A Tale of Two Rankings: Equity v. Equity
Robert M. Costrell

Every fall, Education Trust, a national organization devoted to closing the achievement gap, ranks states on the equity of their K-12 finance systems. These rankings are strikingly at odds with those issued each January by Education Week, the K-12 industry’s “newspaper of record,” in its Quality Counts report.

EdWeek’s equity rankings receive a great deal of attention, as one of several grades in its “State Report Cards.” Prominently funded by the Pew Charitable Trusts, EdWeek collaborates with the National Governors’ Association in releasing the report cards. Over the years, at least a dozen state departments of education have responded with press releases, claiming credit for high grades and disputing low ones. Many other education groups also use these rankings to advance their agendas. Litigants on both sides of school finance cases submit their preferred rankings as evidence. In New Jersey’s widely followed case, Abbott v. Burke, a 1998 court report and decision concluded with numerous citations to Quality Counts material, including New Jersey’s State Report Card with a grade of D+ in equity, ranking 47th in the nation.

EdTrust, a smaller and more recent entrant to the rankings industry receives less general coverage, but its rankings are well known to those specializing in equity. Last fall, for example, the plaintiffs’ counsel in Abbott issued a press release hailing EdTrust’s finding that New Jersey now ranks near first in equity, as a result of the massive infusion of state funding to poor districts, ordered by the court.

Surprisingly, the two equity rankings give diametrically opposed results for a number of states. EdTrust ranks Massachusetts at the very top and New York at the very bottom, while EdWeek flips these rankings virtually upside down. It is particularly puzzling that EdWeek’s current report card still ranks New Jersey quite low, based on measures that are largely impervious to the funding shift that has occurred in that state.

This article provides a guide to those who are perplexed by these rankings … or who should be. As we shall see, the problem is that equity measures which implicitly assume rich districts spend more than poor ones have become obsolete for states like New Jersey that now spend more on the poor than the rich. Finally, although it has been claimed that equity measures are irrelevant in an era of “adequacy,” the distinction is often less clear-cut in practice; we still need to get the equity measures right.

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1 http://lawlibrary.rutgers.edu/courts/supreme/a-155-97.opn.html

2 http://www.edlawcenter.org/ELCPublic/elcnews_pr_041008_NewJerseyLeadsNation.htm
**Education Trust Measures Equity by the Funding Gap Between Rich and Poor**

Education Trust began issuing its equity rankings in 2001, in its report on *The Funding Gap*. This annual report’s main equity measure is the funding gap between poor and rich districts. (There are a few variants on this measure, as well as measures of the funding gap between minority and non-minority districts.) Using Census data, EdTrust sorts districts within each state by the Federal poverty rate among school-age children. The poorest districts – those with the highest poverty rate and 25% of the state’s enrollment – are identified, along with the richest districts, analogously defined.

Education revenues from state and local (but not Federal) sources are also drawn from the Census. The funding gap is the difference between per pupil revenues in poor and rich districts. Depicted in Figure 1, the gap is positive in states where funding of poor districts exceeds that of rich ones, and it is negative where the reverse is true. A positive gap is considered equitable and a negative gap is not.

**Education Week Measures Equity by the Spread Between High- and Low-Spenders**

*Education Week* has been ranking states on equity since it first issued *Quality Counts* in 1997. Its equity rankings depend on measures of the spread between higher- and lower-spending districts. These measures can be very different from those used by EdTrust, since the high-spending districts need not be the rich ones.

Specifically, *EdWeek* ranks states on a composite equity index that has three components, of which the most important is the McLoone index. This is the component most highly correlated (0.81) with the composite index, and most critical in explaining the contrast between EdTrust’s and *EdWeek*’s rankings. Created by Eugene McLoone, now retired professor of education finance at the University of Maryland, this index measures how close low-spending districts are to the state median. The index compares total spending in districts at or below the median with the amount that would be required were they to spend at the median. The ideal ratio, by this measure, is 100%, where no district spends below the median. An index of 95% means the additional funds required to bring all districts up to the median would be 5% of the required total.

