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A PRIMER ON MISSOURI'S FOUNDATION FORMULA FOR K-12 PUBLIC EDUCATION

2017 UPDATE

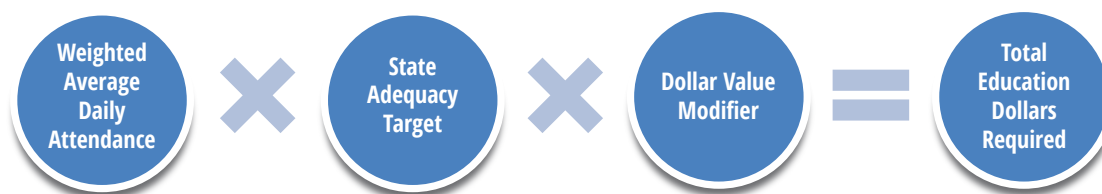
BY JAMES V. SHULS

INTRODUCTION

During the 2006–07 school year, Missouri implemented a new method to fund K-12 public schools. The new foundation formula was the Missouri Legislature’s response to legal challenges brought against the previous formula regarding equity and adequacy. The new foundation formula sought to rectify those problems by elevating funding to adequate levels in all school districts and by leveling the playing field between property-rich and property-poor districts. Though the entire formula is detailed in chapter 163 of Missouri’s revised statutes, it can be very difficult to understand.¹ This primer is intended to help Missourians better understand how their schools are funded.

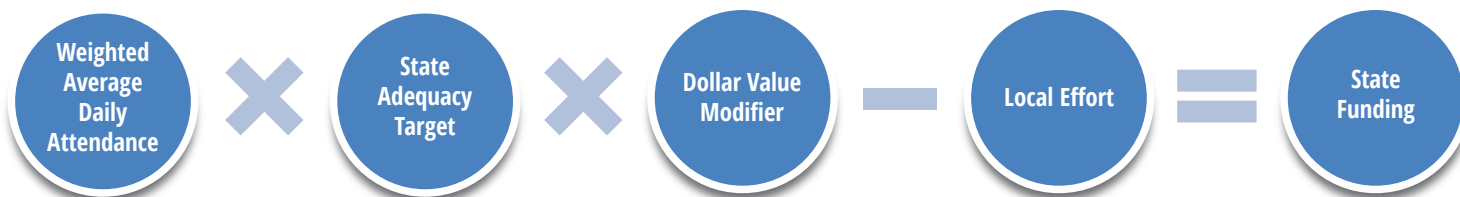
This introduction provides the most basic overview of the formula. Readers who want a 10,000-foot view may find that this primer is all they need to read. For those who want a more detailed understanding, the following sections explain some of the finer points of the formula. However, this primer will only describe how state and local dollars work together in Missouri’s funding formula and will not address how funds from the federal government are dispersed or how other state dollars may be appropriated to schools through special programs. In 2015, approximately 9.44 percent of the operating funds that Missouri school districts spent came from the federal government.² In comparison, the state provided 34 percent, and local funds made up 56 percent, though not all local funds are derived from local property taxes.³

The foundation formula has four basic components: weighted average daily attendance, the state adequacy target, the dollar value modifier, and local effort. Weighted average daily attendance (WADA) is just what it sounds like—the average daily attendance of a school district, adjusted to account for certain student characteristics. This allows school districts with high concentrations of students who are expensive to educate to receive additional funds.⁴ Once a school district’s WADA is calculated, it is then multiplied by the state adequacy target. The state adequacy target is the dollar amount the state has determined as the *adequate* level of per-pupil funding. The resulting dollar amount is then multiplied by the dollar value modifier (DVM), which adjusts the funding level upward for school districts in areas with a relatively high cost of living. Those three pieces determine how much total money a school district should have to spend for K-12 educational purposes, or “total education dollars required.”



The fourth piece, local effort, is subtracted from this amount. Local effort is the amount of money that was raised locally in the 2004–05 school year and includes revenue generated through several means, with property taxes comprising the largest source of local revenue. A significant portion of money counted as local effort is the money each school district receives from the statewide 1-percent sales tax collected as a result of Proposition C.⁵ The result of these calculations is the total amount of dollars the state should provide.

In equation form, the formula is:



At this basic level, the foundation formula is fairly simple. It awards money to each school district based on the number of students and the relative cost-of-living, while taking into account the amount of local dollars raised for education. Upon closer examination, the formula is a bit more complicated. In the following sections, I take a more in-depth look at each part of the formula and explain one more important distinction: hold-harmless school districts.

WEIGHTED AVERAGE DAILY ATTENDANCE



Missouri funds schools based on the number of students in attendance, with more money allocated to schools that serve high concentrations of students who are difficult to educate. The first step in determining how much money a district should receive is to calculate a school district’s weighted average daily attendance (WADA).

HOW IS AVERAGE DAILY ATTENDANCE CALCULATED?

To understand WADA, we must first understand how a district’s average daily attendance (ADA) is calculated.⁶ This figure is reached by dividing the total number of hours students were in attendance during the regular school term by the total number of school hours possible. This number is added to the number of approved summer school hours divided by 1,044 hours (the number of hours the state requires for a regular term school year).⁷ Expressed as a formula:

$$ADA = \left(\sum_{i=1}^n \frac{\text{Regular term hours attended}_i}{\text{Regular term hours possible}_i} \right) + \left(\sum_{i=1}^n \frac{\text{Summer School hours attended}_i}{1,044_i} \right)$$

WHAT IS WEIGHTING?

The state recognizes that some types of students are more challenging to educate than others. Accordingly, the state provides more funding for these students. Currently, three categories of students have been identified as requiring additional resources. These students are *weighted*, meaning they may count as more than one student in the WADA calculation.

1. Students receiving free or reduced-price lunches (FRL).
2. Students on individualized education plans (IEP) for special education services.
3. Students designated as limited English proficient (LEP).

HOW ARE THE WEIGHTS DETERMINED?

Not all students in these categories receive extra funding. The state only awards extra dollars to school districts serving *high concentrations* of students in a particular group. To determine which school districts receive more money for these students, the state has developed a threshold level. When the number of students in a district from a particular category exceeds the threshold level, the school receives additional funds for every student above the threshold. If the percentage of students in each category is lower than the threshold, then the district will receive no weights for their students and will not receive additional dollars.

The state's threshold marks are determined every other year by calculating the average percentage of students in each category within all *performing* districts.⁸ Performing districts are those that have met all the standards on their annual performance report, the state's evaluation of school districts.

