

Comisión Económica para América Latina y el Caribe

CEPAL

Seminario-taller "Asignación de recursos para el mejoramiento  
de la calidad y la equidad educativa"

Santiago de Chile, 10 de enero de 1996

APPLYING ECONOMIC LOGIC TO EDUCATION FINANCE: CHILE'S EXPERIMENT  
WITH THE PER-STUDENT SUBSIDY

Carol Ann Medlin  
Universidad de California, Berkeley

10

11

## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	1
I. GOALS OF FINANCE REFORM IN EDUCATION .....	2
II. CHILE'S EXPERIMENT WITH THE PER-STUDENT SUBSIDY .....	5
III. EVALUATING THE CHILEAN EXPERIENCE .....	9
1. Does use of the per-student subsidy facilitate higher total expenditures in education? .....	10
2. Does use of the subsidy, through competition, lower the costs of education? .....	11
3. Does providing parents with the right to choose among schools improve parental involvement in their child's schooling? .....	12
4. Does the subsidy mechanism improve quality? .....	13
5. Does the per-student subsidy improve school quality and, as a consequence, the academic performance of students? .....	15
IV. TRADE-OFFS BETWEEN GOALS OF ACADEMIC EXCELLENCE AND EQUITY .....	18
CONCLUSION .....	19
BIBLIOGRAPHY	

## INTRODUCTION 1/

Advocates of education reform usually promise that their policy proposals for change will improve the academic quality of schools. This is no less the case with the current wave of proposals favoring the adoption of per-student subsidies as the principal means of financing primary and secondary education. The subsidy mechanism would be used to reimburse schools--either publicly or privately operated--by some multiplier of the number of students attending that particular establishment (the multiplier should reflect the estimated average cost of educating a single child at the primary or secondary level). Parents, no longer constrained by school zoning requirements, would have the right to choose among schools anywhere, so that they might assure their child the very best education possible. Schools would have a direct financial incentive to attract and retain students, introducing a degree of market-induced competition into the school system that advocates claim would result in lower educational costs and higher school quality. However, for schools to have the capacity to respond to parental preferences, they would need considerable autonomy over their own budgets. In this regard, reliance on the per-student subsidy would represent a radical departure from more traditional methods of school finance, which often depend on centralized negotiations. Use of the subsidy mechanism of finance, supporters claim, not only would improve the academic performance of schools, but would also result in higher total expenditures on education, greater equity, lower costs and increased parental involvement their child's education.

This paper attempts to evaluate the credibility of these claims by reviewing evidence derived from the Chilean experience with the per-student subsidy. It is true that the Chilean case is far from a perfect test of the subsidy mechanism. A full-blown, free market version of the kind typically envisioned by economists has never been successfully implemented. Nevertheless, Chile does provide one of the few--perhaps only--national examples of its kind, and it is possible to make speculative inferences about the impact of the subsidy by paying careful attention to the evidence at hand. The evidence I reviewed in many respects confirms the expectations of subsidy proponents. However, I offer two words of caution. First, there is nothing "invisible" about the market hand that magically forces schools to compete with one another by lowering costs and improving quality. The cause-and-effect relationship can be named, as I attempt to show. Second, drawing from the few studies available on the subject, I speculate about possible trade-offs between equity and academic performance that may be inherent to the subsidy mechanism. It appears that a country wishing to promote academic excellence, especially among the most promising and highly motivated students, may do so at the expense of slower achievers, thereby jeopardizing the achievement of an equitable educational system.

The paper is divided into four parts. In the first, I examine the policy objectives sought by supporters of the subsidy mechanism, exploring the logic and economic rationale behind each. Second, I briefly review the history of Chile's experiment with the per-student subsidy, attempting

---

1/ The author would like to express her sincere thanks to Ms. Carrie Timko, University of California, Berkeley, for her valient assistance in reviewing several drafts of this paper.

to highlight the obstacles which have prevented the system from functioning according to the dictates of a free market. Third, I evaluate the Chilean experience against the policy objectives discussed in the first section. Fourth, I speculate on possible trade-offs between the goals of academic excellence and equity.

## I. GOALS OF FINANCE REFORM IN EDUCATION

It seems that public school systems everywhere are under intense scrutiny. In the United States, a 1983 report by the National Commission on Excellence in Education, appointed by then Secretary of Education Terrel H. Bell, portrayed "A Nation at Risk," charging that "the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very survival as a Nation and a people."<sup>2/</sup> In England, allegations of school mediocrity fueled the 1988 Education Reform Act, which the Thatcher government pledged would force cumbersome school bureaucracies to be "directly accountable to the consumers of the service they provide."<sup>3/</sup>

The concern that public school systems are failing in their academic mission--and the closely related fear that a poorly educated workforce hinders a country's ability to compete in the international economy--is not confined to the industrialized countries alone. In 1991, the World Development Report declared that countries relying on export-oriented development strategies must achieve "high standards of general education" to maintain their economic competitiveness. In Chile, following the country's transition to democracy in 1990, government officials announced that quality improvements in school performance would now be the primary objective of education policy.<sup>4/</sup>

The per-student subsidy is to be expected to improve academic achievement in a number of ways. First, total expenditures should increase, especially if parents are permitted to supplement the amount of the government subsidy with personal contributions (called "topping up"). Milton Friedman was the first to argue in favor of such a policy strategy,<sup>5/</sup> pointing out that a traditionally funded system underallocates resources to education. He argued that even though the majority of parents are not willing, or able, to send their child to an expensive private school, they still may be willing to pay more for their child's education than what they pay in taxes to fund the public schools.

---

<sup>2/</sup> John E. Chubb and Terry M. Moe, Politics, Markets, and America's Schools (Washington, DC: The Brookings Institution, 1990), p. 9.

<sup>3/</sup> Timothy Kenyon, "Conservative Education Policy: Its Ideological Contradictions," Government and Opposition (Spring 1994), p. 205.

<sup>4/</sup> Cristián Cox, "Las Políticas de los Anos Noventa para el Sistema Escolar," Serie Políticas Sociales 3, (Santiago, Chile: CEPAL, 1994).]

<sup>5/</sup> Milton Friedman, "The Role of Government in Education," in Capitalism and Freedom (Chicago: University of Chicago Press, 1962), p. 95.

