THE EDGEWOOD VOUCHER PROGRAM: SOME PRELIMINARY FINDINGS

John Merrifield

In 1998, a unique voucher program began in the Edgewood District of San Antonio, Texas. Unlike the other privately funded programs, the Children's Education Opportunity (CEO) Foundation will pay the full tuition of virtually every nearby private school. Unlike the other U.S. voucher programs, nearly every student is eligible. As a result, the program could significantly raise private schools' market share. The stakes are high. Since nearly 80 percent of the school district's funding comes from the state on a per pupil basis, the Edgewood District suffers a large revenue loss per student departure; perhaps more than the cost reduction per student departure (Texas Education Agency). In other words, the marginal cost avoided when a student uses a voucher to enroll in a private school may be less than the per pupil state funding. The unusually high stakes raise the probability that the voucher program will prompt changes in district policies, either because of competitive pressures or budget cuts.

Unlike other U.S. voucher programs, the Edgewood program establishes the nearly universal choice that is a key element of the genuine competition that virtually everyone agrees would significantly alter the K–12 education system. This article compares the Edgewood program to a competitive education system with low entry barriers, market-determined prices, and a critical mass of informed, mobile consumers, and to the other U.S. cities with prominent voucher programs. In addition, it identifies key issues for further research and tentatively assesses some of the program's early results.

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¹For a discussion of other U.S. voucher programs, see McGroarty (1996a, 1996b), Lamdin and Mintrom (1997), Heritage Foundation (2000), Viteritti (2000), Merrifield (2001), and Moe (2001).

²See Dougherty and Becker (1995) for econometric estimates of the average cost savings per pupil lost to private schools.

Background

In 1955, and again, more prominently in 1962, Nobel Laureate Milton Friedman urged policymakers to allocate government funding of K-12 education through a universal voucher program. He argued that the profit motive and the resulting competition would invigorate schooling practices. With the surging civil rights movement and the 1957 launch of the Soviet Union's Sputnik satellite, which highlighted the woeful science and math skills of U.S. high school graduates. Friedman's reform proposal drew considerable attention. The strongly worded 1983 Nation at Risk report (National Commission 1983), and disappointment with previous reform efforts, provided an additional surge of interest. The voucher idea appealed to conservatives eager to scale back the size of government and "liberals" concerned about the especially serious plight of children from lowincome families (Jencks 1966; Singal 1991; Viteritti 1999: 55). But it was not enough to prompt the implementation of even highly restrictive, distant cousins of Friedman's proposal until 1990 when Milwaukee offered vouchers to approximately 1,000 low-income families.

Additional distant cousins now exist in Cleveland, Florida, and Colorado, and in various cities through private funding. Because those programs cap participation at a tiny fraction of the student population, they can only transfer a few children among existing schools within a little changed school system. Commentators, including many academic scholars and prominent school choice advocates, frequently overlook that critical limitation and hype even modest escape-hatch programs as insightful experiments (Merrifield 2001: chap. 3).

Milwaukee and Cleveland have the oldest publicly funded voucher programs. Both programs limit participation to a small fraction of the city's low-income families. For example, starting with Milwaukee's 1998–99 program expansion, the maximum number of vouchers rose to 15 percent of enrollment, still far below the number of low-income families. The expansion added church-run schools to the eligible schools, but the demand for private school seats still exceeds the supply. The Milwaukee program contains other competition-killing rules. Private schools cannot cash vouchers unless they accept them as full payment. In other words, the law bans private co-payments. The effect is the equivalent of price controls. Since taxpayers support public school users at nearly twice the level of a voucher user, the co-payment ban also ensures that private schools must operate with a major funding disadvantage. In the 2002–03 school year, the Milwaukee Public Schools spent \$10,228 per child, while vouchers were

worth up to \$5,783 (American Education Reform Council 2003). During the years the widely known studies were under way, schools could not start up just to serve voucher users. Each private school had to enroll mostly non-voucher students. Still, many prominent choice advocates said the alleged experiments would tell us whether any voucher program, even parental choice in general, would work. Such assertions mistakenly assume that even restriction-laden programs would unleash market forces, or that school choice programs would have the same general effects whether market forces were present or not (Peterson 1997; Shlaes 1998; Wall Street Journal 1998, 2000). The vast majority of remaining school choice advocates did not publicly object to the misleading rhetoric.

