

# **What Research Now Needs to Tell Policy Makers about School Choice**

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## **Abstract**

The purpose of this paper is to present a case for a new generation of research on the question of school choice. This case is based on two premises. First, it is likely that taxpayers, who have school aged children and taxpayers who don't, differ with respect to their preferences concerning education. Since all taxpayers must decide on whether and how much school choice should be allowed, it is important to see how these preferences intersect with respect to both educational and extracurricular outputs of the educational process. Second, any policy decision focuses on maximizing a set of goals given a series of constraints. Therefore, it is necessary to examine all aspects of the school choice question simultaneously in order to make incisive policy recommendations. This paper presents a simple economic model which shows the importance of these premises in the policy decision and suggests that the next generation of researchers should consider these premises as important parts of their investigation.

## What Research Now Needs to Tell Policymakers About School Choice<sup>1</sup>

### I. Introduction

One of the more contentious issues in the educational policy arena is the potential use of school vouchers. In their simplest form, vouchers take some or all the money allocated to public school systems and give it to the parents of school aged children. These parents, in turn, would use this money to enroll their children in the schools of their choosing. According to supporters, a voucher system would improve education in two ways. First, public schools would have to compete harder against private schools for students. This would force public schools to improve or “go out of business.” Secondly, as private schools become more affordable, parents would be able to select the school that best satisfies the needs of their children. Consequently, if a voucher system were enacted, schools would likely reflect the preferences of parents as opposed to the current system which more likely reflects the preferences of taxpayers.<sup>2</sup>

Over the past several years, a first generation of researchers has attempted to determine the empirical impact of moving to a voucher system. Most of this research has focused on one particular outcome of such a move. For example, many researchers have compared the educational achievements between either private and public schools (Evans et al, 1995) or

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<sup>1</sup> With apologies to Teske and Schneider (2001) for playing off their title.

<sup>2</sup> See Friedman (1962) for one of the earliest discussions of vouchers. For an opposite perspective, see Witte (1996).

between experimental voucher schools and non-voucher public schools (Rouse, 1998).<sup>3</sup> Most of these studies have examined the issue using standardized exams (Coleman et al, 1982; Goldhaber, 1996), but some have used graduation rates or graduation and college matriculation rates (Dees, 1998; Evans and Schwab, 1995). Other researchers have examined the factors that influence parental choice of schools (West and Paulsson, 1995; Echols and Williams, 1995). Still others have compared the relative costs of private and public schools (Peterson and Noyes, 1996; Levin and Driver, 1994). And finally, Hoxby (2000) and Arum (1996) have examined whether private school competition would improve public schools.<sup>4</sup>

This first generation research is extremely important for highlighting the important issues involving school choice, while also generating useful data sets. The contention of this paper is that this literature, by itself, does not lead to any incisive policy recommendations unless this research is successfully integrated. That is, unless one simultaneously knows the preferences of both taxpayers and parents, knows which “non-educational” goods or extracurricular goods would be produced in each system and knows the tradeoffs between educational and “non-educational” goods provided under both systems, very little can be said about whether a voucher system is desirable. The purpose of this paper is to show the relevance of this contention with the use of a simple model of the policy decision and to suggest what might be the focus of the next

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<sup>3</sup> The comparison to private schools is done because private schools represent parental choice and it is assumed that these schools would resemble the schools which would exist if parents were the decision maker rather than taxpayers.

<sup>4</sup> This is, of course, a very limited discussion of a vast amount of literature. The author suggests, that those interested in this subject, should consult Cohn (1997), Powers and Cookson, Jr. (1999), Teske and Schneider (2001), and Belfield and Levin (2002).

generation of research<sup>5</sup>. The next section puts forward and analyzes this simple model.

## II. Model

This section puts forward a simple model of the school choice policy decision. We make no claim that this model is realistic, nor is it all encompassing. It is merely used for pedagogical purposes.<sup>6</sup> Consider a simple school choice model where the money follows the students. The government agency in charge of education determines how much money to allocate per student and then distributes the money to schools based on enrollment. This is observationally equivalent to giving the money to the parents and having them in turn pay for their children's education at the school of their choice. In such a system, all schools become voucher schools. And since parents choose which schools to send their children, school must reflect the preferences of parents if they are going to be sustainable. This differs from a "pure" public school system where the government determines how much money goes to each school. In this case, schools reflect the preferences of taxpayers in general.<sup>7</sup>

The key point in the above description is that the decision makers differ with respect to the two different types of schools. In the voucher system, only taxpayers with school aged children, hereafter called parents (P), determine the educational outputs, while in the second case,

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<sup>5</sup> Both Manski (1992) and Hoenack (1992) have put forward more inclusive models of the choice decision, but these papers are, for the most part, the exceptions.

<sup>6</sup> Clearly, if policy problems occur in the simplest case, they would certainly occur if the model was more complicated.