Essentially, the state is calculating the average percentages of difficult-to-educate students in the schools that are performing well and is awarding more money to schools with higher concentrations of special need students than the average *performing* school.

For fiscal years 2017 and 2018, the threshold percentages are as follows:⁹

FRL threshold = 36.12%

IEP threshold = 12.16%

LEP threshold = 1.94%

WHAT ARE THE WEIGHTS AND HOW ARE THEY CALCULATED?

A weight allows students in each of the three categories to be counted as more than one person in the WADA calculation, which has the effect of providing

more funding for students with special needs. Missouri statute has assigned the following weights for students in each category:¹⁰

FRL weight = .25

IEP weight = .75

LEP weight = .60

To calculate a district's threshold, multiply the ADA times the threshold (TH) percentage and subtract that number from the district's enrollment (ENRL) figure for each category. If the number of students in a district receiving one of these services exceeds the threshold level, the number will be positive; if it is less, the number will be negative. If the number is negative, no weights will be attributed to the district. If it is positive, every student beyond the threshold will be multiplied by the weight, meaning they will count more than once. It might be easier to think about this in the framework of an equation. Below are the equations that show how to calculate a district's weight in each category.

FRL Weight

$$=.25(ENRL_{FRL} - (TH_{FRL} \times ADA)), \text{ if } (ENRL_{FRL} - (TH_{FRL} \times ADA)) > 0$$

IEP Weight

$$=.75(ENRL_{IEP} - (TH_{IEP} \times ADA)), \text{ if } (ENRL_{IEP} - (TH_{IEP} \times ADA)) > 0$$

LEP Weight

$$=.6(ENRL_{LEP} - (TH_{LEP} \times ADA)), \text{ if } (ENRL_{LEP} - (TH_{LEP} \times ADA)) > 0$$

SUMMARY

WADA is a combination of ADA plus the weights from each category of students identified as requiring additional funds. For an illustration of this, see Table 1. Imagine a school with an average of 1,000 students in attendance each school day (ADA). The school offers summer school, and when all the hours the students spend there are added up, it equals 20 regular school days (Summer School ADA). The school district receives additional weights for the number of students receiving free or reduced-price lunches and students with limited English proficiency, because they exceed the threshold. However, the school receives no weights for students with individualized education plans, because they do not exceed the threshold. WADA is simply the sum of total ADA and the weights from each of the three categories. The funding formula uses the highest WADA from a three-year window, an estimate of the current year if the district is growing, or the greater of the two previous years.¹¹ This allows funding to increase quickly for school districts with increasing enrollment, but allows funding to fall more slowly for school districts with declining enrollment.

Table 1: Example Circulation of Weighted Average Daily Attendance

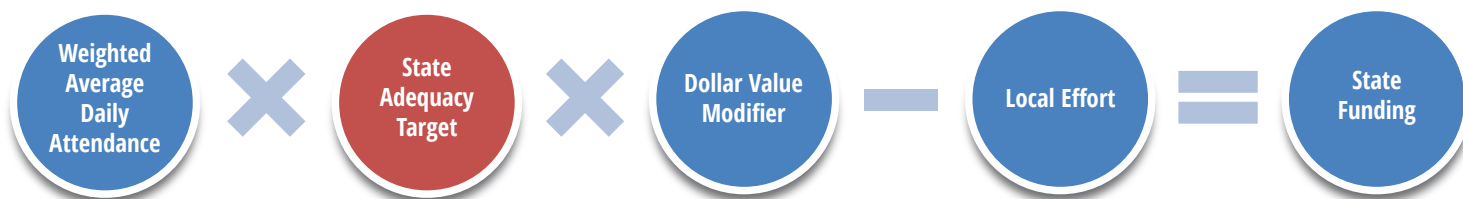
1	Regular Year ADA	1,000
2	Summer School ADA	20
3	Total ADA (Line 1 + Line 2)	1,020
<i>FRL Weights</i>		
4	No. of FRL Students in District	450
5	FRL Threshold (Line 3 \times 36.12%)	368.4
6	Number above FRL Threshold (Line 4 – Line 5; 0 if negative)	81.6
7	FRL Weight (Line 6 \times 25%)	20.4
<i>IEP Weights</i>		
8	No. of IEP Students in District	110
9	IEP Threshold (Line 3 \times 12.16%)	124
10	No. above IEP Threshold (Line 8 – Line 9; 0 if negative)	0
11	IEP Weight (Line 10 \times 75%)	0
<i>LEP Weights</i>		
12	No. of LEP Students in District	25
13	LEP Threshold (Line 3 \times 1.94%)	19.8
14	No. above LEP Threshold (Line 12 – Line 13; 0 if negative)	5.2
15	LEP Weight (Line 14 \times 60%)	3.12
<i>Total Weights</i>		
16	WADA (Line 3 + Line 7 + Line 11 + Line 15)	1043.5

Notice that the number of IEP students in the district did not exceed the threshold. As a result, line 11 is 0.

KEY TAKEAWAYS

- ADA is the average number of students in attendance each school day (plus the number of students in summer school, calculated as a full-year equivalent).
- ADA is weighted when the percentage of students designated as FRL, LEP, or IEP exceeds the threshold level for the district.
- The greater of the estimated WADA for the current year or the actual WADA of the past two years is used for funding calculations.

THE STATE ADEQUACY TARGET



Adequacy, in terms of education funding, is the level of funding needed to ensure that students receive an *adequate* education. Of course, the previous sentence violates the cardinal rule of presenting definitions: Never use the word you are defining in the definition. But therein lies the problem with identifying exactly how much money is required to provide students with an adequate education. How do you define *adequate*? The state has chosen one method, but there are certainly other methods that also seem appropriate.¹²

The first adequacy lawsuit was filed in Kentucky.¹³ The Kentucky Supreme Court ruled that the state's educational system was unconstitutional because not all students had an adequate educational opportunity. Prior to the Kentucky case, school finance litigation arose primarily on equity grounds.¹⁴ Equity lawsuits claim education funding is unconstitutional when some school districts spend significantly more money than others. This is a result of school funding being tied to local property taxes or other sources that may vary across school districts. It is no secret that some areas have significantly higher tax bases than others and, as a result, have more local money to spend on services such as education. Equity lawsuits led states, including Missouri, to increase state financial support for school districts with low property wealth.