Those restriction-laden programs were vulnerable to criticism no matter what the test score data said about the voucher users. School choice opponents said parental choice was a "failed reform" whenever the voucher users did not appear to achieve test scores well above the scores of the unsuccessful voucher applicants. When voucher users did achieve statistically significant gains, choice opponents said it didn't matter because the programs only affected a fraction of the student population.³

Florida's program allows only low-income families to use vouchers, and only after their children endure a low-performing public school for at least two years. A public school earns the low-performing label by getting a failing grade in two of four consecutive years. Like the Milwaukee program, the Florida vouchers are worth about half the sum that supports each public school user, and private schools must accept them as full payment. In Florida, tax dollars support a preferred private alternative only after the government formally certifies its own failure and only if the private alternative seems likely to do better with only half the money spent at the failed public school.

The original Friedman proposal demonstrates that voucher programs are not necessarily limited to a fraction of the students (see Friedman 1955, 1962, 1998). But few, if any, analysts acknowledge that. Opposition to broader programs and school choice advocates' propensity to support restriction-laden programs are the reasons why so few students participate in the publicly funded voucher programs.

³See Carnegie Foundation (1992); Economic Policy Institute (1993); TSTA/NEA (1994); Elmore, Orfield, and Fuller (1995); Smith and Meier (1995); Sanchez (1997); and Drury (2000)

The Unique Edgewood Program

The Edgewood program makes that district's school system America's most competitive K–12 education market. Only low-income families are eligible, but there is no numerical cap. Nearly 100 percent of the district's residents qualify, so it is a nearly universal voucher program. However, there are still noteworthy limitations: possible program expiration in 2008 is a potentially significant entry barrier; low-income eligibility will probably limit product differentiation and price movement effects; and the public schools still have a large funding advantage.

In the year before the voucher program began (1997–98), taxpayers spent \$5,820 per Edgewood public school child. In 1998, a voucher was worth up to \$4,000.⁴ In 2001–02, Edgewood spent \$6,729 per child, and the largest voucher was worth \$4,700. Private schools can charge voucher users more than the voucher amount. Unlike the private schools in Milwaukee and Florida, Edgewood private schools do not have to accept a voucher as full payment. But the low-income eligibility criterion will diminish the propensity to co-pay—that is, to supplement the voucher funds with private funds. So, while allowing such parental co-payments means that market forces will set prices, the low-income eligibility criterion may substantially muffle the price movement effects that are a key element of a competitive education industry.

In 2002–03, Midway through CEO's 10-year commitment, there were 1,935 voucher users, a 14.4 percent increase over 2001–02.⁵ Since more than 96 percent of the 13,435 students enrolled in Edgewood schools in 2001–02 qualified for vouchers, there is still considerable room for growth in the private sector (Texas Education Agency 2002). And there are good reasons to expect more voucher applicants. According to CEO (1999), "The idea of school choice was totally foreign to many parents—not believing that they could now choose the school that was best for their children." Use of the term "scholarship" in place of the term "voucher" confuses many parents. It suggests that children must meet a demanding academic standard. Many parents will not examine the program until they hear about it from their neighbors.

⁴Private schools located inside the Edgewood District and new schools receive \$3,600 for a K–8 student and \$4,000 for a Grade 9–12 child. At the time the program went into effect, there were only four private schools in the district. Private schools located outside the Edgewood District when the program began receive \$2,000 for a K–8 student and \$3,500 for a Grade 9–12 child.

