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Working Paper

The Role of Private Schools in Education Markets

Working Paper, No. 219

Provided in Cooperation with:

George J. Stigler Center for the Study of the Economy and the State, The University of Chicago Booth School of Business

Suggested Citation: Neal, Derek A. (2007) : The Role of Private Schools in Education Markets, Working Paper, No. 219, The University of Chicago, George J. Stigler Center for the Study of the Economy and the State, Chicago, IL

This Version is available at:

<https://hdl.handle.net/10419/262621>

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Working Paper No. 219

**“The Role of Private Schools in Education
Markets”**

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**George J. Stigler Center for the Study
of
the Economy and the State**

The University of Chicago

The Role of Private Schools in Education Markets

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October, 2007

This is a draft version of a chapter for the Handbook of Research on School Choice. I thank Garrett Hagemann for excellent research assistance. I thank the Seale Freedom Trust and the George J. Stigler Center for the Study of the Economy and the State for research support. I also thank Lindy and Michael Keiser for their support through a gift to the University of Chicago's Committee on Education.

For more than two decades, social scientists have been debating empirical evidence concerning the benefits that students receive from access to private schools as alternatives to public schools. This literature grew rapidly following a 1981 report to the National Center for Educational Statistics. James Coleman and several colleagues argued in *Public and Private High Schools* that the achievement of students enrolled in private high schools relative to observationally similar students enrolled in public schools constituted evidence that private schools are superior organizations in terms of their efficiency in fostering academic achievement. This report ignited intense debate and also spawned a large literature on the effects of private schooling.¹

In this chapter, I will review key results from this large literature, but I aim to provide more than a summary of effect sizes and p values. Rather, I hope to use the existing empirical literature to frame and inform a discussion of the roles that private schools currently play in the market for education and the roles that private schools could play given different education policies. I will devote most of my attention to the market for education in the United States, but I also draw on studies from other countries when addressing questions that are difficult if not impossible to address given data from the United States.

In the United States, family decisions concerning where to live and where children attend school are closely linked. In many instances, residential choice dictates which public school is available to children of a given age, and in all cases, residential choice dictates the menu of public schools and associated travel costs that a family faces.

¹ See Heckman and Neal (1996) and Neal (1998) for more on the original debate over the report.

Thus, if we take as given the location of a family in a large metropolitan area, we can think of a family choosing to live in one of N locations and also choosing to send their child to one of K possible schools, of which J are public and $K-J$ are private. Given their income and choice of school and residence, a given family will have a certain amount of income available for consumption. This amount will be determined by the price of land in their neighborhood and the tuition charged by their school if they attend a private school.

To make things simple, assume that each family has only one child. If we assume that parents care about the human capital their child acquires at school, h , the family's consumption, c , and other services provide by their child's school, s , then it is natural to think of families jointly choosing a location and a school to maximize a family utility function, $U(c, h, s)$. To be clear, s is a vector that describes the all non-academic aspects of the school. School decisions concerning sports programs, music and arts programs, religious instruction, conduct policies, safety, and numerous other aspects of school life affect s .

Keeping this framework in mind, realize that most of the empirical literature on private schools is attempting to answer a question like the following:

Consider a family that (for some reason) decides to send their child to a private school instead of the public school that their child would have otherwise attended. How does this decision affect their child's human capital, h ?

I argue that the answer to this question typically hinges on details surrounding the phrase "for some reason." Because the decision to buy a home or pay rent in a given neighborhood is often a simultaneous decision to purchase the right to send one's child to a nearby public school, inter-neighborhood variation in property taxes, real estate prices and rents reflect inter-neighborhood variation in public school quality. Thus, for any given family with a child in private school, their best option in the public sector might involve less c and more h or more c and less h depending on their preferences and their options in the public sector. It is possible that if they moved to the optimal public school attendance zone for their family, they would enjoy even better academic services from an excellent public school but also face an increase in the cost of land that would swamp any savings associated with not having to pay private school tuition. On the other hand, families with low incomes may not be able to purchase housing in any of the attendance zones that provide access to even decent public schools. These families would live in relatively inexpensive neighborhoods, and for them, the choice of private schooling involves an increase in h but a clear decline in c .

There are yet other families who chose private schools primarily because of s . These families may place high value on the religious instruction, sports programs, arts programs, or moral instruction offered by a particular private school, and these families may chose private schools knowing that they are sacrificing h , c , or both h and c for a vector s that better fits their preferences.

