

# An Assessment of the Chilean National Voucher Plan

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*In 1980, the Chilean authorities adopted a series of reforms that were based on “the theory of Milton Friedman,” to radically overhaul the state's education system. The government decentralized the school system and introduced a nation-wide voucher-financing scheme, which remains largely intact today. Advocates of this approach argue that private schools are more effective and efficient than their publicly administered counterparts and that a system based on choice and competition will create incentives for all schools to improve the quality of education provided. This paper analyzes these claims and finds that in the case of Chile, the evidence on the relative efficiency of private voucher schools is inconclusive due to differences between the private and municipal labor markets. The effectiveness of these schools appears to be linked to their students' socioeconomic background, which forms the basis of competition among private voucher schools. In this paper, reforms are proposed that complement the government's program of targeted funding to reduce stratification in the education system. While the success of a national voucher plan ultimately depends on policy design and institutional capacity, other countries considering such reforms should be cautious given the sorting that accompanied its adoption in Chile.*

## Introduction

In 1980, the government of General Augusto Pinochet initiated a radical reform of the Chilean education system by decentralizing the school system and introducing a voucher financing scheme. At the time of the reforms, the Chilean school system was administered by the Ministry of Education, which had achieved significant strides in expanding coverage with universal coverage in primary education being almost attained by the mid-1960s (Delannoy, 2000). Shortly after coming to power in 1973, the military regime instituted a series of market-based reforms, including tax reform and trade liberalization to improve economic efficiency (Lustig, 1995; Raczynski & Romaguera, 1995). By the early 1980s, the regime sought to decrease the size of the state by privatizing many of its activities, including the provision of social services. With regard to education reform, decentralization and the introduction of for-profit and non-profit voucher schools was rooted in the “theory of Milton Friedman,” who argued that a demand-side approach, based on free-choice and competition, would improve the efficiency and efficacy of the education system while also increasing consumer welfare (McEwan & Carnoy, 2000; Friedman, 1955).

The basic restructuring undertaken by the military regime in the 1980s remains largely intact today, even though the democratic government has introduced additional reforms since coming to power in 1990. The almost twenty-five year experience of the Chilean voucher system therefore provides important lessons for countries considering a market-based approach to education. While the government has taken measures to reduce the persistent inequality in the Chilean education system, the proliferation of private-voucher schools has still resulted in sorting. Sorting should therefore serve as a deterrent to other governments that hope to adopt

the voucher approach to financing, particularly if income inequality is an issue. This paper will argue that decentralization and privatization, by themselves are not a panacea to school improvement.

This paper will assess whether the experience in Chile has produced outcomes that match those predicted by the advocates of the national voucher plan. The evaluation will be confined to the impact on the effectiveness, equity, and efficiency of private voucher schools. To fully understand the nature of the reforms and their impact, the paper will begin with an overview of the theoretical arguments in support and against a national voucher-financing plan for education. This is followed by a description of the reforms implemented under the military regime in the early 1980s and those instituted under the democratic government that returned to power in 1990. An evaluation of these reforms in terms of their effectiveness, efficiency, and equity is then presented. The final section of the paper outlines recommendations to improve the equity of the system and concludes with a discussion of this policy's implication for other governments considering a market-based approach to education.

## Theoretical Arguments

In response to the severe economic crisis of the late 1970s, the military regime implemented a series of market-based reforms that sought to minimize the size of the government. Many state-owned companies were sold to private firms and the provision of social services, such as social security and education, were also radically transformed in the early 1980s to advance the role of the private sector in providing these services. The “theory of Milton Friedman” formed the basis of the education policy adopted by the military regime. The underlying principle argues that government

should finance education based on the positive externalities associated with an educated citizenry, but that this does not imply that the government should also be responsible for the provision of education (Friedman, 1955). With respect to financing, it is in the government's best interest to prioritize funding for the basic level of education, as the social gains are greatest at these levels (Friedman, 1955).

