Presidential Essay

INSIGHT FROM HINDSIGHT: THE NEW EDUCATION FINANCE OF THE NEXT DECADE

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INTRODUCTION

Education Finance and Policy is a gift to ourselves, the best kind of gift, one suitable for sharing with others—policy makers, practitioners, and researchers. After a quarter century as a thriving organization, AEFA now has the opportunity to communicate its broad and deep expertise to its members and to the world. We are school finance analysts, program evaluators, economists, political scientists, sociologists, lawyers, statisticians, historians, and computer junkies—and taken together we form the perfect adviser, with all the requisite skills and knowledge to answer difficult school finance and education policy questions. If we succeed in combining these talents, what will we contribute? Insight comes from hindsight. By reviewing enduring problems in education finance and policy, observing what we did right, and seeing when we were surprised and why, we can identify research issues that we missed, avoid similar mistakes in the future, and move forward toward work that is even more productive and useful in the field of education finance and policy.

Since the beginning of our organization, our collective interests have been consistently occupied by the questions of how to provide and finance education in ways that improve both equity of outcomes and efficiency of resource use. While equal opportunity for all children is undoubtedly an overarching value for most of us, few are willing to proceed toward that goal with a disregard for how scarce resources are deployed.

Cost-effectiveness in choice of programs, policies, and finance designs remains a virtue. Thus, a review of findings on research focused on these overriding concerns of equity and efficiency serves to provide insights into the future of our research enterprise.

SCHOOL FINANCE EQUITY

More than thirty years ago, clever and devoted lawyers began to call on the equal protection clauses of the federal and state constitutions to claim that spending on a child's education could not depend on the wealth of his neighbors (see Coons, Clune, and Sugarman 1970; *Serrano v. Priest* 1971). The first two "waves" of court cases argued for equity of inputs—for breaking the correlation between spending and property wealth, and sometimes for practically eliminating disparities in per pupil spending within a state.

Complementing the legal activity, perhaps even spurred by it, scholars developed new concepts and measures of school finance equity, useful in providing evidence for the courts and in simulating remedies for successful cases (Berne and Stiefel 1984). Once legislators saw the need to change their state school financing systems, AEFA researchers helped to develop and hone new finance designs such as the Guaranteed Tax Base, as well as two-tiered designs that combined foundation programs and Guaranteed Tax Base provisions. Then other AEFA researchers evaluated the distribution of spending resulting from these school finance systems based on the new equity frameworks and measures.[1] The new school finance systems also called for ways to make adjustments across school districts for the differences in the cost of obtaining comparable quality inputs (such as teachers), and yet another incredibly productive line of research into cost indices emerged (see Brazer 1974; Chambers 1978; Fowler and Monk 2001).

But the wave of enthusiasm for court and legislative activity, based on legal and finance research, was dampened by the surprising responses of systems that were not static and players who were not school finance people. It turned out that equalizing the property tax base in the state school aid formula, thus equalizing the dollar yield on a tax rate, did not lead to equal spending. Tax prices (the amount of money a school district must tax itself in order to spend each dollar on the education of its children)[2] still differed. In addition, other determinants of the collective demand for education (such as wealth, income,

1. For reviews of these school finance systems, see texts by Guthrie, Garms, and Pierce 1988, Odden and Picus 2003, and Baker, Green, and Richards in press, and for a comprehensive study of state spending distributions, see Murray, Evans, and Schwab 1998.
2. The tax price is lower than 1 for a district if the state matches the district's spending. For example, if the matching rate is .25 to 1, then for every dollar the district spends on education, the state provides $.25, taxpayers in the district are taxed $.75, and that tax price is .75.

and the taste for education) differed, as did supply factors (such as the difficulty of educating a district's students). District spending was not equalized after all (see Feldstein 1975).

Another surprise followed equalization "California-style," in which tax prices for education were raised very high, thus removing the ability of citizens to pay for their children's schooling through their local districts. This equalization effort resulted in lowering, comparatively, the education dollars provided. Citizens, thwarted in their efforts to direct taxes locally, refused to redistribute all the funds they would have spent under the old system. The pie became more equal, but smaller overall (see Downes 1992; Silva and Sonstelie 1995; and Fischel 1996).