Friedman's logic may appear particularly attractive to policymakers in countries saddled with balance-of-payments deficits, forced to make cuts in public social expenditures. Despite lower public spending, government authorities might count on parents to make up the difference in private spending. There are at least two potential problems with this reasoning. First, the income distribution--and size of the country's middle class, specifically--is crucial, since total expenditures will increase only if parents do, in fact, pay more for their child's education than they already pay in taxes. Second, the prediction holds only if private spending on education does not affect public spending levels even further. Under a traditional public school system, it has been argued that parents are willing to pay taxes to support local education because their children also benefit; in supporting the public schools, they subsidize the education of poor children. Under a "topping up" subsidy scheme, parents may quickly discover that their own personal contributions to their child's education "matter" more than what they pay in taxes, since their tax money gets distributed among the total population of schoolchildren. Hence, some parents may become increasingly reluctant to maintain public spending levels in education through higher taxes. If so, it is possible that an increase in private expenditures could be offset by declining public expenditures, and total expenditures would also fall. In any case, it would seem difficult to predict whether overall expenditure levels would increase or decrease, *ex ante*, since these levels would be highly sensitive to the income distribution and tax preferences of any given country.

A second claim of proponents of the per-student subsidy is that this method of school finance promotes equity. The "topping up" variant of the subsidy mechanism would appear to undermine this objective. However, if equity refers simply to a policy strategy of targeting public expenditures toward lower-income groups, the per-student subsidy may achieve the desired effect. A firm national commitment to subsidizing all children by the same amount benefits the poor in disproportion to their income, given a progressive system of taxation. A more aggressive variant of the subsidy mechanism would increase the value of the subsidy for low-income students (frequently called a "compensatory" scheme). In some respects, the compensatory scheme is reminiscent of past policy strategies to create "equality of opportunity" by positively discriminating in favor of the poor and disadvantaged. In this case, the tension between policy goals becomes more apparent since the goal of creating "equality of opportunity" may be undermined if the compensatory scheme also permits "topping up." It seems unlikely that the compensatory amount would permit low-income students keep pace with the middle-income students (whose parents supplement the basic subsidy they receive). For this reason, many proponents of the compensatory scheme who favor equity do not support the topping up variant of the per-student subsidy.

It seems that the policy strategy of increasing total expenditures on education may undermine equity goals, depending on how they are defined. Nevertheless, Chile has attempted to balance these two goals in interesting ways, by devoting additional resources--not channeled through the subsidy mechanism--to benefit low-income students. This will be discussed in a later section.

A third objective of subsidy proponents is to increase parental involvement in their child's schooling. In some cases, this concern reflects a frustration with parents themselves, who are seen to have abdicated responsibility for their child's education. A Thatcher supporter complained:

...[P]arents, busy in their separate employments, and influenced by the prevailing ideas of social welfare tend to regard their children as only partly their own responsibility. Parents send their children to school in the expectation that the teacher, who is the servant of a State that has taken charge of everything, will make up for all the deficiencies of the home, and provide whatever is lacking in their children's lives by way of interest, discipline and moral example. <sup>6/</sup>

If parents have permitted their interest to atrophy, then granting parents the right--or better, the obligation--of choosing their child's school should awaken their interest. Those who support the "topping up" believe this option will even further encourage parental involvement in their children's education. If the economic axiom is true that people place a higher value on things they pay for, parents who will top up the value of the subsidy should become even more directly involved in their child's education.

Perhaps more important, however, proponents of the subsidy mechanism believe parental involvement is necessary to promote school accountability. "Bad schools" happen due to excessive levels of centralization and bureaucratization that serve the people that work there, rather than the students they are expected to serve. Supporters of the per-student subsidy believe that parents can hold schools accountable for their performance through the equivalent of consumer purchasing power, since the subsidy mechanism grants parents the authority to pull their child out of a bad school and place him in a good one.

Fourth, the subsidy mechanism should also have the effect of lowering school costs if schools are permitted some degree of budget autonomy and flexibility in determining spending priorities. School autonomy is expected to limit union control over the schools, an effect viewed positively by proponents of per-student subsidies for several reasons. First, union lobbying tends to limit budget autonomy and flexibility at the school level, since spending priorities are set item-by-item in negotiations with central authorities. Second, and more specifically, unions tend to increase costs if they consistently negotiate salaries higher than what they could achieve in a free-market setting. Finally, unions also negotiate working conditions, thereby increasing bureaucratic control of schools and restricting the school's autonomy in establishing its own academic program.

Finally, according to supporters of the policy, the use of per-student subsidies to fund the primary and secondary schools promotes academic excellence by promoting a fifth key goal, educational diversity. The traditional bureaucracies which run schools have created a public school system, in fact purposefully. But proponents of subsidies tend to value diversity and creativity over sameness and rule-orientation. In their view, educational excellence requires tailoring academic programs to meet the needs of each child. By permitting schools to specialize, and cater to the needs of different kinds of students, the per-student subsidy breaks apart the "systemic" character of public education. Milton Friedman, arguing that the traditional public school system had gone too far in promoting conformity among students, suggested that "Our

---

<sup>6/</sup> Roger Scruton, policy analyst, quoted in Patricia White, "The New Right and Parental Choice," in Journal of Philosophy of Education 22, No. 2 (1988), p. 196.

problem is to foster diversity, and the alternative [the per-student subsidy] would do this far more effectively than a nationalized school system."<sup>7/</sup>

A recent Brookings study that compared the academic performance of public and private schools in the United States reached similar conclusions:

Bureaucracy vitiates the most basic requirements of effective organization. It imposes goals, structures, and requirements that tell principals and teachers what to do and how to do it--denying them the discretion they need to exercise their expertise and professional judgement, and denying them the flexibility they need to develop and operate as teams. The key to effective education rests with unleashing the productive potential that is already present in the schools and their personnel. It rests with granting them the autonomy to do what they do best. <sup>8/</sup>

Supporters of per-student subsidies have cited a wide range of goals--from lowering costs to achieving diversity in schools--that they expect to accomplish by reforming the method by which primary and secondary education is financed. The next section will examine Chile's variant of the per-student subsidy and its ability to meet these objectives.

## II. CHILE'S EXPERIMENT WITH THE PER-STUDENT SUBSIDY

Chile is one of the few countries in the world that has wholeheartedly embraced the per-student subsidy as the primary means of financing primary and secondary education. Although Milton Friedman first proposed the use of school vouchers in a 1956 essay, later published in the book Capitalism and Freedom, most educators viewed the proposal as an illustration of how far removed economists can be from public policy realities. Nevertheless, some pilot programs were attempted a decade or so later in some school districts in the United States and England. <sup>9/</sup> One of the more famous experiments includes the Alum Rock experiment in San Jose, California. Though frequently cited as a failed example of the compensatory voucher scheme--the program was discontinued only five years after it began in 1972--school financial autonomy was never fully achieved, since teacher wages and benefits were guaranteed by central authorities from the outset of the reforms. <sup>10/</sup> In fact, the Alum Rock experiment seems more accurately described as a precursor to open-enrollment schemes now popular within the traditional public school systems in

---

<sup>7/</sup> Friedman, p. 97.