Supporters of expanding private schools posit that these schools would be able to deliver the same results as public schools at a lower cost, since these private entities are profit-seeking actors (Friedman as cited in Carnoy & McEwan, 2003). In addition, Chubb and Moe argue that private schools are more effective, meaning that they are able to deliver better results than public schools while holding costs equal (cited in Carnoy & McEwan, 2003). Arnove (1997), in "Neoliberal Education Policies in Latin America" summarizes five broad arguments used in support of neoliberal education policies. According to Arnove (1997), these education policies will:

- Lead to a more "democratic, efficient, and accountable" system
- Be more responsive to the needs of the communities in which they are operating
- Increase effectiveness of reform and empower teachers
- Increase funds flowing into the education system
- Increase cost efficiency by the reallocation of scarce resources towards primary education, rather than secondary and tertiary education

Critics of this approach tend to emphasize the impacts of sorting, which arises because students from relatively higher socioeconomic backgrounds leave the public school system for private subsidized schools. This sorting can be problematic if the students who move are high performers. Students' performance and classroom experience is enhanced by the quality of their peers and this movement will therefore lead to greater inequality in the education system. Critics also cite the lack of evidence supporting the aforementioned five arguments.

## 1980-1990: Implementation of Neoliberal Education Policies

### *Decentralization*

In 1980, the military regime transferred certain administrative functions to the roughly 300 Chilean municipalities. The Ministry of Education retained its "regulatory, quality assurance, and curriculum-setting" functions while the municipalities oversaw teachers' contractual negotiations and infrastructure improvement plans (Delannoy, 2000, p. 8). Prior to

these reforms, the Ministry of Education was responsible for the hiring and firing of teachers as well as negotiating contracts with the teachers' union. The transfer of these responsibilities to the municipalities required the deregulation of the labor market. Given the authoritarian nature of the regime, Pinochet was able to easily dismantle the union in order to remove rigidities in the labor market. Teachers who accepted a severance package lost their civil servant status and had the option to seek employment with either the municipalities or private schools (Delannoy 2000).

The transfer of public schools to municipalities was quite rapid and by 1982, roughly two years after the reform began, nearly 85 percent of public schools had been transferred (Taylor, 2003). Municipalities formed either a private corporation or established a municipal education department (DAEM) responsible for administration. The main difference between the two is that the former would be managed by a private entity, while the latter would be controlled directly by the municipality. Most municipalities established DAEMs in lieu of private corporations because they were less costly and easier to implement (Taylor, 2003).

### *Privatization*

Additional policies that sought to introduce competition and choice into the labor market accompanied decentralization of the school system. To foster the creation of a competitive market, the military regime introduced a voucher-financing scheme. Under this system, the Ministry of Education established a monthly per student rate, whereby parents had the option of enrolling their children in either public or private-voucher schools.<sup>1</sup> The amount of the voucher was equal for both municipal and private voucher schools with similar characteristics and was based on monthly enrollment, thereby introducing an incentive for schools to expand their class size (McEwan & Carnoy, 2000). The Ministry of Education considered the school's educational level, the types of programs offered, and distance from urban centers when determining the voucher rate of a particular school (Hsieh & Urquiola, 2003). The voucher payment was tied to the rate of inflation at its inception but the economic crisis of the early 1980s caused the government to de-index the voucher leading to a real decline of 25 percent between 1982 and 1990 (Delannoy, 2000).

Many private-voucher schools were formed in response to the new funding mechanism. These schools expanded their coverage drastically with enrollment in private voucher schools increasing from approximately 15 percent in 1981 to nearly 34 percent in 1996 (Carnoy & McEwan, 2003). These students mostly came from public schools as municipal schools' market share decreased from approximately 80 to 60 percent, while those in tuition-charging schools

remained relatively stable over the same period (Carnoy & McEwan, 2003). A voucher approach to education is based on the assumption that parents are rational actors who will select the best school available to their children. An assessment system must therefore be in place for parents to be able to make this determination.

