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Abstract

This paper summarizes the trend toward introducing markets into the education sector. We begin with a brief history of the market reforms and then review recent policy developments related to vouchers, charter schools, tuition tax credits, and educational management organizations. The internal anatomy of markets are then described, recognizing both the possibility of imperfect competition and of market failure. Next, we set out a framework for evaluating market reforms which has four criteria – freedom of choice; productive efficiency; equity; and social cohesion – and a set of three policy instruments – finance, regulation, and support services. We then show how voucher policies can differ considerably in how they satisfy each of the four criteria, although unavoidably trade-offs must be made. We then review the evidence on vouchers and choice in relation to each of the four criteria. Finally, we consider what are the prospects for market approaches to education and where are the needs for further research.

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THE MARKETPLACE IN EDUCATION

INTRODUCTION

For at least a century and a half, universal schooling has been viewed as a primary obligation of government. In the U.S. the State and local governments, with federal support in recent years, have accommodated this responsibility by making substantial legal commitments and providing funding and facilities to discharge that obligation. Although private schools existed prior to the historical establishment of public schools, today they account for only about 11 percent of enrollments at the elementary and secondary level (NCES, 2003a, Table 3; for a discussion of trends in public school districts, see Kenny and Schmidt, 1994). Thus, the public provision of elementary and secondary schooling has long been accepted as a government function and responsibility.

Starting in the 1970's and increasing in intensity in recent years, both the public funding and provision of schooling have been questioned (Friedman, 1993; Lott, 1987). Proposals have been raised to shift school governance and at least some of the funding of education to the private marketplace. Historically, even public schools had a strong component of privatization in the sense that local communities were able to mold their schools to reflect their political, educational, and religious values (Katz 1971). Resources available to schools depended heavily on local property wealth so that schools in richer communities were better endowed than those in poorer communities (Murray et al, 1998). Parents with adequate means could move to neighborhoods that had better schools or ones that more closely matched their childrearing and educational values or could send their children to private schools.

Although significant differences may still exist among public schools, these differences have been reduced considerably by court and legislative decisions that have more nearly equalized school funding; reduced racial inequalities; provided more rights and

opportunities for the handicapped, the poor, and females; and proscribed religious practices. This trend was particularly pronounced in the latter half of the 20th century as court and legislative decisions forced school policies and practices to become more alike, at least procedurally, so that differences among schools were reduced considerably (Husted and Kenny, 2002).

Starting in the 1970's cities began to create district-wide schools based upon academic or vocational themes that might attract students from among different neighborhoods. These magnet schools were designed primarily to encourage racial integration by drawing students away from segregated neighborhoods (Wells and Crain, forthcoming). But, the notion of providing school choice was also a response to the pressures from families whose neighborhood schools no longer reflected the differences permitted in an earlier time.

By the 1980's these movements had expanded to incorporate broader intra-district and inter-district options. Especially notable were the establishment of charter schools in which most state and local regulations were waived in exchange for a school commitment to particular educational goals and results. That movement has expanded from its establishment in 1992 to as many as 2,556 charter schools by 2002 (according to the Center for Educational Reform, an advocacy Center for charter schools and school choice; see www.edreform.org). Even more profound – and politically contentious - were the emergence of proposals to shift schools from government sponsorship to the private marketplace with government funding via educational vouchers or tuition tax credits (Carnoy, 1997; Levin, 1998, Belfield and Levin, 2003; for a general overview, see NCES, 2003b).

Under these funding approaches, a private market of schools would replace all or most public schools. Parents would be provided with a voucher, a certificate for tuition that could be redeemed with the state, or tax credits, reductions in tax burdens for all or a portion

of tuition. In some cases, parents would be able to supplement these public funds with their own finances to obtain more costly schooling for their children. The motivations behind these approaches were: to provide greater freedom of choice of schools as a right and more alternatives for families as a response to the increasing uniformity of schools; to use market competition to make schools more effective with given resources; and to improve options for students in public schools that are economically and racially segregated. These solutions were also consistent with the general movement towards less reliance on government and greater reliance on markets and other forms of decentralization. In exciting a flurry of plans and proposals, educational markets have also been associated with considerable political controversy and strong ideological positions, both from advocates and opponents.¹

In this chapter we wish to address the educational marketplace by describing the principal reform proposals and the assumptions about market behavior that motivate them. We will show that all educational arrangements, including market approaches, face a conflicting set of goals, and they require tradeoffs—that is, sacrifice of some goals in order to obtain others. The movement to an educational marketplace must confront this dilemma, particularly the conflicts that may arise between the private and public purposes of education. We will review the tools that can be used to orient educational market approaches towards specific goals and their consequences. Finally, we will provide a brief review of the available evidence on the impacts of educational markets.² Although there are many ways to introduce markets into the education system, we pay particular attention to educational voucher programs because these programs typically would introduce multiple features of a market simultaneously.

MARKET REFORMS IN EDUCATION

Voucher Programs

The most prominent market reform in education is that of educational vouchers. The concept is found as early as the eighteenth century in a plan proposed by Thomas Paine (West 1967). However, the present discussions on vouchers date back to an important essay published by Milton Friedman (1962) which asked what the government role should be in education. Friedman concluded that: “a stable and democratic society is impossible without a minimum degree of literacy and knowledge on the part of most citizens and without widespread acceptance of some common set of values” (p.86). Since education contributes substantially to these goals, Friedman agrees that some minimal public subsidy is justified. But, he argues that public funding for schooling is not an argument for government schools. Rather, the operation of a private marketplace of schools will provide greater benefits in efficiency and technical progress by promoting choice and competition. To combine public funding with private provision, Friedman proposed that: “Governments could require a minimum level of schooling financed by giving parents vouchers redeemable for a specified maximum sum per child per year if spent on ‘approved’ educational services (Friedman 1962: 89)”. All educational voucher plans utilize this basic concept, although each may contain different provisions with respect to the size of the voucher, the opportunities for parents to add to the voucher, and other details.

An attempt was made to establish an educational voucher demonstration in the early seventies by the U.S. Office of Economic Opportunity (Center for the Study of Public Policy 1970; Weiler, et al. 1974). No state was willing to use public funds for private schools even with federal assistance, so the demonstration was modified to an exercise in public school choice by creating mini-schools within existing public schools in a California school district, and allowing parents to choose among mini-schools within the district. The public discussions of vouchers also led to attempts by partisans to establish statewide voucher plans

during the decades of the seventies and eighties (e.g. Coons and Sugarman, 1978).

Historically, smaller districts in Maine and Vermont had used a voucher-like mechanism to pay tuition to private schools and other public school districts to educate their children in lieu of establishing schools in the home district (Hammons, 2001). By 2003, publicly funded voucher programs had been implemented in several US cities, and proposed in several others (e.g., Washington, DC). But, the total number of participants is very small as a proportion of public school enrollments. (There is also a network of privately funded voucher programs, providing scholarship grants to over 100,000 students, see Howell and Peterson, 2002, Table 2.1).

Milwaukee Parental Choice Program

A formal voucher program for K-12 schooling did not exist in the U.S. until the State of Wisconsin established one for Milwaukee in 1990. The Milwaukee Parental Choice Program was limited to low income families and to no more than 1 percent of students from the Milwaukee Public Schools (raised later to 1.5 percent and more recently no cap on enrollment). The amount of the voucher rose from \$ 2,446 in 1990 to \$ 4,894 in 1998 and \$ 5,882 in 2003-04, amounts predicated upon the amount of state aid to local school districts. Until 1995 the Milwaukee voucher was limited to attendance in non-religious schools and only about a dozen schools and about 830 students participated by the fifth year. In 1998 religious schools were declared eligible by state law for the voucher, an action that was upheld subsequently by Wisconsin courts and the U.S. Supreme Court. This broadening of school eligibility promoted a large expansion: By 2003-04, 107 schools were enrolling almost 12,778 voucher students and two-thirds of voucher recipients were enrolled in religious schools.

Evaluations of the impact of the Milwaukee voucher plan on academic achievement cover only the period from 1990-95 (Witte, 1999). The evaluations of the earlier period were

controversial and contradictory, complicated by a problematic data set (missing data, considerable attrition, instability among comparison groups). The initial evaluation for the State of Wisconsin showed no difference in achievement between voucher and non-voucher students (Witte, 1999). A re-analysis by Greene, Peterson, and Du (1996) using a somewhat different approach found achievement advantages for longer-term, voucher students in both mathematics and reading. A third evaluation that made considerable adjustments for the data problems showed no difference in achievement for reading and a slight advantage for the voucher students in mathematics (Rouse 1998).

Because the earlier period was characterized by relatively few schools and students, a more valid evaluation of the impact of the Choice Program would ideally build on the present situation. Unfortunately, after 1995, schools receiving vouchers were not required to report test results (or even pertinent information on the characteristics of enrollees), so no such analysis could be done.

Cleveland Opportunity Scholarship Program

The second of the existing voucher plans was established by the State of Ohio for the city of Cleveland beginning in 1995. Known as the Cleveland Scholarship and Tutoring Program, it has particular prominence because it was the focus of a U.S. Supreme Court decision which resulted in the legal approval (at the Federal level) of inclusion of religious schools in a voucher plan (Zelman vs. Simmon-Harris 2002). Low income families were given preference for vouchers in Cleveland, with those below 200 percent of the poverty level (about \$ 36,000 for a family of four) provided with 90 percent of tuition or \$ 2,250, whichever is lower. Families above 200 percent of the poverty level were provided with 75 percent of tuition or \$ 1,875, which is lower. About one-quarter of the students came from the latter group.

