

Voucher policies and the response of for-profit and religious schools: Evidence from Chile

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Abstract

School choice proponents argue that the availability of publicly funded vouchers will provide opportunities for a diverse group of new private schools to enter the educational market. Some supporters maintain that vouchers would expand the supply of religious schools. Advocates have also argued that voucher programs would induce for-profit educational entrepreneurs to enter the market. Proponents maintain that these schools may be more responsive to parental demand and specialize and find niche markets, while also being able to take advantage of economies of scale and form chains of schools. In contrast, voucher critics argue that for-profits will not open new schools because they compete at a disadvantage against heavily subsidized public and religious schools. The supply side response to vouchers is predicated on the policy features of the program. For example, are any school types excluded from receiving the voucher? How large is the voucher and is it differentiated by a student's socioeconomic background? Are private voucher schools allowed to charge additional fees? The amount and form of government oversight and regulations also play an integral role in the supply side response to vouchers. This paper reviews the research on how private schools respond to vouchers and examines the supply side dynamics of Chile's universal voucher program that has experienced a number of policy changes since it was established in 1981, focusing on how for-profit and religious schools participate in the education marketplace. The Chilean data indicate that private for-profit and religious voucher schools responded differently to vouchers and subsequent policy changes. While for-profit independent schools were most responsive to vouchers and policies that required less regulation, for-profit chains responded to policy changes by specializing in niche markets. These schools are also more likely to increase in number after the introduction of more accountability and oversight. While vouchers also induced Catholic schools to enter the market, these schools declined in growth after the regulations were introduced.

Introduction

On every continent, governments have decided that giving parents more choices among schools is an appropriate policy response to educational problems. Voucher programs now exist in countries such as Chile, the Netherlands, Sweden, Belgium and some states in the United States (e.g. Florida and Colorado) and cities around the world (e.g. Milwaukee, Wisconsin, USA, and Bogota, Colombia). There are private school tax deductions in countries such as Brazil; charter schools in most states in the United States; public school choice in cities such as New York City and Rio de Janeiro. Countries such as Spain and Argentina provide public subsidies to private, mostly Catholic schools.

Proponents have claimed that many benefits will flow from school choice, ranging from improving the efficiency of public schools (Hoxby, 2003) to expanding opportunities to the most disadvantaged students in low achieving schools (Neal, 2002). Skeptics have raised concerns about the effects of school choice on equity and quality. For example, they are concerned that disadvantaged families will not have the time, ability or resources to choose the best schools for their students. Other voucher critics have argued that in order to save costs schools will recruit more advantaged children, thereby increasing segregation and jeopardizing the quality of schools.

Scholars have developed a substantial body of empirical literature that analyzes the demand side of school choice – how parents gather and use information about schools (Scheider et al., 2000), parent satisfaction (Howell and Peterson, 2002), and school efficiency – whether or not competition is associated with higher achievement (Hoxby, 2000) – and achievement differences between public and private schools (Angrist et al., 2002), but research and evidence on the supply response of private schools to voucher and school choice programs is more limited. Yet, when considering school choice policies and programs, this issue is crucial to understanding if and how educational markets work. How private schools actually respond to the competitive marketplace created by school choice will greatly affect the future and success of voucher reforms.

School choice proponents argue that the availability of publicly funded vouchers will induce a diverse group of new private schools to enter the educational market. Friedman (1962) argues that we will see a “flowering” of a diverse group of new private schools (p.90). Voucher advocates maintain that these new private schools will serve as laboratories for change and experimentation in pedagogical innovation that will provide examples for reform for traditional public schools (Chubb and Moe, 1990).

There is a persistent debate on which types of schools will likely respond to vouchers and enter the marketplace. Given the demand for faith-based education, some advocates maintain that vouchers would expand the supply of religious schools. For example, Coleman (1990) argues that by allowing parents to choose

schools on the basis of faith will strengthen the notion of community and increase parental trust in schools. Voucher advocates claim that religious schooling has created a brand that is appealing to many parents. For example, the Catholic brand is not only associated with religious education, but also with discipline and high academic standards (Bryk et al. 1993). Given the significant demand from parents for faith based education, supporters argue that religious schools will benefit most from voucher programs.

School choice advocates have also argued that voucher programs provide opportunities for for-profit educational entrepreneurs to enter the market. These schools may be more responsive to parental demand and specialize and find niche markets, while also being able to take advantage of economies of scale and form networks of schools (Chubb, 2001).

In contrast, voucher opponents contend that the supply response is inelastic and few for-profit schools will enter the market. Critics maintain that entrepreneurs will not open new schools because they compete at a disadvantage against heavily subsidized public and religious schools. Opponents have also criticized the claim that there are substantial economies of scale in education (Levin, 2002a). The economics of education literature finds that economies of scale are set at fairly low enrollments and school numbers (Andrews et al., 2002).

Some voucher critics have raised concerns about the implications for social cohesion of the emergence of denominational schools. Fuller (2000) argues that the growth of religious schools would harm the development of the community because it would allow self-interested families to dissociate the ties that bind them to other parents and children in the neighborhood. Some have maintained that religious schooling would undermine the preparation of students for a democratic life and the acceptance of a common set of values (e.g. Gutman, 1987). For example, some groups in the Netherlands have opposed Islamic schools on the grounds that religious segregation would hamper the integration of Muslim immigrants into Dutch society and values (Dijkstra et al., 2004).