The key point here is that the change in h associated with attending any private school is directly a function of the h that a child would enjoy in the public school that her family would chose in the absence of private school options, and the nature of this

hypothetical public school varies among families who have different incomes and different priorities and who face different implicit costs of accessing good public schools. In any given area, the distribution of family income interacts with the menu of costs associated with attending public schools of varying educational qualities to determine the distribution of potential gains from greater access to private schools, and these costs take many forms. The cost of housing near the best public schools can be prohibitive for many families, and even in districts with open enrollment, the time and money costs required to commute to these schools from other locations can be quite onerous. In addition, many public magnet schools explicitly ration admission based on the previous achievement of students, and these policies likely increase the advantage that wealthy and well-educated parents already enjoy in their efforts to gain access to quality public schools.

There is no "effect" or set of "effects" associated with access to private schools because families vary greatly in terms of the private schools and public schools that they view as their best options within each sector, and while it is obvious that not all private schools are the same, available data suggest that the public schools different families choose for their children are incredibly heterogenous as well. Although Coleman et al (1981) gave birth to a large literature by boldly claiming the general superiority of private schools, scholars have found the most persuasive evidence of important gains from access to private schools among minority youth who live in cities. Neal (1997) first argued that urban minorities gain the most from access to Catholic secondary schools, in large part, because they face the worst schooling options in the public sector. In the decade since, other studies have found evidence of gains from private schooling among

minority youth in large cities, especially Black children in large cities, but the same literature has produced limited evidence that other groups benefit academically from greater access to existing private schools.

In the balance of this chapter, I review the empirical evidence on effects of private schooling. Then, I discuss the potential effects of various proposals for expanding access to private schools through vouchers or other means of providing public funds that subsidize the operation of private schools. Here, I discuss evidence from other countries that have adopted such policies on large scales. Finally, I compare what one might expect from policies that expand public support for private schools versus policies that further expand the role of test-based accountability systems like No Child Left Behind.

1) Empirical Literature on Private School Effects

a) Experimental Evidence

During the last fifteen years, many researchers have conducted evaluations of experiments involving private schools. These experiments usually involve a voucher program funded by either a private foundation or a state government. Typically, the demand for the vouchers greatly exceeds the supply, and vouchers are allocated by lottery. Thus, researchers are able to measure the effects of being given a voucher, among those who apply, using standard methods for comparing treatment and control outcomes in clinical trials.²

² Angrist et al (2002) evaluate a voucher experiment in Columbia and find that access to voucher schools does generate some improvements in achievement. In this chapter, I focus on results from the United States and other developed countries.

Here, I discuss results from several of these experiments. It is worth noting at the outset that all these experiments involve students in cities, and a majority of voucher recipients in these experiments are minority students. Thus, these experiments tell us nothing directly about the relative value of access to private schools for students in cities versus students in suburbs or small towns, and these experiments provide limited information about differential benefits from private schooling by race among students within cities, since they provide limited information about the experience of white students. However, the fact that these experiments were targeted to economically disadvantaged students in cities is evidence that many who work on education policy believe that urban minorities are in greatest need of alternatives to their local public schools.

Howell and Peterson's (2002) book, *The Education Gap: Vouchers and Urban Schools*, contains the most well known results on voucher use by elementary school children. Howell and Peterson describe results from three privately funded voucher experiments in Dayton, OH, New York City, and Washington, DC. In each city, they follow students who received a voucher as part of a privately funded program and a group of students who applied for a voucher and did not receive them. For the purposes of the experimental evaluation, the programs assigned vouchers by lottery among the families that applied and met eligibility requirements based on need and residence.

Howell and Peterson devote most of their attention to analyses that pool results among the three cities, and they use a composite measure of math and reading as their achievement outcome. Howell and Peterson use whether or not families received a voucher to predict private school attendance, and they estimate the test score gains from

attending private schools using the variation in sector choice induced by the voucher awards. They find significant average gains from private schooling among Black students but no statistically significant effects of private school attendance among whites or Hispanics. Their estimate of the overall average gain from private schooling among Black students implies that private schooling generates a .3 standard deviation increase in achievement over three years. Reardon (2007) explains that, although researchers commonly compare effect sizes from different assessments by simply transforming scores into standard deviation units, results from this procedure can be sensitive to the scales used to report scores in various studies, and thus, comparisons between the Howell and Peterson results and other results in the educational achievement literature must be made with caution. Nonetheless, Howell and Peterson correctly argue that this .3 standard deviation effect is a noteworthy gain.