The government introduced the Programa de Evaluación del Rendimiento Escolar (PER) in 1982. The PER tested all fourth and eight graders in mathematics and Spanish but was abandoned after two years due to cost concerns and the inability of the government to assign managing responsibility (Delannoy, 2000). In 1988, the government instituted a new testing system, Sistema de Evaluación de la Calidad de Educación (SIMCE), which was based on the same ages and subjects of the PER. The provision of this test continues to this day and provides ample data to assess the effectiveness of the Chilean education system. It is important to note however, that while these tests were instituted to provide transparency for parents in their school search, the results of these tests were not made public until 1995. “For many years, teachers blocked the publication of school results, depriving the authorities of a key instrument of market policy” (Delannoy, 2000, p. 9). The absence of school performance indicators meant that parents had to find other qualitative indicators, such as the composition of the student body or school facilities, when evaluating which school to enroll their child.

### The 1990s: A Redistribution of Resources

After the return to democracy, the newly formed coalition government maintained the structure of the education system implemented under the military regime. The new government however recognized the deficiencies of the education system and sought to “play a more active role in promoting the education needs of the poor and supporting local autonomy” (Gauri, 1998, p. 25). Most importantly, the government made education a priority and sought to increase education spending to pre-1982 levels. The average per student subsidy increased throughout the 1990s and by 1997, its value was almost 50 percent larger than it was in 1982 (Table 1). By 2002, public spending on education as a percentage of GDP increased to 4.22 percent, from a low of 2.54 percent in 1991 (WDI Online). This rate is roughly comparable to other countries in the region such as Argentina and Brazil, although Chile remains far behind countries such as Mexico and Colombia (Table 2).

While total education spending increased dramatically throughout this period, it was also reallocated to address the inequities that pervaded the system throughout the previous decade. Private voucher schools proliferated throughout the 1980s but they tended to be established in the more relatively

wealthy urban centers. “In 1996, 81 of the Chile’s 334 municipalities, mostly isolated and rural, did not have a single privately run school, although these municipalities account for a small percentage of overall enrollments” (McEwan & Carnoy, 2000, p. 213). The government sought to address this imbalance by targeting funding to different schools with the assistance of the World Bank. Rural schools received additional funding under the MECE-Rural program instituted in 1992 and the P-900 program targeted the worst performing schools (mostly municipal) by providing materials and technical support (Cox & Lemaitre, 1999). Additional resources were also allocated to primary and secondary schools under the MECE Basica and MECE Media programs.

Table 1  
*Spending per student by the Ministry of Education in Chile.*

Year	In 2001 USD	
	Primary	Secondary
1990	231.8	213.8
1991	244.8	216.5
1992	270.1	270.7
1993	302.8	296.3
1994	325.5	324.5
1995	371.0	396.3
1996	402.3	441.1
1997	443.4	494.3
1998	480.5	546.0
1999	518.7	550.0
2000	539.5	609.6
2001	582.8	623.5
% growth in per student spending	151.4	191.7

*Note. Data are from Cox (2004).*

In 1993, the government also permitted schools to charge a user fee to parents. If a fee is charged, then the per-student monthly voucher is reduced after the fee surpasses a benchmark approved by the government. While this policy attracted private funding for education, the law was amended in 1997 as part of the Full School Day Reform to counter some of its negative effects on lower-income students (Cox & Lemaitre, 1999). The measure introduced in 1997 required private voucher schools charging a fee to direct some of their proceeds to a scholarship fund.

The democratic government also established regulations regarding the conditions of employment, wages, training, and tenure shortly after coming into power in 1991 (Cox & Lemaitre, 1999). The statute implemented in 1991, reversed some of the labor market deregulation implemented under the military regime, making it virtually impossible to fire teachers in municipal schools. However, this tenure provision did not apply to private school teachers. This proved

problematic because municipalities could not adjust the number of teachers employed based on enrollment. In 1995, the government sought to address this shortcoming by allowing municipalities to adjust the size of their teaching force based on enrollment.

