

# NEPC REVIEW: IS PUBLIC SCHOOLING A PUBLIC GOOD? AN ANALYSIS OF SCHOOLING EXTERNALITIES (CATO INSTITUTE, MAY 2018)



## Reviewer:

Doris A. Santoro  
Bowdoin College

June 2018

## National Education Policy Center

School of Education, University of Colorado Boulder  
Boulder, CO 80309-0249  
(802) 383-0058  
[nepc.colorado.edu](http://nepc.colorado.edu)

## Acknowledgements

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### NEPC Staff

Kevin Welner  
Project Director

William Mathis  
Managing Director

Alex Molnar  
Publications Director

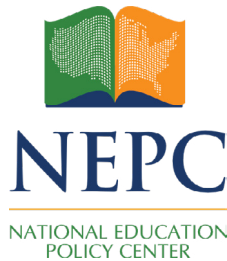
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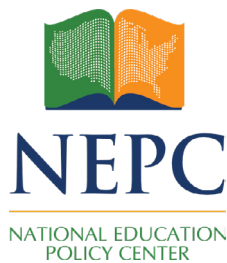
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## Executive Summary

A recent report from the Cato Institute opens with Horace Mann’s well-known conviction that public schools are the bedrock of a democratic society – a public good that should be made available to all. Yet the report, *Is Public Schooling a Public Good? An Analysis of Schooling Externalities*, improperly conflates the civic and economic definitions of a public good. Although the report begins with Mann’s vision of the role of public schools as building a better society, it then misleadingly shifts the analysis to the economic value of public schools as a market-based “good” like steel or corn. The report relies on a false equivalence of the civic and economic definitions of a public good to advance a proposal for de-funding public schools and introducing a nationwide education savings account (voucher) program. While there is extensive research on the educational purposes of schooling, the Cato report’s limited review of this literature consistently misrepresents the meaning, scope and implications of this literature. The result is a portrayal of public schools as “agents of harm” for what appears to be an ideologically-driven thought experiment. Even for those who might be in favor of vouchers, the report’s imbalance, flawed logic and limited research base render the report of no use to policymakers.



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## I. Introduction

Over 90% of students in the US attend public schools.<sup>1</sup> Funding for public schools rests on taxpayers who enjoy indirect benefits to self and society. Compulsory, state-supported education was considered by the founders to be an essential provision of government, given the necessity of an educated populace to meet the demands of a democratic society. Public schools, although imperfect, provide an opportunity for members of a majority-immigrant society to become integrated into the country's democratic fabric and have the opportunity to succeed, regardless of their origins.

Historian David Tyack writes,

The founders of the nation were convinced that the republic could survive only if its citizens were properly educated. This was a collective purpose, not simply an individual benefit or payoff to an interest group. Public school crusaders like Horace Mann believed that schooling should be a common good, open to all, benefiting all, as do clean water and air and leafy parks. The common school was to be public in control and funding.<sup>2</sup>

Concerns with public schools' ability to meet civic, moral, economic and academic goals has led to conversations about alternative methods for using tax revenue, even though the majority of public school parents are satisfied with their local schools.<sup>3</sup> Those who promote conversations about the use of public funds to subsidize private schooling depart from the vision of Horace Mann. These proponents are willing to consider giving up public control of schooling, while continuing to fund it publicly.

This shift in public control to the private sector has already occurred in various ways. Charter schools are given freedom to operate distinctly from public schools as long as they meet the terms of their charter approved by the state, district, university, independent charter board or non-profit organization.<sup>4</sup> Additionally, mayoral and state takeovers of districts have shifted control away from democratically elected local boards. Finally, a small number of voucher programs and education savings accounts have enabled students and their families to use the allotted funding for private and, often, religious schools.<sup>5</sup> True voucher programs currently serve approximately .003% of the student population in the US.<sup>6</sup>

The report, *Is Public Schooling a Public Good? An Analysis of Schooling Externalities* by Cory DeAngelis for the Cato Institute, argues that while education may be a worthwhile expenditure, public schooling is not. The report makes empirical claims that public schooling “appears to have negative effects on society through a less-educated populace, higher taxpayer burden, less tolerance, more crime, and racial segregation.”<sup>7</sup> It then presents a thought experiment to demonstrate the savings that would be realized if funding for public schools were abolished and each student were provided with an education savings account.

## **II. Findings and Conclusions of the Report**

The report begins by glossing over the reasons that taxpayer-funded schools and compulsory education were established: improvement of society (p. 2). The report sets out to examine if public schooling justifies the expenditures by producing “positive social effects” (p. 2). The report briefly raises the issue whether the education invoked by Mann needs to be satisfied by public schooling or if it could be addressed through other means.