The vast majority of students in the program chose religious schools; this was not surprising, since such schools represent three quarters or more of existing private enrollments more generally and are the only ones available at the tuition levels of the Cleveland voucher. There were no differences in achievement in any subject between voucher and non-voucher students over the period of evaluation, Kindergarten to Fourth Grade (Metcalf et al., 2003).

Florida Opportunity Scholarship Program

The Florida voucher program was established in 1999 and has two components. Schools that receive an F for two years out of four on the Florida educational assessment system must allow their students to select another public school or to receive a voucher to go to a private school. The voucher has a value of up to about \$ 4,500. Some 542 students were using the voucher in 2002-03.

Florida also sponsors the McKay Scholarships for students with disabilities, a voucher approach. Parents who decide that their handicapped child is not progressing in public schools can use what is spent in the public school to apply towards private schools. In 2002-03 almost 9,000 out of 375,000 students with disabilities were taking advantage of this finance mechanism. The amount that could be allocated to the voucher was a maximum of more than \$21,000, depending upon the services that were being provided in the public school for that child. Parents could add on to the voucher amount to pay for a more expensive placement. No evaluations of the impact of vouchers on student performance have been done other than a general analysis that argues that schools that might have met the failure criteria succeeded to improve because of their fear of the voucher (Greene, 2001). But, other incentives were also in place, making it very difficult to disentangle the impact of the voucher threat from the stigma of failure or from the effects of special state assistance for schools at the precipice of failure (Kupermintz, 2001; Camilli and Bulkley, 2001).

Colorado Opportunity Contract Pilot Program

In Spring 2003 the State of Colorado passed a voucher plan to take effect in the Autumn of 2004. It would provide vouchers to students from low income families with low academic performance if they are in districts where 8 or more schools in 2001-2 had low or unsatisfactory performance (or are in a district which participates in the program voluntarily). The amount of the voucher would depend upon the grade level and district expenditure: It would amount to the lesser of the actual cost of educating the child in the private schools or 37.5 percent of district expenditure at kindergarten; 75 percent of district expenditure at grades 1-8; and 85 percent of district expenditure for grades 9-12. The plan would start with a maximum of 1 percent of student enrollments in eligible districts and rise to no more than 6 percent by 2007 (see Lenti, 2003). In December 2003 the Colorado plan was struck down, being judged to violate the Colorado Constitution by depriving local school boards of control over instruction in their districts. Legal challenges are likely to continue, however.

Tuition Tax Credits

An alternative way of encouraging a private educational marketplace is a tuition tax credit (TTC) (James and Levin, 1983; Belfield and Levin, 2003). A TTC provides a reduction in tax burden equal to a portion of tuition paid to a private school. For example, a TTC on income tax could be enacted that reduces the tax liability of the taxpayer by some sum, e.g. up to \$ 1,000 a year. Since 1997, six states have enacted tuition tax credits for education, and 13 states have tax deduction programs (for schooling expenditures). A tax credit is different from a tax deduction: Some states allow a portion of tuition to be deducted from income in computing a tax, but this only reduces the tax burden by the tax rate on the allowable deduction rather than providing a reduction in the tax burden of that amount. Some states also permit businesses to contribute up to some maximum amount to cover the tuition of students in private schools. The TTC serves as a subsidy to households with

children in private schools, reducing the effective tuition cost to them, thus increasing the demand for private enrollments. Poorer households can take less advantage of a tax credit because they have less tax liability, although it is possible to design a plan that refunds the credit if tax liability is not adequate to offset it.

Charter Schools

Charter schools are public schools that are able to waive compliance with state and local regulations in exchange for adhering successfully to a specific mission, their charter. In 2002-3 there were 2,556 charter schools serving 685,000 students in 36 states and Washington, D.C. according to the Center for Educational Reform (www.edreform.org). These schools simulate some of the dynamics of a market by increasing the supply of alternatives to parents and by competing with existing public schools. In addition, many of them contract with for-profit, educational, management organizations (EMO's) to operate their schools (Miron and Nelson 2002, 170-93). Typically they also have their own boards of trustees and considerable autonomy relative to public schools in their states. Although they are not components of a private marketplace, they contain features of choice and competition which some analysts believe are good predictors of behavior in such a marketplace (see Kane and Lauricella, 2001; Sugarman, 2002).

Because the intention of charter school legislation is to encourage flexible educational provision in response to local needs, charter schools themselves are heterogeneous (on virtual/cyber charter school laws, see Huerta and Gonzalez, 2003). As well as exemption from regulations in hiring unionized teachers, charter schools can choose a non-traditional pedagogy and or curriculum; they can also select the mode of delivery (classroom-based or through distance-learning) and school facilities. Given this heterogeneity, the evidence on charter schools' performance (at least as reflected in test score comparisons) is mixed (on charter schools in California, see Zimmer, 2003). For advocates, the charter school

movement represents a freedom from government intrusion – not only in how the education is provided, but also in how it should be assessed.

Educational Management Organizations

In the last decade, for-profit businesses have risen to manage schools. Businesses have long sold products and services and managed some operations of schools such as transportation, cafeterias, maintenance, and construction as well as school textbooks, supplies, and equipment such as furnishings and computers (even to include curricular packages and assessment systems). But, the rise of educational management organizations (EMO's) has represented a marketplace in itself where such entities compete to manage entire schools under contract to school districts or to charter school boards. In general, the EMO's and their schools are in competition because they typically are premised upon school choice of clientele and promise to out-perform comparable schools administered by the school district. In fact, school districts often contract with EMO's to operate schools that have done poorly under district administration (for insights into the challenges of establishing and maintaining a profitable educational management organization, see Levin (2001, 2002)). Thus, they provide two major dimensions of a market, choice and competition, features that we will discuss in the next section.

INTERNAL ANATOMY OF MARKETS

What is a market and what is assumed about its behavior?³ Markets are places (literally or figuratively) where buyers and sellers come together to establish purchase of goods and services at an agreed upon price. The purely competitive market is considered the ideal. In such a market there are a very large number of buyers and sellers so that no one buyer or seller can influence the price. There is perfect information on the alternatives open to market participants. There is freedom of entry into the market by either buyers or sellers meaning that there are no obstacles to either producing or purchasing the good or service.

Buyers wish to maximize total satisfaction or utility subject to the limitation of their resource capacity or income. Sellers wish to maximize profits.

Given these assumptions it can be shown that a supply curve can be depicted that shows the amount of a particular good or service that will be supplied at each and every price at any point in time. Each supply curve refers to a given quality of the good or service. Multiple supply curves can denote different qualities offered. The supply curve will be upward sloping or increasing with price because the industry must divert resources from other uses at an increasing cost to increase output, especially over the short run. The demand curve will be downward sloping or inversely related to price because as prices rise they reduce the amount of other goods and services that might be purchased and encourage the purchase of relatively cheaper substitute goods and services. Under these conditions, there is an intersection of the supply and demand curve and an equilibrium price for clearing the market. All suppliers and consumers pay the market price. See Figure 1 for the basic schema of supply and demand.

Although suppliers may want a price that is higher than the market price, competition for clientele will push down the price to that point where firms simply cover all of their costs plus a minimal profit, enough to stay in business. Firms have a choice of which goods or services to produce, so they can decide to enter or leave the industry if they cannot succeed at the equilibrium price. Firms that are less efficient and cannot produce their output at the market price will fail and will leave the marketplace. Consumers may wish to get a price below the market equilibrium, but they will be unable to purchase goods at a below market price in the long run because firms will not be able to sustain themselves at a price below the cost of production. The key dynamics of the market are choice and competition. Households have a choice of suppliers, so firms must compete for their business by providing goods or services at the lowest price.

This is not to say that prices will be invariant over a period of time. Prices may change as a function of overall supply and demand conditions such as the technology of production or changes in household preferences and income. But, the competitive market equilibrium will assure that the new price is consistent with efficient production. For example, Figure 2 shows what happens when there is a technology breakthrough that lowers the cost of production: the supply curve shifts to the right (to S2) which establishes a new and lower equilibrium price. Presumably, competition provides incentives to improve productivity to be able to gain larger profits at the market equilibrium. However, such competitive advantages may be short-lived since other competitors may be able to emulate the conditions that lead to gains, so market prices will fall as in Figure 2 to ensure only a competitive market return.

It is this model that provides claims for those that seek to shift the production of schooling from governments to the private marketplace. They believe that by providing choice and competition, the quality of schooling will rise when costs are constant or the costs will fall for a given quality. In addition, advocates may wish to provide greater choice in types of schooling, providing a range of sub-markets for families because of differences in educational preferences (values, religion, philosophy) rather than requiring each school to provide a uniform type of education (Chubb and Moe, 1990). By replacing a local school monopoly with market competition, efficiency can be brought to the consumer in two ways.⁴ First, there will be incentives to compete by providing schooling services at the lowest possible costs. Second, households will be better matched to the types of schooling that meet their needs because of the variety of schools that will emerge and the incentives of schools to be responsive to the needs of clientele.