Table 2  
*Total public spending on education as percent of GDP for select Latin American countries.*

Country	1991	1998	1999	2000	2001	2002	2003
Argentina	3.28	4.04	4.52	4.60	4.83	4.02	3.54
Brazil	..	5.22	4.30	4.30	4.22	4.15	..
<b>Chile</b>	<b>2.54</b>	<b>3.73</b>	<b>3.84</b>	<b>3.92</b>	<b>..</b>	<b>4.22</b>	<b>4.14</b>
Colombia	2.40	3.93	4.44	4.19	4.44	5.12	5.12
Mexico	3.85	4.21	4.41	4.86	5.16	5.30	5.79
Peru	2.76	3.21	3.36	..	2.94	2.99	..
Uruguay	2.53	2.55	2.78	2.75	3.15	2.57	2.23

Note. Data are from the World Bank WDI.

### Outcomes

The Chilean authorities maintained a system to measure school performance among other key indicators, such as socioeconomic status, which has allowed researchers to assess the impact of the market-based program and whether the plan achieved the objectives that its proponents sought. Specifically, did the introduction of choice and competition in the education system lead to greater effectiveness, equity, and efficiency?

#### *Effectiveness and Equity*

A private voucher school is considered to be more effective than its municipal counterpart if it is able to achieve higher results holding resources constant. Many factors shape students' achievement in school, including a student's socioeconomic background and that of their peers. Delannoy (2000) citing Espinola notes that sorting did appear to occur as students in private voucher schools are from higher income families than those in municipal schools. Seventy percent of students in municipal schools are from the two lowest income quintiles compared to 45 percent in private voucher schools. In absolute terms, private schools (both voucher and full tuition) have been able to produce higher fourth grade SIMCE test score than their public counterparts (Table 3). However, these results do not hold once socioeconomic status is taken into consideration. Carnoy and McEwan (2003) analyzed SIMCE results of fourth graders in mathematics and spanish between 1990 and 1996 to assess the effectiveness of public and private schools. They concluded that on average, adjusting for differences in socioeconomic status, private non-religious voucher schools are "marginally less effective than public schools in producing spanish and mathematics achievement in the fourth grade (or at least similarly effective)" (Carnoy & Martin, 2003, p. 227). Their results indicate that the higher test scores of students at private voucher schools is not a result of

these schools ability to produce better results. Hsieh and Uriquiola (2003) also reached a similar conclusion after expanding their data set to include additional benchmarks such as repetition rates and years of schooling.

Table 3  
*Average learning outcomes for students in grade four, 1990-1996.*

Type of School	1990	1992	1994	1996
Municipal	56.7	63.85	64.43	68
Private-subsidized	58.8	70.15	70.66	73.65
Fully paid private	80.05	86.05	85.07	85.85

Note. Data are from Delannoy (2000).

Teacher qualifications and time spent in the classroom should have had an impact on student learning outcomes. Carnoy and McEwan (2003) compared certain teacher characteristics of the municipal and private voucher schools using data from the 1996 teacher census, which was compiled by the Ministry of Education. Their analysis reveals that teachers in the municipals schools are relatively older and that a higher percentage is college graduates (Table 4). In addition, teacher contract hours per class are higher in municipal schools as well. While it is difficult to quantify the impact of teachers on learning outcomes, the data compiled by Carnoy and McEwan (2003) demonstrate that private-voucher schools do not appear to employ a more experienced and educated teaching staff than their public counterparts.

Table 4  
*The characteristics of primary school teachers.*

Teachers	Public DAEM	Non-religious voucher	Private non-voucher
Average Age	46.1	39.7	39.1
College graduate (%)	97.8	91.9	96.9
Teacher contract hours per class	38.1	34	45.1

Note. Data are from Carnoy and McEwan (2003).

Proponents of a voucher system argue that increased competition will cause schools to improve the quality of the education provided in order to attract students and thereby increase class size. Sorting occurred in Chile<sup>2</sup> and this had an impact on the results achieved in both types of schools. However, the effect of competition on the performance of schools may still be evaluated. Generally, competition did not provide an incentive for public schools to improve their performance—few actually closed (Hsieh & Uriquiola, 2003). Carnoy and McEwan (2003) found similar results, as they were unable to conclude whether competition positively influenced the performance of municipal schools. Test scores, however, indicate that the gap between private non-voucher and municipal

schools decreased from 1990 to 1996 (Table 3). The figures demonstrate that an increase in financing combined with targeted resource allocation to the worst performing municipalities had a positive effect (Delannoy 2000).