Several details concerning the Howell and Peterson results deserve attention. To begin, the results are not that stable when Howell and Peterson divide the sample by city or grade level, and their estimates of gains from private schooling among Black students within individual cities are only significant for New York City. It is impossible to know exactly what to make of these patterns. They could signal that returns from private schooling are quite heterogenous and that a collection of favorable outcomes just happened to be clustered in New York, or they could imply that changes in test scores are noisy measures of changes in real achievement, and it may take large samples to measure private school achievement gains precisely. Further, there are different patterns of attrition in the treatment and control samples. The main reason to show up for follow-up interviews and testing among control group families is the promise of eligibility for

future vouchers. Thus, those who find a new public school that serves them well have less incentive to show up for future rounds of interviews. The opposite is true among the treatment families. Those who are thriving in a new private school have a strong incentive to participate in the study so they can keep their voucher. Over time, these factors could generate a measured gain from private schooling in the remaining samples even if private schooling yields an average gain of zero among those who applied for a voucher. Finally, Alan Krueger (2004) argues that even the results among Black students in New York are not robust to reasonable changes in the rules used to decide which families are Black as opposed to Hispanic.

While Howell and Peterson found considerable but not definitive evidence that private schools raised achievement among participants in the urban vouchers experiments, they report overwhelming evidence that parents who use vouchers to attend a private school do enjoy a striking increase in overall satisfaction with their child's school. This may not be shocking given that both the treatment and control samples in these experiments involve families whose applications for vouchers signal discontent with their public school options. However, the effect is not short-lived. While some voucher recipients eventually leave the private school they choose and return to the public system, and some families in the control group find better options in the public sector, winning the voucher lottery is associated with important increases in parental satisfaction three years into the program. Further, voucher recipients are not only more satisfied with their schools than public school families who applied for and did not receive vouchers, voucher families are more satisfied with their schools than public school families generally.

The Howell and Peterson results concerning satisfaction are an important part of a consistent pattern of similar results found in other cities. As they note, evaluations of voucher programs in both Cleveland and Milwaukee generated similar results concerning parental satisfaction. There is now clear evidence that, when economically disadvantaged families in cities use vouchers to send their children to private schools, they are usually quite satisfied with the overall experience of their children ex post. Vouchers permit these families to find schools outside the public system that work relatively well for them.³

The Milwaukee Parental Choice Program is a voucher program funded by the state of Wisconsin. It began in 1990 and provides a limited number of vouchers to low-income families. Most of the participants in the Milwaukee program are Black, and the dollar value of vouchers used in the program was less than half of the per-pupil spending level in Milwaukee public schools. Further, in the years of the program that produced data for evaluation, only secular private schools were allowed to receive vouchers. This is important because, nationally, a significant fraction of the private schools that serve disadvantaged students in cities are Catholic schools.

A number of studies have evaluated the test score outcomes of students in Milwaukee and reached different conclusions concerning the benefits of access to private schooling in Milwaukee.⁴ Rouse (1998) provides the most complete and careful summary of the patterns present in the data. She concludes that the program did generate clear gains for voucher students in math but not in reading.

³ See Howell and Peterson (2002) pages 178-184.

⁴ The primary participants in this debate were John F. Witte and Jay P. Greene. Rouse (1998) reviews their work with various co-authors and provides independent analyses as well.

The Center for Evaluation and Education Policy at Indiana University has conducted ongoing evaluations of a similar voucher program in Cleveland that is funded by the state of Ohio. The Center's most recent evaluation of the Cleveland Scholarship and Tutoring Program⁵ found some evidence of achievement gains among voucher recipients who attended private schools, but these gains appeared in only some subjects, and there is no clear pattern of superior academic performance among those using vouchers to attend private schools.

b) Non-experimental Evidence

Most of the non-experimental literature on the effects of private schooling deals with outcomes for high school students. Three data sets provide the data used in most studies. The High School and Beyond Survey of 1980 (HSB80) followed students through adolescence and young adulthood. Field workers first interviewed these students in 1980 when they were in either 10th or 12th grade. The National Educational Longitudinal Study of 1988 (NELS88) followed students into high school and after who were in eighth grade in 1988. Both HSB80 and NELS88 are useful in studies of the effects of private schooling because they provide test scores for students at multiple points in time. The National Longitudinal Survey of Youth - 1979 (NLSY79) is a panel data source that focuses more on labor market outcomes and does not include multiple observations of subject-specific achievement scores for individual respondents. It

⁵ See Center for Evaluation and Education Policy (2006).

follows a cohort of young persons from 1979 forward. Members of this cohort were born between 1957 and 1964.