Market advocates would argue that the market approach leads to choice and competition overall, increasing productive behavior on the part of parents and students as

well as schools. Parents and students have incentives to choose schools wisely. They also have incentives to keep schools attentive with the implicit option of switching to other schools if they are dissatisfied. Schools have incentives to be responsive to student needs to both attract and retain students and to get to the maximum size consistent with good education (it should be noted that most private schools are considerably smaller than their public school counterparts; see Andrews et al., 2002). At the same time they have incentives to innovate over the long run to gain market advantages, a dynamic that can make the industry technologically and organizational progressive as other competitors imitate those improvements to increase their own effectiveness. These incentives arise primarily from choice and competition promoted by the marketplace.

Finally, even in markets where there is considerable competition, government regulation is necessary. Governments should set basic standards to capture the public interest in schooling, a matter which will be addressed below. At issue is how extensive this regulatory framework should be, not whether it should exist.

Imperfect Competition

Few markets are perfectly competitive. In many cases there are few suppliers of a particular product or service, and even these firms may choose to collude rather than compete. Further, a key resource used by firms may be controlled by a single entity such as another firm or a union. Consumers may not have good information, and the nature of the good or service may make accurate information difficult to acquire. Certainly, all of these factors are a reality in education. Particularly in rural areas there may be too few potential students to establish competitive schools that can operate efficiently. For example, in Chile about one quarter of the municipalities were too small to have even a single competitor to the community's school (McEwan and Carnoy, 2000). Teachers unions may constrain the ability of schools to adjust employment, benefits, and salaries to market realities or to change the organization of

educational services. And, parents may have difficulties obtaining and evaluating school quality with schools providing information that is designed primarily for marketing and promotional goals rather than for useful comparisons. Though each of these may reduce the efficiency of the marketplace, the issue is whether greater choice and competition is introduced that improves educational processes and outcomes, not whether the improvement is optimal.

As long as there is some choice and competition, it is believed that the outcomes will be better than when there are no choices at all. This does not mean that only competition can be used to obtain efficiency in the use of educational resources to gain maximal performance. In his classic book, Exit, Voice, and Loyalty, Albert Hirschman suggests that both exit (market choice) and voice (informing the provider of how to improve) are important to efficiency and that the easy option of abandoning a supplier may undermine the incentive to guide and pressure them directly to improve services. In the case of education, such school involvement may also be key to student and family engagement that contributes to learning. McMillan (2000) has found some evidence of this in reviewing the impact of choice on parental participation and student achievement.

In order to make appropriate choices families need to have good information. In part, this is the motivation for more prescriptive standards and testing in schools – so that families will have information about school quality and will be able to compare schools and hold them accountable. However, there has been considerable debate over whether school quality can be easily codified and quantified (or even manipulated), leading to the possibility that parents will be making choices based on false information (for discussion, see Kane and Staiger, 2002). In addition, although the intentions of most families are aligned toward their childrens' well-being, some families may make poor or inappropriate choices.

Market Failure and Externalities

Probably the greatest challenge to the view of market efficiency in education is created by the presence of externalities. Externalities refer to effects that “spillover” to the larger society from the individual transactions of the marketplace. That is by virtue of producing and selling goods and services, firms may have an impact that extends beyond the internal production and sale of products to consumers. At the same time, the choice of such services and their consumption by consumers may also have effects beyond the purchasers. Externalities can be divided into those that represent social costs and social benefits. An example of the former is the spewing of pollution by firms in their quest to be narrowly efficient in the production of goods or services. An example of the latter is the reduction in risk of contracting communicable diseases for all society as more and more individuals receive inoculations that reduce the incidence of such diseases. That is the probability of contagion is reduced, even for those who do not receive inoculations, by the acts of those who do get vaccine protection.

Schooling is considered to be a primary source of external social benefits because the results of an education benefit not only the individual, but the society of which she is a part. That is, even those who are not in school are expected to benefit from a more highly educated society. It has long been held that one of the central purposes of schools is to improve the cohesion and stability of society through the provision of a common experience that prepares the young for adult roles and responsibilities (Guttman, 1987). Schools are expected not only to educate students as individuals, but also to contribute to the overall effectiveness of society through creating competent adult citizens. Even Friedman (1962, 86), a prime advocate of replacing government schools with those of the marketplace, has acknowledged this external benefit of schools by asserting that a democracy requires a minimal level of literacy and knowledge and a common set of values to function effectively. This supposition underlies Friedman’s argument for public funding of education. He asserts that this externality (or

“neighborhood” effect) can be addressed by setting “minimum standards” for schools in a marketplace without further government intervention. Friedman does not attempt to suggest what these minimum standards might be or how they might be satisfied, providing a blank canvas on which other designers have sketched their own interpretations. That there is broad agreement that schools must meet not only the narrower requirements of individual students and their families is evident. The larger question is how to reconcile the private choices of families with the public requirements of education for democratic knowledge and values.

EDUCATION AND THE PUBLIC-PRIVATE NEXUS

When families choose the type of education that they want for their offspring, the decision revolves primarily upon their values as well as their perception of their child’s needs. That education yields private benefits to the child and her family is obvious. More and better education is closely associated with higher income and status and greater access to worldly knowledge, both technical and cultural. Since parents want their children to succeed, they will prefer schools that meet high standards. Beyond that, parents usually have political, religious, and philosophical values that they believe are important and should be transmitted to their children. Accordingly, they will seek schools that reflect these values or, at least, do not undermine them. The range of household choices for schooling will be largely predicated on the diversity of backgrounds and educational beliefs of the heterogeneous populations that are found in the U.S (Hochschild and Scovronick, 2003). Increasingly, this diversity is reflected in other nations as immigration and religious radicalism increase throughout much of the world.

If the market responds only to these diverse demands, it will not seek a homogeneous set of school offerings with substantially common experiences for all students. Instead it will tend to divide into market segments or niches that appeal to a particular group of households, segments based upon religion, child philosophy, instructional approaches, and so on. James

(1987, 1993) has found that diversity in the population is an important statistical predictor of the extent of private schooling internationally. Coons and Sugarman (1978) and Chubb and Moe (1990) argue that this is the most appropriate way to serve competing needs rather than expecting a single institution to serve all needs. Under a market approach, schools will seek market niches through product differentiation. That is, they will compete by matching their appeal to particular educational preferences of parents rather than trying to produce a standardized educational product. The problem is that serving well a wide variety of different values and preferences is likely to undermine the social goals of providing a unifying educational influence around societal institutions and values.

In general, the social purpose of schools is to prepare the young for democratic participation in the political, social, and economic institutions that unite society into nations, regions, and communities. Successful citizen participation in a free and democratic society requires a common language, values and knowledge for economic and political understanding and participation, and an acquaintance with a common set of social goals. In addition, democratic societies are also concerned with the provision of fairness in access to life's rewards so that effort and talent, rather than private privilege, are the determinants. These goals argue for a common educational experience rather than one that is differentiated according to family political, religious, and philosophical preferences. That is, the very externalities of education that justify public support argue in favor of a common educational experience rather than one premised upon private choice.

How are these conflicting goals to be reconciled? That conflict is at the heart of all educational systems. On the one hand, the right to influence the way in which one's child is reared means that parents should have the options of choosing the school that matches most closely their childrearing preferences. On the other hand, the right of a society to maintain an effective and stable democracy and a fair society requires that children have a common

educational experience. The existing educational system in the U.S., in which 90 percent of students are in government-sponsored schools, has faced this historic challenge. But, even more so, a market system that bases its appeal on differentiation and choice must adopt a mechanism to ensure common experiences across schools to prepare students for their civic rights and responsibilities.

Clearly, there is no perfect system as much as a search for a “best system” in providing a balance among these and competing aims (Tyack 1974). In this context, one can denote four major criteria for addressing an effective educational system: a) freedom of choice; b) productive efficiency; c) equity; and d) social cohesion.

- (1) **Freedom to Choose**—This criterion places a heavy emphasis on the private benefits of education and the liberty to ensure that schools are chosen that are consistent with the child-rearing practices of families. Voucher advocates typically place great weight on this criterion relative to detractors.
- (2) **Productive Efficiency**—This criterion refers to the maximization of educational results for any given resource constraint. Educational voucher advocates assume that market competition among schools for students will create strong incentives, not only to meet student needs, but to improve educational productivity. Voucher detractors believe that the assumptions that make competition effective will not be present in the educational marketplace.
- (3) **Equity**—This criterion refers to the quest for fairness in access to educational opportunities, resources, and outcomes by gender, social class, race, language origins, handicapping condition, and geographical location of students. Voucher advocates argue that the ability to choose schools will open up possibilities for students who are locked into inferior neighborhood schools and that the competitive marketplace will have great incentives to meet the needs of all students more fully than existing schools. Challengers

argue that vouchers will create greater inequities because parents with education and income are better informed and have greater resources such as access to transportation. Also, they believe that the choices, themselves, will further segregate the poor and disenfranchised as those with power and status will select schools with students like themselves and schools will also select students by such criteria.

- (4) **Social Cohesion**—This criterion refers to the provision of a common educational experience that will orient all students to grow to adulthood as full participants in the social, political, and economic institutions of our society. This is usually interpreted as necessitating common elements of schooling with regard to curriculum, social values, goals, language, and political institutions. Voucher advocates believe that this will take place in schools without making special provisions or that it will only require minimal regulations.