Adequacy is intended to measure whether schools are receiving enough money to provide the services necessary for a quality education. Equity, on the other hand, simply describes whether one district is receiving an appropriate amount in relation to what other districts are spending.

Missouri's education system has been challenged in the courts on both equity and adequacy grounds. The current funding formula was designed to make education funding both more equitable and adequate. The *state adequacy target* (SAT) helps the state meet its obligation to provide education funding in both an equitable and an adequate manner. The state accomplishes these objectives by setting a targeted dollar amount that all schools should spend per student and then ensuring that each district has the appropriate amount of funding to meet that target.

HOW IS THE STATE ADEQUACY TARGET CALCULATED?

There are several ways a state could determine an adequacy target. Missouri has elected to peg the target to the spending levels in school districts that are

performing well, but are not among the state’s highest- or lowest-spending districts.¹⁵ This is known as the “successful schools approach.” To accomplish this, the Missouri Department of Elementary and Secondary Education (DESE) first identifies school districts that are performing well. These *performance districts* are school districts that have met all of the indicators on the Missouri Schools Improvement Program (MSIP) Annual Performance Report (APR).¹⁶

The SAT is based on school districts’ “current operating expenditures,” which include “all expenditures for instruction and support services” from local and state funds.¹⁷ The per-WADA expenditure for the 2003–04 school year was used to determine the initial adequacy target for the 2006–07 school year. The SAT is recalculated every two years, using the following methodology. First, the state identifies the performance school districts based on the prior year’s APR. Once the per-pupil current operating expenditures of each performance school district are calculated, the districts are rank-ordered and the districts with the highest and lowest per-pupil expenditures are removed. The total enrollment of the removed districts cannot exceed 5 percent of the total enrollment in all performing districts. The average per-pupil current operating expenditure of the remaining performance districts is then set as the SAT.

The SAT can never decrease upon recalculation. If the SAT is higher upon recalculation, it is phased in over a two-year period. In the first year following recalculation, the target increases by 50 percent of the difference between the old and new targets, and then by the remaining 50 percent in the following year.¹⁸

WHAT IS THE CURRENT SAT?

The initial SAT was set at \$6,117 for the 2006–07 school year. The target was increased upon subsequent recalculations to \$6,124 in 2010–11, \$6,131 in 2011–12, and \$6,716 in 2012–13 and 2013–14.¹⁹ When the SAT increases, state aid to school districts increases. According to DESE, the increase from \$6,131 to \$6,716 led to an additional requirement of more than \$690 million in education spending over two years.²⁰ The state, however, did not appropriate enough funds to fully fund the formula. A provision in state statute allows DESE to adjust the SAT when this happens.²¹ As a result, the SAT used by DESE remained at \$6,131.

In 2014, the Missouri legislature passed House Bill 1689.²² This bill allowed for some pre-kindergarten students to be calculated in ADA calculations. It also allowed for a recalculation of the SAT. Upon recalculation by DESE, the SAT was determined to be \$6,580.²³ The bill also changed how DESE handled funding during times of a funding shortfall. DESE had been applying a proration factor to the SAT for all school districts regardless of the district’s status as a “hold-harmless” or a “formula” school district. HB 1689 forbade DESE from prorating the funds to hold-harmless districts. Hold-harmless provisions are discussed in detail later in this paper.

In 2016, the legislature passed another piece of legislation with implications for the SAT, Senate Bill 586.²⁴ The bill reinstated a cap on SAT growth that had been removed in 2009. The reinstated cap restricts growth in the SAT to five percent per recalculation. This again forced DESE to recalculate the SAT. As a result, the SAT for the 2016–17 and 2017–18 school years is \$6,241.²⁵

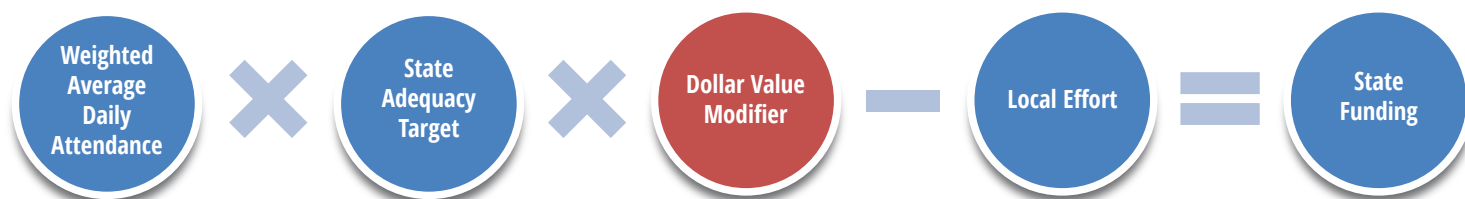
State statutes only allow for the SAT to increase upon recalculation of spending in performing school districts. As you can see, however, the formula may be adjusted downward when the legislature has not appropriated enough money to fully fund the formula or when the legislature passes new legislation impacting the funding formula.

The lower calculations of the SAT in 2014 and again in 2016 were a result of spending in the performing school districts. The spending was simply lower among the subset of districts used for the calculation. Under normal circumstances, the SAT would have therefor remained at \$6,716. Legislation in each of those years, however, allowed for the SAT to be lowered.

KEY TAKEAWAYS

- The SAT is intended to ensure that all school districts have an adequate amount of education funding, regardless of local property wealth.
- The target is the average per-pupil spending in school districts that meet all criteria in the Missouri Schools Improvement Plan.
- The adequacy target is recalculated in odd years and, barring legislation or a funding shortfall, can never decrease.

DOLLAR-VALUE MODIFIER



According to Missouri statutes, the dollar-value modifier (DVM) is “an index of the relative purchasing power of a dollar.”²⁶ The DVM was introduced into the formula because some school districts are located in areas with a much higher cost of living, or lower relative purchasing power. For example, the same home located in Shannon County or Saint Louis County would be worth considerably more in Saint Louis County. Thus, the relative purchasing power of a dollar is less in Saint Louis County than it is in Shannon County. The DVM provides additional funds to school districts in areas with higher costs of living but does not penalize districts with lower costs of living.

The DVM is only a proxy for relative purchasing power, and is expressed as a ratio that represents a locality's average wage per job in relation to the state's median wage per job. This means that areas with higher wages than the state median wage per job would be expected to spend more money on students in their school districts.