Here, I review results from the NELS88 study and make comparisons when necessary to the earlier literature. I adopt this approach for three reasons. First, the persons interviewed in the HSB80 and the NLSY79 now range in age from just under 45 to over 50, and the composition of private schools has changed notably since these cohorts attended high school. Thus, the information in these studies concerning the effects of private schooling may be quite dated. Second, the results from the studies that focused on HSB80 and NLSY79 results have been reviewed in summaries of the earlier literature,⁶ and finally, the results from NELS88 are broadly consistent with the results from earlier studies, even though they are based on richer data from a later time period.

The most robust result in the NELS88 data concerns the effect of Catholic secondary schooling on educational attainment. Catholic schools account for a significant share of private secondary schools, especially in cities, and the NELS88 data show that eighth grade students who went on to attend Catholic high schools in cities were more likely to graduate than other eighth grade students with similar grades, conduct records, and eighth grade test scores. Grogger and Neal (2000) report that graduation rates among white students who attend Catholic high schools in cities are roughly 7 percentage points higher than one would expect among observationally similar students in public schools, and the comparable figure among urban minorities who attend Catholic high schools is 18 percentage points. These large attainment gains among urban minorities echo similar results reported in Neal (1997) based on NLSY79 data. Evans

⁶ See Neal (1998) and Neal (2002).

and Schwab (1995) do not consider urban minorities per se, but they do report significant attainment gains from Catholic schooling among urban students as a whole in their analyses of HSB80 data. There is little evidence that Catholic schooling raises graduation rates among suburban students regardless of race.

Grogger and Neal (2000) find that Catholic schooling is associated with an even larger increase in college attendance among minority students in urban high schools, and we also find a significant increase in college attendance among suburban minorities who attend Catholic high schools. The NELS88 data provide only weak evidence of college attendance gains among urban whites in Catholic schools and no evidence that Catholic schooling raises college attendance among suburban whites.

Although the pre-high school controls in the NELS88 are quite rich, it remains possible that students who attend private or Catholic schools are different from their public counterparts in terms of current motivation or some other factor that may create future differences in attainment, even among students who have the same record of past achievement. Some studies have attempted to estimate models of Catholic school effects that control for this potential source of non-random selection into Catholic schools by using measures of Catholic school availability or Catholic religious affiliation as factors that influence the choice of Catholic schooling without directly influencing schooling outcomes. Both Grogger and Neal (2000) and Altonj, Elder, and Taber (2002) raise concerns about attempts to estimate gains from Catholic schooling in the NELS88 data using this approach, and while neither study provides direct evidence that selection bias creates the attainment gains associated with Catholic schooling, they both note that one

cannot rule of the possibility that part of the large attainment effects reported by Grogger and Neal reflect non-random selection into Catholic schools.

Nonetheless, Grogger and Neal (2000) also point out that positive selection into private schools on unmeasured determinants of academic performance is not a certainty. As I note above, many different considerations may drive the choices parents make concerning private versus public schools, and Grogger and Neal (2000) note that the NELS88 data provide no evidence that private schooling enhances attainment or achievement among suburban students who attend the most prestigious private schools. Grogger and Neal (2000) compare white students who attend suburban private schools that belong to the National Association of Independent Schools (NAIS) with observationally similar students in suburban public schools and find no evidence of attainment or achievement gains from private schooling. It is important to note that the students who attend NAIS schools come from relatively wealthy families on average and their parents are well educated. If these students were somehow barred from attending their NAIS schools, it seems reasonable to assume that they would not attend a public school of average quality. It is not clear exactly why these NAIS students chose their private schools, but the NELS88 data show that the choice of an NAIS school by a suburban family is not likely a sign that this family cannot gain access to public schools of decent quality.

The same cannot be said for urban minorities who attend Catholic schools in large cities. Many Catholic schools in large cities explicitly seek to serve disadvantaged communities where public schools function poorly. Further, Neal (1997) points out that public school graduation rates differ little between black and white students of

comparable family backgrounds unless the comparisons are made in large urban areas, where black graduation rates drop sharply relative to those observed among similar whites. The comparison of NAIS effects among suburban whites to Catholic school effects among urban minorities illustrates an important lesson. Differences in the public schools that different groups see as their best or only public school options may be much more important than differences in their private school options as determinants of differences in potential gains from attending private school. NAIS schools typically spend much more per student than urban Catholic schools and enjoy support from much more wealthy families, but the gains that white students receive from attending suburban NAIS schools appear trivial compared to the gains that urban minority students enjoy in Catholic schools. Urban Catholic schools are not superior to other private schools, but they do often serve children who face bleak options in the public sector.