<sup>8/</sup> Chubb and Moe, p. 187.

<sup>9/</sup> Due to considerable public opposition, these pilot projects have rarely incorporated all of the relevant features to provide a true test of the subsidy mechanism. See Geraint Johnes, The Economics of Education (London: MacMillan Press, 1993) and Nicholas Barr, The Economics of the Welfare State (Stanford, CA: Stanford University Press, 1993.).

<sup>10/</sup> Mark Blaug, "Where Are We Now in the Economics of Education," in Economics of Education Review 4, No.1, p. 169-173; and Nick Bosanquet, After the New Right (Heinemann Educational Books, Ltd, 1983).



the United States. In these open-enrollment schemes, parents may choose from a number of public schools within, or even among, school districts. However, schools are protected from the harsher realities of market competition, since their budgets are not significantly affected by parent's decisions (wages and benefits, representing the largest item on the budget, continue to be set by central authorities).

Though the Chilean educational system does not provide a unadulterated example of market competition among schools, it does offer a unique opportunity to evaluate the effects of the subsidy mechanism on school performance. Competition between the public and private sector schools for public resources to finance their academic programs is the distinguishing feature of Chile that sets it apart from other reform experiments. Since 1979, government officials have sought, with some degree of success but not without a few setbacks, to level the playing field of competition for public and private sector schools. Although public schools continue to exist, owned and operated by the municipalities, the goal of policy has been to force them to compete for students under the same terms as the private sector schools. As we shall see, the obstacles that government officials have confronted in their attempt to create equal conditions for both public and private sector schools are extremely informative, and help bring into sharp relief many of the important controversies surrounding per-student subsidies. <sup>11/</sup>

This section provides a brief history of the Chilean reform experience, focusing on policies that have been particularly difficult to implement.

Historical Overview. In 1979, Chilean government officials initiated a series of radical transformations of the country's educational system. The central feature of the reforms was a change in how public education was to be financed. Previously, public schools were funded via a centralized process of negotiations between teachers, administrators, and government authorities. Budgets were itemized at the national level (by wages, administrative expenses, costs associated with school operation and new construction). Salaries of teachers, administrators, and Ministry officials were always the most critical item--absorbing approximately 90 to 95 percent of the education budget.

Under the new system, revenues were to be entirely determined by the number of students attending each school. Although the amount of the subsidy would vary according to the type of school establishment (kindergarten, primary, secondary, vocational, special ed), its value was calculated to reflect the estimated average cost of a public education. Ideally, each school would be responsible for setting its own budgetary priorities, balancing the competing demands for resources--wages, school repairs, and operating expenses--with the needs of its student-body.

Parental choice was to play a key role in inducing competition among schools. Their individual decisions about where to send their child were expected to force schools to reduce costs while making qualitative improvements towards academic excellence. A national aptitude test--called the SIMCE--was designed, in part, to help parents follow the academic progress of their child in comparison with other schoolchildren.

---

<sup>11/</sup> Unlike the voucher system Friedman originally proposed, no actual voucher is distributed to the parents. However, the subsidy works "as if" it were a voucher, since it follows the child to the school he or she chooses to attend.

Two kinds of schools were to be funded by the per-student subsidy. First, all public sector schools, although they would be forced to radically decentralize to accommodate the new method of financing. Second, a special category of private sector establishments, known as "private, subsidized" schools.

Government officials hoped that the per-student subsidy would provide the private sector with a strong incentive to educate middle- to lower-income schoolchildren who had been previously served by public sector schools. <sup>12/</sup> The expected results were not long in coming, since many parents did show an interest in actively choosing a private, subsidized school for their child. Between 1980 and 1981, the number of students enrolled in private, subsidized schools more than doubled, increasing from 14 to 34 percent of total school enrollment. At the same time, public school enrollment fell from 79 to 58 percent of total enrollment. <sup>13/</sup> The private, subsidized schools sprung up in mostly urban areas, and particularly in the II, V, and IX regions, and in the metropolitan region of Santiago. The private sector was particularly responsive at the level of secondary education, for which the value of the per-student subsidy was highest.<sup>14/</sup>

Chart 1

SCHOOL ENROLLMENT BY TYPE OF ESTABLISHMENT(per thousand students)						
Year	Public	Public	Private	Private	Total	Total
	# Students	% Students	# Students	% Students	# Students	% Students
1980	2.308	79	402	14	2.923	100
1983	2.087	72	644	22	2.895	100
1986	1.944	64	917	30	3.039	100
1989	1.912	61	990	31	3.154	100
1991	1.699	58	1.005	34	2.939	100

Source: Luís Eduardo González and Oscar Espinoza, "Planificación de la Educación en Países de América Latina en Proceso de Descentralización," IPE (1993)

<sup>12/</sup> Expensive private schools served the needs of upper-income students, and accounted for approximately 8 to 10 percent of total school enrollment.

<sup>13/</sup> Luís Eduardo González and Oscar Espinoza, "Planificación de la Educación en Países de América Latina en Proceso de Descentralización," Iván Núñez, Coordinator, IPE (1993).

<sup>14/</sup> High school drop-out rates fell sharply over the period. However, it is difficult to infer from the data whether the public schools or private, subsidized schools were responsible for the decline.

Although the original policy intent was to make government-owned schools compete for scarce public resources under the same conditions as the private sector schools, implementation of the original plan has suffered a number of setbacks, particularly with respect to wage and labor inflexibilities that limit competition in the municipal schools. At the outset, control and administration of the public schools was decentralized to the level of the municipalities. The most critical aspect of the transfer was to provide substantial freedom to the municipalities in the hiring and firing of teachers, a policy which was intended to render the centralized processes of wage negotiations obsolete. It was expected that the municipalities would make rational employment decisions based on the revenues their schools "earned" from their students. (Immediately following the transfers, municipalities were forced to guarantee teachers the same nominal wage levels they had held as public sector employees. After an initial period, however, teacher labor conditions were to be subjected to the fortunes of the free market).

