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Counting the Cash Again:
An Update on Colorado School Finance

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Executive Summary

Colorado's school finance system is complex and multifaceted. This complexity often leads to a variety of misperceptions that stand in the way of productive conversations about K-12 education funding in the state. Interested parties should understand the following about school finance in Colorado:

- Most public school funding comes from "total program," which is calculated under the Public School Finance Act of 1994. The School Finance Act sets a base per-pupil revenue (PPR). This base is then modified upward by a number of factors. In 2015-16, the last year for which final figures are available, total program funding amounted to $6.2 billion after the application of the negative factor discussed below. This equates to a statewide average of $7,313 per pupil.
- Funding levels directly related to the School Finance Act account for only a portion of Colorado's total K-12 public education revenue. In 2014-15, the last year for which complete data are available, more than $10.5 billion in revenue, or $12,449 per pupil, flowed into the state's public education system.
- The Colorado General Assembly does not have the authority to raise taxes without voter approval, operate in a deficit, or print money. The "negative factor," or the mechanism through which the Colorado General Assembly reduces factor funding while still complying with a state constitutional requirement to increase base per-pupil funding, is a reflection of the amount of money the state requires to fund competing budget obligations and priorities.

Proponents of increased education spending often cite declining funding levels and Colorado's ranking relative to other states as evidence that K-12 education spending should be greatly increased. These arguments contain kernels of truth but are too incomplete to be useful in light of the following:

- Colorado's inflation-adjusted total program funding has stabilized and begun to climb.
- Inflation-adjusted per-pupil revenue decreased in the years following the implementation of the negative factor. This decrease is observable in both School Finance Act funding and overall funding. However, statewide average per-pupil revenue began to stabilize in 2012-13 and has been rising steadily since 2013-14.
- Observable reductions in Colorado's levels of education funding follow decades of increases; Colorado's inflation-adjusted "current expenditures per pupil," or expenditures excluding construction costs and debt financing, more than doubled between 1970 and 2010.
- The funding pressures on Colorado's public education system are due in large part to competing budgetary priorities adopted by the state. In particular, a 150 percent increase in Medicaid enrollment following the Great Recession and Colorado's voluntary Medicaid expansion have resulted in budgetary competition for resources between K-12 education and government health care obligations.
- Colorado ranks between 22nd and 40th on credible measures of education funding. These rankings depend on source data, the type of spending measured, and research methodology and should be interpreted with some caution.
- In all cases, Colorado's level of per-pupil education spending falls short of the national average. However, the state's academic outputs remain equal to or higher than those of most other states, and often significantly so.

In all cases, Colorado's level of per-pupil education spending falls short of the national average. However, the state's academic outputs remain equal to or higher than those of most other states, and often significantly so.

- Although funding can and undoubtedly does matter in some educational circumstances, contested academic research, performance trends on well-respected assessments, and case studies in funding infusions raise questions about the efficacy of funding increases as drivers of improved academic performance.

Introduction

The discussion around K-12 public school funding in Colorado can be divisive. Proponents of increased school funding often implicitly or explicitly argue that schools are underfunded, and that the key to improving student performance is increased revenue. Opponents argue that a great deal of money is already spent on education, that the amount of money spent on schools is significantly less important than how it is spent, and that the way school finance systems are structured is the most critical component of any funding conversation.

Proponents of increased school funding often implicitly or explicitly argue that schools are underfunded, and that the key to improving student performance is increased revenue.

Such debates frequently are clouded by a lack of grounded evidence. There exists a great deal of confusion about Colorado's school finance system and about public school funding in general. In the absence of informed debate, opposing viewpoints often divide along ideological or political lines. These ideological differences and the rhetoric they produce can obscure what should be the common goals of education: raising student achievement, increasing access to high-quality education for all students, and building the most effective and efficient K-12 education system possible.

To focus the conversation with these goals in mind, this paper seeks to accomplish five things:

- Provide an overview of school finance and related issues in Colorado;
- Consider Colorado's K-12 public education funding over time;
- Consider education in the context of Colorado's budget, including the budgetary factors affecting school finance;
- Examine Colorado's standing among other states in the area of public school funding; and
- Explore the relationship between increased school funding and student outcomes as established in research, descriptive evidence, and case studies

The Black Box: Colorado's School Finance System and the Negative Factor

Colorado's school finance system is complex, and its inner workings are often a mystery even to those who work in public policy. Yet before any meaningful discussion of K-12 public school funding can be had, a foundational understanding of the system, its associated terms, and its various mechanisms must exist. To this end, the following sections provide a basic overview of school finance in Colorado.

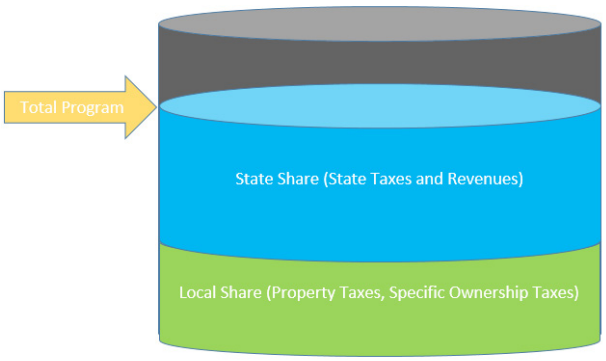
The School Finance Formula, Total Program, and Categorical Funding

The most commonly used school finance figures in Colorado relate to "total program" funding. Total program is the total amount of money school districts receive under the Public School Finance Act of 1994, which is amended each year to fund K-12 education in Colorado. A district's total program amount is calculated on a per-pupil basis and relies upon student counts that occur in October of each year. These counts are used to calculate a "funded pupil count" for each district. Funded pupil counts are notably distinct from actual enrollment counts. For instance, part-time students are counted as .5 of a full-time student and kindergarten students are weighted as .58. The count also includes districts' Colorado Preschool Program pupil count, online pupil count, and ASCENT program enrollment. In districts with fluctuating enrollment, this figure may also include "phantom students" created by the use of enrollment averages for up to five years—a provision designed to mitigate the financial impact of students leaving a school district.[1]

In most districts, total program is comprised of both local and state shares of funding. Like filling a bucket to a predetermined line, local share money derived from property taxes and specific ownership taxes (more commonly known as vehicle registration taxes) pays the first part of a district's calculated total program. The state then fills the bucket the rest of the way to the calculated total program line. In fiscal year 2015-16, 10 of Colorado's 178 school districts received no state share funding under the School Finance Act.[2]

Colorado's School Finance Act provides a "base" amount of per-pupil funding for public education in all districts across the state ... This base amount is modifed upward by a number of "factors."

Figure 1 - Total Program Funding in Colorado



state. For the 2016-17 school year, that base amount is $6,367.90.[3]

This base amount is modified upward by a number of "factors," the combination of which are added to a district's base funding to reach its overall per-pupil revenue (PPR). These factors are:

- **Cost-of-Living** – This factor is index based and is designed to reflect cost-of-living differences in school districts across the state.
- **Personnel Costs** – Based on enrollment levels, this factor allocates additional money to districts to account for varying personnel costs in Colorado school districts. It incorporates the cost-of-living factor as well as historical information.
- **Size** – This factor scales along with district enrollment and recognizes purchasing power differences across districts of various sizes. Smaller districts receive greater size factor adjustments than larger school districts. This factor also includes an adjustment for small school districts in which a charter school operates.
- **At-Risk** – This factor distributes additional money for "at-risk" students. Eligibility for the National School Lunch Program is used as a proxy for this status. Under the at-risk factor, school districts receive between 12 and 30 percent of their total per-pupil funding for each at-risk pupil. Districts with percentages of at-risk students above the state average receive additional funding.
- **Online** – This factor provides funding for multi-district online schools, which are online schools that enroll students from multiple school districts. These schools receive significantly less per-pupil funding than other schools. Single-district online schools, which are district online schools that enroll no more than 10 students from another district, are funded in the same way as other public schools.
- **Negative Factor** – The negative factor is a negative number that reduces other factor funding without reducing the base level of per-pupil funding under the school finance formula. It was introduced in FY 2010-11 to help the state cope with increasing budgetary challenges. The negative factor and its origins are discussed in the next section.

Per-pupil revenue varies widely across school districts because of the many factors included in Colorado's school finance formula.