REGIONAL WAGE RATIO

To understand how the DVM is calculated, it is important to first understand how the state calculates the regional wage ratio. The regional wage ratio is an indicator of how much individuals earn at the local level in comparison to the state; this serves as a proxy for the cost of living in these areas. Because school districts often overlap counties, or are part of larger regional markets, the regional wage ratio is calculated with data from the appropriate statistical area. Some school districts are part of metropolitan or micropolitan areas, while others are not. If a school district is in a micropolitan or metropolitan area, as defined by the United States Office of Management and Budget, the regional wage for that area will be used in the calculation. If a school district is not located in a micropolitan or metropolitan area, the regional wage ratio will be calculated using data from the county level.

Regional wage per job

To compute the regional wage ratio, two figures are needed: the state median wage per job and the school district's regional wage per job. The regional wage per job for a school district is calculated by dividing total wages and salaries by the number of employees in the county, micropolitan area, or metropolitan area. These data come from the Bureau of Economic Analysis in the United States Department of Commerce.

State median wage per job

Suppose you have a sequence or a set of numbers. A median number is the number that falls directly in the middle, where half the other numbers are higher and half are lower. Because there are 114 counties in Missouri and the city of Saint Louis, the state median wage per job is the 58th-highest county wage per job; that is, the county in the middle.

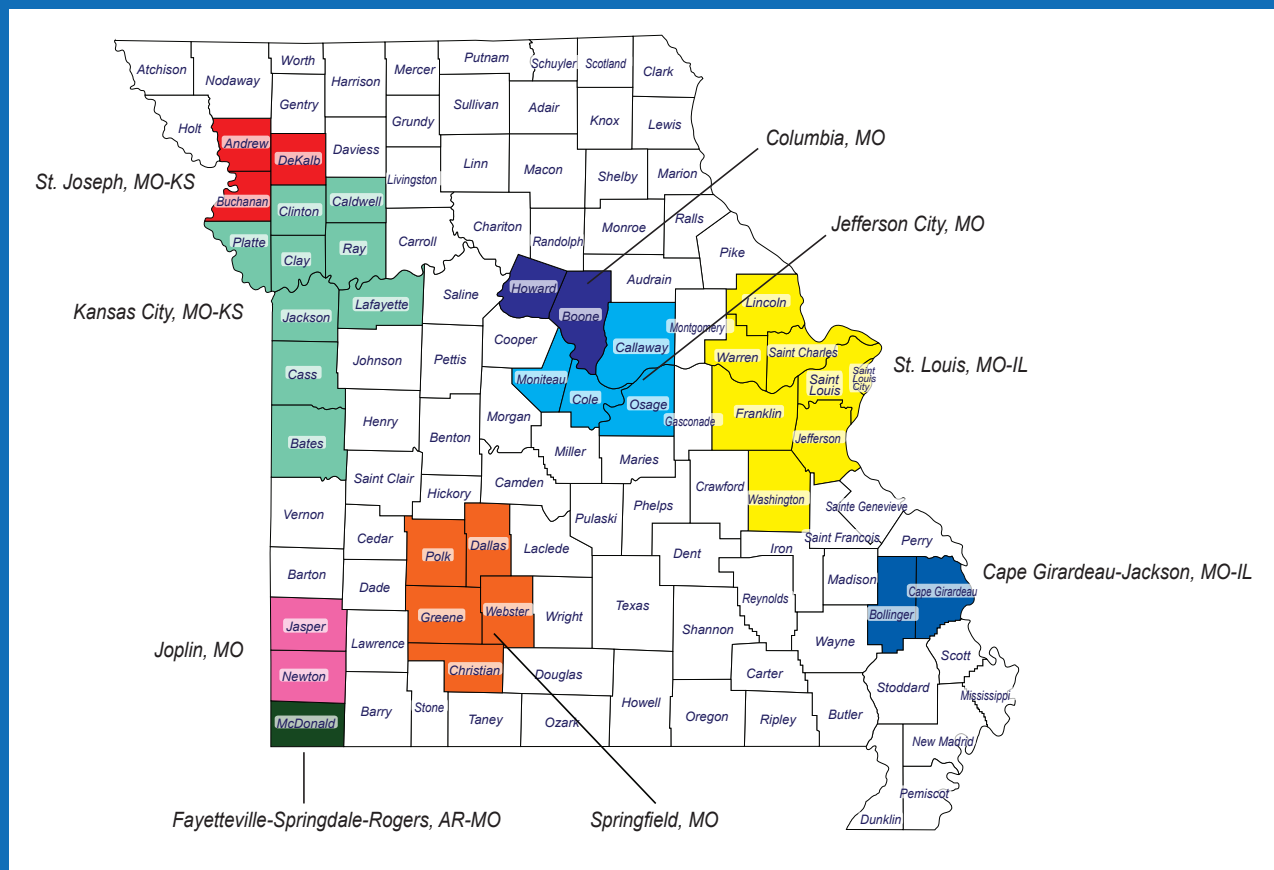
The regional wage ratio is derived by dividing the county, micropolitan, or metropolitan wage per job by the state median wage per job.

It is important to note that economic data from the "fourth year preceding the payment year" are used in these calculations.

WHAT ARE METROPOLITAN AND MICROPOLITAN AREAS?

A metropolitan area is defined as "a core urban area of 50,000 or more" people; a micropolitan area has an urban area containing between 10,000

Map 1:
2013 Map of Missouri's Metropolitan Areas



and 50,000 people. Both micropolitan and metropolitan areas consist of the county or counties surrounding the urban core which “have a high degree of social and economic integration.”²⁷ The two maps display the metropolitan (Map 1) and micropolitan (Map 2) areas in Missouri.²⁸

