THE VALUE OF PRIVATE PROPERTY IN EDUCATION: INNOVATION, PRODUCTION, AND EMPLOYMENT

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I. INTRODUCTION

America's system of public schools must be changed. The 1983 report of the National Commission on Excellence in Education cautioned that "while we can take justifiable pride in what our schools . . . have historically accomplished . . . the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and as a people."[1] Pride in the past accomplishments of our public schools gives many a false impression that the basic structure of public school systems is sound and that reform is needed only in the details: more math and English courses, more or longer school days, stricter requirements for teachers and students, and lower student-teacher ratios. Such proposals are not new. In fact, the problems identified and solutions proposed in the National Commission's report were virtually identical to those in a school study report published ninety years earlier.[2] The striking similarity between the two studies suggests that the issues they address are really symptoms of larger, more fundamental problems, and that a complete restructuring of our current system of education instead may be necessary. In this Article, we argue that the educational system in America can be greatly improved if government is removed from the supply side of the education market, leaving schools privately owned and operated.

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1. NAT'L COMM'N ON EXCELLENCE IN EDUC., A NATION AT RISK: THE IMPERATIVE FOR EDUCATIONAL REFORM 5 (1983).

2. *See* T. SERGIOVANNI, M. BURLINGAME, F. COOMBS & P. THURSTON, EDUCATIONAL GOVERNANCE AND ADMINISTRATION 13 (2d ed. 1987) [hereinafter EDUCATIONAL GOVERNANCE] (citing Edson, *Risking the Nation: Historical Dimensions on Survival and Educational Reform*, 1 ISSUES EDUC. 171, 171-84 (1983) (comparing the National Commission's 1983 report to that of the Committee of Ten on Secondary School Studies, published in 1893)).

The current structure of education policy in the United States has been dictated, at least in part, by an appreciation of the societal benefits that education confers. Education provides tremendous opportunities for personal growth, and Americans, faithful to the principle of equality of opportunity for all, are loath to see bright minds wasted because of lack of funds for education. With the efforts of leaders like Horace Mann and Henry Barnard, America launched a system of free public schools and sowed the seeds of today's educational problems.[3]

At the time that public schools were founded in the United States, demand-side subsidies, that is, subsidies to needy students, might have been impractical. The country was predominantly rural, the government small, and governmental contact with individual citizens limited. Accordingly, a demand-side subsidy to each citizen for the purchase of education would have been so costly to administer that many of those eligible for such subsidies would have been overlooked. Today, however, with urbanization, advanced communication, and the already sophisticated network of government services, the information problem is easily managed. In a system of privately owned schools, demand-side subsidies will ensure every citizen the right to an education; at the same time, the effects of competition will promote vigorous improvement and innovation in our schools.

A few decades ago, America's public school system was a success story despite its structure. Its primary accomplishment was to uncover an enormous amount of talent, as educational opportunities were expanded. Each generation's educational achievement had surpassed that of the last, as more people entered school and stayed longer. This success masked the system's shortcomings, however, as the past few decades have demonstrated. During this period, each generation has been afforded full educational opportunities, but the economic and cultural growth resulting from newly uncovered talent is no longer forthcoming. The stalled progress exposes the Achilles' heel of the system: Our public education system is wrapped tight in a bureaucracy that stifles innovation, fails to put qualified teachers in the classroom, and generally fails to meet the needs of its students.

3. *See, e.g.*, H. MANN, *The Necessity of Education in a Republican Government*, in LECTURES ON EDUCATION 117 (reprint ed. 1969) (1855).

The argument for private schools with direct public subsidies of *students* rests on two pillars. First, students and their parents, empowered with direct subsidies, must be able to make efficient choices regarding both the quantity and types of education. Second, privately owned schools must be able to supply education more efficiently than a system of public schools. We cannot overemphasize that demand-side and supply-side reform must be undertaken together. Unless we abandon the policy of government provision of education, demand-side reforms like the use of vouchers will lead to only a marginal improvement.

This Article presents a comprehensive case for the replacement of today's public education system with a privatized system. In Part II of the Article, we analyze the demand side of the education market by asking whether government needs to intervene to support education at all and, if so, how the necessary support can be supplied in the least intrusive way. As an introduction to analyzing the supply side, in Part III we investigate the political economy of public provision. Because understanding the decisionmaking processes of public and private school systems is crucial to a comparison of the alternative systems, in Part IV we explicate the economist's notion of the private firm and market competition. In Part V, we contrast the model presented in Part IV with the current system of publicly owned schools. Conclusions are presented in Part VI.

II. Private Demand and Public Support

Any thorough discussion of limiting the role of government in the provision of education must address the claim that the private demand for education will be inadequate; that is, individual parents and students will be unable to choose the appropriate type and quantity of education. We have identified four aspects of this claim for review: (1) Education generates positive externalities and, in the absence of government support, consumers will demand too little education; (2) because capital markets are imperfect, children from poor families will be unable to purchase an optimal quantity of education without government intervention; (3) individual consumers of education lack the knowledge and expertise to select the optimal type and quantity of education; and (4) public education indoctrinates children with socially beneficial values and promotes the social

interaction of culturally diverse children.[4]

A. *Human Capital as an Externality*

That the acquisition of human capital through education yields a surplus is not a valid rationale for subsidizing education. It is true that a medical degree raises the income of the doctor and that the doctor's patients receive a benefit greater than the fees they pay, but this is true of all the products we buy. Food and water clearly yield benefits in excess of the price we pay for them. The same is true of television sets and automobiles.[5] With limited budgets, we purchase each good until the value we receive for the last dollar spent on each (the value at the margin) is equal.

Because subsidies given in one market require taxes in some other market(s), subsidies granted because a particular surplus is compelling will necessarily reduce aggregate welfare. In our example, subsidizing medical students will increase the supply of doctors and thereby reduce the number of workers in other fields (say, farmers). The price of medical care will fall, and the price of food will rise. At the margin of use, where the values of the last dollars spent on medical care and food were once equal, people will now consume more, but marginally less valuable, medical care, and poorer, but marginally more valuable, diets. While at the margins these effects are subtle, in the extreme this kind of cross-subsidizing would result in a society where (in the example developed here) splinters were surgically removed by medical specialists from patients who could ill afford adequate diets.[6]

A more sophisticated version of the externality argument relies on the notion that in acquiring education, individuals also acquire certain socially desirable characteristics. For example,

4. *See* West, *The Political Economy of American Public School Legislation*, 10 J.L. & ECON. 101, 103-09 (1967) (identifying two principles for government intervention: "state protection"—the special obligation of the state to protect children—and "neighborhood effects"—the notion that education produces positive externalities that benefit not only its consumer, but the greater society as well); Lott, *An Explanation for the Public Provision of Education: The Importance of Indoctrination*, 33 J.L. & ECON. 199 (1990) (emphasizing the importance of the public school system in indoctrinating students with socially desirable values and beliefs).

5. For an explanation of the concept of consumer surplus, see S. MAURICE & O. PHILLIPS, ECONOMIC ANALYSIS: THEORY AND APPLICATION 71-75 (5th ed. 1986).

6. This basic economic argument was first hinted at by Adam Smith in *The Wealth of Nations* and is part of every principles text in basic economics. *See, e.g.*, R. EKELUND & R. TOLLISON, ECONOMICS 156-58 (3d ed. 1991).

it is often said that literacy produces a better informed voter and the increased earnings capacity provided by an education raises the opportunity cost of crime.[7] Education undoubtedly produces benefits to others. To justify subsidies, however, the external benefits arising from subsidized education must extend beyond the margin of education that individuals would acquire without subsidy. In that case, an individual who chose a quantity of education to maximize his own welfare would fail to recognize *additional* benefits inuring to society, and a subsidy would be justified. If the external benefits of education are all within the margins of private education—that is, if the better informed voter and the less likely criminal would be fully molded by private educational expenditures—subsidies that encourage additional education would not produce additional social benefits.[8]

It may well be true that encouraging investment in human capital does yield externalities at the margin. If so, public *support* for education is justified. Public *provision* of education is, however, a separate question. Because direct subsidies to students in a system of privately owned schools would have the desired effect of increasing the level of human capital that an individual would purchase, the mere existence of positive externalities from education is not necessarily an argument for public provision of education.