Per-pupil revenue varies widely across school districts because of the many factors included in Colorado's school finance formula. At $15,596, Silverton School District in San Juan County had the highest PPR in the state in 2015-16. Branson School District in Las Animas County had the lowest at $6,910.[4] Because of the level of variation in districts' PPR amounts, most education observers use a statewide average in discussions. In 2015-16, funding under the School Finance Act amounted to more than $6.2 billion. The final statewide average PPR was $7,313.[5]

There are also a number of categorical program funding considerations that exist outside the school finance formula. These additional funding sources are not included in a school district's per-pupil revenue figures. In 2015-16, Colorado made roughly $305 million in additional funding available for these categories.[6] The categories are:

- **Small Attendance Centers** – Offers additional funding to schools with fewer than 200 students located 20 or more miles from similar schools in their districts
- **English Language Proficiency Act** – Provides additional funding to support the education of English language learners (ELL) students
- **Gifted and Talented Education** – Supplies funds to support gifted and talented programs

- **Special Education** – Provides funding for special education programs for children with disabilities
- **Transportation** – Offers money to help school districts defray costs associated with transporting students. Money is not usually allowed to subsidize capital investments related to education, such as the purchase of new school buses
- **Vocational Education** – Provides funding to supplement career and technical education programs offered by school districts

As mentioned above, some districts in Colorado collect enough in local tax revenue to fully fund their total program amounts. For some of these districts, the application of the negative factor reduces their entire available state share of funding and requires them to reimburse the state for any categorical funding received.[7]

The Negative Factor

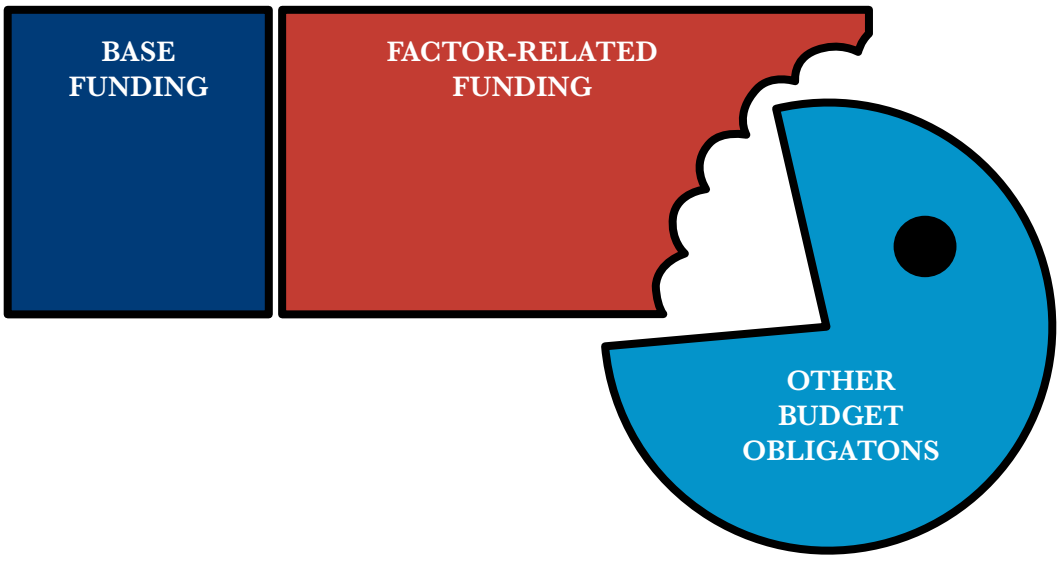
Much of the modern debate around school finance in Colorado centers on the "negative factor." Created in 2009-10 and implemented for the first time in 2010-11, the negative factor is a mechanism by which the Colorado General Assembly can reduce state funding for public education in order to meet Colorado's constitutional requirement for a balanced budget in each fiscal year. These reductions were necessary to fund Colorado's extensive government obligations as state revenue shrank during the Great Recession.

The negative factor stems from a legislative reinterpretation of the language found in Amendment 23 to the Colorado Constitution. Passed in 2000, this amendment required that core K-12 public school funding in the state be increased by inflation plus 1 percent through fiscal year 2010-11. The state was thereafter obligated only to increase funding to keep up with inflation. The text of the amendment can be found in Article IX, § 17 of the Colorado Constitution. It reads:

In state fiscal year 2001-2002 through state fiscal year 2010-2011, the statewide base per pupil funding, as defined by the Public School Finance Act of 1994, article 54 of title 22, Colorado Revised

As the recession squeezed the state financially and spending pressures expanded, the Colorado General Assembly reinterpreted Amendment 23's funding increase requirements more narrowly to apply only to "base" funding, not factor-related funding.

Figure 2 - The Negative Factor



Statutes on the effective date of this section, for public education from preschool through the twelfth grade and total state funding for all categorical programs shall grow annually at least by the rate of inflation plus an additional one percentage point. In state fiscal year 2011-2012, and each fiscal year thereafter, the statewide base per pupil funding for public education from preschool through the twelfth grade and total state funding for all categorical programs shall grow annually at a rate set by the general assembly that is at least equal to the rate of inflation.

As the recession squeezed the state financially and spending pressures expanded, the Colorado General Assembly reinterpreted Amendment 23's requirements more narrowly to apply only to "base" funding, not factor-related funding.

The negative factor was created as an additional factor in the school finance formula, effectively reducing overall funding for public schools by reducing factor-related funding instead of base funding. This allows the legislature to comply with Amendment 23's requirement to increase base funding by enrollment and inflation while still holding down overall expenditures on K-12 public education and balancing the state's budget.

In common usage, the term "negative factor" has largely come to mean the difference between current education spending levels and spending levels that would hypothetically have occurred under a looser interpretation of Amendment 23's language. Interest groups and individuals who support increased education funding often argue that the negative factor violates Amendment 23's requirements. Yet the Colorado Supreme Court upheld the legislature's interpretation of Article IX §, 17 in a 2015 ruling, stating that:

Plaintiffs argue that the negative factor is unconstitutional because it violates Amendment 23, a constitutional provision requiring 18 annual increases to "statewide base per pupil funding." The supreme court concludes that Plaintiffs' complaint misconstrues the relationship between the negative factor and Amendment 23. By its plain language, Amendment 23 only requires increases to statewide ***base*** *per pupil funding, not to* ***total*** *per pupil funding. The supreme court therefore holds that the negative factor does not violate Amendment 23.*[8]

Stated differently, the entirety of the negative factor hinges on a single word in Amendment 23: "base." As such, the debate over Amendment 23 stands as a stark example of the importance of the language used in initiatives placed before voters for decision.

In 2015-16, the negative factor was initially $855.2 million.[9] This figure was adjusted downward by $24.5 million to $830.7 million following a Joint Budget Committee staff recommendation and subsequent legislative action that held funding levels constant despite lower-than-expected enrollment.[10]

"Buying down" the negative factor has been a point of discussion for groups on both sides of the political spectrum. The issue has garnered attention and, in some cases, support from both political parties and from local school boards representing a range of ideologies. However, education funding faces intense competition because of expanding spending obligations and priorities related to government agencies, programs, and services in other areas of the budget. It is important to remember that the negative factor is simply a reflection of the amount of state money that would otherwise be allocated to K-12 education in the absence of other budgetary obligations—a fact typically

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ignored by critics of the factor and its implications. It is, in a very real sense, a numerical indication of how much money the state needs elsewhere to cover costs and balance the budget.

Because of the Colorado Taxpayer's Bill of Rights (TABOR), widely considered to be one of the most effective laws in the country at constraining the disproportionate growth of government, the Colorado General Assembly cannot raise taxes without first winning voter approval.[11] This constitutional provision allows government in Colorado to increase revenues and expenditures only to an extent commensurate with the rate of population growth and inflation.[12] Unlike the federal government, Colorado is constitutionally forbidden from operating in a deficit and lacks the ability to print money. Thus, the Colorado General Assembly's sole responsibility is to divide existing revenue between competing requirements and interests.

Even so, the Colorado state government may have as much money as it would like—so long as voters are willing to agree to higher taxes. They very often do not. Large-scale tax increases have a poor track record with voters in Colorado. This trend was most recently illustrated by the failure of the Amendment 66 tax effort in 2013 by a margin of 65 to 35 percent. The amendment would have increased Colorado income taxes by roughly $1 billion annually—enough to eliminate the negative factor in years going forward—and would have moved Colorado away from its current flat tax to a two-tiered system of progressive taxation.[13] A 2011 measure, Proposition 103, would have raised sales and income taxes by approximately $2.9 billion over five years to fund education. The measure failed by a margin of 63 to 37 percent.[14]

Voters' reluctance to embrace higher statewide taxes and higher government spending, even when those taxes would be spent specifically on education, stands in stark contrast to claims by interest groups and activists that vastly increased spending is reflective of the will of Colorado's citizens.

