department of Education school finance data for 2017–18.

[18] Along with "receipts from the Medicare Catastrophic Coverage Act of 1988," as shown in Nebraska Department of Education's records for 2015–16 (NDE 2017a).

[19] "Poverty: Legislation 79-1013 Section Resource Guide," Nebraska Department of Education, accessed October 9, 2018, https://www.education.ne.gov/povertyandlep/poverty/.

[20] This is the greater of the number of children younger than 19 living in a household that could qualify for free lunch and free milk or the number of students eligible for free lunch and free milk.

[21] Take two school districts, each with 1,000 students. In one, 15 percent of students are low income, whereas in another, 30 percent are low income. The first district's poverty allowance calculation would be about $60,000, whereas the second district's calculation would be about $300,000.

[22] "Poverty: Legislation 79-1013 Section Resource Guide," Nebraska Department of Education.

[23] This is a simplified explanation of the LEP allowance calculation, which also involves using a three-year average of ELLs to ensure the amount remains steady from year to year. For districts with 1 to 12 ELLs, the calculation uses 12 for the number of ELLs.

[24] For 2018–19, the reimbursement rate is $0.535 per mile.

[25] In-lieu-of-transportation costs are the primary costs of transportation in four school districts that pay parents to transport students to school.

[26] For ease of exposition, we use "students" when we mean "formula students." The method of calculating the number of formula students can be found in the Nebraska Department of Education's TEEOSA document.

[27] Although there are other rules for determining these comparison groups, none of those rules were relevant this school year.

[28] The adjusted general fund operating expenditures are calculated using data from the 2015–16 annual financial reports and calculated using the methodology described in the Nebraska Department of Education TEEOSA certification document.

[29] "Large" and "small" districts are not terminology used by the Nebraska Department of Education but are adopted here for ease of exposition. These terms are used throughout.

[30] During the 2017–18 school year, 16 districts received student growth adjustments because of an expected enrollment increase.

[31] Here, we state property valuation but mean adjusted property valuation. Real property was adjusted to 96 percent of actual value, and agricultural land was adjusted to 72 percent of actual value.

[32] These data are collected by the Nebraska Department of Education through the 2017–18 Assessed Valuation and Levies Data Collection and the Nebraska Student Staff and Record System October 2017 Student Snapshot.

[33] Urban Institute analysis of 2017–18 data are available at "Statistical Information for Public School Districts: Levy and Valuation Information," Nebraska Department of Education, accessed October 10, 2018, https://www.education.ne.gov/fos/statistical-information-for-public-school-districts-levy-and-valuation-information/.

[34] According to Urban Institute analysis of Nebraska Department of Education school finance data for 2017–18.

[35] For the complete list of receipts, see page 10 in the Nebraska Department of Education's TEEOSA Certification of 2017/18 State Aid.

[36] "Poverty," EdBuild, FundEd: National Policy Maps, accessed October 9, 2018, http://funded.edbuild.org/national#poverty.

[37] We exclude districts that do not have poverty rates available in SAIPE.

[38] At the time of publication, there were no published numbers on total revenue from local sources for the 2017–18 school year. For this reason, we estimate total revenue from local sources using the 2016–17 school year annual financial reports available on the Nebraska Department of Education website. Additionally, the state aid calculation includes only the total state aid revenue from TEEOSA, rather than all state aid. This difference is minor, and on average, school districts receive only a small portion of their state funding through these other state revenue streams.

[39] 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).

[40] We define *rural* as a school classified as "rural" or "town" by the NCES's "locale" code, while *urban* is a school defined as "urban" or "suburban."

[41] For example, when we increase the poverty allowance base weight from 0.0375 to 0.25, with the maximum poverty allowance component off and the needs stabilization off, the poverty allowance increases in all districts. This leads to a decrease in the adjusted GFOE and a subsequent decrease in basic funding in all districts. The system averaging adjustment increases in most districts but decreases in some. Other adjustment allowances, such as the new school adjustment allowance and the student growth adjustment allowance, decrease because of the decrease in basic funding per student. Together, this results in an increase in formula needs in 95 districts and a decrease in 150 districts. On the resources side of the formula, we see that net option funding decreases in all districts receiving it because of the change in basic funding.

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