

# **Public-Private Partnerships: Contracting Education in Latin America**

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*Abstract:* While there are different types of PPPs, or contracting arrangements, in education, few have been subject to rigorous evaluation. In the case of Latin America, the only innovative PPP experience with a randomized experiment is the case of secondary school vouchers in Colombia. Still, the review of experiences is instructive. In Latin America, the private sector has been shown to run schools efficiently and educate disadvantaged youth. The evidence is especially strong for Colombia's targeted vouchers and privately managed public schools. While some countries in Latin America have a long history of contracts between government and the private sector, there is a real scarcity of rigorous evidence of impact.

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## **Introduction**

Contracting is used to deliver public services of many kinds in most countries. Public-private partnerships in education are often proposed in order to correct for inefficiencies in the public delivery of education services. Proponents claim cost-effectiveness, equity, performance and cost savings, among other potential benefits. To date, the record on impact is relatively scarce. Worldwide attention to the issue is increasing and we are getting more results. While ideology continues to play a role in the various debates, the issue is becoming clearer given the recent increase in impact evaluation studies. While the evidence base is small, it is nevertheless growing.

While the knowledge base related to contracting for public services is extensive, it is often a significant political and technical challenge to initiate contracting for services that have been traditionally publicly provided. The multitude of “how-to” manuals, and substantial consulting industry that specialize in this activity indicates that most governments continue to find it hard work to effectively manage the process of contracting for public services.

While there is much experience with contracting for social services such as health care, child care and administration of welfare programs, contracting for education services is less common. In education, private provision of publicly funded services is more often arranged through vouchers, a type of contracting, or subsidies – in which case, accountability of the schools is pursued through some combination of parental choice, regulation, and criteria for eligibility to participate in the voucher or subsidy program. Nevertheless, contracts for education, just like other social services, can be powerful instruments for ensuring accountability in service provision.

This paper selectively reviews the Latin American experience with contracting with private actors in the education sector with a focus on initiatives that have been rigorously evaluated. It first outlines the main types of contracting relationships, drawing on international experience to provide examples of how contracts work. It then uses that framework to discuss the principle examples of education contracting in Latin America

and provide evidence of how the use of contracting is linked to education outcomes and performance when possible, though there is little or no evaluated experience for many types of education contracting in Latin America – or elsewhere.

Most of the literature is descriptive, or assesses success in terms of implementation and achievement of goals. No studies identified compare contracting to other instruments in terms of relative cost-effectiveness. The reader should keep in mind that a number of well-performing education systems rely extensively on publicly-funded private provision via subsidies or vouchers (for example, the Netherlands, Belgium, Chile). Hence it is not the public funding/private provision model that is under examination – but rather the *specific instrument of contracting* compared to other mechanisms to ensure accountability in provision of education and the attainment of public goals. In this paper, contracting refers to the process whereby a government procures education or education-related services, of a defined quantity and quality, at an agreed price, from a specific provider for a specified period (LaRocque 2006; World Bank 2006).

### **Type of Contracts in Education**

Various forms of contracting are used in education – depending on which services are procured or bought from the private sector (Table 1). In some cases, governments are procuring *inputs* which are services involved in the production of education services, such as management or curriculum design services, or the use of a school facility. In other cases, governments contract an organization to run a public school, undertaking the whole range of activities involved in this *process*. In still other cases, governments contract with a private organization to provide education to a specific student (paying for enrollment), in which case the government is buying an *output*. The challenges and potential benefits of contracting for services that are inputs, processes or outputs are very different. Hence, the discussion below separates the discussions according to the type of contracted service.

What government contracts for	Definition	Contract types
Management, professional services (input)	Government buys school management services or auxiliary and professional services	Management contracts Professional services contract (curriculum design)
Operational services (process)	Government buys school operation services	Operational contracts
Education services (output)	Government buys student places in private schools (contracts with school to enroll specific students)	Contract for education of specific students
Facility availability (input)	Government buys facility availability	Provision of infrastructure services contracts
Facility availability and education services (input and output bundle)	Government buys facility availability combined with services (operational or outputs)	Provision of infrastructure contracts with education services contracts

Source: World Bank 2006

Management, professional and support services. This section presents the experience with contracting for management services and other professional and support services, including support functions (for example, school meals; curriculum design).

In many education systems, weak management is a critical constraint to improving public school performance. To address this, some governments have brought in private organizations to manage public schools. *Management contracts* may entail managing a single school or an entire district. Management responsibilities usually fall into the following categories: financial management, staff management, long term planning and leadership. Non-managerial staff remain public employees. Examples of private management of public schools include charter schools in the United States (Box 1) and Fe y Alegría schools in Latin America.

Evaluated experiences with management contracts in schools is fairly limited and the results are mixed. Several studies of school management contracts in the United States found no conclusive evidence of impacts on school infrastructure and climate, intermediate school outcomes such as attendance and suspension rates, parental

involvement or satisfaction, or learning outcomes (United States General Accounting Office 1996; 2002; 2003). Hoxby and Rockoff (2004) found that students who attended an average of two years in an elementary level charter school in Chicago scored higher on both math and reading tests.