B. *Capital Market Failures, Equity, and Public Schools*

It is often said that public schools are necessary to give children from poor families the same opportunities available to children from wealthier backgrounds.[9] Although equality of opportunity is usually viewed as an issue of equity, arguments for equality of opportunity can be recast as arguments of efficiency, the basic premise being that no human potential should be wasted for lack of adequate educational opportunities. Public schools, however, with uniform education for all, favor those students best suited to the type of education provided and

7. *See* Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 177 (1968).

8. For a discussion of infra-marginal externalities, see R. HOLCOMBE, PUBLIC SECTOR ECONOMICS 56-57 (1988).

9. *See, e.g.*, T. RIBICH, EDUCATION AND POVERTY 2-8 (1968).

place students better suited for alternative instruction at a disadvantage. This is not only inefficient, it is less than fair.

For purposes of this analysis, we begin by assuming that parents who wish to transfer wealth to their children can do so by purchasing bonds for them (financial capital) or by providing them with education (human capital). Either type of capital will produce a future return. Parents with sufficient wealth purchase both assets in quantities that result in an equivalent marginal rate of return to each.[10] If a child lacks the mental capability to acquire human capital, or his abilities are quickly exhausted, extensive expenditures on his education will not be a wise investment. The child will be better off if his parents buy bonds rather than education. Similarly, if parents lack the resources to purchase adequate education for a gifted child, their child will be better off if they borrow money—the functional equivalent of *selling* bonds—and purchase education.[11] If human capital could suffice as collateral for loans, poor parents would purchase the same amount of education that wealthy parents do: the amount that equates the rate of return on education with the rate of interest on bonds.

Unfortunately, capital markets do not function well enough to solve all the problems of parents seeking to educate their children. The return on education is uncertain, and its financing entails unusual risks.[12] The security on such loans is inadequate if the courts will not require an individual to pay debts incurred by his parents to supply him with educational opportunities. The argument for equality of opportunity is, then, di-

10. This analysis depends on an economic principle known as the law of diminishing marginal returns on investment. The basic premise, as applied here, is that the marginal benefit from each additional dollar invested in education decreases as more dollars are invested. At some point, the marginal return on an additional dollar invested in education will drop to a level no greater than the return available from investment in bonds. Any additional funds available will be invested in bonds, because further investment in education would produce a lesser return. *See generally* R. EKELUND & R. TOLLISON, *supra* note 6, at 199 (discussing diminishing marginal returns).

11. *See supra* note 10. Parents without sufficient resources to provide education for their children will borrow money to provide their children with education only to the extent that the return on the investment in education exceeds the interest rate on the borrowing. At some point, the marginal return on an additional dollar invested in education will drop below the additional interest cost associated with borrowing the additional dollar. The result is that the poor family, like the wealthy one, will invest in education to the extent that the marginal return on that investment exceeds the prevailing market rate of return (the interest rate) on bonds.

12. *Cf.* Porter & Scully, *Potential Earnings, Post-Schooling Investment, and Returns to Human Capital*, 4 ECON. EDUC. REV. 87, 91 (1985) (estimating the return to schooling to be 6.6 percent with a high variance).

rected to these inefficiencies of capital markets and the resulting waste of bright minds from poorer families.

Arguments of fairness and equity cannot provide a clear answer to the problem of determining the optimal system of education. This is not to say that equity is unimportant, but promoting equity through the direct provision of education may itself be unfair because the benefits are not equally distributed. Some children are more adapted to traditional public school settings than others. Providing relatively homogeneous educational opportunities gives children who can better capitalize on this particular form of education a distinct advantage over children better suited for some other type of schooling. More creative and diverse educational offerings will ameliorate some of these differences, but the return on the investment will never be the same for every child.

Consider two children of poor families, identical except that the first child is more intellectually gifted than the second. Even in the absence of public support for education, one expects that the first child will be wealthier than the second—the higher return on investment in education for the gifted child will more easily overcome the imperfections of the capital markets and raise the first child's income above that of the second. Public support of education simply lowers the cost of investing in the particular type of human capital that the first child utilizes best. It thus magnifies the inequality that arises from the fundamental differences in the two children's inherent abilities. Thus, public provision of education would seem to result in greater inequality. With direct subsidies, however, students can match their needs and abilities with the offerings provided by the competitive market rather than trying to coax a centralized bureaucracy into providing differentiated service. The goal of equality is better served by direct transfers than by payments in kind.[13]

13. To illustrate this point, consider two youth, one fabulously gifted in the use of his hands (who is ideally suited to be a mechanic or a cabinet-maker), and the other equally gifted in language and mathematical skills (who is ideally suited to be a teacher of math or language). After 12 years of traditional school, the latter is well on the way toward his career goals, and the former has not yet begun. Subsidizing education of this limited type (traditionally only math and language skills) moves the one student ahead on the path to career earning (and even provides possible employment), while the other student must personally pay for his own education and cannot expect to work in the public education system teaching the basic skills he possesses. This consequence is unfair.

C. *Consumer Information and Choice*

Even if externalities and capital market failure exist in the market for education, their presence comprise arguments for subsidizing education, not for its direct provision. If parents are so poorly informed about education that they are unable to make intelligent choices, though, direct provision of education may be justified to allow the government to ensure both acceptable quality and efficient allocation of resources.

Education is not a simple commodity for consumers to analyze. In determining the type and amount of education they should acquire, individuals must forecast how it will affect their future earnings and what other benefits, such as appreciation of art or understanding of world events, the education will provide. The problem of forecasting is exacerbated by the fact that parents typically make education choices for their children. Parents clearly know less about their children than the children know about themselves, and parental interests in the child's future are unlikely to coincide precisely with the best interests of the child.

Decisions regarding education, however, are really no more complicated than many of the other choices that people make for themselves or their children. Parents regularly make choices for their children concerning medical care—a complicated and expensive service, the precise benefits and consequences of which are often highly uncertain. Parents choose the neighborhood in which their children will grow up, what food they will eat, and what religion, if any, they will practice—all with only minimal direction from the government. Those who argue that education is so significantly different as to require direct public intervention bear the burden of proving that assertion. We find no serious empirical support for the proposition.[14]

14. Consider, for example, Henry Levin's argument opposing the implementation of school voucher systems. *See* Levin, *Educational Vouchers and Social Policy*, in SCHOOL FINANCE POLICIES AND PRACTICES 235 (J. Guthrie ed. 1980). Professor Levin asserts that vouchers will exacerbate inequality because poorer parents will systematically choose a type of education that perpetuates their poverty. He cites psychological research indicating that poorer parents tend to encourage more conformity in their children. *See id.* at 252-53. Levin concludes that "research on behavior of working class parents suggests that they will select highly structured schools for their children that emphasize a high degree of discipline, concentration on basic skills, and following orders," *id.* at 252, factors that he contends will lead to lower income. This leap from psychological studies to predicting behavior and projecting resultant ill effects is mere guess work. If

Private markets for education would provide parental decisionmakers with low-cost information about schools in the form of reputation. Professor Henry Levin, an opponent of school privatization, has admitted as much in his hyperbolic argument that

> [e]ach school would connote a different breeding or charter that would have a certification value in preparing individuals for further educational opportunities or positions in the labor market. Even without identifying actual proficiencies of students as individuals, information connoted by the class orientation of schooling would tend to serve a stratification role for further opportunities.[15]

Stripped of its provocative language, Levin's claim is simply that under a voucher system, schools will develop reputations that employers or advanced educational institutions will find to be useful sources of information. Parents will avail themselves of the same information, and will serve their children's interests by responding to this market signal and encouraging their children to attend schools with better reputations.[16]

Those who claim that consumers lack the information or

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poor parents *do* systematically make such choices, it seems likely that they are acting in the best interests of their children. Empirical studies show that poor and minority parents are willing to make enormous sacrifices to secure private education for their children. *See, e.g.*, J. COLEMAN, T. HOFFER & S. KILGORE, HIGH SCHOOL ACHIEVEMENT: PUBLIC, CATHOLIC AND PRIVATE SCHOOLS COMPARED 37-43 (1982).