It also became apparent that politics and politicians needed more attention. While legislators changed state financing either in direct response to court cases or in indirect response to the threats of them, the responses of local districts and inflation too often undid the reforms, and many states did not update their systems correspondingly. Other state priorities, such as indigent health care and prison programs, plus periods of recession, made it difficult for legislators to put together continuous support for major changes to state education funding. School finance expertise could go only so far. More political analysis and expertise was required (Carr and Fuhrman 1999, Erlichson and Goertz 2002, and Cooper and Liotta 2004 illustrate examples of such analyses).

But, most important, moving closer to various versions of input equity proved insufficient for achieving the most cherished part of the equal educational opportunity goal, which was to bring about adequate outcomes and ameliorate racial and income achievement gaps. The advent of the National Assessment of Educational Progress (NAEP) allowed us to track nationwide trends in student performance and to see clearly that on average the achievements of low-income, black, and Hispanic students were far below those of their more advantaged classmates. Policies based on rectifying input inequities were inadequate to the task of providing equal educational opportunities.

Thus, the third wave of school finance court cases was based on the concept of adequate outcomes, and once again an incredible deluge of intellectual activity by members of AEFA helped to move these cases along and to fashion remedies.[3] The fruits of this intellectual activity are many. We now have at least four different ways to conceptualize and measure adequate school financing—the successful districts approach (practiced by Augenblick 1997), the professional judgment method (described by Guthrie and Rothstein 1999), econometric analyses based on district cost functions (illustrated by Reschovsky and

3. See *Rose v. Council for Better Education* 1989 or *Campaign for Fiscal Equity v. State* 2001.

Imazeki 2003), and the costing out of comprehensive school designs (advocated by Odden and Bushe 1998). Additionally, there are now more complete cost indices, which include differences in prices of comparable inputs as well as differences in resources needed to bring disadvantaged children up to standards (see Duncombe and Yinger 2005), and there is a return to enthusiasm for the foundation financing system as a way to distribute state funds to local districts. This time, having learned from our work on input equity, we also have a chance to think ahead to ways the systems may respond, to issues that may be overlooked, and to problems that will be spawned if the adequacy movement in education finance is "successful." These include the following six kinds of issues and problems.

First, the production function for education warrants continued attention because having reliable knowledge on how outcomes are "produced" is at the root of successful implementation of any standards-based reform.[4] We need to return to first principles and to draw from the literature on early childhood development and economics (exemplified by Todd and Wolpin 2003). In particular, we know painfully little about the interactions of home and school investments of time and resources—for example, when do they supplant versus complement each other?—and on the role of the student herself in learning.[5] Related to further development of the theory and empirical dimensions of education production functions, we do not routinely perform cost-benefit analyses of specific interventions that seem promising for raising student achievement. If reducing class sizes in very early grades, providing more preschool education, paying teachers according to scarcity of disciplines and difficulty of assignments, imposing more accountability, and changing the structure and organization of schools to make them smaller or to include more or fewer grades all seem to improve outcomes, how far should these changes be carried, and at what cost? What are the marginal benefits and costs?[6]

Second, how can incentives for adopting cost-effective strategies be improved? The previous discussion of production functions presumes that our current K–12 system has few built-in incentives that drive schools and districts to develop and choose cost-effective ways to achieve outcomes on their own. More research is needed on how this system does work—what consumer preferences are for outcomes, how bureaucracies respond, and how incentives can be changed. Is the importance of high school football teams, for example, a reflection of preferences of taxpayers for nonacademic results, or a rational

4. See Monk 1992 for an insightful review through the early 1990s.
5. See Bishop 1996 for some interesting work on this latter topic.
6. Levin and McEwan (2002) provide examples of principles and practices, and Rice and Brent (2002) illustrate examples of good practice.

choice on how best to produce those academic results? If strong rewards for academic outcomes are put into place in school systems but taxpayers want other outcomes, what will happen to the level of public resources devoted to education?