The economic crisis of 1982-83 brought the process of decentralization to an abrupt halt only two years into the reforms. Facing balance-of-payments deficits, the central authorities could no longer afford to pay the financial incentives offered to municipalities involved in the transfer, or the severance pay offered to teachers. 5,692 of the schools were under municipal control; the rest, 841 of them, remained in the hands of the Ministry of Education. The dual patterns of school administration only served to underscore the problems of schools under new, municipal management. As the crisis worsened, teachers employed by the municipalities saw their wages fall relative to those teachers, still employees of the central government, whose wages were better protected throughout the crisis. Teachers quickly organized in protest, and the military government conceded in an attempt to calm the storm of political unrest. Supplemental payments were arranged to bring all teacher salaries in line with one another, municipalities were forbidden to fire teachers, and new legislation forbade new private, subsidized schools to open in areas where they would directly compete with the municipal schools. These policy reversals seriously threatened the integrity of the subsidy mechanism. Patricia Matte and Antonio Sancho, key participants in the design of educational policies throughout the period of military rule, declared: "The basic conditions needed for the subsidy system to work [were] shattered. It was no longer possible to establish a cost-quality relationship which maximized profits at each institution since such an important part of the budget--salaries--were set ex ante." <sup>15/</sup>

By 1986, the process of decentralization began again, and was completed in only a few months. Attempts were made to restore the logic of the per-student subsidy mechanism in the public sector (the integrity of the subsidy afforded private sector schools had not been affected by the crisis). Hiring and firing privileges were restored to the municipalities, restrictions on private sector freedoms to entry were eliminated, and supplemental payments to teachers from central authorities were suspended (although the value of the basic subsidy was increased to reflect the new, higher salary level for teachers).

Nevertheless, challenges to the integrity of the per-student subsidy were far from over. Following Chile's transition to democracy in 1990, teachers organized to restore public sector employment privileges they had enjoyed prior to decentralization. The initial response of central

---

<sup>15/</sup> Patricia Matte and Antonio Sancho, "Primary and Secondary Education," in Private Solutions to Public Problems: The Chilean Experience (Santiago, Chile: Instituto Libertad y Desarrollo), p. 108.

authorities was to pass legislation to regulate the employment terms and working conditions of teachers, nationally. The legislation established a minimum wage and linked it to adjustments in the per-student subsidy; designated a career path for teachers, with corresponding pay scales based on years of experience rather than on performance; and created special work categories that would merit supplemental wages. Once again, the effective control of municipalities--and markets--over schools was threatened. Though payments to schools continued to be expressed in terms of the subsidy; in actual fact, the great proportion of school expenditures was to be pre-determined through decidedly non-market means.

Just last year, central authorities negotiated new terms of employment with teachers. In exchange for salary guarantees, teachers have accepted more flexible employment conditions, which should result in greater municipal autonomy over school administrative decisions. It is difficult to predict the staying power of the new agreement; there are sharply diverging opinions about how best to improve the state of the Chilean educational system. For our purposes, however, the storm of controversy surrounding use of the per-student subsidy in Chile is informative, bringing the features that policymakers view crucial to the successful implementation of the subsidy mechanism into bold relief.

### III. EVALUATING THE CHILEAN EXPERIENCE

Despite repeated efforts on the part of policymakers to rely exclusively on the subsidy mechanism to finance both the municipal and the private, subsidized schools, the Chilean government continues to supplement the revenues of municipal schools in other ways. In the process, the central government has found itself more entangled in the administrative, procedural affairs of individual schools (and local governments) than supporters of school subsidies would have liked. Because of this dual system of finance, Chile does not provide the perfect test case with which to evaluate the policy impact of the per-student subsidy. Nevertheless, as mentioned previously, Chile merits our attention because it provides one of the few national examples of this system of education finance.

Drawing from somewhat scattered pieces of evidence, I evaluate the results of the Chilean experience against the desired goals of subsidy advocates discussed in section one. Often, the evidence seems to conform to those positive expectations. However, much of what is attributed to a properly-functioning subsidy program is based on evidence of the effective performance of the private, subsidized schools, in contrast to the dismal performance of municipal schools. In fact, it is frequently argued that the effectiveness of municipal schools, if forced to comply with the financial discipline of the private, subsidized schools, would greatly improve. According to this view, the Chilean experiment has not fully lived up to its promise, and an attempt to evaluate the policy impact of the per-student subsidy is, consequently, premature. My approach is different. In evaluating each policy objective against the evidence at hand, I consider whether we can conclude that the subsidy mechanism is the primary cause of differences between private, subsidized schools and municipal schools. More broadly, I consider whether or not competition prompted by the subsidy mechanism is responsible for the successful accomplishment of the desired goals. In some cases, especially with respect to increasing total expenditures and lowering educational costs, the subsidy approach to finance appears to achieve the projected results. In other cases, particularly with respect to parental participation and improvements in students'

academic performance, measurement of the true effect of the subsidy is complicated by the fact that the performance results of the private, subsidized schools are influenced by their ability to draw talented students into their academic programs. Analysts' attempts to control for the effect of school selection, parental choice, and differences in students' innate abilities still reveal important differences in the performance of municipal and private, subsidized schools. While differences in school management may account for some of that difference, I argue that "associational effects"--that is, benefits derived from students' contact with other students having similar skill and motivational levels--may also account for differences in student performance. Thus, far from depending on a process of random selection and impersonal competition, the subsidy mechanism may depend on its ability to enhance important associational effects of schooling. In a final section, I discuss some of the implications of this possible trade-off between improved academic performance and equity.

1. Does use of the per-student subsidy facilitate higher total expenditures in education?

Because "topping up" of the subsidy is permitted, total expenditures on education have increased, though the size of the increase is unknown. The propensity of parents to contribute to their child's education varies substantially. In the published results of a survey measuring differences among parents, Gauri <sup>16/</sup> reports that families with children in the private, subsidized schools spend, on average, 15 percent of their income on school expenses (including transportation costs), compared to the seven percent paid by families with children attending the municipal schools (parents with children in private, paid schools spend almost 50 percent of their income on their children's schooling). Since both types of schools--municipal and private, subsidized--are now permitted to charge fees and tuition at the secondary level, these differences more than likely represent true differences in the parents' propensity to spend. Consequently, as Espínola also points out, there is probably a limit to how much parental contributions will add to total expenditures on education. As of February 1994, only 630 private, subsidized schools had indicated they planned to charge fees, as did only 40 municipal schools. The sluggish response among municipal schools is particularly instructive, since a decision to charge requires a vote of approval by the parents (subsidized, private schools are not forced to comply with this requirement).

An increase in private contributions from parents, even if small, has been accompanied by an increase in public expenditures, as well. These increases have been made possible both because of increases in the value of the per-student subsidy, well above the rate of inflation and because additional resources have been made available to education from other channels. A substantial portion of these new resources must be understood in the specific context of Chile's recent return to democratic governance, which was ushered in with heightened public concern regarding the quality of the country's educational system. That is, supplemental increases in the education budget appear to have occurred in response to a changed political environment, rather than a new system of finance. However, to the extent that key officials believe that new money effectively targets the student, and is therefore better spent than before, it could be argued that

---

<sup>16/</sup> Varun Gauri, "Hay diferencias entre padres de alumnos en colegios Municipales y Particulares," Serie Investigación I-81, ILADES/Georgetown (October 1994), p. 8.

increases in the value of the subsidy have only been possible because of restored confidence in the effectiveness of the subsidy scheme.