There is a small literature that has examined the supply of private schools. Overall the evidence supports the argument that vouchers and school choice increase private school diversity. Private schools in voucher systems tend to specialize in market niches in order to appeal to parents with particular political, philosophical or religious orientations. This has been evident in the Netherlands where publicly funded schools account for almost three-fourths of enrollments, and where over 90 percent of these schools were sponsored by religious groups (Elacqua & Santos, 2014). Belfield & Levin (2004) report that two-thirds of schools in Milwaukee's voucher program are run by religious organizations. In Sweden, 10 percent of primary schools and 50 percent of secondary schools are for-profit subsidized schools (Sahlgren, 2010).

While the evidence suggests that private schools are responsive to educational vouchers, it does not examine how different features of choice programs will affect the supply of private schools. The supply side response to vouchers is predicated on the policy components of the program. For example, which types of providers are allowed to receive public subsidies (e.g. religious, for-profit, etc.)? How large is the voucher and is it weighted by the student's background characteristics? Are private voucher schools allowed to charge top-up fees? The amount and form of government oversight and regulations also play an integral role in the supply side response to vouchers.

Chile's voucher program provides a unique context to analyze private school supply. In 1981, Chile began financing public and most private schools with vouchers. The military government instituted an unrestricted flat per pupil voucher. Essentially any person or organization (for-profit or non-profit, religious or secular) had the right to establish and run a school and receive the per pupil voucher. There were lax rules regarding accountability and student selection and the government did not publish individual school test scores. Schools were only required to comply with minimum school facility and health standards. Schools were also allowed to administer tests and interviews to select students. However, over the last two decades, many aspects of Chile's voucher program have changed. In 1993, the government enacted a law that allowed private voucher schools and public high schools to charge monthly tuition fees. In 1998, the government increased the voucher for schools that offered an extended day program and also provided subsidies for new schools to enter the program and for existing schools to expand their facilities. In 2008, the government instituted a weighted voucher by student socioeconomic background and tied additional public funding to performance standards. That same year the legislature also enacted a law that banned school selection in primary grades. In this paper, we examine the private school response to vouchers and the subsequent policy changes.

Private school supply in Chile

Most researchers generally use a single category to describe private voucher schools in Chile. However, there is a great deal of variability in the private voucher sector. Table 1 shows how primary school students are distributed across school types. Public schools account for the majority (56 percent) of schools and less than half of enrollments (41 percent). For-profit voucher schools account for 30 percent of schools and 34 percent of enrollments. Non-profit voucher schools account for about 10 percent of schools and 17 percent of enrollments. Private non-voucher schools represent 5 percent of schools and 7 percent of enrollments.

Table 1 Here

For-profit and non-profit voucher schools in Chile are diverse in membership. Table 2 shows how primary school schools and students are distributed across for-profit and non-profit school categories. For-profit chains, which represent about 20

percent of all for-profit schools, are probably those that best fit the description of educational privatization proponents (Chubb, 2001). They are often controlled by a group of on-site owners, in some cases with private shareholders who often have ties to other industries,¹ and are characterized by networks of campuses.² Most for-profit networks are small in size. Less than 20 percent of for-profit franchises have more than 3 schools in their networks. Less than 5 percent have more than 5 schools in their network (Elacqua, 2009).

For-profit chain schools, which account for 6 percent of schools and 8 percent of enrollments, stand in varying degrees of contrast to for-profit independent schools, which account for about 80 percent of all for-profit schools and about one-fourth of total schools and enrollments in Chile. For-profit independent schools are especially small in size and scale, suggesting that when these groups set out to establish a school, they are probably looking to create a school that only provides services to children in the community. Recent survey evidence suggests that the majority (75 percent) of the owners are former public school teachers (Corvalan et al., 2008) who were often expelled from the public schooling sector by the military government in the 1970s and 1980s. This suggests that, in contrast to for-profit chain school owners who likely calculate the private returns on investment compared to other investments when they decide whether or not to establish a school, for-profit independent school owners are more likely to consider the opportunity cost of a foregone salary as public school teacher when they set out to open a school.

Non-profit voucher schools, including Catholic,³ Protestant,⁴ and non-sectarian organizations⁵ are more likely to be characterized by a philosophical or religious mission rather than profit maximization. These schools, which are often subsidized by the Church or local businesses, often have access to donated facilities and teachers willing to work for below-market salaries, and thus are able to provide a range of services to students whose costs exceed the voucher and tuition payments. Most non-profit schools are also characterized by networks of campuses that are affiliated through religious congregations or foundations. Catholic schools account

¹ Among the most arresting examples is “La Cuca”, a well established restaurateur, discotheque and bar owner. She also has a for-profit chain of schools in a middle class municipality in Santiago. <http://www.paula.cl/entrevista/la-cuca-pura-carne/>

² According to interviews with the national voucher guild (CONACEP), a number of for-profit chain owners are second generation school owners. Their parents were former teachers who opened the schools in the 1980s. They often study majors such as business or engineering and take over the family schools and use their management skills to expand operations.