⁵Personal communication with the CEO Horizon office, February 11, 2003.

Research Issues and Preliminary Evidence

Previous voucher studies meticulously compared voucher users with unsuccessful applicants—an approach that virtually assumed that the voucher program would not significantly change the school system. Mathematica Policy Research of Princeton, New Jersey, the firm CEO hired to document the Edgewood results, produced many of the early voucher studies. The assumption of no system change was more appropriate for the small, restriction-laden programs studied to date, but still dubious in light of later findings that public school users benefited (Hoxby 2001). Edgewood's nearly universal vouchers are more likely to significantly affect non-voucher users. Certainly, Mathematica's studies will continue to clearly establish whether academic gains reflected by improved test scores are among the benefits that persuade parents to request a voucher, but more is needed.

The Edgewood voucher program is a windfall for Texas's remaining school districts. In 2001–02, each Edgewood school departure gave the state \$5,518 to spend on the state's other public schools (Texas Education Agency 2001). Nearly all of the remaining \$1,211 of the district's 2001–02 per pupil revenue of \$6,729 comes from property taxes levied on homes and businesses located in the district.

Within the Edgewood district, the departures to private schools, with possibly more to come, suggest a number of potential effects. Whether the transfers financially help or hurt the district depends on the difference between avoided marginal cost and the state funding lost when a student enrolls in a private school, and how district leaders adjust to the enrollment losses. Edgewood officials and school choice opponents, generally, said that high fixed costs would cause the state funding loss to be much larger than the avoided marginal cost. Dougherty and Becker (1995), in their econometric analysis of data for all Texas school districts, found that avoided marginal cost was more than 80 percent of the average cost, but they note that the actual savings depend on how many children leave. The departure of one student saves the district almost nothing, but reduces the district's funding. A large number of departures would allow the district to reap substantial savings by cutting teaching positions and possibly closing some schools.

District responses may go beyond the effects of improved or degraded finances. Mark Walsh of *Education Week* said that the voucher program was making the district change its policies: "Though district officials in Edgewood are loath to admit it, the voucher program appears to have shaken them out of complacency and motivated them to respond in concrete ways" (Walsh 1999: 46). However,

Walsh cited no changes in instructional practices, and Hess (2002) found "little evidence of substantive educational response." Walsh (1999) cited the funding of a \$120,000 management study, but the district showed no interest in CEO's offer to pay for a consultant to help the district answer the competitive challenge. At the time of Walsh's article, the only other responses were political action, marketing, and public relations. The more recent findings of Hess (2002) are similar.

However, the preliminary evidence suggests that district students may have benefited from rivalry for students, reduced class sizes that resulted from the district's refusal to adjust staff to enrollment losses, and causes too subtle for Hess (2002) or Walsh (1999) to detect. Indeed, the voucher program benefits suggested by the comparison of Texas school district test score gains (Greene and Forster 2002) need to be traced to their source so that others can copy the relevant practices.

Voucher opponents also argued that district students would suffer from the loss of their most proficient classmates, but cited no evidence that the voucher users were the district's best students (CEO 1999). An actual comparison of voucher users and Edgewood peers did not find significant differences (Mathematica 1999). Indeed, the academic level of some voucher users was so bad that remedial programs were not enough to enable them to cope with the private school curriculum. They had to return to their assigned Edgewood public school, an effect that voucher opponents said was an indication of parental dissatisfaction with the private schools and the voucher program (CEO 1999). Still, the fact that many voucher users were in desperate need of academic improvement does not rule out what researchers usually term negative peer effects. The classmates they left behind might have been even less proficient. Even the preliminary evidence that district students benefited does not rule out negative peer effects. Negative peer effects may have reduced apparent gains that resulted from still unidentified achievement-boosting agents. This volatile political issue needs more attention.