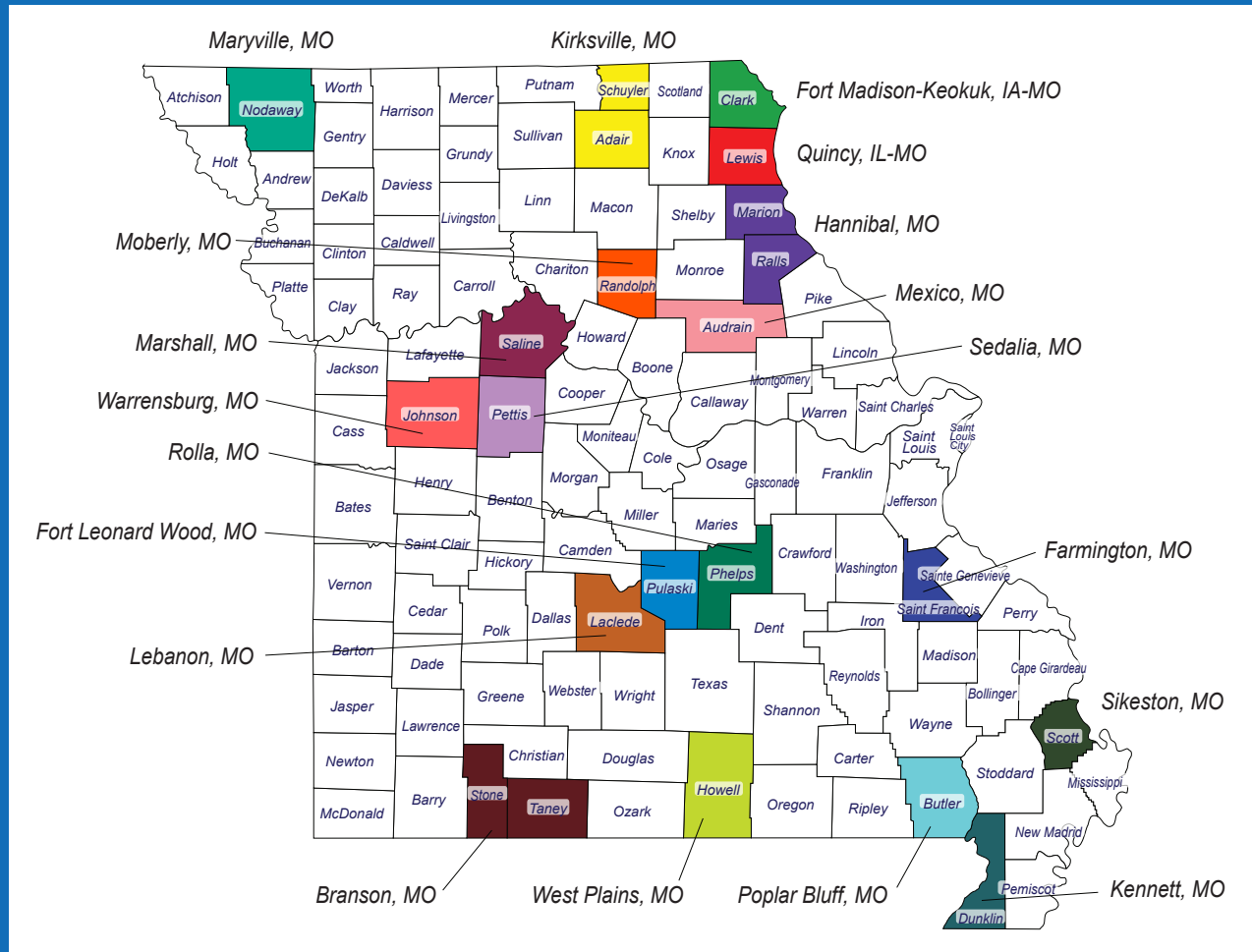
HOW IS THE DVM CALCULATED?

Now that we understand that the regional wage ratio is simply the local wage per job divided by the state median wage per job, we can look at how the DVM is calculated. Remember, the purpose of the DVM is to allow more money to be allotted to school districts located in areas with a higher cost-of-living than the state median. Based on how DESE calculates the DVM, school districts in areas with higher wages than the state median wage per job will receive more money.

The DVM is “calculated as one plus fifteen percent of the difference of the regional wage ratio minus one.”²⁹ The DVM cannot be less than 1 because

Map 2:

2013 Map of Missouri's Micropolitan Areas



the state wants to give more money to districts with a higher cost-of-living, not take money away from those with lower costs. It is sometimes easier to understand the DVM when it can be expressed as an equation:

$$DVM = 1 + .15 (\text{Regional wage ratio} - 1),$$

if $(\text{Regional wage ratio} - 1) > 0$; otherwise $DVM = 1$

The formula seems cumbersome but produces a DVM that is easy to understand in state aid calculations. The DVM for a district will be at least 1, because it cannot be lower than 1; and 1 can be thought of as 100 percent. This means a school district where the regional wage per job is lower than the

Table 2: Hypothetical Illustration of a District's DVM Calculation

1	Regional wage per job	\$45,000
2	State Median wage per job	\$35,000
3	Regional wage ratio $\left(\frac{Line\ 1}{Line\ 2}\right)$	1.286
4	Line 3 – 1	0.286
5	Line 4 × 15 percent	0.0429
6	Line 5 + 1	1.0429

state median will receive a DVM of 1, or 100 percent. A district with a higher DVM, such as 1.0225, would receive 102.25 percent of the money allotted according to the two previous sections of this paper (WADA × state adequacy target).

For illustrative purposes (see Table 2), suppose the state median wage per job is \$35,000 and the average wage per job of a hypothetical district's statistical area (metropolitan, micropolitan, or county) is \$45,000. Divide \$45,000 by \$35,000 to get 1.286—this is the regional wage ratio. Now take 1.286 – 1, which is .286, and multiply it by 15 percent, as is noted in the formula. The result is 0.0429. Add 1 to that, and you get a DVM of 1.0429, or 104.29 percent.

Each school district's DVM for the 2016 fiscal year can be obtained from DESE.³⁰ The highest DVM is 1.092 for the 60 plus school districts in the Saint Louis Metropolitan Area. A total of 153 school districts have a DVM of 1.000.

KEY TAKEAWAYS

- The DVM provides more money to school districts in areas with a higher cost of living than the state median, but does not take money away from districts with a lower cost of living.
- The proxy for cost of living is the regional wage ratio, which is the average wage per job of the school district's statistical area (county, micropolitan, or metropolitan) divided by the state's median wage per job.
- The DVM is presented as a percentage, but in decimal form. That is, a DVM of 1.03 is the same as 103 percent.

LOCAL EFFORT



While the other three portions of the state’s funding formula help determine how much money a school district should spend per student, *local effort* determines how much of that money can be raised locally, based on figures from the 2004–05 school year. By subtracting the local effort from the rest of the formula, the state can determine how much money it needs to supply to each school district in order for each school to have an adequate level of funding. Some districts are able to raise almost all of the money locally, resulting in fewer dollars coming from the state; other school districts receive much more from the state because they have small local tax bases and are able to raise fewer dollars locally.

In other words, the funding formula calculates how much money a school district should spend per-pupil, subtracts the amount raised during the 2004–05 school year, and then supplies the additional money to the district to ensure they have the appropriate amount of funds.