³ Branches of the Catholic church that run schools include religious orders, parishes, Archdiocese, and religious foundations.

⁴ Protestant churches include Methodist, Baptist, Seventh-Day Adventist, Anglican, Lutheran, and Presbyterian churches.

⁵ Most of the non-sectarian non-profit schools are branches of foundations that were created for other specific tasks, such as the Aid Corporation for Children with Cancer. Some foundations were created by community development groups such as the Rural Social Development Corporation. Other non-denominational foundations were created by firms to provide schooling for their employees’ children.

for about 72 percent of non-profit schools and 7 percent of all schools and 13 percent of total enrollments. Only about 4 percent of students in Chile are enrolled in Protestant and non-sectarian voucher schools.

Table 2 Here

Table 3 provides basic descriptive information about for-profit and non-profit school types. Catholic voucher schools have, on average, more students per school and per class than other school types. Public schools and non-profit non-sectarian schools are more likely to serve low-income and rural students than all categories of private schools. Table 3 also shows that for-profit – independent and chain - voucher schools enroll a higher proportion of disadvantaged and rural students than religious – Catholic and Protestant – voucher schools. A higher proportion of for-profit chains are located in the Metropolitan Region (R.M.) compared to other school types. Over two thirds of for-profit independent schools and Catholic schools and over 75% of non-sectarian and Protestant schools are located outside of the R.M. The data presented in table 3 also show that most private non-voucher schools serve higher SES students in the R.M.⁶

Table 3 Here

Policy changes and private school response

In theory, the increase in potential private school demand generated by voucher policies should induce new schools to enter the education marketplace, and the expansion of the operations of existing private schools. The private school response will depend on the rules that govern the voucher program. There are three types of policy designs that are crucial in determining the composition of private schools participating in voucher programs: (1) the exclusion of specific types of schools (e.g. religious schools, for-profit schools); (2) finance; and (3) the amount of government regulation and oversight (Levin, 2002b).

Exclusion of private school types

Voucher programs that exclude specific types of schools would affect the composition of private schools in the market. For example, choice programs that exclude religious schools would constrain the supply of these schools. Most states in the United States only permit secular charter schools, despite the fact that the *Zelman v. Simmons-Harris* 2002 Supreme Court decision permitted the constitutionality of publicly funding denominational schools under federal law. The universal choice programs in the Netherlands and Chile have no restrictions on the participation of denominational schools.

⁶Over two thirds of students enrolled in private non-voucher schools are from the wealthiest decile of income. This data is available upon request.

The exclusion of for-profit schools has also been a hotly debated issue in current educational policy reform discussions. The only two systems where for-profits compete on equal ground with non-profits and public schools for educational vouchers are Sweden and Chile. In both countries for-profit schools are the dominant private voucher school provider. In the United States only a few states allow for-profits to run and or manage charter schools, but the proportion of students is low (Miron et al., 2011)

Finance

Finance refers to the size of the voucher, how it is allocated and weighted, and whether schools can charge additional fees (Levin, 2002b). A larger voucher will likely increase the number and the diversity of private schools that enter the market. The size of the voucher will likely have the greatest impact on for-profit schools, which are often reluctant to establish schools because they must compete against heavily subsidized public schools and nonprofit schools that often rely on donations. If the voucher is universal or targeted will also influence the number and type of schools that enter the market. In the Netherlands, Chile and Sweden, the voucher is universal. In Milwaukee and Cleveland, for example, only low SES students are eligible to use the voucher to choose a private school.

Another important aspect related to finance is whether or not the voucher is differentiated by a student's social background characteristics. A weighted voucher will likely provide private schools with incentives to establish in lower income communities and attract these students (Chubb and Moe, 1990). For-example, the Dutch government has used ethnic background and parent socioeconomic status to weight the education voucher (Ladd and Fiske, 2011).

Top up fees is another important policy component that will likely affect the supply side response. If schools can charge tuition, this will create incentives for schools to move into wealthier neighborhoods and attract students from higher income families. This may also increase opportunities for for-profit owners to enter the market. Chile is a rare example of a voucher system that permits school fees and for-profit schools.

Accountability and oversight

The amount of government regulation and oversight is also an important feature of a voucher program. There is a persistent debate about the appropriate amount a regulation. Some argue that that more regulation will increase the costs for private schools and dissuade them from entering the market. Supporters assert that unregulated choice programs increase the risks that public funds will be used for low quality for-profit schools or for schools with an inappropriate philosophy or ideology (Ladd, 2002).

Regulation usually refers to the requirements of schools that receive the voucher and other rules that they must comply with (Levin, 2002b). Some systems have

common teacher labor laws and pay scales for public and private schools (e.g. the Netherlands) while other systems (e.g. charter schools) give more autonomy to private schools to set pay scales and hire and fire teachers. Other systems emphasize student testing, publishing the results, and holding schools accountable for performance standards as a condition to receive the voucher (e.g. the Netherlands, the United States, Chile). Increased government oversight and greater school accountability and higher standards are likely to affect the amount and type of private voucher schools that enter the marketplace.