Peer effects in private schools that accept voucher users are also potentially important impact issues. The arrival of academically deficient voucher students can harm non-voucher private school users by prompting curriculum adjustments, creating disciplinary distractions, and increasing class size. Large adverse effects would force private schools to bar voucher users, but smaller effects might not. The combined effect of small academic losses by many non-voucher private school users could exceed the gains of the voucher users.

The new private schools are mostly small enterprises located in

converted rental space. Major expansions and new school construction apparently cost more than what can be charged—the voucher amount plus whatever co-payment schools request. The Edgewood area's largest new school opened with assistance from private donors, including supporters of the voucher program (Hess 2002). The older schools filled up and some have undergone modest expansions. Those facts suggest two possible financial situations: (1) the private school marginal cost typically exceeds the voucher amount plus the copayment, but church-run schools are willing to extend subsidies to a limited number of additional children; (2) major expansions cost more than what private schools can charge, but strategies like filling empty seats in existing classrooms, making modest expansions, and converting vacant commercial space into small schools cost less than what they can charge. Another critical factor in private-sector behavior is that voucher funding is certain only through 2007–08. Businesses may limit capital outlays to items that will pay for themselves by then.

Findings From a Quasi-Experimental Approach

Despite their long history, quasi-experimental approaches are not widely used by social scientists. I use it to generate some preliminary findings from the Edgewood data, but the primary point of this section is to demonstrate that a quasi-experimental approach is an additional source of evidence, or an alternative to the econometric approach most widely used to document cause-effect relationships. The quasi-experimental approach addresses the often-serious limitations of the econometric approach (Heckman and Smith 1995), including demanding assumptions, data deficiencies, and potential model specification error. For example, the control variables may not account for all of the achievement-impacting factors present in 1,041 Texas school districts, and the Edgewood program may have influenced some of the other districts in the statewide data set of the Greene and Forster (2002) econometric analysis. Edgewood is part of a 15-district county. The media attention generated by the voucher program may have prompted changes in adjacent school districts. And since Edgewood contained only four private schools in the 1998–99 school year, many voucher users attend private schools outside the Edgewood District. Therefore, the voucher program may have produced potentially important private-sector effects in adjacent districts. Because

⁶See Bondonio (2002), Isserman and Merrifield (1982), and Rephann and Isserman (1994) for social science demonstrations of quasi-experimental approaches.

the quasi-experimental approach entails a straightforward comparison of similar entities, quasi-experimental results are also more accessible to lay people than jargon-laden discussions of econometric results.

Instead of attempting to econometrically divide the cause of differences between diverse school districts into separate categories, a quasi-experimental approach limits comparisons to districts that were very similar until vouchers arose in Edgewood. The quasi-experimental approach begins with a mixture of descriptive statistics and judgment to identify the school districts that most closely resembled Edgewood before the initiation of the voucher program and are unlikely to be influenced by it. I used test scores, socioeconomic characteristics, budget, distance from the international border, and distance from Edgewood to pick a six-district control group that is unaffected by a nearly universal voucher program. Differences between the place affected by the voucher program and the control group define the effects of the program. Unlike an experimental approach, however, the quasi-experimental control group is not the result of random assignment. The interpretation of results must take into account any differences that existed before the introduction of the factor being studied.

Table 1 contains the Edgewood District data and the control group range. Comparisons of 1994–95 and 1997–98 data indicate that the data trends were similar. The key factor is that all seven districts have a high percentage of economically disadvantaged, nonwhite students. The pre-voucher program similarity of the seven districts underpins the key assumption of the analysis that the voucher program will be responsible for any significant changes in the small remaining 1997–98 differences. During the last year prior to the initiation of the voucher program, the Edgewood district had a slightly higher percent of economically disadvantaged students than any control group member, but also slightly more money per student than any of the control group members. Crystal City, the only district not located in a major urban area, is still in the control group because its percent nonwhite and economically disadvantaged were closest to the Edgewood numbers.