The two other components of *EdWeek*’s composite index are the coefficient of variation and a “wealth-neutrality” index. The coefficient of variation, like the McLoone, is a measure of the dispersion of spending among districts: it is the standard deviation of per pupil spending, as a percent of the mean. The “wealth-neutrality” index is a measure of the association between a district’s education revenues and its property wealth (a concept

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3 The figures are adjusted for regional cost differences and each special education student is weighted 1.9.

4 EdTrust has a second, closely related measure, which weights low-income students 1.4 in the per pupil calculation, on the assumption that it costs 40% more to educate low-income children. This shifts down the gap figures depicted in Figure 1. It also changes the interpretation somewhat, to a measure of how much extra is spent on poor children *beyond* what is assumed to be educationally necessary. However, the rankings are very similar (correlation of 0.98).

that is closer to EdTrust’s measure). These two measures can affect the overall *EdWeek* rankings in specific cases, but they are distinctly less correlated with the composite than is the McLoone. For the most part, *EdWeek*’s equity rankings follow the McLoone.

**Conflicting Rankings**

There is little consistency between the rankings of EdTrust and *EdWeek*. Since it is the extreme rankings (top or bottom) that gain most public attention, it is quite striking how many states at the extremes of one list flip to the opposite extreme of the other. Of the ten states rated tops in equity by EdTrust, five are ranked in the bottom third by *EdWeek* (MA, NJ, GA, ND, TN); of *EdWeek*’s top ten, four are in EdTrust’ s bottom third (IA, WV, LA, NY).

More specifically, consider the McLoone – the main driver of *EdWeek*’s composite index. Figure 2 plots the rankings on *EdWeek*’s McLoone index against EdTrust’s rankings on the funding gap. Each of the states (except Hawaii, which has only one district) is ranked from 1 (most equitable) to 49. Clearly there is no relationship whatsoever between the two rankings. At the very extremes, Massachusetts and New Jersey switch places with New York. This poses a puzzle: how is it that states ranked at one extreme on the funding gap between poor and rich districts (EdTrust) can be ranked at the opposite extreme on how much it costs to raise all districts to the median (*EdWeek*’s McLoone index)?

**EdWeek rankings penalize states that spend much more on poor districts**

To pose the puzzle is to solve half of it: states that spend considerably more on poor districts than rich ones can be ranked very low on the McLoone because it would cost a lot to raise the spending of rich districts up toward that of poor ones. One doubts this is the intent of an equity index, but that is the effect of dispersion measures that do not distinguish between rich and poor districts.

Consider the two states at the top of EdTrust’s rankings, Massachusetts and New Jersey. Their *positive* funding gaps are depicted with the tallest bars at the right of Figure 1.

Massachusetts’ progressive funding gap is the product of its 1993 school funding reforms. Its formula for minimum spending – the foundation budget – accords low-income children a premium that averages about 42% over that allotted other children.\(^6\) State aid is targeted at bringing districts up to that minimum, so the vast majority goes to poor districts. Rich districts may choose to spend more than their foundation, out of locally generated funds, but on average, they still spend less than poor districts, as EdTrust shows. *EdWeek*’s data set also shows that the poorest districts spend 118% of the state’s median (see Table 1).\(^7\)

\(^6\) According to *Quality Counts 2005*, 23 state formulas have an adjustment for low-income, but most provide no more than a 25 percent premium (pp. 46, 101).

\(^7\) Note that *EdWeek*’s per pupil spending variable weights low-income children as 1.2, so the 118% figure is over and above the built-in premium assumed for such children.
But *EdWeek* does not use such measures in its equity rankings. Instead, it finds inequity due to districts spending below the state median, even though almost all of the poorest districts (such as Boston and the urban plaintiffs in recent litigation) spend above the median. The state’s basement ranking on the McLoone (#45) reflects the cost of raising spending in districts with less than half the poverty of the rest of the state (see bottom half of Table 1). It is on this dubious basis (along with similarly misleading results for *EdWeek’s* other measure of dispersion) that *EdWeek’s* State Report Card concludes, “Massachusetts has one of the lowest grades for resource equity of the 50 states.”

