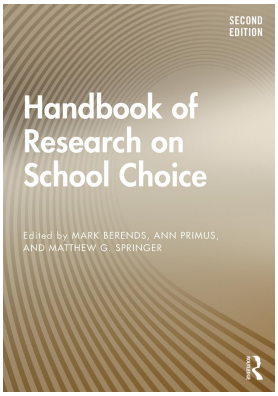

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MARKET COMPETITION AND SCHOOL VOUCHERS

Henry M. Levin

Milton Friedman's formulation of an educational voucher plan has been around for two-thirds of a century. Friedman (1955, 1962) argued that a competitive market of schools to replace government schools would improve family choice, resource efficiency, and educational outcomes. To enable this transition, the government would provide a modest voucher that could be used at any school that met minimal requirements. Parents could pay an additional supplement if they preferred a more expensive education for their children.

Friedman (1962) maintained that the role of the state was to require a minimum, compulsory education for the young to prepare all citizens for democracy and to ensure that everyone, regardless of family income or educational commitment, had the opportunity to gain at least a basic education. To fund it, the government would provide a voucher to parents that state-approved schools could redeem with the state treasury. The voucher would not apply to higher education or vocational secondary education. Friedman asserted that, rather than aiming at the social purposes of building literacy and citizenship, these levels of education were devoted to career preparation as a private investment in human capital that yielded financial and other returns. As such, Friedman believed that further education should be financed privately by the direct recipients of the benefits, largely through the use of income-contingent loans paid out of future income gains resulting from the training.

It is important to note from the outset what Friedman (1962) considered the overall argument for universal and mandatory, basic education:

> 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. Education can contribute to both. In consequence, the gain from the education of a child accrues not only to the child or to his parents but also to other members of the society. The education of my child contributes to your welfare by promoting a stable and democratic society. (p. 86)

As a market economist with a strong preference for the "invisible hand" of the market to make resource allocation decisions, Friedman aligned education with the marketplace rather than with what he called a monopolistic government system. His view was that a market would allocate resources more efficiently than the government because the sum of the decentralized decisions of consumers and producers would be more responsive than that of government control. Of course,

he had to confront how this would be compatible with an overall goal of creating a democratic society with a "minimum degree of literacy and knowledge" and "widespread acceptance of some common set of values." For this he would need to rely upon the government to create direction and standards of compliance for schools. Unfortunately, he did not pursue the details of how the government would accomplish this goal in a marketplace of school choice, other than the general principle of requiring schools to meet standards for voucher approval. He characterized this aim as being no more challenging than the government setting hygienic standards in restaurants, although logically his rationale would seem to require regulation of nutritional content of the educational experience rather than just sanitation.

Competitive Markets and Education

As an economist, Friedman gave great weight to the value of the marketplace as the prime mechanism for creating valued outcomes at least cost. It is important to explain why competitive markets are given such primacy. The textbook definition of pure competition sets out a range of assumptions for obtaining efficient and valued outcomes:

1. A large number of educational users (students) and educational producers (schools).
2. Freedom of exit from and entry into the market of educational users and producers.
3. A homogeneous product or service.
4. Perfect information on alternatives, that is, prices and qualities of product or service.
5. Maximization goals of educational users and producers.
6. Low or no transaction costs.
7. No externalities, costs, or benefits to those outside the immediate transactions.

Large Number of Users and Producers

To have substantial competition, markets must have large numbers of educational users and producers. Metropolitan regions of the United States typically meet this requirement, although there is limited public transportation for access to schools outside of neighborhoods and if young children want to use it, they must be accompanied by adults. In rural areas there may be too few students to support a competitive market of schools. Some suggest that this limitation is present only if vouchers are restricted to brick and mortar schools. If states would collaborate, they could go to schools that are regional through virtual schooling, which provides educational programming and interactions electronically. However, studies of virtual schools show deplorable academic achievement and graduation rates when compared with traditional public or conventional charter schools, so scholars suggest caution in asserting them as a foundation for an expanding market (Zimmer et al., 2009; Woodworth et al., 2015; Ahn & McEachin, 2017; Molnar et al., 2017; Miron, Shank, & Davidson, 2018).