A striking feature in Table 1 is that the gains in the percentage of Edgewood students passing the Texas Assessment of Academic Skills exams administered at several grade levels between 1997–98 and 2000–01 were not matched by similar improvements in ACT scores (one of the two college entrance exams). A narrow focus on TAAS items (minimum skill criteria) apparently does not translate into increased competency on more demanding exams like those that aim to measure readiness for higher education. Though typically not as many

EDGEWOOD DISTRICT KEY FEATURES AND CONTROL GROUP RANGE TABLE 1

	1994–95	1997–98	1998–99	1999–2000	2001-01	2001-02
No. of students	14,547	14,142	13,323	12,982	12,983	13,435
% White	2.0	2.0	2.0	2.0	1.0	1.2
Control group range	1.0 - 26	1.0 - 23	1.0 - 22	1.0-20	1.0-20	1.3 - 18.8
% econom disadv	93.2	90.3	95.7	94.6	92.6	96.3
Control group range	47.8 - 91.0	73.8–88.4	71.1–87.5	69.5 - 88.9	68.7 - 91.1	68.7 - 90.4
% passing all TAAS	37.9	62.0	70.2	74.5	76.3	79.8
Control group range	31.5 - 40.7	54.7 - 71.0	52.8 - 74.9	50.6 - 77.3	58.4-77.3	66.7 - 81.8
Mean composite ACT	17.1	16.3	16.3	16.9	16.2	1
Control group range	15.8 - 18.6	14.7 - 18.1	16.7 - 18.5	16.0 - 18.5	14.6 - 18.3	1
Students/teacher	14.4	14.8	14.5	13.6	14.4	16.3
Control group range	13.6 - 17.2	13.5 - 18.9	13.3 - 19.7	13.1 - 17.7	13.6 - 17.9	13.8 - 15.3
Taxable value/pupil	\$34,363	\$31,024	\$34,209	\$35,929	\$37,928	\$38,150
Control group range ^a	\$40-191	\$38-192	\$38-186	\$39-174	\$41-194	\$45–227
State aid/pupil	\$4,403	\$4,596	\$4,554	\$5,257	\$5,242	\$5,518
Control group range	\$1.4-3.8	\$1.5-4.5	\$1.7-4.6	\$2.3-5.1	\$2.2-5.7	\$2.4-5.5
Total revenue/pupil	\$5,788	\$5,820	\$6,188	\$6,736	\$6,676	\$6,729
Control group range	\$4.9-5.6	\$4.9–5.7	\$4.9–6.3	\$5.6-7.1	\$6.0-7.1	\$6.3-7.3
Total oprting exp/pupil	\$5,673	\$5,551	\$5,802	\$6,356	\$6,279	\$6,189
Control group range	\$4.5–5.4	\$4.6–5.3	\$4.6–6.0	\$5.4 - \$6.6	\$5.7–6.6	\$6.1-6.8

 $^{\rm a} Control$ group dollar ranges are in thousands of dollars. Source: Texas Educational Agency (2000).

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students take the ACT exam as the rival SAT, the ACT data were included because the SAT underwent some changes during the 1990s that complicate comparisons over time.

In terms of the TAAS minimum skills test, data from the voucher program's first year are moderately encouraging. Edgewood's 8.2 percentage point rise in the TAAS pass rate from 1997–98 to the 1998–99 school year (Table 2) is the second largest rise among the seven districts. Crystal City, Port Arthur, and Robstown enjoyed smaller increases, while Wilmer-Hutchins and West Oso suffered pass rate declines. Waco, the control group member with the smallest percentage of nonwhite students, but not the least economically disadvantaged, enjoyed the largest gains. Though Edgewood was the most economically disadvantaged of the seven districts, Waco's 8.5 percentage point gain only barely eclipsed Edgewood's 8.2 percentage point gain. Among the five districts that registered first year TAAS gains, only Crystal City and Edgewood did not register contradictory declines in the ACT score. Wilmer-Hutchins and West Oso, the two districts that registered a first year TAAS decline, enjoyed large ACT gains.

