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EdWorkingPaper No. 23-866

How Free Market Logic Fails in Schooling— and What It Means for the Role of Government

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Market-based policies, especially school vouchers, are expanding rapidly and shifting students out of traditional public schools. This essay broadens, deepens, and updates prior critiques of the free market logic in five ways. First, while prior articles have pointed to some of the conditions necessary for efficient market functioning, I provide a more comprehensive list. Second, with an up-to-date literature review, I show that all of these conditions fail to hold to an unusual extent in schooling relative to other markets. Third, because of these failures, I argue that the most potent critique of the free market approach to schooling comes from the intellectual home of markets—economics. Fourth, I show that the issues leading to inefficiency are the same ones leading to inequity. Fifth, I argue that the analysis points to specific roles for government, which go well beyond those included in new universal school voucher policies but are also narrower than the roles of government encompassed in traditional public education. For these reasons, the current policy direction is off-track and apparently inconsistent with the main criteria on which we evaluate education policy and even with the values that voucher advocates profess.

VERSION: November 2023

Suggested citation: Harris, Douglas N.. (2023). How Free Market Logic Fails in Schooling— and What It Means for the Role of Government . (EdWorkingPaper: 23-866). Retrieved from Annenberg Institute at Brown University: https://doi.org/10.26300/0xbr-5n07

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November 2, 2023

Abstract: Market-based policies, especially school vouchers, are expanding rapidly and shifting students out of traditional public schools. This essay broadens, deepens, and updates prior critiques of the free market logic in five ways. First, while prior articles have pointed to some of the conditions necessary for efficient market functioning, I provide a more comprehensive list. Second, with an up-to-date literature review, I show that all of these conditions fail to hold to an unusual extent in schooling relative to other markets. Third, because of these failures, I argue that the most potent critique of the free market approach to schooling comes from the intellectual home of markets—economics. Fourth, I show that the issues leading to inefficiency are the same ones leading to inequity. Fifth, I argue that the analysis points to specific roles for government, which go well beyond those included in new universal school voucher policies but are also narrower than the roles of government encompassed in traditional public education. For these reasons, the current policy direction is off-track and apparently inconsistent with the main criteria on which we evaluate education policy and even with the values that voucher advocates profess.

"*We are for good education and for having every child have an opportunity for a good education. … [and] believe that competition and choices make everyone better, …[and] if there were other choices for people to make freely that all of the schools would become better as a result and that excellence would be sought in every setting.*"

Former U.S. Education Secretary Betsy DeVos[1]

The American system of primary and secondary education is in the midst of a major upheaval and restructuring. For nearly a century, almost all the nation's children attended schools within the "one best system" of public education (Tyack, 1974). But over the past thirty years, several major trends have shifted more and more students out of that system. In the early 1990s, charter schools emerged (Henig, 2010), and states began making it easier for parents to homeschool their children (Murphy, 2012). This has been followed, over the past decade, by increased intra- and inter-district choice among traditional public schools, as well as various forms of school vouchers. At least 25 percent of children attend a school other than their residentially assigned traditional

[1] https://www.populardemocracy.org/news-and-publications/5-reasons-billionaire-gop-donor-and-public-school-privatizer-betsy-devos.

public school (Harris, Witte, & Valant, 2017). A succession of Supreme Court decisions,[2] support for expanded choice laws under Secretary DeVos, and, most tellingly, the recent adoption of universal vouchers in eight states mean that this number is likely to continue to grow.[3]

Charter schools, homeschooling, and vouchers entail two significant shifts away from traditional[4] public education: (a) they aim to increase school autonomy from government rules and accountability; and (b) they try to increase the number of options available to families. Put differently, these policies treat schooling organizations as autonomous firms and treat families as consumers. In language and logic, these are "market-based school reforms."

One conclusion of the present analysis, however, is that the logic of free markets does not apply well to schooling. This conclusion emerges from the home of market thinking: economics. Non-economists might find this odd, given that economists like Milton Friedman (1955, 1962) have advocated for policies like school vouchers using economic principles. But Friedman did not bring evidence to bear in his argument, nor did he consider many of the unusual features of the schooling environment. This essay does both and shows that economics provides arguably the most comprehensive and persuasive arguments *against* vouchers and market-based logic. While some specific econom*ists* support free markets in education, this conclusion is not a logical endpoint of the discipline's concepts, theory, or empirical findings. Rather, it is a conclusion that also depends on values, evidence, and assumptions—assumptions that fail to hold in schooling, perhaps more so than any other market.

I am not the first to point out that schooling violates free market assumptions. The present analysis builds on earlier work by Walford (1996), Bradley and Taylor (2002), Hess (2002), Ladd (2002), Betts (2005), Levin (2012), Lubienski and Lubienski (2014), Jabbar (2015), Harris (2020), Epple, Romano, & Urquiola, (2021), and many others who have talked about market failure in terms of market assumptions. But my analysis is different in five respects:

First, I broaden the argument to show that *all* of the assumptions necessary for efficient market operation are violated to an unusual extent in the schooling market. Some of these assumptions, and their problems in the context of education, have not been recognized in prior studies or discussed in isolation from the other assumptions, so the larger failure of the paradigm in its application to schooling has yet to be fully recognized.

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[2] Three key voucher cases are most relevant: *Zelman v. Harris* (2002), *Espinoza v. Montana Department of Revenue* (2020), and *Carson v. Makin* (2022).

[3] Some of the recent universal voucher programs are actually "super-vouchers" in the sense that they can be used not just for private school tuition but for purchases of extra tutoring, computers, and other educational goods and services. Advocates call these "education savings accounts" although this is a bit of a misnomer because they do not, as the name implies, involve any saving behavior on the part of families.