Mill Levy Overrides and Bond Issues

Mill levy overrides (MLOs) are voter-approved property tax increases that can be used to fund education on a specific or general basis. Bond issues, on the other hand, are voter-approved long-term debt obligations. MLOs and bond issues are used to fund different types of needs. Bonds are exclusively used to finance capital projects, while MLOs are typically used to fund "soft" projects or initiatives like starting new programs, hiring teachers, or purchasing new textbooks or equipment. The Debt Free Schools Act, passed in 2016, allows school districts to utilize mill levy override funds for capital projects.[15]

MLOs are often excluded from conversations related to school finance. Yet even though these revenues are not evenly distributed among school districts, they constitute a significant source of revenue for most school districts in Colorado. Roughly two-thirds of Colorado's 178 school districts collected override revenues of varying amounts in 2015-16. Combined, these revenues totaled approximately $860 million—nearly $30 million more than the entirety of the negative factor.[16]

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Capital Construction Assistance Programs

A number of programs provide money to schools and districts to assist with capital needs, or needs related to facilities. The largest of these programs are summarized below.

Building Excellent Schools Today (BEST) Grant Program

Primarily administered by the Colorado Department of Education (CDE) Division of Public School Construction Assistance, the BEST program provides capital-related assistance to traditional public schools, public charter schools, boards of cooperative educational services, and the Colorado School for the Deaf and Blind. These grants can be used to address a variety of capital needs, including building repairs, renovations, and mechanical replacements.[17]

Public charter schools in Colorado are eligible to receive money from the State Education Fund to assist with their capital needs.

BEST grants are awarded through a competitive process. Applications are annually reviewed by CDE staff and the nine-member Capital Construction Assistance Board. Grants awarded must be matched by the receiving school or district at a percentage calculated under a number of criteria found in statute.[18] Both charter schools and traditional public schools are eligible to receive the grants, though charter schools previously had to have been chartered for at least five years before becoming eligible for the funds.[19] A legislative change in 2016 reduced that requirement to three years and applied it to traditional public schools as well.[20]

BEST is funded with revenue from the State Land Trust Fund, Colorado lottery spillover funds, marijuana excise taxes, and revenue generated by interest from the deposit or investment of state funds. The overwhelming majority (more than 85 percent) of the program's revenue comes from the State Land Trust Fund, which generates revenue through fees for wildlife-related activities—hunting, fishing, etc.—in specific state-owned areas.[21]

Since its inception in 2008-09, the BEST program has distributed more than $800 million in funds to districts and schools throughout the state. More than $350 million in matching funds has also been used.[22]

Charter School Capital Construction Funding

Public charter schools in Colorado are eligible to receive money from the State Education Fund to assist with their capital needs. Both district-authorized and Charter School Institute charter schools are eligible to receive these funds. In 2015-16, $22 million was allocated for charter school capital construction needs. Two million dollars of this total amount was drawn from marijuana excise tax revenues.[23]

Though not insignificant, charter school capital construction funding is somewhat diluted by the fact that it is distributed on a per-pupil basis to qualified charter schools not located in district facilities. Half the per-pupil share is distributed to qualified charter schools located in district facilities that have capital construction needs. The $22 million allocated for charter school capital construction in 2015-16 resulted in a per-pupil distribution of $258.[24] However, as described in the following section, charter schools face an average funding inequity of $2,000 per student relative to traditional public schools and spend, on average, $660 per pupil on facilities-related costs.

Other Funding Situations: Public Charter and Multi-District Online Schools

Although the school finance formula is the most common way of discussing and thinking about K-12 education funding, a number of unique funding scenarios exist for certain types of public schools. Two of the most common scenarios are discussed below.

Public Charter Schools

Charter schools are public schools that operate with a higher degree of autonomy than traditional public schools. Colorado passed its charter school law in 1993 after a long process involving a wide variety of actors from across the political spectrum.[25] The charter sector has grown exponentially since then. Charter schools served 108,000 students in 226 schools statewide in 2015-16, or roughly 12 percent of Colorado's total public school enrollment.[26]

Though charter school students are public school students under Colorado law, these schools face unique funding challenges. Charter schools receive the same amount of state per-pupil revenue as traditional public schools under the school finance formula. However, 5 to 15 percent of that revenue may be charged back by a school district for administrative costs depending on district size.[27] Charter schools may also receive money for capital needs through Colorado's Charter School Capital Construction Fund and the BEST program.

The primary source of charter funding inequity stems from their frequent exclusion from district mill levy overrides (MLOs) and bond issues. Colorado law does not require that school districts share revenue from mill levy overrides. Charter schools in a given district often do not have access to a proportionate share of the district's mill levy override revenue. Thus, despite the fact that charter schools receive the same amount of per-pupil revenue as public schools (minus relevant chargebacks), they often do not actually operate with the same amount of money per pupil as traditional public schools. A 2014 study found that Colorado charter school students are, in the aggregate, inequitably funded by more than $2,000 per student.[28]

The problem is exacerbated by the fact that although charters must be included in conversations about bond issues, they are often not included in district bond requests. Thus, despite assistance from the Charter School Capital Construction Fund, charter schools find themselves in a uniquely challenging position because they must pay for their own facilities out of their allotted per-pupil revenue—per-pupil revenue that may already be lower due to a lack of access to MLO money. Traditional public schools do not face this challenge, as their school facilities are typically funded at the district level using general fund money, certificates of participation, or voter-approved bond issues. On average, Colorado charter schools spend $660 per pupil on facilities-related costs.[29]

A 2014 study found that Colorado charter school students are, in the aggregate, inequitably funded by more than $2,000 per student.

Despite frequent arguments to the contrary, recent research on Colorado and other states clearly shows that most charters do not and cannot make up for lower funding through the solicitation or use of private philanthropic money.[30]

Although inequity in charter funding persists, some districts—Denver Public Schools, Jefferson County Public Schools,

and Douglas County School District, for instance—offer full funding equity for their charter schools under local MLOs. Legislation was introduced during Colorado's 2016 legislative session that would have required all school districts to equitably share mill levy override revenue with charter schools, though that legislation was defeated.[31]

Multi-District Online Schools

Public charter schools are not the only public schools in Colorado that face unique funding challenges. Multi-district online schools, which are online schools that enroll more than 10 online students from districts outside the schools' home districts, occupy a unique space in the funding conversation. Approximately 15,300 students are enrolled in multi-district online schools in Colorado.[32] Single-district online schools, which are schools in which 10 or fewer students are enrolled from districts outside the schools' home districts, are funded at their home districts' calculated per-pupil amounts under the school finance formula. In contrast, multi-district online schools are funded at a set rate considerably lower than statewide average per-pupil revenue. In 2016-17, this set amount is $6,794.83.[33] A variety of groups at both the state and national levels have worked to change Colorado's set-rate system, as well as similar systems in other states. Suggested reforms have included performance-based funding, utilizing multiple student count dates, and adopting a weighted student funding system, or "backpack funding," that would allow per-pupil revenue to follow students rather than be allocated directly to schools and districts.[34]

In 2013-14, statewide average per-pupil revenue under the School Finance Act was $6,652 after the application of the negative factor. However, total per-pupil revenue after incorporating all other revenue sources was $11,406.

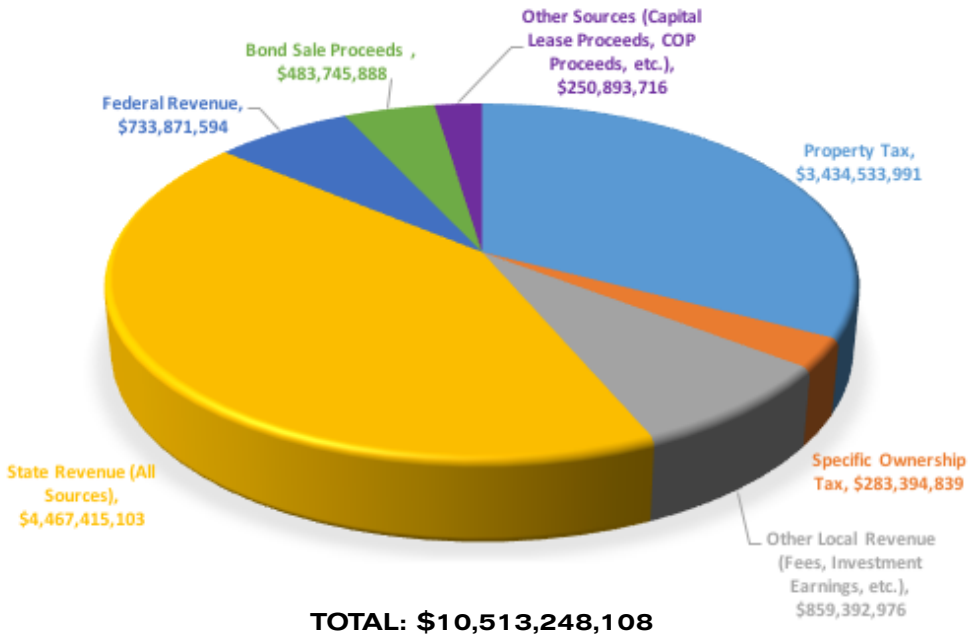
The Full Picture: Overall Education Funding Levels in Colorado