VOUCHERS BY DESIGN

There is not a single voucher plan, but many different ones, each with emphases on a somewhat different mix of priorities among the four criteria. Although some refer to "the voucher plan", differences among voucher plans can have profoundly different results. Within limits, educational voucher arrangements are highly malleable. Plans can be constructed with particular features to address each of the four criteria by using three design instruments: (1) finance; (2) regulation; and (3) support services.⁵

- (1) **Finance**—Finance refers to the overall magnitude of the educational voucher, how it is allocated and whether schools can add tuition charges to the government voucher for families willing and able to purchase a more costly education. A larger voucher will promote more options in the marketplace with greater freedom of choice and competition. If the educational voucher is differentiated by educational need such as larger vouchers for those with handicaps and from poverty backgrounds, some issues of

equity will be addressed. Schools will have greater incentives to attract such students and provide the resources and programs to address their needs. If families can add-on to vouchers from their private resources as Friedman proposed, there will be advantages for families with higher incomes in the educational marketplace who are able to send their children to more expensive and restrictive schools with potential increases in inequities relative to the present system.

(2) **Regulation**—Regulation refers to the requirements set out by government for eligibility of schools to participate in the voucher system as well as any other rules that must be adhered to by schools and families in using educational vouchers. Presumably, only schools that meet certain standards will be eligible to redeem vouchers. Some voucher plans have emphasized a common curriculum and uniform testing as a condition of school participation to ensure that students are meeting goals of social cohesion and that schools can be compared for their productive efficiency along common measures of student achievement. Admissions requirements have also been a matter of scrutiny where schools with more applicants than available places would be required to choose a portion of students by lottery to assure fairness in selection procedures. Eligibility for vouchers may be restricted to certain populations in the name of equity. For example, public and private voucher programs in Milwaukee and Cleveland have been limited to children from poorer families in order to give them choices outside of their neighborhoods. The Florida legislation limited vouchers to children in failing public schools.

(3) **Support Services**—Support services refer to those types of publicly -provided services designed to increase the effectiveness of the market in providing freedom of choice, productive efficiency, and equity. Competitive markets assume that consumers will have access to a wide variety of choices as well as useful information for selecting among

them. In the United States the availability of public transportation is very limited, necessitating a system of school transportation from children's neighborhoods to schools of choice. In the absence of school transportation, school choices and competition for students will be limited, reducing both the competitive efficiency of schools and creating inequities for those who cannot afford private transportation.

Information must be widely available for families to make informed choices about the schools that they select for their children. Accurate information on school programs and effectiveness as well as other important aspects of school philosophy and practice would need to be collected and disseminated to parents to assist in making decisions (Schneider et al., 2000). It could be argued that the schools will provide their own information through promotional materials and informational sessions to parents. However, there is little assurance that the information will be accurate and balanced, and it may be especially difficult to process for less-educated parents.⁶ Technical assistance might also be provided by government agencies through information and training to new schools to advance the productivity of the entire sector.

Different Voucher Plans

Different voucher plans have incorporated specific designs that utilize these three policy instruments to achieve particular goals. Depending upon the specifics, a given voucher plan may differ from another plan in its impact on choice, efficiency, equity, and social cohesion. In essence, each plan uses the design tools to construct a plan which either implicitly or explicitly places greater weight on some goals rather than others.⁷

(1) Designs for Freedom of Choice—A voucher plan that maximized choice would allow for a very broad definition of education that would encompass most types of schools and schooling; would provide either a large voucher to all or a smaller voucher with parents permitted to add to it out of private resources; would minimize regulation of curriculum,

admissions, and other dimensions of school operations; and would provide a good system of comparative information on schools as well as an adequate system of transportation. Such a design would ensure a large number of alternatives on the supply side that parents could choose from. This type of plan is especially attractive to Libertarians who prefer to see the least government interference in the marketplace, especially if the voucher is modest and parents are able to add to it. Libertarians may believe that the support services of information and transportation are unwarranted because the cost of government intervention exceeds its value, and they would favor add-ons rather than a large basic voucher from public funding.⁸

(2) Designs for Efficiency—Productive efficiency is maximized when schools produce a given level and type of education for the least cost. That is, they are operating at the lowest point on their average cost curve. This is somewhat difficult to assess because under a system of freedom of choice, schools may be producing very different types of education. It is the matching of these educational offerings to the preferences of families in a competitive environment that is viewed as the heart of efficiency. Accordingly, designs that focus on efficiency would have a voucher that is high enough (including parental add-ons) to attract many competitors into the marketplace. Regulations would be minimal because they would tend to inhibit competition. However, some would argue that academic achievement is so central to the productivity of all schools that testing of student achievement should be required and reported. Support services such as information and transportation would raise efficiency through increased competition, but the cost of those services would have to be taken into account relative to the efficiency gains.

(3) Designs for Equity—Equity in education refers to equality in access, resources, and educational outcomes for groups that have traditionally faced differences on these dimensions. From a finance perspective, an equitable design would seek compensatory vouchers where more funding was available for students with greater educational need such

as those in educationally at-risk and handicapped categories. In addition, families could not add-on to the voucher so that income differences would be neutralized. The most fundamental regulation on equity is the question of who is eligible to receive and use a voucher. Thus far all of the voucher plans in the U.S. have been limited to students from low income families or those enrolled in failing schools. Thus, the voucher has been accessible to students who are worst off educationally, providing greater equity in choice for them as it has been provided traditionally through residential location and private schools for those who are more affluent. Equity-oriented regulations would also embrace a provision of non-discrimination in admissions. Schools would be required to choose some portion of their students by lottery if there were more applicants than openings. Provisions encouraging or requiring that schools not limit themselves to a narrow social or ethnic population are likely, given the evidence that peers have an important impact on educational outcomes (Zimmer and Toma, 2000). Transportation and information would be required support services to provide access to those who are less advantaged and an informed basis for choosing schools.

(4) Designs for Social Cohesion—Social cohesion connotes a common educational experience, one that prepares all students for civic responsibilities and participation (see the discussions in Wolfe, 2003). The voucher would have to be large enough to provide a common educational experience beyond specialized and elective subjects and activities. The voucher would have to be structured so that all students could gain access to schools where they would be exposed to peers from a variety of backgrounds. This means that parental add-ons to the voucher would probably be proscribed because they would tend to place students from different income strata into different schools. Regulations would focus on establishing common elements in curriculum and certain school activities including the possibility of all students engaging in community service. Support services might focus on the provision of technical assistance in helping schools develop a common educational core as well as the

information and transportation to enable families to find and gain access to schools with a heterogeneity of students.

Incompatibilities and Tradeoffs

Moe (1995) has suggested that molding particular objectives into voucher plans is a matter of design. To some degree he is correct, but such a perspective does not acknowledge the tensions and conflicts among criteria and goals in themselves that suggest that gains in fulfilling one criterion may reduce the ability to fulfill others. This means that intrinsically there must be tradeoffs. Some goals cannot be attained without sacrificing others.

A plan such as Friedman's focuses on freedom of choice and productive efficiency through heightened competition, arguably at the expense of equity and social cohesion. Recall that Friedman would provide a modest, flat voucher at public expense. Parents could add to the voucher out of private resources and schools could set their own tuition. Regulation would be minimal, and there would be no provision for transportation and information. This would promote a very large number of alternatives at different levels of tuition, for those who could afford them, with few restrictions on schools that enter the marketplace, promoting a large supply of alternatives. Clearly, social cohesion and equity goals would not be paramount.

Conversely, plans that emphasize social cohesion and equity tend to reduce freedom of choice and productive efficiency by establishing a variety of regulations and support services. For example, the Jencks plan (Center for the Study of Public Policy, 1970) would regulate admissions and curriculum and require standardized testing and reporting of results (see also the proposal by Godwin and Kemerer, 2002). It would also provide larger vouchers for the poor—compensatory vouchers—and a system of transportation and information. And, vouchers could not be augmented from private resources. The regulations and a fixed-government voucher with no private augmentation would reduce freedom of choice relative

to the Friedman plan. The high costs of providing information and transportation and monitoring the regulations for eligible schools would add considerably to the costs of the voucher system and reduce productive efficiency (Levin and Driver, 1997). But, the larger vouchers for the poor, regulations on admissions, and information and transportation services would increase equity. The common curriculum and testing requirements would be expected to improve social cohesion.

Although some design provisions would improve outcomes along more than one criterion, almost all would also reduce outcomes on other criteria. Provision of information and transportation will improve choice options for all participants, but especially for those from families with the least access to information and transportation, the poor. But, such provision would also raise the costs of the overall educational system, probably reducing productive efficiency unless gains from competition due to better information and access offset the costs of the transportation and information. The establishment of regulations with continuous monitoring and enforcement could be used to increase equity and social cohesion, but at the sacrifice of freedom of choice and productive efficiency.

This means that there is no optimal system that provides maximal results among all four criteria. Ultimately, the choice of design features will depend upon specific preferences and values as transmitted through democratic institutions. Those who place a high value on freedom of choice will probably be willing to sacrifice some equity and social cohesion provisions by eschewing regulations and support services and allowing parental add-ons to vouchers. Conversely, those who place a high value on social cohesion will be willing to sacrifice some freedom of choice through establishing a common curriculum core and other standardized features of schools. Ultimately, much of the debate over the specifics of educational voucher plans revolves around the political power and preferences of the stakeholders.