The report provides the economic definition of a public good: public goods are nonexcludable and nonrivalrous. It elaborates, “The nonexcludability provision means that the producer cannot prevent nonpayers from using the good without bearing costs that exceed the benefit of payment....The nonrivalry provision simply means that one individual’s consumption of the good does not diminish the abilities of others to consume it” (p. 2).

Next, the report claims that public schooling fails to satisfy the two criteria of a public good. On the grounds of nonrivalry, the report raises two examples: a student who occupies one seat in a classroom makes it impossible for another child to occupy that seat; and, the more students present in a classroom render it more difficult for a teacher to tailor instruction to a particular child (p. 3). The nonexcludability portion of the definition is not met, according to the report, because “it is not difficult to exclude a person from a school – or any other type of institution with walls” (p. 3).

Having determined that public schooling is not a public good, the report introduces the concepts of merit and demerit goods. These types of goods are so determined by whether their “externalities” (or unintended effects on those indirectly affected by the transaction) are overall positive or negative. The report then claims to “examine all the theoretical externalities around the traditional public schooling system in the United States today” (p. 3).

Later, a more modest proposal is set forth and the report examines the net effects on “(1) an educated populace, (2) taxpayer costs, and (3) social cohesion” (p. 4).

In order to calculate the externalities (unintended costs and benefits) of public schooling in the US, the report introduces a thought experiment that is presented as a “realistic counterfactual: a private school of choice that could accept the public school’s per pupil funding amount as full payment for tuition and fees” (p. 4).

The report purports to examine findings from voucher programs and experiments from the US and around the world, drawn from an amalgam of peer-reviewed original research, meta-analyses, reviews of research, working papers, program evaluations and publications from advocacy organizations. As a result of this review of about 30 articles, fewer than half are from peer-reviewed sources, the report finds: “According to the existing evidence, government [public] schooling appears to have negative effects on society through a less-educated populace, higher taxpayer burden, less tolerance, more crime, and racial segregation” (pp. 5-6).

Finally, the report quantifies the externalities of public schooling.

For the net effects on an “educated populace,” it uses data from one working paper to compare the performance of students involved in private school choice programs with those enrolled in public schools. Then, it hypothesizes the cost of lost learning due to attending public schools and the impact on future earnings (-\$5.364 trillion or about a quarter of total GDP). Another projection assesses the impact of lower graduation rates on productivity associated with decreases in tax revenues and increases in social costs such as welfare (-\$419.464 billion). The report explains that the figure for lower graduation rates from public schools in the US is derived from one peer-reviewed source based on a state-mandated evaluation in Milwaukee. The other reference is a self-published study about Washington, DC. The report does not elaborate as to how the costs were determined from these two sources (p. 7).

For the net effects on taxpayer, the report calculates that an average of 59% of per-pupil spending is allocated to recipients in current state voucher programs. It then determines the costs of public education spending, relative to the savings that could be realized with vouchers, for educating each child in the US for 13 years (-\$3.497 trillion). That is, what would be saved by cutting education spending by 41%. The report also examines the average private school expenditure per pupil and compares that with the average expenditure in public schools, for educating each child in the US for 13 years (-\$889.152 billion).

For the net effects on social cohesion, the report abandons the multifaceted aspects that were previously discussed (e.g., civic engagement, philanthropy, racial integration). Instead, the likeliness of male students to commit a felony is used as a proxy for social cohesion. This figure is based on a single working paper, and the social costs are estimated (-\$23.474 billion).

The report includes tables that purport to calculate the externalities of public schools: “Table 2: Conservative estimates of government-schooling externalities” and “Table 3: Alternative estimates of government-schooling externalities.” The “conservative” estimate of externalities from public schooling is -\$1.331 trillion while the “alternative” estimate is -\$9.303 trillion.



### III. The Report's Rationale for Its Findings and Conclusions

Given that public schooling does not meet the author's economic criteria for a public good, the report investigates if public schooling is "good for the public" through an examination of its effects, in the form of externalities. Finding that the research consulted indicates that private school choice produces "better" effects, the report states that public schooling should not be supported because it produces "negative externalities." Finally, the report quantifies the costs of public schooling and determines that it should not be supported because studies have shown that private schools produce better outcomes.

The report shifts the terms of analysis by beginning with Horace Mann's conception of public schools as a common good and then subjects public schools to the much more narrow economic definition of a public good. In the author's definition, public schools fail on this strictest economic definition; perhaps no social enterprise will entirely satisfy the nonrivalrous and nonexcludable conditions of a "pure" public good.

More importantly, the proponents of public schools had a much less instrumental view of the good in mind when they declared schools as necessary for the common good. Unlike an economic good which is assessed based on its exchange value, Mann and others' vision of "the good" was based on humanistic and democratic values that go beyond the narrow range employed by economic measurements.<sup>8</sup> The report fails to acknowledge this limitation.