Freedom of Exit and Entry

Markets must be accessible to educational users and producers if they are to provide substantial competition. This means that educational clientele must be able to readily obtain the service from different providers or easily leave one provider for another. Different voucher plans have different provisions on this matter. Most require that schools accept applicants if space is available, or that they use a lottery among applicants to provide equal chances of access. However, the Friedman voucher plan would allow schools to choose from among applicants and also to charge fees above the voucher, which would restrict entry only to those whose families who have adequate resources or access to scholarships to meet costs beyond the voucher.

Schools, if approved for meeting voucher criteria, would be able to enter the voucher market to compete for students who would pay market prices for needed resources within the constraints of the voucher or the voucher plus an extra fee for better services. Under the Friedman plan, the schools would be either for-profit or nonprofit, though some voucher plans (e.g., Chile) include public schools. Perhaps the primary obstacle to entry is that of start-up costs for facilities, personnel, and other requirements that must be committed in advance of receiving voucher revenues. These resources can be obtained from conventional financial sources with sponsorship from credit-worthy organizations or individuals as well as a strong and feasible business plan. It might also be possible for the government to increase market suppliers through technical assistance and government loans in meritorious cases, although no voucher plan presently includes these provisions. Schools would also have to meet the approval requirements set out for voucher eligibility. In general, economies of scale are reached at fairly low levels of enrollment (Kuziemko, 2006; Leithwood & Jantzi, 2009), so there would be opportunities for many schools in urban areas.

Homogeneous Product or Service

Perfectly competitive markets require homogeneous products and services. Not only is the product or service standardized in features and quality, but it is also viewed as a commodity that meets exact specifications. Because of this standardization, the market competes over price. Education is almost the diametric opposite of this description; schools differ in both obvious characteristics (e.g., sponsorship) and more subtle ways (e.g., philosophies of education). Indeed, to the degree that schools compete for students, they rely not on homogeneity and commodification of offerings, but on product differentiation (Rosen, 1974), arguing that their programs, personnel, and educational offerings are different from and superior to those of competitors. They also attempt to appeal to parents who prefer a particular approach to education or schools that serve what they consider the educational needs of their children rather than addressing a homogeneous process and goal. Thus, a voucher market does not meet the standardization criterion. In fact, it is assumed that families are attracted to school choice by seeking schools that address differences in preference to meet their unique goals and the characteristics of their child.

Although the typical voucher arrangement in the U.S. is set at a given level for students not receiving special educational services, under the Friedman (1962) plan, schools would be allowed to charge higher fees to parents who desire and can afford a more expensive education. Friedman would also allow schools to select their students, further differentiating school appeal by student category. In Chile, schools can both select their students and charge higher fees, although there are also financial incentives to schools for enrolling students from lower income families (Murnane, Waldman, Willett, Soledad Bos, & Vegas, 2017).

Price competition and attractiveness of educational programs can be dimensions of school competition. But, the fact that there are few dimensions of school quality that are widely available and accepted, and because quality is difficult to verify, means that schools may place more emphasis on marketing language about their merits than the provision of actual evidence of concrete features or results. Further, the fact that schools can serve different student populations means that differences in educational advantages of enrollees rather than school effectiveness may be responsible for the educational outcomes, even when accountability data on the latter are available. This issue also confounds the usefulness of available information on schools.

Perfect Information

A key assumption of the perfectly competitive market is that buyers and sellers have perfect information about performance and prices of suppliers and about reliability, consistency of quality, and

all other aspects of the good or service and its provision. If the product or service is homogeneous, differences in quality of offerings can be ignored. Of course, most realists acknowledge that perfect information is rare because of the complexity of knowing all of the pertinent details about alternatives, even when the good is viewed as a standardized commodity, hardly an apt description for education in the U.S. context. So, the criterion is often reduced to the necessary amount of relevant information about the alternatives that are offered. And more attention is focused on the availability and measures of key information rather than its completeness (Grossman & Stiglitz, 1976). The assumption is that available information on most markets, particularly those with product differentiation, is always inadequate but may be sufficient for certain purposes (Schneider, Teske, & Marschall, 2002).