HOW IS LOCAL EFFORT CALCULATED?

The largest portion of local effort is the money a school district could earn from local property taxes. Though each locality has the authority to set its own property tax rate by a vote of the electorate, the state uses a set tax levy for state aid calculations. The state has set the performance tax levy at \$3.43 per \$100 of assessed valuation, or 3.43 percent. If a district’s tax levy is lower than the state’s performance tax levy, it will actually have less money locally than the estimated figure of the state. On the other hand, if a district has a tax levy higher than the state’s target, it will be able to raise additional funds with no penalty.

To calculate how much local revenue can be generated from local property taxes, DESE multiplies the assessed valuation, as of December 31, 2004, by 3.43 percent and then deducts collector and assessor fees from the local tax revenue. An illustration of how the local property tax dollars are calculated is presented in Table 3.

For calculation purposes, assessed values from 2004 are used for state aid calculations and will continue to be used unless legislative action is taken.³³ The state will recalculate using updated assessment values if assessed values

Table 3: Calculation of Net Local Tax Revenue

1	Assessed valuation (Dec. 31, 2004)	\$200,000,000
2	Performance tax levy ³¹	3.43%
3	Local tax revenue (Line 1 × Line 2)	\$6,860,000
4	Collector and assessor Fees ³²	1.57%
5	Line 3 × Line 4	\$107,702
6	Net local tax revenue (Line 3 – Line 5)	\$6,752,298

have decreased, but not if they have increased. This means school districts with increasing local wealth will receive higher levels of state funding than they would if the assessment level had been adjusted. In effect, these policies only allow state aid to increase based on adjustments in local property wealth.

WHAT ELSE COUNTS AS LOCAL REVENUE?

A portion of the 1-percent statewide sales tax is calculated as local revenue. Voters approved this tax, known as Proposition C, in 1982. The state collects these funds and distributes them to school districts on a WADA basis. Fifty percent of the funds that a school district receives from the tax are calculated as local funds.

Another large piece of local revenue comes from the state assessed railroad utility (SARRU) tax. Other means of generating money locally include: financial institution taxes, merchants and manufacturers taxes, money collected in lieu of taxes, fines and escheats collected in the prior year, federal properties, and local earnings and income taxes. Of course, not all of these apply to all school districts. Unlike local property taxes, which are mostly static in the formula because they are pegged at 2004 assessment levels, these other forms of local wealth may fluctuate.

KEY TAKEAWAYS

- Local effort is a measure of how much funding a school district can raise locally and is subtracted from the amount of money that should be spent according to the rest of the funding formula.
- Local property values are set at the 2004 level and can only be adjusted downward for local effort determination purposes. This allows state aid to remain constant or increase, but not decrease with rising property values.
- DESE uses a performance tax levy of \$3.43 per \$100 of assessed valuation for calculations of local effort.

HOLD-HARMLESS

Missouri's funding formula has several provisions built in that do not allow a school district's state funding to decrease. The formula has been designed to make it much easier for a school district to garner more state dollars than to lose funds.

For instance, the highest WADA calculation from the current and the previous two years is used. This allows for quick increases in state aid, while allowing districts with declining enrollments to remain funded at a higher level from a previous year.

Additionally, barring legislation, the state adequacy target cannot decline. If a recalculation of the target yields a lower number, the target remains constant.

Even in the calculation of local effort, the system is designed to give school districts more state money, not less. By pegging local tax calculations to 2004 assessment levels and by allowing the assessed value to decrease, but not increase, the state has sheltered some districts from funding cuts.

WHAT IS HOLD-HARMLESS?

The biggest provision for not allowing state aid to decrease comes from a statutory provision known as "hold-harmless." This provision allows school districts to decide if they will be on the current formula or if they will receive funds based on the old formula. Missouri shifted to the new funding formula during the 2006-07 school year. The hold-harmless provision in the new legislation guaranteed that school districts would not receive less state funding under the new formula.³⁴ School districts can make this determination annually. Each year, approximately one-third of all Missouri school districts are categorized as "hold-harmless."³⁵ Districts of all sizes can be held harmless.³⁶ The only criterion is whether a district would receive more money under the formula calculations or if they would receive more funding under the old system.

There are two types of hold-harmless provisions. School districts with fewer than 350 students were guaranteed at least as much total funding as they received in 2005–06. In theory, this means a school district could lose almost all of its students and still receive the same amount of total dollars as it received in 2005–06. Missouri City School District #56 is an example. In 2011, the school district dropped from 33 students to 18. The total state contribution remained the same. As a result, the school district's per-pupil expenditure rose from \$12,570 per-pupil to \$16,379 per-pupil.

According to data from DESE, 192 school districts (37%) have fewer than 350 students. Nearly 50 school districts (9.2%) have 100 or fewer students. It is possible that holding these districts harmless is preventing them from

Table 4: Five Highest-Spending School Districts in Missouri in 2016³⁷

School District	Hold-Harmless Provision	Enrollment	Current Expenditure Per Average Daily Attendance
New York R-IV	Small School	23	\$25,249
Malta Bend R-V	Small School	63	\$23,699
Higbee R-VIII	Small School	207	\$22,172
Craig R-III	Small School	68	\$21,595
Breckenridge R-I	Small School	60	\$20,974

Source: Missouri Department of Elementary and Secondary Education

attempting other changes that may benefit the students. Indeed, the five districts that spent the most per-pupil in 2015 were all small, hold-harmless school districts (see Table 4).

For districts with more than 350 students, the new formula guarantees the same level of funding per WADA. This means a school district such as Clayton, which spent \$17,857 per-pupil in 2015, continues to receive the same level of funding per WADA as it received in 2005–06. This allows Clayton to receive additional money from the state, even though it is one of the highest-spending districts in the state.³⁸ However, the state contributes very little to Clayton in percentage terms (3.24 percent in 2015).

The hold-harmless provision does not allow the amount of state aid to a district to fall below 2005–06 levels. This allows more state money to be allotted to school districts with dwindling enrollments and high local wealth than would otherwise be allotted under the foundation formula.

KEY TAKEAWAYS

- Hold-harmless guarantees school districts they will not receive less money under the new formula than they did under the previous formula.
- Districts with fewer than 350 students are guaranteed the same amount of total dollars from the state as they received in 2005–06.
- Districts with more than 350 students are guaranteed the same amount of state aid per-pupil as they received in 2005–06.