Grogger and Neal (2000) also analyze the effects of attending Catholic secondary schools on twelfth grade achievement scores and find some evidence that Catholic schooling may generate noteworthy increases in math achievement among urban minorities. However, our preferred specification requires strong assumptions that bound the scores of students who dropped out and did not participate in follow-up testing, and our achievement results are not as definitive as our attainment results.⁷

Thus, there is an important parallel to the literature on voucher programs for elementary school families. The literature reviewed in subsection (a) above provides suggestive but not definitive evidence that private elementary schooling raises achievement among urban students, especially Black students, but clear evidence that

⁷ See Altonji, Elder, and Taber (2004) for more on the fragility of estimates of private school achievement effects in the NELS88 data.

families who use vouchers are much happier in their new schools. Likewise, the literature on Catholic secondary schooling provides suggestive evidence that Catholic schooling raises achievement among urban minorities but much stronger evidence that Catholic secondary schools reduce dropout rates and foster educational attainment for these students. It is possible that the increases in attainment associated with Catholic secondary schooling among urban minorities reflect more than decisions to remain in schools where rates of learning are slightly higher. These gains may well reflect a lower psychic cost of schooling that creates greater satisfaction with daily school life. The same feelings of safety and overall satisfaction reported by the parents of elementary school students who use vouchers may create the greater willingness of urban minorities in Catholic high schools to stick with school until graduation.

This line of reasoning highlights a limitation of the simple model of school choice presented in the introduction above. In a setting that is explicitly dynamic, the overall satisfaction of students with their school environment may actually influence the amount of human capital they acquire by affecting the non-pecuniary costs of attending school. Among students who are beyond the age of mandatory schooling, mechanisms that allow students to find schools that they enjoy can enhance human capital accumulation even if students learn at the same rate in all schools.

2) A Greater Role for Parents

As a whole, the existing literature on comparisons of public and private school performance suggests that urban minority students enjoy the most significant gains from access to private schools. Among minority students who attend urban Catholic secondary

schools, something about the improved matches between students and their schools generates much higher graduation rates than would be expected among similar students in urban public schools. Further, urban minorities who gain access to either private elementary or secondary schools appear to learn at the same or slightly higher rates than they would have in public schools. Finally, it is beyond doubt that access to private schools in cities can permit economically disadvantaged families to find schools for their children that are simply a better fit than the schools they would attend in their public school system, and while I did not stress this point above, the private schools in the Milwaukee, Cleveland, Dayton, New York, and Washington experiments as well the Catholic secondary schools that typically serve minority communities in cities spend far less per pupil than their public school neighbors.

Programs which expand access to private schools in cities increase the number of families, especially disadvantaged families, that feel they are satisfied with the overall environment of their child's school, and this increase in school satisfaction does not come at the cost of less learning or higher per-pupil spending. Further, increased school satisfaction may contribute to the lower dropout rates observed among minority teenagers.

Yet, scholars realize that one cannot extrapolate from these results to the outcomes that should be expected if some state or large district adopts a large-scale voucher program. To begin, we cannot rule out the possibility that the gains we observe in the current literature arise simply because a limited number of children are much better suited to a particular private school than their local public school. Thus, the benefits from the current experimental literature may overstate the gains we might expect for most

students who would change schools under a universal voucher system. Further, social scientists do not really understand why urban private schools that serve minority communities, especially Catholic schools, appear to have such success,⁸ and thus, it is impossible to make confident predictions concerning whether or not this success can be replicated on a large scale. On the other hand, these experiments really pose no serious competitive threat to their local public school systems, and it is possible that large-scale voucher systems could have their greatest impact through the effects of real competition on public school performance.⁹

Nonetheless, the rhetoric on both sides of the voucher debate often fails to acknowledge our inability to know exactly how large-scale voucher systems would affect education in the United States. Voucher proponents often make rather bold claims about the promise of vouchers, and opponents of vouchers are quick to rattle off a long list of terrible things that vouchers will create.¹⁰ These lists remind me of a scene in the 1984 movie, *Ghostbusters*, in which the protagonists tell the mayor about all the terrible things that may happen to the city without their help. Their list of potential calamities begins with "Fire and brimstone coming down from the skies," and ends with "human sacrifice, dogs and cats living together - mass hysteria."