School selection has also been a highly debated topic. How much leverage does a school have to shape its pool of students? Does the system allow oversubscribed schools to conduct assessments and parent interviews? Are schools required to allocate the remaining slots by lottery? Does the school system provide mechanisms to assure fairness in selection procedures? Some systems restrict certain populations in the name of social equity. For example, the voucher programs in the United States generally limit the voucher to disadvantaged students to choose a private school outside of their neighborhood. Some universal choice systems are moving to a school lottery system (e.g. Washington D.C.). Other systems (e.g. Chile) ban selection in early grades, but allow schools to develop their own systems of selection, which results in almost half of the schools using assessments and parent interviews to screen students (Elacqua, Martinez & Santos, 2014). Regulation of admissions has been a matter of scrutiny for schools with a specific mission that want to have control over which type of families they admit. Religious schools may be wary that banning selection would erode their religious mission. Thus, strict admissions requirements are likely to discourage these schools from entering the market.

Private school response to vouchers and policy changes in Chile

We can gain insight into how voucher policies will influence the supply of private schools by examining the effects of current universal voucher programs. This section evaluates how private schools responded to the universal voucher program instituted in Chile in 1981 and to a number of policy changes over the last three decades. We also examine whether different types of private schools are more likely to respond to the policy changes.

Chile's national voucher program and education policies: 1981-2012

During the 1980s, the military government enacted a sweeping education reform program (1973-1990). First, the Ministry of Education decentralized education service delivery to regional and provincial offices and the administration of public schools to municipal governments, whose maximum authority is an elected mayor. Second, the government altered the financing scheme of public and most private schools. Municipalities and private school owners – for-profit, nonprofit, religious, secular – that did not charge tuition started to receive vouchers on a per-student basis. As a result, enrollment gains or losses began to have an impact on their budgets. The voucher formula included adjustments for rural schools and high

schools, but did not take into account a student's socioeconomic characteristics. Fee-charging private non-voucher schools continued to operate without public funding.

The essential features of this system remained in place for over a decade. The center-left coalition that won the democratic election in 1990 chose to focus on improving the quality of poor schools through direct resource investments, while maintaining the organizational and funding components introduced in the eighties (OECD, 2004; Cox, 2003). The only significant modification of the voucher program was in 1993, when the Ministry instituted a financing scheme that allowed all private voucher schools to charge limited tuition (Elacqua et al., 2013). The "shared financing" law in Chile allowed private voucher schools and public high schools to charge monthly fees, in addition to the per pupil subsidy, that can be up to 1.6 times the basic voucher payment.

The center-left administration also introduced an extended school day program in 1997. While this program did not alter the organizational components of the voucher system, it increased the voucher by 35 percent for participating schools and provided subsidies for existing public and private schools to expand their school facilities to increase coverage and for new public and private full day schools.⁷ The extended school voucher and government subsidies for school facilities provided strong incentives for new private voucher schools to enter the marketplace.

In 2008, the Chilean legislature enacted two laws – the School Preferential Voucher Law (Ley SEP) and the General Law of Education (LGE) – which were both designed to change the rules under which the voucher system operated. The SEP law recognizes that it is more costly to educate disadvantaged students by introducing an extra per-pupil subsidy (50 percent over the base voucher) for students classified as low-income in the Ministry of Education's socioeconomic status classification system who attend public or private voucher schools and who voluntarily participate in the program.⁸ The additional per-pupil voucher is tied to an increased role of the Ministry of Education in monitoring and ranking schools based on student performance and holding them accountable for their outcomes.⁹ Schools are required to set goals and develop an improvement plan. The government increased oversight of lower ranked schools. Low performing schools that do not show improvement can lose their license to operate. In addition, participating schools cannot charge tuition to low-income students and they are required to make public how the additional resources provided by the Ley SEP are spent.

⁷ According to the Ministry of Education, between 2002 and 2011, the facilities subsidy (Programa de Aporte Capital) provided over 1.700 million dollars to public and private voucher schools to implement the extended school day program.

⁸ Elacqua and Santos (2012) find that 84% of public and private voucher schools signed the agreement. The schools that do not participate do not receive the additional per-pupil voucher. The accountability and monitoring components of Ley SEP became mandatory in 2013.

⁹ See Elacqua et al., (2013) for an analysis of the impact of the SEP ranking on instructional policies and teaching practices in schools.

The LGE repealed the constitutional education law (*LOCE-Ley Organica Constitucional de Enseñanza*) enacted three days prior to the end of the military regime in 1989. The LOCE granted administrators and teachers freedom on how to provide education and limited the government's role to assuring access to schools, but it did not give the State the authority to regulate the quality of education services.¹⁰ The LGE increased the requirements to open a school¹¹ and also granted the government the ability to regulate school quality.¹² The LGE also bans all public and private voucher schools from using parental interviews and admissions tests to select and expel primary school students. Schools are allowed to use academic assessments in middle school and high school, but are not permitted conduct student or parent interviews.

