



DOCUMENT(S) REVIEWED:	<i>Markets vs. Monopolies in Education: A Global Review of the Evidence</i>
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### **Summary of Review**

The Cato Institute report examines international evidence on outcomes from public and private education. The paper makes three key claims: private schools outperform public schools in “the overwhelming majority of cases”; private schools’ superiority is greatest in countries where the education system has more market features; and “the implications for U.S. education policy are profound.” Each claim is problematic. The first is based on an atypical method of summarizing academic literature and excludes two important research studies. The claim also fails to adequately take into account selection bias due, for instance, to parents choosing private schools because of an academic focus on their children. The second claim oversimplifies a very complex issue, namely the optimal application of market forces to improve education. And the third claim is dubious as well: even if the report’s first two claims are legitimate (based on international evidence), there may be no practical implications for U.S. education policy.

## Review

### I. INTRODUCTION

The introduction of market reforms to education systems has been a popular policy over the last decade. Charter schools, voucher programs, increased home-schooling, and tax credits have all introduced greater competition and market forces into the American school system. At issue is whether these reforms have improved the quality of education.

Andrew Coulson's policy analysis report, *Markets vs. Monopolies in Education. A Global Review of the Evidence*,<sup>1</sup> endeavors to consider all the evidence on this important issue, domestic as well as international. The report attempts to answer a provocative question: "Would families and communities be better served by a free and competitive education marketplace than they are by our current system of state school monopolies?"<sup>2</sup>

The author claims that the evidence typically used to address this question is "inadequate or even irrelevant." Instead, he advocates for the use of international evidence. The reasoning is this: if there is a large volume of international evidence and it all points to the same conclusion, then that conclusion should also apply to the U.S.

The report collects evidence from 55 domestic and international studies from over 20 countries on public versus private school performance. Eight dimensions of performance are covered: achievement, efficiency, parental satisfaction, classroom orderliness, condition of facilities, subsequent earnings, attainment (graduation rates of high schools, or highest average grade completed), and intelligence. Studies are then classified ac-

ording to the freedom of the nation's educational system. The three criteria for a relatively free education system are: parents pay one-third or more of the cost of private school, private schools have managerial autonomy; and public schools receive at least 30 percent more government funding per pupil than most private schools.

This evidence is then used to answer two questions: *Across the globe, do private schools outperform public schools?* and *Is the private school advantage even greater in freer education systems?* If the answers to both questions are "yes," then the report offers the admonition that policymakers should introduce as much market reform as possible.

### II. FINDINGS AND CONCLUSIONS OF THE REPORT

Using an approach that tallies positive and negative conclusions, the report finds that the literature strongly supports the conclusion that private schools outperform public ones. Across all eight dimensions of performance, the number of studies finding an advantage for private schools exceeds the number finding the opposite. For example, of the 63 separate tests for achievement differences, 41 find a statistically significant private school advantage; only eight find an advantage in favor of public schools (with 14 reporting no difference). No study finds public schools are better in terms of parental satisfaction, quality of facilities, or attainment. Based on a simple count of all 113 findings, nearly eight times as many favor private over public schools.

To identify public/private differences in systems with greater freedom, the report

selects 26 of the 55 studies. These are selected if they meet all three criteria of a free system. In this subset of studies private schools are found to outperform public schools on all dimensions. For example, in comparisons of achievement, 15 studies favor private schools and only two favor public schools. Applying a simple count of all 38 tests in these 26 studies, 35 favor private schools compared with two that show a public school advantage.

The report draws on these tabulations of evidence to make several broad policy claims (page 11):

- The content of schooling does not need to be overseen by the state.
- There should be universal access to minimally regulated education markets.
- Parents should directly pay at least some of the cost of their children's education.

### **III. THE REPORT'S RATIONALE FOR ITS FINDINGS AND CONCLUSIONS**

The report's own rationale for its findings is uncomplicated and based on three assertions. All the research evidence has been collected, correctly classified, and appropriately summarized. Overwhelmingly, private schools appear to outperform public ones. Moreover, given the magnitude of the difference in performance, no alternative way of summarizing the evidence is likely to overturn this result.

As discussed below, however, this rationale is very much open to question.

### **IV. THE REPORT'S USE OF RESEARCH LITERATURE**

Although the report does include a substantial body of literature, its use of that literature is problematic on several grounds.