Third, teachers deserve a special place among the inputs. We have not yet learned how they most efficiently influence achievement gains. What are the payoffs of more or different teacher training, more technology for teachers to use, smaller classes, or safer schools? Nor have we learned definitively how incentives and institutions such as unions can and do affect teachers' choices. And we do not know enough about how the actions of schools and districts influence where, how long, and how teachers work, although we do have a large number of talented researchers attending to all these issues.[7]

Fourth, if states begin to provide "adequate" funding to each school district, this will surely be a necessary but not sufficient condition for achieving adequate outcomes for students. One school finance issue for us to study is whether school districts should distribute funds to schools within districts to ensure that the funding is adequate at each school, and, if so, how this can be done. Of course, this line of thinking could continue to even more micro levels—to the classroom or individual student or her family. Some work on school- and student-level costs and formulas has been begun recently, but much more is needed.[8]

Fifth, although students with severe disabilities are included in adequacy standards, it is still unclear how well local districts can effectively provide for them. The financial incentives to provide less than appropriate services for severely disabled, low-incidence students are strong. On the other hand, strict regulatory control and access to courts for enforcement of regulations may favor low-incidence special education spending in ways local residents do not intend, leading either to overprovision or to supplanting of provision for "general education" students. Is it possible that the externalities of appropriate education are more broadly distributed than a local district or even a state and that the financial responsibility should, could, or must be nationwide if services are to be provided fairly and efficiently? Progress in the financing of severely disabled special education needs much analysis for adequacy to succeed.[9]

7. Examples include Hoxby 1996, Theobald and Gritz 1996, Strauss et al. 2000, Ballou and Podgursky 2002, Lankford, Loeb, and Wyckoff 2002, Clotfelter et al. 2004, Plecki and Monk 2003, Roelke and Meyer 2003, Goldhaber, Perry, and Anthony 2005, and Rivkin, Hanushek, and Kain 2005. AQ1
8. See Clark and Toenjes 1997, Betts, Rueben, and Dannenberg 2000, Iatarola and Rubenstein 2001, Roza and Hill 2004, and Rubenstein, Schwartz, and Stiefel 2005.
9. See Lankford and Wyckoff 1996, Parrish, Chambers, and Guarino 1998, and Chaikind 2001, for work on this issue. AQ2

Sixth, we must anticipate and explore the potential unintended consequences of success in adequacy. How would labor markets or higher education institutions be affected if nonmarginal changes in high school completion and/or increases in the quality of high school education were accomplished? Will we begin to see repercussions on performance, behavior in school, or choices of private versus public schools as a result of emphasizing test scores to the exclusion of other academic and nonacademic outcomes? Finally, we should continue to study how longitudinal data on students, teachers, and schools that are now becoming available, partly as a consequence of reporting needs, will affect our abilities to analyze outcomes and to establish proper incentives for students, teachers, principals, and districts (see Hannaway and Chaplin 2005 for recent work).

EDUCATIONAL EFFICIENCY

Issues of educational efficiency also have a long history of informative research by members of AEFA. Some of this work began with studies of input regulations for federal funding aimed at determining whether Title I supplemented rather than supplanted local funds, and at crafting state school aid formulas to ensure that local districts contributed sufficiently to capture external benefits through matching mechanisms or required tax rates. But, again, the need to focus directly on outcomes became clear when *A Nation at Risk* (NCEE 1983) was published and when results from NAEP revealed that there was almost no progress in the 1990s in closing gaps between high- and low-income students and between children of different races.