Although figures provided under the School Finance Act are the most commonly referenced numbers related to school funding, they provide an incomplete picture of the total revenue Colorado's K-12 public education system receives. In 2014-15, the most recent year for which complete revenue figures are available, Colorado K-12 education received more than $10.5 billion in total revenue, only about $5.9 billion (56 percent) of which came from total program funding under the School Finance Act after accounting for the negative factor.[35] Various other sources of funding outside the school finance formula flow into K-12 education in Colorado, including revenues from the federal government, bonded debt, proceeds from lease payments and certificates of participation, and other sources.

Though rarely mentioned in discussions or debates about education funding in Colorado, this additional revenue represents a significant increase in overall per-pupil funding. In 2014-15, statewide average per-pupil revenue under the School Finance Act was $7,026 after the application of the negative factor. However, total per-pupil revenue after incorporating all other revenue sources the same year was $12,448.[36]

Figure 3 - Total K-12 Education Revenue in Colorado, 2014-15

Source: Colorado Department of Education



TOTAL: $10,513,248,108

Trends and History: Colorado K-12 Funding Over Time

The debate over "adequate funding" far predates the contemporary discussion of the negative factor. For instance, a group of plaintiffs attacked the state's education funding system in 2005 as being unconstitutional under the Colorado Constitution's requirement that the Colorado General Assembly establish and maintain "a thorough and uniform system of free public schools throughout the state, wherein all residents of the state, between the ages of six and twenty-one years, may be educated gratuitously."[37]

As part of the legal proceedings, a study on "adequate" levels of school funding was commissioned. Conducted in part by the executive director of a well-known interest group advocating for increased school funding, the study based its analysis upon the "professional judgment" of a number of educators and the results of a model that drew data from successful school districts. The study found that between $1.94 billion and $4.15 billion was needed to bring K-12 funding to "adequate" levels in Colorado if mill levy override revenues were excluded from the calculations.[38] After a tortured slog through the courts that lasted until 2013, the Colorado Supreme Court ruled that the school funding system, while possibly not ideal from a policy perspective, was constitutional.[39]

Now as then, interest groups and scholars advocating for increased public K-12 funding use a variety of statistics and graphs to support their arguments for "adequate" funding. While these graphs are seldom outright fabrications, many paint an incomplete picture of overall funding trends in Colorado. For instance, a number of interest groups and media outlets have employed graphs depicting Colorado's per-pupil expenditures declining rapidly away from the national average, giving the impression that Colorado's funding levels have plunged dramatically in recent years.[40]

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In truth, Colorado's inflation-adjusted per-pupil education spending levels have not exceeded average national per-pupil expenditures since 1979-80.[41] While Colorado's level of funding did decline in the years following the Great Recession, the drop was neither as precipitous nor as consistent as depicted in graphs using the national average as a baseline.

More importantly, the most common interpretation of the depicted change—that Colorado is rapidly decreasing its education funding levels—is contradicted by the very idea of an average. Any baseline representing national average funding will necessarily be affected by shifts in other states' funding levels, which Colorado cannot control. Thus, these graphs do not necessarily depict true negative funding changes within Colorado. Rather, they reflect Colorado's position relative to an ever-shifting baseline (misleadingly depicted as a constant) driven by widely varied education systems across the nation.

While Colorado's level of funding did decline in the years following the Great Recession, the drop was neither as precipitous nor as consistent as depicted in graphs using the national average as a baseline.

It is also critical to note that such graphs seek to compare Colorado to other states on the basis of inputs rather than outputs, a questionable perspective if one concedes that society's primary interest is in what education produces rather than what it consumes. As discussed in a later section, Colorado's educational outputs exceed those of many other states, including a number with higher funding levels.

Even with the creation of the negative factor, Colorado will appropriate more in nominal total program funding in 2016-17 than ever before.[42] However, it becomes clear after adjusting for inflation that the state did experience a significant reduction in total program funding in the years immediately following the Great Recession. After reaching peak levels in 2009-10, total program appropriations decreased rapidly until 2012-13. Appropriations climbed steadily in subsequent years. In 2016-17, total program appropriations will exceed inflation-adjusted appropriations in every pre-recession year other than 2009-10, when appropriations peaked.[43]

Inflation-adjusted statewide average per-pupil revenue also experienced declines in the years following the Great Recession. However, this trend has largely reversed itself. Despite a noticeable dip between

Figure 4 – Inflation-Adjusted Total Program Appropriations Fiscal Year 2005-06 to Fiscal Year 2016-17 (Constant 2016 Dollars)

Source: Colorado General Assembly Joint Budget Committee

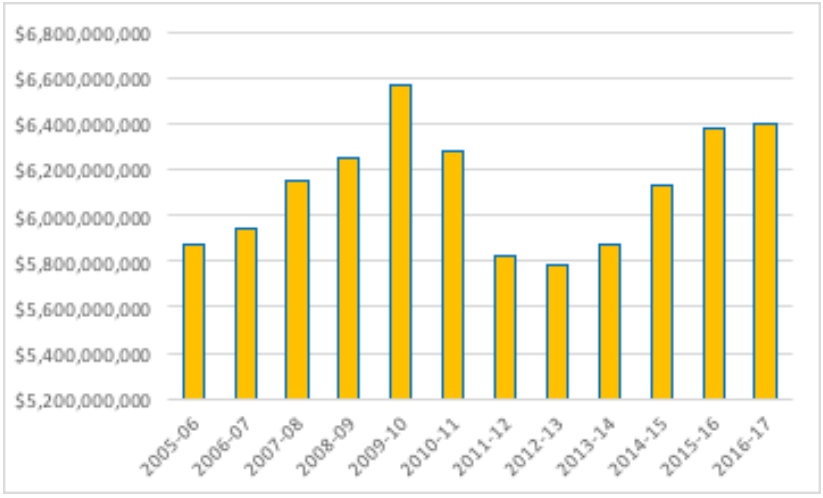
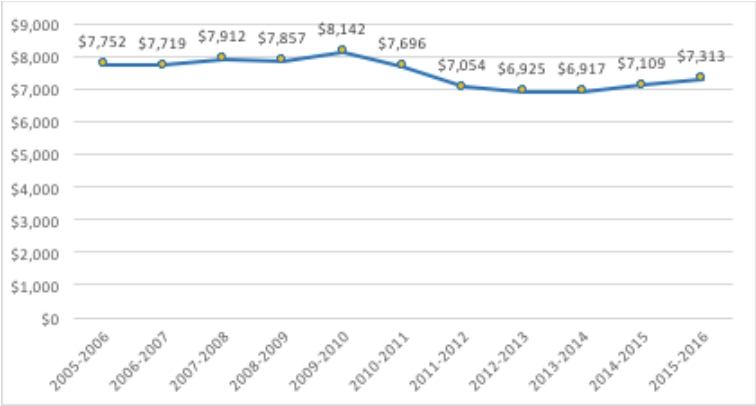


Figure 5 – Inflation-Adjusted Statewide Average Per-Pupil Revenue Fiscal Year 2005-06 to Fiscal Year 2015-16 (School Finance Act Only, Constant 2015 Dollars)

Source: Colorado Department of Education



2009-10 and 2011-2012, the years in which Colorado experienced some of the largest impacts of the Great Recession, inflation-adjusted per-pupil revenue stabilized between 2011-12 and 2013-14, then began to climb steadily in the years following 2013-14.[44] The amount increased again in 2016-17, to $7,425, though the final figure for 2016-17 will not be available for some time.[45]

As mentioned previously, total program funding and its associated state and local shares offer only a partial view of education funding in Colorado. After including all sources of revenue and adjusting for inflation, it is true that Colorado experienced a downward trend in total revenue per pupil in the years following the Great Recession. Colorado Department of Education data show that after adjusting for inflation, total revenue per pupil in Colorado decreased from $13,629 in 2009-10, the year prior to the implementation of the negative factor, to $12,449 in 2014-15. However, the general downward trend in overall education revenue predates the implementation of the negative factor.[46]