It is an understatement to say that advocates of vouchers may agree on the general case for vouchers, but may disagree profoundly on specifics. There are even strong differences among persons who are often placed in the same general political category. Thus, many liberals want to see greater freedom of choice for students in the inner-city through educational vouchers, even though liberals are usually viewed as antagonistic to marketplace solutions for government services. At the same time, cultural conservatives are deeply committed to a common curriculum and knowledge framework that should be required of all students and the schools where they are enrolled, a very substantial commitment to regulation (Bennett, 1987; Hirsch, 1987). Political conservatives with libertarian views reject regulatory requirements entirely in favor of market accountability, that is letting consumers decide what they want.

EVIDENCE ON VOUCHERS AND CHOICE

Educational vouchers and tuition tax credits apply to a very small proportion of school populations in the U.S. Even among these situations, there have been relatively few evaluations, and virtually none that address consequences for all four of the criteria that we have set out. Nevertheless, it is possible to provide the contours of findings for each area.

Freedom of Choice

Advocates of the marketplace emphasize that parents will have greater freedom of choice than they would under a government system. In an open market families will have the right to choose schools for their children that are premised on their values, educational philosophies, religious teachings, and political outlooks. Where there are varied preferences and or abilities across students, this freedom of choice becomes especially important: it is too expensive and complicated for a government provider to collect and process all the information needed to allocate students to their most preferred school. For libertarians,

allowing families to make their own choices should – almost by definition – improve educational outcomes.

The evidence on choice favors the view that vouchers will increase choice considerably in terms of the numbers and diversity of options and that those who take advantage of choice will express higher satisfaction with their schools than comparable groups. Doubters of the expansion of choice often start out with the existing numbers of openings at private schools in a particular region, showing that the available openings are miniscule in comparison with the potential number of vouchers. Certainly, in the short run this is likely to be true with little expansion of openings in response to voucher demands. Existing schools have capacity limitations which can only be relieved through longer run expansion, and there is a time lag between the stimulus to establish new schools and the ability to plan, construct, and staff them. However, in response to the new private market demand, the long-run supply of school places will increase (as evidenced in Milwaukee between 1998 and 2002). But, there is another reason that the number of school choices should expand under a market system relative to government sponsorship of schools. Private schools (and charter schools too) tend to be about half of the size of public schools in the U.S. (NCES, 2003c). This means that for any given population there are likely to be twice as many schools under a market regime.

The U.S. evidence strongly supports the conclusion that parents value freedom of choice (Peterson and Hassel, 1998). Many families report higher satisfaction from participation in voucher programs (Howell and Peterson, 2002), and from being able to choose charter schools over regular public schools (Zimmer, 2003). Indeed, the very fact that parents in large numbers choose different types of schools when given options is prima facie evidence of the benefits of choice, and guaranteeing freedom of choice is an important way to raise satisfaction levels within the education system (Teske and Schneider, 2001).

But, there are several caveats to bear in mind, when depending on increased choice to improve substantially the quality of education. One is that some families may not have the resources or the capacity to make choices that are in their children's best interests; there may be a role for education professionals to guide, monitor, or regulate these choices. Also, in sparsely populated areas the limited population size may preclude the establishment of alternatives. For example, in Chile where educational vouchers have been available for more than two decades, about one quarter of municipalities, mostly in rural areas, do not have a single alternative to the municipal school (McEwan, 2003). A second is that some families may choose schools that will lead to *de facto* segregation of groups; individual families may feel better off, but society as a whole may be worse off. A third caveat is that there may be only limited options to increase the range of choices: in the US, many families already have as much choice as they feel they need – fully three-quarters of families appear satisfied with their choice of school (Henig and Sugarman, 1999). And, when a sample of low-income families were offered a voucher of \$1400 toward attendance at private school, only between 29% and 70% used the voucher for at least three years (Howell and Peterson, 2002, 44). Fourth, private schools might deny some students access. A religious private school is likely to bar enrollment to students with atheist beliefs (or belief in an alternative faith), for example (around 75% of all U.S. private schools currently in operation are religiously affiliated). The final caveat is that private schools may be subject to increased regulations if they accept vouchers: these regulations may discourage new supply (as found by Muraskin and Stullich, 1998, 49).

So, parents may be 'free to choose' in principle, but not in practice. Each of these factors suggest that the gains from enhanced freedom of choice in a market – although positive overall – may not be profound and may be particularly limited for some groups.

Efficiency

Some economists have questioned whether the resources spent on public schools has been invested efficiently. For example, over the period 1973 to 1996 Hanushek (1998) charts falling NAEP Science scores and stable NAEP Math scores in US schools, even as real current expenditure per pupil increased by around 45% (although this debate is controversial: compare Hanushek (1994) and Grissmer et al. (1998)). Many commentators attribute this alleged decline in performance to inefficiencies in government provision of education and a lack of competition. They contend that an educational system with a greater reliance on the marketplace through choice and competition would be more efficient.

Competitive Pressures

Economists believe that marketplace competition forces providers of a service to be more efficient. Competition exists when multiple, separate providers—facing the same legal rules and regulations—are available to meet the demands of consumers. Where there is more competition between providers (schools/districts), then consumers (parents/children) will face lower prices for services and/or higher quality services; providers must accept lower ‘profits’, such that only efficient firms will remain in business. More competition should mean higher quality schooling and enhanced educational outcomes in the education market.

The impact of competition can be assessed in terms of test scores and other outcomes from the education system. Belfield and Levin (2002) review over 40 published studies from 1972 to 2002 which explicitly test for a link between competition and educational outcomes in U.S. schooling. These studies use large-scale cross-sectional datasets, employing over 400 individual tests for the impact of competition. Competition is measured either between schools within districts, between districts, or between the public and the private sectors. The impact is measured as the effect on educational outcomes when the extent of competition is increased by one standard deviation.

[TABLE 1 HERE]

Their results are summarized in Table 1. The first row indicates that the evidence from over 200 tests in 25 separate studies shows that competition does have a beneficial effect on the academic outcomes of students in public schools. In general, test scores rise with the extent of competition. However, the effects are substantively modest: around three-fifths of the tests show no correlation, and the mean effect of increasing competition by 1 standard deviation is to raise academic test scores in public schools by approximately 0.1 standard deviations, equivalent to about 10 points on the verbal SAT or one-tenth of the test score gap between Anglo and African-American students.

If competition presses schools to offer more effective schooling, students may respond by enrolling longer or by applying to college in greater numbers. No effect of competition on dropout rates is evident, but a 1 standard deviation increase in competition from private schools is associated with public school graduation rates of approximately 0.08 to 0.18 standard deviations. The effects of competition on spending are harder to predict. From the evidence, there is no clear link between educational expenditures and competition.

Fundamentally, competition in the marketplace should raise educational efficiency (see Hoxby 2000). Indirectly, the evidence suggests that competition raises test scores modestly, but does not raise expenditures. There is also some direct support: the evidence given in Table 1 shows an increase of 1 standard deviation in private-school enrollments raises public-school efficiency (ratio of test scores to per-pupil spending) by as much as 0.2 standard deviations.

Overall, this evidence supports the argument in favor of introducing more marketplace competition into education: Increasing competition—either intradistrict, interdistrict, or from private schools—may raise effectiveness and efficiency of public schools, as well as address other educational objectives. It is important to note that the

substantive effect is modest and does not support the contention that market competition will produce radical improvements in educational results. Also, the magnitude of the reform is important. Case studies of Cleveland and San Antonio show very few pressures to improve when the competitive stimuli are limited to small-scale reforms (Hess et al., 2001).

However, this evidence only establishes the benefits of competition, and does not consider any necessary reorganizational costs to foster, regulate, and monitor competition, or to promote competition broadly across the education system. For example, Levin and Driver (1997) estimate the additional costs of a statewide voucher system for record-keeping and monitoring of students, transportation, adjudication, and information services and conclude that these added costs would be substantial, perhaps as much as one-fourth of existing per-pupil expenditures. Bear in mind that the centralized administration of an extremely decentralized activity (funding and regulating household and school choice) entails a huge increase in transactions and their costs. For example, in the case of California, the State would have to shift its attention from monitoring somewhat over 1,000 school districts to concerning itself with the establishment of individual accounts for almost 7 million individual students and a doubling of existing numbers of schools to 25,000 or more.

More Efficient School Managers and Owners

The second argument that the marketplace may deliver higher quality education rests on the belief that private owners and managers of schools will be more efficient than government ownership and management. Government-run education systems are often heavily criticized (Bok, 2000): public schools may have excessive rules or rules applied to all schools regardless of circumstance, and they may be run ‘democratically’, making them fraught with conflicts and compromises to appease the demands of special interest groups which have little connection to students’ educational needs (Chubb and Moe, 1990). Costs may be inflated, because politicians feel that spending on public services is electorally

popular and because of corruption, fraud and waste (which taxpayers cannot escape from as easily as shareholders can divest themselves of stock in a wasteful company). In contrast, private owners have incentives – profits, typically – to closely monitor their companies to make sure that they are meeting their objectives. With more market freedom, private schools could be taken over by more efficient providers, or a for-profit company could franchise its schooling technology for example. Whichever development takes place in the open educational marketplace, the profit motive or educational mission will induce owners and managers to raise educational quality and efficiency to attract an optimal number of students.