<sup>7</sup> This, of course, assumes away heterogeneity problems and that schools respond perfectly to the wishes of their stakeholders. These assumptions eliminate most of the problems involved in agency theory or public choice analysis (see Eysenbach, 1974 and Levin, 1987). It also assumes that all taxpayers are voters and all voters are taxpayers.

taxpayers in general, hereafter called taxpayers (T), determine the educational outputs. For a voucher system to come into being, taxpayers must be willing to defer their decision making ability to parents. However, this is a decision for taxpayers to make, and they will only do so if the utility or satisfaction they obtain from the current school system as it stands, is less than the utility they would obtain from a voucher system. Let E be a set of educational outcomes, and C be a set of “non-educational” or extracurricular outcomes. Each includes any spillover effects that might occur. Then a voucher plan will be preferred if

$$(1) U_T(E_T^*, C_T^*) < U_T(E_P^*, C_P^*).$$

This equation just states that vouchers will be preferred if the optimal choices made by parents (designated with the subscript “P” and with asterisks), yield more utility to the taxpayers than the utility of the optimal choices of E and C,  $E_T^*$  and  $C_T^*$ , that taxpayers make under the current system. Thus, equation (1) represents the policymakers’ decision criteria. Now if taxpayers and parents have the same preferences, if the per unit cost of E and C are the same under both systems, and if the components of E and C are the same for taxpayers and parents, then taxpayers will be indifferent between the two plans. However, there is no reason to expect that any or all of these conditions will hold, and this is the main reason while policy decisions concerning school choice are so difficult. This point can perhaps be made more cogent with a simple example.

Suppose, several articles are published which focus on the educational achievement of students who attend private and/or experimental voucher schools. And suppose there is a consensus in the literature that private schools and/or experimental voucher schools are able to produce students with higher SAT scores, and that they do so at a lower per student cost compared to the current public school system. This research would give support to those who

favor voucher programs on two important fronts, and on its face, might lead to many policy makers to favor a voucher system. That this should not be the case is demonstrated by the following scenarios.

1. In the above simple model, this result produces  $E_p^* > E_T^*$ . This does not necessarily mean that the decision making condition in equation (1) will hold if the research does not compare what is happening to C for the two types of schools. It is quite possible that  $C_p^* < C_T^*$  and that on net, taxpayers would still prefer the public school system.<sup>8</sup> Without knowing the taxpayers' preferences, no clear cut decision can be made from this research.
2. Suppose, we add the condition that public schools and voucher schools would receive the same amount of money per student. If this were the case, then if voucher schools could produce higher SAT scores at a lower cost, voucher schools would have more money to spend on C than would public schools. This does not necessarily imply, however, that voucher schools could produce more E and C than would public schools. It might be the case that public schools can produce C at lower per unit cost, and again, it is possible that voucher schools might end up with more E, but still less C.
3. Finally, suppose voucher schools not only produce SAT scores at a lower cost, but suppose they can also produce C at a lower per unit cost. This would cause  $E_p^* > E_T^*$  and  $C_p^* > C_T^*$ . It would appear, then, that voucher schools should be preferred since they win on both criteria. However, it is likely that taxpayers and parents differ as to what should be included in E and C.<sup>9</sup>

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<sup>8</sup> Remember, it is the taxpayer, in general, that is always the policy maker in this model.

<sup>9</sup> Anybody who has had school aged students understand that one is more likely to attend a performance of the class play if they have students in school than if they haven't.

For example, taxpayers might want to know how students performed in shop classes, or if voucher schools even have a shop program. On the other hand, parents might be more concerned that their children are prepared for college. Both college preparation classes and shop classes could theoretically be in E for both taxpayers and parents. However, there is no guarantee that this will be the case or that taxpayers and parents feel the same way about these two outputs.

### III. Conclusions

The above scenarios point out four very important points about the policy decision.

1. The Role of Taxpayers, in General, in Policymaking. Before any policy can get enacted, the taxpayer must approve it. While some parents pay taxes, households with school aged children represent only about 36% of the total households.<sup>10</sup> Therefore, much attention needs to be placed on those taxpayers without school aged children.<sup>11</sup>
2. The Relevance of “Non-educational” Goods. Schools produce more goods than just educational goods. It is often the case that these “non-educational” outputs are the most contentious part of the debate over vouchers. Furthermore, it is unlikely that parents want the same mixture of these “non-educational” goods as do taxpayers. Since these goods represent the opportunity costs of educational goods, they must be given a substantial amount of attention.
- 3) Per Unit of Output Costs. While it is important to examine the cost per student, it is also

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<sup>10</sup> This figure is obtained from “Profiles of General Demographic Characteristics,” in the 2000 Census of Population and Housing.

<sup>11</sup> If parents were the policymakers, much of the discussion about vouchers would be superfluous. As Hoxey (2003) has pointed out, “In short, a parent’s continuing to choose a voucher or charter school is such a strong indication of his beliefs about the school’s productivity that we should hesitate to conclude that a choice school’s achievement is inferior so long as there is substantial demand for that school. (Page 6)



important to determine the cost of any particular output the school offers. When it comes to decision making tradeoffs are very important. One can not know what the tradeoff of, for example, four points on an SAT score to an extra play from the theater department without knowing the per unit costs of these outputs.<sup>12</sup>

4) The Difference Between Outcomes and Utility. For policymakers, school outcomes are not as important as the utility or satisfaction that policymakers obtain from these outcomes. When diminishing marginal utility exists, an increase in any school output might not be as preferred as it appears. Thus, the utility or preference functions of both taxpayers and parents must be examined very closely in order to determine the value of different school outputs over different ranges of those outputs.

Finally, scenario 3 shows, all these points must be examined at the same time. Essentially, policy making involves maximizing (minimizing) some goals given some constraints. In the case of educational reform, the policymaker wants to maximize the utility of a variety of outputs, given the amount of money that is allocated to the educational system and given the per unit costs of these outputs. One cannot solve this problem without examining preferences, educational achievement, the production of “non-educational” goods, total expenditures and per unit costs simultaneously. It is this integration that is, for the most part, missing from the first generation of research, and it is this area that this paper suggests should be the focus of the second generation of research.

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<sup>12</sup> Calculating these per unit costs is certainly not easy due to the problems of joint production and the measurement of spillover benefits and costs.

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