### IV. The Report's Use of the Research Literature

Not only does the report substitute a narrow economic definition for Mann's broader civic usage, it also fails to meet its own neoclassical economic criteria. It states that the formal definition of a public good is derived from "a classic 1954 article [in which Nobel laureate economist Paul Samuelson] explained that such a good satisfies two necessary conditions: (1) it is nonexcludable, and (2) it is nonrivalrous in consumption" (p. 2).<sup>9</sup>

Furthermore, the definition of nonexcludability imports conditions that are not present in standard economic usage. The report focuses on the *taxpayer* as agent who may or may not exclude others, when, in fact, non-excludability is much broader – *no one* can deny another access to the good, the point is not who is ostensibly "paying" for the service through their tax dollars.<sup>10</sup>

Many in mainstream economics consider education a public good, albeit, not a "pure" public good.<sup>11</sup> Economics textbooks go as far as to say that "A strong public school system benefits all members of a community, regardless of whether they have school-aged children"<sup>12</sup> Furthermore, the utility of the economic concept of a "public good" as a guide for practical action has been questioned by economists, including Samuelson himself.<sup>13</sup> The report draws on select research that examines the effects of voucher programs in the US and beyond. However, it excludes a vast body of empirical research comparing the performance of public and private schools on grounds that it did not did not examine *all* of the characteristics

addressed in this report (p. 4).<sup>14</sup> A more rigorous research approach would engage the data, even if it contradicts the aims of the report.

The report claims to “examine all the theoretical externalities around the traditional public schooling system in the United States today.” It would be impossible to examine all the theoretical externalities connected to public education because they are, theoretically, infinite. Later, the aim of the report is narrowed to examine the overall net effects of private school choice on “(1) an educated populace, (2) taxpayer costs, and (3) social cohesion” (p. 4). When engaged in quantitative analysis, as this report purports to do, it is a methodological standard to demonstrate that the variables studied are defined consistently across research consulted. This is not done.

Twenty-nine sources were consulted to determine the effects of public school externalities (or outcomes beyond educating the individual).

**Table 1: Sources Consulted in “Is Public Schooling a Public Good?”**

Scholarly, Peer-Reviewed	Advocacy Organizations	Working Papers/ Policy Briefs	Evaluations
14	6	7	2

### **Educated Populace**

The report cites 19 of these sources (12 peer-reviewed, two from advocacy organizations, three working papers, and two program evaluations) to determine if public schools have beneficial effects on producing an “educated populace.” The variables are limited to math scores, reading scores and graduation rates. It is not clear if the report is referring to math scores on state tests, nationally normed exams, international measures or daily quizzes. It is unclear what grade levels were assessed. For instance, Table 2 disaggregates “fourth year” math and reading scores from “overall” scores. The report does not indicate if fourth year means fourth grade or the fourth year of high school. Which scores are included in the “overall” tally is also a mystery (p. 6.).

Completely missing are the negative results from recent, major, well-designed large-scale studies in Indiana, New Orleans, and Washington, DC.

### **Taxpayer Costs**

The section on taxpayer burden relies on two digital publications by a single advocacy organization claiming that private school choice programs save taxpayers money. Contrary literature was not employed.

### **Social Cohesion**

The variables used as a measure of “social cohesion” are wide-ranging and ill-defined. The report does not draw on recognized definitions of social cohesion nor previous studies that



have investigated social cohesion.<sup>15</sup> Nor does it address economic research that highlights the likelihood of social fragmentation in voucher-type programs.<sup>16</sup>

The report apparently uses a random set of variables for “social cohesion.” “Adult criminal behavior” is based on a single, unpublished working paper of one program enrolling 28,702 students since its inception<sup>17</sup>; “civic outcomes” (from one article from an advocacy organization); “tolerance of others,” “charitable giving,” “volunteering,” “political participation” (one peer-reviewed scholarly review); “civic values and practices” (one article from an advocacy organization); and “racial integration” (one article from an advocacy organization and one peer-reviewed study).

From this ill-defined and disparate collection of factors, the report finds: “According to the existing evidence, government schooling appears to have negative effects on society through a less-educated populace, higher taxpayer burden, less tolerance, more crime, and racial segregation” (pp. 5-6).

## V. Review of the Report’s Methods

**Table 2: Government-schooling externalities and their signs<sup>18</sup>**

Externality	Sign
Educated populace (math scores–overall)	Null
Educated populace (reading scores–overall)	Null
Educated populace (math scores–4th year)	Negative
Educated populace (reading scores–4th year)	Negative
Educated populace (graduation rates)	Negative
Taxpayer costs	Negative
Social cohesion (crime)	Negative
Social cohesion (tolerance)	Negative
Social cohesion (political participation)	Negative
Social cohesion (racial integration)	Negative

Source: Author analysis.