15. Levin, *supra* note 14, at 253.

16. The significant capital investment in facilities required to operate a school would give private school owners a strong incentive to preserve the school's reputation. This incentive would guarantee that the private schools deliver what they promised to parents and students, thus increasing the reliability of information that the schools provide parents.

Because schools sell services that promise future benefits, the purchase of education presents ordinary problems of contract enforcement. In Klein & Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615 (1981), the authors identify three methods for assuring performance in a market transaction: "(a) explicit contractual or regulatory specification with third-party enforcement, (b) direct (two-party) enforcement of implicit contracts, and (c) one-party organization or vertical integration." *Id.* at 635. All of these enforcement mechanisms are viable options in private education. For example, explicit contractual specification subjects promises made by a school to verification by some third party. While such promises would perhaps be awkward to enforce in court, private institutions now offering preparatory courses in law and accounting achieve the same objective by guaranteeing that if their graduates fail to pass the relevant licensing examinations, they may retake the course at no charge. Such promises are easily enforced. Concerns for reputation and the threat of terminating future exchange are sufficient inducements for private education providers to meet the terms of their implied contracts. On-the-job training is probably the most common example of vertical integration in education. In on-the-job training situations, the employer-educator has a direct financial interest in ensuring that the employee receives quality training.

ability to participate intelligently in a private market for education should bear the burden of showing that this is so. We have demonstrated mechanisms by which markets and consumers reduce information problems. Even if there are some information dissemination problems that survive institutional remedies, government could intervene in a way far less intrusive than by actually operating the schools. In particular, government could gather and disseminate information about educational institutions in much the same way that the federal government provides information about automobile safety and gas mileage.[17] If still more intervention were required, the government could mandate licensing and impose minimum standards, as it does in medicine and construction. Public provision of education is not the only solution to informational problems.

D. *Public Provision and Public Indoctrination*

Perhaps the most shocking argument for public provision of education is the contention that public schools inculcate certain socially beneficial values. These include "a common language, set of values, and knowledge necessary for appropriate political functioning in our democratic society."[18] This view was shared by many of the economists who laid the intellectual foundation for democratic capitalism, including Adam Smith, Thomas Malthus, and John Stuart Mill.[19] Nevertheless, indoctrination is a valid justification for public provision of education only if: (1) Public education institutions inculcate the desired values more effectively than do private education institutions; (2) private institutions, including religion and families, fail to teach the desired values; and (3) public education institutions do not spread values contrary to the common interest.

First, the available empirical evidence suggests that private schools may be more successful than public schools in teaching appropriate social values. Take, for example, the values that dissuade students from crime. At least one recent study reports a positive relationship between the rate of juvenile delinquency

17. Of course, private entities might emerge that would perform much the same function for educational institutions that such publications as *Consumer Reports* presently perform for many other products.

18. Levin, *supra* note 14, at 250.

19. *See, e.g.*, High, *State Education: Have Economists Made a Case?*, 5 CATO J. 305, 306-15 (1985).

and the proportion of children attending public schools.[20] Another commentator anticipated this result:

> It seems reasonable . . . to conclude that the popular belief . . . that state education makes the public less crime prone is unsupported by the available evidence. Beyond this, [one] could argue, but with less certainty, that the evidence showed a prima facie relationship in the opposite direction, i.e., that state education involved adverse external effects and aggravated or even helped to cause the prevailing trend towards increased criminal behavior.[21]

Second, family and religious institutions have shown themselves to be very capable of teaching values. These institutions serve as mechanisms for internalizing some of the economic benefits from the development of desirable values that would otherwise be lost to the individual. For example, if the Jones family or the Mormon Church devotes special efforts to teaching honesty, others will give preference in business transactions and social relations to members of these groups because of their known honesty. These added benefits provide an incentive, in addition to concern for the well-being of the child, for family and religious groups to place a special emphasis on the teaching of socially desirable values.[22] This, of course, is not to argue that all externality problems related to the teaching of values can be solved by voluntary arrangement. It does, however, cast doubt on arguments that *only* the government can properly and adequately teach socially desirable values.[23]

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20. *See* Lott, *Juvenile Delinquency and Education: A Comparison of Public and Private Provision*, 7 INT'L REV. L. & ECON. 163, 169 (1987). The study attempted to correct for the effects of such factors as family income, juvenile unemployment rates, spending per pupil, and urban residence, all which tend to influence the rates of juvenile delinquency. *See id.* at 168.

21. West, *supra* note 4, at 19.

22. Private schools would have similar incentives to encourage positive social values in their students. If parents believe that alumni of a particular school have an advantage in the market because of their perceived level of honesty, they will be more likely to send their children to that school, even if that school charges a higher tuition, to give their children that advantage.

23. In this regard, it is interesting to note the positive contempt that some advocates of public provision of education hold for voluntary arrangements. Consider this statement: "What makes the voucher system unique is that parents will be able to send their children to schools that will reinforce in the most restrictive fashion the family's political, ideological and religious views." Levin, *supra* note 14, at 251. Professor Levin values "the importance of being exposed to conflicting positions," *id.*, and fears that parents may prefer schools that shelter children from viewpoints that might challenge the parents' own values. His reference to "conflicting positions" hints that the values that would be taught in his ideal public school might not be those that parents consider desirable.

Finally, it is not clear that public schools will inculcate the socially desired set of views.[24] Scholars have long recognized that government intervention often promotes special interests over the general interest. Publicly provided education is not likely to be free of special-interest pressure. For example, certain forms of indoctrination, like promoting the virtue of income equality, may reduce opposition to a government policy advocating income transfers.[25] If indoctrination of this type benefits politicians by lowering the political cost of transferring wealth among constituent groups, the possibility for abuse of politically controlled education must be considered a realistic threat.

III. The Political Economy of Public Provision

Given the need for reform in education, the real debate is between those who believe that the current institutional structure of public provision can be adjusted to improve its performance and those who believe that the problems are endemic to the current system. In this Part, we consider the public choice model of government and its relationship to education policy.

The public choice model treats government policies as being majoritarian and holds that majorities can be formed as coalitions of non-majority special interests.[26] Acting alone, and without the resources to build a coalition, a single individual has little influence on government. Thus, the cost of forming a coalition to manipulate the instruments of government is a critical factor in any effort to shape policy. A group with relatively low costs of organizing for political action will, all other things being equal, have a greater influence on public education policy than its private benefits would otherwise warrant. Conversely, a group with relatively high costs of organizing will have less influence due to the difficulties inherent in forming such a group into a political coalition. This is not a cynical view of special-interest government. Indeed, the fairest and most compassionate representative listens to his constituents, and

24. Perhaps an obvious related question is whether there is *one* set of values that is "right" for everyone. This issue is addressed in the discussion of output differentiation, *infra* pp. 419-22.