[INSERT TABLE 2]

The evidence on the relative effectiveness in producing academic achievement of private schools over public schools has been reviewed by McEwan (2000). The evidence for Catholic schools is summarized in Table 2 (the results for nonreligious schools are similar). Overall, it shows only small differences between private and public school types (when student intake differences are accounted for), indicating that there are not large differences in results across management and ownership structures (see also Figlio and Stone, 1999). For achievement, there appear to be: modest effects for mathematics of poor, minority students in grades 2-5 (but not in grades 6-8 or among non-black students) from attendance at Catholic schools; and no consistent effects for reading. For educational attainment (i.e. years of schooling), Catholic schools increase the probability of high school completion and of college attendance (particularly for minorities in urban areas).⁹

[INSERT TABLE 3]

Other studies have compared the school effectiveness of specific types of choice arrangements such as charter schools or magnet schools (Gamoran, 1996). A recent comprehensive review by Miron and Nelson (2002) compares charter schools with traditional public schools. Summarized in Table 3, the evidence indicates that, although results vary

from state to state, charter schools appear on average to be no more (but also no less) effective than traditional public schools. Evidence on charter schools is continuing to accumulate.¹⁰

Another potential school type that might be expected to take advantage of an educational marketplace is for-profit schooling. As of summer 2003, the largest for-profit provider of education in the U.S. is Edison Schools, which educates approximately 80,000 students across 150 schools. However, many of the private for-profit companies have faced difficulties in achieving profitability and in competing with non-profit religious schools. In general, the for-profit companies have not been able to innovate more efficiently than public schools, and have had difficulties in establishing brand equity (Levin, 2001b). Overall, private for-profit schools have not established themselves as clearly superior to public schools, and the evidence on improved managerial competence is ambiguous.

Educational Effectiveness from Voucher Programs

Evidence from existing voucher programs and randomized field trials is relevant to the question as to whether a marketplace is more efficient than a state-run system. (Most of these evaluations focus on test scores, although it may be more appropriate to consider the effect on student attainment). Evaluations of the small-scale voucher programs in the U.S. show largely neutral effects. For the Milwaukee Parental Choice Program, the results vary from no effect to an effect on mathematics, but not reading, to an effect for both mathematics and reading (compare Witte, 1999; Rouse 1998; Greene et al., 1998). For the Cleveland Scholarship and Tutoring Program, there are no significant differences between scholarship and public school students on any set of educational outcomes, although those students who accept the voucher but then return to the public schools report the lowest test scores (Metcalf et al., 2003). The Florida Opportunity Scholarship Program involves so few students that it is not possible to identify an educational impact as yet.

[INSERT TABLE 4]

Experimental evidence also shows weak educational effects from participation in a voucher program. Using an experimental design, Howell and Peterson (2002) randomly assigned educational vouchers among a group of voucher applicants from low-income families, forming a group of voucher recipients and a similar control group. The voucher amount of about \$1,400 a year was applied mainly to tuition at low-cost Catholic schools for up to three years in three cities (New York, Washington D.C., and Dayton, Ohio). The full results are reported in Howell and Peterson (2002) for voucher recipients who used their voucher at a private school; the test score impacts are summarized in Table 4. Overall, no achievement advantages were found for educational vouchers after three years. Although the authors report positive gains for one specific group, African Americans, after three years of voucher enrollment, these results have been challenged on methodological grounds and non-robustness when statistical corrections are made.¹¹

Considering all the evidence on the efficiency and effectiveness of markets in education, the following conclusion appears to be robust: markets do improve educational quality over what would be provided in a fully public system, but the size of this improvement is probably modest and appears to be found for some groups and not for others. To the degree that students are stratified into schools with more nearly homogeneous student populations, the peer effects of diversity on achievement may be reduced for some groups of students as well. The educational marketplace has advantages in matching students to the types of schools that their families prefer relative to traditional assignment by attendance area. This advantage is less evident where intra-district or inter-district or extensive charter school choice exists. The additional costs of the infrastructure required to monitor and administer a voucher system are substantial and may outweigh the modest achievement advantages.

Equity

The concern that school systems – whether provided by markets or the state – be fair and equitable is an important one. Equity can be assessed in terms of inputs – do all students get an appropriate amount of funding and resources, commensurate with their needs? Equity can also be assessed in terms of outcomes – do all students finish their schooling with sufficient skills and a fair opportunity to progress in life?

Those who challenge education markets argue that they will produce greater social inequities, as parents with higher incomes may benefit most. First, families already paying for private schooling may receive a government subsidy for tuition fees, which previously they were willing to pay for independently. This windfall is intrinsic to universal voucher programs, for example, and is also likely with the introduction of a tax credit or deduction. Second, wealthier families will have the most resources to purchase educational services in a private market, allowing them to purchase more education if “add-ons” are permitted, resulting in greater inequities in inputs.¹² Also, highly educated parents may gain extra benefits when choices are expanded: as Schneider et al. (2000) have shown, these parents are probably better informed about what is available to them in the market, and will be best-placed to take advantage of new school services. The likely result is that children from wealthy families will use the marketplace to greater advantage. Social stratification will increase. However, there is little direct evidence that this source of advantage is significantly greater in practice than the inequities of a public school system with local financing where families with adequate income can choose school neighborhoods.

Moreover, markets can be regulated so as to avoid inequities and, in fact, help low-income families or students in failing schools. Many voucher programs – particularly the small-scale programs – have an income threshold applied to them: only families below a certain income level are eligible for a voucher. Similarly, tuition tax credits can be allocated

on a merit-based or income-based criterion. The general idea is to enable low-income and minority families to enter the market with more ‘purchasing power’ given to them from government subsidies. Furthermore, markets may make the education system more equitable through open enrollment (Godwin and Kemerer, 2002). Advocates argue that the ability to choose schools will open up possibilities for students who are locked into inferior neighborhood schools, and that the competitive marketplace will produce greater incentives to meet the needs of all students more fully than existing government schools.

More general concerns about broadening the scope of the market and the implications for educational equity should also be noted. First, private schools may refuse to admit some types of students, denying them an appropriate education. (It is difficult to find direct evidence that private schools do this overtly, see Lacireno et al., 2002). Second, families may seek schools that enroll students from their backgrounds with the direct or subtle exclusion of other types of students. Simply creating a curriculum and marketing appeal that is friendly to some types of ethnic and social groups can discourage others from applying. There is a reasonable amount of evidence that – where families are given school choice – they prefer enrollment at schools that are the same racial and socio-economic group as their own (Witte, 1999; Martinez et al., 1996; Schneider et al., 2000; Fairlie and Resch, 2002; Weiher and Tedin 2002). As well, many families wish to enroll their children with peers of as high as possible ability and social class backgrounds. If families sort themselves according to ability, high-achieving students will help each other, and gain further advantages over other students.¹³ Persistent and significant educational inequities may result. Recent literature has emphasized the impact that different peer groups have on the education of fellow students, and the peer consequences of choice would appear to be negative (Levin 1998; Zimmer and Toma 2000). Given the largely neutral impact of vouchers on

participants' test scores, these sorting effects may be critical in a full evaluation of the educational marketplace.

Social Cohesion

Schools should promote the social good; this is the main reason they are publicly-funded. What constitutes the 'social good' will vary across societies, but in a democracy the purpose of schooling is usually interpreted as necessitating common elements of schooling with regard to curriculum, values, goals, language, and political orientation. After compulsory schooling, citizens should possess the skills and knowledge necessary for civic and economic participation in society. By introducing markets and choice into the education system, therefore, there is a risk that these common elements will be undermined.¹⁴

There are two routes through which an education system can generate social cohesion and order. One is by the design of the system itself: social goods are created when collective action is undertaken, i.e. when all students are offered the same system of education. This is the idea of 'common schooling': social goods are created through communal activities. Clearly, reliance on the market would undermine this 'common schooling'; where families can opt out of public schools, or when they can provide extra funds for their children's education, they will not be part of this communal activity (see Levinson and Levinson, 2003). Where richer families can buy more elitist and exclusive education for their children, social cohesion may be adversely affected. However, it is difficult to find empirical research that substantiates the importance of common schooling in promoting social order.

The second route to producing social goods is through the instruction that students receive within school. When students are taught socialization skills and the importance of civic virtues, social cohesion may be enhanced. Some schools may include courses such as Civics or Political Science or Religious Education as part of the curriculum; others may encourage charitable acts by the students or offer instruction on (for example) environmental

issues.¹⁵ At issue is whether private schools can inculcate more of these capacities than public schools; whether families would – if schooling choices were more open – demand more of this type of education; and whether schooling does influence social cohesion.

Opponents of the marketplace are concerned that individual families are more likely to stress private advantages to them than broader benefits to society. Indeed, the pressure for greater freedom of choice derives from the preferences of families. Precisely how to measure the student behavior that connotes these social benefits is not settled. For example, some would measure student knowledge of political and economic institutions and modes of participation in civic life. Others would measure attitudes towards civic participation. Others yet might measure orientations towards contributing to society.

When measuring some of these dimensions, research evidence for the U.S. suggests that private schools offer more ‘civic education’ than public schools do.