The more recent Edgewood TAAS gains were smaller than the 1997–98 to 1998–99 gains. The ACT scores rose from 1998–99 to 1999–2000, but fell again in 2001 (Table 1). The 2002 ACT scores are not available yet. None of the recent scores topped the 1994–95 ACT score of 17.1. Edgewood's 1997–2002 steady TAAS gains were comparable to TAAS gains seen in Crystal City, Port Arthur, and Waco, and significantly better than the gains recorded in Robstown, Wilmer Hutchins, and West Oso. All but West Oso saw 1997–2001 ACT declines.

The quasi-experimental results are consistent with the Greene and Forster (2002) econometric findings. Edgewood appears to be slightly outperforming the average TAAS gains of similar school districts. The next section discusses how to interpret and not interpret econometric and quasi-experimental findings.

Data Interpretation

Deciding what the empirical evidence means could be a much tougher task than resolving model-specification issues or deciding which data to seek. Given the controversy that surrounds even the smallest voucher program, misleading or incomplete reports could have a devastating impact on the direction and effectiveness of school choice efforts. To see how inappropriate perceptions of parental

CHANGES IN TEXT SCORES: EDGEWOOD DISTRICT SCHOOLS AND CONTROL GROUP RANGE TABLE 2

	1994–98	1997–99	1997–2001	1997–2002
% Point Change: Passing all TAAS Control group range	24.1 19.3 to 31.5	8.2 -11.4 to 8.5	12.5 -5.8 to 12.7	17.8 0.5 to 17.4
Composite ACT Control group range	-0.8 -0.5 to 1.0	0.0 -1.3 to 1.4	-0.1 -1.3 to 0.1	

Source: Texas Educational Agency (2000).

choice as an agent of change might arise, consider how the possible research outcomes could be interpreted.

Suppose that after a few more years, credible studies document significant achievement gains by Edgewood's public school students, relative to the six control group districts, by voucher users and by the non-voucher private school users. Such findings would mean that nearly universal parental choice, even with some key shortcomings, creates enough pressure to noticeably improve the school system, including the private sector. But even this rosy scenario raises important concerns. The effects of an Edgewood-like program might be very different in other places. A means test reduces universality and competition much less in Edgewood than it would in most other places. And policymakers may fail to recognize that a less restrictive program would produce significantly better results. For example, the gains of Arizona, Michigan, and Milwaukee public school users most affected by rivalry enhanced by vouchers or charter schools are becoming well known, but the modest size of the gains is not (Hoxby 2001). It would take 10 to 20 years of such gains for the students in those schools to reach achievement levels that are only as bad as nearby suburban public schools. Despite their gains, the Milwaukee public schools only barely averted a threatened June 2000 state takeover.

What if the researchers document significant gains for voucher users, but find little change elsewhere, or even that no group of children appears to be better off? Absent convincing summary analyses that blame restrictions, or demonstrate that the data do not allow us to assign blame, opponents of school choice will give their standard answer to the "why" question—namely, "choice does not work." Inability to soundly refute such assertions could adversely affect the political feasibility of parental choice policies for a long time.

It is important to recognize that even if the Edgewood District fails to respond positively to the voucher program, that does not necessarily mean the program is ineffective. Government (public) schools are hard to change. Entrenched interests and long-standing practices cannot be altered overnight. Asked to apply the findings about organizations' typical response to disruptive change to the K–12 system, Christensen (2001: 7) said, "Processes and values in K–12 really do make change virtually impossible in the current context." The Edgewood voucher program's limitations, especially looming expiration in 2008, also undermines the district's incentives to substantially change their policies. If the voucher program cannot overcome the school district's inertia, the research reports must reveal whether too many, or too few, limits on choice were responsible for a failure to achieve significant improvements. Growth, diversification, and improvement

in the private sector, where new schools can readily replace those unable to adapt to change, is an appropriate, sufficient measure of the Edgewood program's effectiveness.