Competition did not drive private-voucher schools to improve their service delivery. While parents of relatively higher socioeconomic backgrounds are more likely to have the resources and the commitment to seek the best education available to their children, private-voucher schools exacerbate this trend. Rather than implementing reforms to improve productivity such as increasing teacher training, these schools instituted less costly selective admissions practices to improve results, such as accepting students who were from more privileged backgrounds (Hsieh & Uriquiola 2003; Gauri, 1998). In Chile, many private schools may employ admissions testing or parental interviews to determine the suitability of an applicant to their program; private schools are therefore able to select and mold their student body to produce the highest test results. A survey from 726 households in Santiago revealed that 28 percent of students enrolled in private voucher schools took an admissions test at their current school “a surprising result given that tests are traditionally unacceptable, strongly discouraged by the ministry, and largely clandestine, a result indicating that schools are competing by attracting better students” (Gauri, 1998, p. 102).

### *Efficiency*

To evaluate the impact of the voucher system on efficiency requires an examination of the resources available to both municipal and private-voucher schools. According to Milton Friedman’s thesis, private schools would be more efficient than their public counterparts; they would be able to deliver the same results as public schools with lower costs. It is extremely hard to measure the efficiency of these two types of schools because differences in cost factors existed throughout the period of analysis. For example, the wages and contractual terms of teachers’ employment in public schools were more stringently regulated than those in private voucher schools, beginning with the introduction of First Teachers’ Statue in 1991 (Cox & Lemaitre, 1999). In addition, municipal schools do not enjoy the same liberty as their private counterparts in allocating resources for infrastructure improvement projects (McEwan & Carnoy, 2000). McEwan and Carnoy (2000) have found that private voucher schools cost 13-17 percent less than their public counterparts, holding achievement and SES equal; however, they find that most of the differences between the two types of schools are explained by the differences listed above. After assessing the impact of Chile’s education reform, Delannoy (2000) concludes that the results are “mixed” due to the inherent difficulty in quantifying some of the

structural differences between the two types of schools and suggests that further research is needed.

### **Recommendations**

Since 1980, the Chilean education system has undergone two distinct eras of reform. The first, from 1980 until the end of the authoritarian regime, was characterized by decentralization and privatization with limited government intervention. By the end of this era, real voucher payments had decreased dramatically and great variation existed between the schools of various regions. The reforms instituted in the 1990s sought to redress some of the deficiencies of the purely market-based education system; education spending increased drastically and many funding schemes were introduced to target scarce resources to schools in the most need.

While targeted funding did increase learning achievement in some of the worst performing and rural schools, inequality still persists within the education system. As noted above, private voucher schools do perform better than their municipal counterparts. However “there is large empirical literature suggesting that good peer group characteristics, such as mean SES of a school, are associated with higher achievement, all else equal” (Somers, McEwan & Willms, 2004, p. 54). In order to achieve the highest test scores, which will increase demand, some private voucher schools have undertaken selective practices to admit students who will be able to improve the school’s performance. This is a less costly approach than initiating innovative teaching methods to improve test scores. These more capable students in turn, opt out of the municipal school system, thereby leaving municipal schools with lower performing students. This sorting has negative implications for equality as lower performing students benefit from higher-achieving peers in the classroom.

In order to remedy this effect and to improve equality, the Chilean education ministry should adopt regulations that prohibit the use of selective admission practices (Hsieh & Uriquiola, 2003). More importantly, these regulations should be stringently monitored and schools should be penalized if found not to be in compliance. A less radical approach would be to restrict these practices unless the school faces excess demand. While the best performing schools would still be able to “cream skim”<sup>3</sup>, this would limit the ability of all other schools to do the same. Another option, which was adopted in Milwaukee, Wisconsin, is to enforce random selection of applicants when excess demand for private voucher school exists; however, this would only partially ameliorate the problem because of differences in the availability of the voucher<sup>4</sup> (Gauri 1998). While the application of random selection would inhibit the ability of schools to cream skim, it still does not address the issue of inequality on the demand side.