The private school response to Chile's voucher program and education policy

The provision of education in Chile became increasingly privatized after the voucher reforms were instituted in 1981. According to figure 1, in 1981, 15 percent of Chilean primary students attended private schools that received some public subsidies, and another 7 percent attended more elite, non-subsidized private schools. Between 1981 and 1986 the private voucher enrollment rate increased from 15 to 31 percent. In 1993, 33 percent of students attended private voucher schools, 60 percent were enrolled in public schools, and 8 percent in private non-voucher schools. The proportion of students enrolled in private voucher schools increased steadily over the next 15 years, as private schools were permitted to charge tuition and the government provided subsidies to build facilities to increase the coverage of schools with an extended school day. Finally, in 2008, the year the SEP law and LGE were enacted, the public and private voucher school enrollment rates converged at 46 percent. Between 2008 and 2012, the rate of enrollment in private voucher schools increased from 47 to 52 percent, while public school representation declined from 47 percent to 41 percent. These shifts in participation suggest that private voucher schools responded to the additional weighted funding. A fairly stable percentage of 7 to 8 percent of students have attended private non-voucher schools since 1981.

Figure 1 Here

The trends in the number of private schools in Chile's voucher system from 1981 to 2012 by school type are depicted in table 4. In 1981, the year the voucher program was enacted, approximately one-third of the schools were for-profit independent

¹⁰The only formal requirement to open a school in Chile was to have a high school diploma (Montt et al., 2006).

¹¹The new requirement to open a school is to have a university or vocational higher education degree.

¹²This allowed the government to enact the Quality Assurance Law (national school accountability) in 2012 which ties the national voucher to school accountability measures for all publicly funded schools.

schools, one third were denominational, mostly Catholic, and one-third were private non-voucher schools. There were only 83 for-profit chain voucher schools in operation in 1981. Over the period of 1981 to 1993, the total number of private voucher schools increased by over 100 percent. For-profit schools far outpaced growth rates of other private school types. For-profit independent schools quickly became the dominant type of private school in the educational market. The total number of for-profit independent schools increased by 216 percent and the total number of for-profit chains by 131 percent 12 years after the voucher reform was instituted. Denominational voucher schools consolidated over the same time period yielding a more moderate growth of less than 100 percent in the number of schools. Non-voucher schools also continued to grow at a slower pace of 45 percent.

When the government introduced top up fees in 1993 the total number of for-profit chains quickly increased to 254 in 1998 (a 32 percent growth in 5 years). Non-denominational non-profit schools also grew at a similar pace. Very few Catholic and for-profit independent schools entered the market between 1993 and 1998, suggesting that for-profit chains were more responsive to this policy change. These schools likely have a greater capacity to expand operations into different niche markets.

The introduction of the extended school day voucher and school facilities subsidies also induced many for-profit independent and chain and non-sectarian non-profit schools to enter the market. The number of these school types increased by over 50 percent between 1998 and 2008. Few denominational schools were established during this period. This is likely due to the fact that many of these schools, which are usually run by religious groups, already had the necessary infrastructure to implement the extended school day program. Non-voucher schools declined in number during this period. The total number of non-voucher schools decreased by 36 percent after the extended school program was introduced. This is likely due in part to the Asian crisis, which affected Chile in the late 1990s, and likely hindered the ability of middle and upper class families to pay high school fees in private elite schools. Studies suggest that many of the private non-voucher schools closed down and reopened as private voucher schools that charged the more limited top-up fees (Elacqua et al., 2014).

Finally, after the SEP law and LGE were enacted in 2008 – which introduced school accountability and more regulation and oversight in publicly funded schools – very few new private voucher schools entered the marketplace. Since 2008, the number of Catholic schools has declined, while the numbers of Protestant and for-profit independent schools has remained flat. Religious schools may have been concerned that greater government intrusion would undermine their religious mission. Increased government oversight may have overwhelmed for-profit independent schools, which are typically smaller than other school types. The number of non-voucher schools has also continued to decline in number. The only school type that experienced any growth during this period was for-profit chains which continued to increase in number at a steady pace until 2012. This suggests that these schools

may have been more prepared in terms of management and capacity to comply with the new performance standards. For-profit chains may also be better able to tap the resources and expertise of other schools in the network to deal with the increased accountability and oversight.

Table 4 Here

Entry and exit of private schools

The general trends reported above mask the fact that a number of schools are exiting or entering the market in any given year. The trends in the number of private voucher schools closing or entering the market from 1993 to 2011 are depicted in figure 2. While the number of private schools that entered and exited the market grew at a steady pace from 1993 to 2011, approximately 104 new schools were established and 38 were closed on average each year during the 19 year period. The peak of new schools and school closures in 2003 is likely related to the high number of private non-voucher schools closing and re-opening as new private voucher schools (Elacqua et al., 2014). The number of new private schools declined from 108 in 2009 to 59 in 2011.