First, although the stated goal of the report is to be comprehensive, it omits some relevant research. Surprisingly, some of that research might support the claims of the report. A series of research studies in England, for instance, examined how market forces might improve its "monopoly" system of education. In general, that research found market reforms to be beneficial.<sup>3</sup>

However, other research omitted from this review does not support the report's claims. These omitted studies raise serious questions about the report's methodological assumptions and about the usefulness of reviewing international evidence instead of relying on U.S. research.<sup>4</sup>

Specifically, in their review across ten Latin American countries, Somers et al. affirm that many earlier studies comparing public and private schools have failed to properly control for correlated characteristics.<sup>5</sup> As an illustration, imagine a study comparing the performance of private school students to students at a nearby urban public school. A researcher should control for differences in family income across the schools; any observed test score difference may arise because of family income and not the quality of school. There are many such factors to control for, including family background, student ability, neighborhood resources. Based on more complete econometric models, Somers et al. find that:

conditioning on a complete set of student, family and peer characteristics explains a large portion of the observed difference in achievement between public and private schools... Across the 10 countries ... the mean private school effect is approximately zero.<sup>6</sup>

This omitted research study is significant for

two reasons. First, it controls for characteristics that the new Cato report states are unlikely to influence the results, and it finds they do matter. Second, the 10 countries are all in Latin America, which is represented heavily in the report's literature summary.

Another study not included casts more doubt on the report's conclusions insofar as they apply to the U.S. school system. In a paper released in August 2008 (and therefore probably too late to be found by Mr. Coulson's search), which will be published in the *Annual Review of Economics*, Cecilia Rouse and Lisa Barrow review the evidence on U.S. voucher programs. They conclude:

The best research to date finds relatively small achievement gains for students offered education vouchers, most of which are not statistically different from zero. Further, what little evidence exists regarding the potential for public schools to respond to increased competitive pressure generated by vouchers suggests that one should remain wary that large improvements would result from a more comprehensive voucher system.<sup>7</sup>

This conclusion of Rouse and Barrow rests on a very sophisticated and detailed interpretation of all the U.S. evidence.

The very modest conclusions of these two, more careful studies are in sharp contrast to those in this report. As discussed below, simply tallying results of unscreened studies is not a particularly useful way of summarizing research.

A second way in which the literature review is problematic is that it relies heavily on unpublished research. Of the 55 research papers cited in the literature summary 32 are

working papers or conference papers. Of those that are formally published, not all were published in peer-reviewed journals. Typically, literature reviews give more credence to published studies as one indicator of quality, while referring to unpublished studies in a supplementary way. This report makes no distinction.

A third concern is that the included studies are not representative of the globe in any meaningful sense. Of the 55 studies, 23 refer to the market reforms in Chile. Another 16 studies refer to the U.S. education system and a full five of those U.S. studies test for public/private differences in one city: Milwaukee, Wisconsin.

Accordingly, almost half the report's international evidence for a private school advantage is based on studies of the Chilean school system. Certainly, many economists and other researchers consider the Chilean experience to be the most expansive market reform of education; it is also the one that has received the most intensive research investigation (hence its prominence here). The research on Chile is far from conclusive in identifying private schools' superiority, however.<sup>8</sup> Another surprising finding with regard to Chile is its very weak relative standing on international tests, despite its considerable support for private schools.<sup>9</sup>

When the sample for analysis is reduced to include only those studies in systems with greater freedom, only a few countries are covered. Of the 26 studies, six refer to India and four refer to Tanzania. Another five refer to the U.S. Interestingly, Chile is not represented at all in the reduced sample.

Finally, even the cited research literature does not fully correspond with the author's argument. The report claims that "existing [U.S. school choice] programs are too small,

too restriction laden, or both” (executive summary) and so we should survey education systems across the globe. But a number of the studies included in this review are of such small programs; they are not system-wide comparisons. To take the U.S. examples: enrollments were 19,000 in the Milwaukee Parental Choice Program (2007-08); 5,700 in the Cleveland Scholarship and Tutoring Program (2004); 2,791 in the first year of the three-city voucher experiment reported in Howell and Peterson (2002); and 1,400 in the DC Opportunity Scholarship program (2004). It is not clear why these studies of small-scale programs should be included in a review that purports to summarize international evidence across school systems.

## V. REVIEW OF THE REPORT’S METHODS

A virtue of this report is that the method used is easy to understand. A simple distinction between public (monopoly) and private schools is set up. The evidence is tabulated and counted. Public and private schools are judged based on which have the most studies in their favor.

Unfortunately, the debate is more complex than this. Consequently, more detailed analysis is also required.