Taken together, however, total expenditures on education have indeed risen in Chile, some of which can be directly attributed to use of the subsidy mechanism, generally, and some (unestimated) amount seems to have to do with the particular "topping up" variant adopted.

2. Does use of the subsidy, through competition, lower the costs of education?

Yes, the educational costs per student drop in response to lower teachers' wages and smaller administrative staffs. Support for this conclusion derives from comparing public sector costs of educating a typical child in the private, subsidized schools (whose main source of public financial support derives from the per-student subsidy) with that of the municipal schools (which have received supplemental salary support from central authorities). In 1988, it cost the central government between 2000 and 7000 pesos more a year to pay for the schooling of a child in the public schools, compared to what it cost in the private, subsidized schools. <sup>17/</sup>

It could be argued that the comparison by school type is inconclusive, since private, subsidized schools may rely on additional revenues from private sources. Two additional pieces of information would seem to contradict this argument. First, wage differentials are significant. The average salary of teachers in the municipal schools, where wage levels have been supported by centralized bargaining strategies on the part of the teachers' union, is 39 percent higher than the average salary of teachers in the private, subsidized schools, where wages are essentially unregulated. <sup>18/</sup> An internal study carried out by the Ministry of Education concluded that municipal schools spend between 90 and 95 percent of their revenues on wages; compared to 67 percent for the private, subsidized schools. Certainly in terms of wage costs, a purely market application of the per-student subsidy (which precludes centralized bargaining over wages) is more "cost-effective" than the alternative.

A second factor responsible for lower per-student costs in the private, subsidized schools is their tendency to employ fewer teachers and administrators per student than municipal schools. At the primary level, the student/teacher ratio is 35:1 for the private, subsidized schools, and 23:1 in the municipal schools. Again, one explanation for these differences is that private, subsidized schools are not subjected to the same kinds of union demands regarding employment conditions as the municipal schools. They may be better able to hire and fire part of their teaching staff in response to changing demographics and economic circumstances than the municipal schools. In contrast, the hiring practices of municipal schools seem to reflect a host of non-market, especially political, factors. During the turbulent 1980s, rocked periodically by economic and political crises, the municipal schools had little control over the size of their own teaching staff. Although municipal enrollment fell by 24 percent between 1982 and 1990, the number of teachers employed

---

<sup>17/</sup> Espinoza and González, p. 105.

<sup>18/</sup> Cristián Aedo I. and Osvaldo Larrañaga, "Educación Privada en Chile: Calidad y Sesgo de Selección," Unpublished Document, p. 7.

by those schools fell by only 11 percent. With the transition to democracy in 1990, an attempt was made to rehire teachers who had lost their jobs for political reasons in the early years of the dictatorship. As a consequence, although enrollment levels began to stabilize after 1991, the number of teachers increased by ten percent.<sup>19/</sup>

Some have argued that since private, subsidized schools tend to teach students from more privileged backgrounds, their costs should be lower. Since the municipal schools are not permitted to "cream" the best students from the educational system, they must take on the most difficult, and expensive, students to teach. While the argument seems plausible--that is, providing a quality education to children from underprivileged backgrounds may prove costly--it is not clear that the resources should be continue to be distributed as they are at present. Some 86 percent of the additional resources made available to the municipal schools between 1990 and 1993 went to the hiring of new teachers, despite already low student/teacher ratios and steady enrollment.<sup>20/</sup> It could be that very low student/teacher ratios are important for the slow, disadvantaged students; however, there is little indication that the new hires were in response to a policy decision to serve disadvantaged students, in particular; instead, the new hires seemed to reflect tendencies toward clientalism and provoked public controversy for their political expediency.

It appears that one possible consequence of the per-student subsidy is greater flexibility in the hiring and firing of teachers and administrative staff, since reduced costs result from personnel reductions and the lowering of teachers' wages. However, as the Chilean case demonstrates, the effect is produced only in school systems which effectively restrain the capacity of teachers to strike national, or at least highly centralized, bargains over wages and working conditions. In an effort to protect teachers from the harsh market conditions while at the same time promoting a somewhat competitive labor market for teachers, some countries may choose to enforce a minimum wage and/or a minimum classroom size.

### 3. Does providing parents with the right to choose among schools improve parental involvement in their child's schooling?

It may depend on how parental involvement is measured. A study by Gauri demonstrated that the probability of belonging to a Parent's Association, talking with a child's teachers, or actively participating in school activities is essentially the same for parents who exercise their right to choose schools by placing their child in a private, subsidized school and parents who do not (whose children remain in the municipal schools). <sup>21/</sup>

---

<sup>19/</sup> Viola M. Espínola, "El Impacto de la Descentralización sobre la Educación Gratuita en Chile," Serie Gestión Escolar, Documento 1/95, 1995.

<sup>20/</sup> Espínola, pp. 23-24.

<sup>21/</sup> However, parents who send their children to the elite private, paid school establishment show a much higher propensity to participate in their child's schooling.

On the other hand, if the act of exercising choice counts toward parental involvement, parents whose children attend the private, subsidized schools may be considered much more involved in their child's schooling. These parents are much more likely to have chosen among a variety of other schooling options for their child; also, their reasons for choosing a particular school are much more likely to reflect concerns about academic performance. <sup>22/</sup> It is doubtful, however, that the subsidy mechanism is responsible for these differences among parents. Many parents whose children remain in the municipal schools are also actively exercising a choice<sup>23/</sup>--only their reasons have more to do with the school's location and low cost. In fact, there are some significant differences among the kinds of parents who chose the private, subsidized schools and those who do not. It is easiest to measure these differences in socio-economic terms. A survey of parents in the metropolitan area of Santiago, carried out by Aedo and Larrañaga found that, parents choosing a private, subsidized school for their child are more likely to own an automobile and make, on average, \$100 a month more than parents whose children remain in the public schools. But there appear to be significant cultural differences, as well. Parents whose children attend the municipal schools are much less likely to view education as the key to social mobility and a better life. They are also likely to be less educated and less likely to read newspapers on a regular basis.

Although the subsidy mechanism is surely not the cause of these differences, its use seems to separate parents along socio-economic and cultural lines, channeling their children into different types of school programs (in this case, public versus private). As I will discuss in a later section, this fact carries with it important, and somewhat contradictory, implications for equity, on the one hand, and academic excellence, on the other.