Clearly, the relative comprehensiveness and accuracy depend heavily on the characteristics of the good. Choosing schools is a particularly complex challenge, not only because of the attempt of each producer to emphasize differentiation of its goals, functions, and methods from other schools through product differentiation (Rosen, 1974), but also because most characteristics of schools are not based upon common units of measurement or language. Test results, graduation rates, and demographic characteristics of enrollments are common measures that can be obtained in many jurisdictions. But, how well a child will succeed academically or match the philosophy and practices of a school or benefit from teacher effectiveness or peer relations cannot be readily predicted from available information. The attractiveness of a school and its uniqueness are often attempted through descriptions of glowing attributes without specificity or evidence supporting the descriptions.

The contrast between the elegance of the language and the lack of verification for a prospective student is not just a problem of communication. Education is sometimes called an "experience good" because it requires experience in an educational setting, often for a considerable period, to ascertain its effectiveness. Clearly, it is not feasible for parents to test many schools based on experience to make a decision, so their choice will be based upon minimal information relative to the richness of experience. Low-cost methods of search, such as use of the internet, are not feasible for obtaining the information required on experience goods (Huang, Lurie, & Mitra, 2009). Further, parents in school choice often lack even approximations of test results and class size and rely on the recommendations of acquaintances rather than obtaining concrete data on schools (Schneider et al., 2002).

Maximization Goals

That the perfectly competitive market leads to economically efficient results assumes "maximization goals" (i.e., goals that maximize benefits) on the part of both users (e.g., satisfaction, usefulness) and producers (e.g., enrollments, market share, profits). In the case of education, it is assumed that a rational family decision is to maximize the satisfaction and usefulness of their children's education (supposing the possibility of different families' priorities). For example, some may seek schools that focus on the investment returns to the school as reflected in the future productivity of their children or academic achievement, while others focus on a supportive school climate. Friedman emphasized competition among both for-profit and nonprofit producers. For-profit schools will attempt to maximize profits or related goals such as market share, while nonprofit schools will seek to maximize their unique foci such as education of a specific gender or philosophy or social commitment. These motives are less understood in education than in the production of other goods and services because a combination of both financial and philosophical goals may be present. However, we might assume that every school is attempting to maximize some result related to these two goals, separately or in combination.

Transaction Costs

To engage in market activity, both users and producers often face costs beyond the purchase of a good or service. In school choice these costs may include the acquisition and analysis of data, consultations with experts, interviews, school visits, negotiations, and monitoring of educational progress. The perfectly competitive market assumes that such costs are negligible or zero. But for education markets, it is clear that this is not so. First, there is the cost of information on alternatives. Some families may acquire such information online, but it is often necessary for them to visit the schools to learn more specific details through tours and presentations. Schools may also require interviews, testing results, and previous school records for consideration of admissions, and these take both schools and parents time to arrange and discharge

With the exception of virtual schools, children must be educated at a physical site. Even if there are adequate numbers of competing voucher schools within and beyond a neighborhood, transportation to schools must be accommodated. Public transportation in the U.S. is typically inadequate for this, except in a few areas of the country. And that provision is not appropriate for young children because, as mentioned previously, it requires responsible adults to accompany them to and from school. Such cases will require private transportation, which is costly to families even if carpooling is feasible. Merely the search for a school may require substantial transportation costs. Daily transport will likely require both family funding and travel time.

Even if the government subsidizes school transportation, the irregular transport patterns that may emerge and adapt to change with school switching will necessitate more costly alternatives than traditional school transportation modes (Levin & Driver, 1997). An increase in the size of the geographic region of feasible school choices will also mean an increase in the direct cost of transportation and the travel time to obtain access. One estimate of the overall cost of infrastructure for a means of accommodating transaction costs for the existing private school population—record keeping, monitoring eligibility for vouchers and school attendance, transportation, information, and adjudication of disputes in a highly decentralized system—suggests that education costs would rise by about one-quarter (Levin & Driver, 1997).