The report employs a rhetorical device to simplify what is actually a very complex issue. The public school system is stated to be a “monopoly,” but the author never specifies which features make it so (both absolutely and relative to other countries). The standard textbook definition of a monopoly rests on “barriers to entry” exemplified by families who want different schools from the current offering(s) but are not allowed them. While we shouldn’t minimize real economic, informational and logistic obstacles to

school choice options in the U.S., there remains plenty of opportunity for American families to choose different schools: they can enroll in charter schools; they can home-school; they can move to a different school district; or they can pay extra for private school. Certainly, private schools compete at a disadvantage to subsidized public schools, but within the public system there is considerable heterogeneity. Moreover, other elements of “monopoly” exist elsewhere but not in the U.S.: countries such as the United Kingdom and France have a national curriculum that all schools—including private ones—must follow; similarly, the Netherlands has public and privately owned schools, but both are heavily regulated. In short, the monopoly features of the U.S. education, relative to other countries, are far from clear.

Similarly, the “market” concept used in the report is not straightforward. As the author notes, citing Merrifield, the market system includes “profit, price change, market entry, and product differentiation” (p.2). But none of these elements are addressed here. There is, for instance, no investigation of the role of profit in education. In fact, most private schools, inside as well as outside the U.S., are non-profit enterprises. There is no treatment of prices, which might allow for cheap, low-quality private schools as well as expensive, high-quality ones. Finally, product differentiation is presumed away; in this report, schools are compared by how their students perform according to a common metric.

In summary, when commentators style the public school system as a monopoly, it is important to ask: *In what sense?* Without specifics, it is not clear what to test for to see whether private schools are better. For example, do private schools have more efficient managers, motivated by profit? Do

they have more flexibility over the curriculum or staffing? If private schools in the Netherlands offer an exemplar, might that mean that U.S. private schools should be more highly regulated rather than, as this Cato report argues, that the U.S. should move toward further deregulation?

A second way in which the method is overly simple is in how the evidence is weighed. The report's method for appraising evidence is essentially a "vote count" of all studies. Each study is given a value of 1 if it finds private schools outperform public schools, 0 if no difference is found, and -1 if public schools are superior. These scores are then tabulated to see which type of school is superior. A second tabulation is then performed for the reduced sample, restricted to studies that meet all three market criteria and so have the most "market-like" features. Again, these studies are counted and tabulated as to which school sector is superior.

The problem with using vote count methods is that not all votes—not all studies—are necessarily equal. There are two ways in which these "votes" are not equal.

First, some studies are better able to detect genuine differences in school quality than others. For example, it does not seem reasonable to equate a study based on random assignment of students to public and private schools with a correlational study that simply compares student outcomes subsequent to their independent choices of public or private school. The latter could easily confound preexisting student differences with differences caused by school quality.

It is possible for a random assignment study to be poorly implemented (or have low external validity). But scholars generally agree that there is a hierarchy of methods that allow for causal claims about outcome meas-

ures, with experimental methods at the top. Similarly, as noted above, some studies are published only after a rigorous peer review, while others are self-published or published in a non-peer-reviewed journal. The vote count approach assumes that all studies are equally valid and useful.

Second, no account is taken of the power of each finding. For example, if two studies find a small positive impact from private schooling and one finds a large negative impact, the vote count method would find unambiguously in favor of private schools; averaging the three studies would possibly reverse the conclusion. Also, one study may be based on a small sample and another on population-wide data. Although this report catalogs sufficient studies in favor of private schools that this possibility is unlikely, the vote count procedure is still uninformative as to the size of any advantage from attending a private school. It merely shows (setting aside the other problems identified in this review) that private schools are probably better than public schools.

But even this conclusion is premature. Importantly, it is far from clear that any (or all) of these studies have properly identified a private school effect. Let us assume that private school students outperform public school students on raw achievement tests. This advantage may be because private school students are from wealthier families, so studies must control for this. Most do, although some don't. More importantly, there may be other hard-to-observe characteristics that cause a private school advantage, such as parental engagement, the safety of the neighborhood or family religiosity.<sup>10</sup> Studies do not typically control for all these factors and often cannot. Moreover, it is necessary to control for the *decision* to choose a private school. That is, families choose private school because it is a better

fit for them for many reasons; public school parents may or may not be doing the same. This selectivity bias may be substantial.