25. *See* Lott, *supra* note 4, at 201.

26. *See generally* R. Holcombe, *supra* note 8, at 130, 147.

his decisions on questions of policy often reflect what he hears. Low organization costs merely serve as amplifiers for the pleas that interested individuals make as a group.

The suppliers of educational inputs, especially teachers and other education professionals, have relatively low organization costs among groups with a special interest in education. Because teachers and administrators typically belong to the same social class, receive similar training, are members of the same professional organizations, and interact on a daily basis, their costs of organizing are relatively low. By contrast, parents, aside from their general interest in the quality of their children's education, may have very little in common. It is therefore much more difficult and costly for them to organize.[27] Because their costs of influencing education policy are lower, teachers' and administrators' influence on policy disproportionately exceeds their numbers or the relative importance of their interests.[28]

Low organization costs are crucial to effective political influence. Thus, groups are often led to support policies that promote their solidarity even when the policy imposes some cost on the group's members. For example, many teacher organizations oppose merit pay and efficient procedures for dismissal of incompetent teachers, preferring instead lock-step pay increases and nearly automatic tenure.[29] The former policies are more efficient, would result in better schools, and would presumably benefit many, if not most, teachers, but such policies would undermine the very cohesion that makes effective political action possible. The same reasoning underlies the teacher associations' opposition to higher pay for scarce science and math teachers and support for certification requirements.[30] If

27. Parents have much more influence at the local school level, where neighborhood proximity and organizations like the parent-teacher association bring them together.

28. The special role of educators in the political market for education policy is well documented. *See, e.g.*, Toma, *Institutional Structures, Regulation, and Producer Gains in the Education Industry*, 26 J.L. & ECON. 103, 105-15 (1983); West, *supra* note 4, at 108-27. One study found that teachers' associations were, by far, the most effective interest group in gaining legislative influence over education policy. *See* R. CAMPBELL, L. CUNNINGHAM, R. NYSTRAND & M. USDAN, THE ORGANIZATION AND CONTROL OF AMERICAN SCHOOLS 60-61, 264 (1985) [hereinafter ORGANIZATION AND CONTROL] (reporting results of unpublished Ph.D. dissertation by J. Alan Auferheide).

29. *See* Urban, *Old Wine, Old Bottles?: Merit Pay and Organized Teachers*, in MERIT, MONEY AND TEACHERS' CAREERS: STUDIES ON MERIT PAY AND CAREER LADDERS FOR TEACHERS 25 (H. Johnson ed. 1985) [hereinafter STUDIES ON MERIT PAY].

30. *See id.* at 33-35.

teachers viewed one another as competitors, they would be less able to organize.

Other well-organized groups benefit disproportionately, if indirectly, from their influence on education policy. Examples include conservatives who object to the provision of vocational education as nothing more than an attempt by businesses to pass their training costs on to taxpayers, politicians who wish to inculcate certain values that minimize opposition to government activity, and civil rights groups that use the public education system to heighten awareness of their cause.

Organizational advantages of public education advocates make it difficult to gauge the actual popular support for public provision of education in this country. Almost every group and every facet of life is affected in some way by education. As discussed above, those who have a special advantage in influencing government policy have an incentive to support public education in spite of its shortcomings. An elected representative who asks his constituency whether they favor the public provision of education may be deafened by the amplified voices of a minority of self-interested respondents.

IV. Private Property, Firms, and Market Competition

If government quit the business of operating schools and limited itself to providing subsidies to students, the resulting system would be composed of private firms supplying educational services in a competitive market. Thus, to analyze the relative desirability of privately-supplied education, we first must consider the nature of the firm and market competition.

A. *The Nature of the Firm*

A firm may best be viewed as a nexus of contracts linking productive inputs.[31] As such, it is a center of productive activity. The owner of the firm gathers productive inputs with the promise of remuneration, organizes their productive efforts, and undertakes the task of monitoring and gauging their performance. The return for the obligation of payment and the effort of management is the claim to the final product.[32]

31. *See* Jensen & Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure*, 3 J. Fin. Econ. 305, 311 (1976).

32. *See* Alchian & Demsetz, *Production, Information Costs, and Economic Organization*, 62 Am. Econ. Rev. 777, 779-83 (1972).

The firm arises when the costs of using explicit contracts and markets to coordinate economic activity become too high.[33] This occurs when the organization demands more flexibility than explicit contracts permit and when the marginal product of individual inputs, particularly workers, is difficult to monitor.[34] The owner's right to the residual is a key aspect of the firm, because this right provides the incentive to seek ways to increase performance by monitoring the contributions of the various inputs and by continually adjusting relationships within the firm. Altering the membership of the team of inputs is a method to measure and monitor the contribution of individual inputs to team production.[35] In order to maximize output or to reduce the costs for a given level of output, owners must be able to revise the contract terms and incentive structures for individual inputs without the obligation to alter similarly the terms for other inputs.

The survival of the owner depends on the quality of his entrepreneurial decisions and how effectively he performs the monitoring and control functions of management. If the owner is not an efficient manager, the residual flow will be less than it could be, and the owner's right to the flow will bring a lower price than if the firm were efficiently managed. The potential gain from increasing the efficiency of economically inefficient firms will result in the emergence of specialized agents who ferret out such prospects.[36] Inefficient owners will be induced to sell their firms to these specialists, whose return depends on the degree to which efficiency can be improved.

B. *Market Competition*

Competition has two basic elements: a large number of consumers and producers, and relative ease in entering or exiting a market.[37] When these two conditions are met, the self-interested behavior of individuals vested with private property produces the most efficient allocation of resources. Private ownership of property assures that individual exchange activities enrich the participants, because individuals do not volunta-

33. *See generally* Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937), *reprinted in* READINGS IN PRICE THEORY 335-38 (G. Stigler & K. Boulding eds. 1952).
34. *See id.* at 336.
35. *See* Alchian & Demsetz, *supra* note 32, at 779-81.
36. *See* Jensen & Meckling, *supra* note 31, at 308.
37. *See* R. EKELUND & R. TOLLISON, *supra* note 6, at 67.

rily trade their resources unless the exchange results in a net benefit. Competition for sales reduces prices and assures the production of the types of products consumers demand. Easy entry and exit guarantee that cost-saving innovations and demand-enhancing product designs will quickly spread throughout the market. Ease of movement in the labor market and competition for labor skills give workers leverage to influence wages and working conditions.[38]

Information is valuable in a competitive market whenever decisionmaking by market participants is imperfect. Competition in the trade of information leads to specialized firms and information networks that sample products and provide reliable, low-cost information about quality and price. Reputation and brand name recognition are market signals of product quality and value. The informed decisions of consumers perform a policing function in competitive markets: Favorable information about a good or service increases demand for that product, and unfavorable information decreases demand.[39]

Competition leads to efficient adjustments in the allocation of resources in response to changes in technology, consumer preferences, and supplies of inputs.[40] When such changes occur, markets temporarily generate prices higher or lower than cost. This provides the signal to reallocate resources. The prospect of economic profits and the fear of losses associated with competition lead to innovation in production technology and in the composition of the goods and services produced. A new means of production that is less costly than existing technology or a new product that is more appealing to consumers results in short-term profits to the innovator because of lower cost of production or enhanced demand for his product. Over time, others mimic the successful innovator and spread the efficient innovation through the market. Conversely, inefficient technologies and unwanted products are unprofitable, and competition will drive them from the market.

When competitive entry is limited by physical or institutional constraints, market prices will exceed average production cost.[41] Instances of physical barriers to entry, such as sole own-

38. *See* Bator, *The Simple Analytics of Welfare Maximization*, 47 AM. ECON. REV. 22 (1957).