Externalities

The competitive marketplace assumes that the benefits and costs of a market activity are limited to the user and producer and do not affect third parties. But education is virtually assumed to produce externalities, or what Friedman (1962) called "neighborhood effects." Universal basic education is largely justified by its neighborhood effects for the entire society, the consequences of the overall educational system for all of its members. And to reinforce these valued effects, Friedman proposed that only schools meeting certain (unspecified) conditions would be approved to be eligible for vouchers. Schools are expected to transform individual students from many backgrounds and points of view into a democratic society, creating civic participants who support and improve the social, political, and economic institutions for democratic functioning. Friedman (1962) asserted that it is this neighborhood effect that justifies public funding and compulsory education.

This places education at the heart of a serious dilemma. Supporting the goal of choice, parents have the right to rear their children in the ways that reflect their beliefs and value commitments. This provides parents with considerable leeway in the exposure of their children to religion, politics, philosophical orientations, and other experiences they choose as educational influences on their offspring. This is a fundamental benefit of a free society, limited only by legal proscriptions. But, to gain such a benefit, it is necessary to submit to the laws that enable the rights (e.g., freedom of speech, political participation, and choice; freedom of association and participation) that make private decisions and choices possible (Gutmann, 1999; Levin, 1987, 1991, 2009).

As Friedman (1962) asserted, the reproduction of a society premised upon member rights and obligations is based heavily on a common system of knowledge and values that are inculcated through the educational system. Accordingly, all schools would need to meet a common set of standards in preparing students for functioning effectively in a democratic society. Families could choose the type of schools their children attend, including schools focusing on educational philosophies, religion, and political orientation. But they would also have to comply with a system of education that exposes them to other perspectives and populations resolving political differences with discourse and acceptable civic behavior.

Rebell (2018) addresses these dimensions and asserts that, in failing to discharge these responsibilities adequately, schools will violate both a prime educational purpose as well as the requirements of federal and state constitutions. Friedman (1962) stipulated that a market of choice that does not provide an effective education for civic knowledge and democratic values and behavior cannot justify government funding. For this reason, eligibility of schools for vouchers must depend upon their preparing students with values and competencies for a democratic society.

Reality of Educational Markets

The highly competitive market that Friedman (1962) proposed using government funding for the voucher and parent funding through additional fees has been claimed to create a more effective and efficient system for education. But as revealed above, the actual features of the highly competitive market are inconsistent with the reality in education (Henig, 1993). The competitive market's assumption of homogeneity of services is precisely what the voucher is designed to undermine, making available many specialized educational choices. Useful information on school qualities for multiple schools is likely to be limited in terms of predictable educational consequences for any particular student prospect. There are high transaction costs for accessing useful information and attendance at schools outside the neighborhood. In addition, competitive school choice without effective regulation is undermined by the exigency, emphasized by Friedman (1962) and others, of preparing the young for mastering a common set of values, knowledge, and skills for participation in a democratic society. The production of public goods, whether imposed by the government or produced as neighborhood effects, is one of the major causes of market failure more generally (Bator, 1958).

Consequences of Voucher Competition

The literature on vouchers addresses four specific goals: *freedom of choice*, *productive efficiency*, *equity*, and *social cohesion* (Levin 2002). Do vouchers enhance these goals? Clearly, the specifics of voucher plans vary and can influence the outcomes (Education Commission of the States, 2017), but the characteristics of markets can be generalized across voucher plans. Most programs in the U.S. are limited to lower-income populations, so this must be taken into account, although countries with universal voucher systems such as Chile and Sweden can also be considered. The most important and comprehensive review of findings on the impacts of voucher competition is from Epple, Romano, and Urquiola (2017), but unique insights for Chile can be found in Hsieh and Urquiola (2006) and Trevino, Mintrop, Villalobos, and Ordenes (2018), and for Sweden in Abrams (2016) and Yang Hansen and Gustafson (2016).