I have written elsewhere¹¹ that it is impossible to know exactly what would happen in the United States if a whole state or a large district implemented a voucher program that included all students or at least all students from families below a certain

⁸ Bryk, Lee, and Holland (1993) do describe ethnographic evidence that Catholic schools foster a sense of community, but such hypotheses are difficult to test directly.

⁹ In fact, Hoxby (2002) argues that the Milwaukee program discussed above did improve the performance of public schools that serve disadvantaged populations.

¹⁰ See <http://www.nea.org/vouchers/index.html> as an example.

¹¹ See Neal (2002).

income level, and this is true. However, the greatest hopes and the worst fears about vouchers should be tempered by the fact that several industrialized nations have long operated systems that are functionally equivalent to universal voucher systems, and these systems have neither produced educational utopia or "mass hysteria."

a) The European Experience

In 1991, Sweden adopted a new system of education spending that, in practice if not in name, created a nationwide voucher system. Parents are free to send their children to either public schools or schools run by independent agencies, and as a close approximation, average per-pupil spending follows each student to the school of her choice. Both non-profit and for-profit organizations may operate independent schools and receive government funding, and to date, the inclusion of for-profit schools has not generated the types of misbehavior that many voucher opponents fear. There is no evidence that the for-profit schools are simply taking public funds and not providing quality educational services. Further, the existing empirical literature suggests that public-private performance comparisons in Sweden yield results that echo themes from the literature on small-scale voucher experiments in the United States. The Swedish program appears to serve families by facilitating a more efficient matching of families with schools that share their educational philosophy and opinions about proper pedagogy.¹² However, the existing literature suggests that the achievement gains associated with choosing voucher schools are modest, and to this point, the competitive

¹² See Hepburn and Merrifield (2006).

pressures created by this system have generated only modest improvements in the achievement of public school students.¹³

Some may argue that the design of the Swedish system has constrained the potential effects of the system. The following paragraph from a report by Bergstrom and Blank (2005) illustrates that the Swedish systems fosters a highly regulated form of competition among schools:

“Still, independent schools in Sweden must be approved by the Swedish National Agency for Education and meet certain criteria in order to receive funding. They have to meet the educational standards set up for the school system and must work in line with the targets set for the compulsory educational system. They must also be open to admit all children regardless of their ability, religion or ethnic origin. Last, they are not allowed to charge fees..... Municipalities are allowed to give an opinion on whether they consider the establishment of an independent school to be harmful to existing schools, and the Swedish National Agency for Education takes their views into account.”

Although the Swedish system is much more regulated than the voucher system that Milton Friedman¹⁴ and subsequent advocates of vouchers have envisioned, systems like the Swedish one may be exactly the right reference point when considering the likely effects of large-scale voucher systems in the United States. One of the key rationales for public funding of education is that one citizen benefits from participating in a democracy with other citizens who are well-educated. Thus, it seems only natural that, under any

¹³ See Sandstrom and Bergstrom (2005).

¹⁴ See Friedman (1962).

system of educational finance, interest groups will seek to ensure that public funds for education are restricted to uses that foster the type of education that they view as essential for citizenship. Further, the amount of money that developed nations spend on education is so vast that there are strong incentives for providers of education to engage in rent-seeking activities that limit competition among current schools and deter future entry by new competitors.

Government health insurance programs like Medicare and Medicaid permit individuals to use their benefits at the public or private hospital of their choosing, but government agencies at both the state and federal level regulate many aspects of the market for health care. Government agencies regulate the licensing of doctors and other health care workers, and health care companies or private foundations cannot even open a new hospital without regulatory approval.

It seems fanciful to imagine that a large-scale voucher program in the United States could ever transfer significant resources to schools that are not licensed or inspected by some government agency, and the experience of other Western nations bears this out. Many European countries have educational finance systems that permit private organizations to run publicly funded schools, and the budgets for these schools are linked in some approximately linear way to the numbers of students who choose these schools so that public money flows to schools to both public and private schools on a roughly per-pupil basis. Nonetheless, these systems do not create “free-markets” for education that are simply subsidized by government funds. In these countries, new independent schools cannot open without government approval, and in most cases, independent schools must follow national curricula and submit to inspections and testing administered

by government education agencies. Finally, a majority of these countries require that private schools pay teachers according to the same centrally bargained, pay scales used in public schools.