Next we explore whether Chile's universal voucher program worked to benefit existing schools or has led to the establishment of new private schools. According to table 5, over half of religious voucher schools and secular non-profit voucher schools existed before the voucher program was instituted in 1981. Conversely, 68 percent of for-profit independent schools and 57 percent of for-profit chain schools were created after the voucher program was established. The existence of the national voucher program was a major factor for the entry decisions of the majority of for-profit schools. It was less of a factor for religious and non-profit schools. Table 5 also indicates that the vast majority of private non-voucher schools existed prior to 1981, suggesting that school vouchers may have acted as a deterrent to entry for these schools into the education marketplace.

Figure 2 Here

Table 5 Here

Conclusion

School choice advocates argue that the availability of educational vouchers will induce a diverse group of private schools to enter the market. Given the demand for faith-based education, some advocates assert that vouchers would expand the supply of religious schools. School choice supporters have also argued that voucher

programs provide opportunities for for-profit schools to enter the market. These schools may be more responsive to parental demand and specialize and find niche markets, while also being able to take advantage of economies of scale and form networks of schools. In contrast, voucher opponents argue that the supply response is inelastic and few for-profit schools will enter the market. Critics maintain that entrepreneurs will not open new schools because they compete at a disadvantage against heavily subsidized public and religious schools. Opponents have also criticized the claim that there are substantial economies of scale in education.

The supply side response to vouchers is predicated on the policy features of the program. For example, are religious schools and/or for-profit schools allowed to receive public funding? How large is the voucher and is it weighted by the student's background characteristics? Are private voucher schools allowed to charge top-up fees? The amount and form of government oversight and regulations also play an important role in supply side response to vouchers. This paper reviews the research on how private schools respond to vouchers and examines the supply side dynamics of Chile's long-standing national voucher program that has gone through a number of policy changes since it was instituted in 1981.

The Chilean data indicate that prior to the voucher reforms in 1981, approximately one-third of the schools were for-profit independent schools, one third were Catholic schools, and one-third were private non-voucher schools. There were only 83 for-profit chain voucher schools in operation in 1981. When private subsidized schools began to receive the same per-pupil subsidy as the public schools, over 1,100 for-profit voucher schools entered the market during the first decade, compared to fewer than 300 religious schools. The supply of new schools appears elastic: 76% of current private voucher schools were founded after the policy was introduced in 1981. We also report that over 700 private voucher schools have closed over the last 20 years.

We find mixed evidence regarding the size and scale of for-profit and religious schools. While most religious schools are large urban Catholic schools and characterized by networks of campuses located in middle and high income communities, over 80 percent of for-profits are small one-offs run by former teachers that compete for students in both low-income and middle class neighborhoods. There are a growing number of for-profit chain schools, which are often run by school owners with ties to other industries. These schools often specialize in niche markets in low and middle income communities. Finally, the non-profit non-sectarian schools are more likely to serve disadvantaged students in rural areas outside of Santiago and most are characterized by networks of campuses that are associated with non-profit foundations.

We also find that for-profit and religious schools respond differently to policy changes. During the first 12 years of unfettered vouchers, for-profit independent schools far outpaced growth rates of other private school types. These schools have persisted as the dominant type of private school in the schooling market. The total

number of for-profit chains also increased significantly after the reform was introduced in 1981. Religious and non-sectarian non-profit schools experienced a more moderate growth after vouchers were introduced.

The total number of for-profit chains and non-sectarian schools increased by over 30 percent in the first 5 years after school fees were introduced in 1993. Religious schools and for-profit independent schools were less responsive to this policy change. School networks established new schools in wealthier communities.

The increased extended school day voucher and school facilities subsidies also induced many for-profit independent and chain and non-sectarian non-profit schools to enter the market. The total number of for-profit independent and chain schools increased by over 50 percent and the total number of non-sectarian non-profit schools increased by almost 65 percent a decade after the government introduced the extended school day voucher and provided school facilities subsidies for new schools and existing schools that needed to expand their infrastructure to be able to increase the number of school hours. While most Catholic schools offer an extended day program (Elacqua, 2012), they grew at a slow pace of 10 percent in 10 years.

Finally, we find that the SEP law and LGE, which increased government regulation and oversight, had differential effects on for-profit and religious schools. The number of Catholic schools declined between 2008 and 2012, while the numbers of for-profit independent schools remained stagnant during the same period. Conversely, for-profit chains increased by 34 percent in 4 years. There are a host of reasons that may explain the Catholic school pattern. First, Catholic schools may have felt that the religious character of their schools would be undermined by increased government regulation and control over admission processes. Second, the sex abuse scandal in the Chilean Catholic Church that occurred during this time period may have affected parental demand for Catholic schools. Finally, religious schools have had to adapt their personnel practices to meet the needs of the current teacher labor force. They are no longer able to rely on clergy as a low-cost teaching force. Currently, less than 4 percent of teachers at Catholic schools is religious and clergy (Conferencia Episcopal, 2002). This means that Catholic schools are not able to maintain their advantage over other school types and replicate their previous levels of per pupil spending.

There are also different explanations for the differential effects on for-profit independent and chain schools. First, for-profit independent schools are small in size and scale and are less likely than for-profit chain schools to have the capacity to cope with the increased paperwork and demands of the accountability system. Second, for-profit chain school owners may have better managerial skills than small mom and pop schools run by teachers. Finally, for-profit chains may also be better able to take advantage of the resources at the other schools in their networks. For-profit independent schools are less likely to have access to these networks.