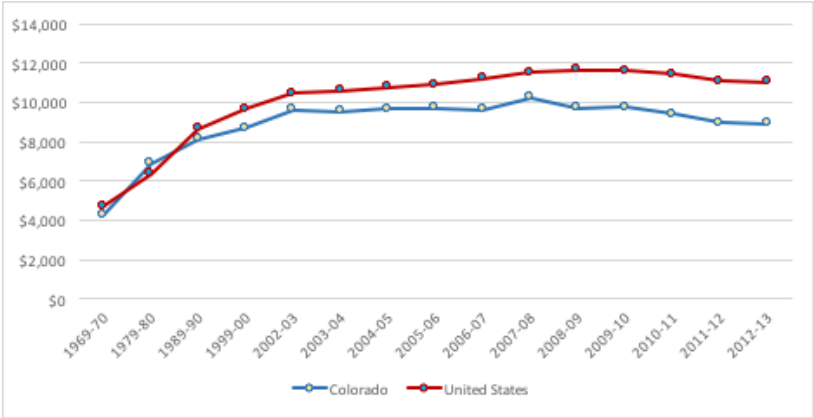
Even all this information offers an incomplete picture of Colorado's education funding situation over time. Considered in the context of the last four decades, the observable post-recession decreases in the state's education funding levels constitute exceptions to a longstanding pattern of spending increases.

Colorado K-12 education spending, like education spending in the rest of the nation, increased rapidly during the second half of the twentieth century and the early part of the twenty-first century. In both the United States overall and Colorado specifically, inflation-adjusted "current expenditures" per pupil, or expenditures that exclude capital construction costs and debt financing, more than doubled between 1970 and 2010, according to the National Center for Education Statistics (NCES). Though current expenditures per pupil in Colorado began to decrease in 2007-08, they remained at more than twice their 1970 levels in 2012-13, the most recent year for which NCES has complete data.[47]

In both the United States overall and Colorado specifically, inflation-adjusted "current expenditures" per pupil, or expenditures that exclude capital construction costs and debt financing, more than doubled between 1970 and 2010, according to the National Center for Education Statistics (NCES).

Figure 6 – Inflation-Adjusted Per-Pupil Expenditures in Colorado and the United States, 1969-70 to 2012-13 (Constant 2014-15 Dollars)

Source: National Center for Education Statistics



Although Colorado's total program funding and per-pupil funding have stabilized and reversed the trend of reduction, the state indeed experienced a reduction in funding in the years following the Great Recession. However, this decline is a relatively new development after decades of dramatically increased education spending and has its roots in deeper-seated budgetary tensions than are typically acknowledged in conversations about school finance.

To understand the negative factor and Colorado school finance overall, one must consider education funding in the context of the state's overall budget.

Over the past decade, the largest slice of Colorado's overall budget has been taken up by appropriations for human services and health care.

Competing Priorities: K-12 Funding in the Context of the Colorado Budget

Colorado's overall budget is best represented as a pie. This pie includes funding from the state's General Fund, cash funds, federal funds, and revenue from other sources. Each broad set of programs represents one slice of the pie. The sizes of these slices vary greatly, but the pie's overall size is finite in any given year. A relative increase in the size of one slice will necessarily result in a relative decrease in one or more of the other slices. Thus, although appropriations have increased substantially across all sectors of Colorado government, some sectors have experienced major changes in the percent of appropriations allocated to them on a year-by-year basis.

Over the past decade, the largest slice of Colorado's overall budget has been taken up by appropriations for human services and health care. In 2016-17, these departments and services will consume 40.6 percent of Colorado's $27.15 billion dollars in total operating appropriations, or about $11 billion. The bulk of these appropriations—roughly $9.1 billion—are attributable to the Department of Health Care Policy and Financing.[48] The largest cost drivers in that department are medical

services premiums, which fund health care services for individuals who qualify for Medicaid. These premiums and associated expenses will account for a projected $6.8 billion in expenditures in 2016-17.[49] The second largest slice of Colorado's budget pie is comprised of appropriations for K-12 education, which will consume 20.1 percent of the state's appropriations in 2016-17.[50]

The portion of Colorado's total operating appropriations dedicated to human services and health care has risen faster than any other area of the budget, increasing from 32.3 percent in 2006-07 to its current 40.6 percent. The percentages of total operating appropriations dedicated to "general government"—a category that includes the Governor's Office, Legislative Department, and Department of Personnel—and higher education have also grown. Over the same time period, K-12 education's slice of the pie has shrunk from 23.6 percent to its current 20.1 percent.[51]

Colorado's total operating appropriations include revenue from the federal government and other sources that can make direct comparisons over time difficult. Yet a similar pattern is observed—and even amplified—when one examines Colorado's nearly $10 billion General Fund operating appropriations, which are solely comprised of state revenue. Within the General Fund, human services and health care account for 34.9 percent of the overall pie, while K-12 education accounts for 37.7 percent.[52]

Since 2006-07, the portion of the General Fund dedicated to human services and health care has grown from 29.3 percent to its current 34.9 percent, with the most noticeable increases occurring in the years following fiscal year 2010-11. Smaller percentage increases have occurred in general government, other government, and corrections and judicial spending. Meanwhile, the portion of General Fund appropriations dedicated to K-12 education spending has experienced the largest percentage decrease, falling from 42.3 percent in 2006-07 to 37.7 percent in 2016-17.[53]

The competitive relationship between health and human services funding and K-12 education funding is best illustrated graphically. Note that the percentages of the General Fund used up by most services and departments has remained relatively constant since 2010-11, yet education appropriations and health and human

Since 2006-07, the portion of the General Fund dedicated to human services and health care has grown from 29.3 percent to its current 34.9 percent, with the most noticeable increases occurring in the years following fiscal year 2010-11.

Figure 7 – General Fund Operating Appropriations by Program Type

Source: Captured from Appropriations Report: Fiscal Year 2016-17, Colorado General Assembly Joint Budget Committee, July 2016, 13

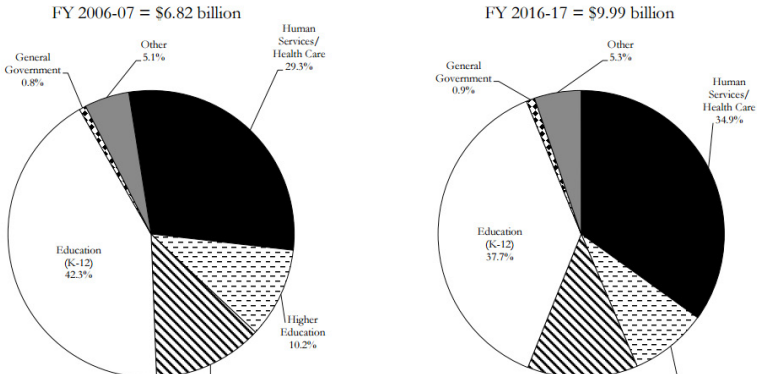
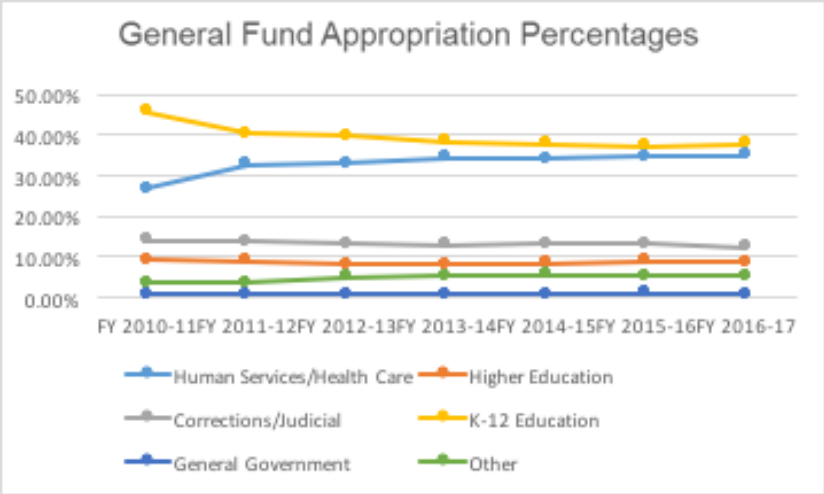


Figure 8 – General Fund Appropriation Percentages Fiscal Year 2010-11 to Fiscal Year 2016-17

Source: Colorado General Assembly Joint Budget Committee



services appropriations are locked in near-direct competition with one another.