The report explicitly states that selectivity bias is not a concern. The author contends that either the bias is unimportant, or enough of the studies do control for it, or in fact the bias is in favor of public schools. But each of these reasons is questionable. It is likely that the choice of school is motivated by the family's expectation about how well the child will do. Simply put, these studies do not all include the controls that they should. As noted above, Somers et al. illustrate how studies that fail to control for peer group characteristics can overstate the private school advantage.<sup>11</sup> Finally, the report never explains why families who enroll in private school might have characteristics associated with lower achievement.

## **VI. REVIEW OF THE VALIDITY OF THE FINDINGS AND CONCLUSIONS**

Even if we accept the report's conclusion that private schools do outperform public ones, it is still not clear which policy reforms should be implemented.

For example, a market with more product differentiation might simply mean more charter schools. Yet, these schools are fully publicly funded and so fall afoul of the report's criterion that parents must pay directly. Even voucher programs include sizeable subsidies that families then turn over to their private schools.

Finally, the report does not explore or even mention any possible adverse consequences from a system of independent private schools. One of the reasons for having a public education system is that of externalities: the recognition that beyond its private, individual benefits, education has influences

on society, on culture, and on what it means to be a citizen. Societies do not solely value higher test scores; they also care about social cohesion and societal inequalities. The report appears to implicitly assume that these public benefits of education are unimportant or unaffected by the types of schools children attend.

## **VII. USEFULNESS OF THE REPORT FOR GUIDANCE OF POLICY AND PRACTICE**

The report claims that its findings are of "profound" importance for U.S. education policy. At best this is an overstatement, for several reasons.

First, there is now a substantial evidence base on market reforms in the U.S. There have been many small-scale reforms, often evaluated using high-quality research methods. These evaluations are included here. But there have also been large-scale reforms, such as charter schools and homeschooling, which arguably have radically changed the opportunities for parents wanting to choose a school outside of their public neighborhood school. Yet, the large body of literature on charter schools, much of which is high-quality and published in peer-reviewed journals, is not mentioned here.

Accordingly, and contrary to the basic assertion in the Cato report, there is little warrant for U.S. policymakers to draw policy conclusions from tallying the results of the body of very uneven international evidence. The large and growing body of U.S. evidence about school choice and marketization is more accessible, applicable and useful than figuring out how international evidence applies to the U.S.

Of course, it is hard to summarize all of the U.S. literature into a single conclusion. But

as explained by Rouse and Barrow (quoted above), “The best research to date finds relatively small achievement gains for students offered education vouchers, most of which are not statistically different from zero.”<sup>12</sup>

The argument that the report’s findings have profound implications for U.S. policy is unconvincing for a second reason: some of the report’s international evidence is from countries with education systems that are dramatically different from the American system. Aside from the five studies from the U.S., more than half of the 21 studies included in the second (reduced) sample are from Pakistan, India, Tanzania, Ghana, and Nigeria. It is far from obvious what U.S. policymakers might infer from studies in these very different countries. This is not a matter of one system being preferred, it is simply a matter of difference. These five countries do not have universal secondary schooling (or, at least in the case of Pakistan, even universal elementary schooling), have public schooling often tied to religion, and have formal labor markets that cover only a small subset of the population. Indeed, in making any international comparison, scholars need to pay attention to the substantial differences in such areas as curriculum, assessment, funding systems, political decentralization, religiosity, wealth, teacher labor markets, and, perhaps most importantly, the incentives to attend school. It is of course possible to learn from the experiences of other countries, but the lessons become harder as countries are less and less similar.

Policymakers and practitioners rightly prefer localized evidence: the context of a reform matters. Further, education reforms often

have diverse consequences that need to be accounted for. In rural areas, for example, private schools may not be able to operate at sufficient scale to maximize profit or break even.

Finally, policymakers need to know not only whether a reform improves educational outcomes but also whether the costs of the reform outweigh the benefits. The Cato report does not identify the size of any private school advantage, so it is not possible to assess the level resources that would need be spent to yield such an advantage. The report includes 26 tests that purport to assess efficiency; these ideally should provide an immediate economic answer. However, many of these 26 tests are far from compelling.<sup>13</sup> This is so for several reasons, but the primary one is that very few studies accurately measure costs in public and private schools. As well, these studies almost never consider the costs of implementing a reform. Conclusions about efficiency from this evidence base should therefore be made very cautiously.