#### 4. Does the subsidy mechanism improve equity?

Critics of the private, subsidy schools would certainly argue no. They point out that 70 percent of the students in the lowest two quintiles remain in the municipal schools.

Supporters of the subsidy mechanism, however, are quick point out that the private, subsidized schools draw in relatively equal percentages from the lower three income quintiles, unlike the private, paid schools which draw disproportionately from the upper-most quintile. In other words, although students in the municipal schools are disproportionately poor, it is not the case that poor students attend municipal schools, only. Still, accusations that the private, subsidized students discriminate against the underprivileged students remain. Critics argue that the private, subsidized schools "cream" the best students from the country's educational

---

<sup>22/</sup> Despite this, parents who actively choose tend to rely on information regarding school reputation, and tend to have very little knowledge of SIMCE rankings. See Gauri, p. 10.

<sup>23/</sup> Though some are not. Some parents reported that their children attend the municipal schools due to poor planning. See Gauri, pp. 7-8.



system,<sup>24/</sup> and the municipal schools get stuck with the more disadvantaged students. As one educational authority eloquently put it:

Las escuelas (municipales) somos, antes que nada, un servicio a la comunidad. Las escuelas tenemos que recibir a todos los alumnos que no demanden matricula, sin importar su condicion. Nosotros recibimos a los alumnos limitrofes, alumnos que en estos momentos son tierra de nadie, y como escuelas basicas tenemos el deber de recibirlos y prepararlos, tenemos que sacarlos adelante. Es nuestro deber, cosa que no ocurre con la escuela particular. En la escuela particular (subvencionada), no existe el grupo de educacion diferencial, la escuela particular toma el examen de admision, y desecha a todos los alumnos problemas. Es duro decirlo asi, pero es una realidad.<sup>25/</sup>

Chart 2

ENROLLMENT BY INCOME QUINTILE AND SCHOOL TYPE (1990)			
Income Quintile	% municipal	% private, subsidized	% private, paid
I	41,9	25,8	4,0
II	27,6	22,6	5,8
III	15,8	22,4	8,0
IV	9,8	17,9	15,2
V	4,9	11,3	67,0
Total	100,0	100,0	100,0

Source: Viola M. Espínola, "El Impacto de la Descentralización sobre la Educación Gratuita en Chile," Serie Gestión Escolar, Doc. 1/95 (Santiago, Chile: CIDE, 1995), p. 21.

Strictly focusing in terms of the appropriate targeting of public expenditures, the subsidy mechanism has furthered equity goals. The amount of public subsidy paid to any school--municipal or private, subsidized--falls by some fraction of the amount charged to parents in school fees and tuition. In effect, this mechanism ensures that a greater percentage of public resources in education are targeted to the lower-income groups. A still more equitable solution would increase the value of the subsidy for low-income students. Though Chile has not opted to use this kind of "compensatory" subsidy, the country has adopted a somewhat similar policy of

<sup>24/</sup> Many of the private, subsidized schools require entrance exams.

<sup>25/</sup> Cited in Aedo and Larrañaga, p. 9; and Larrañaga (1995). Originally from the Informe de Comisión de Financiamiento en Seminario "Políticas y Mejoramiento de los Servicios de Salud y Educación del Municipio," Septiembre de 1993.

"elevating the floor" of schools whose academic performance is weakest. Chile's P-900, MECE, and MECE-media projects funnel financial resources and technical assistance directly to the schools that fall below some official ranking of vulnerability (which includes information about poverty levels and scholastic performance of students).

In sum, although equity implications of the per-student subsidy may be challenged from a number of perspectives, the subsidy mechanism has permitted public funds to be more effectively targeted toward the lower income students. Still, the more global effect of the policy with regard to other notions of equity--including, for example, equality of opportunity and equality of results--is more in doubt.

5. Does the per-student subsidy improve school quality and, as a consequence, the academic performance of students?

Standard measures of school quality suggest that students in the private, subsidized schools perform better academically than students educated in the municipal schools. Supporters of the per-student subsidy have argued that the competition induced by funding schools according to the number of students by attendance explains this result. However, opponents have tended to argue that school quality cannot be so easily measured. The dispute revolves around the SIMCE national achievement test which is taken by all students in the fourth and eighth grade levels. Policy analysts generally agree that SIMCE scores are highly affected by factors other than academic achievement, including cultural and socio-economic factors, and innate student ability. They disagree about how easily a measure of academic achievement can be distilled from these other factors.

Initial debate in Chile was sparked by the publication of raw SIMCE test scores by type of school establishment. Although students attending private, paid schools performed far better than all other students, the debate focused on the performance of students attending schools whose revenues depend almost entirely on public funds. The academic performance of students in private, subsidized schools was consistently higher, albeit only marginally, than that of students attending municipal schools (please see Chart 3).

**Chart 3**

COMBINED AVERAGE SIMCE TEST SCORES IN SPANISH AND MATH (4TH GRADE LEVEL)			
School Type	1988	1990	1992
Municipal	47.8	56.7	63.8
Private, Subsidized	52.4	63.8	70.1
Private, Paid	69.6	79.9	86.0

Source: Informe Resultados SIMCE, Ministerio de Educación, 1993. Cited in Viola M. Espínola, "La Descentralización de la Educación en Chile: Continuidad y Cambio de un Proceso de Modernización," Serie Gestión Escolar 2/94 (Santiago, Chile: CIDE, 1994), p. 30.

In light of these results, an obvious question followed: did differences in student test scores have more to do with socio-economic factors or with qualitative differences in private sector versus public sector schooling? A CEP study carried out by Carla Lehmann found that private, subsidized schools outperformed municipal schools at every socio-economic level. Only in a small geographic subset of poor, rural areas were the test scores of municipal students higher than those of students attending private, subsidized schools (not featured in Chart 4; this apparent anomaly will be discussed below).

Chart 4

SIMCE SCORES BY SOCIO-ECONOMIC LEVEL AND SCHOOL TYPE (1993)			
School Type	Socio-Economic Level	Mathematics	Spanish
Municipal Private, Subsidized	High	64,6	65,3
	High	68,9	71,5
Municipal Private, Subsidized	Middle	58,9	62,7
	Middle	60,6	64,7
Municipal Private, Subsidized	Low	51,5	54,3
	Low	53,7	57,3

Source: Carla Lehmann, "El Sentido de Pertenencia Como Catalizador de una Educación de Calidad," Serie Documentos de Trabajo, 22 (Santiago, Chile: CEP). Presented in Larrañaga 1994.