More rigorous studies of management contracting experiences in other social services (for example, hospitals and clinics) have found that management contracts are effective in improving aspects of management, and in particular financial management (Loevinsohn and Harding 2004). Nevertheless, it is clear that the efficiency and quality gains are limited by the constraints facing managers who oversee staff that remain in public employment.

*Box 1: Privately Managed Public Schools in the United States*

There are two forms of private management of public schools in the United States. The first is *direct contracting*, whereby school oversight boards contract directly with an education management organization (EMO) to manage a public school. In the United States, there is a distinct local government body, called a “school board”, which is legally and administratively responsible for oversight of the public schools for their district. The second, *indirect contracting*, involves EMOs managing charter schools under contract to the organization that holds the school charter. Charter organizations themselves are already operating under a contract with the school authorities – this form of contracting will be discussed in the next section. The schools remain publicly-owned and funded (hence, students do not pay fees). Under this model, the private sector operator is paid a fixed management fee or a fixed amount per student. In either case, the contractor is held responsible for various aspects of school performance and payments are linked to performance.

Typically, private sector operators are brought in to operate the worst performing schools in a given school district. The number of privately managed public schools in the United States has grown from 138 schools in 1998-99 to 463 schools, managed by 51 EMOs, in 2003-04. In 2003, approximately 80 percent of privately

managed schools were charter schools. In the United States, the organizations that undertake school management are almost all organized as for-profits. The most significant example of private management of public schools is in Philadelphia where 70 of the worst performing schools have been contracted to for-profit and not-for-profit management organizations.

Source: World Bank 2006

Contracting for *professional services* is less common. Public and private schools in 11 countries across the Middle East, Europe and North America have contracted with the Sabis Network, which was founded in 1886 in Lebanon, for curriculum design and implementation services. In 2003, there were about 25,000 students in Sabis network schools, which implement the Sabis Educational System, an internationally focused curriculum. Sabis schools operate a longer school day than most schools and put considerable emphasis on testing (World Bank 2006).

*Support services* such as non-instructional activities, including maintenance, pupil transportation and school meals are often very costly in public schools. In the few cases where good cost analysis has been done, it is frequently found that these services are significantly more costly in public compared to private schools. The proportion of staff not involved in instruction is often very high in public schools; in a number of countries, support staff in public schools are paid higher salaries relative to similar jobs in the private sector. Education policymakers in many countries have expanded contracting for support services as a way of improving cost effectiveness of these services, so as to free up resources and time devoted to education. Usually contracts are tendered for multiple schools – so that contract management expertise can be developed in a single place, and contracts are sufficiently large to attract many bidders. Contracting for support services is done in virtually all public education systems to different degrees. Food services for example are rarely run by public school authorities in OECD countries. Virtually all school-bus service in England and New Zealand is provided through contractors, as is 80 percent in Canada (World Bank 2006).

Operational services. In some countries, private actors are contracted for a broader range of responsibilities to, in essence, run a public school. In these operational contracts the private actors are both managing and staffing the public school. These initiatives are most often aimed at freeing schools from public service constraints or giving schools “autonomy”, and harnessing the interest and knowledge of motivated parents and other community members to improve the quality of school oversight. In many cases, the communities also contribute to the construction, upkeep or improvement of school facilities (either in-kind or financially). Contracting is sometimes initiated as a response to motivated community organizations or the presence of a non-profit education organization. Examples of operational services contracting include United States charter schools, City Academies in the United Kingdom (Box 2), and Fe y Alegría in Latin America. Operational services contracting is most often tried in areas or schools that are performing poorly or have the greatest financial need. In the United States, for example, it is used most often in “failing” schools. In Latin America, governments most often contract with Fe y Alegría to run rural schools for hard-to-reach populations. Both models rely heavily on parent and community participation as a complement to the accountability pursued via the contract.

*Box 2: City Academies in the United Kingdom*

In 2000 the United Kingdom government announced that it would implement a program similar to the United States charter schools, called City Academies, in order to raise educational standards. Under this program, the government has been implementing contracts with sponsoring organizations to take over the operation of under-performing schools. Sponsors come from the private or voluntary sectors and religious groups. They must commit to contribute 20 percent of capital costs up to a maximum of \$3 million (equivalent). The Government pays the remaining 80 percent. Each City Academy focuses on a particular area of the curriculum. They have significant freedom over management structures and have flexibility on length of the school day and the school year. The first 3 schools opened in September 2002 with 14 more opened by 2005. City Academies face challenges familiar to those of many Charter Schools - they are taking over poorly performing schools in socially

disadvantaged areas. A recent evaluation of the program shows that there is no significant short-term impact on learning outcomes, though it may be too early to assess the impact of the program because it covered only two years of operation.