[4] I define "traditional public education" as the historical system in the United States in which schools are funded, governed, and managed by local government school districts, which assign students to schools based on residence. The shorter term, "public education" usually has a broader meaning and does not clearly distinguish itself from policies that also rely on some form of market logic, such as inter-district choice. This distinction is critical in what follows.

Second, while prior critiques of free markets in schooling have mostly come from outside of economics, the fact that market failure is rooted in economists' own assumptions means that economics itself provides a strong critique of free market schooling. School voucher policies would not even satisfy the one criterion that permeates neoclassical economics—the efficiency criterion. The logic of free market schooling fails on its own terms.

Third, I show that the same unusual features of schooling that make a free market inefficient also make it inequitable. The fact that both inefficiency and inequity result from the same forces creates a simple and unified framework to understand market-based school reform and its failures.

Fourth, I update and broaden the range of empirical evidence brought to bear on this issue. I mainly focus on evidence about *how* the free market logic fails but also briefly describe the latest evidence on student outcome effects.

Fifth, I show the implications of this failed logic for debates about vouchers, traditional public schools, and the in-between cases of quasi-markets. It is not just that vouchers would be inefficient, but that, because they do less than advertised to provide options, they also do relatively little to improve parental freedom. At the same time, and more surprisingly, the analysis suggests some possible over-reach on the part of traditional public schools and points toward a specific form of quasi-market that seems to meet all the commonly discussed criteria—efficiency, equity, and freedom, among others—more successfully.

The Idealized Efficient Free Market

To understand why free market schooling fails, we need to start by discussing the conditions under which it could conceivably succeed.[5] Economists define success mainly in terms of *Pareto efficiency*. This means there are no trades left to be made that would improve any person's utility while not harming anyone else. More concretely, the economic efficiency criterion focuses on satisfying the private desires of self-interested consumers.

This notion of efficiency is achieved when markets operate under certain conditions or assumptions (Arrow, 1951; Debreu, 1951):[6]

1. *Choices of individuals do not affect other people.* Since individual actors are the ones making decisions, their decisions cannot affect anyone who is not involved in those decisions, except through prices. (This is sometimes called the "no externalities" assumption.)

[5] This section and the next build partially on the second chapter of Harris (2020).

[6] Some otherwise important assumptions are not listed, especially that consumers are rational and self-interested. These additional assumptions are widely recognized as false, but possibly still useful assumptions. They, too, are also violated to a greater extent in schooling: (a) the immediate "consumers" are children whose brains are not fully developed and who are therefore not as rational as adults; and (b) one of the key values taught in schools is altruism, suggesting that self-interest is not as salient as in other markets. However, violations of these two assumptions, even if worse in schooling, do not have particular implications for the roles of government, so I do not discuss them further.

2. *Consumers (and producers) have good information.* Consumers can choose options that serve them well when they are well-informed about those options.

3. *Consumers (and producers) have many options to choose from*. With many options, consumers can avoid products and services that do not serve them well and force out low-performing firms. Monopolists, in contrast, can charge exorbitant prices and use resources inefficiently.

4. *No switching costs exist*. Markets involve transactions between buyers and sellers; therefore, the costs of creating these transactions (e.g., switching from one seller to another) need to be small so that mutually beneficial transactions can occur.

5. *Demand is flexible*. In most markets, we can reasonably assume that consumers can choose not to enter a given market at all, e.g., to eat at home instead of entering the market and eating at a restaurant. This potential for complete exit from the market creates additional pressure on firms to serve consumers well.

6. *Technology can be improved, and those gains can be monetized through intellectual property rights*. In markets for physical goods, firms can invest in research and development to create new products and new ways of manufacturing them. These investments can generate long-term profits because the resulting discoveries constitute intellectual property, the rights to which can be owned, rented, or sold to others.

When all of these assumptions hold, firms *compete* with one another for customers, *innovate* to create new products and produce existing ones more efficiently, and *match* goods and services to individual consumers' tastes.

Not even the staunchest market advocates would argue that the above assumptions hold perfectly in any real-world situation. The theory is still generally useful because the assumptions are at least approximately true in most markets, most of the time. For this reason, the assumptions should be viewed not as strict conditions but as an organizing framework for gauging market potential. What does this framework tell us about schooling markets?

Practical Realities of the Schooling Market

Unfortunately, in the case of schooling, all of the assumptions fail to an unusual extent. Table 1 briefly contrasts the assumptions from above with the realities of schooling. In what follows, I describe the evidence underpinning the statements in the second column and provide examples regarding the non-schooling markets to illustrate why the assumptions fail to hold, particularly in schooling.

1. Individual schooling choices affect other people in many ways. Schooling decisions involve two major external effects that violate the first assumption. First, Wolfe and Haveman (2002) catalog the wide range of ways in which each individual's education benefits other people, e.g., how the benefits of education are passed down to future generations, from parent to child, and through broader social networks. Education

reduces the likelihood that they commit crimes against others (Lochner, 2020), increases the likelihood that people vote (Milligan, Moretti, & Oreopoulos, 2004), and, more generally, lays a foundation for democratic participation (Levin, 2020). These "positive externalities" explain why almost all economists, from Adam Smith, writing in 1776, to Milton Friedman, writing in 1955, have argued for public subsidies for primary and secondary education and compulsory schooling laws. Without subsidies, market actors would ignore external effects and provide too little education.

Subsidies are insufficient, however, to solve the externality problem in schooling for three reasons: (a) educational objectives are multi-dimensional, and some of those objectives have more positive externalities than others; (b) schooling arrangements have additional external effects on neighborhoods; and (c) the production of education also involves externalities.