Yet the Lehmann study, relying on socio-economic and SIMCE test score averages, was unable to control for the socio-economic background of individual students, and made no attempt to control for the motivational influence of parents on student performance. A 1994 study by Aedo and Larrañaga attempted to do so econometrically. After calculating differences in the probability of a child attending either a public or private sector school, and controlling for those differences, Aedo and Larrañaga still found that private, subsidized schools do a better job educating their students than the municipal schools. They concluded: "... los niños que efectivamente asisten a escuelas privadas subvencionadas obtienen mejores resultados en estas escuelas que una muestra de alumnos tomada al azar; mientras quienes asisten a establecimientos públicos consiguen peores resultados respecto al que lograría una muestra aleatoria de niños que asistiera a dichos establecimientos."<sup>26/</sup>

<sup>26/</sup> Aedo and Larrañaga, p. 24.

The Lehmann study and the study carried out by Aedo and Larrañaga are two of the most important attempts to separate out the effect of school quality on student academic performance from other factors that are beyond the control of schools. Even so, it must be remembered that cultural, socio-economic status, and parental influences are very difficult to measure; and it is unlikely that the impact of these factors can be controlled for completely in a quantitative study.

Despite these difficulties, and drawing from what we know of the administrative problems plaguing the municipal schools, it is not hard to believe that there are relevant organizational aspects that positively contribute to student academic performance in the private, subsidized schools. However, attaching too much importance to the private-versus-public sector dichotomy seems to evoke a rather simplistic image of municipal schools as the "unfinished business" of the Chilean government: if the subsidy could be fully applied to the municipal sector (or, better, if the municipal schools could be privatized) then the country's educational system would be permitted to function properly, and would produce similar performance results as the private, subsidized schools market.

I would like to posit an alternative hypothesis, one that has not been considered, and has not been controlled for, in the studies cited above. What if part of the explanation for why students in the private, subsidized schools perform better has to do with the importance of "associational effects?"-- that is, the positive effect on learning that occurs when smart, motivated students study with other smart students who are motivated in similar ways. The effect should be different than the effect of parental influences or socioeconomic status on learning, because associational effects have to do with who your peers are, not where you come from. An important study by the Brookings Institution may have captured a part of this effect by measuring the importance of school tracking <sup>27/</sup> policies on academic performance. While they argued that private schools may do a better job of tracking than their public counterparts, they also concluded that "tracking practices may account for as much as 30 percent of the total influence of school organization on achievement" and was far more important than a simple measure of socioeconomic status of a school's student body.

It may be that Lehmann inadvertently uncovered evidence of associational effects in a study that hypothesized that schools with a sense of purpose and a clear set of academic goals<sup>28/</sup>--typically, the private, subsidized schools-- may achieve better results than schools that do not--typically, the municipal schools. Lehmann's study showed that private, subsidized schools perform consistently better than the municipal schools, controlling for socioeconomic urban/rural factors, except under one special circumstance. The performance of private, subsidized schools was no better, and was sometimes inferior, to the performance of the municipal schools in low-income and isolated rural areas.

---

<sup>27/</sup> Measures of school tracking "capture how aggressively schools track students into academic programs and how extensively academic work contributes to the school's general climate." See Chubb and Moe, p. 131.

<sup>28/</sup> However, the cause Lehmann attributes to these factors is public versus private ownership. I argue that associational effects may be more complex, involving a combination of factors that includes the interest and motivation of students in the classroom as well as school orientation.

Chart 5

SIMCE RESULTS OF LOW-INCOME STUDENTS (1993)			
School Type	Rural Characteristics	Math	Spanish
Municipal Private, Subsidized	Rural with poor accessibility	49,8	50,2
		48,1	49,2
Municipal Private, Subsidized	Rural with minimal accessibility	46,0	45,4
		43,7	42,4

Source: Lehmann (1994).

If associational effects do matter, these results are not very surprising. In low-income and isolated areas, the private, subsidized schools lose their advantage over the municipal schools because they cannot easily reproduce the components of a focused academic program in a sparsely populated geographic area. Like the municipal schools, they are forced to pool together a group of heterogeneous students whose educational needs may conflict with one another.

In many respects, the hypothesis I propose simply complements, rather than rivals, an important alternative hypothesis--that the effective implementation of the per-student subsidy improves school quality due to more efficient management. However, in order to understand the policy implications of exclusively relying on the subsidy mechanism to finance primary and secondary education, it is important to consider different possibilities of how the subsidy actually works. If associational effects are real, I argue that there may be important trade-offs between policy goals of academic excellence and equity.

#### IV. TRADE-OFFS BETWEEN GOALS OF ACADEMIC EXCELLENCE AND EQUITY

Let me propose a thought experiment for a moment, setting aside the controversial issue of whether or not private sector schools are more efficient than public. Imagine that all municipal schools in Chile were suddenly privatized--that is, what if municipal schools from one day to the next were to turn into private, subsidized schools--what would happen to overall measures of school quality, then? In other words, by inventing a counterfactual scenario, I'd like to try to fathom the independent effect of using the per-student subsidy to finance primary and secondary education, regardless of who actually administers the schools.

I speculate that the academic performance of students in the former municipal schools would still be inferior to that of students in the current private, subsidized schools (leaving an

open question about whether private management would have some effect on student test results). I imagine this for the following reason. If the per-student subsidy were to be evenly applied to all schools--private, subsidized or municipal--parents would likely behave in ways very similar to how they do now. School costs may fall, efficiency may rise, but approximately 60 percent of parents would continue to keep their child in the school nearest home. Although their reasons may vary, this important 60 percent of parents select their child's school for non-academic reasons. If we look again at the concentration of low-income students in the municipal schools--70 percent of the students in the municipal schools fall in the lowest two income quintiles--it is not difficult to imagine how the absence of positive associational effects might work against this important subset of students.

While the scenario I have portrayed is distressing, it is so partly because I left out an important positive side to the story. The students who are able, and willing, to enroll in a school with an academic program and student body aptly tailored to their needs may perform much better academically than they would in a different sort of school in which the positive associational effects are lost.

How powerful are associational effects? It seems hard to argue with the hypothesis that high achievers learn more in the company of other high achievers, similarly motivated, than they might in the company of slower ones who may have different educational objectives. But what about the slower students? Do they also perform better in the company of like students, or do they need the challenge, and stimulation, that a few high achievers in the classroom might provide? If associational effects do matter, a country opting to permit school choice may relinquish an important tool of policy that stimulates the academic performance of slow students in disadvantaged environments. However, holding back the good students, to the benefit of weaker students, also seems unacceptable, because the philosophical point of the system seems to be to allow those students who can improve, and get ahead academically, to do so without distraction. If the point sounds negative or critical, it shouldn't. The importance of having a highly educated labor force in today's competitive international economy underscores the importance of unleashing the academic potential of students willing, and able, to challenge themselves to the fullest of their abilities. My purpose has been to point out, however, that promoting the goal of academic excellence has important implications for equity, not all of them pleasant.