Source: Machin and Wilson 2005

There is a good deal of research on the impact on contracting charter organizations to run schools in the United States. However, virtually all charter school initiatives also introduced school choice and it is thus impossible to disentangle the effects of the contract structure and process from the effect of the introduction of competition among schools for students. Taken together, the findings are inconclusive. A number of studies have found significant performance improvements, a number have found no impact, or have found that school performance actually deteriorates (LaRocque 2006). For example, Hoxby and Rockoff (2004) found that charter schools raise student performance in Chicago, while Bettinger (2004) found that charter schools do not have an impact on student performance in Michigan. Nevertheless, contracting for operational services appears to be a viable mechanism for improving schools which experience performance problems, and for ensuring service delivery to “hard-to-reach” populations.

Education services. Rather than engaging a private entity to operate a public school, some governments contract for enrollment of students in private schools; in essence, buying *outputs*. By enrolling students in existing schools governments can quickly expand access without the upfront expenditure for constructing and equipping new schools. Other governments contract for enrollment to access specialized services not available in the public sector, such as alternative education. Contracting for education services or enrollment ties funds to individual student enrollments. Unlike other forms of contracting, it allows targeting (or variation in levels of financial support) for specific students/ groups (for example, low-income, disadvantaged or “problem” students). Examples of this type of contracting have been used in New Zealand to provide adequate education to children who are not responding to the traditional methods and in the Philippines to support the enrollment of low-income students in private schools

in areas where there is a shortage of places in public high schools (Box 3). They also include voucher programs such as those in Spain, Colombia and Chile.

*Box 3: Education Contracting in the Philippines*

Since 1998 under the Educational Service Contracting (ESC) scheme, the Philippines government has used contracting to support the enrollment of low-income students in private high schools in localities where public schools are full. Eligible schools must be certified and charge relatively low fees. Family income for eligible students cannot exceed \$1,280. The per-student payment to private schools is set at \$71 and cannot exceed the unit cost of delivery in public high schools. Schools cannot charge the students any additional fees. The number of ESC-funded students grew from 4,300 in 158 schools in 1986 to 280,216 in 1,517 schools in 2003. In 2002, ESC contracts covered 22 percent of students in private high schools (equal to 13 percent of all private school enrollments). A recent assessment of the certification procedure in one region of the country showed that less than 10 percent of schools were below standard.

Source: FAPE 2004

This form of contracting also utilizes competitive pressures; either from parental selection of schools (Philippines, Spain) or by competitive tender (New Zealand). In the case of the Philippines, and New Zealand, external quality review is a requirement for eligibility. The accountability impact of contracting is complemented by the influence of already functioning school governance/ oversight arrangements (for example, school board; board of trustees; parents committees) (LaRocque 2006).

Programs are growing and few serious problems have been emerged. However, there have been no rigorous impact evaluations. The certification and accreditation programs generate sufficient information on quality to demonstrate that it is usually not lower than that of public schools, and may, in fact be better. If allowed, extra fees can reduce access for students from low-income families. This model requires that government ensure/ arrange both contracting and regulation (certification or

accreditation) and that there be existing capacity in appropriate private schools (for example, reasonable tuition; willing to enroll publicly-funded students; right locations).

Contracting for Facility Availability. Public-private partnerships are an increasingly common form of procurement for large infrastructure projects in the schooling sector. Table 2 outlines the range of activities under this type of contracting. The most common arrangement is one where the private sector finances, designs, constructs and operates a public school facility under a contract with the government for a given period. At the end of that concession period, ownership of the school facility is transferred to the government. Although arrangements can differ widely, infrastructure-focused PPPs have a number of characteristics in common: (i) the private consortium is selected via a competitive tender process, (ii) private sector partners invest in school infrastructure and provide related noncore services (for example, building maintenance), (iii) the government retains responsibility for delivering core services such as teaching, (iv) arrangements between the government and its private partner are governed by long-term contracts—usually 25 to 30 years and contracts specify the services the private contractor must deliver and the standards that must be met, (v) service contracts are often bundled, with the private sector taking on several functions such as design, building, maintenance, and employment of some noncore staff, and (vi) payments under the contract are contingent upon the private operator's delivering services to an agreed performance standard (World Bank 2006).

Type of partnership	Features
Traditional design and build	Government contracts with private partner to design and build a facility to specific requirements
Operations and maintenance	Government contracts with private partner to operate a publicly owned facility
Turnkey operation	Government provides financing; private partner designs, constructs, and operates facility for specified time period; public partner retains ownership of facility
Lease-purchase	Private partner leases facility to government for specified time period; ownership then vests with government
Lease or own-develop-operate	Private partner leases or buys facility from government; private partner develops and operates facility under contract to government for specified time period
Build-own-transfer	Private partner obtains exclusive franchise to finance, build, operate, maintain, manage, and collect user fees for fixed period to amortize investment; at end of franchise, title reverts to public authority
Build-own-operate	Government either transfers ownership and responsibility for existing facility or contracts with private partner to build, own, and operate new facility in perpetuity

Source: LaRocque 2006; World Bank 2006

In utilities and many other public service sectors, governments have sought to mobilize private investment in needed capital stock (school infrastructure). Contracting for provision of facilities is appealing because it relieves governments of having to frontload capital financing and all at once. The United Kingdom, Canada, Australia (Box 4), and other countries have implemented infrastructure PPPs, or as they are known in the United Kingdom, Private Finance Initiatives (PFIs), to expand private involvement in financing and providing infrastructure. In general, only for-profit entities are involved in PFIs because the nonprofit sector has very limited ability to fund large capital developments.