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<thead>
<tr>
<th>Table 1: poverty and spending across districts in MA and NJ</th>
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<tr>
<td>poverty quartile:</td>
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<td>adjusted spending per pupil, as percent of state median</td>
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<td>district spending:</td>
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<tr>
<td>poverty quartile:</td>
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<td>2nd-lowest poverty</td>
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<td>lowest poverty</td>
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Source: *Education Week* data set, constructed from U.S. Census data for 2001-02. *EdWeek’s* spending variable is adjusted for regional cost differences, special education students are weighted at 1.9 and low-income students are weighted at 1.2.

The story is even more striking in New Jersey. As a result of court decisions, New Jersey has devoted large sums of money to spending in poor urban districts – the “Abbott” districts. This surely accounts for its high ranking by EdTrust. *EdWeek’s* dataset similarly shows that the poorest districts spend, on average 122% of the state’s median (Table 1). In fact, an article in this year’s issue of *Quality Counts* highlights the New Jersey case, showing the Abbott districts have reversed the 1996 gap with the state’s 30 highest-spending K-12 districts, and now exceed those districts by 13%.

And yet, *EdWeek* ranks New Jersey near the bottom (#42) on the McLoone index, and #33 overall. As in Massachusetts, the districts spending below median have less than half the poverty of the rest of the state (Table 1); none of the Abbott districts enter into the McLoone calculation because they all spend above the median. Still, *EdWeek* obliviously opines, “New Jersey has room to improve when it comes to the equitable distribution of education dollars.” By contrast, the lead attorney for New Jersey’s plaintiffs, quoted just a few pages earlier in *Quality Counts*, believes the state “ought to be celebrating, tooting our horn.” *EdWeek* seems to have missed an opportunity to reflect upon the measures
that form the basis of its Report Card, since the only way New Jersey could “improve” equity in *EdWeek*’s ranking would be to raise funding for relatively affluent districts.

The problem with measures of dispersion is not a new one. It has long been known that these measures do not distinguish between progressive and regressive disparities in spending. Perhaps in an earlier era, when spending gaps were more consistently regressive, the problem was not overwhelming. Today, however (as Figure 1 shows), funding gaps are progressive in as many states as they are regressive. Indeed, in *EdWeek*’s data set, 40 states spend more in the poorest quartile than in the richest. Also in 40 states, the average poverty rate is higher in districts that spend above the median than below it. Thus, in today’s environment for the vast majority of states, *EdWeek*’s McLoone index measures equity by the cost of raising spending in relatively well-off districts. This seems to be exactly backwards from what most users of *EdWeek*’s rankings would assume.

**The Other Half of the Puzzle**

What about those states at the other end of EdTrust’s spectrum that spend considerably less on poor districts than rich ones? Here, at least, one might think the McLoone index would generate a similar ranking. For example, Pennsylvania’s low ranking on McLoone (#39), is consistent with its EdTrust ranking (#46), as the districts spending below median in that state are in fact relatively poor ones (one of only nine such states).

So why not New York? What explains its dramatic flip from dead last on EdTrust’s rankings to #3 on *EdWeek*’s McLoone (and #7 on *EdWeek*’s composite index)? The answer concerns New York City, which has 37% of the state’s students. By virtue of its size, New York City dominates the EdTrust calculation: the funding gap is essentially the difference between NYC’s revenues and that of the state’s richest districts. However, this gap is not reflected in *EdWeek*’s McLoone, because NYC is actually the state’s median-spending district. In states where the median district is huge, the proportion of the population below the median can be considerably less than 50%; for New York, it is only 18%. That means that 2/3 of New York’s high McLoone index is accounted for by the fact that it costs nothing to raise NYC’s spending to the state median. At the very least, this makes it hard to compare with states that have more granular districts around the median; some might conclude that it renders the McLoone index meaningless for New York. And yet, *EdWeek*’s Report Card states, “New York

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8 *EdWeek*’s 1.2 weight for low-income children would tend to reduce the number of states with positive spending gaps, compared to the unweighted EdTrust measure. However, EdTrust’s measure is based on the Census variable for state and local education revenues, while *EdWeek*’s spending variable includes spending from Federal aid. Since Federal aid is concentrated in low-income districts, *EdWeek*’s spending variable will show a more progressive pattern, resulting in more states with a positive gap.

9 Even so, New York does not rank much better in the spending of poor districts relative to median-spender (#42) than it does in spending relative to the richest quartile.