Ineffectiveness would not mean that parental choice is a bad idea. Only compelling evidence of harm to others justifies constraints on freedom. Insignificant effects from genuine competition would only require the authorities to pursue K–12 reform by other means. A general condemnation of parental choice is proper only if credible studies demonstrate that well-informed, competitive behavior was present (new schools opened, others closed, product differentiation occurred, there were flexible prices), and that the dominant effects were harmful.

A Better Choice Experiment?

If studies demonstrate that the Edgewood Program did not harness market forces enough to at least transform and expand the private sector, potential donors must confront an important choice, and gutwrenching tradeoffs. To produce the improved competitive education industry experiment that might yield an authoritative, positive demonstration of market forces in K–12 education, donors would have to concentrate significant resources in a single area. Unless they can commit a large amount of additional money to private vouchers, pursuit of the improved experiment would mean less assistance for children in many areas, and a smaller total number of children receiving tuition help. Both the potential benefits and costs are quite significant.

If the donors that support the various CEO-type privately funded voucher programs should decide to pool their resources to create an improved market experiment, the resulting parental choice must be truly universal. The ability of middle- and upper-income families to make co-payments to supplement vouchers would increase education funding, establish the critical market mechanism of price change, and foster more rapid introduction of innovations and the critical differentiation of education services. To save money without unduly distorting competitive pressures, existing private-school voucher users and the truly wealthy could be temporarily denied vouchers.

Universal choice within an entire average, medium-sized county will produce clearer findings than universal choice in an overwhelmingly low-income neighborhood in a large metropolitan area. Funding constraints will dictate the appropriate size of the universal choice area. Do not call it a pilot program. That makes it sound temporary. A long-term funding commitment is critical for the program to bring

forth something like the investment response to a permanent, publicly funded universal voucher program. Uncertainty about the financial staying power of private donors would still create some differences between the investment response to a privately funded program and the response to a permanent publicly funded universal voucher program.

Conclusion

The Edgewood program is a lifesaver for thousands of children and a fairly good voucher experiment. "Fairly good" means that the Edgewood program might energize the school choice movement or cripple it. If the program is a significant reform catalyst, careful interpretation of the Edgewood results could spark the "wildfire" that Milton Friedman said would spread across the country from the nation's first real demonstration of market forces in K–12 education. But the differences between a "fairly good" experiment and a well-designed experiment may be enough to curb the strong market response that would transform or replace ineffective schools.

This article identified the key research and interpretation issues surrounding various possible outcomes under school choice, including disappointing outcomes. Researchers need to ensure, however, that weak results in certain programs do not create despair about very different, but superficially similar reform proposals.

References

American Education Reform Council (2003) Data from www.AERC/SchoolChoiceinfo.org.

Bondonio, D. (2002) "Evaluating Decentralized Policies." *Evaluation* 8 (1): 101–24.

Carnegie Foundation for the Advancement of Teaching (1992) School Choice: A Special Report. Princeton, N.J.: Carnegie Foundation.

CEO Foundation (1999) A Report on the First Semester of the HORIZON Voucher Program. San Antonio: CEO Foundation.

Christensen, C. (2001) Remarks presented at a conference on "New Schools in Organizational Space." Hamline University, St. Paul, Minn. (October).

Dougherty, J. C.; and Becker, S. L. (1995) An Analysis of Public-Private School Choice in Texas. San Antonio: Texas Public Policy Foundation.

Drury, D. W. (2000) "Vouchers and Student Achievement." *Policy Research* (Summer).

Economic Policy Institute (1993) School Choice: Examining the Evidence. Washington: Economic Policy Institute.