39. *See* Stigler, *The Economics of Information*, 69 J. POL. ECON. 213 (1961).

40. *See* R. EKELUND & R. TOLLISON, *supra* note 6, at 217.

41. *See id.* at 253-54, 263.

ership of a necessary input, are rare in the domestic economy.[42] Most often, domestic monopolies are created by legislation denying the right to compete in an industry or, as in the case of public schools, by special subsidies given to certain governmentally-favored producers that make it much less costly for them to do business.[43] The residual claimant to a legislated monopoly expends resources in vote-gathering, campaign contributions, and lobbying efforts in order to maintain his monopoly position.[44] When there is no clearly defined residual claimant (again, as in the public school system), the excess return is captured by a bloated bureaucracy[45] and those factors of production that are most scarce.[46]

V. Comparing Public and Private Schools

A. *The Nature of Public Schools*

The approximately 80,000 public elementary and secondary schools in the United States provide a sharp contrast to the model of private firms and private competition outlined in Part IV. If organized as private, for-profit firms, these schools would compete for student tuition dollars. Private owners would strive better to serve their clientele because buyers (parents) would be free to transfer their children to another school if they were not satisfied with the school's service or performance. A wide array of educational offerings would arise as indi-

42. *See id.* at 252.

43. *See* Stigler, *The Theory of Economic Regulation*, 2 Bell J. Econ. & Mgmt. Sci. 3, 4-5 (1971). *See generally* Posner, *Theories of Economic Regulation*, 5 Bell J. Econ. & Mgmt. Sci. 335 (1974) (analyzing theories explaining government intervention in the economy).

44. *See* Tullock, *Efficient Rent Seeking*, in Toward a Theory of the Rent-Seeking Society 97, 98-99 (J. Buchanan, R. Tollison & G. Tullock eds. 1980); Tullock, *The Transitional Gains Trap*, 6 Bell J. Econ. & Mgmt. Sci. 671, 671-78 (1975). *See also* Posner, *The Social Costs of Monopoly and Regulation*, 83 J. Pol. Econ. 807, 815-21 (1975) (estimating the costs incurred to achieve monopoly positions in a number of industries). *See generally* Tollison, *Rent Seeking: A Survey*, 35 Kyklos 575 (1982) (a survey of research on rent seeking).

45. *See generally* W. Niskanen, Bureaucracy and Representative Government 45-71 (1971). For a general overview, see P. Jackson, The Political Economy of Bureaucracy (1983). It is interesting to note that the absence of the disciplinary features of market competition is often used to justify an extensive government bureaucracy to supply the necessary discipline of an industry. *See* 2 A. Kahn, The Economics of Regulation: Principles and Institutions 12-13 (1971).

46. *See* C. Ferguson, Microeconomic Theory 436-39 (3d ed. 1972). Unions, for example, serve to create labor scarcity and, not surprisingly, have proven most effective in the public sector. *See* D. Martin, An Ownership Theory of the Trade Union 58-61 (1980). Additionally, unionization provides a convenient vehicle for political activity on the part of labor. *See* McChesney, *Rent Extraction and Interest-Group Organization in a Coasian Model of Regulation*, 20 J. Legal Stud. 73 (1991).

vidual schools attempted to find their niche in the demand for education. The system would create a vast laboratory for experimentation by the schools, with the forces of market competition, directed on the demand side by parental choice and on the supply side by accountable entrepreneurs, judging the results.

Competition in the education market has not occurred in the United States. Each state has chosen to provide education directly, using government employees and facilities, and to fund the agencies directly from tax revenues. In a public school system, power over schools is vested in the legislatures of the various states. Legislatures delegate authority over the day-to-day functions of state education to a state education agency headed by a chief state school officer and a state school board. Forty-nine states delegate some power over the operation and maintenance of public schools to local independent school districts or to school systems that are part of general-service local governments.[47] This power is exercised, however, under the scrutiny of the state legislature.[48] Relatively little power is delegated beyond the local school districts to the individual schools, their principals, or their teachers.[49]

Traditionally, most decisionmaking authority in education rested with local school boards.[50] Today, however, because funding, and thus discretionary power, generally originates at the state and district levels, decisions affecting public education systems are mostly made at the top, with decreasing local influence.[51] The success of legal challenges in several states to the practice of financing public education through taxes levied and retained at the district or county level has also heightened the role of state governments in public education.[52]

47. Hawaii alone utilizes a public school system that is wholly operated and controlled by the state. *See* HAW. REV. STAT. § 27-1(1) (1990).

48. *See, e.g.*, Buck v. McLean, 115 So. 2d 764, 765 (Fla. Dist. Ct. App. 1959) ("[C]ounty school boards are a part of the machinery of government operating at the local level as an agency of the State in the performance of public functions. The character of their functions, and the extent and duration of their powers rests exclusively in the legislative discretion.").

49. *See, e.g.*, R. GORTON, SCHOOL ADMINISTRATION: CHALLENGE AND OPPORTUNITY FOR LEADERSHIP 65 (1976) (listing the roles of an elementary or secondary school principal as: "(1) manager, (2) instructional leader, (3) disciplinarian, (4) human relations facilitator, (5) change agent, and (6) conflict mediator").

50. *See* ORGANIZATION AND CONTROL, *supra* note 28, at 77-78; EDUCATIONAL GOVERNANCE, *supra* note 2, at 241-42.

51. *See* EDUCATIONAL GOVERNANCE, *supra* note 2, at 249-50.

52. The basis for these challenges centers around the claim that local funding does

The ability and willingness of local school boards to delegate authority to individual schools has also eroded, largely due to several court decisions. In one such decision, the court ruled that a school board's delegation of discretionary power to a subordinate school will not absolve the school district of the consequences of exercising the power.[53] Accordingly, to protect themselves, school boards find it increasingly necessary to retain primary control. Other courts have focused on school districts as the relevant unit of activity in resolving school-related cases. For example, judicial efforts to achieve desegregation in public schools focused attention on the actions of school districts and required that remedial action be taken at the district level.[54]

Major policy decisions regarding instructional programs, minimum course loads and content, attendance requirements, approval of textbooks, certification of personnel, standards for school facilities, and funding are typically made at the state level.[55] The duties of the local school board are more administrative, including such matters as selection of a chief administrator, establishment of policies and procedures to administer educational programs and to facilitate planning and accountability, preparation of budgets, acquisition of property and supplies, establishment of personnel policies and the approval of collective bargaining agreements, and appraisal of the work of individual schools.[56]

If schools were privately owned, decisionmaking authority

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not equalize educational opportunity, but rather makes educational quality dependent on the wealth of the individual school district. *See, e.g.*, Rose v. Council for Better Educ., Inc., 790 S.W.2d 186 (Ky. 1989); Serrano v. Priest, 5 Cal. 3d 584, 96 Cal. Rptr. 601, 487 P.2d 1241 (1971). *But see* San Antonio Indep. School Dist. v. Rodriguez, 411 U.S. 1 (1973) (holding that such systems do not violate the Equal Protection Clause of the United States Constitution). *See generally* Annotation, *Validity of Basing Public School Financing System on Local Property Tax*, 41 A.L.R.3d 1220 (1972).

In the past three decades, the role of state government in financing education has increased significantly. In 1960, state funding for education averaged 39.1 percent and local funding 56.5 percent. By 1987, the state contribution was 49.8 percent, and the local share was 43.9 percent. A small federal component has contributed the remainder. *See* NAT'L CENTER FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., DIGEST OF EDUCATION STATISTICS 148 (1989).

53. *See* Herbert v. Livingston Parish School Bd., 438 So. 2d 1141, 1143-45 (La. Ct. App. 1983).