*Box 4: Private Finance Initiatives in the United Kingdom*

Private finance initiatives (PFIs) in the education sector have been extensively used in the United Kingdom where almost all new schools are built under these arrangements rather than traditional procurement methods. Findings from a qualitative

evaluation undertaken to evaluate the contracting out of services show that PFIs have saved the government money and have more efficiently delivered educational infrastructure.

Most PFIs in the United Kingdom fall under a structure known as the Design, Build, Finance and Operate (DBFP). A private sector company or consortium of companies provides educational facilities and facility administration during a specified contract period. The private sector provider is paid with public money conditional on meeting performance targets. As of 2003, 102 education PFI deals had been signed, totaling over \$3 billion.

Source: LaRocque 2006

Contracting for facility availability undoubtedly has benefits. Under these contracts, facilities can be delivered more quickly than under traditional procurement. Implementing such contracting requires detailed quantification of capital costs, and reasonably good capital planning processes. Building these capabilities within the public education sector often has positive effects throughout the sector – not just in the case of the facilities involved. Contracting for private actors to provide facilities usually requires capital works replacement over the life of the project – which prevents underinvestment in facility maintenance and upkeep.

However, efficiency gains (cost savings) from contracting for facility provision may be limited. This is due to the high cost of borrowing for social infrastructure and the limited range of cost savings associated with private design, construction, and operation versus traditional public procurement. For most social services, the more significant cost savings from private participation are to be found in operating the services. Capital costs, including maintenance, rarely exceed 15 percent of total service costs in education and health, for example (World Bank 2006).

Contracting for facility availability and education services. Another important form of contracting used in social services is contracting private actors to provide facilities and to operate them – that is, to undertake all the activities associated with

delivering the needed services. In other social sectors, particularly health care, a number of governments have implemented this type of contract. In essence, the governments implement simultaneously two forms of contract with the same operator – a contract for facility financing, development and availability, as well as a long-term contract to provide services. The rationale governments use most often for this form of contracting is to obtain needed capital investment, while at the same time providing powerful incentives to the operator to organize and deliver services as efficiently as possible. The efficiency gains that the private consortium can capture from both constructing and operating are more likely to offset the higher costs of borrowing they will face compared to the government. Australia, Germany, and Spain have all used this type of contracting to provide health services. The United Kingdom’s DBFP (design, build, finance and operate) mentioned above is an example of this type of contracting.

The benefits realized by contracting for facility availability combined with operation include the benefits noted above (for facility availability) as well as those associated with more efficient organization of service provision. Operating costs in both health and education services constitute 70-85 percent of total costs (LaRocque 2006). Hence, potential efficiency gains in the operation of services are significant.

### **Education Contracting in Latin America**

Different models of education contracting are used to varying degrees in Latin America (Table 3). For example, the private management of public schools and contracting for education services, such as vouchers, is quite common. On the other hand, contracting for facility availability is rare. Additionally, while many studies have analyzed the impacts of several programs, the evidence is largely inconclusive. The following section presents examples of each model and attempts to discuss evidence of impact whenever possible.

Model	Country	Program
Management contracts	Latin America and Spain	Fe y Alegría
Professional services contract (curriculum design)	Colombia	Bogotá's Concession Schools
Operational contracts	Venezuela	Venezuelan Association of Catholic Education
Contract for education of specific students	Colombia	PACES (vouchers for low income students)
	Chile	Universal vouchers
Provision of infrastructure services contracts	Mexico	Projects for the Provision of Services-University of San Luis Potosi
Provision of infrastructure contracts with education services contracts	N/A	N/A

### Private Management of Public Schools

*Fe y Alegría.* Fe y Alegría (FyA) is a nongovernmental organization that operates formal preschool, primary, secondary, and technical education programs in the poorest communities in Latin America, which are typically remote and underserved by public education systems. The program, which is run by the Jesuit Order of the Catholic Church, began in Venezuela in 1955 and has since spread to 14 other countries (including Spain). FyA's primary mission is to provide quality education to the poor, to ensure that students complete at least the basic cycle of schooling, and to establish schools that foster community development. Governments in a number of Latin American countries have entered into contracts with FyA to operate public schools, primarily in poor areas (World Bank 2006).

The typical arrangement is that government pays the salaries of teachers and the principal; foundations, international agencies, and voluntary fees from the local community pay for the land, construction, and maintenance of schools; the community invites FyA to open and build the school; and FyA trains and supervises teachers, manages the school, and helps the school operate as a community development center (World Bank 2006).

A national office coordinates the network of FyA schools in each country, while overall coordination is provided from headquarters in Venezuela. Most FyA schools are located in rural areas, but some are in or near urban slums. Schools generally enjoy broad autonomy, despite being publicly funded and regulated. They can usually appoint school directors and teachers without state or teacher union interference. Parents are expected to participate in their children's studies and to be actively engaged in school programs (World Bank 2006).