Regarding (a), take the goal of preparing children to be citizens in a democratic society. When an individual learns democratic values (tolerance, respect for individuals, etc.), this is beneficial to everyone in the society—a positive externality. Labaree (1997), Levin (2020), and others write about this as the public good element of schooling. Adding subsidies to markets will encourage more education in total, but if school choices are made by individual families, then these public good elements will be dominated by private, individual objectives, such as career development and building social networks.

Regarding (b), when students are assigned by residence, those neighborhood bonds are reinforced as children and parents walk to school with others on the same block and attend school events together. These relations, in turn, build up the neighborhood social network. With school choice, these bonds are weaker because, even when students wish to go to the neighborhood schools, over-subscription means they often cannot. Instead, they get into cars or school buses and drive across town. No level of subsidy addresses this neighborhood externality.

Regarding (c), in most private sector markets, the service you receive from a company does not depend on the other consumers who choose the same company. This is not true with schools. Students affect each other's academic knowledge (Sacerdote, 2010; Lavy et al., 2012) and their expectations and beliefs (Andrew & Flashman, 2017) through peer effects. More broadly, schools are communities where outcomes are collectively generated (Battistich et al., 1995; Arum, 2000).

In other markets, we might find it bizarre for firms to actively turn away paying customers, but these production externalities create strong incentives to do just that in schooling. Families choose schools, based to a substantial degree, on the types of students who attend them (Epple & Romano, 1998; Schneider & Buckley, 2002; Glazerman & Dotter, 2017), which gives schools incentives to choose students, as we have seen in recent studies of charter schools (Bergman & McFarlin, 2020) and vouchers (Waddington et al., 2022). Schools have at least 20 different ways to follow through on those incentives (Harris, 2020). Others, too, have discussed how schools choose students instead of students choosing schools (Jennings, 2010; Mommandi & Welner, 2021). This selection process distorts the market mechanism, shifting the competitive process away from the core elements of education—instruction, curriculum, management, and organizational culture—toward the zero-sum game of student selection.

2. Families have imperfect information. We expect schools to do many things, and goals like creativity, values, and socio-emotional skills are hard to define and even

harder to measure (Hess, 2002). While families can get rough estimates of this school information through word of mouth, social networks, and online reviews, the problem is that almost no parents directly observe what happens in schools, and almost everything they see is filtered through the minds of their adolescents and teenagers. As further evidence, experiments providing families with additional information generally lead to changes in their schooling choices (Hastings & Weinstein, 2008; Valant & Weixler, forthcoming). While these effects are typically small, the fact that they have any effect at all is noteworthy, given the other constraints parents face in gaining access to schools (e.g., geographic proximity) that would keep them from using new information to alter their decisions. If parents were generally well informed already, we would not expect their decisions to be influenced by information provided by researchers.

Other educational goals like worker productivity and civic responsibility[7] face the additional difficulty that they are not observable until adulthood. Even if we could track children this long, the information would come too late. For today's kindergartners, we would have to wait 13 years to be able to measure any adult outcome when they turn 18 years of age (Harris, 2020). By this time, most of today's educators will have moved on to other jobs, and information about school quality and qualities will be irrelevant.

Even if we accept short-term measures, like test scores, grade point averages, and attendance, as predictors of students' long-term outcomes, education is unique because almost all student outcomes are driven primarily by factors outside school control, what economists call "joint production." Student outcomes are heavily influenced by what happens years before entry into formal schooling (Walker et al., 2011). Student outcomes in high school are also driven, for example, by the quality of elementary and middle school students attended when they were younger. If we fail to account for all factors other than the current school and simply rely on information about, for example, the percentage of students who pass a test or graduate high school, then we misjudge school quality. Student outcome measures can be adjusted to account for these outside factors, especially by focusing on student growth, or "value-added" (Kane & Staiger, 2002), but markets are insufficiently coordinated to make these statistical adjustments.

To say, then, that families are poorly informed would be an understatement. Hess (2002), for example, says education involves an "exceptionally ambiguous output." One effect of this is to induce schools to spend more on marketing (Childs & Taylor, 2021), to focus on "customer service" (Jabbar, 2015), and to use symbolic and emotional messages that are detached from school effectiveness (Lubienski, 2007). Such efforts are unlikely to directly improve teaching or learning.

While some debates on choice seem to blame families for their bad choices,[8] my point here is different: that families are capable, and even in some ways best situated to make good choices for their children, but the market will not, and even cannot, provide the information they need.

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[7] There are even different ways of thinking about good citizenship. Sondel (2015, 294) distinguishes "personally responsible citizens," "participatory citizens," and "justice-oriented citizens."

[8] Lubienski and Lubienski (2013, p.34) emphasize that "since market forces generate winners and losers in other sectors, there is concern about students left behind in failing schools because their parents have less access to information, *or less initiative*, to make good choices for them" (italics added). My argument is different and places less responsibility on marginalized groups themselves (or their "initiative") and more on the situation.

3. Families have limited options. Competition works best when there are many competitors. Few families, however, will ever have many schools to choose from. Students generally have to physically travel to a brick-and-mortar school building every day, and time and transportation are costly. Moreover, parents must get to school periodically to pick up children when sick and attend parent-teacher conferences and extracurricular performances. This means the only viable options are schools close to home or work. Families are geographically constrained in a way unlike perhaps any other product or service.