54. *See, e.g.*, Swann v. Charlotte-Mecklenburg Bd. of Educ., 402 U.S. 1 (1971) (mandatory bussing implemented on district-wide basis); Brown v. Board of Educ. of Topeka, 347 U.S. 483 (1954).

55. *See* ORGANIZATION AND CONTROL, *supra* note 28, at 87.

56. *See* E. MORPHET, R. JOHNS & T. RELLER, EDUCATIONAL ORGANIZATION AND ADMINISTRATION 248-49 (1982) [hereinafter EDUCATIONAL ORGANIZATION].

would reside at the level of the school, instead of at the state or district level. School-based initiatives would be implemented to meet whatever demands legislatures placed on schools to effect racial balancing. Busses and other ancillary equipment would be under the control of the school and its owner, not the state. Finally, decisions over funding would directly affect appropriations to students, and students and their parents would determine the allocation of these funds among schools.

B. *The Impact of Public Supply on Production: Innovation and Diversity*

1. *Innovation*

Political control of the supply of education retards technological progress. The pace of innovation and change is slow because the cost of innovation increases with greater need to seek approval and accommodate divergent interests. More importantly, the motivation for innovation is diminished because the return to innovation cannot be captured by the potential innovators. In the public school system, the decision to innovate is made by authorities at the district, state, or federal level. A potential innovator in the public school system bears none of the direct cost of an experiment and can claim none of the financial rewards of successful innovation. Instead, returns to the individual, if any, are confined to perquisites and indirect benefits associated with the experiment. Experiments are often altered in response to pressures from teacher associations, civil rights groups, administrators, parents, and the general community; not surprisingly, such "reguided" experiments often fail in their mission.[57]

Can successful innovation be achieved within the current publicly supplied structure of education? The question can be answered in part by determining whether changes in educational inputs affect educational output, that is, scholastic performance. A recent report surveyed the results of 147 separate studies of "educational production functions." These studies attempt to determine the effect of such factors as teacher-to-pupil ratios, teacher education, teacher experience, teacher salary levels, and average expenditure per pupil on scholastic

57. *See* Boyd, *The Politics of Curriculum Change and Stability*, in THE DYNAMICS OF ORGANIZATIONAL CHANGE IN EDUCATION 232 (J. Baldridge & T. Deal eds. 1983).

achievement.[58] The survey showed that these studies produced curiously similar results.[59] While most would probably accept without question the value of these factors in furthering educational achievement, as Table 1 indicates,[60] in the overwhelming majority of studies these factors were found not to make a statistically significant contribution or were found to have adverse affects.

TABLE 1. SUMMARY OF ESTIMATED RELATIONSHIPS BETWEEN SELECTED INPUTS AND SCHOLASTIC ACHIEVEMENT FROM 147 STUDIES OF EDUCATIONAL PRODUCTION FUNCTIONS

Input	Number of Studies	Statistically Significant (+)	Statistically Significant (−)	Statistically Insignificant
Teacher-to-Pupil Ratio	112	9	14	89
Teacher Education	106	6	5	95
Teacher Experience	109	33	7	69
Teacher Salary	60	9	1	50
Expenditures per Pupil	65	13	3	49

Why are these inputs ineffective? The New York City Schools' Experimental Elementary Programs (EEP), which began in 1969, provides a revealing case study.[61] The result of a compromise among the board of education, the teachers' union, and civil rights leaders, EEP was designed to test the effects of various programs and inputs on the scholastic achievement levels of the schools' students.[62] The four-year experiment was implemented in eleven schools at a cost of $40

58. *See* Hanushek, *The Economics of Schooling*, 24 J. ECON. LITERATURE 1141, 1159-73 (1986).

59. Some of the studies may be affected by problems of measurement, specification, experiment design, et cetera. Nevertheless, the consistent results of the tests indicate a reasonable level of reliability.

60. The information presented in Table 1 is drawn from Hanushek, *supra* note 58, at 1161.

61. *See* Warren, *The Nonimplementation of EEP: "All That Money for Business as Usual"*, in MAKING CHANGES HAPPEN? 150, 150-52 (D. Mann ed. 1978).

62. *See id.* at 150-51. Specific policies that were to be implemented under EEP included longer school days, individualized instruction, special classes for children with unusual needs or problems, tutorial clinics, an earlier start for formal education, school and community councils, and health programs. *See* COMM. ON EXPERIMENTAL PROGRAM TO IMPROVE EDUC. ACHIEVEMENTS IN SPECIAL SERVICE SCHOOLS, FINAL REPORT (June 20, 1968).

million.[63] Each of the programs and inputs failed: The students' academic achievement was virtually unaffected.[64]

The failure of the experimental programs is not, in and of itself, especially troubling. Failed experiments can provide valuable information. The manner in which the public authorities conducted this experiment, however, renders useless any information that EEP's failure might have provided. As one commentator has observed:

> Essentially, EEP utilized a role change model to foster innovation in an organization with a strong built-in resistance to change—without sufficient sanctions to overcome these barriers. While naivete about the nature of the organization might be blamed for this lack in the beginning of the experiment . . . [w]hat appears more likely is that neither the administration nor the union wanted EEP to succeed, and they made this clear by not acting forcefully to encourage better implementation.[65]

Factionalism diluted the original proposal, and politics, along with the lack of proper incentives, hindered its implementation. In short, we have no information whether the policies of EEP are beneficial or not.

The same frustrations are evident throughout the literature on educational innovation. "[E]ducational innovation and reform has emerged as a big business involving a broad array of public and private foundations and R&D organizations. Yet, after more than two decades of systematic efforts at reform . . . little really has changed."[66] The succinct explanation given for this lethargy is that "all too often innovative policies . . . were at best only partially *implemented*"[67] because the political process of change in education must confront and reconcile "contradictory pressures [from] curriculum policymakers [whose] positions will have some bearing upon who gets what, when, and how."[68]

In a private market for education, decisions to experiment would be made by the school's owner. The potential profits generated by successful innovation would provide entrepreneurs with the incentive to identify and implement potentially

63. *See* Warren, *supra* note 61, at 151.
64. *See id.*
65. *Id.* at 152.
66. Boyd, *supra* note 57, at 232.
67. *Id.* (emphasis in original).
68. *Id.* at 233.

beneficial programs. If the EEP experiment discussed above had been conducted by the owner of a private school, the experiment clearly would have been conducted differently. Certainly, the $40-million price of the study would have given the owner a strong incentive to police the experiment to ensure that it was properly implemented.[69] Because funding from a political agency would have been unnecessary, the design and control of the experiment would have remained in the hands of its creators—or at least in the hands of individuals with a direct incentive to make it work. A study conducted by a private firm would not have been subject to the political factionalism that plagued EEP. In particular, parent groups, whose children were captives of the public schools used in the experiment, would have had less incentive to meddle. If they were unhappy with the experimental program, they could have moved their children to a different school. Similarly, teachers would have realized that some of the benefits of a successful experiment would accrue to them in the form of higher salaries, and thus would have been much more helpful in its implementation. While the same policies might well have failed in a private school, the school's owner would at least learn from the failure and avoid repeating the same mistakes in the future.[70]

2. *Diversity*

Central political control of the production of education creates a tendency toward uniformity of output and stifles consumers' ability to match their needs with available offerings. This results from several policies unique to public schools. First, attendance zones deny students any choice among schools. Second, district and state school boards are constrained by court rulings that dictate uniformity of schools.[71] Attempts to differentiate schools in separate attendance zones

69. Indeed, such an expensive undertaking would almost certainly have been preceded by a smaller pilot study designed to highlight potential problems. In the EEP experiment, the first year of the project was to serve this purpose. When problems of implementation were revealed, however, no corrective measures were taken, and the experiment, flawed as it was, proceeded. *See* Warren, *supra* note 61, at 151-52.