The central curriculum is supplemented with locally developed materials. FyA schools do not charge compulsory fees. In 2003, more than 1.2 million students were in the FyA network. More than 31,000 people worked for FyA in 2002, 97 percent of them lay persons and 3 percent members of a religious order.

Unit costs in FyA schools are higher than in public schools when the community contribution is factored in, but it has also been shown that, in descriptive comparisons, that:

- Schools in the FyA network were successful in reducing grade repetition and dropouts; FyA schools in most countries have lower repetition and definitive dropout rates than other public schools (Swope and Latorre 2000; see Table 4); and
- Progression and retention rates were 44 percent and 11 percent higher in FyA schools than in other public schools; the main indicator of school performance is schooling retention—largely because most countries where FyA operates do not have standardized tests (McMeekin 2003).

Country	Gross Repetition Rate (percent)		Gross Dropout Rate (percent)	
	Fe y Alegría	Other public schools	Fe y Alegría	Other public schools
Peru	25.4	32.5	9.9	25.7
Bolivia	20.4	72.9	9.0	26.8
Venezuela	22.0	40.2	16.2	38.7
Nicaragua	24.1	39.1	13.8	10.0
Ecuador	7.2	12.8	29.2	38.6
Guatemala	20.5	18.0	22.3	38.2
Colombia	21.3	19.2	10.5	8.0
El Salvador	29.0	20.2	39.7	40.4
Paraguay	27.4	33.9	8.4	5.0

Source: Swope and Latorre 2000

A recent study evaluates the effects on standardized test scores of graduating from the program in Venezuela (Allcot and Ortega 2006). Using OLS and propensity score matching, with a cross-section of individuals, an Average Treatment Effect on the order of 0.1 standard deviations, using a control group of public school students is estimated. The authors argue that the better performance of the Fe y Alegría system stems from their labor contract flexibility and decentralized administrative structure.

*Concession Schools in Bogotá, Colombia.* In 1999, the city of Bogota implemented the Concession Schools program in order to expand access to and improve the quality of education. To remedy the situation, the government chose to contract private schools to deliver education to poor children. The government awards contracts to private entities to manage public schools. Similar models are used in Medellín, Cali, Cartagena, Valle del Cauca, and Cundinamarca. The initial contract period has been set for 15 years and is run in 25 schools. The program covers over 25,000 students, about 3 percent of total public enrollment in the city. The schools are located in the poorest areas of the city and also in areas where there was a severe lack of primary and secondary schools. Students can apply to the concession schools in their neighborhoods and the District Secretary of Education uses means-testing to allocate students to the schools (World Bank 2006).

The conditions agreed upon under this type of contracting include: (i) autonomy in the management of the school, (ii) State ownership of infrastructure, (iii) value of contract estimated on the basis of approximate per-student cost and number of students served, (iv) specification of available education levels (preschool, primary, lower and upper secondary levels), and (v) there is no labor contract between the State and the teaching and administrative staff executing the contract. In addition, the contract should specify the quality of service to be provided and the continuous enrollment of a stipulated number of students (World Bank 2006).

There are few studies of the program, though there is some evidence that the program has positive impacts on schooling outcomes. The only impact evaluation undertaken to date found that concession schools exhibit lower dropout rates than similar non-concession schools- about 1.7 percentage points lower (Barrera 2005). In addition, concession schools may generate positive externalities: public schools located near concession schools have a 0.0008 percentage point lower dropout rate than other public schools, most likely due to competition between concession schools and their neighboring public schools. And there is evidence of a positive but small impact on test scores: math scores in concession schools improved by 2.4 percent and are about one percentage point higher than non-concession schools, while reading scores improved by 4 percent and are about 2 percentage points higher than non-concession schools.

*AVEC in Venezuela.* The Venezuelan Association of Catholic Education (AVEC) runs over 700 Catholic schools, most of which deliver education to poor children. In 1990, the Ministry of Education, Culture, and Sport (MECD) struck an agreement with AVEC to provide subsidies to private schools located in low-income urban and rural areas, indigenous communities, vocational schools, and those schools that were only able to cover up to 85 percent of operational costs. *Fe y Alegria* schools form a large body of AVEC schools. In 2005, government subsidies to AVEC schools amounted to almost \$49 million, covering 483,000 students.

The agreement between MECD and AVEC holds AVEC schools to higher degree of accountability for performance than public schools (Mora 2005). Whereas there are no conditions imposed on public schools, AVEC schools must provide financial statements to MECD regarding the use of funds and present an annual management report. Supervision is also a large part of the AVEC model: supervisors visit the schools twice a year to assess the academic and operational situation. This information is then compiled for future analysis.

There is very little rigorous empirical evidence of the impacts of AVEC schools on education outcomes vis-à-vis regular public schools. A comparison of publicly subsidized AVEC schools and public schools shows that AVEC has a strong association with better schooling outcomes (Mora 2005). Repetition rates and dropout rates are lower in AVEC schools than they are in public schools and AVEC schools have a higher percentage of teachers with higher education diplomas. In addition, AVEC schools have lower per student costs but a higher percentage of their budgets go to non-personnel costs.