In addition to this problem of geography and distance, schools are subject to *economies of scale*. To open its doors to even a handful of students, the school needs a principal, office, restroom, accounting system, computer system, curriculum map, library—and, of course, a teacher. Once these things are in place, adding another student comes at a very low additional (marginal) cost. As classes fill up, schools may have to hire more teachers, but the other fixed costs are "spread out" among a large number of students. This is why research suggests that, to be viable, schools need at least a few hundred students (Andrews, Duncombe, & Yinger, 2002; Harris, 2007), which economists call the minimum efficient scale. This may also be why charter schools, which have fewer students than the average school district, have much higher per-pupil spending on administrative costs (Buerger & Harris, 2021).

It is also common, in typical market settings, for businesses to expand when demand is high, but educators know that expansion can be unwise in schooling. Just as schools are inefficient when they are too small, they become impersonal and dysfunctional when they get too large, i.e., diseconomies of scale (Andrews et al., 2002; Harris, 2007). We need schools to be "large" but not "too large."

The above issues are fundamentally about the geography of schooling—the need to get students to brick-and-mortar buildings each day—and how this is compounded by the advantages of larger schools. Homeschooling and virtual schools ostensibly obviate these factors, but they still require an adult to facilitate learning activities and focus attention on the work at hand. Few parents are in a position to do this themselves, if for no other reason than most parents work either inside or outside the home. Technology alone, as we have seen both before (CREDO, 2015) and after COVID-19 (Goldhaber et al., 2022), cannot substantially reduce the need for in-person schooling.

4. Switching costs are high. In most markets, consumers can switch products easily when they are unhappy. Switching is costly when it comes to schools, however. Even in traditional public schools that operate under state academic standards, schools vary as to which material is taught and in which grade (Polikoff, 2012). When switching schools, students may, therefore, miss important content or experience wasteful redundancy. Students must also adjust to new instructional philosophies, schedules, norms, and rules. This is likely why research consistently shows that when students switch schools, their academic outcomes initially drop, as do those of students in receiving schools (Hanushek, Kain, and Rivkin, 2004).

In addition to these academic costs, schooling is an inherently social enterprise where friendships are essential. Students have difficulty making friends at new schools when their prior schools are forced to close (Kirshner et al., 2011). Though less actively explored in research, parents' own friendship and social networks are also partially tied to their children's. Switching schools is difficult for everyone. The higher these switching

costs—academic, social, and otherwise—the more rigid is school enrollment, the less responsive schools will be to consumer needs, and the less efficient will be market operations.

5. Schooling demand is nearly fixed. The demand for schooling is extremely high, to the point that it is a basic household necessity. Again, it is nearly impossible to work outside the home and extremely difficult to complete household chores with a child at home, especially when parents also have to serve as their children's teachers. This is why less than one percent of U.S. households with children engage in homeschooling and why so few switched to homeschooling once schools reopened in-person after COVID.[9]

While the vast majority of parents want to send their children to school—for the direct benefits this gives their children and the fact that this frees up their own time to work—parents are also legally required to care for and educate their children, starting in kindergarten and at least up to age 16 (Education Commission of the States, 2018). These compulsory schooling laws mean that schools can survive even if families are dissatisfied. Children have to go to school somewhere. This fixed total demand allows schools to persist in the market even when no one is satisfied.

6. Establishing intellectual property rights for school improvement is inherently difficult. Schooling is a service and social enterprise produced by people more than machines. This means it is difficult to isolate—and therefore profit from—intellectual property. Entrepreneurs can develop and sell textbooks, curricula, and software, but these tools represent only a fraction of the "technology" of schooling, and the more dominant elements, which fall under the broad umbrella of *implementation*, cannot be copyrighted or patented. For this and other reasons, economists have long recognized that the potential for innovation in the service sector is more limited than in other sectors, which limits productivity gains and leads to rising service sector prices (Baumol, 1993; Archibald & Feldman, 2018).

These inherent constraints on innovation create an additional problem. The free market model takes schools to be profit-maximizing. This assumption is actually reasonable—we could create a free market schooling model dominated by for-profit schools— but here it is the validity of the assumption that creates the problem. As innovation is one of the main paths to profit, the above limits on innovation force schools to profit in less productive ways, e.g., through misleading marketing (Lubienski, 2007) and selecting students who require fewer financial resources.

It is important to understand these assumptions and the latest evidence about them. As I show later, these violations of the assumptions in the schooling market also create a framework for thinking about the role of markets and governments.

Market Failure and Equity

Perhaps free markets are inefficient, but advocates also argue that they are more equitable. As the initial quote from former Secretary Betsy DeVos suggests, choice and competition would be good for "everyone" and "in all settings." However, the same

[9] While headlines have focused on the 30% increase in homeschooling during the pandemic, this amounts to only 184,000 of a total of 50,000,000 school-age children (Dee, 2023). Apparently, very few families saw value or feasibility in homeschooling even after they had some experience and skill with it.

problems leading to inefficiency also lead to inequity.[10] It is not just that the assumptions underlying efficiency do not hold in the market for schooling overall, *but that they are even further from the truth for marginalized, oppressed, and disadvantaged families*.

Consider just the role of peer effects. Earlier, I discussed how peers affect one another in the classroom (Sacerdote, 2010; Lavy et al., 2012; Andrew & Flashman, 2017). I also explained how, for this and other reasons, parents choose schools based on demographics (Epple & Romano, 1998; Schneider & Buckley, 2002; Glazerman & Dotter, 2017) and how this leads to the bizarre outcome of schools actively turning away paying customers. Private schools value their ability to select students more than perhaps any other form of institutional autonomy (Kisida et al., 2015).