In summary, it is possible that private schools are superior to public schools when all the international evidence is counted. We don’t know, and this report does little if anything to help answer that question. What we do know is that the best studies in the U.S. and abroad control for many factors before drawing any conclusion, and, when these factors are accounted for, what is most surprising is how small the private school advantage is—if it even exists. As such, expanding market forces is unlikely to yield dramatic improvements in the quality of the U.S. education system.

## Notes and References

- <sup>1</sup> Coulson, A. (2008, Sept. 10). *Markets vs. Monopolies in Education: A Global Review of the Evidence*. Washington, DC: Cato Institute. Retrieved Sept. 12, 2008, from <http://www.cato.org/pubs/pas/pa620.pdf>
- <sup>2</sup> The question includes communities, but there is no discussion of community-specific effects of markets. For example, if a market allows families to segregate by race but all test scores go up, it is not clear whether communities are better served. Also, if private schools teach religious doctrine rather than math and science, it is not clear that communities are better served.
- <sup>3</sup> Gorard, S. (2003). What can we learn from school choice in England and Wales? *New Economy*, 10, 240-244.
- <sup>4</sup> The review also omits a separate study that confirms the findings of Braun et al. (2006). That study is Lubienski, C. and Lubienski, S. T. (2004). Charter, private, public schools and academic achievement. New evidence from NAEP Mathematics data. Working paper. Retrieved Sept. 25, 2008, from [http://www.ncspe.org/publications\\_files/OP111.pdf](http://www.ncspe.org/publications_files/OP111.pdf).
- <sup>5</sup> Somers, MA, McEwan, PJ and Willms, JD (2004). How effective are private schools in Latin America? *Comparative Education Review*, 48, 48-69.
- <sup>6</sup> Somers, MA, McEwan, PJ and Willms, JD (2004). How effective are private schools in Latin America? *Comparative Education Review*, 48, 48-69.
- <sup>7</sup> Rouse, C. and Barrow, L. (2008). *School vouchers and student achievement: Recent evidence, remaining questions*. Retrieved Sept. 25, 2008, from [http://ncspe.org/publications\\_files/OP163.pdf](http://ncspe.org/publications_files/OP163.pdf)
- <sup>8</sup> This is evident from Table 1 of Coulson for achievement. McEwan (2002) has three tests: two show no difference and one favors private schools. McEwan and Carnoy (2000) have three tests: two favor private schools; the other favors public schools. Tokman (2001) has two tests: one favors private and the other public schools. Sapelli and Vial (2002, 2005) have two tests: one neutral and one favoring private schools. This suggests that – for Chile, at least – the type of private school and the method used to compare them will influence the comparison.
- <sup>9</sup> In the 2000 PISA, Chile is ranked 38<sup>th</sup> out of the 42 participating countries. In the 2003 TIMMS, Chile is ranked 39<sup>th</sup> out of 43 countries.
- <sup>10</sup> For example, religiosity may raise students' expectations of education success. See Regnerus, M. D. (2000). Shaping schooling success: Religious socialization and educational outcomes in metropolitan public schools. *Journal for the Scientific Study of Religion*, 39, 363-370.
- <sup>11</sup> Somers, MA, McEwan, PJ and Willms, JD (2004). How effective are private schools in Latin America? *Comparative Education Review*, 48, 48-69.
- <sup>12</sup> Rouse, C. and Barrow, L. (2008). *School vouchers and student achievement: Recent evidence, remaining questions*. Retrieved Sept. 25, 2008, from [http://ncspe.org/publications\\_files/OP163.pdf](http://ncspe.org/publications_files/OP163.pdf) rouse
- <sup>13</sup> Generally, efficiency tests are problematic because few studies accurately measure full resource use in either the private or public sector. Notably, private schools are unwilling to declare budgetary information to researchers and fees are often an imprecise measure of resource use. Of the 26 tests, few are compelling. Three are from Tooley et al. (2007): yet two cannot be found in the text and the third does not have a proper outcome measure. Three are from the same paper on Chile (McEwan, 2002) but the scores are 1, 0, and -1. Similarly, two are from the same paper on India (Bashir, 1997), but the scores are -1 and 1. This is also the case for the two tests for the Dominican Republic (Jimenez and Lockheed, 1995). The test by Howell and Peterson (2002) is not based on a costs reported by the private

schools but simply an inference based on the low cost of the voucher and simulated costs of education. Finally, five tests are from Jimenez and Lockheed (1995), whose costs analysis has been criticized as imprecise by Tsang, M. 1997. Cost analysis for improved educational policymaking and evaluation. *Educational Evaluation and Policy Analysis*, 19, 318-324.