Note: “Null” indicates that the preponderance of the evidence suggests that government schools do not have statistically different effects on society than private schools of choice. “Negative” indicates that the preponderance of the scientific evidence suggests that government schools produce socially less-desirable outcomes than do private schools of choice.

Source: DeAngelis, C.A. (2018, May). *Is public schooling a public good? An analysis of schooling externalities*. Cato Institute. Retrieved May 21, 2018, from <https://www.cato.org/publications/policy-analysis/public-schooling-public-good-analysis-schooling-externalities>, 6.

The source of this table is credited as the author's analysis based on a "meta-analytic and systemic review." A cursory review of studies comparing outcomes of public and private school enrollment for students participating in voucher programs or experiments precedes the table. However, the summative presentation of this data is limited to directional "signs" (null, negative, positive). How the classification signals were determined is not described.

Furthermore, even if the reader were willing to allow for the magic box that produced those "signs," the limited comparative studies from which the data were drawn cannot be extrapolated to determine the overall effects of public schooling.

The report's model depends on the assumption that vouchers could meet the tuition needs of an entire student populace, less expensively.<sup>19</sup> This premise rests on the claim that taxpayers would realize a substantial savings by multiplying the current cost of educating students in the public schools with the reduced 59 percent cost for vouchers, based on a table from EdChoice's website.<sup>20</sup> Unaddressed is the fact that charter and voucher schools often do not serve special needs populations and teacher pay is typically below public schools.

To better understand the scale of what the report imagines, it is useful to put the thought experiment into perspective. The model is based on more than 50 million students enrolled in public elementary and secondary schools (p. 6).

## **VI. Review of the Validity of the Findings and Conclusions**

The report's findings depend on the premise that education savings accounts would enable all students in the US to enroll at a private school of choice. It asserts that "private school tuition fees are often below the state-mandated maximum voucher funding amount" (pp. 5-6). However, the report's own figures tell a different story. The report presents the average private school tuition as approximately \$11,633 in 2017 dollars. However, average voucher funding amount for private school choice programs is approximately \$7,024 (p. 7). Therefore, this premise fails to operate as a "realistic" counterfactual as the average voucher amount (\$7,024) falls far below average private school tuition (\$11,633), upon which the entire thought experiment is based (p. 4).

The findings of this report rest on an inadequate and cherry-picked research base. It selectively ignores evidence that challenges its ideological perspective. It makes sweeping claims about the whole of US public education based on studies, many of which have not undergone the rigors of peer review or replication, of limited, small-scale experiments. It draws conclusions that are simply unsubstantiated by the available evidence. The validity of claims about the impact of public schools cannot be verified given dubious, shifting and undefined variables. The limited research base, lack of transparency and leaps in logic render this report invalid.

## VII. Usefulness of the Report for Guidance of Policy and Practice

*Is Public Schooling a Public Good? An Analysis of Schooling Externalities* from the Cato Institute twists the civic and economic definitions of a public good into a false equivalence. Although the report begins with Mann's vision of role of public schools as building a better society, it then shifts the analysis to the exchange value of public schools as a market-based "good" like steel or corn. The report relies on a conflation and a false equivalence between the civic and economic definitions of a public good to advance a proposal for de-funding public schools and introducing a nationwide education savings account program.

The report misrepresents the scope and implications that can be drawn from the limited research examined.

The result is a portrayal of public schools as agents of harm for what appears to be an ideologically driven thought experiment. Even for those who might favor vouchers, the report's flawed logic and limited research base suggest a poorly developed polemic rather than a useful tool for policymakers.

## Notes and Resources

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- 8 Brighouse, H. (2008). Education for a flourishing life. In D.L. Coulter & J.R. Weins (Eds.), *Why do we educate? Renewing the conversation* (Vol. 1) (pp. 58-71). Malden, MA: National Society for the Study of Education;  
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- 9 This essential source is misrepresented. In Samuelson's 1954 article, only non-rivalry is addressed; Samuelson did not incorporate the concept of nonexcludability until 1958;  
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- 19 This premise is deeply flawed, however, this review provides the most sympathetic analysis possible. For a perspective of what is not included in this premise see Shear, B. (2017, April). *Review of "Apples to Apples: The Definitive Look at School Test Scores in Milwaukee and Wisconsin."* Boulder, CO: National Education Policy Center. Retrieved June 11, 2018, from <http://nepc.colorado.edu/files/reviews/TTR%20Shear%20Milwaukee%20Vouchers.pdf>
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