Similar forces affect the supply and distribution of teachers. When teachers leave the profession, the second most commonly mentioned reason they give is student discipline (Ingersoll and Smith, 2003), and student behavior issues are correlated with students' family income (Mills-Koonce et al., 2016). This is partly why students' family income is a strong predictor of teacher turnover (Hanushek, Rivkin, and Kain, 2004; Loeb, Darling-Hammond, and Luczak, 2005).[11]

A similar phenomenon occurs in teachers' initial decisions about where to teach. Children growing up in wealthy families are more likely to attend college and become prospective teachers; moreover, prospective teachers prefer teaching in the same types of schools they attended themselves (Boyd et al., 2004). For these and other reasons, schools serving wealthier families also end up with higher-quality teachers (Sass et al., 2012). This process, in turn, leads to stratification and unequal educational quality by any definition.

And all of this assumes that schools in a free market would all spend the same amount of money. But wealthy families, by definition, have more financial resources to spend on education, and these resources lead to better results (e.g., Jackson et al., 2015). Most voucher policies allow schools to top off vouchers with additional tuition and to engage in voluntary fundraising campaigns. Traditional public schools also suffer from funding inequities, but at least in that case, there is a political/legal path toward funding equity. In a free market, there is no mechanism even to try to seek equity, and the market's natural forces are aligned against it.

Due to both historical and ongoing systemic factors, the above income-driven stratification also creates racial inequality. Racial/ethnic minorities have lower incomes and, even more so, lower levels of wealth (Conley, 2010; Darity et al., 2018). Thus, when schools select on either income or race, they are usually compounding inequality on the other dimension as well.

This reflects a larger truth: markets are supposed to be efficient, not equitable. Those with greater means can consume more and better products. In the case of schooling, the problem is exacerbated by peer effects, perceptions about "other people's children" by families in the school choice process, and tendencies of the teacher labor market. These pressures, and those induced by the other questionable free market

[10] While there are different definitions of equity (Espinoza, 2007), the discussion in this section applies to all common definitions.

[11] The fact that students' family income predicts teacher turnover holds even after controlling for salaries, overall school funding, leadership, and other relevant factors.

assumptions, hinder market functioning, particularly for low-income families and racial/ethnic minorities.[12]

Discussion

Three main conclusions emerge from this analysis: First, the schooling market has many unusual features—features owed to the very nature of schooling rather than any government policy. While others have pointed to some of these features (e.g., Walford, 1996; Bradley & Taylor, 2002; Hess, 2002; Ladd, 2002; Betts, 2005; Levin, 2012; Lubienski & Lubienski, 2014; Epple, Romano & Urquiola, 2021), the present account is more comprehensive and shows just how distinctive the schooling market really is.

Second, these unusual features conspire against competition, matching, and innovation—and therefore against efficiency. To the degree competition does arise, it gets misdirected so that schools compete to select the best students and provide the best marketing and customer service, not the best instruction and curriculum. The logic of the free market, in the case of schooling, fails on its own terms—on efficiency.

Third, and for the same reasons, free markets in schooling are inequitable. Many of the factors that need to be in place to make markets efficient are less likely to be in place for marginalized, disadvantaged, and oppressed people. The fact that the same market assumptions lead to failure on efficiency and equity grounds yields a simple, unified, and strong critique of the free market approach.

The violations of the free market assumptions are also worse for schools than other sectors. It is not just that the assumptions are violated, but that they are violated more severely in schooling. This is fairly obvious when we compare schooling to typical consumer goods markets. Though some advocates liken the schooling market to shopping at the grocery store,[13] the vast majority of consumer goods: have almost no impact on anyone other than the purchaser, have well-defined features and information on which to evaluate them, and involve many different options that improve over time through patented innovations.

Even when we turn to markets where the violations are more apparent, it is difficult to find one less well situated to a free market than schooling. Health care is sometimes considered similar to education, but even in that case, consumers go to see doctors and hospitals only occasionally, which greatly reduces the burden of physical distance and opens up many options. Health care also involves rapid technological advancement in the form of new and patentable drugs, equipment, and procedures.

Schooling even meets the conditions of an efficient market more poorly *than other parts of the education market*. College students, for example, are more independent and mobile than school-age children and, therefore, have more choices—they have hundreds of colleges to choose from. With early childhood education (ECE), the minimum efficient scale appears much smaller—often operating perfectly well in someone's house—so that supply can be more responsive to parental demands.

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[12] For conciseness, I have focused on race and income inequality, but this logic also extends to the idea that schools will tend to avoid serving students with disabilities (Bergman & McFarlin, 2020).

[13] One school choice supporter, U.S. Senator John Kennedy (R-LA), commented in a Senate hearing that: "I can go down to my over-priced Capitol Hill grocery this afternoon and choose among about six different types of mayonnaise…How come I can't do that for my kid in school?" (Russell, 2017).

With both ECE and higher education, demand is also more flexible. In the case of ECE, many families have alternatives within the household or extended family. With higher education, demand is elastic because there is less need for young adults to be in college. No "compulsory college" laws exist, and most young adults never obtain a college degree.[14] None of this means we should not also have roles for government in ECE and higher education, but this does imply that the ideal roles are probably less intense than in K-12. (Whether for that reason or others, ECE and higher education do indeed rely more on market forces.)

The fact that these conclusions emerge from the home of free markets—economics—makes them all the more remarkable. However, economics has also come to play an outsized role in education policy debates (Jabbar & Menashy, 2022), and other complementary critiques from other disciplines and perspectives also warrant attention. For example, critics of neoliberalism emphasize how market logic changes the way people think in more broadly harmful ways, encouraging greed and individualism (Apple, 2001).[15] If we design a school system for consumers and firms, then parents and educators will think about themselves as consumers and firms, respectively, focusing on their own individual needs and profits, views that would be passed on to students. Yet any well-functioning society also requires that people think altruistically as citizens and community members. Again, a key contribution of the present study is to show that free market schooling fails even if market-based approaches did *not* affect how people think in this way.[16]

Implications for Research, Policy, and Discourse

While the above analysis broadens, deepens, and clarifies critiques of free market schooling, perhaps the most surprising conclusions arise when we consider the full significance. This section provides implications for the role of government in schooling, education research, and policy discourse about vouchers and traditional public schools.