70. EEP was actually an extension and modification of an earlier program by the New York schools that was similarly unsuccessful. *See id.* at 150-52. Had the prior program been adequately implemented, the information derived from its failure would have made EEP—and the related $40 million expenditure—unnecessary.

71. *See supra* note 52 and accompanying text (equal funding required for public schools within a state); *supra* note 54 and accompanying text (comparable racial mix required in the public schools within a given district). Plans to differentiate schools

pose the risk of court challenge, because students in one zone would be deprived of the services provided to students in another. Third, public funding is often earmarked for certain educational functions, limiting the choices available to local school administrators.[72] Fourth, legislative and administrative bodies often impose specific requirements,[73] or mandate uniform curricula or evaluation schemes, for teachers and students.[74] Uniform testing produces a tendency toward uniform education, particularly if teacher and school ratings are based on student performance on these tests.[75] Finally, diversity in the decisionmaking process is, in part, a function of the number and variety of decisionmakers. Centralized decisionmaking reduces the number of individuals with the authority to implement decisions; at the same time, political influences tend to encourage conformity of views among the governing leadership and inhibit conflicting and controversial styles and philosophies.

So long as the offerings of our schools are uniform, the information provided by the expression of choice will be lost. Parental monitoring of school performance through choice is efficient and virtually cost-free.[76] Its substitute is high-cost, inefficient monitoring by the state board of education. Although a good program or school is not difficult to identify, objective standards that can be used by a state agency to identify a good school are quite difficult to develop. A good school

through magnet school programs and tracking have been viewed with skepticism as attempts at segregation. *See, e.g.*, ORGANIZATION AND CONTROL, *supra* note 28, at 131.

72. *See, e.g.*, Elementary and Secondary Education Act, Pub. L. No. 89-10, 79 Stat. 27 (1965) (codified as amended in scattered sections of 20 U.S.C.). The Act provides supplemental federal funding for special programs in schools. The funding cannot be used to offset funding from other sources. The Act provides funding for low-income and disadvantaged pupils; libraries, textbooks, and instructional materials; supplementary education centers and services; basic skills improvement programs; and special services and programs for handicapped children and other children with special needs.

73. *See, e.g.*, Education for All Handicapped Children Act, Pub. L. No. 94-142, 89 Stat. 773 (1975) (codified as amended at 20 U.S.C. §§ 1400-1485 (1988)). The Act mandates placing handicapped children in regular classrooms and programs to the extent possible. Federal statute also mandates equal treatment of males and females in public education, thus constraining course offerings aimed uniquely at men or women (for example, shop or home economics), and greatly impacts physical education offerings and athletics. *See* 20 U.S.C. §§ 1681-1688 (1988).

74. Many state boards of education prescribe a "common school" curriculum, impose standardized tests of student achievement and teacher competence, and restrict the selection of textbooks. *See* ORGANIZATION AND CONTROL, *supra* note 28, at 65.

75. *See* Darling-Hammond & Wise, *Teaching Standards, or Standardized Teaching?*, 41 EDUC. LEADERSHIP 66 (1983).

76. Presumably, most parents monitor their children's schooling to a reasonable extent even in a public system. The difference is that parents of students in public schools have few, if any, options if they find the teaching or programs unsatisfactory.

provides not only adequate and appropriate subject matter, but also a compassionate, enthusiastic atmosphere that motivates students to learn. Designing standardized programs and testing teacher competence address only the subject matter. Testing the atmosphere of a program would require a bureaucracy large enough to visit every classroom. Alternatively, parents, if given the choice, could provide much more reliable evaluative information simply by selecting the schools that their children will attend.

Uniformity also prevents the tailoring of school programs to meet individual students' needs. The value of differentiated programs is subjective in nature and can only be revealed by the choice of the consumer. A world with uniformly white shirts, brown shoes, and four-door green sedans would offer products with the same general functions as the diverse offerings of our competitive market, but the value to consumers clearly would be less. The willingness of consumers to pay for diversity and of producers to risk losses in attempting to provide it makes this point obvious. The same principles apply to education. Some students need more discipline; others would excel if given more freedom. Some need college preparatory courses, while others would profit from vocational training. Some students and parents want biology teachers to teach creationism and avoid human sexuality. Others do not. The value lost by forcing students into a uniform curriculum is unknowable, but if the diversity of shirts, shoes, and cars in our society is an indicator, it is significant.[77]

Privately supplied education would provide a range of educational options to students and their parents. The education entrepreneur, motivated by the potential for increased profits resulting from the unique market appeal of his school, would attempt to design a school program that attracts a segment of the market. Students would benefit from the availability of services more closely tailored to their individualized desires, while excessive prices would be prevented by the threat of competition. Poor programs would be eliminated by the absence of willing consumers, and inefficient school administrator-owners

77. Even in education, the value of diversity is illustrated by the differentiation among colleges and universities. Because students are free to select a college with programs more suited to their individual needs, undergraduate, graduate, and vocational programs are available that focus on virtually any discipline or vocation that a prospective student would want to pursue.

would be bought out by specialized agents with fresh ideas and program designs upon which they would be willing to risk their investment.

C. *The Impact of Public Ownership on Teachers and Teaching*

In most public school systems, employment contracts originate at the school district level, while licensing or certification is controlled by the state. Because monitoring the productivity of individual teachers in the educational setting is difficult, teachers have extensive discretion and can therefore engage in opportunistic behavior. Though the shortage of public school teachers is consistently offered as a rationale for pay increases, merit or differential pay scales are rare.

Economists attribute shortages to a failure of market price to allocate resources properly.[78] In a private market, a shortage of teachers would signal that the wages of teachers are too low to attract sufficient numbers to fill demand. Competitive bidding among employers for the scarce supply of available teachers would raise wages and attract an increased number of teachers into the market. At the same time, higher wages would encourage employers to find alternative teaching methods and technologies that conserve scarce teaching talent. The independent and opposing forces generated by workers' desires for higher wages and employers' wishes to minimize labor costs are balanced by the prevailing market wage rate.

In the market for public school teachers, political considerations obscure both supply and demand. The demand for teachers reflects not only the trend in school-age population, but also the teacher-to-student ratio, the number of teachers per classroom, the number of special courses, and the daily work load of each teacher—all factors controlled by the government. Political forces also influence the supply of teachers, through the government's control of colleges of education and the process of certification.[79] In this environment, the very notion of a "teacher shortage" is problematic. Given the tremendous political clout wielded by teachers' unions and others whose incomes depend on the decisions made by government

78. *See, e.g.*, R. EKELUND & R. TOLLISON, *supra* note 6, at 99-100, 107-08.

79. There are numerous projections of teacher supply and demand. *The Condition of Education*, published annually by the National Center for Educational Statistics, United States Department of Education, contains the most frequently cited figures.

authorities, there can be no reasonable expectation that an increase in wages for teachers would suffice to eliminate shortages. Were there no shortage, political forces could align to create one by changing the parameters that determine teacher need and availability. In public schools, teachers' wages reflect not the forces of the market, but rather the political strength of teacher interest groups in comparison to taxpayers and other interest groups. Indeed, a survey of the recent literature reveals much dispute as to whether teachers as a group are in shortage or surplus.[80] There is also much evidence to suggest that, in general, the wages of teachers are comparable to those of other professions requiring similar educational backgrounds.[81] There does, however, appear to be a genuine shortage of math and science teachers.[82] To meet recently increased math and science requirements that have been imposed in many states, school systems have been forced to use teachers outside their areas of certification.[83] In a private market, such an inefficient result would never occur; consumers of education would demand properly qualified personnel, and school owners would offer higher wages to attract more math and science teachers into the market.