CHARTER SCHOOL FUNDING

Charter schools are free, public schools and like district schools they are funded from local and state dollars. The distribution of these funds is based largely on the formula provided in the preceding sections, save for the

provision for hold-harmless schools. But to understand how charters are funded, it is important to note that traditional public schools raise additional money outside of the formula.

In the foundation formula, local funds are subtracted from the amount a school district should receive based on its WADA, the state adequacy target, and DVM. Part of the local funds come from property taxes, which the state calculates using the performance tax levy of \$3.43 per \$100 of assessed valuation in 2005. But districts can, and often do, have tax levies higher than the performance tax levy. This additional revenue, from the incidental and teachers fund, goes to the school district and to charter schools in addition to the funds the formula generates.³⁹

Traditional school districts can also levy taxes for capital projects in a debt service fund or a capital projects fund. These are the funds they typically use to build new school buildings or make renovations. These two funds represent the biggest difference between the funding of charter schools and local public schools, because charters do not have access to debt service funds, capital project funds, or other facility funds. Without these funds, charter schools must cover the cost of facilities with their allotment of state aid and the local dollars raised in the incidental and teachers fund. That is, current expenditures, as listed by DESE, cover the cost of operations at most traditional school districts, but cover the cost of operations and facilities at charter schools. For fiscal year 2011, it was estimated that charter schools received \$4,682 per-pupil less than their district counterparts.⁴⁰

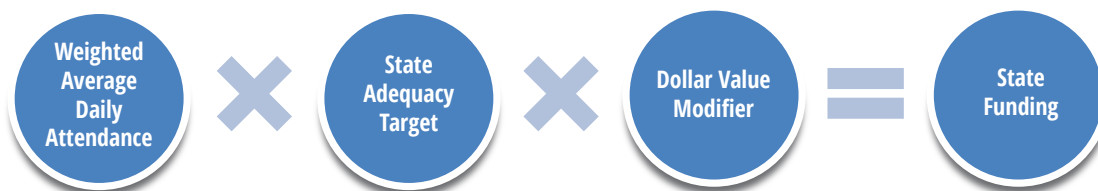
HOW IS CHARTER AID DETERMINED?

Charter schools can operate in one of two ways. They can be organized as a school within a local school district, meaning they are not their own *local educational agency* (LEA), or they can be independent and form their own LEA. The funding of the school differs slightly depending on the LEA status of the charter school.⁴¹

Charter Schools without LEA Status

If a charter school has not obtained its own LEA status, it reports its attendance numbers, including IEP, FRL, and LEP figures, to its local school district. The local school district is then responsible for including these figures in the attendance counts it reports to the state. The state then appropriates money to the school district in the manner laid out in the preceding sections. The district then must pay the charter school the figure derived from multiplying the charter school's WADA by the state adequacy target and the DVM. If you recall in the district formula, local effort was subtracted. By not subtracting the local effort here, the district is paying the charter school the entirety of the funds calculated for the charter school by the WADA, adequacy target, and DVM.

In addition to the funds derived from the formula, the school district must pay the charter school a portion of funds that were raised locally that exceed the tax performance levy. If a district has a tax rate above \$3.43 per \$100 assessed valuation, the charter school is entitled to a portion of the revenue. The funds raised in excess of the performance levy from the incidental and teachers fund must be distributed to the charter school based on the school's WADA. For this calculation, the WADA for all students in the district, including all charter schools, is used to determine how much money should be distributed to the charter schools.



Charter Schools with LEA Status

If a charter school has obtained LEA status, the funding is slightly different. Instead of the school district paying the charter school, DESE pays the charter school its allotment under the foundation formula. This allocation is still calculated based on the charter's WADA multiplied by the state adequacy target and the DVM. Additionally, DESE distributes the revenue to the charter school that the incidental and teacher funds raised in excess of the performance tax levy. These funds are then subtracted from the funds that would be distributed to the traditional public school district.

In short, the difference between a charter that is its own LEA and one that is which entity (the school district or DESE) pays the funding allotment to the charter.

KEY TAKEAWAYS

- State and local dollars fund charter schools, but charter schools do not have access to facility funds.
- The difference between a charter school that has local educational agency (LEA) status and one that does not is who pays the charter: the state or the district.

CONCLUSION

The foundation formula currently in place is a result of Senate Bill 287 of 2005. The bill was the legislature's response to legal challenges to the previous formula. Through Senate Bill 287, lawmakers sought to adequately fund education based on a sequential methodology rather than an ambiguous target of equity, as was the intended goal of the previous formula. Deciding whether or not these goals

have been attained requires a bit of judgment as to what constitutes adequacy, but a few things are clear. In regard to promoting an adequate and equitable funding system, the foundation formula:

- Provides more money per pupil to school districts with relatively low property wealth than it does to districts with relatively high property wealth.
- Provides more money to districts with disproportionately high percentages of students living in poverty.
- Provides more money to districts with disproportionately high percentages of students with special needs.
- Provides more money to districts with disproportionately high percentages of students with limited English proficiency.
- Provides more money to districts in areas with a higher-than-average cost of living.

Additionally, the foundation formula uses a method for calculating the state adequacy target that is fairly common in other states.

Though it may seem a bit cumbersome, Missouri's K-12 education funding system is fairly straightforward when compared to those of other states. Indeed, many of the features of the formula are found in other state formulas. These similarities do not mean that Missouri's current system is necessarily good—simply that the foundation formula uses features found in other states.

If someone asked what is wrong with the foundation formula, the answer would have to be “it depends.” School districts that spend lower amounts may claim that the formula does not address equity issues sufficiently; wealthy suburban districts may claim they are funding education in other parts of the state. Both of these assertions are somewhat true. Many of the wealthy suburban districts spend thousands of dollars more per pupil than some of the rural districts and receive very little, percentage-wise, from the state. But those wealthy suburban districts most likely contribute more income and sales tax into the state coffers than they receive back in the formula. If the state were to implement recapture of local dollars, or a “Robin Hood” system, where the state takes money from districts with an abundance of local property wealth and awards it to districts with less, this may satiate some school districts while raising the ire of others.

Education funding is complicated, because everyone wants more money. That is most likely the reason the hold-harmless provisions were inserted. When lawmakers were attempting to pass legislation, the new foundation formula might not have passed without the support of school districts, and to gain their support, lawmakers needed to reassure school districts that they would not be losing any money by switching to the current formula. Though hold-harmless may have made SB 287 politically feasible, hold-harmless and the various other provisions that allow funds to increase but rarely decrease make it more difficult for the state to be flexible in responding to the changing demographics of Missouri schools.