Evidence from Chile's national voucher program is very relevant for predictions about what to expect from the introduction of vouchers and education policies in different contexts. Small for-profit independent schools are most responsive to the voucher and subsidies with few strings attached, suggesting that an unfettered voucher program may induce a flood of for-profit small teacher run schools to enter the market. Publicly funded vouchers have also induced Catholic schools to enter the market. However these schools appear be more wary of regulations and oversight than for-profit schools. The decline in the growth in the number of Catholic schools over the last 4 years can likely be partially explained by the increased regulations, oversight, and accountability effective in 2008. For-profit chains have also increased in number since the introduction of vouchers. These schools appear to respond to policy changes by specializing in niche markets, while also being able to expand their networks, which provide the necessary expertise and economies of scale. For-profit chains also seem to be more likely to thrive in a more regulated educational market than small for-profit independent schools.

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Graphs and tables

Figure 1: The distribution of primary school students across public and private schools in Chile (1981-2012)

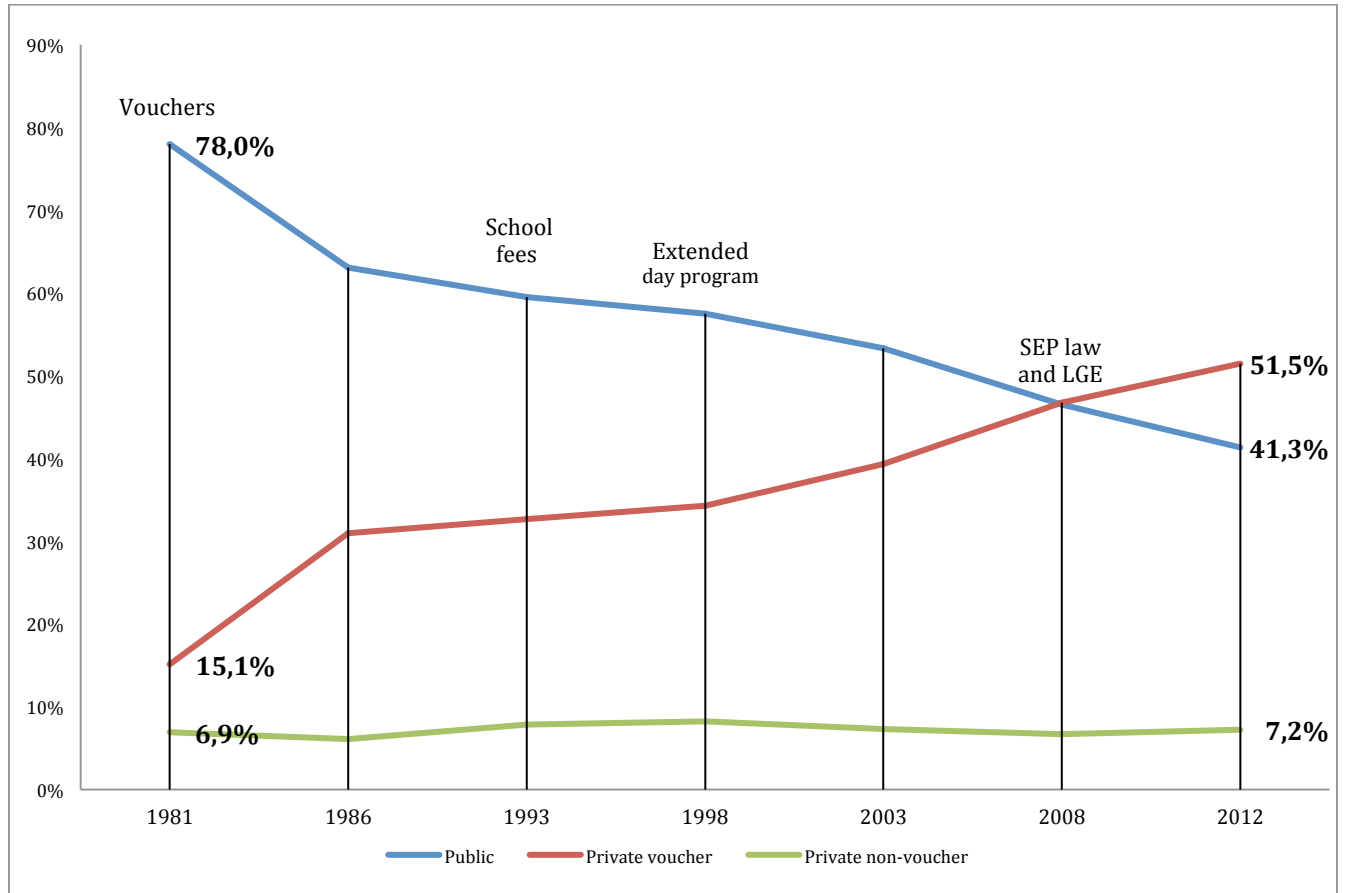


Figure 2: Entry and Exit of Private Schools

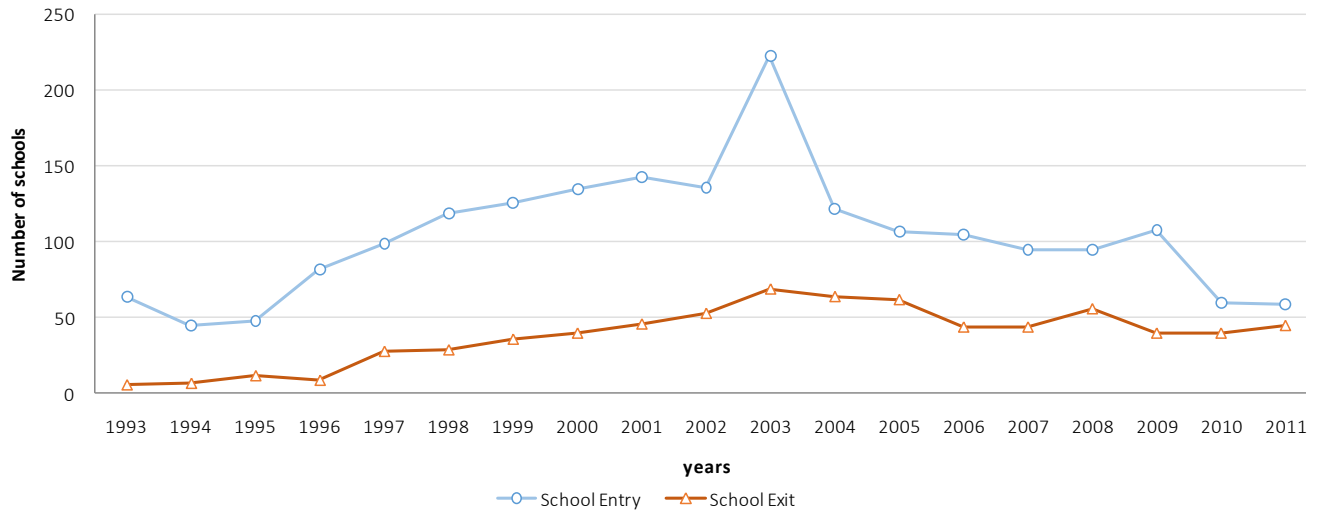


Table 1 Distribution of primary students across school types (2012)

	Percent of schools	Percent of enrollments
Public	55,7%	41,3%
For-profit voucher	29,9%	34,4%
Non-profit voucher	9,5%	17,0%
Private non-voucher	4,9%	7,2%
Total	100	100
Number of schools or students	8.682	1.962.575

Table 2 Distribution of primary students across school types (2012)