Much of the growth in human services and health care spending in recent years can be attributed to explosive growth in Medicaid enrollment as a result of the eligibility expansion ushered in by the passage of the Patient Protection and Affordable Care Act (PPACA) in 2010.[54] While PPACA initially made state Medicaid expansion mandatory, the United States Supreme Court overturned that requirement with a 2012 ruling, essentially making the expansion voluntary.[55] Nonetheless, 25 states, including Colorado, pressed ahead with Medicaid expansion.[56]

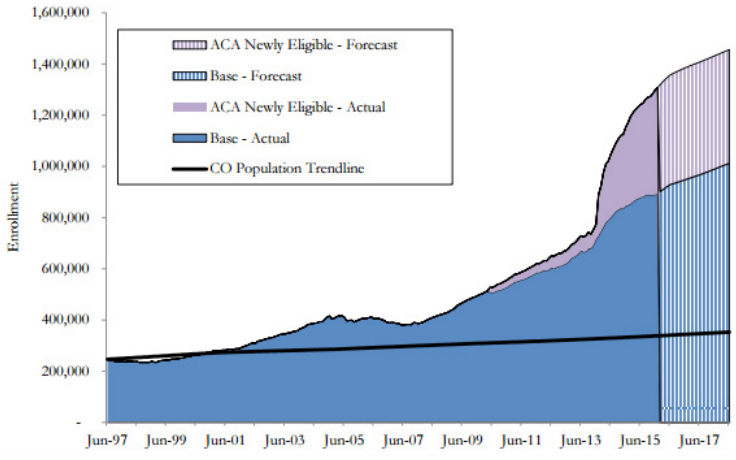
In 2016-17, there will be a projected 1,385,945 Colorado residents enrolled in Medicaid—a 150 percent increase from the 553,407 recipients in 2010-11.

Medicaid enrollment in Colorado has been increasing for some time, particularly during the years of the Great Recession as incomes fell and jobs were lost. However, that growth has been significantly accelerated under PPACA-driven expansion efforts and now significantly outpaces Colorado's overall population trend.[57] In 2016-17, there will be a projected 1,385,945 Colorado residents enrolled in Medicaid—a 150 percent increase from the 553,407 recipients in 2010-11.[58] The state's estimated population as of July 2015 is 5,456,574.[59] Taken together, these figures indicate that approximately one in four Colorado residents is now enrolled in Medicaid.

Some argue that services like Medicaid provide important care to Colorado's most vulnerable citizens. Others argue that the current rate of expenditure on these services is unsustainable. A discussion of the merits of Medicaid is beyond the scope of this paper. However, it is clear that increased obligations for government spending in some areas—most notably on services related to Medicaid expansion—are crowding out spending in education. Budgeting is, by its very nature, a process of determining a state's priorities. A dollar spent in one area cannot be spent again in another. In Colorado, the state has adopted a set of priorities that have resulted in a significant limitation on the amount of revenue that can be allocated to K-12 education.

Figure 9 – Colorado Medicaid Enrollment, Fiscal Years 1997-2017 (Forecast)

Source: Captured from Appropriations Report: Fiscal Years 2016-17, Colorado General Assembly Joint Budget Committee, July 2016, 51



Making the Grade: Colorado's Funding Levels Relative to Other States

For years, advocates of increased K-12 education funding have used state rankings to paint Colorado as failing in its duty to support education. These rankings typically depict Colorado as performing very poorly on education funding compared to other states. Yet how numbers are calculated and what they mean matter in such conversations. Closer examination of the numbers behind the more incendiary claims raise serious questions.

In the mid-2000s, advocates of increased funding heavily used the assertion that Colorado was "49th in education funding." This figure gave target audiences the impression that Colorado ranked 49th in overall education funding in the United States. However, the figure actually portrayed Colorado's ranking on education funding "per $1,000 of personal income." Thus, the most expedient way to improve Colorado's rating on this measure would have been to evict the state's highest earners. According to the United States Census Bureau, Colorado's actual rank for total expenditures per pupil during the relevant time period was 26th.[60]

Despite being soundly debunked, claims about Colorado ranking at the very bottom of the education-funding list have persisted. The claim resurfaced in 2013, when petition gatherers for a group working to support Amendment 66 wore shirts bearing the trope.[61] A slight variation of the claim, this time asserting that Colorado ranked 47th rather than 49th, was published in 2014, and was once again shown to be misleading.[62] With several large funding-related initiatives slated for the November 2016 ballot, it is reasonable to assume that this questionable statistic will arise once again.

Using data that show one thing (education funding per $1,000 of personal income) to make an entirely different point (per-pupil education funding overall) is disingenuous. While legitimate conversations about Colorado's rankings and what they

In the mid-2000s, advocates of increased funding heavily used the assertion that Colorado was "49th in education funding." This figure gave target audiences the impression that Colorado ranked 49th in overall education funding in the United States.

may say about education funding are valid in some cases, a prerequisite to these conversations is having accurate information. It is helpful, then, to examine Colorado's current rankings from each of the most frequently cited sources.

National Center for Education Statistics – 39th

With $10,092 spent per pupil, Colorado ranked 39th among states for total expenditures per pupil in 2012-13 according to the National Center for Education Statistics (NCES).[63] NCES's total expenditures figure offers the most complete picture of per-pupil spending in the United States. The figure includes a variety of services and operations that fall under the umbrella of public education spending, such as instruction, student support, operations and maintenance, transportation, and food services. Importantly, this measure also includes spending on capital construction projects and debt financing.

At $8,893 spent per pupil, Colorado also ranks 39th under NCES's inflation-adjusted current expenditures per pupil measure, which excludes capital construction and debt financing. Colorado's rank on this measure has been largely constant in recent years, even after the Great Recession. Although the state's rank fell somewhat in the years following 2007-08, it has hovered within one position of 39th place since 2008-09. Counterintuitively, Colorado's ranking on this measure has improved slightly since the implementation of the negative factor in 2010-11, rising from 40th in 2010-11 to 39th in 2012-13.[64]

United States Census Bureau – 40th

Colorado ranked 40th for current expenditures per pupil according to the United State Census Bureau's 2013 school finance report, with $8,647 spent per pupil.[65] Colorado also ranked 40th in the Census Bureau's 2012 report.[66] However, the state's ranking on this measure has fallen by ten places since the 2002-03 ranking of 30th.[67]

National Education Association – 22nd

The Colorado Education Association, a state affiliate of the 2.9-million-member National Education Association (NEA), is often at the forefront of conversations about increased education funding in Colorado. Given this advocacy work, it is interesting to note that the nation's largest teachers union itself ranks Colorado higher for current expenditures per pupil than any other organization. The National Education Association ranked Colorado 22nd in the nation on this measure in 2013-14, calculating that the state spent approximately $10,723 per student.[68] If the District of Columbia were excluded from the rankings, Colorado's rank would rise to 21st.

Despite frequent union claims that Colorado's education funding situation is worsening by the year, NEA's most recent ranking represents a slight improvement since 2002-03, when Colorado ranked 25th on the same measure.

Education Week Quality Counts Survey – 37th

Published annually by *Education Week*, this report ranks states on "chance for success," academic achievement, and school finance, with ratings in each of these categories consisting of both an overall grade and a number of more granular rankings. The 2016 report, which relied upon 2013 data, ranked Colorado 37th overall in the area of school finance. As some interest groups have reported, the state was ranked 42nd

in adjusted per-pupil expenditures, which account for regional cost differences. Colorado received rankings at levels ranging from 12th to 39th on a variety of other funding measures within the report.[70]

Interestingly, the *Education Week* report is one of the few sources of school finance rankings that also directly ranks states on academic measures. The report ranked Colorado 18th in overall K-12 achievement, 15th in fourth- and eighth-grade math and reading proficiency rates as measured by the National Assessment of Educational Progress (NAEP), and 22nd in graduation rates.[71] It also ranked Colorado 13th in "chance for success," which evaluates states on a range of criteria like family income, academic achievement, and adult educational attainment.[72] If Colorado's ranking in school finance had any impact on its ranking in the academic areas of the report, that impact is not immediately apparent.