Freedom of Choice

This goal refers to the ability of families to select educational experiences for their children that comport with their private preferences. There is no question that freedom of choice is enhanced by the opportunities of vouchers and competition, providing more variety of schools and more

possible choices. This is particularly true for approaches that include non-governmental schools and religious schools. In the U.S., about 80 percent of private school enrollments are in religiously affiliated institutions (National Center for Education Statistics, 2018). Friedman would allow religious schools to participate in voucher plans, and most recent state voucher plans have included schools with religious affiliations to expand choice opportunities.

Productive Efficiency

Productive efficiency refers to the maximization of educational outcomes given resource constraints. In a general way, Friedman (1962) and market adherents assume that increased competition will improve the outcomes that parents seek, including student achievement. Although Friedman provided no empirical evidence on this, he did refer to the potential efficiencies in improving teacher recruitment, selection, calibration of compensation with productivity, and retention of excellent teachers. Much of the literature on this topic compares results from standardized testing of students in voucher schools with those in traditional public schools. Overall, summaries of this literature show no reliable pattern of achievement advantages for voucher students over those in traditional public schools (Levin, 1998; Rouse & Barrow, 2009; Epple et al., 2017). That is, whatever the competitive effects of vouchers among participating schools, they have not shown a consistent, competitive advantage in student achievement. Specific studies for Chile (Hsieh & Urquiola, 2006) and Sweden have not provided reliable evidence of voucher advantages on student achievement (Epple et al., 2017), and researchers have found this conclusion in U.S. summaries of studies on academic effectiveness of charter schools, as well (Berends, 2015; Epple, Romano, & Zimmer, 2016).

Recent studies of results for state voucher plans in Indiana, Louisiana, and Ohio, and the federal program in the District of Columbia, using experimental and quasi-experimental methods, have shown that academic achievement for public school students exceeds that of comparable voucher students. For example, the study of the D.C. voucher program showed a loss of about 10 percentile points over two years for voucher recipients relative to similar students in public schools (Dynarski, Rui, Webber, & Gutmann, 2018). A randomized study of Louisiana's program found that voucher participation reduced mathematics achievement in a single year by about 14 percentile points relative to comparable students in public schools (including reductions in reading, science, and social studies achievement). Voucher participation increased the probability of failing scores by between 24 percent and 50 percent (Abdulkadiroğlu, Pathak, & Walters, 2018).

A study of voucher schools in Indiana found that in a single year the voucher students lost 5 percentile points in mathematics relative to comparable students in public schools (Waddington & Berends, 2018). In Indianapolis, voucher students experienced comparable achievement in English/Language Arts, but losses in mathematics relative to comparable public school students (Waddington & Berends, 2018). In the Ohio program, operating since 2005, voucher students in private schools did more poorly than comparative students in public schools (Figlio & Karbownik, 2016).

Equity

Equity refers to fairness in access to educational opportunities, resources, and outcomes by gender, social class, race, language origins, disabilities, and geographical location of students. Improved equity is considered an important public, or neighborhood, effect of education. Friedman (1962) and voucher advocates assume that the ability to choose schools will provide better opportunities for students who are locked into inferior neighborhood schools and that the competitive marketplace will have incentives to meet the needs of all students. Those who challenge vouchers assert that they will create greater inequities because parents with education and income are better informed and have greater resources such as access to transportation, and schools will seek to attract and select

students by these criteria. Although empirical study has been less extensive, it is clear that certain patterns follow the use of market mechanisms for education. The most notable is that, regardless of stated preferences for academic criteria, actual choice is based heavily on racial and socioeconomic preferences (Schneider & Buckley, 2002; Schneider, Elacqua, & Buckley, 2006; Stein, Goldring, & Cravens, 2010). Distance is also an important criterion limiting many students to schools in their segregated neighborhoods and relatively few alternatives (Glazerman & Dotter, 2017). A study of private school preferences in Utah found that parents give high importance to religious and moral values relative to academic achievement (Bukhari & Randall, 2009).