Table 5 summarizes the empirical evidence from two cross-sectional analysis of civic education in the US, controlling for other factors including family background. Students in assigned public schools are compared with those in four other types of school: magnet public, private Catholic, private religious but non-Catholic; and private independent. Although not fully consistent, the results broadly indicate that private schools produce more community service, civic skills, civic confidence, political knowledge and political tolerance than is available in public schools. The explanatory power of the school type on actual levels of civic-mindedness is however very low. Nevertheless, there is certainly no direct evidence that, were families to choose a private school from the marketplace of providers, social cohesion would fall.¹⁶ However, this analysis is based upon existing samples of private schools, not the kinds that would arise under a voucher plan. Analysis of the expansion of the supply of private schools accepting vouchers in Milwaukee indicates 30% are secular, with the rest religiously affiliated: around half of these religious students are Catholic and

half are from other faiths. But there was a reasonable expansion of new schools: just under half of the participating schools were founded after the Program was introduced, suggesting the need for caution in extrapolating from existing provision (see Belfield et al., 2003).

FUTURE DEVELOPMENTS

What are the prospects for market approaches to education, and where are the needs for research? The market approach to education is proceeding apace in elementary and secondary education. Much of the momentum derives from the political tides that have swept in privatization more generally in recent decades. But, other reasons are the quest for many different forms of school choice and the search for radical alternatives to counter the failure of inner-city schools. Federal legislation under No Child Left Behind (NCLB) is also an important force for privatization as an extension of school choice; three main provisions serve to increase choice. Under Unsafe Schools Choice Options, students can transfer from a school identified as ‘persistently dangerous’ or one where they were victims of a crime. Under Public School Choice, a school that fails to meet academic Adequate Yearly Progress targets (AYP) must offer students transfer alternatives to other schools. Finally, under Supplemental Educational Services, schools failing to meet AYP targets for three years must offer low-income students additional tutoring or remediation outside the regular school day. Each of these provisions will open up the educational market, both from the parents’ perspective – many students may be affected – and from the providers’ perspective – where private companies may offer tutoring or remediation services or charter schools may grow. Such provisions may also be politically attractive, in that choice is only triggered when the current set of educational options is deemed inadequate. As states are responsible for identifying unsafe schools and setting AYP targets there is latitude in how much market provision is encouraged. However, given the difficulty of meeting NCLB standards over

time, especially for highly mobile students who do not attend a particular school long enough to benefit from enriched services, it is possible that more and more schools will be declared “failures”. This will provide political ammunition to push for educational market approaches and further privatization as a promising alternative to that “failure”.

The evidential base is far from complete. About the only conclusions that we can draw at this time are: (1) market approaches increase choice considerably; (2) competition and choice are associated with small improvements in academic achievement, but nothing approximating the revolutionary changes argued by advocates; (3) there is some evidence that universal market approaches will lead to greater inequalities, but restricted ones limited to the poor may have the opposite impacts; and (4) the effects of educational markets on social cohesion are unknown and depend heavily on how social cohesion is defined and measured and what types of schools will emerge in a market expansion.

Why is So Little Known?

Although we have been able to set out a policy and evaluation framework for educational vouchers with some confidence, the evidence needed to fill in that framework is much less comprehensive. There are a number of reasons for this:

- (1) Lack of Market Experience—Educational vouchers and tuition tax credits as well as charter schools and for-profit educational management organizations are a relatively recent phenomenon. They embrace only a tiny fraction of schools and students in the U.S. This has meant that the empirical universe from which one can derive evidence is extremely limited. Thus, much of the evidence is derived from other forms of educational competition, international settings such as Chile, and public/private school comparisons rather than from extensive market competition. Even the applications of educational markets are relatively small in scale and are difficult to generalize to more extensive applications.

- (2) Chicken vs. Egg Dilemma—In the absence of more solid and persuasive evidence of superiority and the complications of tradeoffs among goals, it is difficult to initiate more extensive market demonstrations. That is, in order to encourage dramatic departures from the traditional organization of schools, it is necessary to show that the alternatives are demonstrably superior. But, in the absence of larger scale applications of educational markets, it is not possible to derive that evidence.
- (3) Too Many Variants—Clearly the outcomes of an educational marketplace depend crucially on the specifics. There are many different combinations of arrangements for finance, regulation, and support services, each with potentially different consequences on the four criteria that have been delineated. Therefore, generalization is limited from the few implementations that exist today in the U.S. or in other countries. In reality, evidence must be limited to a particular application of educational vouchers or other forms of the educational marketplace, and the existing variants are too limited from which to draw extensive generalizations.
- (4) Evaluations are Extensive and Expensive—It is one thing to do research on modest interventions in education. It is quite another to evaluate a system-wide change. Holding other things constant statistically or experimentally becomes less feasible as one expands the scope of the intervention, and market approaches to education represent extensive interventions. Thus, costly evaluations of educational vouchers that have adopted experimental designs have found that even after three years of assessment, a timeline that many think is too short, serious challenges to validity arise (e.g. see Howell and Peterson 2004; Krueger and Zhu, 2004ab). Further, even these evaluations typically address only matters of student achievement and parental satisfaction, ignoring the other important dimensions. The significant advantages in using randomized field trials to produce very precise answers and accurately identify

impacts may come at the cost of relevance to broader policy questions and issues of program implementation. Although much more can be done in ascertaining the probable impact of market reforms in education on different educational outcomes, the multiplicity of educational goals and the thinness of the evidence suggests that a priori views and ideological stances will probably dominate in terms of educational policy on this topic.

Table 1 **Summary of the Effects of Increases in Competition by One Standard Deviation**

Outcome Variable	Stat. Sig. Estimations (n)^a	Competition Measure	Effect of Increasing Competition by 1 Standard Deviation
Academic outcomes	38% (206)	Herfindahl Index	Outcome scores in public schools rise by 0.1 s.d.
		Private school enrollments or other proxies for competition	Outcome scores in public schools rise by <0.1 s.d.
Attainment, graduation rates, drop-out rates	42% (52)	Number of districts or schools	Drop-out rates are not affected
		Private school enrollments	Graduation rates are higher by 0.08–0.18 s.d.
Spending	42% +ve 22% -ve (33)	Number of districts in state	Spending is lower by 12%
		Private school enrollments	Spending effect is ambiguous (higher by 0.2–0.4 s.d. <i>or</i> lower by 7%)
Efficiency	66% (64)	Herfindahl Index	Efficiency is higher, only in concentrated markets
		Private school enrollments	Efficiency is higher, by approximately 0.2 s.d.

Notes: ^a Number of separate studies: academic outcomes, 25; attainment, graduation rates, drop-out rates, 6; spending, 11; efficiency, 13; teaching quality, 8; private school enrollments, 6. Final column effects are calculated using all studies, where both significant and insignificant coefficients are reported.

Source: Belfield and Levin (2002).

Table 2 **Summary of Catholic School Effects**

Academic Outcome	Number of positive and significant estimates / Total number of studies	Average effect (all studies)
<u>K-8 Math:</u>		
Full sample	1 / 4	0.02
Minority	2 / 7	0.05
White	1 / 7	0.04
<u>K-8 Reading:</u>		
Full sample	1 / 3	0.03
Minority	0 / 7	0.00
White	2 / 7	0.10
<u>Secondary Math:</u>		
Full sample	2 / 5	-0.05
Minority	1 / 6	0.00
White	3 / 4	0.10
<u>Secondary Reading:</u>		
Full sample	1 / 4	-0.05
Minority	0 / 2	0.00
White	1 / 2	0.00
<u>High school graduation:</u>		
Full sample	4 / 5	0.07
Minority	5 / 6	0.14
White	5 / 6	0.06
<u>College attendance:</u>		
Full sample	3 / 4	0.06
Minority	5 / 6	0.15
White	5 / 6	0.06

Source: McEwan (2000, Table 5).

Table 3 **Summary of Charter School Effects**

Academic outcome	Grade level	State	Results for charter schools relative to comparison group
Math Reading	2-11	AZ	+ve (very weak) +ve (weak)
Reading	3,4 and 7	CO	+ve (2/3rds outperformed comparison schools)
Writing	3,4 and 7	CO	+ve
Math	3,4 and 7	CO	No difference
Reading / Math	4,6,8 and10	CT	+ve
Reading / Math		DC	-ve (less likely to have improved; more 'below basic')
Reading / Math	3,5 +	GA	No difference
Reading / Math	4,5,7,8, and11	MI	-ve
Reading / Math	5,6,8,9 and11	PA	-ve (lower scores in cross-section) +ve (faster gains)
Reading / Math	3-8	TX	-ve, all schools +ve, at-risk schools

Source: Miron and Nelson (2002, Table 3).

Table 4 **Summary of Impact of Voucher Experimental Trials**

Impact of switching to a private school on test score performance				
City	Year I (NPR)	Year II (NPR)	Year III (NPR)	Year III (N)
<i>Full Sample:</i>				
New York City	1.1	0.6	1.4	1250
Dayton	2.2	4.2	..	
Washington, DC	-0.3	7.5**	-2.1	687
<i>African Americans:</i>				
Three-city average	3.9	6.3**	6.6**	1175
<i>All Other Groups:</i>				
Three-city average	-1.0	-1.4	-3.5	760

Notes: NPR is National Percentile Ranking. ** Statistical significance at $p < 0.05$.
Source: Howell and Peterson (2002, Table 6-1).