Education Law Center, Rutgers University – 34th

Each year, the Education Law Center (ELC) at Rutgers University publishes a national report card on school funding. While many other comparative analyses of funding levels rely on raw spending data from state to state, the ELC report argues that "such simple analysis disregards the complex differences among states and districts that affect education costs."[73] To correct for these differences, the report utilizes a predictive model that controls for student poverty, regional wage variation, and school district size and density. Using this model, the 2013 ELC report ranked Colorado 34th in funding levels.[74]

Using this study as a foundation, Colorado media reported that Colorado received an "F" for school funding "relative to the health of the state's economy."[75] While nominally true, this description does not adequately address the way that grade was calculated. The grade is based on an "effort index," which grades states according to how much they spend on education relative to per capita gross domestic product (GDP). One of the fastest ways to improve on this measure would be to decrease Colorado's economic productivity—a goal that neither proponents nor opponents of increased funding espouse. The report finds that all but four states experienced decreases in their effort index ratings between 2008 and 2013.[76]

Increased funding is often held out as either a catalyst or a prerequisite for improved academic performance. Yet a large body of research on the subject casts doubt on those assertions, and they are further called into question by evidence in Colorado and other states.

Research and Evidence on the Effects of Education Funding

Increased funding is often held out as either a catalyst or a prerequisite for improved academic performance. Yet a large body of research on the subject casts doubt on those assertions, and they are further called into question by evidence in Colorado and other states.

Academia and School Finance Research

Perhaps the most comprehensive and frequently cited examination of research related to education funding was conducted by Dr. Eric Hanushek, an economist at Stanford University, in

the late 1990s. Hanushek reviewed 163 studies on the effects of expenditures per pupil on academic achievement and found that 66 percent showed no statistically significant relationship between spending and achievement. An additional 7 percent found a statistically negative effect. Only 27 percent of the studies examined showed a statistically significant positive relationship.[77] Hanushek and others have stated that these findings indicate the amount of money spent on education is a poor predictor of academic outcomes.

Hanushek reviewed 163 studies on the effects of expenditures per pupil on academic achievement and found that 66 percent showed no statistically significant relationship between spending and achievement. An additional 7 percent found a statistically negative effect. Only 27 percent of the studies examined showed a statistically significant positive relationship.

Though Hanushek continues to stand by his findings and has often served as an expert witness in finance-related proceedings, his work has been criticized by some academics. One of the most widely cited attacks on Hanushek's work came from three researchers—Rob Greenwald, Larry Hedges, and Richard Laine—who, after expressing concerns about the methodological soundness of many studies examined by Hanushek, designed a set of "quality control measures" to limit the number of studies examined.[78]

These supposed "quality" measures eliminated an astonishing 83 percent of the 163 studies examined by Hanushek, but kept a disproportionately large number of studies showing a statistically significant positive relationship.[79] Not surprisingly, a reanalysis of the small number of remaining studies found a strong and statistically significant relationship between per-pupil expenditures and student outcomes.[80] Hanushek characterized the revised body of studies as "dramatically biased toward retaining both statistically significant positive and insignificant but positive results, just the direction that leads to supporting their general conclusions."[81]

Hanushek's work has also been questioned by contemporary proponents of increased education spending.[82] Perhaps most vocal among Hanushek's current critics is Bruce D. Baker, a professor at the Graduate School of Education at Rutgers University. Baker has referred to Hanushek as "a merchant of doubt," and accused him of undertaking a "deceitful mission" to undermine increased school funding.[83] He has rebutted Hanushek's arguments in publications for the Albert Shanker Institute, the nonprofit research arm of the American Federation of Teachers, and for the Boulder-based National Education Policy Center, which receives funding from both the National Education Association and the American Federation of Teachers.[84]

While most studies have found that increased education funding does not result in academic gains, a handful of contemporary studies find the opposite. One 2015 study, for instance, examines the effects of court-mandated funding "shocks" on student outcomes in later life, finding that increased spending leads to somewhat higher educational attainment and wages, as well as somewhat lower incidences of adult poverty.[85] The study's methodology has been questioned by Hanushek and others.[86] Another contemporary study found that school finance reforms resulting in increased funding for low-income districts gradually increased student performance in those districts, thereby narrowing the achievement gap between high- and low-income school districts. However, the researchers note that their findings do not hold at the student level, adding that closing achievement gaps in a given school district "would require changing the allocation of resources *within* school districts."[87]

Given these disputes, perhaps the fairest characterization of purely empirical research on the impacts of general school funding is "contested." There is some agreement that money spent on effective

methods of improving education may be helpful but little agreement on which methods are beneficial. For instance, some proponents claim that reforms like large-scale class size reduction are wise allocations of additional resources. Yet a significant body of evidence casts doubt on that assertion, and contends that the benefits of such endeavors are outweighed by their steep costs.[88]

Calls from proponents of increased education spending cite a need to raise funding to "adequate" levels, but most attempts at placing a dollar amount on "adequate" have been questionable at best. As one prominent pair of researchers noted, "… money is used so loosely in public education—in ways that few understand and that lack plausible connections to student learning—that no one can say how much money, if used optimally, would be enough."[89]

Education Funding and Academic Achievement in Colorado

Academic research is only one aspect of the school funding argument. Student performance on the National Assessment of Education Progress (NAEP), widely considered to be the gold standard in the field of measuring academic achievement, also raises serious questions about the correlation between spending levels and academic outcomes in Colorado.

Colorado's inflation-adjusted education spending increased by 107 percent between 1969-70 and 2012-13 (from $4,298 to $8,893). Most of these increases occurred before the turn of the century; spending levels largely remained stable between 2002-03 and 2007-08, when they spiked to an all-time high of $10,232. Colorado's inflation-adjusted current spending per pupil fell 13 percent in subsequent years, to $8,893 in 2012-13, the last year for which complete data are available.[90]

During roughly the same time period (2003-2013), the state charted statistically significant increases in fourth-grade mathematics and eighth-grade reading on the main NAEP assessments, which are notably distinct from NAEP's long-term trend assessments and track academic performance on a state-by-state basis. Eight-grade mathematics and fourth-grade reading showed no statistically significant change.[91]

The lack of a coherent connection between funding levels and academic achievement also extends to state rankings. As mentioned in the previous section of this report, Colorado is ranked at levels between 22nd and 40th on the most current measures of education spending. In all cases, this spending fell below the national average. However, the state consistently and significantly exceeds the national average proficiency rates on NAEP assessments. In 2015, Colorado outperformed the national overall in percentage of students at or above proficient in fourth- and eighth-grade mathematics and eighth-grade reading. There was no significant difference between Colorado and the nation overall in fourth-grade reading.[92]

The lack of a coherent connection between funding levels and academic achievement also extends to state rankings.

This pattern also holds true for NAEP scale scores. Although Colorado is statistically tied with many states in regard to NAEP scale scores, only eight states statistically exceeded Colorado's performance in fourth-grade mathematics in 2015, and only five in eighth grade. In fourth-grade reading, just six states scored statistically significantly better than Colorado. In eighth-grade reading, that number fell to four.[93]

Some critics argue that changes in NAEP scale scores are inadequate proxies for

judging educational progress in Colorado. Instead, they rely upon data related to "achievement gaps," or the difference in scale scores between certain subgroups of students. For instance, minority students have historically performed at significantly lower levels than Caucasian students. Under this analytic approach, the progress of an education system is judged by its ability to narrow these gaps by raising the performance of historically underserved subgroups.

Colorado does indeed perform somewhat worse under such analysis. Despite national improvements, the state's achievement gaps between white students and their African American or Hispanic peers have not changed significantly in either reading or math for nearly two decades.[94] In some cases, the gaps have widened since the 1990s—a phenomenon largely due to the fact that although minority students' performance has improved in most tested NAEP subjects, the performance of white students has risen more quickly.

...Colorado's inflation-adjusted per-pupil expenditures decreased between 2003-04 and 2012-13. Yet academic performance among white, African American, and Hispanic students improved or remained constant during the same time period.

This relative stagnation masks significant upward trends among minority subgroups. Since 1992, African American students have seen statistically significant performance increases of 14 points in fourth-grade reading, 22 points in fourth-grade mathematics, and 18 points in eighth-grade mathematics. There has been no significant change in eighth-grade reading scores among African American students since at least 1998. Over roughly the same time period, Hispanic students saw increases of nine points in eighth-grade reading, 23 points in fourth-grade math, and 22 points in eighth-grade mathematics. No significant changes were observed in fourth-grade reading.[95] Many analysts use the "rule of thumb" that a gain of 10 points on NAEP equates to roughly one additional grade level of learning.[96] Viewed in this light, minority students have experienced very large gains since the 1990s despite a relative lack of progress in closing achievement gaps.[97]

Despite arguments to the contrary, the performance of subgroups offers further evidence that funding levels are not clearly linked to academic outcomes. As mentioned previously, Colorado's inflation-adjusted per-pupil expenditures decreased between 2003-04 and 2012-13. Yet academic performance among white, African American, and Hispanic students improved or remained constant during the same time period. None of these subgroups saw a statistically significant decrease in performance.[98]

NAEP results are influenced by myriad variables. As such, no causal link can be easily determined between any policy change—including increased funding—and a simultaneous change, or lack thereof, in NAEP scores. However, overall trends in Colorado cast doubt on a direct association between funding levels and academic achievement as measured by NAEP. Some critics argue that education initiatives or reform efforts may have contributed to NAEP gains, and that these efforts clearly cost money. This is a fair point, and it would clearly be inaccurate to assert that public education does not require some level of funding to operate and engage in improvement. However, the fact remains that fluctuations in the amount of money available to schools does not appear to be a good predictor of academic achievement levels.