Vouchers are available to all students in Chile and those from relatively higher socioeconomic background are more likely to apply to these schools. This approach would most likely be more successful in Wisconsin as this voucher system is only available to low-income students.

While Chile has instituted targeted funding to lower performing and poorer schools, the voucher should be recalibrated to induce private voucher schools to admit poorer students (Gauri & Vadwa, 2004). Voucher payments in Chile today are correlated with the school's characteristics rather than the individual student's circumstances. This approach was adopted in Holland (the only other country to implement a nation-wide voucher system), whereby the government pays a higher voucher payment for minority (1.9 times the normal), and economically disadvantaged (1.25 times the normal) students (Gauri & Vadwa, 2004). This approach would create incentives for the private voucher schools to admit students who might not fit the image of their ideal applicant. The increase in administrative costs that would inevitably follow, however, may limit the ability of the Ministry of Education to adopt this method of voucher determination. Moreover, given that relatively wealthier families benefit under the current system, they would most likely oppose any reform that sought to recalibrate the voucher. Given that wealth is correlated with political power, these groups would also be likely to successfully impede any such reform.

## Conclusion

While decentralization and privatization were implemented in Chile under an authoritarian regime, this does not preclude one from drawing important lessons regarding education reform in other countries, be they developed, developing or in transition. Countries may not be able to implement all the elements of these reforms—for example, the initial abolishment of the teachers' union—with the ease of Chile (Carnoy & McEwan, 2003). However, many democracies have been able to implement some type of voucher system, such as New Zealand, Columbia, and the Czech Republic (Gauri, 1998; Carnoy & McEwan, 2003).

What is clear from the evidence above is that a voucher system, based purely on decentralization and privatization will not by itself lead to a general improvement in education as measured by standardized test scores (Delannoy, 2000; Guarú, 1998). As Gauri (1998) notes, “the Chilean reforms of the 1980s were not practicable, did not turn education upside down, and did not dramatically improve school performance” (103). Choice, which is promoted by the introduction of private voucher schools, is limited because voucher schools themselves select their location and employ selective admissions practices. The

evidence in Chile collected to date in support of the positive impact of competition and efficiency, is inconclusive and, as studies have confirmed, private voucher schools are no more effective than municipal schools once socioeconomic status is taken into account.

It is extremely difficult to assess whether or not Chile's system could be adopted elsewhere with greater success. Success is inherently dependent on “specific alterations of institutional structures within specific constraints on organization, money, and information” (Gauri (citing Elmore 1990), 1998, p. 104). The governance of a country considering this approach to education should be taken into consideration. Chile is also a country that enjoys a relatively low level of corruption relative to some of its neighbors. Chile ranks number 21 on the Transparency International's 2005 Corruption Perception Index as compared to 55 for Columbia and 65 for Peru for example. Countries with higher levels of corruption may experience additional costs associated with privatization than Chile<sup>5</sup>.

While no system of education is entirely equitable, “the element of choice and quality within the education system remains significantly reliant on income” (Taylor, 2003, p. 36). Given the linkage between one's education and job opportunities, overcoming this is a great challenge for the authorities, especially given the inequity that permeates Chilean society. As the Chilean government continues to institute policies that address the stratification that has accompanied educational privatization, administrators in other countries who are considering this policy, particularly in countries characterized by severe income inequality, should proceed with caution.

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## Endnotes

- <sup>1</sup> Private-voucher schools are schools that accept the voucher payment whereas private schools charge tuition and are financed exclusively by parents. Private voucher schools may be religious or for-profit institutions.
- <sup>2</sup> Students sorted according to their socioeconomic background. Relatively more well off students were more likely to enroll in private voucher schools than their less well-off peers.
- <sup>3</sup> Cream skimming results when the highest-performing students opt out of public schools to enroll in private voucher schools.
- <sup>4</sup> Chile's plan is national in scope while the voucher in Milwaukee is only available to low-income students
- <sup>5</sup> Columbia instituted a private voucher system for secondary education that was based on a lottery. This program, which began in 1992, ended in 1997. Corruption is not believed to have played a role in the authorities' decision to terminate to program.