Implications for Schooling Policy: Six Roles for Government. One advantage of listing the various economic assumptions and examining the latest evidence about them is that doing so points to *specific* areas where a role of government might be particularly valuable. Below, I discuss six roles for government that are implied by the above analysis.

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[14] Compulsory ECE is a bit more plausible than compulsory college, and such a policy would bring ECE closer to K-12 in terms of how well the optimal market conditions hold and the implied roles for government.

[15] Apple writes that, "the very concepts we employ to make sense out of the social relations that organize our lives not only reflect these relations, but produce them" (2001, p.19). Some neoliberal critics also point to its indirect effects on education, e.g., through a tendency to direct education systems toward human capital that is valued in the workplace and away from other pursuits (e.g., tolerance and deliberation). While important, these arguments about indirect effects and context are beyond the scope of the present conversation's narrower focus on the design of education policy.

[16] Other critiques include the value for equity (see above), protection of civil rights (Harris et al., 2016), importance of social cohesion (Levin, 2012), the public good nature of schooling (Labaree, 1997), and concerns about neoliberalism broadly (Apple, 2001), including managerialism (Apple, 2010) and incentivism (Lubienski and Lubienski, 2014).

The first and most obvious is school *funding*. The positive externalities of schooling mean that public subsidies are necessary to prevent under-education. Even Friedman (1962) agreed on this point.

Second, given that families cannot effectively hold schools accountable by "voting with their feet," and that the market will likely under-produce public-oriented elements of education, such as civics, it makes sense that governments adopt their own *standards and accountability*. Schools in high demand—those that are over-subscribed—would otherwise be under little pressure to maintain or improve quality or to improve it only along private-oriented dimensions.

Third, and for similar reasons, the government has a role in ensuring schools' *transparency* in their curricular offerings, other policies, and funding decisions. This helps prevent schools from using misleading advertising, adopting illegal or discriminatory policies, and allocating inordinate funding away from the classroom to profit school leaders and owners. This could not only help make the market function more efficiently but also allow the government to fulfill its obligation to use public funds wisely.

Fourth, given the broadly held aim of universal schooling and the fact that schools have incentives to choose students, a logical role for government is ensuring *accessibility* of quality schools for all children. This means ensuring that schools are available to serve students with all types of needs (e.g., students with disabilities) and ensuring that all children have access to those schools by keeping tuition and fees to a minimum and preventing schools from selecting only certain types of students.

Fifth, and for the same reasons as above, governments should facilitate citizen *engagement* about the types of schools they want. In a well-functioning free market, there is no need to do this because the market, through price signals, provides all the information that suppliers need. This mechanism is not available in schooling partly because the accessibility principle means that the price mechanism has to be minimal. Knowing the number of students or applicants is also insufficient to guide school opening and closing decisions. Some schools will have few students simply because they serve students that other schools will not or because the information available in the market is too poor to show their real success. Also, the fact that students have external effects on people outside their families means that fully informed decisions about the use of public funds for schooling require input from a broader group—citizens.

That these roles for government argue against vouchers is fairly obvious. Perhaps more surprising is that they also present a partial critique of traditional public schools. Some argue that, in traditional public schools, governance is too localized (Polikoff, 2021), poorly informed, and captured by organized special interests (Chubb & Moe, 1990); management is too bureaucratic and stagnant (Hill, Pierce & Guthrie, 1997); and results are too unequal (Gamoran, 1987; Kozol, 1991; Kao & Tienda, 1998; Baker, 2018). With the accountability role, for example, the government might not be any more effective than the free market.

Even if the government were effective in carrying out the above roles, the government currently takes on many more roles than those directly implied by the above principles. Most obvious is that school districts own, govern, and manage every aspect of their schools. It could be that the needs for standards/accountability, transparency, accessibility, and the other roles are so great that the only way to fulfill them is for the

government to manage everything directly. To make such a case, however, we would have to look beyond the analysis presented here.

The failure of the market logic also does not mean there is no role for parental school choice. Few would deny that students have varying needs, that parents know a great deal about those needs and should have agency in addressing them, or that schools vary in their ability to meet them. While families' voting with their feet is insufficient to facilitate efficient or equitable market functioning the way it does in other markets, it can be a valuable component of a larger system. For that reason, *choice* is the sixth role of government applied by the above economic analysis. This does not mean vouchers. Some voucher advocates like to simply call their ideas "school choice," but what they are actually supporting is a specific form of it that, as I have shown, has significant drawbacks. Charter schools, intra- and inter-direct choice, and others allow choice within a public sphere where the government fulfills its various roles.

To borrow another term from economics, these six roles—funding, standards/accountability, accessibility, transparency, engagement, and choice—suggest that governments should focus on their comparative advantages while market forces focus on their own. This may be why, in the vast majority of countries, schooling functions as a quasi-market (Walford, 1996; Bradley & Taylor, 2002), falling somewhere in between all-government and all-market. This quasi-market approach is logical, given the above analysis. What makes the current analysis different from prior ones is the set of implications for government that follow.