#### Private Delivery of Education Services

*PACES in Colombia.* The Program for Expansion of Secondary Education Coverage (*Programa de Ampliación de Cobertura en Educación Secundaria*, PACES), was launched in 1991 in order to provide access to secondary education for the poorest third of the population in Colombia, by using vouchers to pay for attendance in private schools. Municipal governments provided 20 percent of the funding for PACES, while the federal government covered the remaining 80 percent. The program, which ran until 1997, covered 125,000 children in 216 municipalities. The vouchers were renewable through the end of high school as long as the child continued to progress through school, and 77 percent of beneficiaries renewed their vouchers. The vouchers could be used at private academic and vocational schools and about 40 percent of private schools accepted the voucher. The unit costs for participating private schools were 40 percent lower than for non-participating private schools (World Bank 2006).

The quality of the education offered was a constant concern. Critics of PACES pointed to the risk that low quality private schools would have the highest participation rates. However, Angrist and others (2002) showed that low quality private schools were not interested in joining the program. The average math and Spanish scores for students enrolled in participating schools were as good as those for students in public schools (World Bank 2006).

PACES' implementation experience lends itself to rigorous empirical analysis. Due to oversubscription in the program, there were more applicants than vouchers, which were then awarded by lottery. This created a natural, randomized experiment which enabled Angrist and others (2002) to undertake a rigorous impact evaluation of the program. They found that voucher beneficiaries had higher educational attainment: they were 10 percentage points more likely to finish the 8<sup>th</sup> grade three years after they won the vouchers. They were also 5 to 6 percentage points less likely to repeat a grade, scored 0.2 standard deviations higher on achievement tests than non-voucher students, and were 20 percent more likely to take the college entrance exam than students who had not won a voucher in the lottery. They were also 0.6 to 1 percentage points less likely to be married and 2.5 to 3 percentage points less likely to be working. Angrist and others (2002) also estimated that PACES beneficiaries were likely to earn \$36 more in wages each year, compared to the \$24 per beneficiary that it cost the government to provide vouchers instead of places in public schools. And in a study of PACES' longer term effects, Angrist and others (2006) found that the program improves scores for both average students and those over the 90<sup>th</sup> percentile.

Indicator	Impact-PACES Voucher Students Were:
Years of Schooling	10 percentage points more likely to finish 8 <sup>th</sup> grade
Grade Repetition	5-6 percentage points less likely to repeat a grade than non-voucher students
Test Scores	Scored 0.2 standard deviations higher on achievement tests
Finished High School	5-7 percentage points higher than non-voucher students
Take College Entrance Exam	15-20 % more likely to take the college entrance exam
College Exam Scores	More likely to score 2 points higher than non-voucher
Employment	2.5-3.0 percentage points less likely to be working than non-voucher students
Being Married or Cohabiting	0.6-1.0 percentage points less likely to be married or living with someone than non-voucher students

Source: Angrist and others 2002; 2006

*Vouchers in Chile.* Since the 1980s, Chile has promoted school choice and school competition via a voucher system. At that time, education was decentralized to the municipal level and the voucher system began to subsidize all public and most private schools through a voucher system. Monthly payments are made to schools based on a per student basis. In order to be eligible for funding, the schools must provide free education to all families. Parents are free to choose a school regardless of location and whether they are public or private. However, while subsidized private schools are free to select their own students, public schools must accept all students who apply. Both public and subsidized private schools must follow certain operational guidelines including having basic facilities, hiring certified teachers, and meeting national curriculum goals (Bellei 2005). In addition, the schools must adhere to a student-class ratio of 45:1 (Mora 2005). In general, however, schools are allowed to develop and implement their own academic and operational plans (Bellei 2005; Mora 2005).

As of 2002, 53 percent of students were enrolled in public schools, 34.2 percent were enrolled in co-financed private schools, and 3.8 percent studied in totally subsidized private schools. According to the national evaluation system (SIMCE), non-subsidized private schools perform best, followed by subsidized private schools, and then public schools (Bellei 2005, Mora 2005). However, among low income schools, public schools outperform private schools (Mora 2005). While a number of studies have attempted to

measure the impacts of the voucher system on various outcome measures, the results are often contradictory and inconclusive. Some found that the voucher system had positive impacts on test scores and pre-college examinations (Gallegos 2002; Contreras and Macias 2002; Sapelli and Vial 2002; August and Valenzuela 2003; Sapelli 2003; Gallegos 2004). Yet others found that there was no impact on test scores, repetition rates, or secondary school enrollment rates (Carnoy and McEwan 2000; Hseih and Urquiola 2003). In addition, Gauri (1998) found that school choice had led to increased social and academic stratification.