## CONCLUSION

By reviewing evidence from the Chilean experience, it is possible to conclude that many of the policy objectives sought by supporters of the per-student subsidy can be obtained if certain specified conditions hold. There is nothing invisible about the market hand that forces schools to respond to competition by becoming more cost-efficient and cost-effective. The causes-and-effects set in motion by the subsidy mechanism can be named, in many cases. For example, total expenditures on education may indeed increase provided that "topping up" is permitted, parents have the capacity to pay, and public expenditures do not fall. Lower per-student costs may result if schools are given greater autonomy over their own budgets, but it must be underscored that costs are significantly lower only if wages and benefits fall for teachers and administrators, generally. Furthermore, if lower average costs decline, greater equity in public expenditures may

be pursued if additional or supplementary spending is targeted toward the lower-income and disadvantaged students.

The actual--rather than predicted--effect of the subsidy mechanism on academic achievement is more complicated, since factors external to school performance may confound attempts to measure its impact. However, I discussed how the subsidy mechanism might be operating in Chile, by reviewing studies which compared achievement test results of students attending both private and public sector schools. Some analysts have attributed the relatively better performance of students in the private, subsidized schools to greater efficiencies produced by the use of the per-student subsidy as the principle means of finance. Other analysts dismiss these claims, arguing that the private, subsidized schools appear to provide a higher quality education only because they "cream" the better-prepared students.

If "creaming" by socioeconomic or cultural factors explains achievement results, the subsidy mechanism is clearly not responsible for improvements in school quality. However, if the cause of higher test scores is more effective management in the private, subsidized schools, an appropriate policy solution for poor school performance is the privatization of the public school system.

Evidence from the Chilean case suggests a third possibility--that positive associational effects may be a contributing cause of better academic performance among students attending the private, subsidized schools. If true, the subsidy mechanism may "work"--though for somewhat different reasons than economists might expect. In this case, the appropriate policy response may be greatly contested. If the right policy tool--i.e. the subsidy mechanism--can improve the academic performance of a certain sub-set of all students, is it not incumbent upon decisionmakers to permit its use? Of course, there would be no problem if all students--high achievers and slow learners--learn best when assigned to classrooms with students of similar motivation and academic skills. However, what if the opposite is true: that slower learners perform better academically if they are challenged in the classroom by high achievers? Even more problematic, what if the slower students are more likely to be low-income and otherwise disadvantaged students, as we in fact have observed in the case of Chile? In short, I pose the question: does the subsidy mechanism of financing primary and secondary education force a choice between promoting academic excellence and achieving greater equity in the schools?

## BIBLIOGRAPHY

- Aedo, Cristián I. and Osvaldo Larrañaga. "Educación Privada versus Pública en Chile: Calidad y Sesgo de Selección." Unpublished Document.
- Blaug, Mark. 1985. "Where Are We Now in the Economics of Education?" Economics of Education Review 4, 1:17-28.
- Bosanquet, Nick. 1983. After the New Right. London: Heinemann Educational Books, Ltd.
- Casteñeda, Tarsicio. 1993. Para Combatir la Pobreza: Política Social y Descentralización en Chile durante los '80. Santiago, Chile: Centro de Estudios Públicos.
- Chubb, John E. and Terry M. Moe. 1990. Politics, Markets, and America's Schools. Washington, D.C.: The Brookings Institution.
- Cox, Cristián. 1994. "Las Políticas de los Años Noventa para el Sistema Escolar." Serie Políticas Sociales 3. Santiago, Chile: CEPAL.
- Driscoll, Mary. 1993. In Rasell and Rothstein, eds., School Choice: Examining the Evidence. Washington, D.C.: Economic Policy Institute.
- Espínola, Viola H. 1994. "Financiamiento Privado para la Educación Pública." Serie Gestión Escolar 1/94. Santiago, Chile: CIDE.
- Espínola, Viola H. 1994. "La Descentralización de la Educación en Chile: Continuidad y Cambio de un Proceso de Modernización." Serie Gestión Escolar 2/94. Santiago, Chile: CIDE.
- Espínola, Viola H. 1995. "El Impacto de la Descentralización Sobre la Educación Gratuita en Chile." Serie Gestión Escolar 1/95. Santiago, Chile: CIDE.
- Espinoza, Oscar and Luis Eduardo González. 1993. "Planificación de la Educación en Países de América Latina en Proceso de Descentralización." Iván Nuñez, Coordinator. IPE. Unpublished Document.
- Friedman, Milton. 1962. "The Role of Government in Education." Capitalism and Freedom. Chicago: University of Chicago Press.
- Gauri, Varun. 1994. "Hay diferencias entre padres de alumnos en colegios Municipales y Particulares." Serie Investigación I-81. Santiago, Chile: ILADES/Georgetown University.
- Infante Barros, Maria Teresa. 1992. "La Reforma Educacional en Chile: Descentralización, Privatización y Expansión de Opciones a Nivel Individual." Paper presented at the CATO Conference in Mexico, D.F.



- Kenyon, Timothy. 1994. "Conservative Education Policy: Its Ideological Contradictions." Government and Opposition (Spring 1994), pp. 198-220.
- Larrañaga, Osvaldo J. 1994. "Descentralización en Educación y Salud en Chile." Programa de Economía Ilades-Georgetown.
- Larroulet, Cristián V, ed. 1993. Private Solutions to Public Problems: The Chilean Experience. Santiago, Chile: Instituto Libertad y Desarrollo.
- Lehmann, Carla. 1994. "El Sentido de Pertenencia Como Catalizador de una Educación de Calidad." Serie Documentos de Trabajo, N. 222. Santiago, Chile: Centro de Estudios Públicos.
- Ministerio de Educación, División de Planificación y Presupuesto. 1990. "Análisis de Remuneraciones del Personal del Sector Subvencionado."
- Raczynski, Dagmar, Claudia Serrano, and Edgardo Bousquet. 1990. "Escuelas y educación básica. La mirada de padres y apoderados en Peñalolén." Apuntes Cieplan 95. Santiago, Chile: CIEPLAN.
- Solari, Aldo E. "La Desigualdad Educativa: Problemas y Políticas." Serie Políticas Sociales 4. Santiago, Chile: CEPAL.
- Wells, Amy Stuart. 1993. "Title." In Edith Rasell and Richard Rothstein, eds., School Choice: Examining the Evidence. Washington, D.C.: Economic Policy Institute.
- White, Patricia. 1988. "The New Right and Parental Choice." Journal of Philosophy of Education 22, 2:195-199.
- World Bank, World Development Report 1991.