We are currently in the midst of a response to the lack of progress on narrowing the differences in educational achievement. A great national experiment in accountability is under way; it focuses sharply on outputs and standards and has been stimulated and/or evaluated by many members of AEFA (Ladd 1999; Carnoy and Loeb 2003; Hanushek and Raymond 2005; Harris and Herrington forthcoming). This experiment includes new openness to methods of financing education (through vouchers or tax credits), as well as new means of providing education services (charter schools, virtual schools, home schools, private schools, high schools, and colleges combined), all of which our members are busy studying.[10]

We have learned from past work on equity that unintended consequences may be very important, and we now have similar findings in the area of accountability. Studies have shown that the emphasis on accountability has resulted in inappropriately exempting students, in teachers' cheating, in perniciously

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10. See Bifulco and Ladd, in this issue for example, and Rouse 1998.

teaching to the test, even in feeding students strategically (see Cullen 2003; Jacob and Levitt 2003; Figlio and Winnicki 2005, respectively). Nonetheless, despite the lessons from the past we still find ourselves surprised when, for example, lawmakers adopt accountability systems that do not take into account student and school resources (the production function again) that affect the outputs they hope to improve. Therefore we have accountability systems that focus test scores and their progress but ignore differences in student populations, teachers, and other school resources, thus leading to measures of success that ignore efficiency. In the most recent yearbook AEFA members begin to address alternative ways to measure efficiency, all of which include measure of resources as well as outputs, but these studies need to be supplemented by more work in the area (Stiefel et al. 2005). And we are only at the beginning of providing good cost analyses to accompany the study of the benefits of reforms, although Henry Levin is always reminding us of the importance of such work (as in Levin 2002).

What else might we learn from the past to help us contribute to knowledge on efficiency? We might look for more system responses. For example, different residential patterns could emerge in response to a decoupling of school quality from local school district choice,[11] or more racial and income segregation in schools could appear if an effort is made to bunch low-scoring subgroups of students below a statistically reportable number in all but a few of a district's schools.[12] We might encourage new methods such as general equilibrium simulations; we might find ways to work better with politicians along the lines that we work with lawyers (although the incentives to work with lawyers are high, since we get paid to testify); and we might make sure that we study and analyze ideas that originate from policy makers.

THE FUTURE

This journal represents the public face of a many-headed adviser, one with multiple areas of expertise who has learned a number of important lessons in the thirty years of AEFA. The future holds the promise of learning from hindsight—more attention to response and unintended consequences; more focus on costs as well as benefits; multiple viewpoints on any issue; more sophistication in analytical techniques; openness to new ways of financing and provision (perhaps making analogies with U.S. higher education, which is so admired worldwide); and, finally, the promise that if we avoid mistakes of the past, we will still surely be surprised by the new issues and problems

11. See Nechyba 2000 for some work on this topic.
12. My coauthors and I have begun such work in Stiefel, Schwartz, and Chellman 2006.

of the future. I am placing my bets, however, that we will not be surprised to read about these new issues right here in *Education Finance and Policy*.

APPENDIX

Just to cover my wager on future issues, I am including in this appendix a "laundry list" of the favorite topics I would love to see written about in these pages. I hope to open the mail every three months and be overwhelmed with a desire to read immediately all the interesting articles that appear.

- The role of race in school finance and education provision: Are some school finance systems implicitly discriminatory, for example? What is the exogenous effect of peers on academic achievement, and in particular, is peers' race relevant? What are the implications for school segregation along racial lines?
- How do private schools (religious and nonsectarian) allocate their funds to functions and programs compared to public schools? Are administrative costs different? Is one "more efficient"?
- How does capital spending affect academic achievement? How about art, music, or physical education?
- What are the benefits and costs of different ways to provide or finance education: home schooling, virtual schooling, schooling in schools of various sizes and grade configurations?
- What are the most cost-effective ways to provide equal opportunity at the college and university level? What is the role of community colleges, of financial aid, of accountability in K–12, of how K–12 is organized, especially at the high school level? Do we need attention paid to gender imbalances along with racial and income imbalances?
- What can we learn from other countries with distinctly different education finance systems or ways of providing education services?
- Can we make progress in understanding a problem by drawing on multiple data sources and findings to reflect on different parts of it?[13]

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13. Vigdor 2005 provides an example of this method.

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Queries

AQ1. 2005 per reference list; OK, or should 2004 be used in both places, or is 2005 a different work that should be added?

AQ2. "Parrish" per reference list; OK, or change spelling to "Parish" in both places?

AQ3. There's no Bifulco and Ladd in this issue; add to the reference list an earlier *EFP* work by B & L and cite that work here?