Implications for Policy: Mixed Market Models. The discussion so far has focused on implications for traditional public schools (TPS), charter schools, and especially vouchers, taken separately. But a growing number of U.S. school districts have a mix of two or more of these (and others like inter-district choice), already operating simultaneously. Almost every district in the country still has at least 50 percent of students attending TPS, yet at least one-third of students nationally are attending schools other than the zoned TPS. In these mixed models, the various sectors operate under somewhat different sets of rules, i.e., the role of government varies across them.

These mixed market models do have some advantages. Whenever TPS make up a substantial share of the market, everyone has *access* to—a right to attend—a particular school, while other parts of the market facilitate additional *choice*. Those TPS are fewer in number than under a full-TPS model, so that that access would be less convenient, but one could argue that this is sufficient access. Mixed models also alleviate teaching to the test and other actions that make outcomes look better than they are to fulfill government accountability provisions (Koretz, 2017). This applies to TPS but also charter schools. In New Orleans, for example, the arts suffered because schools were under such tight scrutiny to increase test scores in order to meet their contract obligations (Woodward, 2020). Vouchers might counter-balance this tendency since, without government accountability, voucher schools have no reason to focus on any particular metric and can try to address more subjective preferences of families. The idea that market and government accountability can be complementary (Betebenner et al., 2005), therefore, extends to mixed market models.

However, once the charter or voucher sectors are let loose, there is no guarantee that such a mix of options will be maintained. Some charter/voucher supporters argue that TPS would only go away if they fail to compete, but this is misleading. TPS are legally

barred from competing in two ways central to vouchers' attractions: TPS can neither inculcate religion nor select students.[17] It is not an even playing field, and public schools could be driven out even if they were performing well. Even if TPS survive this distorted competition, the fact that other schools can select their students could relegate TPS to second-tier status—schools of last resort for those who have been turned away.

Implications for Research. The above six key roles for government also point to several somewhat under-explored research areas. While the literature is replete with studies of standards and accountability in traditional public schools, we need to learn more about their effects within more market-oriented systems, such as voucher and charter school policies. Similarly, there seems to be little evidence about whether or how charter authorizers engage communities and determine what kinds of charter schools citizens want. This highlights that the six roles for government are somewhat speculative at this point; they follow logically from the analysis of market assumptions, but we know too little about how they work empirically.

The implications for research on market-based reform effects on student *outcomes* is a different matter. I have focused on the mechanisms of schooling markets and associated roles for government, but most voucher research, or at least most of the attention, focuses on results for students who use vouchers versus those who do not, called participant effects. These studies offer a limited lens for understanding the roles for government and markets, however. First, comparing student outcomes under vouchers with traditional public schools is inherently difficult, e.g., because vouchers and private schools have different objectives and because most voucher policies are designed to create student selection and, therefore, introduce more selection bias (Harris, 2020). Second, such studies capture the net effects of the multiple mechanisms described earlier and tell us relatively little about how each one works and how they interact.

Nevertheless, it is noteworthy that, despite the harsh critiques against traditional public schools, voucher programs, especially those most similar to the universal vouchers now being advanced, have a questionable track record. The vast majority of research on the topic involves programs targeted to disadvantaged students in urban locations—where we expect, and where evidence suggests, the effects on most outcomes are positive (Egalite & Wolf, 2016). It is common, however, that public policies become less effective at scale, and we see considerable evidence of this with vouchers. Four statewide programs have been studied. In three of these, in Indiana (Waddington & Berends, 2018), Louisiana (Abdulkadiroğlu et al., 2018; Mills & Wolf, 2017), and Ohio (Figlio & Karbownik, 2016), the estimated achievement effects have been negative. The effects in Florida (Figlio, 2014) are indeterminate because students using vouchers did not take comparable tests.[18]

The statewide voucher results look somewhat more positive with respect to educational attainment. In Indiana, statewide vouchers did not alter or worsen high school

[17] Charter schools are not supposed to select students or teach religion, though some certainly do that as well.

[18] One problem with using test scores as outcomes is that any achievement test is going to favor one type of school over the other. The fact that voucher programs using the state tests taken by public schools show worse results is likely due to misalignment between private school curricula and public school tests, but the reverse is true with off-the-shelf norm-references tests, which are likely to align better for private schools than for public schools (Harris, 2020).

graduation; in Louisiana, they did not alter college-going. In Florida, the programs appear to have increased college-going (Chingos et al., 2019); however, the matching techniques relied on in this case, and in many other voucher studies, call these studies into question.[19] Any program that allows selection on student characteristics that are not observed by researchers—indeed, such selection is an explicit part of private school operations—will struggle to account for student differences using observable measures alone. This is why the Louisiana results are most convincing; students were randomly assigned.

This means we need research to meet at least four main conditions to inform the current voucher debate. We need analysis of *statewide* programs studied with methods that convincingly address *selection* and with metrics that are *comparable* with traditional public schools. Louisiana is the only current example that meets these first three, and, in that case, we see no effects on attainment and negative effects on achievement. *Universal voucher access* is a fourth condition, as this is a key trait of the recent wave of voucher proposals, but there appear to be no examples of studies where that condition is also met. All four statewide programs noted above targeted disadvantaged students for whom we expect more positive effects, meaning we can expect that results will be worse in the newer universal programs. But we may never know because current universal voucher programs allow selection/discrimination and will not have comparable metrics.

The situation looks still worse for vouchers when we compare them to the alternatives. Rather than worsening with scale, charter school participant effects have been positive and improving as the number of charter schools has expanded (CREDO, 2023). Also, while vouchers do seem to create competition that improves TPS outcomes, charter schools accomplish this as well (Cohodes & Parham, 2021). The combination of participant and competitive effects also seems positive for charter schools, for both achievement and high school graduation nationally (Chen & Harris, 2022). Given the more expansive role of government with charter schools, this evidence also reinforces the case for the six government roles.