10 Similarly, Illinois’ median-spending district is Chicago, with 21% of the state’s students, leaving only 32% of students in the below-median districts. This raises the McLoone somewhat. But other components of the *EdWeek* composite still result in a very low ranking for Illinois, comparable to that of EdTrust.
does fairly well in its grade for resource equity…The main reason for the high grade is the state’s McLoone Index.”

**State Share of Funding**

*EdWeek’s* equity rankings used to depend heavily on the state (vs. local) share of school funding. This year, *EdWeek* quite rightly dropped the measure in question, since the state share is not a measure of equity. EdTrust, however, still publishes rankings of the state’s share, as the recommended *means* to greater equity, albeit not an end itself. But a high state share is not a reliable or necessary route to equity, and may not be desirable. A little state funding can go a long way, if it is concentrated on those districts most in need.

Figure 3 plots EdTrust’s measure of the funding gap (from Figure 1) against EdTrust’s data on state share of school funding. There is no statistical relationship between the two. Although EdTrust points to states such as Illinois, with low state share and wide funding gaps, EdTrust’s top-rated states on equity (Massachusetts and New Jersey), also have a low state share of funding – the sign of an aid formula efficiently targeted to achieve equity. States that rely more heavily on state revenues (such as Michigan) do not necessarily target it on poor districts.

The inequities in relying *solely* on local property tax are well known: state revenues are definitely needed to smooth out variations in local tax capacity. On the other hand, the drawbacks from excessive reliance on state revenue are less widely appreciated. Sound principles of public finance suggest that local funding of education gives local officials a greater stake in educational success.\(^\text{11}\) In addition, the main state sources of revenue (income and sales tax) are considerably more volatile than local revenue, so heavy reliance on state revenues can make school funding overly vulnerable to the business cycle. There is likely a happy medium for state share, and the precise optimum surely varies from state to state. But to construct rankings by state share assumes there is no happy medium: a higher share is always better. This is at least debatable.

**Recommendations for the equity rankings industry**

How can the equity rankings industry improve its performance, to prevent confusion from conflicting and misleading rankings? These suggestions emerge from this analysis:

- *EdWeek* should drop measures of dispersion, such as the McLoone and the coefficient of variation. These measures do not distinguish between poor and rich districts, so the unwary reader does not know whether the spending gaps are progressive or regressive.

- In addition to measuring funding gaps by poverty (as in EdTrust), funding gaps might also be constructed by median income and wealth (as in *EdWeek*’s “wealth-neutrality” measure). These are likely to be somewhat correlated,\(^\text{12}\) so a fuller

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12 The correlation between rankings on the wealth-neutrality index and EdTrust’s funding gap is 0.59.
equity picture can be conveyed without risk of sharply conflicting rankings.

- EdTrust should follow Education Week’s example and drop the rankings by state share.

- Spending and revenue measures should be presented both with and without Federal funds. Excluding Federal funds focuses attention on the equity of state and local policies; including Federal funds provides a picture of equity from the viewpoint of students, who do not care where the money comes from.

- Spending comparisons at varying points on the distribution can be informative. Opinions may vary on whether equity is better measured, for example, by comparing poor districts with rich districts or with the median-spending district.

- If weighted pupil counts are used, unweighted measures should also be presented (as EdTrust does, for low-income weights), for transparency of interpretation. Weighted measures are a somewhat confusing attempt to introduce adequacy considerations into an equity measure, and the weights are rather arbitrary.\(^\text{13}\)

**Conclusion: the future of equity measures in an era of adequacy?**

Finally, what is the relevance of equity measures if, as commonly asserted, we have moved from an era of equity to “adequacy?”\(^\text{14}\) The adequacy movement is a legal strategy developed by plaintiff lawyers to set constitutional funding obligations at the level needed to bring student achievement up to specified standards. Thus, it is argued, even if there is perfect equity, funding may still be inadequate. However, there is even more contention over measures of adequacy than of equity. In large part, this is because of the difficulty in linking resources to outcomes in the absence of evidence for a causal link. As a result, the methodologies typically used – such as the “professional judgment” model, based on educators’ opinions, rather than data on actual spending and outcomes – are deeply flawed.\(^\text{15}\) Although some courts (e.g. New York) use such methods, the results are so widely at odds with one another, that Quality Counts 2005 wisely concluded it had no sound basis on which to rank states by adequacy.