Studies of nationwide vouchers or voucher-like plans include Chile, Sweden, and Holland (see Chapter 7 of this volume). Holland provides universal school choice with specified per-pupil funding that goes to the school of choice. Chile has had a voucher system since 1981, largely modeled after Friedman's plan of a modest voucher, with additional school fees paid by families, school selection of students, and extensive privatization of for-profit schools (Valenzuela, Bellei, & Ríos, 2014). Analysis of data from the Organization for Economic Co-operation and Development study of the Program for International Assessment found that Chile has the most segregated school system among all participating countries in terms of socio-economic stratification (Gutierrez, Jerrim, & Torres 2017). Elacqua (2012) and Hseih and Urquiola (2006) described the extent of that segregation and its mechanisms. Epple et al. (2017) emphasized that increased student stratification in that country is due to a market sorting tool that not only places students from lower income and minority groups at a disadvantage in school selection, but also creates mechanisms where such students suffer educationally because their presence attracts less talented teachers and peers. School choice has also contributed to increased student segregation in Sweden (Yang Hansen & Gustafson, 2016) and Holland (Levin, Cornelius, & Hanisch-Cerda, 2013).

In the U.S., researchers have concluded that school choice leads to stratification by race and social class even beyond the effects of extensive residential segregation (Scott, 2005). A Brookings study found that charter schools have been found to be more racially and economically segregated than traditional public schools (Whitehurst, Reeves, & Rodrigue, 2016). Mickelson and Nkomo (2012) offered insight into the mechanisms at the local level and their consequences. Contrary to the assertions of Friedman (1962), educational inequities through vouchers are likely to expand, separating students by race, socioeconomic status, English language learning, and disability.

Social Cohesion

As with equity, social cohesion refers to a major public purpose of schooling in a democratic society: the aforementioned neighborhood effect (Friedman, 1962). Public schools are premised, at least partly, on a common educational experience that is expected to develop all students to grow to adulthood prepared to effectively contribute to the social, political, and economic institutions of our society. A democracy requires that its members master the skills and knowledge necessary for civic and economic participation, including their rights and responsibilities under the law, principles of democratic government, and an understanding of the economic system, as well as preparation for productive roles. In his recent book, Michael Rebell (2018) argued eloquently that the states and federal government have constitutional responsibilities in this regard, and outlined strategies to meet them.

But, as discussed above, preparation for civic life and social cohesion requires student exposure to diverse perspectives (Gurin, Nagda, & Lopez, 2004). It requires teaching methods and curriculum that respect differences and provide tools for resolving them in a democratic context. This is more than a checklist of topics. It also conditions how the topics are taught and applied to practices that engage students in desirable civic behavior (Kahne & Bowyer, 2017). Vouchers are premised on attracting students from like-minded families drawn to particular educational values, often of a

political, religious, or philosophic nature or preferences for peers of similar racial and social backgrounds. Although these differences must be respected in a democracy, there must also be room in schools for the shared values that underlie our society. Chubb and Moe (1990) argued that differences in perspectives on appropriate school operations and policies could not be resolved by democratic governance. Rather, any conflict over school practices could better be resolved by removing it from the political realm and providing government scholarships or vouchers that allow families to choose the schools that reflect their values.

Friedman (1962) stressed the crucial importance of civic education by saying that schools should be approved only if they met requirements of inculcating in their students the democratic knowledge and values essential to functioning in our society. But, as this chapter touched on earlier, he was virtually silent on the details of how this would take place while promoting an educational market that would be Balkanized by families choosing schools on religious, political, racial, and philosophical differences. Such differences are already mirrored in the present neighborhood segregated system of schools, but the voucher approach serves to streamline the separation and stratification of families and students by race, social class, and family values. If the choice of schools is just a reinforcement of partisan views of the world already held by families, the education for social cohesion will not be realized.