Table 5 Summary of Correlations between School Type and Civic Education

Facet of civic education	Relative to assigned public school Results in 1996/1999			
	Magnet Public	Catholic	Religious, non-Catholic	Private secular
Community service	../.	+ve/+ve	+ve/..	+ve/..
Civic skills	../.	+ve/+ve	../.	../.
Civic confidence	../.	../+ve	../+ve	+ve/+ve
Political knowledge	../.	../+ve	../.	+ve/..
Political tolerance	+ve/..	../+ve	../-ve	../+ve

Notes: Results are from probit and ordered probit estimations (details available from author). +ve or -ve indicates that there was a statistically significant difference ($p < 0.10$) from the assigned public school category; ‘.’ indicates no statistically significant difference.

Sources: Estimates for 1999 are taken from Belfield (2003). Estimates for 1996 are taken from Campbell (2001, Table 12-7).

Figure 1

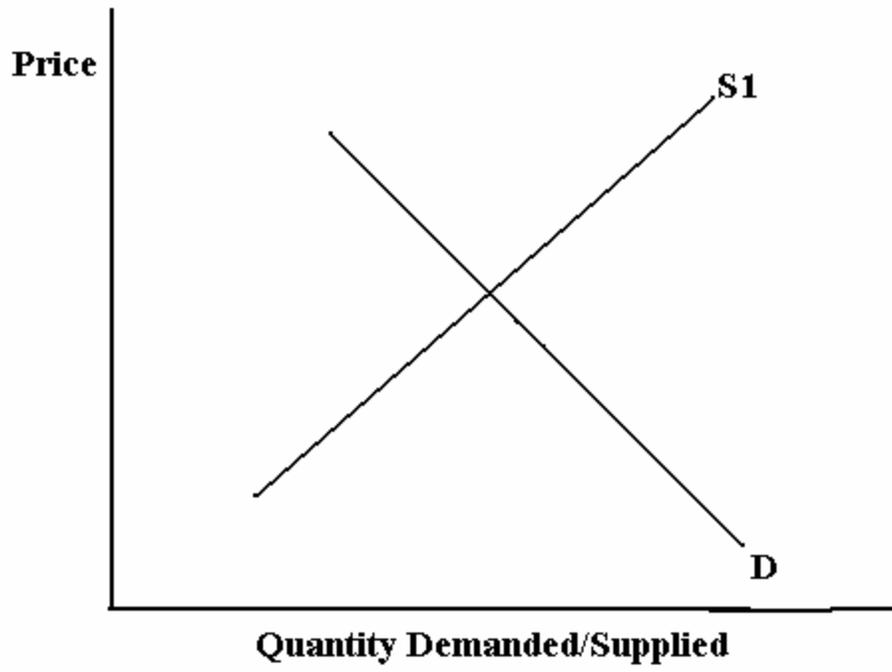
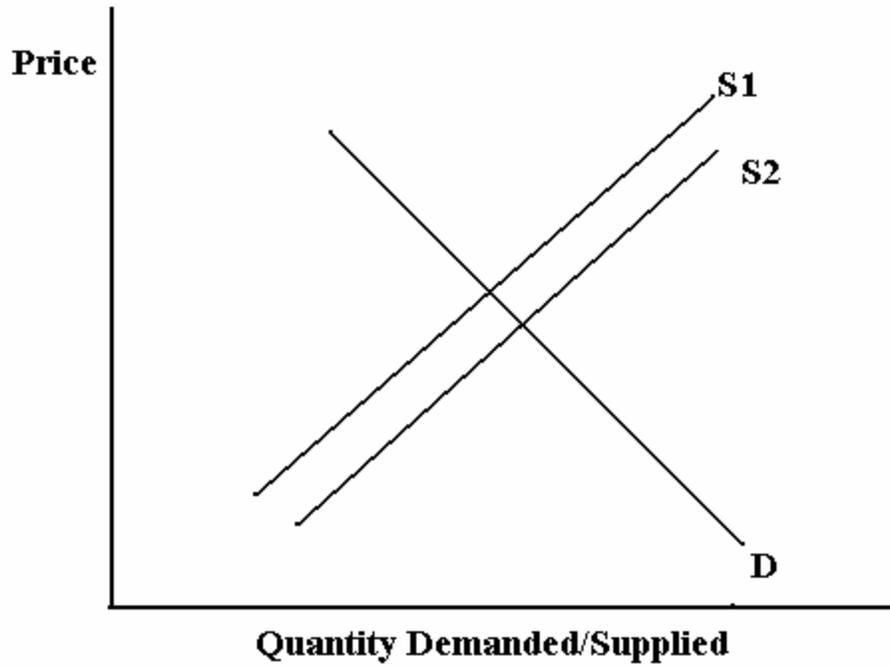


Figure 2



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ENDNOTES

¹ As examples on both sides of the debate, compare Smith (2003); Viteritti (1999); Coulson (1999); Henig (1994); and Cookson (1992). For analysis that relates these positions to political constituencies, see Ryan and Heise (2001).

² There is now a considerable amount of evidence on education markets, from researchers in political science, law, education, sociology, and economics (e.g., Godwin and Kemerer, 2002; Wolf, 2003; Hoxby, 2003). It is therefore only possible to provide an overview of the issues (for an earlier, book-length review, see Gill et al., 2001).

³ The brief exposition that follows is designed only to provide the uninformed reader with the most rudimentary picture of a market and price determination. It is not a substitute for a more thorough presentation. Detailed expositions at an introductory level can be found in Pindyck and Rubinfeld (2000).

⁴ It is important to note that a large number of households exercise choice among schools and school districts in their choice of neighborhood. For some detail on existing school choice, see Henig and Sugarman (1999). For the theory on why choice of community may lead to efficient production of schooling and other public goods in local communities, see the classic article by Tiebout (1956).

⁵ More detail is provided in the Appendix to Levin (2002, 170-71) presenting “Questions for Analyzing Design Dimensions of Vouchers.”

⁶ The dearth of knowledge and understanding by parents is heavily underlined in Public Agenda (1999). Schneider, Teske, and Marschall (2000) also found class and race differences in knowledge of schools. For a detailed investigation of public attitudes, see Moe (2001).

⁷ Levin (1999) with greater elaboration in Levin (2002). Also see Godwin & Kemerer (2002).

⁸ For example, E. G. West, an important supporter of private markets in education has argued that public benefits or externalities of education are largely mythical or are not worth the burden of tax support because of the dead-weight loss of public welfare created by that level of taxation. His views imply that the provision of payment for education should be privately arranged rather than being a matter for the government. See West (1965; 1991).

⁹ There have been a number of attempts to identify alternative outcomes for schooling besides test scores, and to compare these across school types. Comparisons between private religious and public schools show the former reduce teen involvement in sexual activity, arrests, and the use of hard drugs, but there is no difference in alcohol, tobacco or soft drug usage (Figlio and Ludwig, 2000).

¹⁰ Recent micro-level analysis from four states indicates that charter school students may perform better (WI), broadly equivalent (TX), or worse (CA, NC) than students in other school settings (Bifulco and Ladd, 2003; Witte, 2003; Hanushek et al., 2003; and Buddin and Zimmer, 2003). These micro-level analyses also find considerable variation in academic achievement across types of charter school.

¹¹ These findings have been challenged by a re-analysis that concludes that these gains may not be robust to more consistent racial classification and alternative sampling schemes (see Krueger and Zhu, 2004ab; and in rebuttal, see Peterson and Howell, 2004). Notwithstanding, on either set of assumptions there is very little evidence that voucher programs make a large difference to educational outcomes for participating students.

¹² Much of the present system of funding public education permits greater funding of schools in wealthier areas through the property tax. However, by basing this type of decision on individual families rather than communities, it can be shown that the inequalities are likely to increase.

¹³ There is more international evidence on sorting according to ability levels. For New Zealand, there is evidence of ethnic partitioning after decentralization: the proportion of minority students increased in lower performing schools and fell in higher performing schools (Fiske and Ladd, 2003). Similar evidence has been found in studies of schools in Scotland and the Netherlands (Willms, 1996; Karsten, 1994). For the United Kingdom, families – when given new school choice options – selected schools with similar socioeconomic status to their own (Gorard and Fitz, 2000). However, the overall effect on the socioeconomic partitioning of the system was slight.

¹⁴ Often, the assumption that a government system does generate social cohesion is taken for granted. Given the substantial involvement of local, state, and federal governments in education over the past century, there has been very little specific evidence adduced as to how social cohesion is being promoted and what indicators can be used to ensure that it continues to do so. (We appreciate the comments of a reviewer on this issue).

¹⁵ A related approach is to compare the educational processes (e.g. pedagogies, cultures, class-room interactions, and textbooks) of private versus public schools (see Peshkin, 1986; Brint et al., 2001).

¹⁶ From data from the 1996 Youth Civic Involvement survey, Smith (2003, 114) reports higher levels of tolerance, civic capital efficacy, and participation in private schools, although when these correlations are adjusted for student and community characteristics only private independent schools show an advantage. Further, this conclusion depends heavily on which schools might predominate in market expansion. Evangelical

schools, which are the most rapidly growing segment at present, show less political tolerance among their students than Catholic or public schools (Godwin et al., 2001).