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NOTES

1. See Missouri Revised Statutes: <http://www.moga.mo.gov/statutes/chapters/chap163.htm>
2. These figures were obtained from the Missouri Department of Elementary and Secondary Education's School Finance Report: <https://mcde.dese.mo.gov/guidedinquiry/District%20and%20School%20Information/School%20Finance%20Report.aspx?rp:DistrictCode=048914>
3. Not all of the local funds were raised from property taxes. Local dollars include the one percent Proposition C sales tax and various other revenue streams.
4. Students who are expensive to educate provide additional challenges for school districts. These include economically disadvantaged students, students with special needs, and students with limited English proficiency.
5. Proposition C was a statewide ballot initiative in 1983 in which voters approved a one percent sales tax for the purpose of funding education.
6. See Missouri Statute 163.011: <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
7. Summer school hours do not count physical education if the students are in grades 9–12 and the course does not count toward graduation credits. Missouri Statute 160.011 states that students should be in school at least 1,044 hours during a regular term school year. <http://www.moga.mo.gov/mostatutes/stathtml/16000000111.html>
8. For more information on how the threshold levels are calculated, see the description of how the State Adequacy Target is calculated. Threshold calculations are determined in essentially the same manner.
9. See Missouri Department of Elementary Education's memo FAS-16-005 - State Adequacy Target (SAT) and Threshold Recalculations: <https://dese.mo.gov/sites/default/files/am/documents/FAS-16-005.pdf>
10. See Missouri Statute 163.011: <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
11. Note that, this only applies to traditional public schools, not charter schools. WADA for charter schools is based on current-year figures.

12. For a broader discussion on this, see: Downes, Thomas A. and Leanna Stiefel. (2015). Measuring equity and adequacy in school finance. In H.F. Ladd & M.E. Goertz (Eds.), *Handbook of research in education finance and policy* (pp. 244–259). New York: Routledge.
13. *John A. Rose v. Council for Better Education*. (1989). 790 S. W. 2d 186, 60 Ed. Law Rep. 1289.
14. Guthrie, James W., Matthew G. Springer, R. Anthony Rolle, and Eric Houck. (2007). *Modern education finance and policy*. Chicago: Allyn & Bacon.
15. See Missouri Statute 163.011: <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
16. For more on APR, see: https://dese.mo.gov/sites/default/files/MSIP_5_2016_Comprehensive_Guide.pdf
17. See Missouri Revised Statute 163.011: <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
18. See Missouri Revised Statute 163.011: <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
19. Dorson, Roger & Jennifer Jordan. (2015). State basic aid formula, tax rates, budget and calendar. Presentation. *Department of Elementary and Secondary Education*. [https://dese.mo.gov/sites/default/files/State%20Basic%20Aid%20Formula,%20Tax%20Rates,%20Budget%20\(Dorson-Jordan\).pdf](https://dese.mo.gov/sites/default/files/State%20Basic%20Aid%20Formula,%20Tax%20Rates,%20Budget%20(Dorson-Jordan).pdf)
20. Email exchange with Ron Lankford, deputy commissioner of the Missouri Department of Elementary and Secondary Education.
21. “The state adequacy target may be adjusted to accommodate available appropriations as provided in subsection 7 of section 163.031” <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
22. See House Bill No. 1689 of 2014: <http://www.house.mo.gov/billtracking/bills141/billpdf/truly/HB1689T.PDF>
23. Dorson, Roger & Jennifer Jordan. (2015). State basic aid formula, tax rates, budget and calendar. Presentation. *Department of Elementary and Secondary Education*. [https://dese.mo.gov/sites/default/files/State%20Basic%20Aid%20Formula,%20Tax%20Rates,%20Budget%20\(Dorson-Jordan\).pdf](https://dese.mo.gov/sites/default/files/State%20Basic%20Aid%20Formula,%20Tax%20Rates,%20Budget%20(Dorson-Jordan).pdf)
24. See Senate Bills 586 & 651 of 2016: <http://www.senate.mo.gov/16info/pdf-bill/tat/SB586.pdf>
25. See DESE administrative memo: <https://dese.mo.gov/sites/default/files/am/documents/FAS-16-005.pdf>
26. See Missouri Revised Statute 163.011: <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
27. See U.S. Department of Commerce definition of metropolitan and micropolitan statistical areas: <http://www.census.gov/population/metro/>
28. Maps were obtained from the Policom Corporation. Available at: <http://www.policom.com/2013MAPS/MOMETMIC2013.pdf>
29. See Missouri Revised Statute 163.011: <http://www.moga.mo.gov/mostatutes/stathtml/16300000111.HTML>
30. See each district’s DVM here: <https://dese.mo.gov/sites/default/files/fas-FY16DVMCalculation.pdf>
31. Set at \$3.43 for every district except special districts.
32. Collector and assessor fees may vary.

33. Preis, Stacey. (2011). Implementation of the SB 287 funding formula: impact on Missouri school districts. Prepared for the Joint Committee on Education. Available at: <http://www.senate.mo.gov/jced/FundingFormula.pdf>
34. See Missouri Revised Statute 163.031: <http://www.moga.mo.gov/statutes/C100-199/1630000031.HTM>
35. Download a list of hold-harmless districts here: <https://mcds.dese.mo.gov/quickfacts/pages/district-and-school-information.aspx?RootFolder=%2Fquickfacts%2FSchool%20Finance%20Data%20and%20Reports%2FHold%20Harmless%20Districts&FolderCTID=0x012000B3EF86959C3A824680BF44E0680ED1F4&View=%7B0E813976-3BD6-4D9B-9112-5D0C54B515E8%7D>
36. Preis, Stacey. (2011). Implementation of the SB 287 funding formula: impact on Missouri school districts. Prepared for the Joint Committee on Education. Available at: <http://www.senate.mo.gov/jced/FundingFormula.pdf>
37. Figures obtained from DESE Preliminary Figures.
38. The Gorin R-III school district, with 20 students, actually spends the most per-pupil: \$27,503 in 2016.
39. These funds are part of the incidental and teacher fund.
40. Batdorff, Meagan, et al. (2014). Charter school funding: Inequity expands. <http://www.uaedreform.org/wp-content/uploads/charter-funding-inequity-expands.pdf>
41. See Missouri Revised Statute 160.415: <http://www.moga.mo.gov/statutes/C100-199/1600000415.HTM>



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