Equity continues to be important in litigation. Some judges rely on certain measures of adequacy that end up being an equity standard in disguise. Other judges simply turn

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\(^\text{13}\) Quite aside from issues with equity measures, quality control also varies in the industry. Here, Education Week might learn from its more careful competitor, Education Trust. When anomalies arise, EdTrust contacts the state to ascertain if something has changed on the ground, or whether there might instead be data problems. As a result of such diligence, errors have been found in Census data, and corrected – errors that remain in Education Week data. Education Week draws sweeping conclusions in its State Report Cards, based solely on the statistical results, with little or no checking to see what lies behind the results. Consequently, anomalous results – such as the stark reversal of rankings between EdTrust and Education Week – are not explored and explained. Even programming errors by Education Week go undetected. Education Week is now providing its data set to users, to at least replicate results after the fact, and this promises to improve matters going forward.

\(^\text{14}\) This shift is the overarching theme of this year’s issue of Quality Counts.

directly to comparisons of plaintiff districts with rich districts, which is to say equity. Massachusetts’ recently concluded litigation provides an illuminating study of the use of adequacy and equity measures:

In 1993, the Supreme Judicial Court ruled for the plaintiffs in McDuffy, largely on the basis of disparities in spending between poor and rich districts, i.e. equity data. As discussed above, Massachusetts completely overhauled its funding formula in 1993 to close or reverse these disparities, and also adopted a host of other important measures on standards, testing, and accountability. In 1999, a new set of plaintiffs reactivated the case, renamed as Hancock, seeking further relief. The argument now was that equity is irrelevant, and that funding is inadequate to bring all students to proficiency in the state’s seven curriculum frameworks, established under the 1993 reform act. The case was referred by the SJC to a lower court for trial, held in 2003-04.

The trial judge acknowledged defense evidence that the state had reduced, eliminated, or reversed funding gaps by district poverty, median income, and property wealth, but agreed with the plaintiffs that these equity measures were irrelevant. However, the judge also discarded adequacy studies (from both sides), based on professional judgment and successful schools models, as deeply flawed. She relied instead largely on an ad hoc indicator of adequacy put forth by the plaintiffs, that high-scoring (mostly wealthy) districts heavily outspent their foundation budget, while the plaintiff districts did not. I have dissected this argument elsewhere, but the point here is that without any demonstrated link between spending and outcomes, this was essentially an equity argument by the back door. Indeed, it was a hyper-equity argument, since it takes the average spending among wealthy districts as the minimum necessary for their success, and then scales it up for poor districts by the low-income premium embodied in their foundation budgets. On this basis the trial judge concluded the state’s funding system was inadequate to meet its constitutional obligations.

The SJC rejected the trial court’s conclusion. In so doing, the Court relied on the very evidence of the closure of funding gaps that the trial court found irrelevant. These measures are similar in conception to those of EdTrust (although based on different data). The Court also accorded great significance to non-monetary measures enacted by the Commonwealth, in standards, testing, and accountability. It was on the basis of the state’s comprehensive education reform program – including equity in funding – and the significant progress in achievement under that program, that the Court terminated twenty-seven years of litigation and twelve years of court jurisdiction over education funding.

In short, the death of equity has been exaggerated. Equity measures will almost surely continue to play a role in public discourse, as indeed they should for a society that values equal opportunity. The equity rankings industry will continue to be important, so both consumers and producers should take the opportunity to examine its performance.

http://www.massinc.org/commonwealth/ Hancock_symposium/

17 The Court had previously rejected challenges to MCAS, the state’s exam required for graduation.
Education Trust (2004, Table 1). Spending is adjusted for regional cost differences, and special education students are weighted, but not low-income students. The rankings are very similar, weighting low-income students.
Figure 2: Conflicting Equity Rankings
(1 is best, 49 is worst)

Ed Trust Ranking, by per pupil revenues in poor vs. rich districts

Ranking by Ed Week's McLoone Index
Figure 3: No Relationship Between State Share of School Funding and Equity

Source: Education Trust 2004

Spending Gap Between Poor and Rich Districts

State Share of State & Local Education Revenues, percent

Source: Education Trust 2004