Trial and Error: Case Studies in Education Funding Effects

A variety of evidence from more specific circumstances also calls into question the notion that increased funding alone can improve education. The following are case studies in three states where large revenue increases from three separate sources—the state, the federal government, and private philanthropists—have been leveraged in the hopes of improving student achievement levels.

Kansas City, Missouri

In 1985, a federal judge intervened in the struggling Kansas City, Missouri, School District (KCMSD). The district's facilities were crumbling, its schools were highly segregated by race, and its academic achievement levels were abysmal. The judge's decision followed a suit brought by members of the KCMSD school board, school district personnel, and a group of schoolchildren alleging that the actions of the state, surrounding district, and the federal government had led to extreme racial segregation.[99]

The judge's response was to force a nearly limitless stream of revenue into the school district. The ordered amount was more than $2 billion over 12 years, with about three-quarters of that money coming from the state of Missouri.[100] That 1985 judgment amounts to $4.4 billion in inflation-adjusted 2015 dollars, or more than the entire state share of total program in FY 2015-16 divided among all 178 Colorado school districts.[101] Indeed, KCMSD spent more following the judgment than any of the other 280 largest school districts in the nation.[102]

The unprecedented influx of money was used to purchase 15 new schools, increase teacher salaries, decrease student-teacher ratios to the lowest levels in any other large district in America, and add amenities like a 25-acre wildlife sanctuary, robotics lab, and a large swimming pool. Even after these additions, the district purportedly had so much money that school leaders ordered replacements for equipment in new condition, spent $700 on light fixtures, and purchased hundreds of new computers that sat in storage for so long that they became obsolete before students even used them. The hope was that these new, state-of-the-art facilities and associated reform efforts would attract white, middle-class families to the school district and lead to improved educational outcomes. They did not.[103]

In 1997, the frustrated judge directed that payments to the district cease after 1999. Little had been accomplished by the experiment. The school district's achievement levels did not increase, the black-white achievement gap remained unchanged, and levels of racial integration *decreased*.[104]

Newark, New Jersey

A more recent example of the effects of a major cash infusion was observed in Newark, New Jersey, beginning in 2010. After struggling for years, control of Newark schools had been seized by the state of New Jersey, though that seizure produced little in the way of results. Fifteen years later, fewer than four in 10 Newark students reached grade-level proficiency in math or reading, half of the district's students did not go on to finish high school, and 90 percent of those who did graduate and attend community college required remediation.[105]

The judge's response was to force a nearly limitless stream of revenue into the school district. The ordered amount was more than $2 billion over 12 years, with about three-quarters of that money coming from the state of Missouri.

In 2010, entrepreneur and Facebook CEO Mark Zuckerberg pledged $100 million in grant money to the Newark public school system. Negotiated with New Jersey Governor Chris Christie and Newark Mayor Cory Booker, Zuckerberg's donation was matched by other philanthropists, bringing the total amount to roughly $200 million. This money flowed directly to Newark schools in hopes of bringing about better performance, improved outcomes, and needed reform in the struggling district. Overall, it did not.[106]

The $200 million cash infusion led to some successes, particularly after roughly $60 million was infused into Newark's charter schools. A 2012 study by Stanford University's Center for Research on Education Outcomes found that charter students in Newark "gain[ed] an additional seven and a half months in reading and nine months in math."[107] Results generated by the donation in traditional public schools, however, were far less promising.

In 2010, entrepreneur and Facebook CEO Mark Zuckerberg pledged $100 million in grant money to the Newark public school system.

Sensing an opportunity to further its interests and those of the adults it serves, the Newark Teachers Union quickly made the new resources a condition of contract negotiations. This opportunism led to a union contract that cost $50 million—a figure that included $31 million in back pay for raises teachers hadn't received for two years. Joe del Grosso, head of the Newark Teachers Union, infamously said of the contract negotiations, "We had an opportunity to get Zuckerberg's money … Otherwise, it would go to the charter schools. I decided I shouldn't feed and clothe the enemy."[108]

Much of the remaining money was used to feed a bloated administrative bureaucracy, fund services at levels many times what they would cost in the private sector, and embark upon non-essential projects. The district spent more than $25,000 per pupil in 2013, more than half of which never made it to students.[109] As two researchers editorialized in a 2015 *Wall Street Journal* column, "The bulk of the funds supported consultants and the salaries and pensions of teachers and administrators, so the donation only reinforced the bureaucratic and political ills that have long plagued public education in the Garden State."[110]

Unsurprisingly, this inefficient use of resources did not result in academic improvement. In 2014, Newark's test scores showed that proficiency rates had *decreased* in both math and reading at every grade level in which assessments were administered. Between 2 and 5 percent of the district's traditional public school students were prepared for college, as indicated by ACT scores. The lack of results led to the resignation of Newark's superintendent in 2015.[111]

Denver, Colorado

A similar disconnect between resources and outcomes was documented in a 2016 *Denver Post* analysis of achievement data and money associated with the federal School Improvement Grant (SIG) program. This roughly $7 billion program was aimed at improving the lowest-performing 5 percent of schools in the nation. Since 2010, 39 low-performing schools in Colorado have received a share of $50 million in SIG funds. Of these 39 schools, only half managed to move up one level to "Priority Improvement," the second-lowest accreditation rating on Colorado's five-level accreditation scale. The other half experienced negative or neutral changes.[112]

For example, Aurora Central High School received $1.7 million in SIG funds.[113] Yet only 7 percent of the school's tenth-grade students reached proficient or advanced scores in mathematics in 2014—a decrease from 12 percent in 2013. Reading achievement among the school's tenth-

graders barely improved, from 35 percent in 2013 to 38 percent in 2014.[114] The school's academic growth scores, which are a less demographically biased measure of school performance than pure achievement scores, fell well short of adequate levels in every measured subject in 2014.[115] In 2014-15, the school's on-time graduation rate was 44 percent.[116]

Likewise, six struggling schools in Pueblo City 60 shared $9.7 million in SIG funds. Much of this revenue was spent on consulting services that bore little fruit.[117] Just 7 percent of tenth-graders at Pueblo 60's Central High School were proficient or advanced in mathematics in 2014, up slightly from 5 percent in 2013. The school's percentage of proficient and advanced students in reading remained unchanged at 51 percent.[118] The only subject in which the school made adequate growth was reading.[119] These results were echoed by Roncalli Middle School, where results worsened despite the recent conversion to a Science, Technology, Engineering, and Math school.[120]

Conclusion

Debates over school finance in Colorado often fail to provide a complete picture of Colorado's overall funding levels and how those funding levels relate to the state's academic performance. Proponents of increased funding do not acknowledge the fact that Colorado's current education funding situation stems not from malice, deceit, or deliberate deprivation, but from competing policy and budget priorities that have had the effect of crowding out funding for K-12 education. Any change in this situation will necessitate difficult choices between budget priorities on the part of Colorado's elected officials.

Colorado's downward trends in post-recession education funding have largely stabilized and reversed themselves in recent years. Yet Colorado policymakers should be aware that although money undoubtedly matters to some extent in education, simply increasing the amount of money available to public schools does not, by itself, guarantee results.

A productive course of action in the realm of school finance will require harder work than simply placing a tax increase on a ballot. It will involve realigning Colorado's budget priorities, rethinking how money is distributed and spent in Colorado's public education system, and considering ways to incentivize more effective spending of existing funds within schools and districts. These reforms may yet prove to be effective levers for meaningful educational improvement.

As always, the first step is having the right conversation.

A productive course of action in the realm of school finance will require harder work than simply placing a tax increase on a ballot. It will involve realigning Colorado's budget priorities, rethinking how money is distributed and spent in Colorado's public education system, and considering ways to incentivize more effective spending of existing funds within schools and districts.

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