Implications for Public Discourse. This analysis also has implications for the ways we talk about traditional public education and vouchers. It is not just that schooling aligns poorly with the free market in ways that undermine efficiency and equity but that they undermine voucher advocates' central claim. As Friedman made clear in the title of his 1962 book that popularized the idea, this is about *freedom*. Vouchers, almost by definition, increase freedom by reducing barriers to (consumer) choice, which philosophers call negative liberty. But vouchers are limited with respect to providing real and valuable options, or positive liberty. Geography and economies of scale limit the

[19] While test scores have the disadvantage of misalignment across sectors (see above), an advantage is that matching techniques work fairly well. This is because researchers can match on prior scores and examine *changes* in student achievement trajectories. In these cases, selection bias is less of a concern because students' general aptitudes are accounted for in baseline levels. In contrast, the various educational attainment milestones—high school graduation and college entry, for example—occur at a point in time, so there is no way to match on baseline levels of the same outcome. This makes random assignment particularly important when studying attainment. If one student accepts a voucher and one otherwise identical student does not, clearly there is something different about them that led one student to use the voucher to attend the private school (e.g., the private school might have had additional information allowing them to reject the other student using their admission criteria).

number, variety, and quality of options; the information parents need to choose among those few options will not be available for this "exceptionally ambiguous output" (Hess, 2002), and even if they can correctly identify the best choice, it remains unclear whether those schools will admit them.

But, again, this is not meant as a defense of public education. The concept's defenders often focus less on the principles of public education (e.g., open and universal access to secular, academic skills and common values and language) and more on the specific, historically rooted institutional arrangements whereby schools are organized into local districts, governed by locally elected school boards, and managed by superintendents and their appointees. My analysis derives roles for government that are consistent with the broad definition and purposes of public education but which imply institutional arrangements different from the American tradition.

Conclusion

Traditional public education in the United States is being gradually replaced. At least a quarter of students no longer attend traditional public schools (Harris, Witte, and Valant, 2017), and that number is growing. This has been driven mainly by inter- and intra-district choice and charter schools, which mix roles for government and markets in ways that are broadly consistent with the present analysis. This trend has improved student outcomes as evidence on charter schools suggests that they have positive and gradually improving participant effects (CREDO, 2023) and induce systemwide changes across the school districts in which charter schools locate (Chen & Harris, 2022). Until COVID, and with largely stagnant enrollment in private schools, we also saw three decades of national improvement in scores on the NAEP and rapid increases in high school graduation rates (Harris et al., 2022) and college-going (Current Population Survey, 2021).

The sudden turn toward universal vouchers is, therefore, problematic on several levels. Vouchers do not meet any of the conditions necessary for the market to be efficient. For the same reasons, they are likely to be inequitable. These concerns are borne out by evidence suggesting that this movement is, at best, not the most likely to succeed of the relevant alternatives and, at worst, has the potential to undermine decades of success on achievement and other measures. Even the seemingly potent argument about "parental freedom" is more tenuous than often recognized because vouchers give relatively few actual, viable options in practice, especially for marginalized and oppressed groups. The schooling market is inherently different from other markets, so, when it comes to the role of government, we cannot treat it as if it were the same.

What, then, explains the aggressive and increasingly successful voucher push? As experts in the politics of education have noted, school choice debates are dominated by political ideologies, values, and culture wars (Henig, 1998) and mediated through alliances, networks, and think tanks (DeBray et al., 2007) that are increasingly funded by a small number of wealthy donors (Reckhow & Snyder, 2014), some of which support vouchers as part of a large market or anti-government ideology (Scott & Holme, 2016). That is certainly true here as well.

Even setting aside issues of political power, policy debates can never be about evidence alone. Empirical research is based on outcomes whose significance cannot be

interpreted independently of the values and objectives we hold for education. This is why the present analysis interprets evidence and applies logic and reason to the arguments made by policy advocates based on the values they themselves profess. Secretary DeVos talks about the worthy goal that "excellence" might be "sought in every setting." She argues that we can accomplish this with "competition and choice" through school vouchers and parental freedom. But, as much as excellence or freedom might be sought, this essay shows that these goals are unlikely to be achieved without altering the present course.

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Table 1: Assumptions Required for Efficiency Under Free Markets and Their Application to Schooling

Assumption	*Reality in Schooling*
1. Choices of individuals do not affect other people	*Individual schooling choices affect other people in many ways*. They create external effects on the community (e.g., longer term effects on civic participation, crime, and public health) and affect neighborhood social bonds. They also involve peer effects, an example of externalities in production, that induce schools to select their preferred students.
2. Consumers (and producers) have good information	*Families have imperfect information*. Parents do not observe schooling directly. Output is complex and ambiguous and arises far in the future. We also cannot easily attribute output schools because of contributions from families and other contextual factors (i.e., "joint production").
3. Consumers (and producers) have many options to choose from	*Families have limited options*. They must transport their children to and from school every day, due to geographic constraints, and production is subject to economies of scale, so that schools need to be large and few in number.
4. No switching costs exist	*Switching costs are high*. School curricula, rules, and norms vary and require students to adjust. Schools also entail layers of social relationships that are broken when students switch schools.
5. Demand is flexible	*Schooling demand is nearly fixed*. Parents have a legal and moral responsibility to care for and educate their children. They cannot easily do this while working inside and outside the home.
6. Technology can be improved and those gains can be monetized through intellectual property rights	*Establishing intellectual property rights for school improvement is inherently difficult*. Quality is mostly about implementation. Few important schooling products, and even fewer processes, can be patented or copyrighted.