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80. *Compare* CARNEGIE FORUM ON EDUC. AND THE ECONOMY, A NATION PREPARED: TEACHERS FOR THE 21ST CENTURY 26-32 (1986) [hereinafter A NATION PREPARED] (predicting shortages) *with* E. FEISTRITZER, TEACHER CRISIS: MYTH OR REALITY? 90 (1986) *and* Hecker, *Teachers' Job Outlook: Is Chicken Little Wrong Again?*, OCCUPATIONAL OUTLOOK Q., Winter 1986, at 12, 17. *See generally* D. GERALD, P. HORN & W. HUSSAR, PROJECTION OF EDUCATION STATISTICS TO 2000 (1985) (offering projections of primary and secondary school enrollment and numbers of classroom teachers).

81. In 1985, public school teachers' average earnings were $24,559 for nine- or ten-month contracts, while persons in other jobs requiring comparable education earned an average of $28,497 for twelve months' work. Among females, the difference was even smaller ($23,543 versus $25,370). *See* E. FEISTRITZER, PROFILE OF TEACHERS IN THE U.S. 25 (1986). One study estimates that public school teachers place a value on their summer leisure time equal to approximately 13 percent of their salary. *See* R. MABRY, C. LINDSAY, M. MALONEY & B. MABRY, FRINGE BENEFITS AND THE VALUE OF SUMMER LEISURE FOR PUBLIC SCHOOL TEACHERS IN THE SOUTHEAST 41 (1989) [hereinafter FRINGE BENEFITS]. At least one other study has indicated that the earnings potential of those who choose to be teachers may be less than the earning power of others. The average Scholastic Aptitude Test (SAT) scores of freshman education majors were 70 points (7.3 percent) lower than the average scores of all other college freshmen. *See* E. FEISTRITZER, THE CONDITION OF TEACHING: A STATE BY STATE ANALYSIS 72 (1985). *See also* A NATION PREPARED, *supra* note 80, at 29-32 (reporting significantly lower SAT scores for high school students intending to major in education, as compared to all other college-bound students).

82. *See* Vetter, *Supply and Demand for Science and Mathematics Teachers, summarized in* T. GOOD & G. HINKEL, TEACHER SHORTAGES IN SCIENCE AND MATHEMATICS: MYTHS, REALITIES, AND RESEARCH 2 (1983).

83. *See* T. GOOD & G. HINKEL, *supra* note 82, at 4.

Turning to another source of teacher supply manipulation, colleges of education generally support teacher certification requirements that restrict the supply of teachers. On average, general courses in educational methodology and theory required for certification take more than one academic year to complete.[84] This requirement all but eliminates one potential supply of interested and qualified science and math teachers. Among professional scientists and mathematicians, there are, no doubt, a number of young parents who regret the incompatibility of their own schedules with those of their children, and who would be willing to sacrifice some income to secure jobs that were more compatible.[85] When a full year's wages must be sacrificed in order to obtain the necessary certification, however, relatively few professionals who might otherwise make valuable contributions to the teaching profession during their children's school years find it practical to do so.

It is a principal axiom of economics that incentives guide individual behavior.[86] In the employment relationship, this principle underlies the general practice that more productive employees are paid higher wages. The potential reward of higher wages encourages employees to put forth greater effort, and the higher output of the more productive workers encourages employers to offer higher wages in order to retain their services. When this principle operates smoothly, labor markets efficiently allocate individuals to vocations in which the value of their contribution is highest.

In the market for public school teachers, the link between productivity and pay has not been established. Periodic attempts to implement teacher incentive programs in public schools have failed.[87] Unions have historically denounced merit

84. *See* M. BURKS, REQUIREMENTS FOR CERTIFICATION FOR ELEMENTARY AND SECONDARY SCHOOLS (45th ed. 1989) (listing certification requirements for all 50 states). In general, there is one "education" course required for each substantive "subject-area" course. Only in New Jersey is it possible to be certified without having taken any special courses in education. *See id.* at 159.

85. Teachers with children appear to value a schedule that is compatible with that of their children. *See* FRINGE BENEFITS, *supra* note 81, at 11.

86. *See, e.g.*, R. EKELUND & R. TOLLISON, *supra* note 6, at 10, 12.

87. *See* Urban, *supra* note 29 (reviewing history of performance-based pay proposals in the United States). There are two major types of programs that have attempted to reward teaching excellence: merit pay, which rewards exemplary teaching by either a bonus or an increased annual salary; and the career ladder, which rewards qualified teachers by promoting them to higher paying jobs with greater responsibility and influence. *See generally* STUDIES ON MERIT PAY, *supra* note 29.

pay as an attempt to reduce wage scales.[88] In a public school environment, merit pay systems may be susceptible to bias, because the evaluators have no financial responsibility to discipline their decisions and because there is no hard evidence of merit on which to base these decisions.[89] Finally, establishing merit pay criteria to divvy a *legislatively predetermined* salary appropriation among teachers might result in counter-productive, opportunistic behavior on the teachers' part.[90] For example, teachers might profit from hoarding resources or refusing to cooperate with other teachers in order to gain a relative advantage in securing their piece of the finite appropriations pie.

Need we accept an educational "market" in which monetary incentives for teachers to excel are not implemented, and the best teaching goes largely unrewarded? In a government-operated school system, there may be no other option, because teaching ability, beyond a basic understanding of the subject matter, cannot be measured objectively:

> A compelling reason why there are no blueprints for effective teaching is that the effectiveness of particular instructional techniques depends critically on the characteristics of the children in the class, on the personality of the teachers, and the nature of the interaction of students and teacher. The critical characteristics of students and teachers that influence the effectiveness of particular instructional techniques may be very subtle and, consequently, cannot be documented through even detailed research.[91]

Perhaps the kernel of an idea for measuring teacher performance is contained in the above quotation: Students know the quality of interaction with their teacher, and parents can sense the enthusiasm for learning that a teacher imparts to their children.[92] In public schools, however, parental input is difficult to obtain, especially when those parents believe that their input is unlikely to bring about significant change. A private market for schools would provide this information automatically. Parents

88. *See* Urban, *supra* note 29, at 25-26, 35.

89. *See* EDUCATIONAL GOVERNANCE, *supra* note 2, at 29.

90. *See* R. MCKENZIE, ECONOMIC ISSUES IN PUBLIC POLICIES 142-57 (1980) (discussing merit pay systems and departmental discord).

91. Murnane, *The Rhetoric and Reality of Merit Pay: Why Are They Different?*, in STUDIES ON MERIT PAY, *supra* note 29, at 57, 64.

92. *See* Epstein, *A Question of Merit: Principals' and Parents' Evaluations of Teaching*, 14 EDUC. RESEARCHER 3, 4 (1985).

dissatisfied with a teacher's performance would spend their education dollars elsewhere, and profit-minded school owners would instantly be aware of the loss of customers. Parents pleased with the performance of a teacher would likely spread the word in the community, and talented teachers, like hairdressers and mechanics, would develop a loyal following. Because a loyal clientele would be valuable to the school's owner, the rewards provided to the effective teacher would reflect the positive appraisals of parents.

VI. Conclusion

Much has been gained from the public provision of education. Millions have received an education that otherwise might not have been available. Our system of public schools made great strides toward providing everyone with educational opportunities, and the dividends were handsome. As a vehicle for bringing education to the people when communication was slow and communities were small, public schools served admirably. Today, however, most children live near several schools. If schools were made private, and parents were allowed a choice of where to spend their child's education dollar, our schools could be made competitive—competitive with each other, and, because competition brings out the best, competitive with the best educational systems anywhere. Private property and market competition would provide both the incentives and discipline that are absent in our present educational system; enhancing their roles would produce tremendous gains in the performance of American education.