Table 1 provides a summary of how the public funding of private schools works in a few European countries. While many European countries allow independent schools to receive government funding, these four countries are also examples of countries that also provide some meaningful opportunities for new private schools to entry the market and receive government funding on roughly equal terms with existing public sector schools. Nonetheless, even these countries have chosen “half of a loaf” when it comes to the use of markets in the provision of education. Independent schools in these countries are heavily regulated, and these regulations clearly limit opportunities for innovation as well as the performance pressures created by market competition. At the same time, these regulations limit the possibility that expanded school choice will exacerbate social stratification by ability or class or that public money will be used to fund schools that clearly work against the public interest.¹⁵ The approach in these countries is thus one that introduces a limited form of competition that makes schools responsive to both parents and government.

b) Accountability Systems As Alternatives to Markets

Hayek (1945) famously noted that prices in free markets aggregate information in powerful ways. If it is socially efficient for people in one region to economize on their

¹⁵ In Neal (2002), I point out that vouchers do open the possibility that public funds could be used to run schools that encouraged to students to engage in discrimination or even violence against others.

use of a natural resource because persons in another region have found a new and highly productive use for this resource, no central agency needs to collect information about the relative value of all the different potential uses for the resource and then send out new quotas for resource use in different regions. Rather, competition for the resource induces a rise in the market price, and all potential users of the resource have an increased incentive to economize on its use.

Likewise, one can imagine a competitive market for elementary and secondary schools services, in which, the tuitions at different schools reflect the information that parents have. Schools run by organizations that possess a set of effective practices and talented persons to implement these practices would face excess demand for their schools. In the short term, tuition and teacher salaries at these schools might rise sharply, but over the long-term, the supply of such schools would increase and more talented persons who fit well in these schools would be drawn into the teaching profession. Because European “voucher” systems often bar selective admission procedures, regulate teacher salaries and tuition, and limit new school formation, they also limit the ways that competition can improve efficiency. Nonetheless, the current education policy debate does not center on the question of whether or not independent schools should compete with government schools on roughly equal terms but rather on what these terms should be.

This approach is quite different than the approach taken in the United States. Here, test-based accountability systems have been at the center of state and national reforms plans for almost two decades, and even though these systems are touted as systems that make public schools function more like private businesses, these systems do

not introduce a limited role for markets but simply expand the role of the federal government. Further, these systems are implemented in ways that have no parallel in the private sector.

Accountability systems like the No Child Left Behind Act (NCLB) of 2001 make no use of the information that millions of parents possess concerning the performance of their children's schools. NCLB and other accountability systems reward and punish schools and teachers based almost exclusively on the outcomes of standardized tests. If a school has N students and the NCLB testing system for its state involves assessments in K subjects, the information contained in an N by K matrix of test scores is then collapsed into a single performance index for the school called Adequate Yearly Progress or AYP. I will not explore the tedious details of AYP calculations here because these details are not germane to my point. Whatever the details, schools are being rewarded and punished based on a performance index that incorporates no information from parents and throws away most of the information from the available N by K matrix of test scores.

AYP is the outcome of a political process concerning policies that are enforced by civil servants in government agencies, and thus advocates of education reform demand that AYP be both objective and transparent. However, these two political considerations create a system that no private organization would ever consider implementing. In the early years of the accountability movement, Holmstrom and Milgrom (1991) provided a model of incentive provision and job structuring that explains why so few workers in private firms receive incentive pay that is linked to simple performance statistics like AYP. Most jobs involving skilled workers are complex and involve many tasks. Thus, it is almost impossible to devise personnel policies built around a single performance

measure that simultaneously provide incentives for skilled workers to allocate correct amounts of effort to all the varied tasks in their jobs.

One might say that a teacher's job involves at least N times K tasks because teachers are supposed to foster K different skills in N different students. However, existing empirical work demonstrates that the simple performance metrics used in accountability systems often give teachers strong incentives to ignore certain skills and to ignore certain students. A significant amount of literature demonstrates that test scores rise following the introduction of these systems, in part, because teachers shift their focus away from general subject mastery and toward coaching their students to do well on questions that are similar in format to those on a relevant high-stakes exam¹⁶, and a more recent literature shows that teachers also shift their efforts toward students whose performance is most likely to influence AYP or some other summary performance measure for the school.¹⁷ Thus, the format of exams and the details of how one calculates a single performance index from a matrix of test scores dictate the allocation of effort by teachers.

The phrase "accountability system" begs the question "accountable to what or whom?" In the traditional model of sole government provision, public school principals and teachers are accountable to government agencies that are run by the agents of elected officials. Under test-based accountability systems like NLCB, principals and teachers are accountable to a set of procedures and standards that are created and monitored by the same agents of these elected officials. The premise of these systems is that, by creating a set of transparent procedures, the Federal government can provide the political pressure

¹⁶ See Jacob (2005) and Koretz (2002) as examples.