Some types of private schools choose not to prepare students for skill development or civic requirements of the present world at all. Peshkin (1988) has written a sympathetic study of an evangelical school focused on teaching values and content that are designed to enable students to ascend to the "Kingdom of God." Although a highly engaging account that illustrates how every feature of the school is designed to reinforce a system of sincere religious beliefs and commitments, its rationale differs substantially from a broader concern for civic education and social cohesion. If anything, this challenge has become heightened in an age when social media are replacing more general media sources. Social media sources target audiences with information supporting particular points of view meant to attract users and reinforce their biases rather than to inform audiences with the broader issues surrounding most controversies (Lee, Choi, Kim, & Kim, 2014; Sunstein, 2017).

Social cohesion is a basic requirement for effective functioning of a democratic society, and Friedman (1962) recognized this explicitly. But competition in a market of schools promotes product differentiation and purported differences among schools as competitive advantages, not a broader approach competing on similar measures of educational quality or shared civic responsibility. In this respect, pressures on schools to provide social cohesion represent a serious tension that is a key rationale for public education but that is threatened by market competition and voucher choice.

Takeaways

There are three primary takeaways from this chapter. First, key features of the educational marketplace deviate in significant ways from the perfectly or highly competitive marketplace that Friedman assumed. These include the significant transaction costs for obtaining useful and accurate information and potentially high travel costs to reach schools beyond the local community. Further, gaining experience in different schools for comparison before making a choice is precluded so that reliance for information must be based upon marketing language or the advice of others. On the supply side, many schools seek to specialize their offerings to appeal to particular populations rather than to compete on "educational quality" for similar services. With school fees added to the voucher as Friedman advised, market segments can emerge that sort students by race, socioeconomic status, and other dimensions, limiting the number of suppliers in each stratum and creating sorting and equity issues among the student population. The assumption of no externalities is also violated in relegating education to a marketplace dominated by consumer choice. A prime goal of schools to prepare students for sustaining and participating effectively in a democratic society is compromised by an

emphasis on fulfilling individual choice or private goals in conflict with the societal goal of common preparation for democracy (Levin, 2018).

Second, the contrast between the perfectly competitive market and the educational marketplace is key to understanding the lack of evidence supporting Friedman's view that the market is a promising route to raise educational standards and academic achievement. Of course, Friedman's libertarian focus would celebrate the ability of families to choose their own schools premised on their own goals, and would not be likely to assess educational reform by one standard: academic achievement. But as we have identified in research studies, private family choices place much less emphasis on academic achievement than on schools' demographic, religious, political, and philosophical commitments based on family values (Schneider & Buckley, 2002; Bukhari & Randall, 2009). (This may also explain the lack of systematic difference in charter school achievement when compared with traditional public schools on academic outcomes [Berends, 2015; Epple et al., 2016]). And voucher advocates have emphasized recently that a multitude of other criteria might be used for comparison (Hitt, Wolf, & McShane, 2019). That is, freedom of choice is a valued end in itself, but it does not reinforce a social consensus on academic achievement and civic preparation.

Finally, one of the paradoxes is that, although market competition does not seem to systematically improve the academic performance of voucher students and may actually reduce it, the presence of competition from vouchers seems to nudge up the performance of the traditional public schools from which voucher students are drawn. That is, public schools that are competing with voucher schools for enrollments show small gains in student achievement relative to public schools that are not affected by voucher opportunities. Although the competitive effects are modest (i.e., less than 2 percentiles) there is some evidence that public school students benefit more from the competition than voucher schools.

A case in point is the evaluation of the Ohio voucher program, which showed lower gains in achievement for students in voucher schools than in traditional public schools, but modest improvements in the public schools from which voucher students were drawn. Epple et al. (2017) also found support that voucher competition provides improvements for public school students in test results. An extensive review of 41 research studies of school competition among public schools or between public and private schools used the Herfindahl Index, an economic measure of competition to assess the relation between market competition of schools and academic outcomes of schools (Belfield & Levin, 2002). About two-fifths of the studies showed a positive, but modest, effect of public school competition on academic results. While neither the overall proportion of positive findings nor their magnitudes suggest consistent and large impacts, this is certainly an important topic for future exploration.

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