Bellei (2005) outlines three principal reasons why it is difficult to make comparisons between public and private schools in Chile and how they explain the widely diverging results in individual analyses, all stemming from the lack of random assignment of students to schools: (i) private schools tend to be located in urban areas and serve middle to middle-high income students, (ii) there are wide differences in the level of resources available to schools, even among the same types of schools, and (iii) there is very little information about how families select schools and how private schools select students. Thus, it is difficult to measure the supply of private schools, control for school resources, and the estimates are riddled with selection bias. The studies also differ in the ways that they use control variables such as parental education, school socio-economic status, student characteristics, test-score variation, and so on. Gallegos (2006) explains that the differences in results can be attributed to changes in the voucher and education systems in the mid 1990s. Hoxby (2003) reiterates that existing studies lead to inconclusive evidence of impact due to a lack of random assignment, thus making it difficult to determine whether variation in school choice is endogenous, and lack of pre-treatment data. The Chilean studies, along with the other evaluations mentioned here, are presented in Table 6.

#### Contracting for Facility Availability

While there is considerable experience with this model in other sectors in many other countries, this model is not often used in Latin America. One exception is a higher education project in San Luis Potosi, Mexico. Mexico's Projects for Provision of

Services (*Proyectos para Prestación de Servicios*, PPS) are based on the United Kingdom's PFI experiences. In the most complete cases, the government contracts with private providers to design, finance, build, operate, and maintain assets and services in the areas of health, education, and transport. Twenty-eight projects are being developed in the transportation, health, and education sectors, including 5 polytechnic colleges. Currently, the Mexican government is undertaking a pilot PPS to build a new campus for the University of San Luis Potosi, with an expected \$30 million investment. The project is expected to expand the enrollment capacity of the university from its current 1,500 students to 5,000 students by 2010 (Garcia 2005). Because this model is new, there is little evidence of impact.

Table 6: Education Contracting Models in Latin America

Model	Program	Evaluation/type of analysis	Impacts
Management contracts; Professional services contract; Operational contracts	Fe y Alegría	Propensity Score Matching (Allcott and Ortega 2006) Comparison of means (Swope and Latorre 2000) Comparison of means (McMeekin 2003)	Positive impact on college exam pass rates
	Bogotá's Concession Schools	Propensity Score Matching (Barrera 2005)	Positive impact on dropout rates and test scores
	AVEC	Comparison of Means (Mora 2005)	AVEC schools have lower repetition and dropout rates
Contract for education of specific students	PACES	Randomized (Angrist and others 2002; 2005)	Positive impact on years of schooling, test scores, high school completion, taking exams, exam scores
	Universal vouchers in Chile <sup>1</sup>	Ordinary Least Squares (Bravo and others 1999; Mizala and Romaguera 1999; Carnoy and McEwan 2000; McEwan 2001; Gallegos 2002; Vegas 2002; Sapelli and Vial 2002; Mizala and Romaguera 2003; Sapelli 2003) HLM (Mizala and Romaguera 2003; Mizala and others 2004)	
Provision of infrastructure services contracts	Projects for the Provision of Services-University of San Luis Potosi	Not yet evaluated	
Provision of infrastructure contracts with education services contracts			

Source: Adapted from Bellei 2005

## **Conclusions**

Proponents of PPPs in education often claim cost-effectiveness, equity, superior performance and cost savings. To date, the record on impact is relatively scarce. Worldwide attention to the issue is increasing and we are getting more results. While ideology continues to play a role in the various debates, the issue is becoming clearer given the recent increase in impact evaluation studies. While the evidence base is small, it is nevertheless growing.

While there are different types of PPPs, or contracting arrangements, in education; few have been subject to rigorous evaluation. In the case of Latin America, the only innovative PPP experience with a randomized experiment is the case of secondary school vouchers in Colombia. In that case the randomization was the result of oversubscription to the program, forcing the administrators of the program to use a lottery to assign limited places.

Still, the review of experiences is instructive. Management contracts are little studies, but the international review would suggest they may not be as promising as other types of reforms. Services contracts are more widespread, but there is little evidence from rigorous evaluations. Contracts that allow students to attend private schools appear to have significant benefits. Contracts for the construction of facilities are widespread in some parts of the world (OECD), but much less so in middle-income or developing countries. In education we have yet to see a combination facilities/services arrangement between the public and private sector.

In Latin America, the private sector has been shown to run schools efficiently and educate disadvantaged youth. The evidence is especially strong for Colombia's targeted vouchers and privately managed public schools. While some countries in Latin America have a long history of contracts between government and the private sector (or civil society, or usually the church), there is a real scarcity of rigorous evidence of impact. Thus, there is a need for more experimentation and evaluation, with pre-program data and randomized allocation of benefits.