Elmore, R.; Orfield, G.; and Fuller, B. (1995) School Choice: The Cultural

- Logic of Families, the Political Rationality of Institutions. New York: Teachers College Press.
- Friedman, M. (1955) "The Role of Government in Education." In R. Solo (ed.) *Economics and the Public Interest*. New Brunswick, N.J.: Rutgers University Press.
- _____ (1962) Capitalism and Freedom. Chicago: University of Chicago Press.
- _____(1998) "Freedom and School Vouchers." Chronicles (December).
- Greene, J., and Forster, G. (2002) Rising to the Challenge: The Effect of School Choice on Public Schools in Milwaukee and San Antonio. Civic Bulletin no. 27. New York: Manhattan Institute.
- Heckman, J., and Smith, J. (1995) "Assessing the Case for Social Experiments." *Journal of Economic Perspectives* 9 (2): 85–110.
- Heritage Foundation (2000) School Choice 2000 Annual Report. Washington: Heritage Foundation.
- Hess, F. (2002) "Edgewood, 1998–2000: An Outside Invasion." In Hess, Revolution at the Margins, 167–96. Washington: Brookings Institution.
- Hoxby, C. (2000) "Does Competition among Public Schools Benefit Students and Taxpayers?" *American Economic Review* 90 (5): 1209–38.
- _____(2001) "Rising Tide." Education Next (Winter): http://educationnext.org/20014/68.html.
- Isserman, A., and Merrifield, J. (1982) "The Use of Control Groups in Evaluating Regional Economic Policy." Regional Science and Urban Economics 12: 43–58.
- Jencks, C. (1966) "Is the Public School Obsolete?" The Public Interest 2: 18–27.
- Lamdin, D., and Mintrom, M. (1997) "School Choice in Theory and Practice: Taking Stock and Looking Ahead." *Education Economics* 5 (3): 235.
- Mathematica (1999) "San Antonio School Voucher Program Serves Working Poor: Evaluation Finds Little Creaming." *Mathematica Press Release*, 16 September.
- Merrifield, J. (2001) *The School Choice Wars*. Lanham, Md.: Scarecrow Education Press.
- McGroarty, D. (1996a) *Break These Chains*. Rocklin, Calif.: ICS Press, Prima Publishing.
- _____(1996b) "Hope for Milwaukee." Report Card (May-June).
- Moe, T. (2001) Schools, Vouchers, and the American Public. Washington: Brookings Institution.
- National Commission on Excellence in Education (1983) A Nation at Risk: The Imperative for Educational Reform. Washington: Government Printing Office/U.S Department of Education.
- Peterson, P. (1997) "A Report Card on School Choice." Commentary (October): 29–33.
- Rephann, T., and Isserman, A. (1994) "New Highways as Economic Development Tools: An Evaluation Using Quasi-Experimental Control Group Matching Methods." Regional Science and Urban Economics 24 (6): 723–51.

CATO JOURNAL

- Sanchez, R. (1997) "Riley Launches Attack on School Vouchers." Washington Post, 24 September: A6.
- Shlaes, A. (1998) "Voucher Program Passes Its Test." Wall Street Journal, 30 October.
- Singal, D. (1991) "The Other Crisis in American Education." *Atlantic Monthly* (November): 59–74.
- Smith, K., and Meier, K. (1995) *The Case Against School Choice*. New York: M. E. Sharpe.
- Texas Education Agency (2002) Snapshot Report (www.tea.state.tx.us/perfreport/snapshot/2001/index.html).
- TSTA/NEA (1994) Our Public Schools: The Best Choice for Texas. Austin,
- Viteritti, J. P. (1999) Choosing Equality. Washington: Brookings Institution. Wall Street Journal (1998) "Choice Thunderclap." Wall Street Journal, 11 June.
- (2000) "Choice Debate Is Over." Wall Street Journal, 6 April. Walsh, M. (1999) "Ground Zero for Vouchers." Education Week (17 March): 46–51