¹⁷ See Reeback (2007) and Neal and Schanzenbach (2007).

necessary to make sure that the agents of state and local government actually reward good schools and close bad schools. Yet, this premise rests on the hope that performance statistics like AYP can be transparent and useful at the same time, and this matter remains an open question.

Neal and Schanzenbach (2007) analyze several different proposed AYP systems and demonstrate that it is not possible to design simple and transparent systems that will induce schools to teach all subjects and all students well, and this result is quite intuitive. Knowledge is difficult to quantify or classify, and teachers are simultaneously trying to foster many different types of knowledge and skill in their students at the same time. Thus, it comes as no surprise that Holmstrom and Milgrom (1991) began their article by explaining why teachers are an obvious example of a type of worker that should not be rewarded or punished based on performance statistics. Nonetheless, it is possible that some carefully designed accountability system could generate important overall improvements in public school performance relative to the current baseline even if teacher efforts remain distorted on some dimensions. Only time and more research will tell.

Conclusion

Future policy debates must take place in a context that acknowledges that test-based accountability systems are not vehicles for bringing market solutions or “business practices” where government has failed. Rather, accountability systems are just a different model for government creation and gathering of information that will shape the behavior of schools. This model does not provide a role for parents as monitors of school

performance, and it does nothing to encourage schools to address the desires of parents concerning curricula, discipline, safety, or pedagogy.

Thus, accountability systems are not substitutes for markets. They are substitutes for more traditional forms of bureaucracy. By contrast, in parts of Europe school choice does make schools directly responsive to parents and thus employs millions of parents as performance monitors. The regulations in these systems are designed to limit the ways that parents can shape the market for education, but in these countries, the policy choices involve how parents participate directly in holding schools accountable not whether they participate.

Table 1 shows that some countries have adopted systems that foster parental choice, while at the same time, requiring national testing aligned with a national curriculum. Thus, the Swedish system blends elements of test-based accountability and voucher systems raising the possibility that it is best to think of these approaches as complements rather than substitutes. Parents may not know the answers to the questions on their children's geometry tests, but they know much about whether or not their child is enthusiastic, happy, sad, anxious, or even fearful concerning the next day at school. Much of the existing academic literature places little weight on these outcomes because test score measures are often seen as the only objective measures of academic output. However, policies that lower the non-pecuniary costs of attending school for students generate direct welfare gains, and the literature on attainment gains associated with Catholic secondary schooling raises the possibility that, by allowing individuals to find schools they enjoy, we may raise overall attainment among persons who currently feel unsafe, unwelcome, or simply out of place in their current public school. Current policy

discussions in the United States should move beyond the details of designing accountability systems based on objective but manipulable performance statistics and begin to explore ways to usefully employ the information that parents possess concerning school performance.

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Table 1: Regulations Among Selected Countries that Fund Independent Schools

	Government Inspections	National Testing	Regulation of Teacher Salaries	National Curriculum	Limits on Fees
Sweden	Yes ¹⁸	Yes ¹⁸	Yes ¹⁹	Yes ²⁰	Yes ²¹
Netherlands	Yes ²²	Yes ²¹	Yes ²¹	Yes ²¹	Yes ²¹
Denmark	No ²³	No ²²	Yes ²²	National guidelines ²²	Yes ²²
England	Yes ²⁴	Yes ²³	Yes ²³	Yes ²⁵	Yes ²³

Although Table 1 indicates whether or not each country implements each type of policy, how they are implemented can vary greatly between countries. For example, the hurdles that organizations must clear in order to open a new school vary greatly by country. According to Patrinos (2001) and (2002) groups of parents in Denmark and the Netherlands can relatively easily form a new school that is eligible for government funding. However, in Denmark, parents must pay all the initial capital costs before receiving government funds. While in the Netherlands, the national and municipal governments contribute directly to the costs of setting up new schools. In Sweden, new independent schools may not receive funding unless they are approved by the National Agency for Education (NAE), and local municipal schools may file protests with the NAE objecting to applications by new groups that seek to open independent schools.

¹⁸ National Agency for Education

¹⁹ “Teacher Reject New Agreement” *European Industrial Relations Observatory On-line* 2000

²⁰ Hepburn and Merrifield 2006

²¹ Bergström and Sandström 2002

²² Patrinos 2002

²³ Patrinos 2001

²⁴ Machin and Wilson 2005

²⁵ McIntosh 2005