	Percent of schools	Percent of enrollments
Public	55,7%	41,3%
For-profit independent	24,0%	26,2%
For-profit chain	5,9%	8,2%
Non-profit Catholic	6,8%	13,1%
Non-profit Protestant	1,1%	1,5%
Non-profit non-sectarian	1,6%	2,4%
Private non-voucher	4,9%	7,2%
Total	100	100
Number of schools or students	8.682	1.962.575

Table 3 Descriptive summary of private primary schools across school types (2012)

	N	Average School Size	Average Class Size	% Chain	% Priority	% Rural	% R.M
Public	4.834	168	16	100%	49%	62%	13%
For-profit independent	2.080	249	23	0%	32%	28%	30%
For-profit chain	515	314	27	100%	33%	23%	40%
Non-profit Catholic	591	512	35	62%	23%	6%	35%
Non-profit Protestant	97	334	31	84%	30%	15%	15%
Non-profit non-sectarian	140	216	20	70%	38%	40%	24%
Private non-voucher	424	334	21	N/A	2%	3%	58%
Total	8.682						

Table 4 The growth of private schooling in Chile: 1981-2012

	1981	1993	Percent change	1993	1998	Percent change	1998	2008	Percent change	2008	2012	Percent change
For-profit independent	397	1.257	216,6%	1.257	1363	8,4%	1363	2076	52,3%	2.076	2080	0,2%
For-profit chain	83	192	131,3%	192	254	32,3%	254	384	51,2%	384	515	34,1%
Non-profit Catholic	277	530	91,3%	530	547	3,2%	547	605	10,6%	605	591	-2,3%
Non-profit Protestant	35	64	82,9%	64	75	17,2%	75	95	26,7%	95	97	2,1%
Non-profit non-sectarian	34	59	73,5%	59	76	28,8%	76	124	63,2%	124	140	12,9%
Private non-voucher	404	588	45,5%	588	699	18,9%	699	444	-36,5%	444	424	-4,5%
Total	1230,0	2690,0	106,9%	2690,0	3014,0	18,1%	3014,0	3728,0	27,9%	3728,0	3847,0	7,1%

Table 5 New school entry by school type, 1992

	For-profit independent	For-profit chain	Catholic	Protestant	Non-sectarian	Non-voucher
Existed prior to 1981	397 32,0%	83 43,2%	277 52,8%	35 55,6%	34 57,6%	380 68,7%
Created after 1981	842 68,0%	109 56,8%	248 47,2%	28 44,4%	25 42,4%	173 31,3%
Total	1239	192	525	63	59	553