## References

- Allcott, H. and D.E. Ortega. 2006. "The Performance of Decentralized School Systems: Evidence from Fe y Alegria in Venezuela." Cambridge: Harvard University. Processed
- Angrist, J., E. Bettinger, E. Bloom, E. King, and M. Kremer. 2002. "Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment." *American Economic Review* 92(5): 1535–58.
- Angrist, J., E. Bettinger, and M. Kremer. 2006. "Long-Term Educational Consequences of Secondary School Vouchers: Evidence from Administrative Records in Colombia." *American Economic Review* 96(3): 847-862.
- August, S. and J.P. Valenzuela. 2003. "Do Students Benefit from School Competition? Evidence from Chile." Ann Arbor: University of Michigan. Processed
- Bellei, C. 2005. "The Private-Public School Controversy: The Case of Chile." Presented at the Conference on Mobilizing the Private Sector for Public Education, October 5-6, Harvard University.
- Bettinger, E.P. 2005. "The Effect of Charter Schools on Charter Students and Public Schools." *Economics of Education Review* 24(2): 133-147.
- Bravo, D., D. Contreras, and C. Sanhueza. 1999. "Rendimiento Educativo, Desigualdad, y Brecha de Desempeño Privado Público: Chile 1982-1997." Department of Economy, University of Chile. Processed
- Carnoy, M. and P. McEwan. 2000. "The Effectiveness and Efficiency of Private Schools in Chile's Voucher System." *Educational Evaluation and Policy Analysis* 22(3): 213-239.
- Conteras, D. and V. Macias. 2002. "Competencia y resultados educacionales." Santiago: University of Chile. Processed.
- FAPE. 2004. "ESC Certification Program ECP." Makati City: Fund for Assistance to Private Education. Processed
- Gallegos, F. 2002. "Competencia y Resultados Educativos. Teoría y Evidencia para Chile." *Cuadernos de Economía* 39(118): 309-352.

- Gallegos, F. 2004. "School Choice, Incentives, and Academic Outcomes: Evidence from Chile." Boston: Massachusetts Institute of Technology. Processed.
- Gallegos, F. 2006. "Voucher-School Competition, Incentives and Outcomes: Evidence from Chile." Boston: Massachusetts Institute of Technology. Processed.
- Garcia, U. 2005. "Public-private partnerships in Mexico: Opportunities in Mexico." Mexico City: Ministry of Finance. Processed
- Guari, V. 1998. *School Choice in Chile. Two Decades of Educational Reform.* Pittsburgh: Pittsburgh University Press.
- Hoxby, C.M. 2003. "School Choice and School Competition: Evidence from the United States." *Swedish Economic Policy Review* 10: 11-67.
- Hoxby, C.M. and J.E. Rockoff. 2004. "The Impact of Charter Schools on Student Achievement." Cambridge: Harvard University. Processed
- Hsieh, C.T. and M. Urquiola. 2003. "When Schools Compete, How do They Compete? An Assessment of Chile's Nationwide School Voucher Program." NBER Working Paper 10008.
- LaRocque, N. 2006. *Contracting for the delivery of education services: A Typology and International Examples.* Wellington, New Zealand: Education Forum.
- Loevinsohn, B. and A. Harding. 2005. "Buying results? Contracting for health service delivery in developing countries." *Lancet* (August 20-26) 366(9486): 676-81.
- Machin, S. and J. Wilson. 2005. "Public and Private Schooling Initiatives in England." Presented at the Conference on Mobilizing the Private Sector for Public Education, October 5-6, Harvard University.
- McEwan P. 2001. "The Effectiveness of Public, Catholic, and Non-Religious Private Schools in Chile's Voucher System." *Education Economics* 9(2): 103-128.
- McMeekin, R.W. 2003. "Networks of Schools." *Education Policy Analysis Archives* Arizona State University, Tempe, <http://epaa.asu.edu/epaa/v11n16>.
- Mizala, A. and P. Romaguera. 1999. "Schools Performance and Choice. The Chilean Experience." *Journal of Human Resources* 35(2): 392-417.
- Mizala, A.I. and P. Romaguera. 2003. "Equity and Educational Performance." Center for Applied Economics, Department of Industrial Engineering, University of Chile. Processed

- Mizala, A., P. Romaguera, and C. Ostoic. 2004. "A Hierarchical Model for Studying Equity and Achievement in the Chilean School Choice System". Center for Applied Economics, Department of Industrial Engineering, University of Chile. Processed
- Mora, J.G. 2005. "Public-Private Partnerships in Latin America: A Review Based on Four Case Studies." Presented at the Conference on Mobilizing the Private Sector for Public Education, October 5-6, Harvard University.
- Sapelli, C. 2003. "The Chilean Voucher System: some new results and research challenges." *Cuadernos de Economía* 40(121): 530-538.
- Sapelli, C. and B. Vial. 2002. "The Performance of Private and Public Schools in the Chilean Voucher System." *Cuadernos de Economía* 39(118): 423-454.
- Swope, J. and M. Latorre. 2000. "Fe y Alegría schools in Latin America: Educational communities where the pavement ends." Centro de Investigación y Desarrollo de la Educación, Santiago. Processed
- United States General Accounting Office. 1996. "Private Management of Public Schools: Early Experiences in Four School Districts" (GAO/HEHS-96-3). Washington, DC.
- United States General Accounting Office. 2003. "Public Schools: Achievement Results for Students Attending Privately Managed and Traditional Schools in six Cities" (GAO-04-62). Washington, DC.
- United States General Accounting Office. 2002. "Public Schools, Insufficient Research to Determine Effectiveness of Selected Private Education Companies" (GAO-03-11). Washington, DC.
- Vegas, E. 2002. "School Choice, Student Performance, and Teacher and School Characteristics: The Chilean Case." World Bank Policy Research Working Paper 2833.
- World Bank. 2006. "Colombia: Contracting Education Services" (Report No. 31841-CO). Washington, DC: World Bank.